CITY OF Salem AT YOUR SERVICE

Land Use Application

Planning/Permit Application Center
City Hall / 555 Liberty St. SE / Room 320 / Salem, OR 97301-3513
503-588-6173 * planning@cityofsalem.net

If you need the following translated in Spanish, please call 503-588-6256.
Si usted necesita lo siguiente traducido en español, por favor llame 503-588-6256.

(For office use only)
Permit #:

Application type

Please describe the type of land use action requested:

SUBDIVISION TENTATIVE PLAN

Work site location and information

Street address or location of subject property	4560 CENTER STREET NE SALEM, OR 97301
Total size of subject property	4.71 Acres
Assessor tax lot numbers	072W30AA08000
Existing use structures and/or other improvements on site	Vacant
Zoning	RA - Residential Agriculture
Comprehensive Plan Designation	Developing Residential
Project description	24-LOT RESIDENTIAL SUBDIVISION

People information

	Name	Full Mailing Address	Phone Number and Email address
Applicant	DON JENSEN	5190 KALE ST. SE SALEM OR 97305	(503) 932-2259
Agent	PDG (MARK FERRIS)	200 HAWTHORNE AVE., SUITE A-100 SALEM, OR	(503) 939-3723

Project information

Neighborhood Association	East Lancaster Neighborhood Assn.
Have you contacted the Neighborhood Association?	○ Yes ⊙ No
Date Neighborhood Association contacted	
Describe contact with the affected Neighborhood Association (The City of Salem recognizes, values, and supports the involvement of residents in land use decisions affecting neighborhoods across the city and strongly encourages anyone requesting approval for any land use proposal to contact the affected neighborhood association(s) as early in the process as possible.)	
Have you contacted Salem-Keizer Transit?	○ Yes ⊙ No
Date Salem-Keizer Transit contacted	
Describe contact with Salem-Keizer Transit	

Authorization by property owner(s)/applicant

***If the applicant and/or property owner is a Limited Liability Company (LLC), please also provide a list of all members of the LLC with your application.**

Copyright release for government entities: I hereby grant permission to the City of Salem to copy, in whole or part, drawings and all other materials submitted by me, my agents, or representatives. This grant of permission extends to all copies needed for administration of the City's regulatory, administrative, and legal functions, including sharing of information with other governmental entities.

Authorizations: Property owners and contract purchasers are required to authorize the filing of this application and must sign below.

- **All signatures represent that they have full legal capacity to and hereby do authorize the filing of this application and certify that the information and exhibits herewith submitted are true and correct.**
- **I (we) hereby grant consent to the City of Salem and its officers, agents, employees, and/or independent contractors to enter the property identified above to conduct any and all inspections that are considered appropriate by the City to process this application.**
- **I (we) hereby give notice of the following concealed or unconcealed dangerous conditions on the property:**

Electronic signature certification: By attaching an electronic signature (whether typed, graphical or free form) I certify herein that I have read, understood and confirm all the statements listed above and throughout the application form.

Authorized Signature: Daniel C. Jenks

Print Name: Daniel C. Jenks **Date:** 11/22/19

Address (include ZIP): 5190 Kale St. SE, Salem, OR 97305

Authorized Signature:

Print Name: **Date:**

Address (include ZIP):

(For office use only)		
Received by Sally Long	Date: 12-6-19	Receipt Number: 19-125242-LD

Not using Internet Explorer?
Save the file to your computer and email to planning@cityofsalem.net.

Land Division Application

for

Belle Plaines Estates

A Proposed 24-Lot Subdivision Tentative Plan
Salem, Oregon

Prepared for

Don Jensen

(Herein referred to as the Applicant)

By

CIVIL ENGINEERS
LAND SURVEYORS
PROJECT MANAGERS
PLANNERS

I. SITE INFORMATION:

The project site includes the following privately owned property in Marion County Oregon, located south of Center Street NE and north of 46th Avenue in Salem, Oregon. This property is also described as Assessor's Tax Map number T7S, R2W, Sec. 30AA, Tax Lot 8000 and contains 4.71 acres.

Aerial

The current zoning of the site is Residential Agriculture (RA). Pursuant SRC Chapter 265.015(a)(2), at the time this tentative subdivision plan is approved the zoning will automatically change to Single Family Residential (RS). This automatic zone change is supported by the current Comprehensive Plan designation.

Zoning

Assessor's Map

II. BACKGROUND INFORMATION:

Belle Plaine Estates was originally approved on November 3, 2011, Application No. 11-112375-LD by the City of Salem. That approval expired. A second approval for 25-lots was provided by the City and decision issued on August 15, 2016 but has since expired. The City has also determined the subdivision application for the property submitted in March of 2019 has also expired and a new subdivision application must be submitted to the city. This application is being submitted as a result of that expired subdivision approval. A copy of the 2016 Preliminary Plat and Notice of Decision is included in the appendix.

The site design generally follows the same design as the original subdivision approval with the exception of a couple of items. The Street stub to the east boundary of the site has been eliminated due to the fact that U.S. Army Corp of Engineers will not allow wetland impacts by this street stub based on future development of the adjoining property. Right-of-way dedication has been left in place as required by the city, however, for future development should that ever occur. In addition, the lot count has been reduced from the original lot count of 30 lots to 24 lots.

The Applicant proposes 24 single-family lots on the 4.71-acre site and the proposed density of the site is approximately 5 units per acre. Three (3) of the lots are designed as flag lots, but do not exceed the 15% maximum requirement of the total lots within a subdivision so no adjustment is necessary.

Existing Conditions: The site is generally rectangular in shape and the topography of the site is relatively flat. Approximately 0.4 acres of wetlands are present on the site, which are proposed to be filled with mitigation provided in an off-site wetland mitigation bank. A previous wetland delineation was approved on May 20, 2015 and is good for five years. A Joint Permit Application was submitted to the Oregon Department of State Lands (DSL) and the U.S. Army Corps of Engineers (Corps) to permit the wetland impacts but has since expired. A new application will be submitted to the USACE and DSL concurrent with this application.

III. COMPLIANCE WITH DEVELOPMENT CODE CRITERIA:

The following is a written statement describing the applicant's proposal and how it meets the requirements for a Subdivision Tentative Plan (SRC 205.010(d)). This application also includes a request for a Class 1 Adjustment to the minimum lot depth for double frontage lots.

1. **The tentative subdivision plan complies with the standards of this Chapter and with all applicable provisions of the UDC, including, but not limited to, the following:**

    - **Lot standards, including, but not limited to, standards for lot area, lot width and depth, lot frontage and designation of front and rear lot lines.**
    - **City infrastructure standards.**
    - **Any special development standards, including, but not limited to, floodplain development, special setbacks, geological or geotechnical analysis, and vision clearance.**

Applicant's Response: The proposed tentative subdivision plan complies with the applicable provisions of the Salem Revised Code (SRC). The minimum lot area requirement for single family dwellings is 4,000-square feet excluding the area of an accessway, except for infill lots, in which the minimum lot area shall be 5,500-square feet, excluding the area of any accessway.

As shown on the Preliminary Site Plan, the smallest lot proposed is 4,633 square feet and the largest lot proposed is 9,314 square feet with the average lot size being 5,740 square feet. All lots have a minimum of 40-feet of frontage and the cul-de-sac bulbs have a minimum of 30-feet of frontage at the property line and a minimum of 40-feet at the front building setback line. All lots meet the minimum 40-feet width and the 70-feet depth requirement.

The tentative subdivision plan complies with City of Salem Public Works infrastructure design standards, including the proposed stormwater management system (see Storm Water Management Report in appendix). Existing 46th Avenue transitions from a 34-foot pavement width within a 60—foot right-of-way (see Section #3 – Sheet C-5.01). The local street, 46th Avenue is designed with a minimum of 30-feet of pavement width and a minimum right-of-way width of 60-feet as required in SRC, Chapter 803 (see Section #2 – Sheet C-5.01).

The sanitary sewer system for the site is designed in conformance with the City of Salem Public Works design standards, is a public system and is consistent with the original subdivision approval. The water system for the site is designed in conformance with the City of Salem Public Works design standards, is a public system and is consistent with the original subdivision approval as well.

The storm sewer system for the site has been redesigned. The storm water treatment and flow control is being accommodated by utilizing pre-treatment manholes and the long bioswale/detention basin adjacent Center Street. Before flowing into the basin, the storm water flows pass through pre-treatment manholes (Downstream Defender from Hydro International) which then flow into the basin. During low flows, the basin serves as a bio-swale, being over 100 feet in length, flowing in both directions towards the outlet near the center of the basin. During higher flows the basin fills up with outlet flows controlled by the outlet control manhole out on Center Street. The Preliminary Storm Water Report is included in the appendix of this submittal.

According to the City of Salem Floodplain Map, the proposed development is not in a mapped floodplain and no special setback requirements apply.

2. **The tentative subdivision plan does not impede the future use or development of the property or adjacent land.**

Applicant's Response: The tentative subdivision plan is consistent with the land use of the adjacent properties and does not impede the future use or development of this property or adjacent land. The properties bordering the site to the west and south are developed with single family homes, which is a use consistent with this proposal. The property bordering to the east is developed and is used for a church congregation. There is the potential for future development of the church property. Conversations with DSL and the Corps, however, have indicated that they will not permit filling of the wetlands located in the southeast corner of the site in order to allow the extension of 46th Avenue to the south, which was included in the original subdivision approval to be extended from 46th Avenue NE to the church property. The City of Salem planning staff has requested that the Applicant provide street stubs to the east church property as shown on the revised Site Plan so future connectivity can be provided through the church property.

The church has submitted a letter to the City of Salem asking that the requested street stub to their property not be required as it will have a direct impact on their future ability to expand in the manner which they are planning. This letter is also included in the appendix of this application.

The elimination of a street stub from 46th Avenue NE to the church property does not prohibit the church property from future development of a portion of their property. The church property has access to the existing public street Baldwin Avenue, which is stubbed to the south boundary of the church property and to Center Street NE, which runs along the frontage of the site. These two public street connections will provide the required access and connectivity if a portion of the church property becomes available for future development.

3. **Development within the tentative subdivision plan can be adequately served by City infrastructure.**

Applicant's Response: The proposed development can be adequately served by City infrastructure with the proposed improvements. Public sanitary and storm sewers are in place in Center Street NE and have adequate capacity for use by this development. The public water system in Center Street NE and 46th Avenue NE will be looped together and will provide the required fire and domestic water protection. Center Street NE is a major arterial street and is adequate to serve the development. 46th Avenue NE is a local street and will be continued through the site connecting with Center Street NE directly opposite of Sphinx Court. Franchise utilities are available to the site and will be designed into the site to service individual lots. Please reference the Sanitary & Water Plan and the Grading and Drainage Plan for details regarding the utility design. Along the entire frontage on the development side of Center Street NE, the applicant will construct improvements for a setback sidewalk.

4. **The street system in and adjacent to the tentative subdivision plan conforms to the Salem Transportation System Plan.**

Applicant's Response: The extension of 46th Avenue NE through the site is consistent with the recommendations for the local street connectivity element included in the Salem Transportation Plan.

5. **The street system in and adjacent to the tentative subdivision plan is designed to provide for the safe, orderly, and efficient circulation of traffic into, through and out of the subdivision.**

Applicant's Response: The extension of 46th Avenue NE through the site is designed in such a way that it lines up with Sphinx Court NE, directly to the north of the proposed subdivision. This new connection, along with the curb and sidewalk improvements to 46th Avenue NE, within the subdivision, will provide for safe, orderly and efficient circulation of traffic into, through and out of the subdivision.

6. The tentative subdivision plan provides safe and convenient bicycle and pedestrian access from within the subdivision to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development. For purposes of this criterion, neighborhood activity centers include, but are not limited to, existing or planned schools, parks, shopping areas, transit stops, or employment centers.

Applicant's Response: To the north of the development is Center Street NE. Center Street NE is designated as a major arterial street in the Salem Transportation System Plan (TSP), and as such is subject to a 48-foot wide right-of-way improvement. Proposed improvements include a bicycle lane and sidewalks which meet the ADA requirements. The Applicant's proposed improvements are shown on Sheet C5.01 – Section #1.

To the south of the subject property is 46th Avenue NE. This street is designated as a local street in the Salem TSP, and as such is subject to a 30-foot wide improvement within a 60-foot right-of-way. The proposed subdivision plan will connect 46th Avenue NE to Center Street NE and will have the required curb and sidewalk improvements - thus providing safe, orderly and efficient circulation of traffic into, through and out of the subdivision. Together, the Center Street NE and 46th Avenue NE improvements will provide improved pedestrian, bicycle, and vehicular circulation between the new and existing subdivision areas. Additionally,

with the extension of 46th Avenue NE, contiguous sidewalks will be available from the proposed subdivision to Auburn Elementary School.

7. **The tentative subdivision plan mitigates impacts to the transportation system consistent with the approved Traffic Impact Analysis, where applicable.**

Applicant's Response: Pursuant to the City of Salem Revised Code (SRC) Chapter 803.015 and the adopted Institute of Transportation Engineer's Trip Generation Manual, a Traffic Impact Study (TIA) is not required for this subdivision. This criterion is met.

8. **The tentative subdivision plan takes into account the topography and vegetation of the site so the need for variances is minimized to the greatest extent practicable.**

Applicant's Response: There are a total of 6 trees on the property – four of which are subject to the standards of this ordinance. Of these four trees, only one is slated for removal (see Tree Preservation Plan). The site does not have any significant or heritage trees or riparian corridors on the site. There is not any vegetation other than field grass or unusual topography at the site. The site is a cleared grass field with flat topography; therefore, disruption to this topography and vegetation is expected and approved by the city on development sites. This criterion is met.

9. **The tentative subdivision plan takes into account the topography and vegetation of the site, such that the least disruption of the site, topography, and vegetation will result from the reasonable development of the lots.**

Applicant's Response: As stated earlier, the design of the proposed subdivision has considered both topography and vegetation on the site. The property is fairly flat, and the proposed grading has been designed to minimize impacts to the existing wetlands while providing positive drainage for lots and roads. This criterion is met.

10. **When the tentative subdivision plan requires an Urban Growth Preliminary Declaration under SRC Chapter 200, the tentative subdivision plan is designed in a manner that ensures that the conditions requiring the construction of on-site infrastructure in the Urban Growth Preliminary Declaration will occur, and, if off-site improvements are required in the Urban Growth Preliminary Declaration, construction of any off-site improvements is assured.**

Applicant's Response: An Urban Growth Preliminary Declaration application is not required for this subdivision because the property is within the Urban Service Area.

GENERAL SHEET NOTES:

1. REFERENCE C-1.11 AND C-1.13 FOR STREET TYPICAL SECTIONS.
2. REFERENCE C-1.07 FOR OVERALL GRADING AND DRAINAGE PLAN.

CURVE TABLE

NO	LENGTH	RADIUS	DELTA	CHORD	CHORD BEARING
C1	39.02'	25.0'	089°25'06"	35.18'	S45°08'17"E
C2	39.02'	25.0'	089°25'06"	35.18'	S45°08'17"E
C3	31.62'	20.0'	090°34'34"	28.43'	S44°51'43"W
C4	8.14'	45.0'	010°21'48"	8.13'	S85°00'16"W
C5	29.93'	45.0'	038°06'20"	29.38'	S60°46'12"W
C6	12.16'	45.0'	015°29'19"	12.13'	S33°58'23"W
C7	49.89'	45.0'	063°31'30"	47.38'	S05°32'01"E
C8	8.91'	30.0'	017°01'04"	8.88'	S28°47'14"E
C9	10.39'	30.0'	019°51'07"	10.34'	S10°21'08"E
C10	31.62'	20.0'	090°34'34"	28.43'	N44°51'43"E
C11	19.31'	30.0'	036°52'12"	18.97'	S18°00'32"W
C12	22.10'	45.0'	028°08'27"	21.88'	S22°22'24"W
C13	30.73'	45.0'	039°07'19"	30.13'	S11°15'29"E
C14	29.18'	45.0'	037°09'05"	28.67'	S49°23'41"E
C15	17.46'	45.0'	022°13'57"	17.35'	S79°05'13"E
C16	31.23'	20.0'	089°28'20"	28.15'	N45°09'44"W
C17	31.23'	20.0'	089°28'20"	28.15'	S45°09'44"E
C18	31.60'	20.0'	090°31'40"	28.41'	N44°50'16"E
C19	63.23'	40.0'	090°34'34"	56.85'	S44°51'43"W
C20	63.23'	40.0'	090°34'34"	56.85'	S44°51'43"W
C21	62.46'	40.0'	089°28'20"	56.31'	S45°09'44"E
C22	62.46'	40.0'	089°28'20"	56.31'	S45°09'44"E

PROJECT DELIVERY GROUP
Engineers | Land Surveyors | Project Managers

REGISTERED PROFESSIONAL ENGINEER
62670PE
OREGON
NOV. 9, 1999
KEITH WHISENHUNT
EXPIRES:

DATE SIGNED:

BELLE PLAINE ESTATES SUBDIVISION

JENSEN CONSULTING & DEVELOPMENT, LLC

5190 KALE ST NE
SALEM, OR 97305

REVISIONS

NO.	DESCRIPTION	DATE	BY

PROJECT NO.: 13080
HORIZ DATUM: NAD 83-SPCS
VERT DATUM: NGVD 1929(47)
HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DESIGN: KW
DRAWN: JSL
CHECKED:
APPROVED:

SHEET TITLE

PRELIMINARY SITE PLAN

C-1.05

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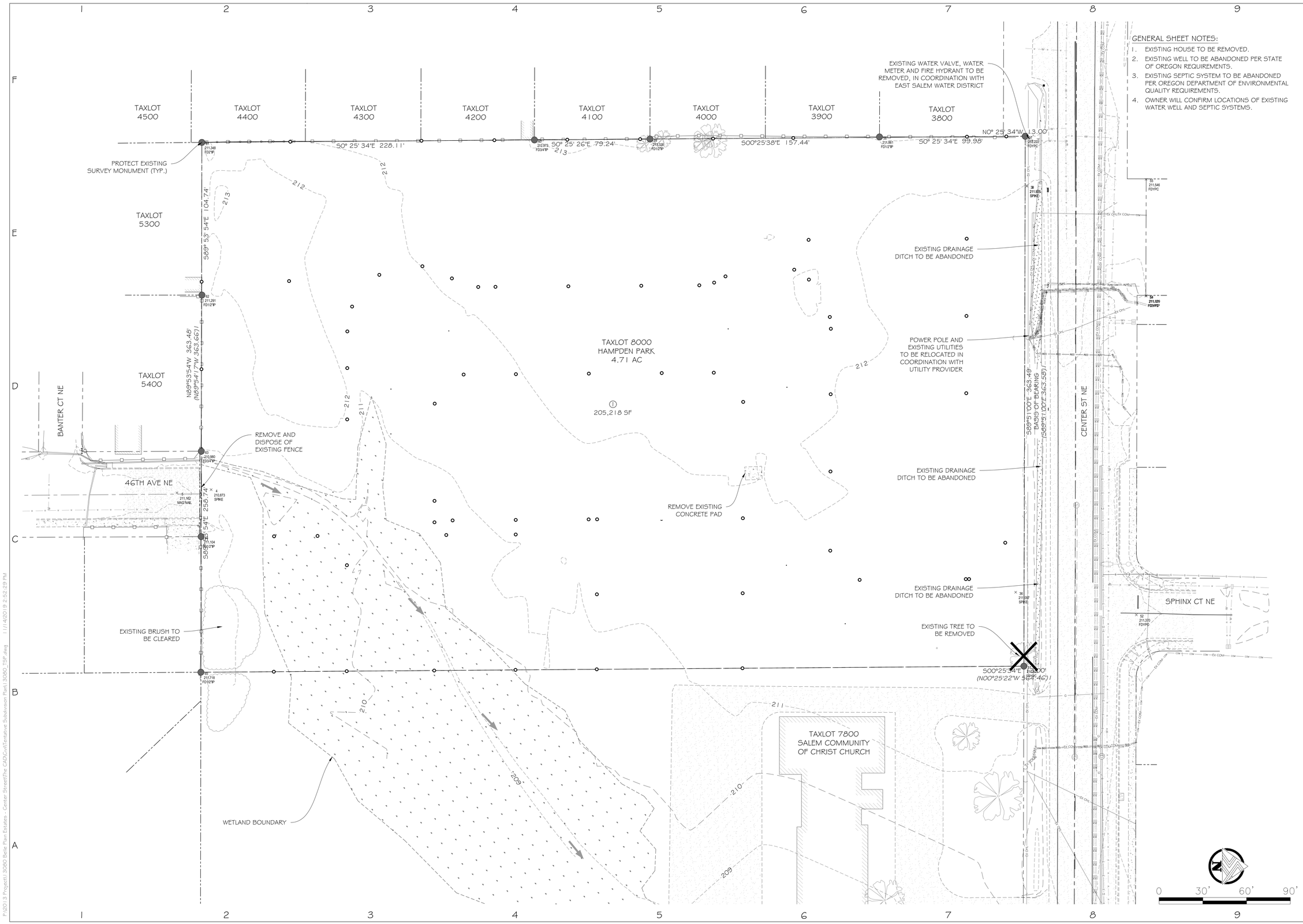

GENERAL SHEET NOTES:

1. EXISTING HOUSE TO BE REMOVED.
2. EXISTING WELL TO BE ABANDONED PER STATE OF OREGON REQUIREMENTS.
3. EXISTING SEPTIC SYSTEM TO BE ABANDONED PER OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY REQUIREMENTS.
4. OWNER WILL CONFIRM LOCATIONS OF EXISTING WATER WELL AND SEPTIC SYSTEMS.

PROJECT DELIVERY GROUP
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SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN

C-1.01

PROPOSED FIRE HYDRANT

PROPOSED ULTRA-BLOCK RETAINING WALL

STORMWATER DETENTION FACILITY

STREET B

STREET C

STREET D

BANTER CT NE

46TH AVE NE

CENTER ST NE

SPHINX CT NE

CONNECT TO EXISTING WATER MAIN

WETLAND BOUNDARY

SALEM COMMUNITY OF CHRIST CHURCH

ADA COMPLIANT RAMPS

STORMWATER FACILITY

1 205,218 SF

10' PSDE

20' PUSDE

10' PUE

5' RWE

BELLE PLAINE ESTATES SUBDIVISION

PROJECT DELIVERY GROUP
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REGISTERED PROFESSIONAL ENGINEER
62679PE
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SHEET TITLE

PRELIMINARY SANITARY & WATER PLAN

C-1.09

0 30' 60' 90'

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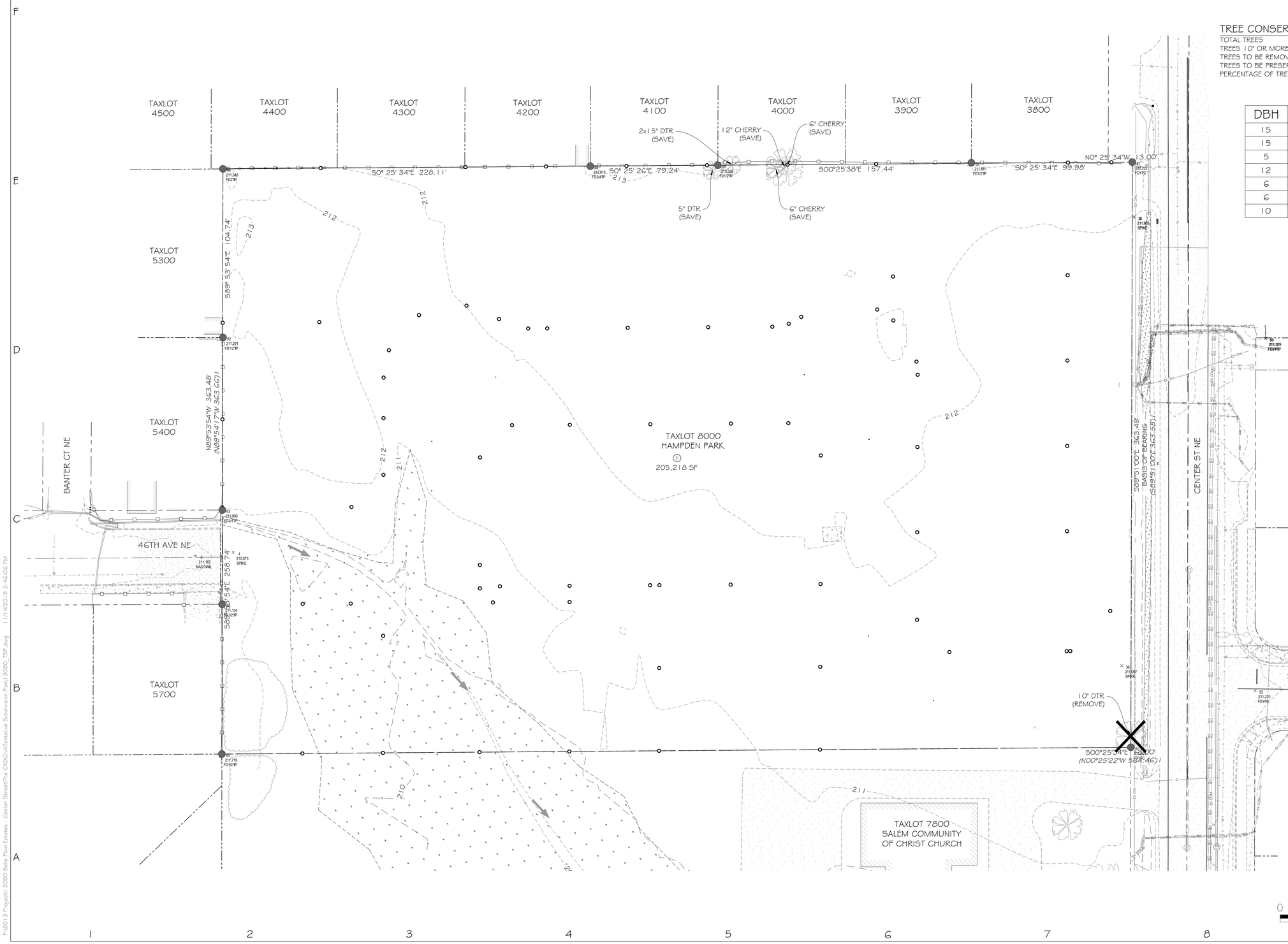

TREE CONSERVATION DATA

TOTAL TREES	-	7
TREES 10" OR MORE DBH	-	4
TREES TO BE REMOVED 10" OR MORE DBH	-	1
TREES TO BE PRESERVED 10" OR MORE DBH	-	3
PERCENTAGE OF TREES TO BE PRESERVED	-	75%

DBH	TYPE	SAVE
15	DTR	Y
15	DTR	Y
5	DTR	Y
12	CHERRY	Y
6	CHERRY	Y
6	CHERRY	Y
10	DTR	N

PROJECT DELIVERY GROUP
Engineers | Land Surveyors | Project Managers

REGISTERED PROFESSIONAL ENGINEER
62679PE
OREGON
NOV. 9, 1999
KEITH WHISENHUNT
RENEWAL: 6/30/2020
EXPIRES:

DATE SIGNED:

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SHEET TITLE

TREE CONSERVATION PLAN

C-1.11

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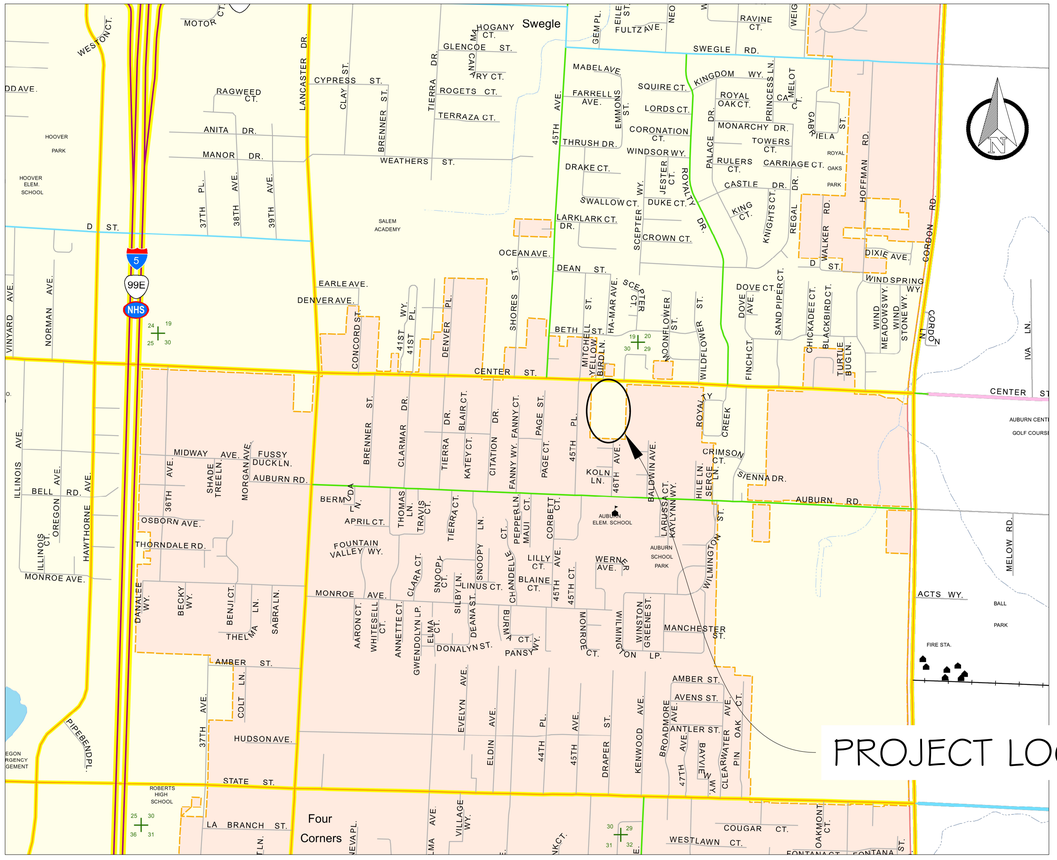
TENTATIVE SUBDIVISION SUBMITTAL

FOR

BELLE PLAINE ESTATES

SALEM, MARION COUNTY, OREGON
NOVEMBER 2019



VICINITY MAP
NTS

SHEET INDEX

PROJECT CONTACTS

OWNER:
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5190 KALE ST NE
SALEM, OR 97305
503-932-2259

CIVIL ENGINEER:
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KEITH WHISENHUNT, PE
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503-364-4004 (OFFICE)
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KEITHW@PDGNW.COM

LAND SURVEYOR:
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503-364-4004 (OFFICE)
KEITHW@PDGNW.COM

LOCAL JURISDICTION:
CITY OF SALEM PUBLIC WORKS
DEVELOPMENT SERVICES
PUBLIC WORKS DEPARTMENT
555 LIBERTY ST SE
SALEM, OR 97301
503-588-6211

ABBREVIATIONS USED

AC	=	ASPHALT CONCRETE
DBH	=	DIAMETER AT BREAST HEIGHT
DTR	=	DECIDUOUS TREE
ROW	=	RIGHT OF WAY
PCC	=	PORTLAND CEMENT COMPANY
PSDE	=	PRIVATE STORM DRAIN EASEMENT
PUE	=	PUBLIC UTILITY EASEMENT
PUSDE	=	PUBLIC STORM DRAIN EASEMENT
SDMH	=	STORM DRAIN MANHOLE
SDDMH	=	STORM DRAIN DEFENDER MANHOLE
SSMH	=	SANITARY SEWER MANHOLE
TYP.	=	TYPICAL

LEGEND

PROPOSED PCC
PROPOSED AC
EXISTING WATER
EXISTING SANITARY SEWER
EXISTING STORM SEWER
EXISTING COMMUNICATIONS
EXISTING UTILITY POLE AND DROP
EXISTING WOOD FENCE
EXISTING GAS LINE
SWALE/RAIN GARDEN
PROPOSED WATER LINE
PROPOSED SANITARY SEWER SERVICE
PROPOSED WATER METER
PROPOSED FIRE HYDRANT
PROPOSED WATER VALVE
PROPOSED BLOW-OFF VALVE
EXISTING TYPE 4 CATCH BASIN
PROPOSED TYPE 3 CATCH BASIN
SANITARY SEWER CLEANOUT
PROPOSED SD CONTROL STRUCTURE
PROPOSED CENTERLINE MONUMENT
PROPOSED CLUSTER MAILBOX
SIDEWALK TO BE CONSTRUCTED WITH STREET
EXISTING GROUND
FINISH GRADE
WETLANDS
MITIGATED WETLANDS
STORM DETENTION OUTFALL RIP-RAP
STORM DETENTION RETAINING WALL
STORM DETENTION CHECK DAM
DETENTION BASIN BOTTOM
DETENTION BASIN SIDE, SLOPES ≤ 3:1

PROJECT DELIVERY GROUP
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COVER SHEET

C-0.01

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DRAINAGE NOTES

D1 DRAIN TO STREET FROM WEEP HOLES IN THE CURB

D2 DRAINS TO STORMWATER DETENTION FACILITY

PROPOSED ULTRA-BLOCK RETAINING WALL

STORM DETENTION CHECK DAM (TYP)

PROPOSED STORMWATER DETENTION FACILITY

STORM DRAIN OUTFALL RIP-RAP

SD LAT

REFERENCE DETAIL 1 ON SHEET C-5.01

REFERENCE DETAIL 2 ON SHEET C-5.01

REFERENCE DETAIL 3 ON SHEET C-5.01

FOR TYPICAL KNUCKLE SECTION, REFERENCE DETAIL 4 ON SHEET C-5.01

REAR-LOT AREA DRAINS (TYPICAL)

STREET B

STREET C

STREET D

BANTER CT NE

46TH AVE NE

CENTER ST NE

SPHINX CT NE

STORMWATER FACILITY

SALEM COMMUNITY OF CHRIST CHURCH

WETLAND BOUNDARY

10' PSDE

20' PUSDE

10' PUE

0 30' 60' 90'

PROJECT DELIVERY GROUP
Engineers | Land Surveyors | Project Managers

REGISTERED PROFESSIONAL ENGINEER
62679PE
OREGON
NOV. 9, 1999
KEITH WHISENHUNT
EXPIRES:
DATE SIGNED:

BELLE PLAINE ESTATES SUBDIVISION

JENSEN CONSULTING & DEVELOPMENT, LLC

5190 KALE ST NE
SALEM, OR 97305

REVISIONS			
NO.	DESCRIPTION	DATE	BY

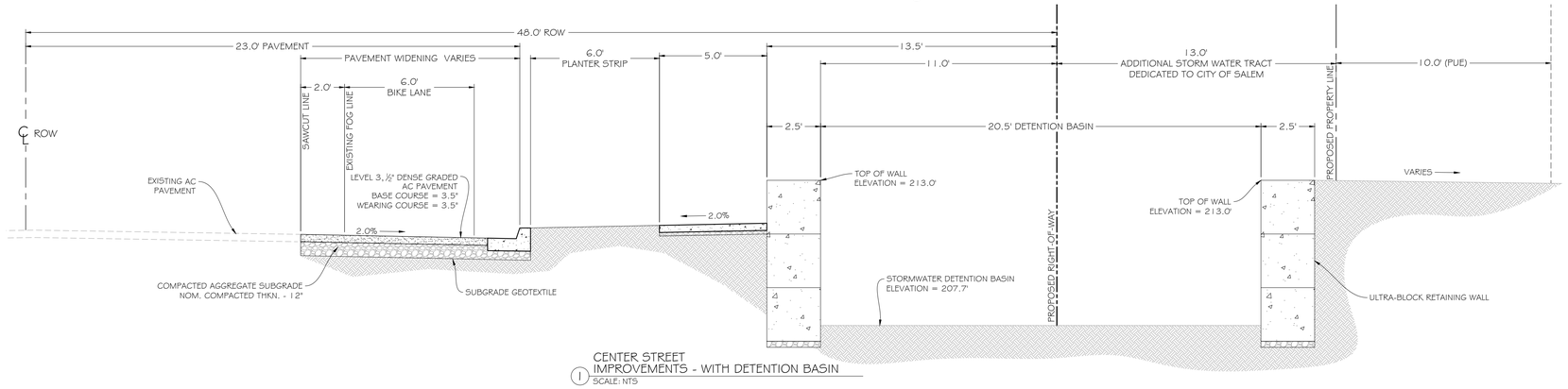
PROJECT NO:	13080
HORIZ DATUM:	NAD 83-SPCS
VERT DATUM:	NGVD 1929(47)
HORIZ SCALE:	AS SHOWN
VERT SCALE:	AS SHOWN
DESIGN:	KW
DRAWN:	JSL
CHECKED:	
APPROVED:	

SHEET TITLE

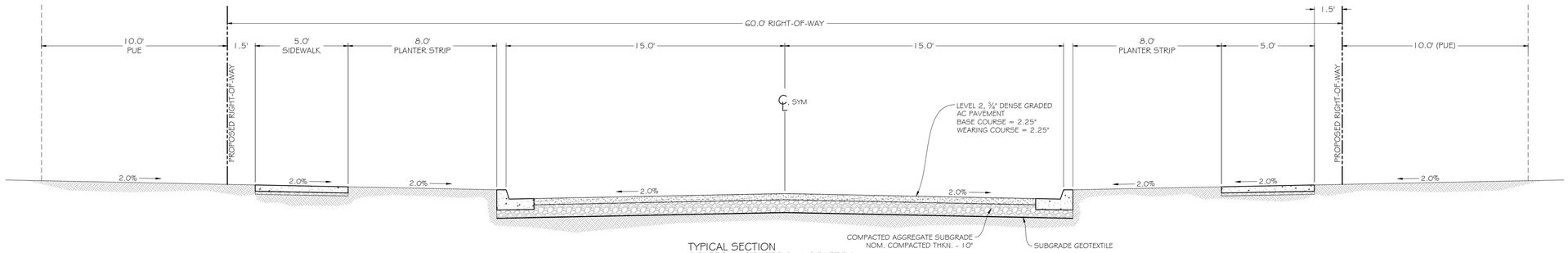
PRELIMINARY GRADING & DRAINAGE

C-1.07

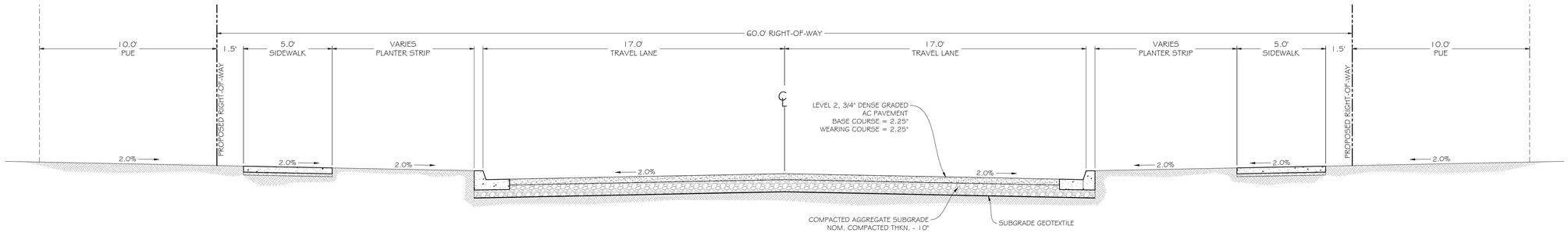
P:\2013 Projects\3080 Belle Plain Estates - Center Street\The CAD\Civil\Tentative Subdivision Plan\3080_TSP.dwg 11/4/2019 2:44:12 PM



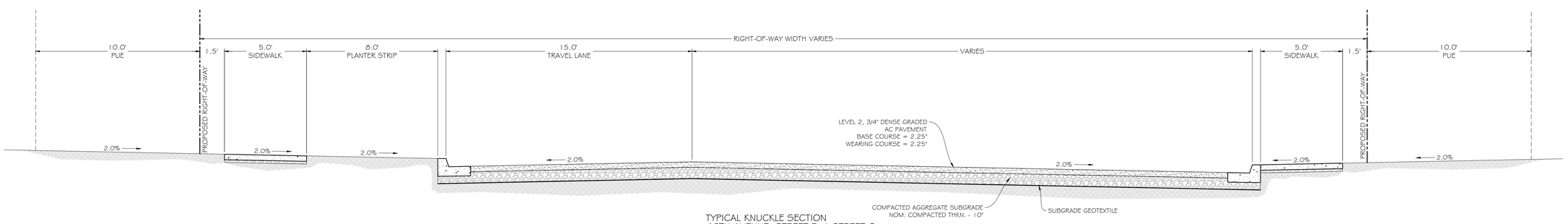
1 CENTER STREET IMPROVEMENTS - WITH DETENTION BASIN
SCALE: NTS



2 TYPICAL SECTION STREET B, STREET C, & STREET D
SCALE: NTS



3 TYPICAL SECTION 46TH AVENUE NE
SCALE: NTS



4 TYPICAL KNUCKLE SECTION 46TH AVENUE, STREET B, & STREET C
SCALE: NTS

PROJECT DELIVERY GROUP
Engineers | Land Surveyors | Project Managers

REGISTERED PROFESSIONAL ENGINEER
62670PE
OREGON
NOV. 9, 1999
KEITH WHISENHUNT
EXPIRES:
DATE SIGNED:

BELLE PLAINE ESTATES SUBDIVISION

JENSEN CONSULTING & DEVELOPMENT, LLC
5190 KALE ST NE
SALEM, OR 97305

REVISIONS

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VERT SCALE:	AS SHOWN
DESIGN:	KW
DRAWN:	JSL
CHECKED:	KW
APPROVED:	

SHEET TITLE

TYPICAL STREET SECTIONS

C-5.01

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CITY OF Salem
AT YOUR SERVICE

Traffic Engineering Section
Public Works Department
555 Liberty Street SE, Room 325 Telephone: 503-588-6211
Salem, Oregon 97301-3513 TTY: 503-588-6292

Trip Generation Estimate

Street _____

Bin # _____ TGE # _____

Date Received _____

Section 1 (To be completed by applicant.)

Applicant Name: Don Jensen Telephone: 503-932-2259

Applicant Mailing Address: 5190 Kale St. NE, Salem, OR 97305

Location of New Development: 4560 Center St. NE, Salem OR 97301
(Please provide street address. If unknown, provide approximate address and geographical description/nearest cross streets.)

Description and Size of New Development: 24-Lot Single-Family Residential Subdivision
(e.g., 150 single-family homes, 20,000 sq. ft. office addition, 12-pump gas station, 50-student day care, additional parking, etc.)

Description and Size of Existing/Past Development, if any (note whether to remain or be removed): Vacant 4.71 acres

Planning Action Involved, if any: None
(e.g., zone change, subdivision, partition, conditional use, PUD, mobile home park, etc.)

Building Permit Involved: Yes ☐ No ☑

Section 2 (To be completed by City staff.)

Proposed Use	Existing Use
Development Quantity:	Development Quantity:
ITE Land Use Code:	ITE Land Use Code:
Trip Generation Rate/Equation:	Trip Generation Rate or Equation:
Average Daily Trips:	Average Daily Trips:
ELNDT Adjustment Factors	**ELNDT Adjustment Factors**
Trip Length: Linked Trip:	Trip Length: Linked Trip:
TSDC Trips:	TSDC Trips:

Section 3 (To be completed by City staff.)

Transportation Impact Analysis (TIA)

Net Increase in Average Daily Trips: _____
(Proposed use minus existing use.)

☐ A TIA **will** be required:
- ☐ Arterial/Collector—1000 Trip/day Threshold
- ☐ Local Street/Alley—200 Trip/day Threshold
- ☐ Other: _____

☐ A TIA **will not** be required.

Transportation Systems Development Charge

Net Increase in TSDC Trips: _____
(Proposed use minus existing use.)

☐ A TSDC **will** be required.
(Fee determined by Development Services.)

☐ A TSDC **will not** be required.

(For additional information, refer to the back of this application.)

Section 4 (To be completed by City staff.)

Remarks:

Date: _____

cc: ☐ Chief Development Services Engineer
- ☐ Community Development
- ☐ Building Permit Application
- ☐ _____

By: _____

REDMOND GEOTECHNICAL SERVICES

December 19, 2014

Mr. Jim Seely
Encore Development, LLC
941 Player Drive North
Salem, Oregon 97303

Dear Mr. Seely:

Re: Results of Street Coring and Laboratory Testing Services, Determination of Pavement Section Thickness and Subgrade Soil Classification, Proposed Averette Residential Development Site, Center Street NE and Sphinx Drive NE, Salem (Marion County), Oregon

In accordance with the request of Mr. Keith Whisenhunt of Project Delivery Group, LLC, we have completed our street coring along the south side of Center Street NE and exploratory test hole excavation as well as laboratory testing services for the proposed Averette Residential Development project located in Salem (Marion County), Oregon. The purpose of our work at this time was to determine the existing pavement section thickness and the subgrade soil classification (Resilient Modulus) in accordance with the City of Salem Asphalt Concrete Pavement Design Standard (Development Bulletin # 33) dated January 1, 2000.

Specifically, on December 9, 2014, we were present at the site and performed one (1) core hole within the southerly east bound lane of Center Street NE approximately 50 feet to the west of the intersection with Sphinx Drive NE. Additionally, one (1) exploratory test hole was excavated by hand within the proposed future extension of Sphinx Drive NE (see attached Site Exploration Plan).

The core hole advanced in Center Street NE (CH-# 1) found approximately 3.0 to 3.5 inches of asphaltic concrete (AC) over approximately 8.0 to 9.0 inches of aggregate base rock (ABR). The subgrade soils encountered within the core hole and/or test hole consisted of medium to orangish-brown, medium stiff, sandy, clayey silt (ML).

A sample of the existing subgrade soil encountered in the exploratory test hole (TH-#1) was collected and tested in the laboratory in accordance with the ASTM Vol. 4.08 Part D-2844-69 (AASHTO T-190-93) test method for the determination of the subgrade soil "R"-value and expansion pressure. The results of the "R"-value testing was then converted to an equivalent Resilient Modulus (M_R) in accordance with current AASHTO methodology.

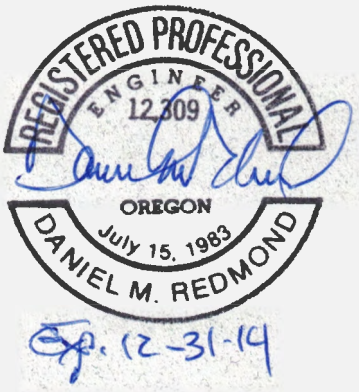
The results of the laboratory "R"-value test revealed that the existing sandy, clayey silt subgrade soils have an apparent "R"-value of 27 (see attached Results of R (Resistance) Value Tests). Using the current AASHTO methodology for converting "R"-value to Resilient Modulus (M_R), the sandy, clayey silt subgrade soil has a Resilient Modulus (M_R) of 5,476 psi which is classified as "Fair" (M_R = 5,000 psi to 10,000 psi).

A review of the above referenced City of Salem Asphalt Concrete Pavement Design Standard reveals that the required thickness of asphaltic concrete and aggregate base rock for a Collector Residential Street with a subgrade classification of "Fair" is 7.0 inches and 12.0 inches (500,000-1,000,000 EAL's), respectively. In this regard, the results of the recent street core indicates that the existing southerly east bound lane of Center Street NE does not contain a thickness of asphaltic concrete and aggregate base rock which meets and/or exceeds the City of Salem standards for a Collector Street. Additionally, the above referenced City of Salem Asphalt Concrete Pavement Design Standard reveals that the required thickness of asphaltic concrete and aggregate base rock for a Local Residential Street with a subgrade classification of "Fair" is 4.5 inches and 10.0 inches (50,000 to 100,000 EAL's), respectively.

We appreciate this opportunity to be of service to you at this time and trust that the above information is suitable to your present needs. Should you have any questions regarding the above information or if you require any additional information and/or assistance, please do not hesitate to call.

Sincerely,

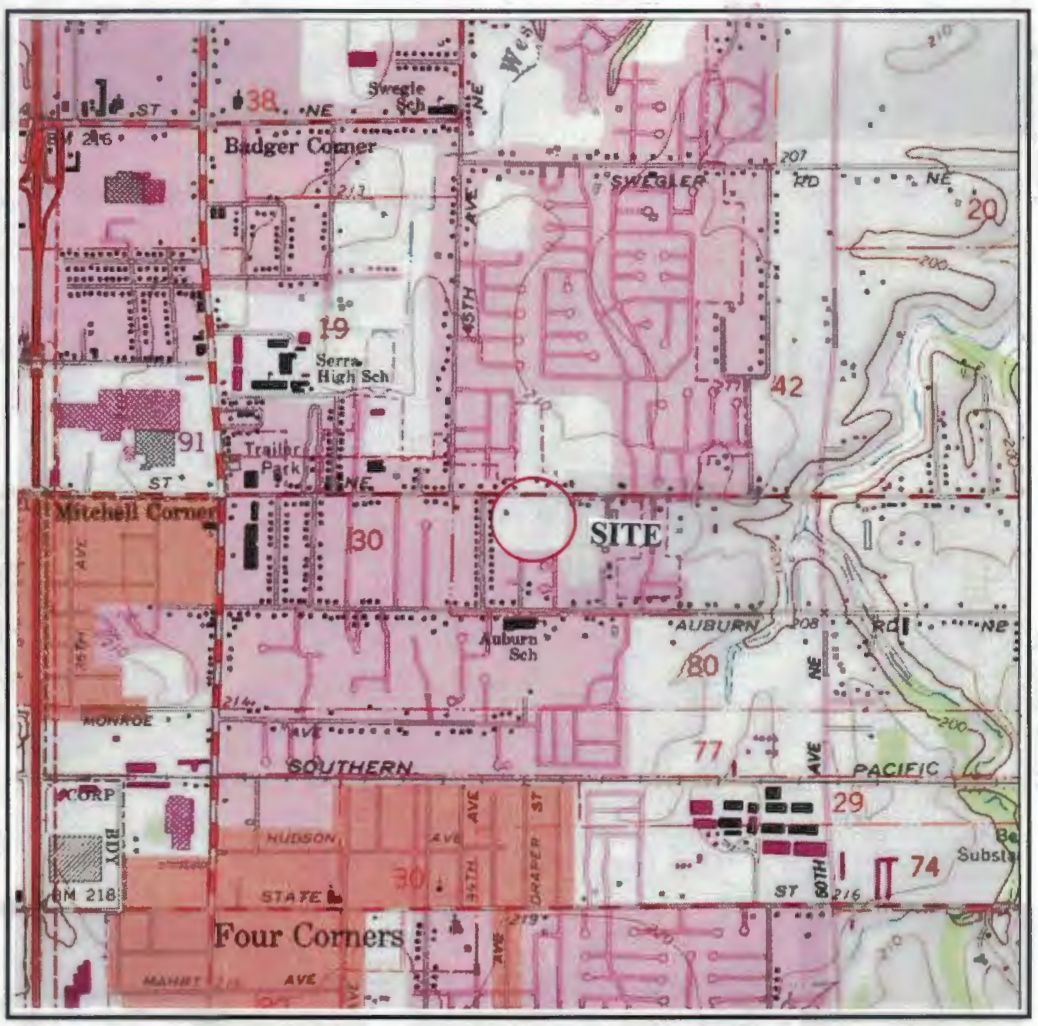
Daniel M. Redmond, P.E., G.E.
President/Principal Engineer



cc: Mr. Keith Whisenhunt
Project Delivery Group, LLC

Attachments:

Figure No. 1 - Site Vicinity Map
Figure No. 2 - Site Exploration Plan
Figure No. 3 - Log of Core/Test Holes
Figure No. 4 - Results of R (Resistance) Value Tests



SALEM EAST QUADRANGLE
OREGON—MARION CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 STAYTON 15' QUADRANGLE

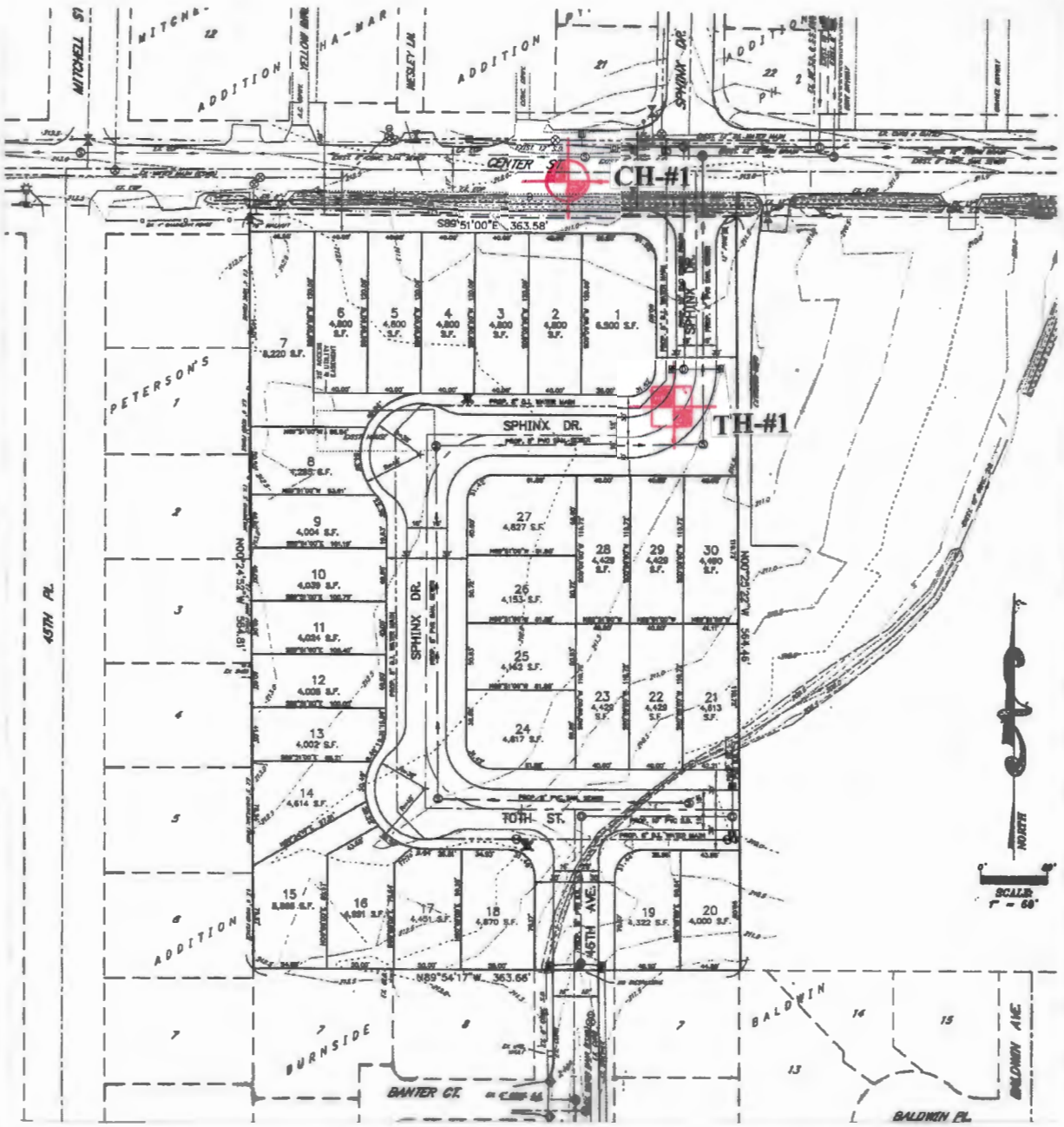
SCALE 1:24 000

1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

SITE VICINITY MAP

Project No. 1352.001.G	CENTER STREET SUBDIVISION	Figure No. 1



LEGEND

CH-#1 Indicates approximate location of exploratory core hole

TH-#1 Indicates approximate location of exploratory test hole

SITE EXPLORATION PLAN

Project No. 1352.001.G

CENTER STREET SUBDIVISION

Figure No. 2

LOG OF CORE/TEST HOLES

CH-#1: 3.0 to 3.5 inches of Asphaltic Concrete (AC) over
8.0 to 9.0 inches of Aggregate Base Rock (ABR)

TH-#1: 12.0 inches of dark brown, very moist to wet, soft, organic, sandy and clayey SILT (Topsoil) over medium brown to orangish-brown, very moist, medium stiff, sandy, clayey SILT (ML)

Figure No. 3

RESULTS OF R (RESISTANCE) VALUE TESTS

SAMPLE LOCATION: TH-#1

SAMPLE DEPTH: 1.0 feet bgs

Specimen	A	B	C
Exudation Pressure (psi)	213	326	441
Expansion Dial (o.ooo1")	0	1	2
Expansion Pressure (psf)	0	3	8
Moisture Content (%)	20.3	17.5	14.4
Dry Density (pcf)	91.9	93.6	96.7
Resistance Value, "R"	16	28	34
"R"-Value at 300 psi Exudation Pressure = 27			

SAMPLE LOCATION:

SAMPLE DEPTH:

Specimen	A	B	C
Exudation Pressure (psi)			
Expansion Dial (0.0001")			
Expansion Pressure (psf)			
Moisture Content (%)			
Dry Density (pcf)			
Resistance Value "R"			
"R"-Value at 300 psi Exudation Pressure =			

Figure No. 4

DRAINAGE DESIGN REPORT and STORMWATER MANAGEMENT PLAN

For

Belle Plaine Estates

Jensen Consulting and Development, LLC
Salem, Oregon

Prepared for:

CITY OF Salem AT YOUR SERVICE

City of Salem
555 Liberty St SE
Salem, OR 97301

Date:
December 2019

Site Location:
4560 Center Street NE
072W30AA/8000 –4.9 Acres

Prepared by:

Project Delivery Group, LLC
3772 Portland Road NE
Salem, Oregon 97301

REGISTERED PROFESSIONAL ENGINEER
15716
OREGON
JANUARY 21, 1992
LEE NORTH BRENNAN

RENEWS: 12/31/2019

Table of Contents

Project Overview and Description

Size and Location of Project

The proposed project encompasses approximately 4.9 acres and is located at 4560 Center Street NE, in Salem, Marion County, Oregon (Site). Tax map and lot number is 072W30AA 8000.

Refer to the infrastructure improvement drawings for the Site map.

Brief Description of Project Scope and Proposed Improvements

The Belle Plaine Estates Project consists of a 24-lot single-family residential subdivision with public streets and public utilities. The project is being designed to January 2016 City of Salem (City) Stormwater Design Standards. In addition to the City's design standards, the project will be designed to meet the U.S. Army Corps of Engineers Standard Local Operating Procedures for Endangered Species (SLOPES) requirements as part of the wetland fill-removal permitting processes associated with Site. The development incorporates a detention basin and vegetated swales to provide for stormwater flow control, detention, and water quality enhancement.

Contaminants of Concern

Pollutants of concern for residential developments, as listed in the DEQ Stormwater Management Submission Guidelines for Removal/Fill Permit, include the following:

- Sediment
- Metals (zinc, copper, lead, etc.)
- Oil, Grease and Other Petroleum
- Nutrients (nitrogen, phosphorous, other fertilizer ingredients)
- Pesticides, herbicides, fungicides
- Chloride
- Fecal Coliform
- Hydrocarbons

Description and size of the watershed draining to the site

The Site is located in Southwest Salem along the south side of Center Street NE, and west side of 45th Place NE. The Site slopes to the southeast with grades ranging from 0 to 3%. The majority area of the Site however is very flat, with a grade of approximately 0.3% from south to north. The Site encompasses approximately 5.02 acres.

The adjoining existing residential development to the south discharges stormwater runoff into an open channel on the Site through an existing culvert. The size of the Off-Site drainage basin draining to this point is approximately 5.0 acres in size. With the extension of 46th Avenue NE, the off-site drainage basin will be piped directly to the existing wetland to maintain hydrology flows to the wetlands; therefore, the off-site basin will not be accounted for in the proposed stormwater design.

The existing site contains a single-family residence with associated landscaping, paved patios, and gravel accessways. The remainder of the site include open areas and a small portion of a wetland (0.13 acres). The existing residence

and the existing gravel accessway will be removed with the development of the subdivision. The impermeable surfaces of the existing residence have not been included in the pre-development hydrology analysis of the site.

There is an existing underground stormwater collection and conveyance system located in Center Street NE, which is located to the north of the site. For purposed of this report, it is assumed that this system has adequate capacity to convey the pre-development flows from the site. The public storm sewer system in Center Street NE is shallow in depth, which limits the pipe connection to it from this Project. It also limits the low-impact development alternatives available for treatment of the collected stormwater.

It is the intent of the design of the Project to have the Site operate under two drainage areas: Drainage Basin A and Drainage Basin B, as illustrated in the drainage basin maps provided in Appendix A. The northerly basin (hereinafter referred to as "Drainage Basin A") encompasses approximately 145,757 square feet (3.35 acres) and is the majority of the Site. Drainage Basin A drains primarily to the north towards Center Street NE where any flows enter the existing stormwater management system. The second drainage area (Drainage Basin B) encompasses approximately 61,573 square feet (1.41 acres) and drains primarily to Center Street NE. There is a third drainage basin located in the southwesterly portion of the Site which includes the wetland and adjoining areas (both in pre-and post-development) that drain into the wetland, which do not contain any impermeable surfaces, and which encompasses approximately 11,504 square feet (0.26 acres). Currently, the drainage flow through this drainage basin is via a small open channel (1'-2' wide) in a northeasterly direction through the wetlands and into the public piped stormwater system in Center Street NE. This third basin (including the wetland area) was not included in the areas of stormwater run-off to be collected treated and detained, and thus is not discussed further in this drainage report.

Drainage Basin A is designed for collected run-off to flow through a pre-treatment manhole (Downstream Defender®) before being conveyed through a vegetated swale (with 6" wide concrete check dams for flow attenuation/spreading purposes) that is part of the westerly portion of the swale/detention basin located parallel with and along the frontage of Center Street NE, where it will be treated before being discharged out of the swale/detention basin and into the existing stormwater management system in Center Street, NE. This westerly vegetated swale portion of the swale/detention basin is approximately 176 feet in length. The collected stormwater from Drainage Basin B (which also includes the collection of stormwater run-off along Center Street NE) passes through a separate pre-treatment manhole (Downstream Defender®) before being conveyed through a vegetated swale with the same type of concrete check dams that is part of the easterly portion of the swale/detention basin; this easterly vegetated swale portion of the swale/detention basin is approximately 104 feet in length.

The flow out of the vegetated swale/detention basin is regulated by an outlet control manhole located out in the Center Street NE right-of-way. The manhole is equipped with five orifices for flow control, and an overflow riser pipe to address very large storm event flows without overtopping of the swale/detention basin.

Summary of the Manner in which Existing Trees and Native Vegetation are Impacted and/or Preserved

The site has an existing single-family dwelling, paved patios and graveled accessways. There are no significant trees. The vegetation is predominately planted grasses. The grass cover will be maintained until the development of the subdivision occurs which will require removal of the vegetated cover.

Summary of the Extent in which GSI/MEF criteria are met

This project is classified as a Large Project because of land disturbance over 10,000 square feet in area. Large projects are required to use Green Stormwater Infrastructure (GSI) to the City's maximum extent feasible (MEF) criteria to meet flow control and treatment performance standards. All the collected stormwater of the two drainage basins will be passed through pre-treatment manholes followed by vegetated swales passage prior to discharge. The vegetated swale will utilize ¾" to 2-inch river rock placed 2.5 to 3 inches deep on high density coconut matting over 12 inches of native topsoil. The bottom of the swale will be planted with species such as rushes and other forbs, as well as shrubs, that are well-suited for wet-to-moist soil conditions.

Regulatory Permits Required

A 1200-C permit from the Oregon Department of Environmental Quality (DEQ) is required along with City of Salem permits. A Section 404 permit will be applied for and obtained from the Oregon Department of State Lands (DSL) and the U.S. Army Corps of Engineers (ACOE) to fill in the existing ditch and adjoining wetland areas to extend 46th Avenue NE and complete the access to and the formation of the associated lots. There will be no work within the wetland until the appropriate fill-removal permit is obtained.

Escape route for the 100-year storm

The escape route for the stormwater runoff from the site due to a 100-year storm event will be via surface overflow conveyance out the northerly end of the Project where any floodwaters will flow to the existing piped public underground system in Center Street NE, being conveyed to the north in underground piping and open ditches through residential neighborhoods. The City identifies the drainage ditch/underground piping as the "East Fork Little Pudding". The flow continues in the underground piping/open ditch conveyance system until the system discharges into the West Fork Little Pudding River located approximately 2.0 miles to the northeast of the Site. The West Fork Little Pudding River discharges into the Little Pudding River at a point located approximately 4.3 miles to the northeast of the Site.

Methodology

Depth to Groundwater

A geotechnical investigation is currently being conducted for the development of Belle Plaines Estates. Groundwater elevations are expected to fluctuate seasonally in accordance with rainfall conditions and are not expected to approach surface elevation. Thus, groundwater presence was not included in the hydrology calculations of this report.

Delineation of Existing Trees and Native Vegetation

The Project site, as previously discussed, has a planted grass cover. There are no significant streets or native vegetation presence.

Description of Soil Types and Any Other Geologic Features Impacting Stormwater Infrastructure Design

Per the Natural Resource Conservation Service (NRCS) Soil Survey, the site consists predominately (75.7%) of Woodburn Silt loam (WuA, hydrologic soil group C) and (approximately 24.3%) of Concord Silt Loam (Co, hydrologic

soil group C/D). A copy of the NRCS soils report for this site is provided in Appendix B. There are no other geological features impacting stormwater infrastructure design for the site. For the purposes of this report, the Site soils are considered to all be in group C.

Identification of any hazardous materials based on past use of the project Site

No hazardous materials are expected on this Site.

Analysis

Computational methods utilized and software utilized

In accordance with City of Salem January 2016 Stormwater Design Standards, the TR-55 method Hydrograph Type 1A, 24-hour storm was used to model the required design storms. HydroCAD modeling software was used to size the stormwater facilities. The design storms used were:

- Salem water quality storm (1.38 inches)
- ½ of the 2-year 24-hour storm (1.80 inches)
- 2-year 24-hour storm (2.2 inches) (SLOPES requirements)
- 10-year 24-hour storm (3.2 inches)
- 25-year 24-hour storm (3.6 inches) (used for water quality Max. Velocity)
- 100-year 24-hour storm (4.4 inches) (used only to confirm overflow conveyance and freeboard in swale/basin during storm event)

For the Site, the pre-development peak 2 year storm event flow rate was determined to be 0.15 cfs. For design purposes, half of that flow rate was 0.08 cfs. Using the hydrograph method and the HydroCAd modeling software, this equated to a 1.80 inch storm event.

Design Assumptions

As per the City of Salem requirements, the water quality design storm event is 1.38 inches of rainfall. SLOPES utilizes the less intense ½ of the 2-year, 24-hour event (1.1 inches of rainfall). For the purposes of this report, the City of Salem water quality storm event of 1.38 inches of rainfall was used for the water quality parameters of this report and the storm water management system for the Site.

As previously discussed, the site has been divided up into 2 drainage basins:

- Drainage Basin A: Collects storm water from approximately 3.35 acres (1.76 acres impervious) which flows through a pre-treatment manhole (Downstream Defender®) before being conveyed through a vegetated swale (with concrete check dams for flow spreading purposes) that is part of the westerly portion of the swale/detention basin located parallel with and along the frontage of Center Street NE; it will be treated for water quality utilizing bio-retention and phytoremediation through the vegetated bottom and shallow slopes of the westerly vegetated swale portion of the swale/detention basin (approximately 176 feet in length) before being discharged out of the swale/detention basin and into the existing stormwater management system in Center Street, NE. Outflow from the swale/detention basin is controlled by an outlet control manhole which discharges into the existing piped underground conveyance system within Center Street NE.

- Drainage Basin B: Collects storm water from approximately 1.41 acres (0.77 acres impervious) which flows through a separate pre-treatment manhole (Downstream Defender®) before being conveyed through a vegetated swale (with concrete check dams for flow spreading purposes) that is part of the easterly portion of the swale/detention basin located parallel with and along the frontage of Center Street NE; it will be treated for water quality utilizing bio-retention and phytoremediation through the vegetated bottom and shallow slopes of the easterly vegetated swale portion of the swale/detention basin (approximately 104 feet in length) before being discharged out of the swale/detention basin and into the existing stormwater management system in Center Street, NE. Outflow from the swale/detention basin is controlled by an outlet control manhole which discharges into the existing piped underground conveyance system within Center Street NE.

The drainage basins are illustrated on the drainage basin maps provided in Appendix A.

The swale detention basin will have a bottom elevation ranging from 207.65 to 207.85 with a top of swale basin minimum elevation of 210.95. A City specified orifice outflow control manhole structure, located between the detention basin outlet and the inlet to the existing stormwater management system in Center Street NE, will control outflows from the swale/detention basin such that the combined peak discharge flows from the north and south basins during the design storm events will not exceed the calculated peak pre-design combined flow for these two basins.

A Site-specific percolation/infiltration test has not been performed. For purposes of this study, an assumed percolation/infiltration rate of 0.5 inches per hour was assumed, which is a conservative value for the type C hydrologic soils of the Site. For design purposes, it was assumed to utilize 50% of this assumed rate or 0.3 inches per hour. In the HydroCAD model and associated results, this outflow is labelled "discarded"

Hydrology Calculations

Run-off Curve Numbers (CN) and Time of Concentration (Tc)

For run-off estimation, a pre-and post-development flow path was determined for the Drainage Basins A and B, as illustrated in the drainage basin maps provided in Appendix A. The pre-developed runoff CN for the site was the City required 72 for soils within hydrologic group C, with the exception of the existing paved street portion of Center Street (which will be retained as part of the proposed development) with a CN of 98. The post-developed runoff CN used for the site is based on the following assumptions:

- Paved Streets: 98
- Sidewalks: 98
- New House Roof Areas (assumed 2,000 s.f./lot): 98
- New House Driveway Areas (assumed 400 s.f.): 98
- Landscaped Yard Areas; all other pervious areas: 74.

North Drainage Basin: The pre-development flow path consists of sheet flow across the lot for approximately 300 feet, and then transitions into shallow concentrated flow when it enters the existing drainage swale along the frontage of Center Street NE. The post-development flow path is aligned as sheet flow across the assumed grassed portion of one of the lots for approximately 85 feet, where it is collected by a private area drain for conveyance though a 6-inch-diameter pipe to a new curb inlet to be developed in the extension of 46th Ave. NE. It then flows though the underground piped storm water conveyance system; passes though the pre-treatment manhole; and

then is discharged into the westerly end of the westerly portion of the swale/detention basin. No delay time was accounted for in the pre-treatment manhole nor in the flow through the swale/basin. The pre-and post-development flow paths (which includes a 5-minute delay from when the storm starts to when surface water run-off occurs [as per the methodology of the Oregon Department of Transportation Hydrology Manual] parameters were input into the HydroCAD program which determined a pre-development Tc of 27.9 minutes, and a post-development Tc of 27.4 minutes.

South Drainage Basin: The pre-development flow path consists of sheet flow for approximately 267 feet. The post-development flow path consists of sheet flow across the assumed grassed side of one of the lots for approximately 88 feet; then across the sidewalk and landscape strip areas before discharging into the street gutter. The street gutter flows (shallow concentrated flow) south and then north and into the new curb inlet at the intersection with Center St. NE. It then flows though the underground piped storm water conveyance system; passes though the pre-treatment manhole; and then is discharged into the easterly end of the easterly portion of the swale/detention basin. No delay time was accounted for in the pre-treatment manhole nor in the flow through the swale/basin. The pre- and post-development flow paths (which includes a 5-minute delay from when the storm starts to when surface water run-off occurs [as per the methodology of the Oregon Department of Transportation Hydrology Manual] parameters were input into the HydroCAD program which determined a pre-development Tc of 29.5 minutes, and a post-development Tc of 29.0 minutes.

The Hydro CAD model results for the basins in a pre- and post-development scenario are provided in Appendix C.

Using the derived Tc's, weighted CNs, and other drainage basin parameters, the combined peak pre-and post-development flow rates (with and without flow control) for ½ of the 2-year, 2-year (SLOPES), 10-year, and 25-year design storm event peak flows are summarized in Table 2 below.

Table 1: Combined Drainage Basins A and B Pre-and Post-Development Calculated Peak Stormwater Flows

Storm Event	Pre-Development (cfs)	Post-Development (cfs)	
		No Controls	With Controls
½ of 2-year	0.08	0.50	0.08
2-year	0.15	0.81	0.15
10-year	0.69	1.72	0.59
25-year	0.96	2.10	0.91

The combined drainage basin outflow model results for the predevelopment (Reach 5R) and Post Development (Reach 7R) scenarios, are provided in Appendix C.

Treatment and flow control sizing calculations

Swale/Detention Basin and Outflow Control Structure

The swale/detention basin details are provided in the infrastructure improvement drawings. In general, the swale/detention basin consists of a mega-block concrete retaining wall along the northerly, westerly and southerly sides of the swale/basin, with a 20-foot-wide flat bottom, and a 5:1 access slope on the easterly end of the swale/basin. Swale/detention basin has a bottom design elevation of 207.85 at its westerly and easterly end, and a bottom/outlet grate elevation of 207.65 at the catch basin outlet structure. The minimum top surface elevation of the swale/basin's top of slope or top of wall is 210.95. The outlet for the swale/basin is a City Type 3 catch basin (ditch inlet) with a downgradient outlet flow control manhole. The outlet flow control structure has a lower 1.7-inch-diameter orifice set an elevation of 206.99; a second 2.0-inch-diameter orifice with an invert elevation of 209.00; a set of 3 6.0-inch-diameter orifices with inverts of 209.30 to the top, and an overflow riser pipe (12-inch-diameter) rim elevation of 209.60.

During the "1/2 the 2-year" design storm event, the peak water surface elevation in the basin was modeled to be 208.83, with a peak outflow rate of 0.08 cubic feet per second (cfs), and a required storage volume of approximately 5,885 cubic feet. During the "2-year" design storm event (modeled for SLOPES requirements), the peak water surface elevation in the basin was modeled to be 209.29, with a peak outflow rate of 0.15 cfs, and a required storage volume of 8,430 cubic feet; there is approximately 1.66 feet of freeboard in the basin during the 2-year event. During the "10-year" design storm event, the peak water surface elevation in the basin was modeled to be 209.45, with a peak outflow rate of 0.59 cfs, and a required storage volume of 9,307 cubic feet; there is approximately 1.50 feet of freeboard in the basin during the 10-year event. During the "25-year" design storm event, the peak water surface elevation in the basin was modeled to be 209.53, with a peak outflow rate of 0.62 cfs, and a required storage volume of 9,743 cf; there is approximately 1.42 feet of freeboard in the swale/basin during the 25-year event. During the "100-year" design storm event, the peak water surface elevation in the basin was modeled to be 210.03, with a peak outflow rate of 1.89 cfs, and a required storage volume of 10,735 cf; there is approximately 1.24 feet of freeboard in the basin during the 100-year event. The basins full capacity to the minimum top surface elevation of 210.95 is approximately 17,722 cubic feet.

Thus, the calculated post-development controlled peak outflows for the modeled storm events do not exceed the peak calculated pre-development outflow rates, as summarized in Table 1 above. The Hydro CAD model results of the routing of the various design storm events through the detention basin are provided in Appendix C

Drainage Basin A: Vegetated Swale (Water Quality)

After flowing through the pre-treatment manhole, the run-off from Drainage Basin A flows through the vegetated swale located along the westerly portion of the swale/detention basin along the frontage of Center Street NE. It is designed so that low-flow storm water run-offs will flow through the vegetated swale and either percolate or be captured within the growing medium or will be enhanced by the vegetative swale's phytoremediation processes. Per the January 2016 City of Salem Stormwater Design Standards, the westerly vegetated swale City of Salem requirements and the modeling results are summarized in Table 2 below.

Table 2: Vegetated Swale Requirements/Modeling Results for Drainage Basin A

Code Requirement	Water Quality Required	Water Quality Designed	Conveyance Required	Conveyance Designed	Meets Design Requirements
Minimum Hydraulic Residence Time: (min)	9	53.6	~	~	YES
Maximum Water Design Depth: (ft)	0.33	0.14	1	0.17	YES
Minimum Freeboard (for facilities not protected from high flows): (ft)	~	~	1	1.4	YES
Manning "n" Value:	0.25	0.25	0.03	0.03	YES
Maximum Velocity (fps)	0.9	0.05	3	0.50	YES
Minimum Length of Swale: (ft)	100	176	100	176	YES

Drainage Basin B: Vegetated Swale (Water Quality)

Similar to the vegetated swale of Drainage Basin A, the collected storm water run-off from Drainage Basin B flows through the pre-treatment manhole, and then continues through the vegetated swale located along the easterly portion of the swale/detention basin along the frontage of Center Street NE, which is designed similar to the westerly vegetated swale: it is designed so that low-flow storm water run-offs will flow through the vegetated swale and either percolate or be captured within the growing medium or will be enhanced by the vegetative swale's phytoremediation processes. Per the January 2016 City of Salem Stormwater Design Standards, the easterly vegetated swale Hydrocar model results area are summarized in Table 3 below.

Table 3 – Vegetated Swale Requirements/Modeling Results for Drainage Basin B

Code Requirement	Water Quality Required	Water Quality Designed	Conveyance Required	Conveyance Designed	Meets Design Requirements
Minimum Hydraulic Residence Time: (min)	9	30.5	~	~	YES
Maximum Water Design Depth: (ft)	0.33	0.07	1	0.10	YES
Minimum Freeboard (for facilities not protected from high flows): (ft)	~	~	1	3.0	NO
Manning "n" Value:	0.25	0.25	0.03	0.03	YES
Maximum Velocity based on 25-year flow: (fps)	0.9	0.06	3	0.50	YES
Minimum Length of Swale: (ft)	100	104	100	104	YES

The Hydro CAD model results for the vegetated swales for the two drainage basins are provided in Appendix D.

Outlet Conveyance Pipe Capacity Calculations

The greatest outflow rate for the pipes would be at the outflow pipe from the control structure for the north and south basins, during the 100-year storm event. The peak outflow from the detention basin's outlet control structure during the modeled 100-year design storm event is 1.90 cfs, with the 12" pipe having a capacity of 2.6 cfs; it is flowing at approximately 73% of capacity during the 100-year design storm event. Thus, the conveyance pipe from the outlet control structure has enough capacity to convey the 100-year storm event peak flows. The Hydro CAD model conveyance results for the outlet pipe from the flow control manhole (Reach 7R) is provided in Appendix C.

GSI Analysis

Implementation of GSI to Maximum Extent Feasible

With the incorporation of the pre-treatment manholes with the vegetated swales, this project implements Green Stormwater Infrastructure (GSI) to 100% of the Maximum Extent Feasible (MEF). Thus, the stormwater management system has been designed with the utilization of GSI to the MEF.

Stormwater Facility Details/Exhibits

The drainage basin maps for the pre-and post-development scenarios are provided in Appendix A. The maps illustrate the drainage basins and flow paths utilized in the analysis. The infrastructure improvement drawings illustrate the vegetated swale/detention basin, and outlet flow control structure details.

Source Control / Downstream Analysis Report / Open Channel Hydraulic Modeling / Floodway and Floodplain Analysis

Source control, downstream analysis, open channel hydraulic modeling, and floodway and floodplain analysis are not required for this project. Potential pollution sources are expected to be those typical for residential developments as summarized above in Contaminants of Concern. A downstream analysis report is not required as it is assumed that the downgradient system has adequate capacity to address pre-development flows from the Site and the peak flows from the Site are being limited to be at or below the calculated pre-development flow rates for the ½ of the 2-year and 10-year design storm events. There are no significant open channels in proximity to the Site, which would require modeling for downstream analysis purposes. No floodway or floodplain analysis will be required for this Project since the property is not in a mapped FEMA area of special flood hazard.

SLOPES

Provided below is a response to each item listed in the SLOPES response form:

Describe all low-impact development practices that will be used to infiltrate or evaporate runoff from the project area.

In order to protect endangered species and other fauna within the Project area, during the development of Belle Plaine Estates, some low-impact development practices will be used as part of the stormwater management system. These practices include bio-retention and phytoremediation through swales with a vegetated bottom.

Clearly document the amount of post construction runoff (PCR) that would be treated.

The Post Construction Runoff (PCR) volumes for a design storm of 50% of the 2-yr 24-hr storm (1.1 inches); the total impervious area (2.53 acres) multiplied by the 2-yr 24-hour design storm in feet (0.092 feet) calculates a PCR volume for the site of 0.023 acre-feet.

Detail how and where water quality treatment would be provided for the PCR.

The pretreatment manholes and the vegetated swales will act as both a low-impact development practice and water quality treatment for 0.23 acre-ft of PCR. The vegetated swales will use a layer of growing medium to facilitate bioretention, bio-accumulation, biodegradation, and the use of native grasses, rushes, and other forbs and shrubs established within the growing medium for both bio-attenuation and phytoremediation (bio-uptake) processes. During the water quality design event, the run-off will be filter through the growing medium, with any overflow discharging into the ditch inlet.

Provide the specific stormwater manual reference for the design.

The Project is being designed to January 2016 City of Salem Design Standards pertaining to storm water management standards, which are modeled after the City of Portland Bureau of Environmental Service's Stormwater Management Manual (SWMM, 2016 version) and associated design standards and details.

Specify the BMPs that will be used to ensure the stormwater conveyance maintains natural drainage patterns, allows water quality treatment before mingling with stormwater run-on from adjacent area, and prevents erosion along the flow path to receiving water.

Rather than let stormwater runoff flow directly from the streets or lots into the existing underground stormwater piped conveyance system with eventual discharge into an unnamed tributary of Fruitland Creek, the runoff will be passed through pre-treatment manholes and the filtered through the vegetated swales before it enters the public underground piped conveyance system in Center Street NE. The detention basin will provide the required peak flow rate outlet control before the stormwater is discharged into the existing underground storm drain system within Center Street NE, where it will eventually discharge into the "East Fork Little Pudding" underground piped and open ditch conveyance system. By treating the water at the source, the toxicity and flow rates of the water flowing into the City's "East Fork Little Pudding" storm water conveyance system, then into the West Fork Little Pudding River, then into Little Pudding River, and eventually into the Willamette River will be greatly reduced. A vegetated swale with low flow velocities will also provide opportunity for the water to be infiltrated into the ground. Additionally, best management practices from the erosion control plan will continue to be implemented during infrastructure and residence development within the Belle Plaine Estates residential subdivision, implementing these BMP items as a minimum:

Erosion Control
- Preserve Natural Vegetation
- Dust Control
- Temporary/Permanent Seeding

Sediment Control
- Sediment Fence (Perimeter)
- Inlet Protection
- Construction Entrance

Pollution Control
- Proper Signage
- Hazardous Waste Management
- Spill Kit on site
- Designated Fueling Area
- Concrete Washout Area
- Recycle Materials
- Paving Operations Controls

Provide detail regarding the amount, type and location of mitigation for any untreated PCR.

Approximately 100% of the drainage area will be treated within the vegetated swales. As designed, there will be no untreated PCR.

Operate, inspect and maintain each stormwater facility in accordance with the maintenance plan, including scheduled inspections recorded in a maintenance log and timely correction of any deficiencies noted.

The vegetated swales will be maintained to provide a minimum of 80% of vegetative cover. An inspection and maintenance plan along with a copy of the maintenance logs for the vegetated swales, detention basin, catch basins and manholes, and the outflow control structure have been provided in Appendix F. The party responsible for the detention basin and the storm water management system inspection, operation, and maintenance will initially be the Developer of Belle Plaine Estates as part of the infrastructure warranty process within the City of Salem (1 year) During this warranty period, the Developer is legally and financially responsible for the pre-treatment manholes, vegetated swales, detention basin, and flow control outlet manhole, and will be responsible to provide inspection and timely correction of any deficiencies noted with these and other components of the stormwater management system. At the end of this period, the operation, maintenance, inspection, inspection logging, and legal and fiscal responsibility for these noted storm water management system components will be transferred to the City of Salem upon acceptance of the infrastructure improvements completed by the Developer; as such, the City will maintain the financial and legal responsibility of the stormwater management system, including the pre-treatment manholes, vegetates swales, detention basin, and outflow control manhole.

Conclusion

The stormwater treatment and flow control for the Site have been designed and sized to be in compliance with the January 2016 City of Salem Stormwater Design Standards.

A summary of design features of the designed stormwater management system is as follows:

Pre- and Post-Development Calculated Peak Stormwater Outflows, Combined Drainage Basins A and B

Storm Event	Pre-Development (cfs)	Post-Development (cfs)	
		No Controls	With Controls
½ of 2-year	0.08	0.50	0.08
2-year	0.15	0.81	0.15
10-year	0.69	1.72	0.59
25-year	0.96	2.10	0.91

Vegetated Swale Requirements/Modeling Results for Drainage Basin A

Code Requirement	Water Quality Required	Water Quality Designed	Conveyance Required	Conveyance Designed	Meets Design Requirements
Minimum Hydraulic Residence Time: (min)	9	53.6	~	~	YES
Maximum Water Design Depth: (ft)	0.33	0.14	1	0.17	YES
Minimum Freeboard (for facilities not protected from high flows): (ft)	~	~	1	1.4	YES
Manning "n" Value:	0.25	0.25	0.03	0.03	YES
Maximum Velocity based on 25-year flow: (fps)	0.9	0.05	3	0.50	YES
Minimum Length of Swale: (ft)	100	176	100	176	YES

Vegetated Swale Requirements/Modeling Results for Drainage Basin B

Code Requirement	Water Quality Required	Water Quality Designed	Conveyance Required	Conveyance Designed	Meets Design Requirements
Minimum Hydraulic Residence Time: (min)	9	30.5	~	~	YES
Maximum Water Design Depth: (ft)	0.33	0.07	1	0.10	YES
Minimum Freeboard (for facilities not protected from high flows): (ft)	~	~	1	3.10	NO
Manning "n" Value:	0.25	0.25	0.03	0.03	YES
Maximum Velocity based on 25-year flow: (fps)	0.9	0.06	3	0.50	YES
Minimum Length of Swale: (ft)	100	104	100	104	YES

Peak Static Heads within System:

During the 10-year design storm event: 209.45
During the 25-year design storm event: 209.53
During the 100-year design storm event: 209.71

Outlet Control Structure Overflow Riser Elev.: 209.60
Minimum Top Surface Elev. of Detention Basin: 210.95

APPENDIX A—DRAINAGE BASIN MAPS

DRAINAGE
BASIN A
145,757 SF

① 205,218 SF

DRAINAGE
BASIN B
61,573 SF

FLOW PATH

46TH AVE NE

CENTER ST NE

SPHINX CT NE

WETLANDS

TAXLOT 7800
SALEM COMMUNITY OF
CHRIST CHURCH

0 30' 60' 90'

PROJECT DELIVERY GROUP
Engineers | Land Surveyors | Project Managers

REGISTERED PROFESSIONAL ENGINEER
OREGON
NOVEMBER 19, 1999
KEITH W. HISENHUNT
EXPIRES: JUNE 30, 2020

PRELIMINARY NOT FOR CONSTRUCTION

BELLE PLAINE ESTATES SUBDIVISION

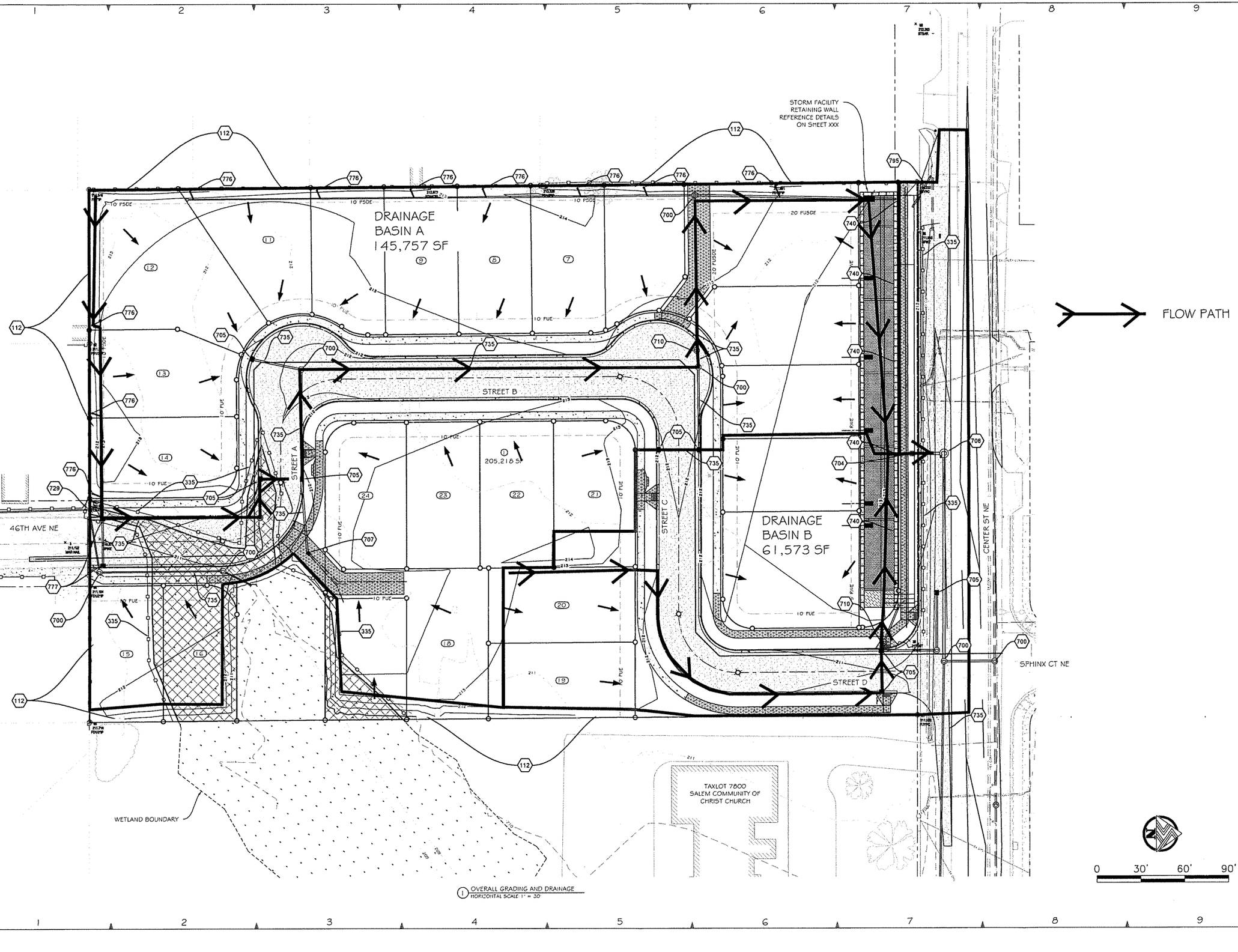
JENSEN CONSULTING & DEVELOPMENT

SALEM, OREGON

	13060
	NAD 83-SPCS
	NGVD 1929(47)
	AS SHOWN
	AS SHOWN
	KW
	JSL
	KW

PRE-DEVELOPMENT DRAINAGE BASINS AND FLOW PATHS

EXHIBIT A



1 OVERALL GRADING AND DRAINAGE
HORIZONTAL SCALE 1" = 30

PROJECT DELIVERY GROUP
Engineers | Land Surveyors | Project Managers

REGISTERED PROFESSIONAL ENGINEER
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	NGVD 1929(47)
	AS SHOWN
	AS SHOWN
	KW
	JSL
	KW

POST DEVELOPMENT DRAINAGE BASINS AND FLOW PATHS

EXHIBIT B

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 Marion County Area, Oregon

June 11, 2018

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,020 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 45 90 180 270

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 1:20,000.

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

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

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

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

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

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

Soil Survey Area: Marion County Area, Oregon
Survey Area Data: Version 14, Sep 19, 2017

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

Date(s) aerial images were photographed: Jun 15, 2015—Jun 23, 2015

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Co	Concord silt loam	1.1	24.3%
WuA	Woodburn silt loam, 0 to 3 percent slopes	3.6	75.7%
Totals for Area of Interest		**4.7**	**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.

Marion County Area, Oregon

Co—Concord silt loam

Map Unit Setting

National map unit symbol: 24p2
Elevation: 120 to 350 feet
Mean annual precipitation: 40 to 45 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 190 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Concord and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Concord

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Mixed mineralogy alluvium

Typical profile

H1 - 0 to 15 inches: silt loam
H2 - 15 to 29 inches: silty clay
H3 - 29 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water storage in profile: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Forage suitability group: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

Minor Components

Dayton

Percent of map unit: 10 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave

Across-slope shape: Concave
Hydric soil rating: Yes

WuA—Woodburn silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 24s3
Elevation: 150 to 350 feet
Mean annual precipitation: 40 to 45 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 200 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Woodburn and similar soils: 85 percent
Minor components: 1 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: Linear
Across-slope shape: Linear
Parent material: Silty alluvium and mixed mineralogy loess

Typical profile

H1 - 0 to 17 inches: silt loam
H2 - 17 to 32 inches: silty clay loam
H3 - 32 to 68 inches: silt loam

Properties and qualities

Slope: 0 to 3 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 low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 25 to 32 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Forage suitability group: Moderately Well Drained < 15% Slopes (G002XY004OR)
Hydric soil rating: No

Minor Components

Aquolls, somewhat poorly drained
Percent of map unit: 1 percent
Landform: Terraces
Hydric soil rating: Yes

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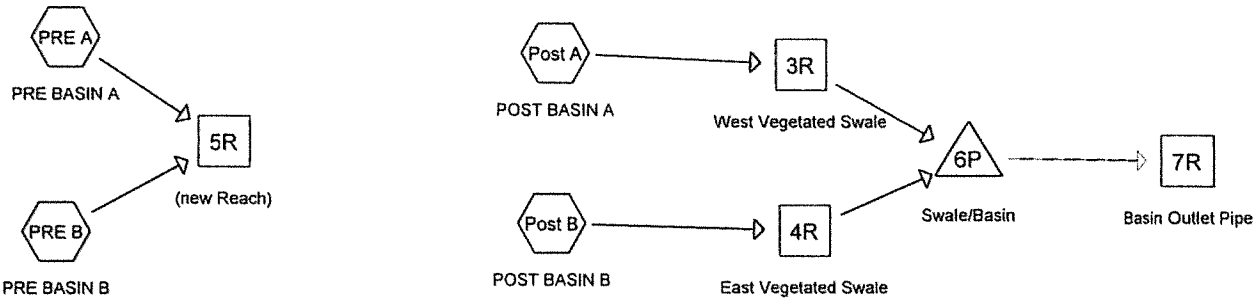
APPENDIX C— DRAINAGE BASIN, DETENTION POND, AND OUTLET PIPE HYDRO CAD MODEL ANALYSIS RESULTS



Subcat Reach Pond Link

Routing Diagram for 13080 Bella Cresta -SLOPES half of 2-year 0.3 exfil

Prepared by Project Delivery Group, LLC - LB, Printed 12/5/2019

Summary for Subcatchment Post A: POST BASIN A

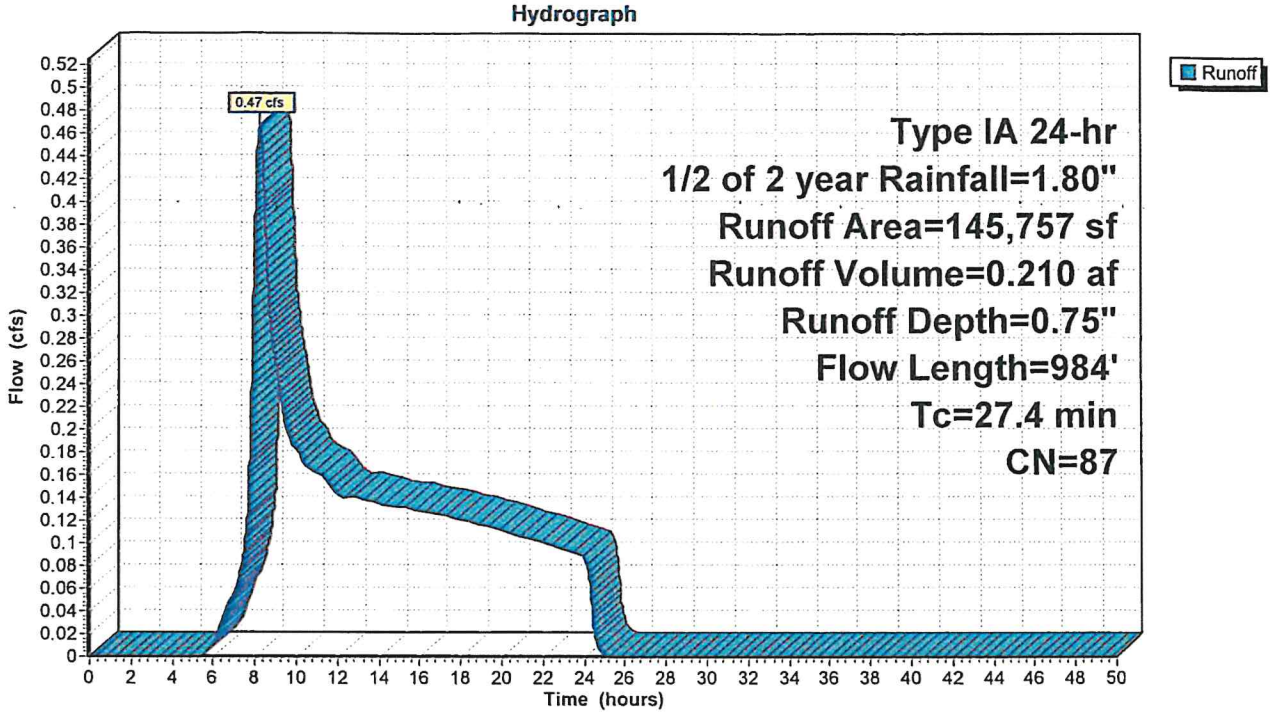
Runoff = 0.47 cfs @ 8.22 hrs, Volume= 0.210 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 1/2 of 2 year Rainfall=1.80"

	Area (sf)	CN	Description
*	23,511	98	Paving, C&G
*	5,410	98	Sidewalk
*	40,000	98	Roofs: 2,000 sf/lot, 20 lots
*	8,000	98	Driveways: 400 sf/lot, 20 lots
	68,836	74	>75% Grass cover, Good, HSG C
	145,757	87	Weighted Average
	68,836		47.23% Pervious Area
	76,921		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
15.8	85	0.0070	0.09		**Sheet Flow, Sheet flow over Grass** Grass: Short n= 0.150 P2= 2.20"
0.6	136	0.0100	3.71	0.73	**Pipe Channel, 6" Area Drain to Curb inlet** 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
6.0	763	0.0022	2.13	1.67	**Pipe Channel, Curb Inlet to Basin** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
27.4	984	Total			

Subcatchment Post A: POST BASIN A



Summary for Subcatchment Post B: POST BASIN B

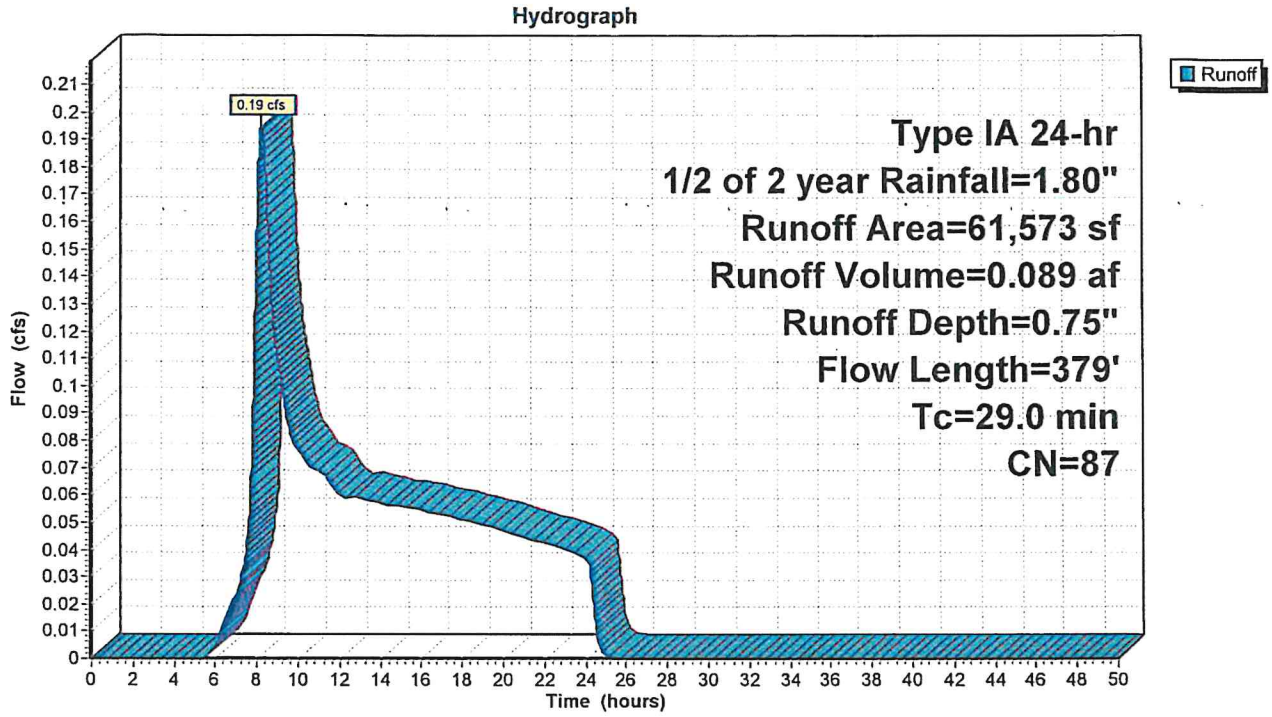
Runoff = 0.19 cfs @ 8.25 hrs, Volume= 0.089 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 1/2 of 2 year Rainfall=1.80"

	Area (sf)	CN	Description
*	19,215	98	Paving, C&G
*	4,515	98	Sidewalk
*	8,000	98	Roofs: 2,000 sf/lot, 20 lots
*	1,600	98	Driveways: 400 sf/lot, 20 lots
	28,243	74	>75% Grass cover, Good, HSG C
	61,573	87	Weighted Average
	28,243		45.87% Pervious Area
	33,330		54.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
17.9	88	0.0055	0.08		**Sheet Flow, Sheet flow over Grass to Sidewalk** Grass: Short n= 0.150 P2= 2.20"
1.4	6	0.0150	0.07		**Sheet Flow, Sheet Flow Across Sidewalk and Curb** Grass: Short n= 0.150 P2= 2.20"
1.9	9	0.0150	0.08		**Sheet Flow, Sheet Flow Acress Landscape Strip** Grass: Short n= 0.150 P2= 2.20"
2.5	214	0.0050	1.44		**Shallow Concentrated Flow, zshallow Concentrated (gutter flow** Paved Kv= 20.3 fps
0.3	62	0.0050	3.21	2.52	**Pipe Channel, Curb Inlet to Basin** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
29.0	379	Total			

Subcatchment Post B: POST BASIN B



Summary for Subcatchment PRE A: PRE BASIN A

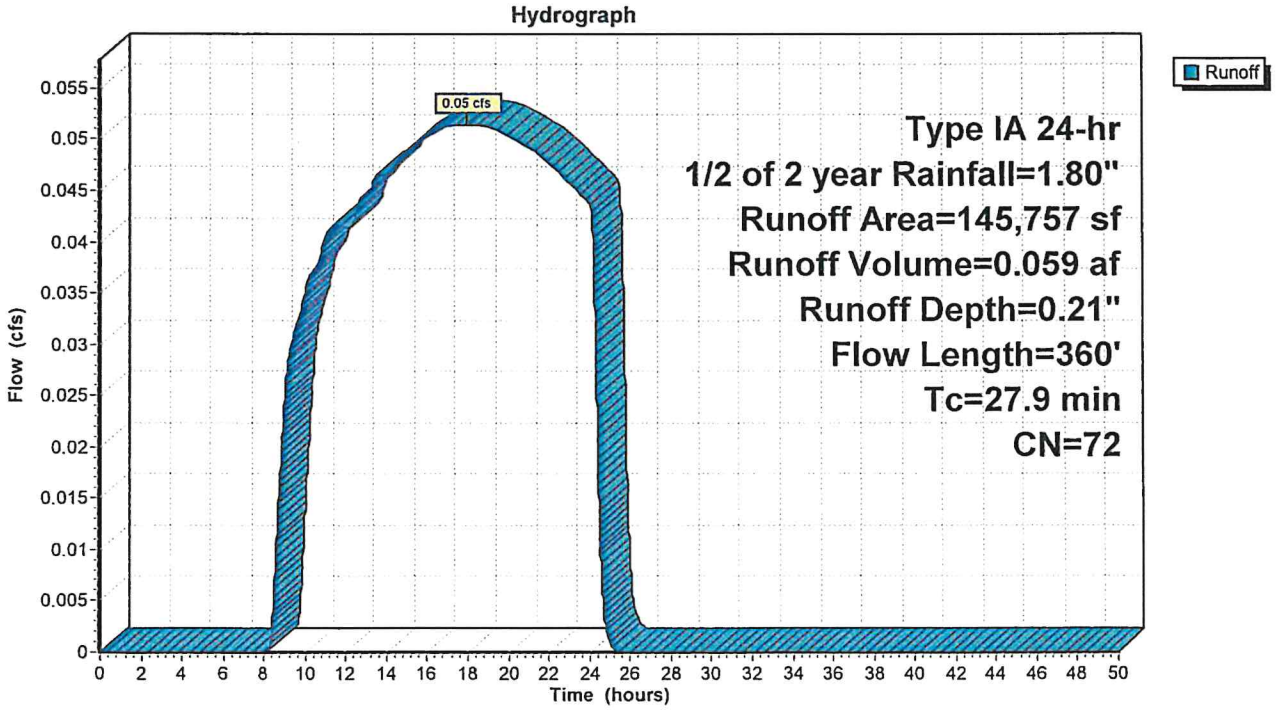
Runoff = 0.05 cfs @ 17.95 hrs, Volume= 0.059 af, Depth= 0.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 1/2 of 2 year Rainfall=1.80"

	Area (sf)	CN	Description
*	145,757	72	COS - Required Pre-Dev.
	145,757		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Run-off**
20.7	300	0.0071	0.24		**Sheet Flow, Sheet flow across field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
2.2	60	0.0020	0.45		**Shallow Concentrated Flow, Flow in Drainage Ditch** Nearly Bare & Untilled Kv= 10.0 fps
27.9	360	Total			

Subcatchment PRE A: PRE BASIN A



Summary for Subcatchment PRE B: PRE BASIN B

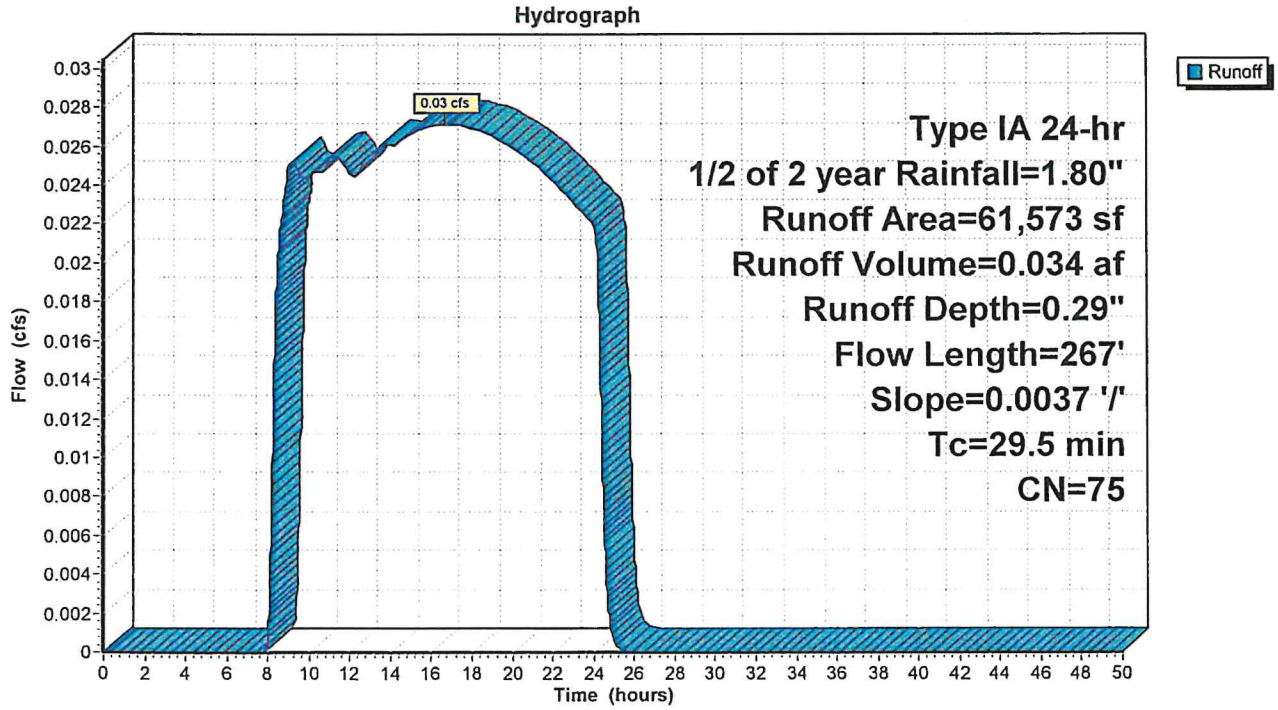
Runoff = 0.03 cfs @ 16.75 hrs, Volume= 0.034 af, Depth= 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 1/2 of 2 year Rainfall=1.80"

	Area (sf)	CN	Description
*	53,913	72	COS Required Pre-Dev
	7,660	98	Paved roads w/curbs & sewers, HSG C
	61,573	75	Weighted Average
	53,913		87.56% Pervious Area
	7,660		12.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Runoff**
24.5	267	0.0037	0.18		**Sheet Flow, Sheet Flow Across Field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
29.5	267	Total			

Subcatchment PRE B: PRE BASIN B



Summary for Subcatchment Post A: POST BASIN A

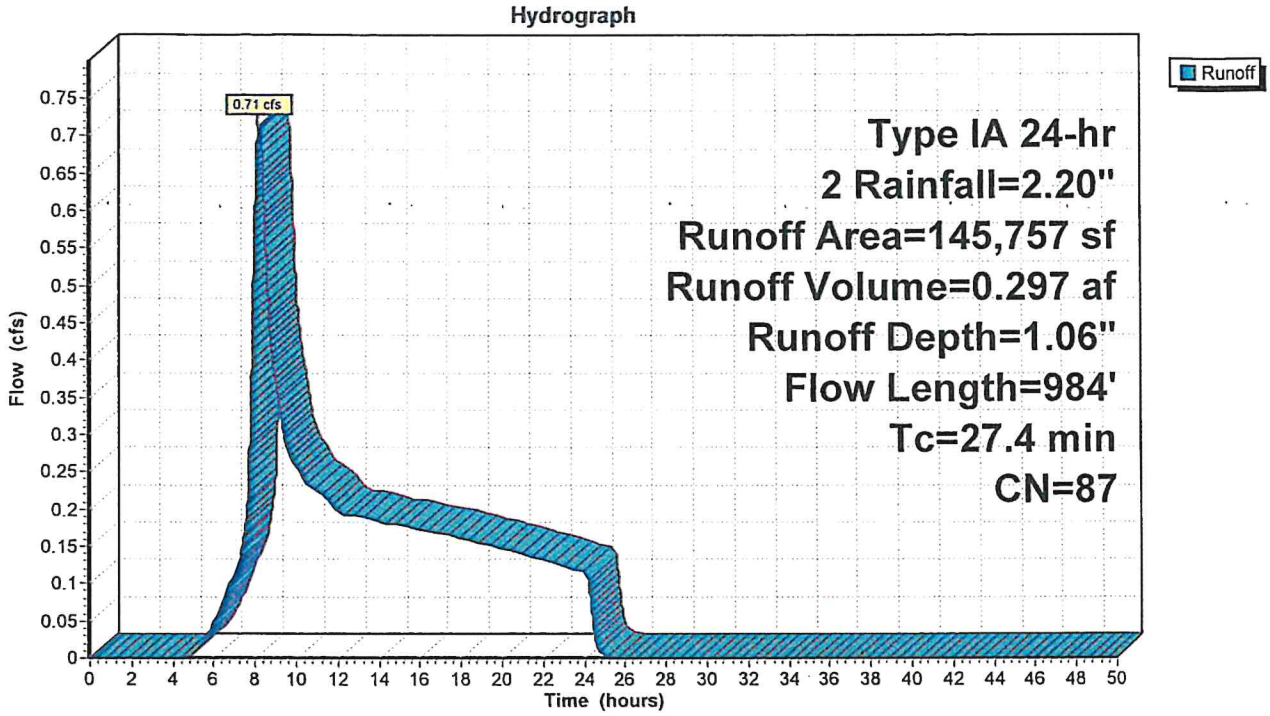
Runoff = 0.71 cfs @ 8.20 hrs, Volume= 0.297 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2 Rainfall=2.20"

	Area (sf)	CN	Description
*	23,511	98	Paving, C&G
*	5,410	98	Sidewalk
*	40,000	98	Roofs: 2,000 sf/lot, 20 lots
*	8,000	98	Driveways: 400 sf/lot, 20 lots
	68,836	74	>75% Grass cover, Good, HSG C
	145,757	87	Weighted Average
	68,836		47.23% Pervious Area
	76,921		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
15.8	85	0.0070	0.09		**Sheet Flow, Sheet flow over Grass**
					Grass: Short n= 0.150 P2= 2.20"
0.6	136	0.0100	3.71	0.73	**Pipe Channel, 6" Area Drain to Curb inlet**
					6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13'
					n= 0.010 PVC, smooth interior
6.0	763	0.0022	2.13	1.67	**Pipe Channel, Curb Inlet to Basin**
					12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'
					n= 0.013 Corrugated PE, smooth interior
27.4	984	Total			

Subcatchment Post A: POST BASIN A



Summary for Subcatchment Post B: POST BASIN B

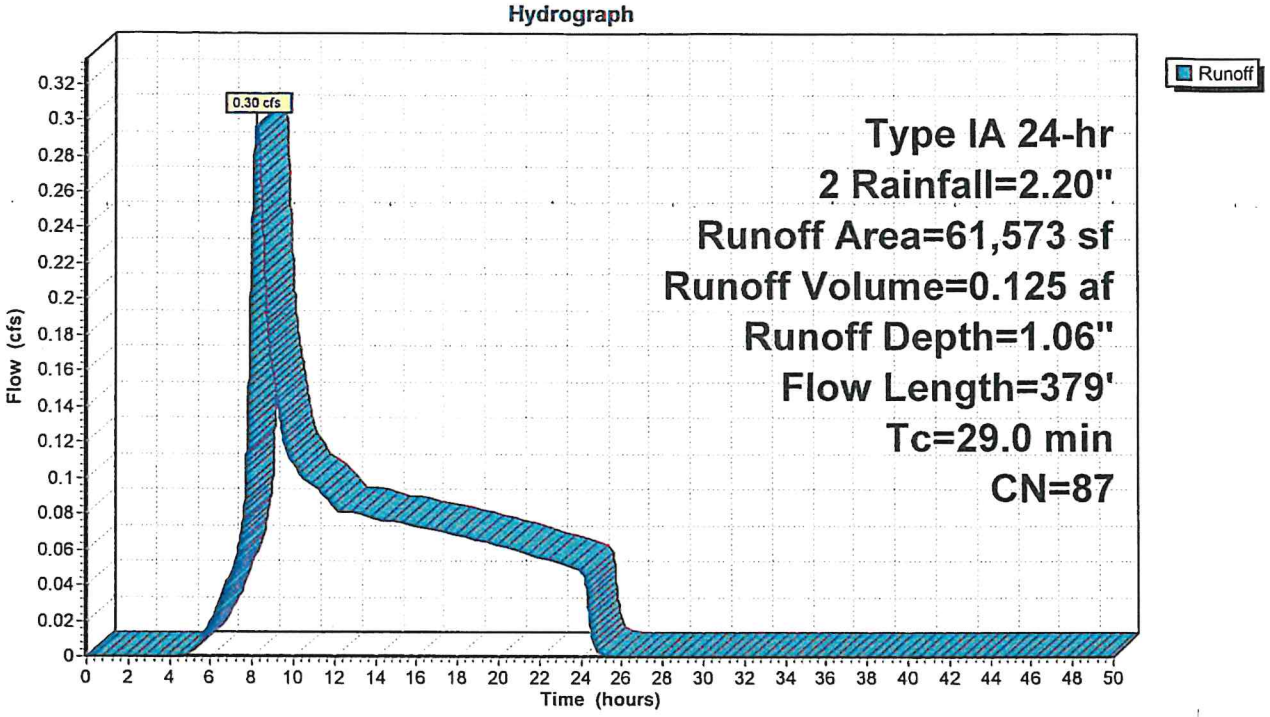
Runoff = 0.30 cfs @ 8.22 hrs, Volume= 0.125 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2 Rainfall=2.20"

	Area (sf)	CN	Description
*	19,215	98	Paving, C&G
*	4,515	98	Sidewalk
*	8,000	98	Roofs: 2,000 sf/lot, 20 lots
*	1,600	98	Driveways: 400 sf/lot, 20 lots
	28,243	74	>75% Grass cover, Good, HSG C
	61,573	87	Weighted Average
	28,243		45.87% Pervious Area
	33,330		54.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
17.9	88	0.0055	0.08		**Sheet Flow, Sheet flow over Grass to Sidewalk** Grass: Short n= 0.150 P2= 2.20"
1.4	6	0.0150	0.07		**Sheet Flow, Sheet Flow Across Sidewalk and Curb** Grass: Short n= 0.150 P2= 2.20"
1.9	9	0.0150	0.08		**Sheet Flow, Sheet Flow Acress Landscape Strip** Grass: Short n= 0.150 P2= 2.20"
2.5	214	0.0050	1.44		**Shallow Concentrated Flow, zshallow Concentrated (gutter flow** Paved Kv= 20.3 fps
0.3	62	0.0050	3.21	2.52	**Pipe Channel, Curb Inlet to Basin** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
29.0	379	Total			

Subcatchment Post B: POST BASIN B



Summary for Subcatchment PRE A: PRE BASIN A

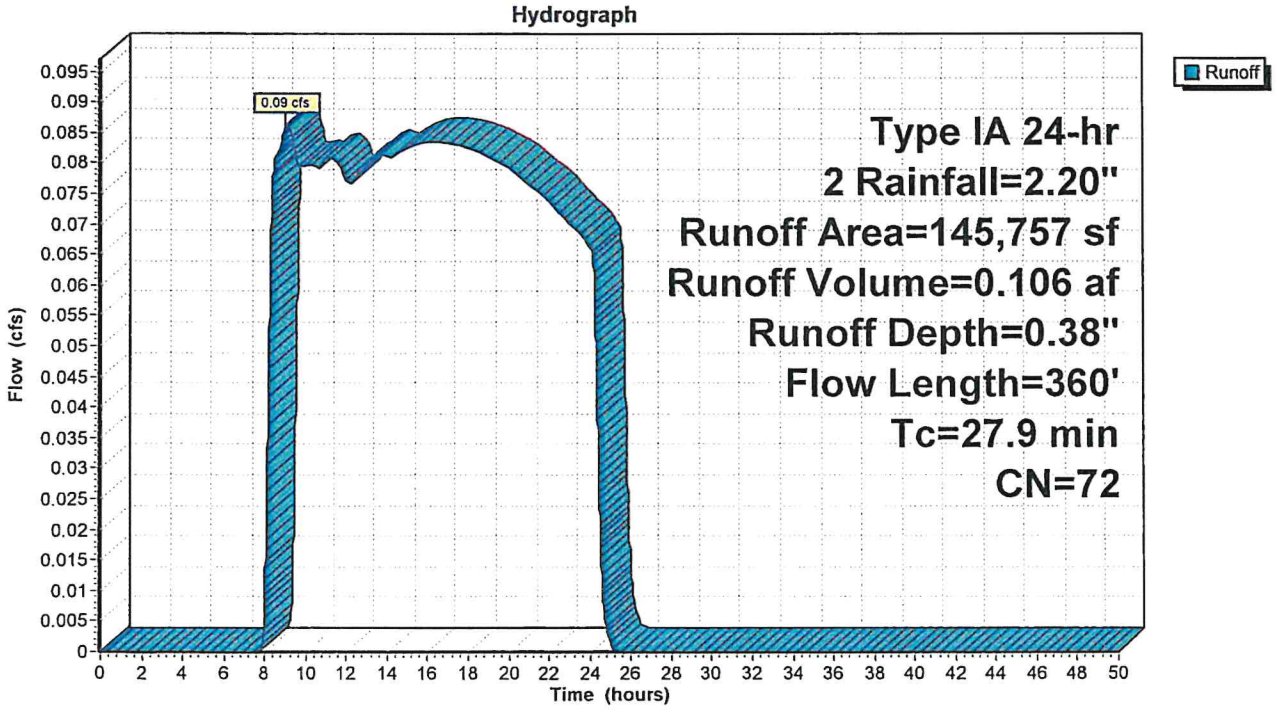
Runoff = 0.09 cfs @ 9.08 hrs, Volume= 0.106 af, Depth= 0.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2 Rainfall=2.20"

	Area (sf)	CN	Description
*	145,757	72	COS - Required Pre-Dev.
	145,757		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Run-off**
20.7	300	0.0071	0.24		**Sheet Flow, Sheet flow across field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
2.2	60	0.0020	0.45		**Shallow Concentrated Flow, Flow in Draininage Ditch** Nearly Bare & Untilled Kv= 10.0 fps
27.9	360	Total			

Subcatchment PRE A: PRE BASIN A



Summary for Subcatchment PRE B: PRE BASIN B

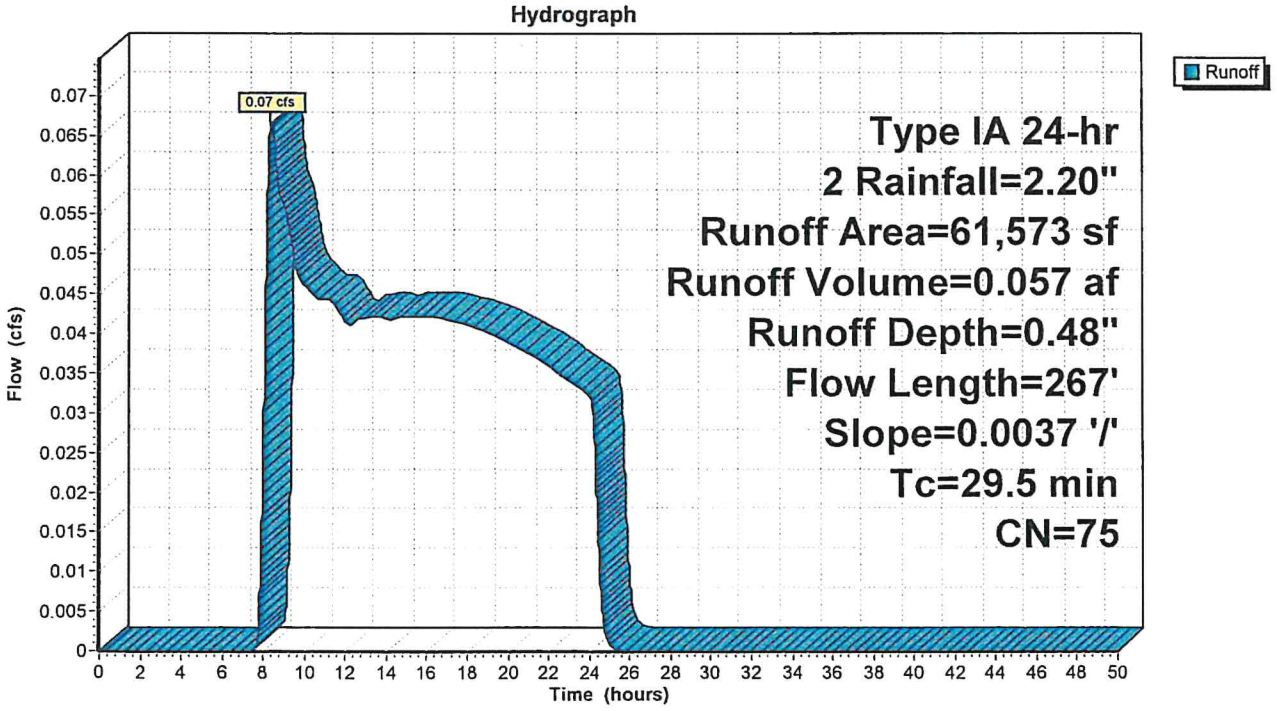
Runoff = 0.07 cfs @ 8.39 hrs, Volume= 0.057 af, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2 Rainfall=2.20"

	Area (sf)	CN	Description
*	53,913	72	COS Required Pre-Dev
	7,660	98	Paved roads w/curbs & sewers, HSG C
	61,573	75	Weighted Average
	53,913		87.56% Pervious Area
	7,660		12.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Runoff**
24.5	267	0.0037	0.18		**Sheet Flow, Sheet Flow Across Field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
29.5	267	Total			

Subcatchment PRE B: PRE BASIN B



Summary for Subcatchment Post A: POST BASIN A

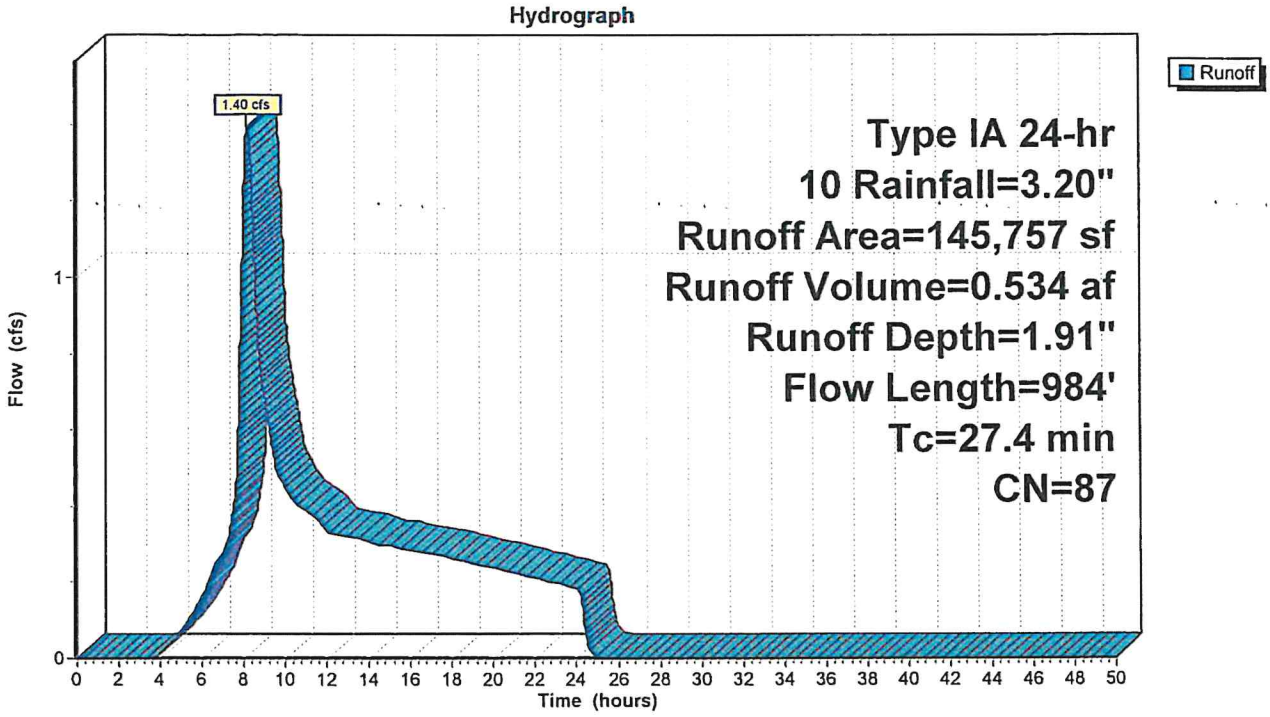
Runoff = 1.40 cfs @ 8.19 hrs, Volume= 0.534 af, Depth= 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 Rainfall=3.20"

	Area (sf)	CN	Description
*	23,511	98	Paving, C&G
*	5,410	98	Sidewalk
*	40,000	98	Roofs: 2,000 sf/lot, 20 lots
*	8,000	98	Driveways: 400 sf/lot, 20 lots
	68,836	74	>75% Grass cover, Good, HSG C
	145,757	87	Weighted Average
	68,836		47.23% Pervious Area
	76,921		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
15.8	85	0.0070	0.09		**Sheet Flow, Sheet flow over Grass** Grass: Short n= 0.150 P2= 2.20"
0.6	136	0.0100	3.71	0.73	**Pipe Channel, 6" Area Drain to Curb inlet** 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
6.0	763	0.0022	2.13	1.67	**Pipe Channel, Curb Inlet to Basin** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
27.4	984	Total			

Subcatchment Post A: POST BASIN A



Summary for Subcatchment Post B: POST BASIN B

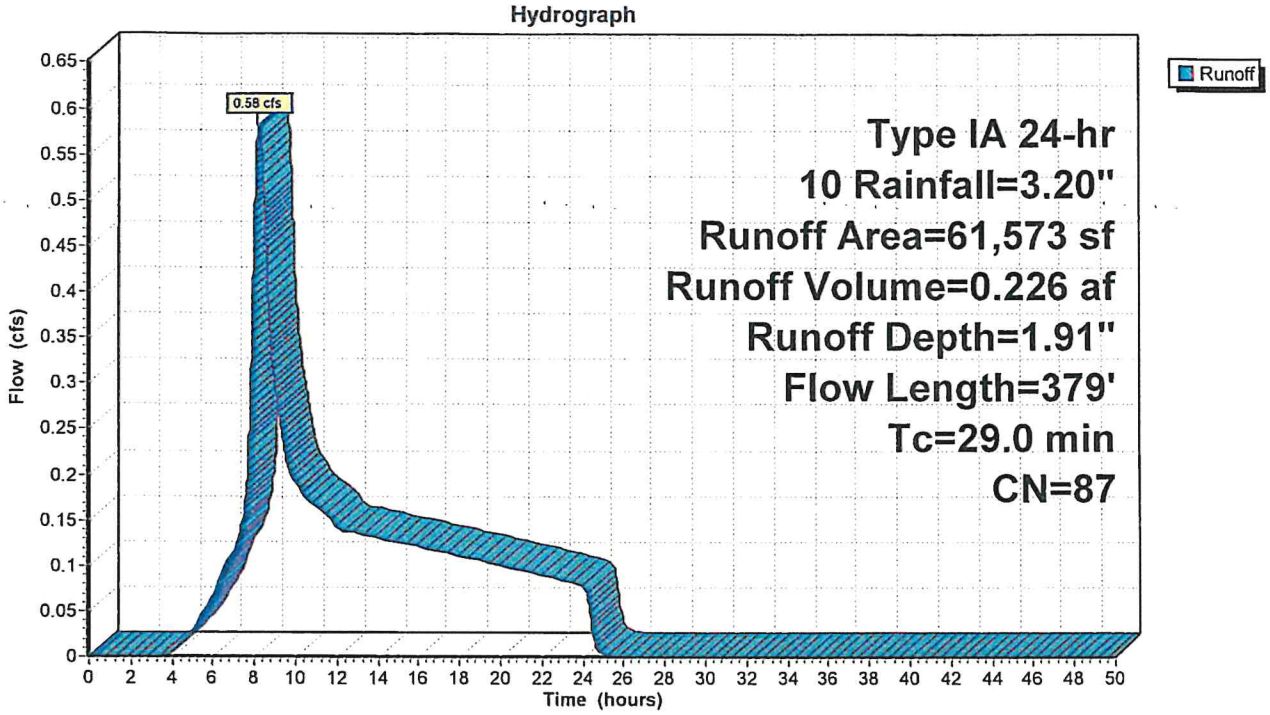
Runoff = 0.58 cfs @ 8.22 hrs, Volume= 0.226 af, Depth= 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 Rainfall=3.20"

	Area (sf)	CN	Description
*	19,215	98	Paving, C&G
*	4,515	98	Sidewalk
*	8,000	98	Roofs: 2,000 sf/lot, 20 lots
*	1,600	98	Driveways: 400 sf/lot, 20 lots
	28,243	74	>75% Grass cover, Good, HSG C
	61,573	87	Weighted Average
	28,243		45.87% Pervious Area
	33,330		54.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
17.9	88	0.0055	0.08		**Sheet Flow, Sheet flow over Grass to Sidewalk** Grass: Short n= 0.150 P2= 2.20"
1.4	6	0.0150	0.07		**Sheet Flow, Sheet Flow Across Sidewalk and Curb** Grass: Short n= 0.150 P2= 2.20"
1.9	9	0.0150	0.08		**Sheet Flow, Sheet Flow Acress Landscape Strip** Grass: Short n= 0.150 P2= 2.20"
2.5	214	0.0050	1.44		**Shallow Concentrated Flow, zshallow Concentrated (gutter flow** Paved Kv= 20.3 fps
0.3	62	0.0050	3.21	2.52	**Pipe Channel, Curb Inlet to Basin** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
29.0	379	Total			

Subcatchment Post B: POST BASIN B



Summary for Subcatchment PRE A: PRE BASIN A

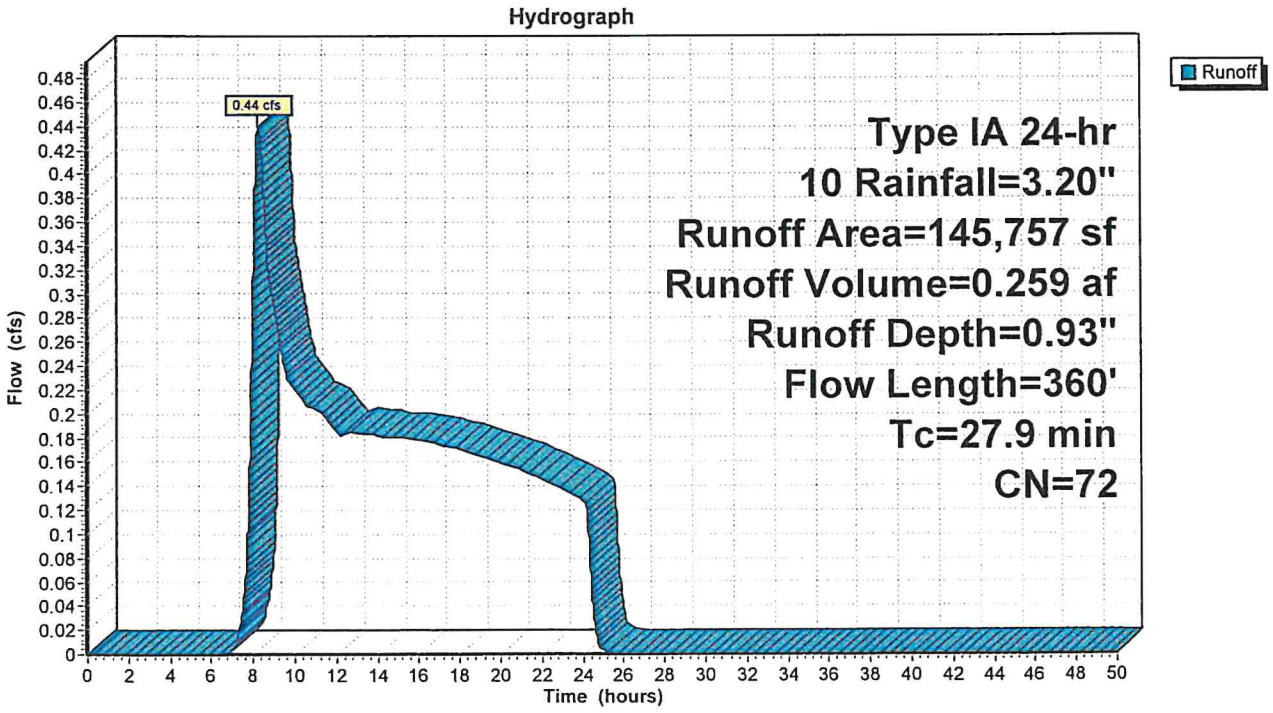
Runoff = 0.44 cfs @ 8.28 hrs, Volume= 0.259 af, Depth= 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 Rainfall=3.20"

	Area (sf)	CN	Description
*	145,757	72	COS - Required Pre-Dev.
	145,757		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Run-off**
20.7	300	0.0071	0.24		**Sheet Flow, Sheet flow across field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
2.2	60	0.0020	0.45		**Shallow Concentrated Flow, Flow in Drainage Ditch** Nearly Bare & Untilled Kv= 10.0 fps
27.9	360	Total			

Subcatchment PRE A: PRE BASIN A



Summary for Subcatchment PRE B: PRE BASIN B

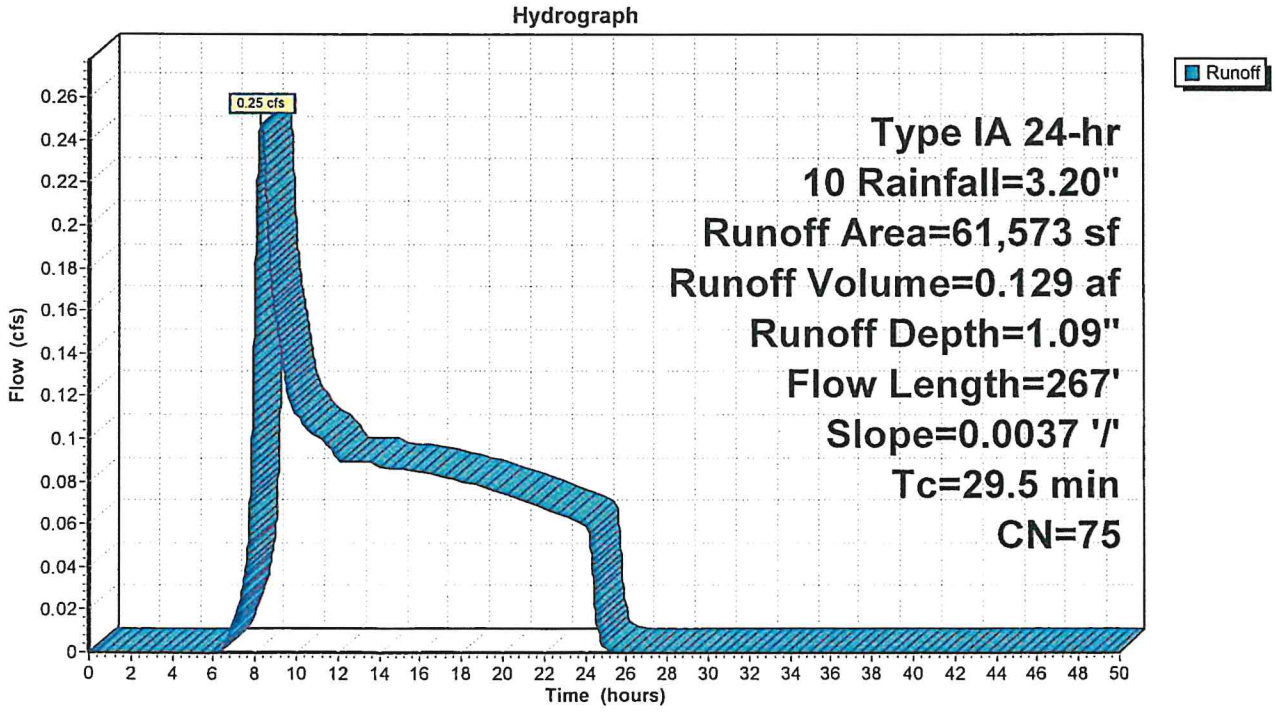
Runoff = 0.25 cfs @ 8.29 hrs, Volume= 0.129 af, Depth= 1.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 Rainfall=3.20"

	Area (sf)	CN	Description
*	53,913	72	COS Required Pre-Dev
	7,660	98	Paved roads w/curbs & sewers, HSG C
	61,573	75	Weighted Average
	53,913		87.56% Pervious Area
	7,660		12.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Runoff**
24.5	267	0.0037	0.18		**Sheet Flow, Sheet Flow Across Field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
29.5	267	Total			

Subcatchment PRE B: PRE BASIN B



Summary for Subcatchment Post A: POST BASIN A

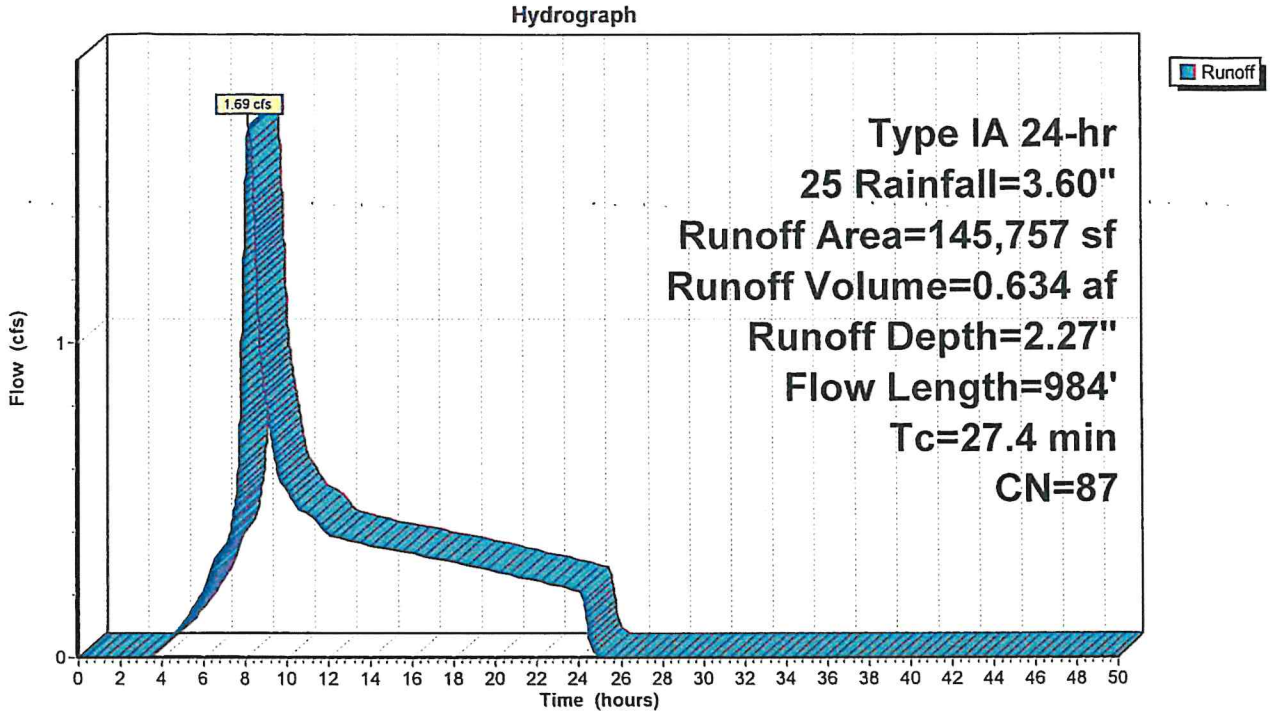
Runoff = 1.69 cfs @ 8.19 hrs, Volume= 0.634 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25 Rainfall=3.60"

	Area (sf)	CN	Description
*	23,511	98	Paving, C&G
*	5,410	98	Sidewalk
*	40,000	98	Roofs: 2,000 sf/lot, 20 lots
*	8,000	98	Driveways: 400 sf/lot, 20 lots
	68,836	74	>75% Grass cover, Good, HSG C
	145,757	87	Weighted Average
	68,836		47.23% Pervious Area
	76,921		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
15.8	85	0.0070	0.09		**Sheet Flow, Sheet flow over Grass**
					Grass: Short n= 0.150 P2= 2.20"
0.6	136	0.0100	3.71	0.73	**Pipe Channel, 6" Area Drain to Curb inlet**
					6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13'
					n= 0.010 PVC, smooth interior
6.0	763	0.0022	2.13	1.67	**Pipe Channel, Curb Inlet to Basin**
					12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'
					n= 0.013 Corrugated PE, smooth interior
27.4	984	Total			

Subcatchment Post A: POST BASIN A



Summary for Subcatchment Post B: POST BASIN B

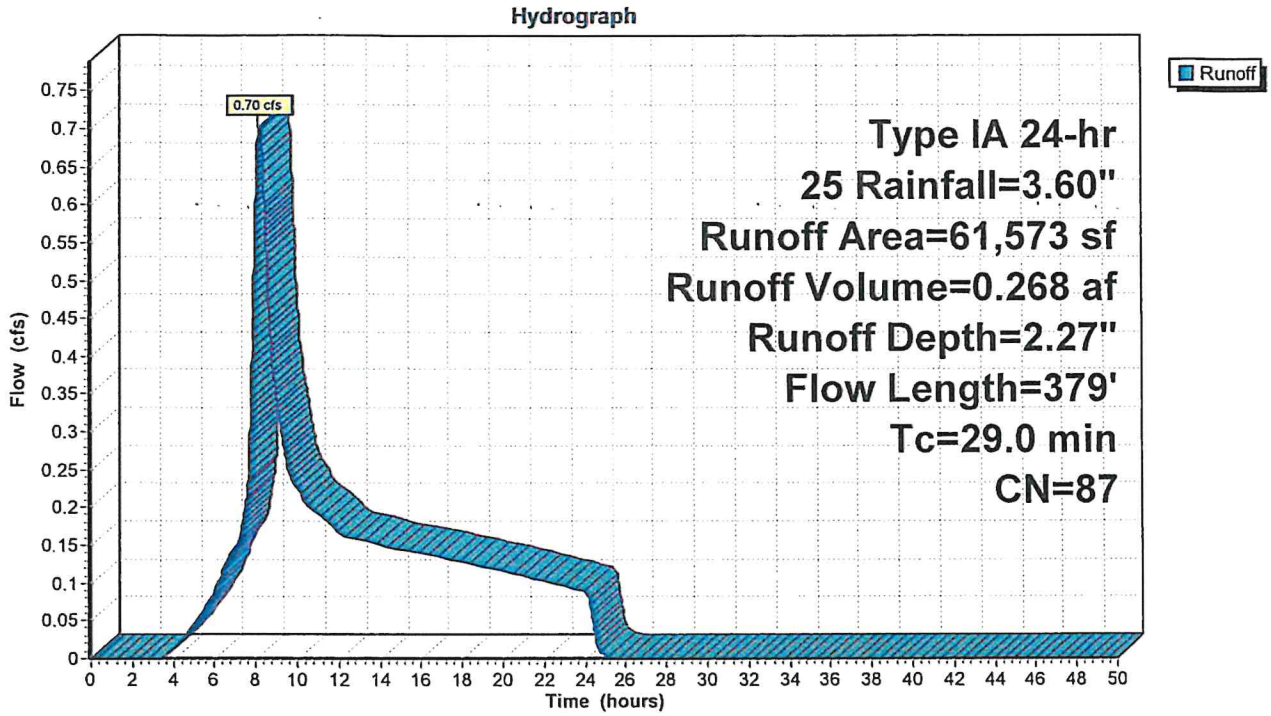
Runoff = 0.70 cfs @ 8.22 hrs, Volume= 0.268 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25 Rainfall=3.60"

	Area (sf)	CN	Description
*	19,215	98	Paving, C&G
*	4,515	98	Sidewalk
*	8,000	98	Roofs: 2,000 sf/lot, 20 lots
*	1,600	98	Driveways: 400 sf/lot, 20 lots
	28,243	74	>75% Grass cover, Good, HSG C
	61,573	87	Weighted Average
	28,243		45.87% Pervious Area
	33,330		54.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
17.9	88	0.0055	0.08		**Sheet Flow, Sheet flow over Grass to Sidewalk** Grass: Short n= 0.150 P2= 2.20"
1.4	6	0.0150	0.07		**Sheet Flow, Sheet Flow Across Sidewalk and Curb** Grass: Short n= 0.150 P2= 2.20"
1.9	9	0.0150	0.08		**Sheet Flow, Sheet Flow Acress Landscape Strip** Grass: Short n= 0.150 P2= 2.20"
2.5	214	0.0050	1.44		**Shallow Concentrated Flow, zshallow Concentrated (gutter flow** Paved Kv= 20.3 fps
0.3	62	0.0050	3.21	2.52	**Pipe Channel, Curb Inlet to Basin** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
29.0	379	Total			

Subcatchment Post B: POST BASIN B



Summary for Subcatchment PRE A: PRE BASIN A

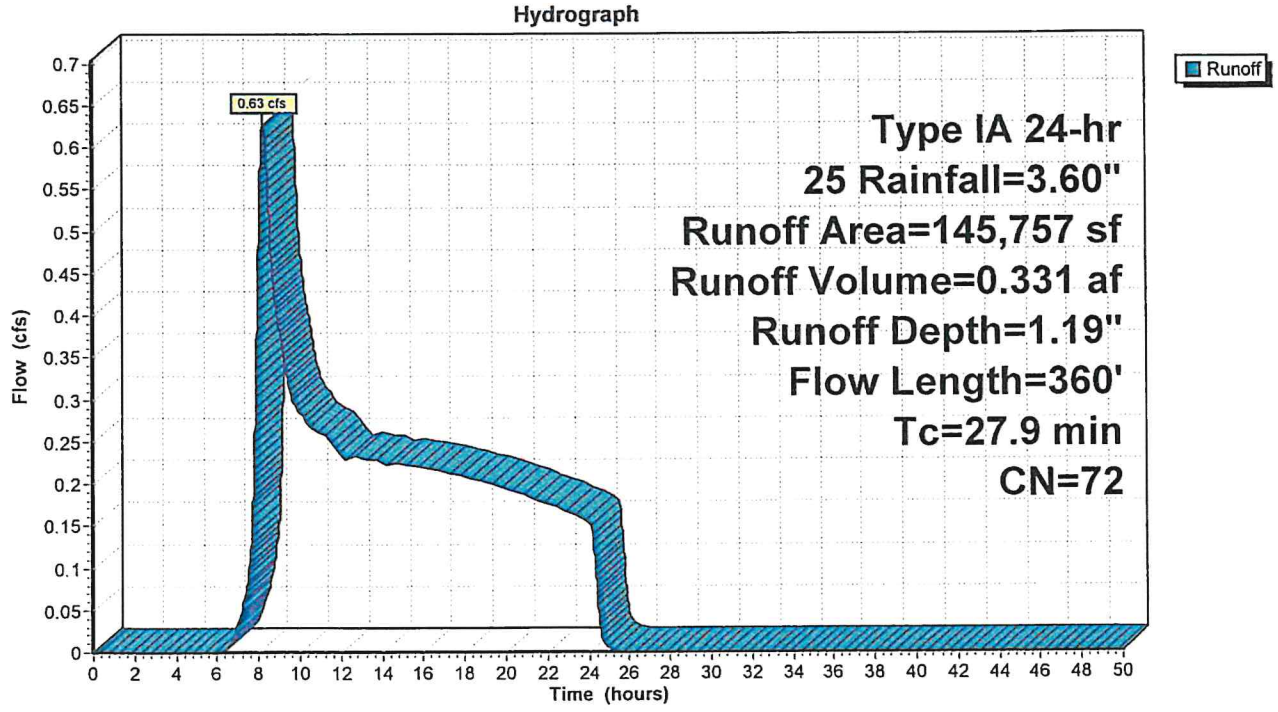
Runoff = 0.63 cfs @ 8.27 hrs, Volume= 0.331 af, Depth= 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25 Rainfall=3.60"

	Area (sf)	CN	Description
*	145,757	72	COS - Required Pre-Dev.
	145,757		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Run-off**
20.7	300	0.0071	0.24		**Sheet Flow, Sheet flow across field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
2.2	60	0.0020	0.45		**Shallow Concentrated Flow, Flow in Drainage Ditch** Nearly Bare & Untilled Kv= 10.0 fps
27.9	360	Total			

Subcatchment PRE A: PRE BASIN A



Summary for Subcatchment PRE B: PRE BASIN B

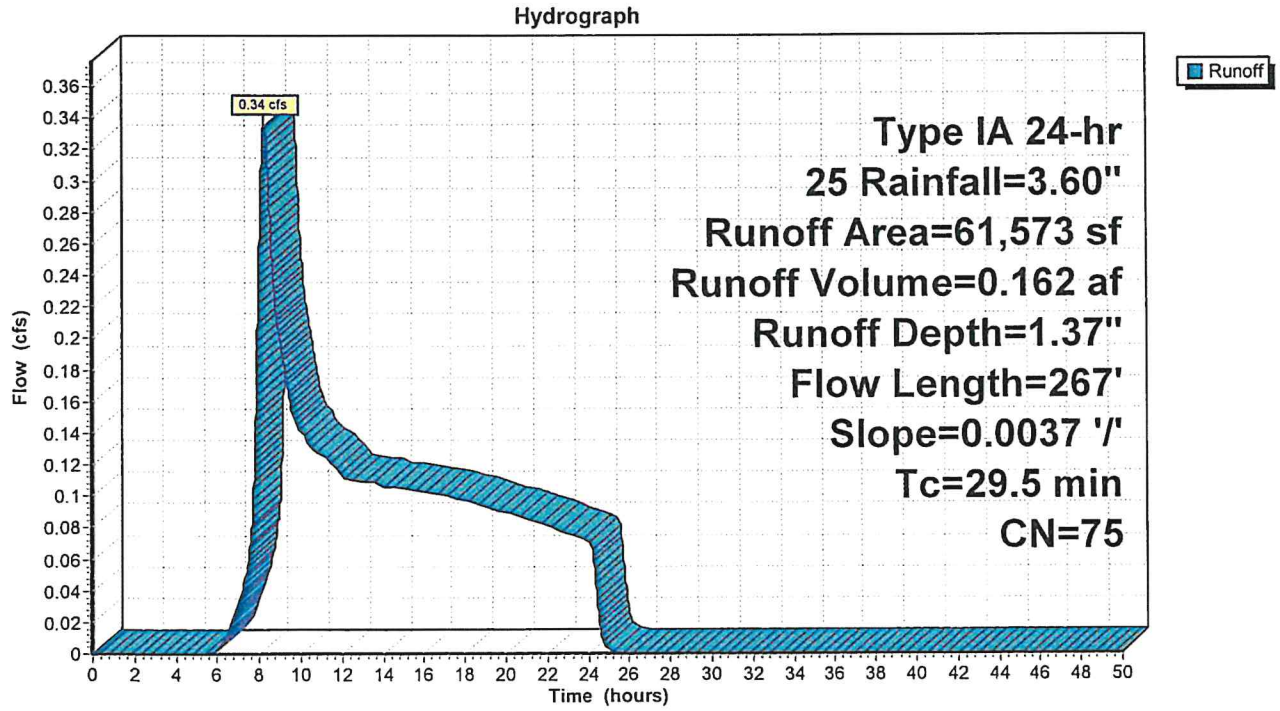
Runoff = 0.34 cfs @ 8.26 hrs, Volume= 0.162 af, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25 Rainfall=3.60"

	Area (sf)	CN	Description
*	53,913	72	COS Required Pre-Dev
	7,660	98	Paved roads w/curbs & sewers, HSG C
	61,573	75	Weighted Average
	53,913		87.56% Pervious Area
	7,660		12.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Runoff**
24.5	267	0.0037	0.18		**Sheet Flow, Sheet Flow Across Field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
29.5	267	Total			

Subcatchment PRE B: PRE BASIN B



Summary for Subcatchment Post A: POST BASIN A

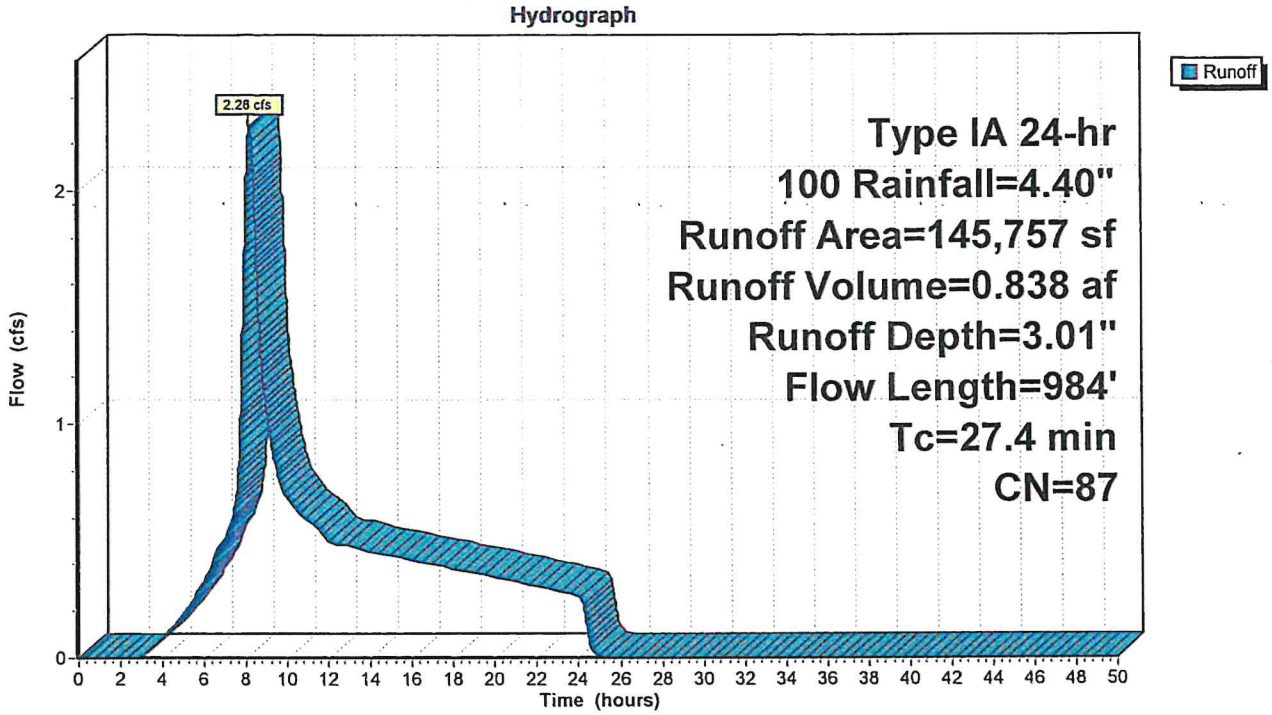
Runoff = 2.28 cfs @ 8.19 hrs, Volume= 0.838 af, Depth= 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 100 Rainfall=4.40"

	Area (sf)	CN	Description
*	23,511	98	Paving, C&G
*	5,410	98	Sidewalk
*	40,000	98	Roofs: 2,000 sf/lot, 20 lots
*	8,000	98	Driveways: 400 sf/lot, 20 lots
	68,836	74	>75% Grass cover, Good, HSG C
	145,757	87	Weighted Average
	68,836		47.23% Pervious Area
	76,921		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
15.8	85	0.0070	0.09		**Sheet Flow, Sheet flow over Grass** Grass: Short n= 0.150 P2= 2.20"
0.6	136	0.0100	3.71	0.73	**Pipe Channel, 6" Area Drain to Curb inlet** 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
6.0	763	0.0022	2.13	1.67	**Pipe Channel, Curb Inlet to Basin** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
27.4	984	Total			

Subcatchment Post A: POST BASIN A



Summary for Subcatchment Post B: POST BASIN B

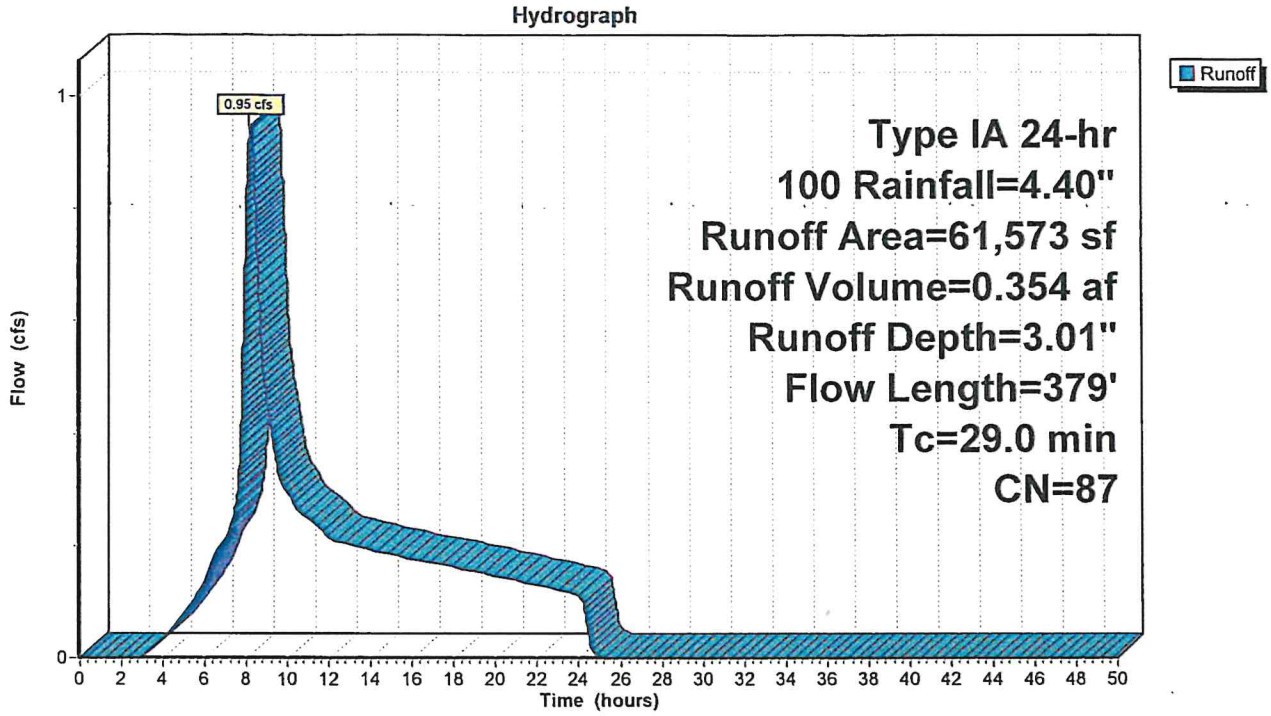
Runoff = 0.95 cfs @ 8.21 hrs, Volume= 0.354 af, Depth= 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 100 Rainfall=4.40"

	Area (sf)	CN	Description
*	19,215	98	Paving, C&G
*	4,515	98	Sidewalk
*	8,000	98	Roofs: 2,000 sf/lot, 20 lots
*	1,600	98	Driveways: 400 sf/lot, 20 lots
	28,243	74	>75% Grass cover, Good, HSG C
	61,573	87	Weighted Average
	28,243		45.87% Pervious Area
	33,330		54.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
17.9	88	0.0055	0.08		**Sheet Flow, Sheet flow over Grass to Sidewalk** Grass: Short n= 0.150 P2= 2.20"
1.4	6	0.0150	0.07		**Sheet Flow, Sheet Flow Across Sidewalk and Curb** Grass: Short n= 0.150 P2= 2.20"
1.9	9	0.0150	0.08		**Sheet Flow, Sheet Flow Acress Landscape Strip** Grass: Short n= 0.150 P2= 2.20"
2.5	214	0.0050	1.44		**Shallow Concentrated Flow, zshallow Concentrated (gutter flow** Paved Kv= 20.3 fps
0.3	62	0.0050	3.21	2.52	**Pipe Channel, Curb Inlet to Basin** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
29.0	379	Total			

Subcatchment Post B: POST BASIN B



Summary for Subcatchment PRE A: PRE BASIN A

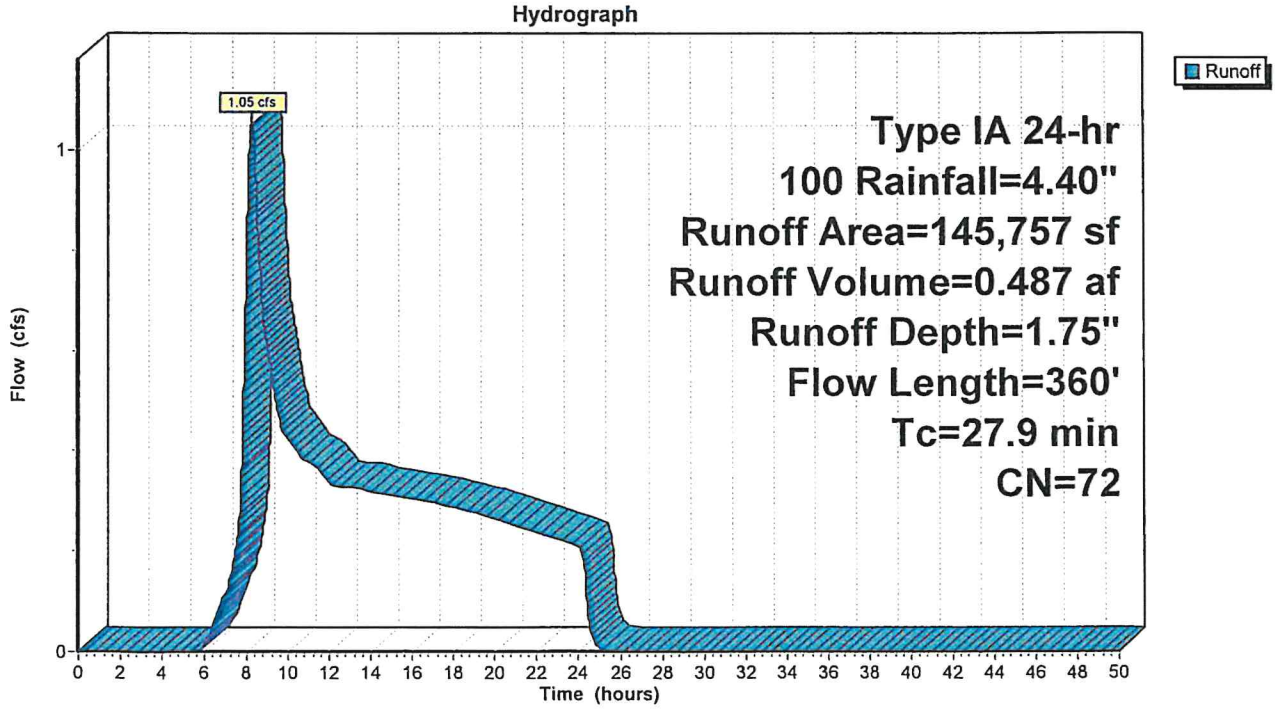
Runoff = 1.05 cfs @ 8.22 hrs, Volume= 0.487 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 100 Rainfall=4.40"

	Area (sf)	CN	Description
*	145,757	72	COS - Required Pre-Dev.
	145,757		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Run-off**
20.7	300	0.0071	0.24		**Sheet Flow, Sheet flow across field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
2.2	60	0.0020	0.45		**Shallow Concentrated Flow, Flow in Drainage Ditch** Nearly Bare & Untilled Kv= 10.0 fps
27.9	360	Total			

Subcatchment PRE A: PRE BASIN A



Summary for Subcatchment PRE B: PRE BASIN B

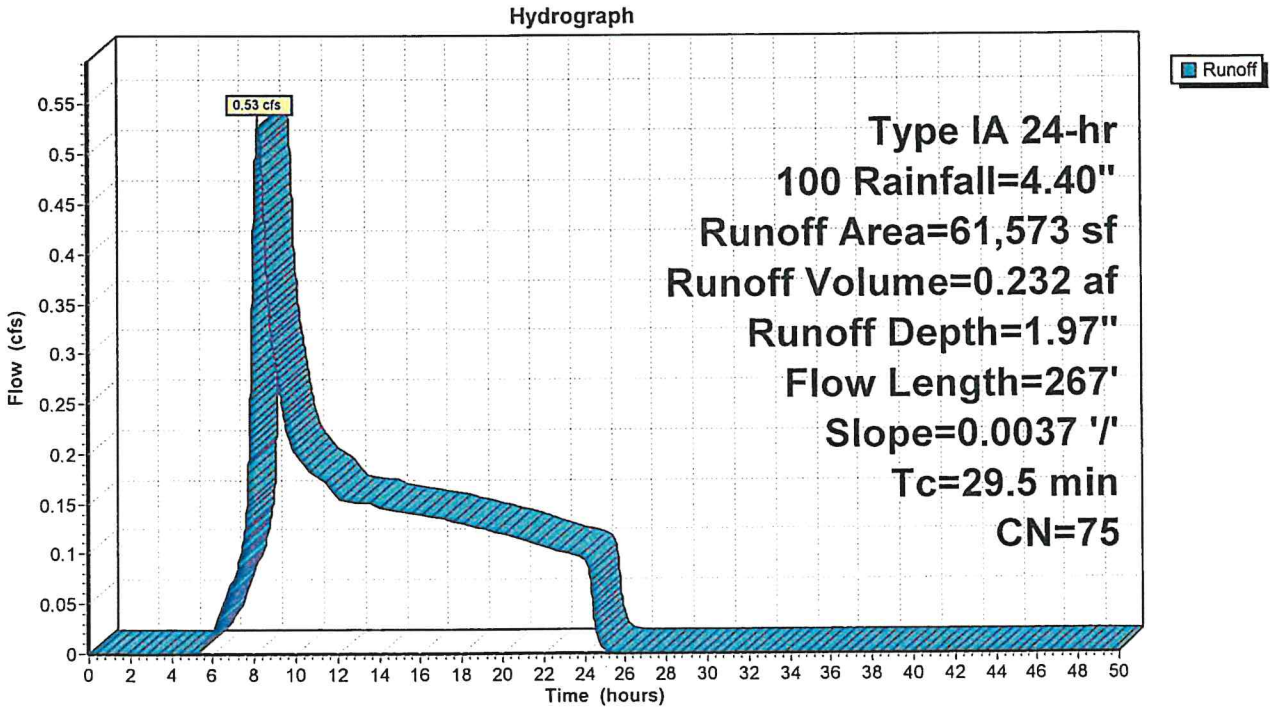
Runoff = 0.53 cfs @ 8.23 hrs, Volume= 0.232 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr 100 Rainfall=4.40"

	Area (sf)	CN	Description
*	53,913	72	COS Required Pre-Dev
	7,660	98	Paved roads w/curbs & sewers, HSG C
	61,573	75	Weighted Average
	53,913		87.56% Pervious Area
	7,660		12.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Runoff**
24.5	267	0.0037	0.18		**Sheet Flow, Sheet Flow Across Field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
29.5	267	Total			

Subcatchment PRE B: PRE BASIN B



Summary for Subcatchment Post A: POST BASIN A

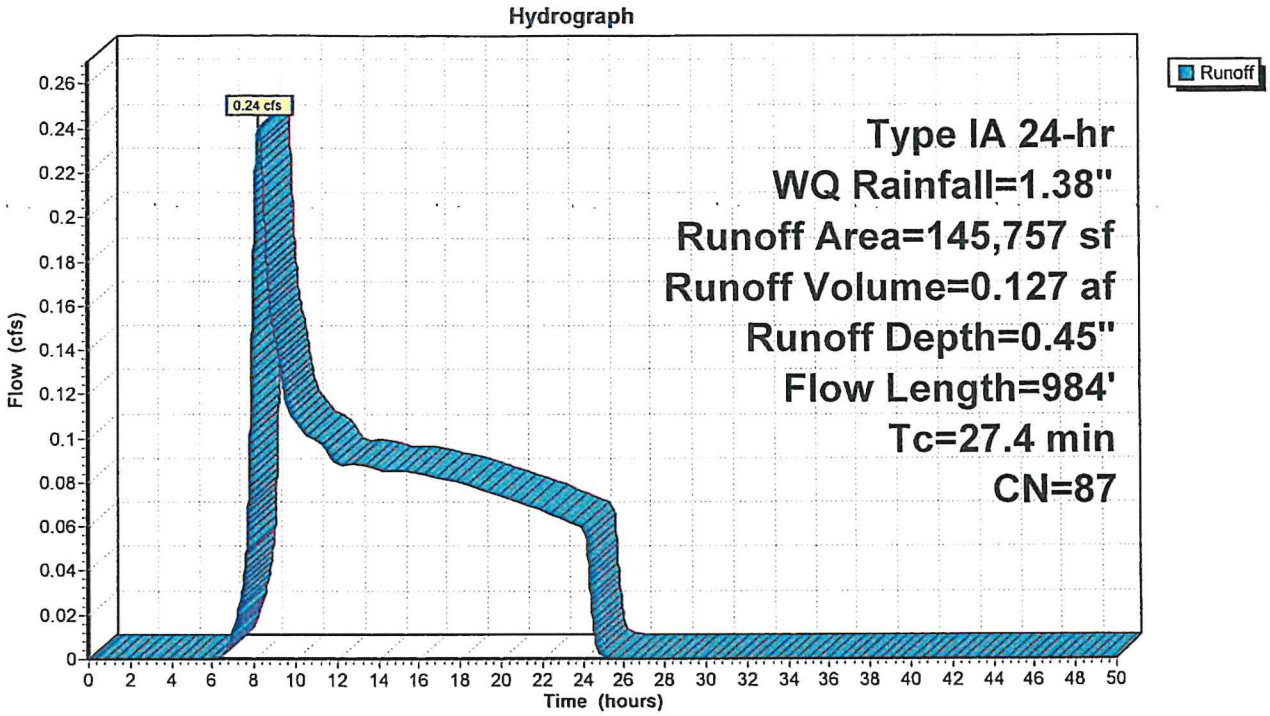
Runoff = 0.24 cfs @ 8.25 hrs, Volume= 0.127 af, Depth= 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr WQ Rainfall=1.38"

	Area (sf)	CN	Description
*	23,511	98	Paving, C&G
*	5,410	98	Sidewalk
*	40,000	98	Roofs: 2,000 sf/lot, 20 lots
*	8,000	98	Driveways: 400 sf/lot, 20 lots
	68,836	74	>75% Grass cover, Good, HSG C
	145,757	87	Weighted Average
	68,836		47.23% Pervious Area
	76,921		52.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
15.8	85	0.0070	0.09		**Sheet Flow, Sheet flow over Grass**
					Grass: Short n= 0.150 P2= 2.20"
0.6	136	0.0100	3.71	0.73	**Pipe Channel, 6" Area Drain to Curb inlet**
					6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13'
					n= 0.010 PVC, smooth interior
6.0	763	0.0022	2.13	1.67	**Pipe Channel, Curb Inlet to Basin**
					12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'
					n= 0.013 Corrugated PE, smooth interior
27.4	984	Total			

Subcatchment Post A: POST BASIN A



Summary for Subcatchment Post B: POST BASIN B

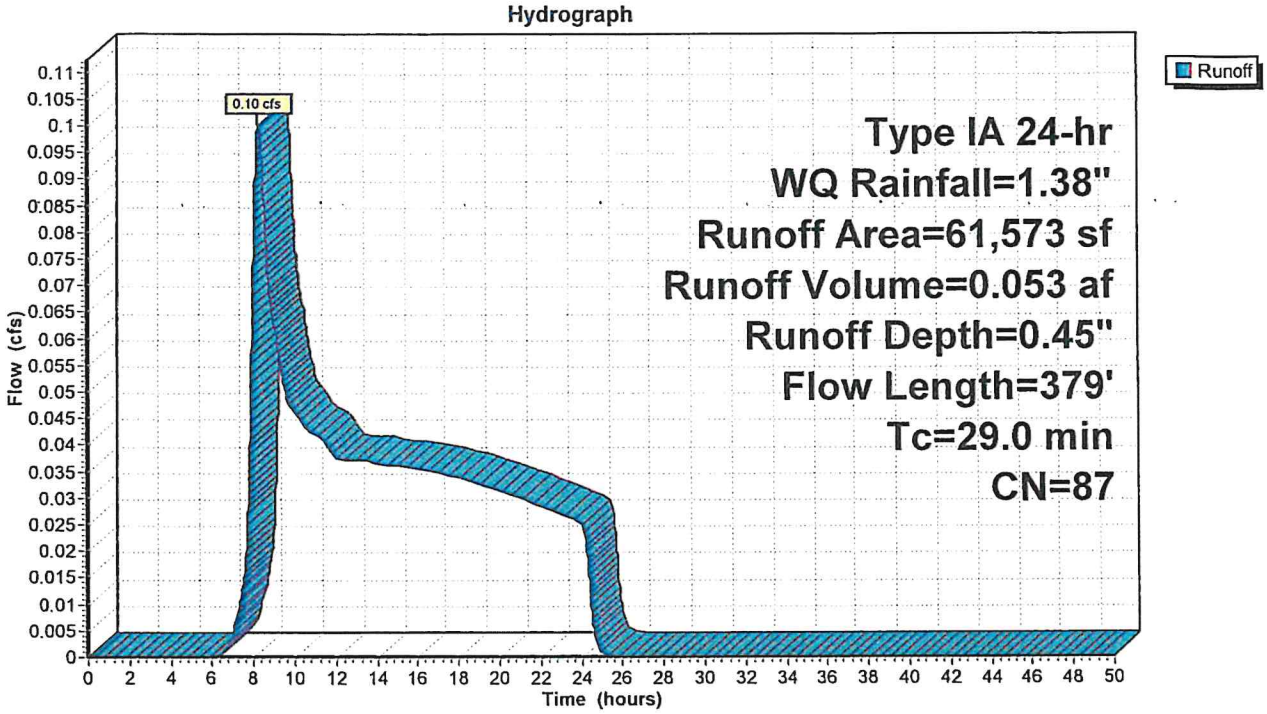
Runoff = 0.10 cfs @ 8.28 hrs, Volume= 0.053 af, Depth= 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr WQ Rainfall=1.38"

	Area (sf)	CN	Description
*	19,215	98	Paving, C&G
*	4,515	98	Sidewalk
*	8,000	98	Roofs: 2,000 sf/lot, 20 lots
*	1,600	98	Driveways: 400 sf/lot, 20 lots
	28,243	74	>75% Grass cover, Good, HSG C
	61,573	87	Weighted Average
	28,243		45.87% Pervious Area
	33,330		54.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5.0 Min. Delay to Start of Run-off**
17.9	88	0.0055	0.08		**Sheet Flow, Sheet flow over Grass to Sidewalk** Grass: Short n= 0.150 P2= 2.20"
1.4	6	0.0150	0.07		**Sheet Flow, Sheet Flow Across Sidewalk and Curb** Grass: Short n= 0.150 P2= 2.20"
1.9	9	0.0150	0.08		**Sheet Flow, Sheet Flow Acress Landscape Strip** Grass: Short n= 0.150 P2= 2.20"
2.5	214	0.0050	1.44		**Shallow Concentrated Flow, zshallow Concentrated (gutter flow** Paved Kv= 20.3 fps
0.3	62	0.0050	3.21	2.52	**Pipe Channel, Curb Inlet to Basin** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
29.0	379	Total			

Subcatchment Post B: POST BASIN B



Summary for Subcatchment PRE A: PRE BASIN A

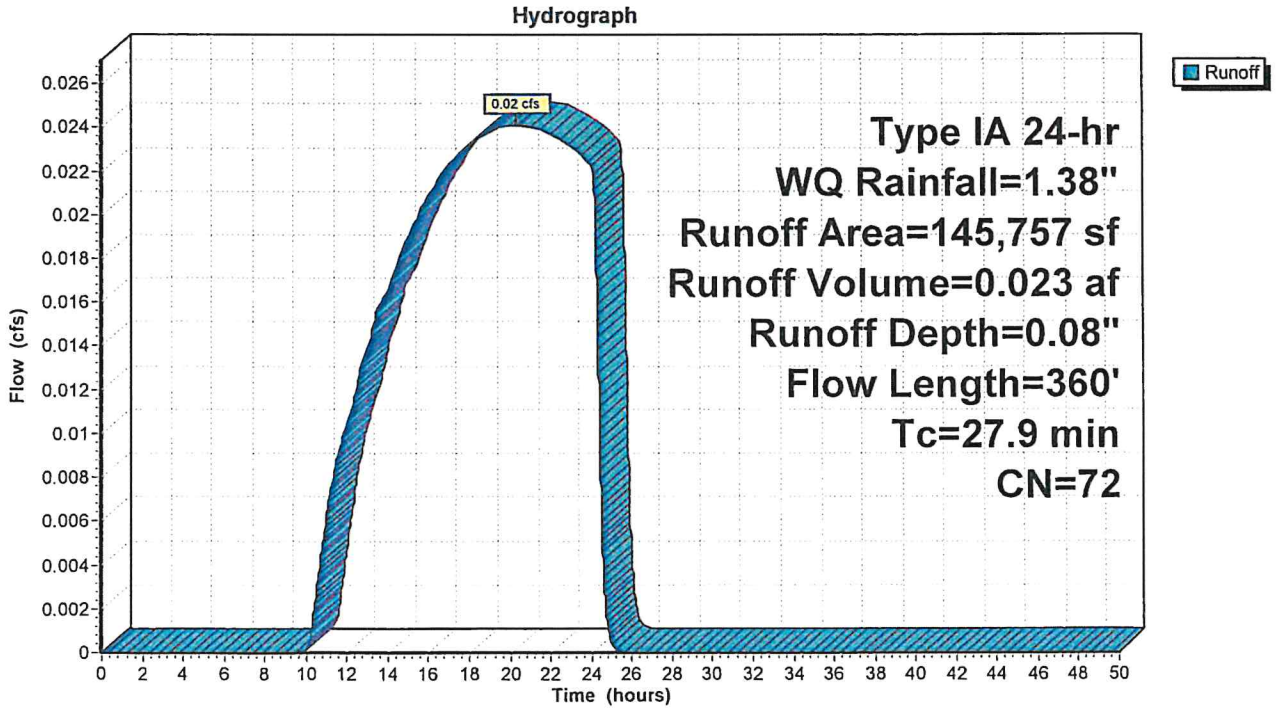
Runoff = 0.02 cfs @ 20.37 hrs, Volume= 0.023 af, Depth= 0.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr WQ Rainfall=1.38"

	Area (sf)	CN	Description
*	145,757	72	COS - Required Pre-Dev.
	145,757		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Run-off**
20.7	300	0.0071	0.24		**Sheet Flow, Sheet flow across field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
2.2	60	0.0020	0.45		**Shallow Concentrated Flow, Flow in Draininage Ditch** Nearly Bare & Untilled Kv= 10.0 fps
27.9	360	Total			

Subcatchment PRE A: PRE BASIN A



Summary for Subcatchment PRE B: PRE BASIN B

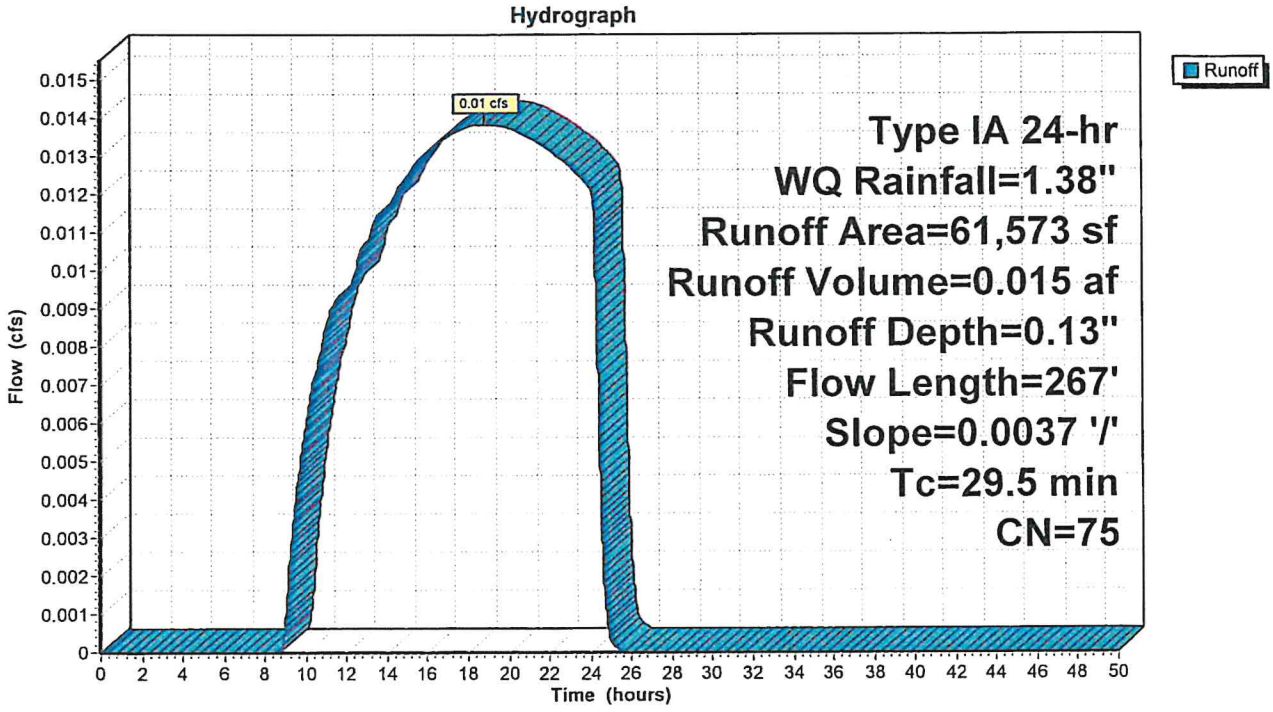
Runoff = 0.01 cfs @ 18.91 hrs, Volume= 0.015 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type IA 24-hr WQ Rainfall=1.38"

	Area (sf)	CN	Description
*	53,913	72	COS Required Pre-Dev
	7,660	98	Paved roads w/curbs & sewers, HSG C
	61,573	75	Weighted Average
	53,913		87.56% Pervious Area
	7,660		12.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, ODOT 5 Minute Delay to Start of Runoff**
24.5	267	0.0037	0.18		**Sheet Flow, Sheet Flow Across Field** Cultivated: Residue<=20% n= 0.060 P2= 2.20"
29.5	267	Total			

Subcatchment PRE B: PRE BASIN B



Summary for Pond 6P: Swale/Basin

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 0.45" for WQ event
Inflow = 0.32 cfs @ 8.39 hrs, Volume= 0.180 af
Outflow = 0.10 cfs @ 22.24 hrs, Volume= 0.180 af, Atten= 70%, Lag= 830.9 min
Discarded = 0.04 cfs @ 22.24 hrs, Volume= 0.074 af
Primary = 0.06 cfs @ 22.24 hrs, Volume= 0.106 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 208.18' @ 22.24 hrs Surf.Area= 5,429 sf Storage= 2,366 cf

Plug-Flow detention time= 304.6 min calculated for 0.180 af (100% of inflow)
Center-of-Mass det. time= 304.5 min (1,199.6 - 895.1)

Volume	Invert	Avail.Storage	Storage Description
#1	206.98'	17,722 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
206.98	19	0	0
207.65	19	13	13
207.70	1,348	34	47
207.80	4,234	279	326
207.85	5,402	241	567
207.90	5,409	270	837
208.00	5,416	541	1,378
208.10	5,423	542	1,920
208.50	5,453	2,175	4,096
209.00	5,489	2,736	6,831
209.50	5,537	2,757	9,588
210.00	5,587	2,781	12,369
210.50	5,638	2,806	15,175
210.95	5,683	2,547	17,722

Device	Routing	Invert	Outlet Devices
#1	Discarded	206.98'	**0.300 in/hr Exfiltration over Surface area**
#2	Primary	206.99'	**1.7" Horiz. Orifice -1/2 of 2-year** C= 0.600 Limited to weir flow at low heads
#3	Primary	209.00'	**2.0" Horiz. Orifice -2 year** C= 0.600 Limited to weir flow at low heads
#4	Primary	209.30'	**6.0" Horiz. Orifice -10 year -1** C= 0.600 Limited to weir flow at low heads
#5	Secondary	209.30'	**6.0" Vert. Orifice -10 year -2** C= 0.600
#6	Secondary	209.30'	**6.0" Vert. Orifice -10 year -3** C= 0.600
#7	Tertiary	209.60'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

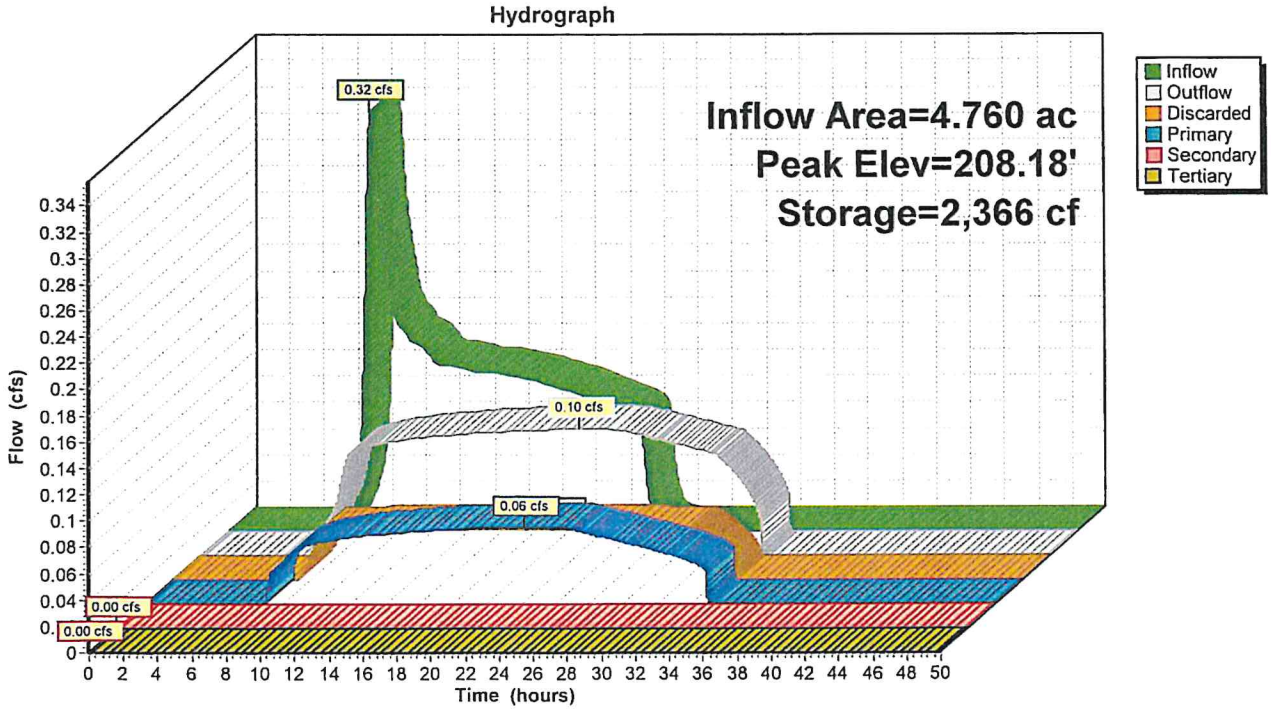
Discarded OutFlow Max=0.04 cfs @ 22.24 hrs HW=208.18' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.06 cfs @ 22.24 hrs HW=208.18' TW=207.59' (Dynamic Tailwater)
├**2=Orifice -1/2 of 2-year** (Orifice Controls 0.06 cfs @ 3.69 fps)
├**3=Orifice -2 year** (Controls 0.00 cfs)
└**4=Orifice -10 year -1** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.98' TW=207.49' (Dynamic Tailwater)
├**5=Orifice -10 year -2** (Controls 0.00 cfs)
└**6=Orifice -10 year -3** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.98' TW=207.49' (Dynamic Tailwater)
└**7=Orifice/Grate** (Controls 0.00 cfs)

Pond 6P: Swale/Basin



Summary for Pond 6P: Swale/Basin

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 0.75" for 1/2 of 2 year event
Inflow = 0.64 cfs @ 8.33 hrs, Volume= 0.298 af
Outflow = 0.12 cfs @ 24.23 hrs, Volume= 0.298 af, Atten= 81%, Lag= 954.1 min
Discarded = 0.04 cfs @ 24.23 hrs, Volume= 0.106 af
Primary = 0.08 cfs @ 24.23 hrs, Volume= 0.192 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 208.85' @ 24.23 hrs Surf.Area= 5,478 sf Storage= 5,988 cf

Plug-Flow detention time= 566.9 min calculated for 0.298 af (100% of inflow)
Center-of-Mass det. time= 566.6 min (1,426.8 - 860.3)

Volume	Invert	Avail.Storage	Storage Description
#1	206.98'	17,722 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
206.98	19	0	0
207.65	19	13	13
207.70	1,348	34	47
207.80	4,234	279	326
207.85	5,402	241	567
207.90	5,409	270	837
208.00	5,416	541	1,378
208.10	5,423	542	1,920
208.50	5,453	2,175	4,096
209.00	5,489	2,736	6,831
209.50	5,537	2,757	9,588
210.00	5,587	2,781	12,369
210.50	5,638	2,806	15,175
210.95	5,683	2,547	17,722

Device	Routing	Invert	Outlet Devices
#1	Discarded	206.98'	**0.300 in/hr Exfiltration over Surface area**
#2	Primary	206.99'	**1.7" Horiz. Orifice -1/2 of 2-year** C= 0.600 Limited to weir flow at low heads
#3	Primary	209.00'	**2.0" Horiz. Orifice -2 year** C= 0.600 Limited to weir flow at low heads
#4	Primary	209.30'	**6.0" Horiz. Orifice -10 year -1** C= 0.600 Limited to weir flow at low heads
#5	Secondary	209.30'	**6.0" Vert. Orifice -10 year -2** C= 0.600
#6	Secondary	209.30'	**6.0" Vert. Orifice -10 year -3** C= 0.600
#7	Tertiary	209.60'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

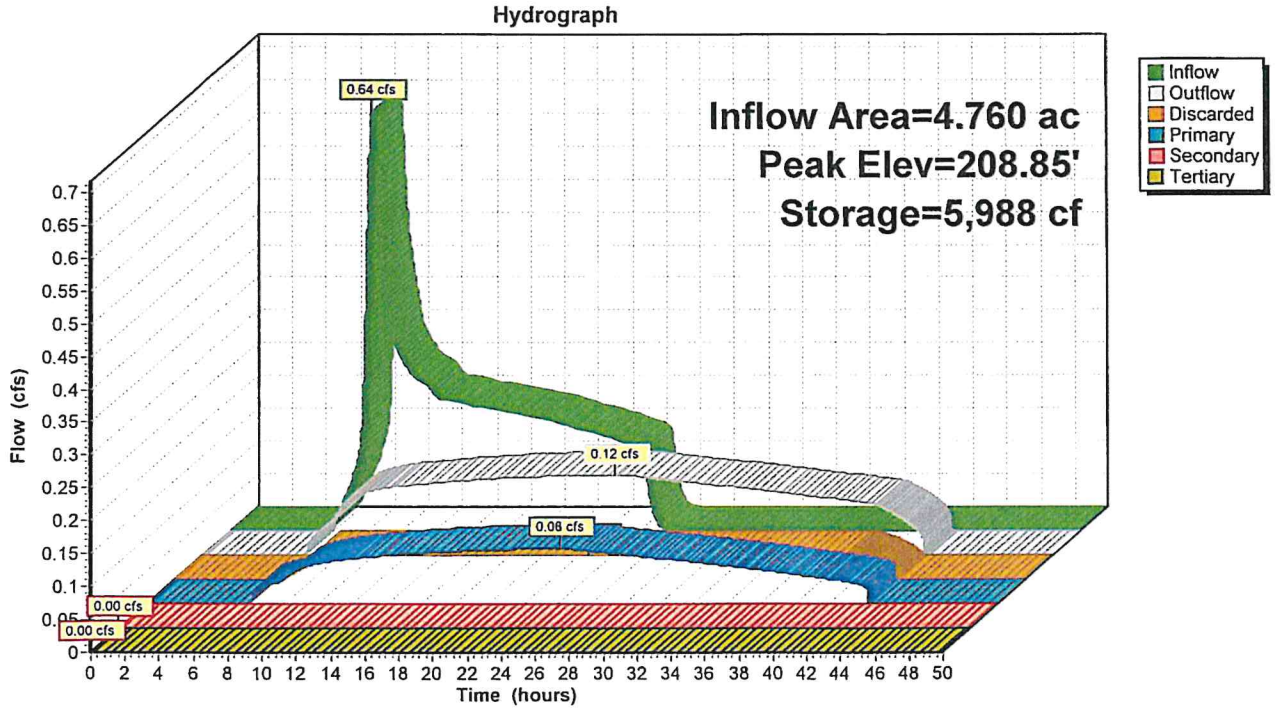
Discarded OutFlow Max=0.04 cfs @ 24.23 hrs HW=208.85' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.08 cfs @ 24.23 hrs HW=208.85' TW=207.61' (Dynamic Tailwater)
├**2=Orifice -1/2 of 2-year** (Orifice Controls 0.08 cfs @ 5.35 fps)
├**3=Orifice -2 year** (Controls 0.00 cfs)
└**4=Orifice -10 year -1** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.98' TW=207.49' (Dynamic Tailwater)
├**5=Orifice -10 year -2** (Controls 0.00 cfs)
└**6=Orifice -10 year -3** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.98' TW=207.49' (Dynamic Tailwater)
└**7=Orifice/Grate** (Controls 0.00 cfs)

Pond 6P: Swale/Basin



Summary for Pond 6P: Swale/Basin

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 1.06" for 2 event
Inflow = 0.99 cfs @ 8.29 hrs, Volume= 0.422 af
Outflow = 0.19 cfs @ 21.69 hrs, Volume= 0.422 af, Atten= 80%, Lag= 804.1 min
Discarded = 0.04 cfs @ 21.69 hrs, Volume= 0.122 af
Primary = 0.15 cfs @ 21.69 hrs, Volume= 0.300 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 209.30' @ 21.69 hrs Surf.Area= 5,518 sf Storage= 8,480 cf

Plug-Flow detention time= 637.7 min calculated for 0.422 af (100% of inflow)
Center-of-Mass det. time= 637.5 min (1,474.6 - 837.1)

Volume	Invert	Avail.Storage	Storage Description
#1	206.98'	17,722 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
206.98	19	0	0
207.65	19	13	13
207.70	1,348	34	47
207.80	4,234	279	326
207.85	5,402	241	567
207.90	5,409	270	837
208.00	5,416	541	1,378
208.10	5,423	542	1,920
208.50	5,453	2,175	4,096
209.00	5,489	2,736	6,831
209.50	5,537	2,757	9,588
210.00	5,587	2,781	12,369
210.50	5,638	2,806	15,175
210.95	5,683	2,547	17,722

Device	Routing	Invert	Outlet Devices
#1	Discarded	206.98'	**0.300 in/hr Exfiltration over Surface area**
#2	Primary	206.99'	**1.7" Horiz. Orifice -1/2 of 2-year** C= 0.600 Limited to weir flow at low heads
#3	Primary	209.00'	**2.0" Horiz. Orifice -2 year** C= 0.600 Limited to weir flow at low heads
#4	Primary	209.30'	**6.0" Horiz. Orifice -10 year -1** C= 0.600 Limited to weir flow at low heads
#5	Secondary	209.30'	**6.0" Vert. Orifice -10 year -2** C= 0.600
#6	Secondary	209.30'	**6.0" Vert. Orifice -10 year -3** C= 0.600
#7	Tertiary	209.60'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

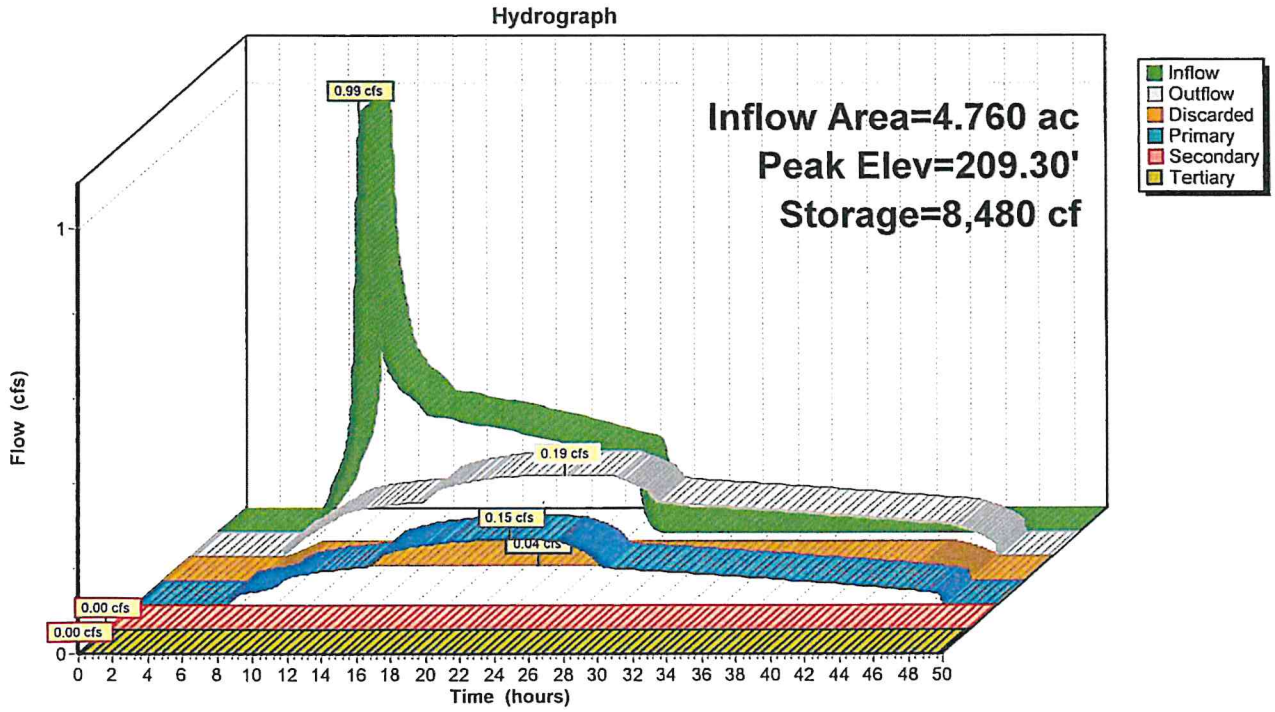
Discarded OutFlow Max=0.04 cfs @ 21.69 hrs HW=209.30' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.15 cfs @ 21.69 hrs HW=209.30' TW=207.66' (Dynamic Tailwater)
├**2=Orifice -1/2 of 2-year** (Orifice Controls 0.10 cfs @ 6.17 fps)
├**3=Orifice -2 year** (Orifice Controls 0.06 cfs @ 2.64 fps)
└**4=Orifice -10 year -1** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.98' TW=207.49' (Dynamic Tailwater)
├**5=Orifice -10 year -2** (Controls 0.00 cfs)
└**6=Orifice -10 year -3** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.98' TW=207.49' (Dynamic Tailwater)
└**7=Orifice/Grate** (Controls 0.00 cfs)

Pond 6P: Swale/Basin



Summary for Pond 6P: Swale/Basin

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 1.91" for 10 event
Inflow = 1.95 cfs @ 8.26 hrs, Volume= 0.760 af
Outflow = 0.64 cfs @ 10.08 hrs, Volume= 0.759 af, Atten= 67%, Lag= 109.1 min
Discarded = 0.04 cfs @ 10.08 hrs, Volume= 0.129 af
Primary = 0.47 cfs @ 10.08 hrs, Volume= 0.558 af
Secondary = 0.13 cfs @ 10.08 hrs, Volume= 0.073 af
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 209.45' @ 10.08 hrs Surf.Area= 5,532 sf Storage= 9,320 cf

Plug-Flow detention time= 420.8 min calculated for 0.759 af (100% of inflow)
Center-of-Mass det. time= 420.6 min (1,220.7 - 800.1)

Volume	Invert	Avail.Storage	Storage Description
#1	206.98'	17,722 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
206.98	19	0	0
207.65	19	13	13
207.70	1,348	34	47
207.80	4,234	279	326
207.85	5,402	241	567
207.90	5,409	270	837
208.00	5,416	541	1,378
208.10	5,423	542	1,920
208.50	5,453	2,175	4,096
209.00	5,489	2,736	6,831
209.50	5,537	2,757	9,588
210.00	5,587	2,781	12,369
210.50	5,638	2,806	15,175
210.95	5,683	2,547	17,722

Device	Routing	Invert	Outlet Devices
#1	Discarded	206.98'	**0.300 in/hr Exfiltration over Surface area**
#2	Primary	206.99'	**1.7" Horiz. Orifice -1/2 of 2-year** C= 0.600 Limited to weir flow at low heads
#3	Primary	209.00'	**2.0" Horiz. Orifice -2 year** C= 0.600 Limited to weir flow at low heads
#4	Primary	209.30'	**6.0" Horiz. Orifice -10 year -1** C= 0.600 Limited to weir flow at low heads
#5	Secondary	209.30'	**6.0" Vert. Orifice -10 year -2** C= 0.600
#6	Secondary	209.30'	**6.0" Vert. Orifice -10 year -3** C= 0.600
#7	Tertiary	209.60'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

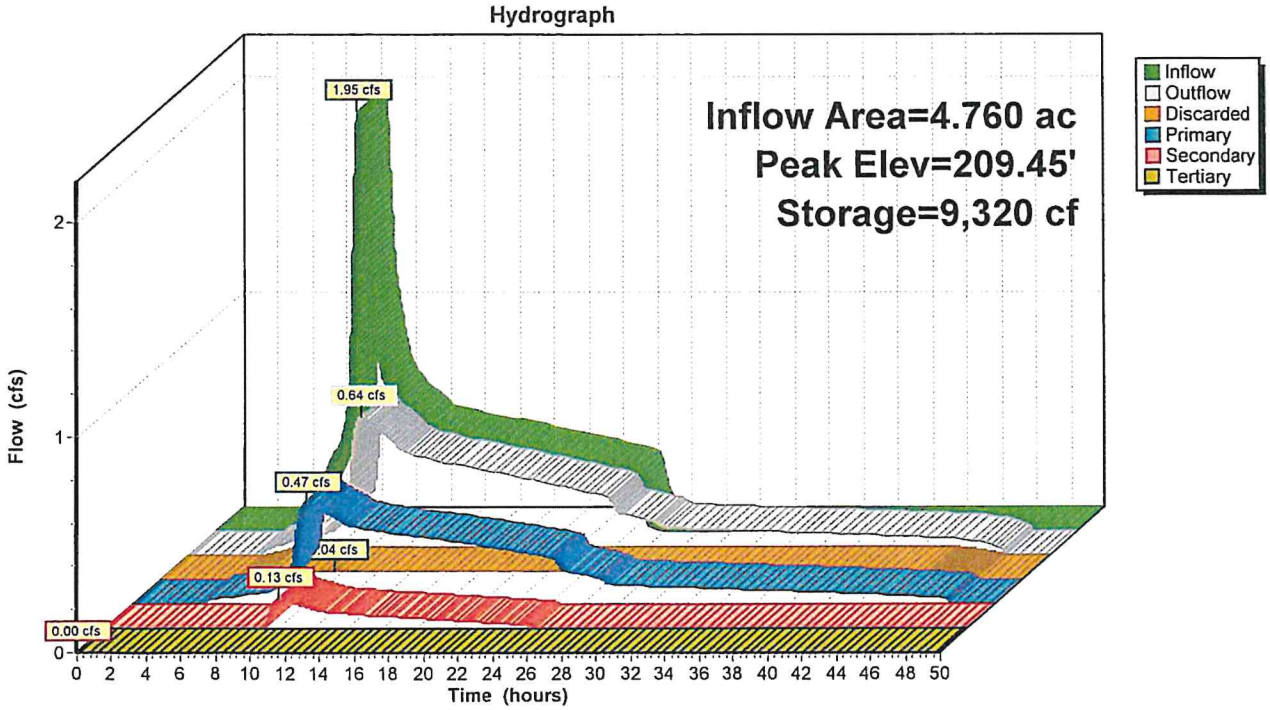
Discarded OutFlow Max=0.04 cfs @ 10.08 hrs HW=209.45' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.47 cfs @ 10.08 hrs HW=209.45' TW=207.82' (Dynamic Tailwater)
├**2=Orifice -1/2 of 2-year** (Orifice Controls 0.10 cfs @ 6.15 fps)
├**3=Orifice -2 year** (Orifice Controls 0.07 cfs @ 3.24 fps)
└**4=Orifice -10 year -1** (Weir Controls 0.30 cfs @ 1.27 fps)

Secondary OutFlow Max=0.13 cfs @ 10.08 hrs HW=209.45' TW=207.82' (Dynamic Tailwater)
├**5=Orifice -10 year -2** (Orifice Controls 0.07 cfs @ 1.33 fps)
└**6=Orifice -10 year -3** (Orifice Controls 0.07 cfs @ 1.33 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.98' TW=207.49' (Dynamic Tailwater)
└**7=Orifice/Grate** (Controls 0.00 cfs)

Pond 6P: Swale/Basin



Summary for Pond 6P: Swale/Basin

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 2.27" for 25 event
Inflow = 2.36 cfs @ 8.25 hrs, Volume= 0.901 af
Outflow = 0.98 cfs @ 9.34 hrs, Volume= 0.901 af, Atten= 58%, Lag= 65.8 min
Discarded = 0.04 cfs @ 9.34 hrs, Volume= 0.130 af
Primary = 0.64 cfs @ 9.34 hrs, Volume= 0.651 af
Secondary = 0.31 cfs @ 9.34 hrs, Volume= 0.120 af
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 209.54' @ 9.34 hrs Surf.Area= 5,541 sf Storage= 9,806 cf

Plug-Flow detention time= 363.5 min calculated for 0.901 af (100% of inflow)
Center-of-Mass det. time= 363.5 min (1,153.5 - 789.9)

Volume	Invert	Avail.Storage	Storage Description
#1	206.98'	17,722 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
206.98	19	0	0
207.65	19	13	13
207.70	1,348	34	47
207.80	4,234	279	326
207.85	5,402	241	567
207.90	5,409	270	837
208.00	5,416	541	1,378
208.10	5,423	542	1,920
208.50	5,453	2,175	4,096
209.00	5,489	2,736	6,831
209.50	5,537	2,757	9,588
210.00	5,587	2,781	12,369
210.50	5,638	2,806	15,175
210.95	5,683	2,547	17,722

Device	Routing	Invert	Outlet Devices
#1	Discarded	206.98'	**0.300 in/hr Exfiltration over Surface area**
#2	Primary	206.99'	**1.7" Horiz. Orifice -1/2 of 2-year** C= 0.600 Limited to weir flow at low heads
#3	Primary	209.00'	**2.0" Horiz. Orifice -2 year** C= 0.600 Limited to weir flow at low heads
#4	Primary	209.30'	**6.0" Horiz. Orifice -10 year -1** C= 0.600 Limited to weir flow at low heads
#5	Secondary	209.30'	**6.0" Vert. Orifice -10 year -2** C= 0.600
#6	Secondary	209.30'	**6.0" Vert. Orifice -10 year -3** C= 0.600
#7	Tertiary	209.60'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

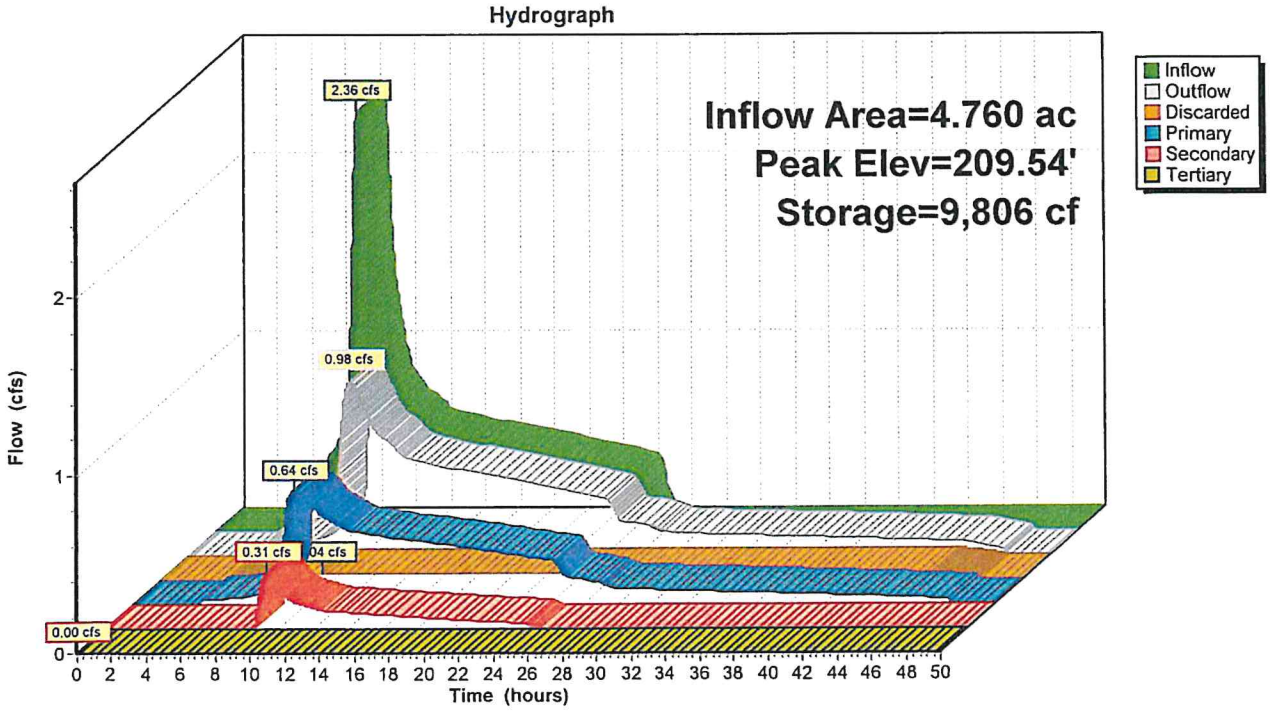
Discarded OutFlow Max=0.04 cfs @ 9.34 hrs HW=209.54' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.64 cfs @ 9.34 hrs HW=209.54' TW=207.91' (Dynamic Tailwater)
├─**2=Orifice -1/2 of 2-year** (Orifice Controls 0.10 cfs @ 6.15 fps)
├─**3=Orifice -2 year** (Orifice Controls 0.08 cfs @ 3.54 fps)
└─**4=Orifice -10 year -1** (Orifice Controls 0.46 cfs @ 2.36 fps)

Secondary OutFlow Max=0.31 cfs @ 9.34 hrs HW=209.54' TW=207.91' (Dynamic Tailwater)
├─**5=Orifice -10 year -2** (Orifice Controls 0.15 cfs @ 1.67 fps)
└─**6=Orifice -10 year -3** (Orifice Controls 0.15 cfs @ 1.67 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.98' TW=207.49' (Dynamic Tailwater)
└─**7=Orifice/Grate** (Controls 0.00 cfs)

Pond 6P: Swale/Basin



Summary for Pond 6P: Swale/Basin

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 3.01" for 100 event
Inflow = 3.20 cfs @ 8.24 hrs, Volume= 1.192 af
Outflow = 2.14 cfs @ 8.64 hrs, Volume= 1.192 af, Atten= 33%, Lag= 24.1 min
Discarded = 0.04 cfs @ 8.64 hrs, Volume= 0.133 af
Primary = 0.81 cfs @ 8.64 hrs, Volume= 0.796 af
Secondary = 0.81 cfs @ 8.64 hrs, Volume= 0.238 af
Tertiary = 0.49 cfs @ 8.64 hrs, Volume= 0.025 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 209.73' @ 8.64 hrs Surf.Area= 5,560 sf Storage= 10,871 cf

Plug-Flow detention time= 286.6 min calculated for 1.192 af (100% of inflow)
Center-of-Mass det. time= 286.7 min (1,060.5 - 773.8)

Volume	Invert	Avail.Storage	Storage Description
#1	206.98'	17,722 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
206.98	19	0	0
207.65	19	13	13
207.70	1,348	34	47
207.80	4,234	279	326
207.85	5,402	241	567
207.90	5,409	270	837
208.00	5,416	541	1,378
208.10	5,423	542	1,920
208.50	5,453	2,175	4,096
209.00	5,489	2,736	6,831
209.50	5,537	2,757	9,588
210.00	5,587	2,781	12,369
210.50	5,638	2,806	15,175
210.95	5,683	2,547	17,722

Device	Routing	Invert	Outlet Devices
#1	Discarded	206.98'	**0.300 in/hr Exfiltration over Surface area**
#2	Primary	206.99'	**1.7" Horiz. Orifice -1/2 of 2-year** C= 0.600 Limited to weir flow at low heads
#3	Primary	209.00'	**2.0" Horiz. Orifice -2 year** C= 0.600 Limited to weir flow at low heads
#4	Primary	209.30'	**6.0" Horiz. Orifice -10 year -1** C= 0.600 Limited to weir flow at low heads
#5	Secondary	209.30'	**6.0" Vert. Orifice -10 year -2** C= 0.600
#6	Secondary	209.30'	**6.0" Vert. Orifice -10 year -3** C= 0.600
#7	Tertiary	209.60'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

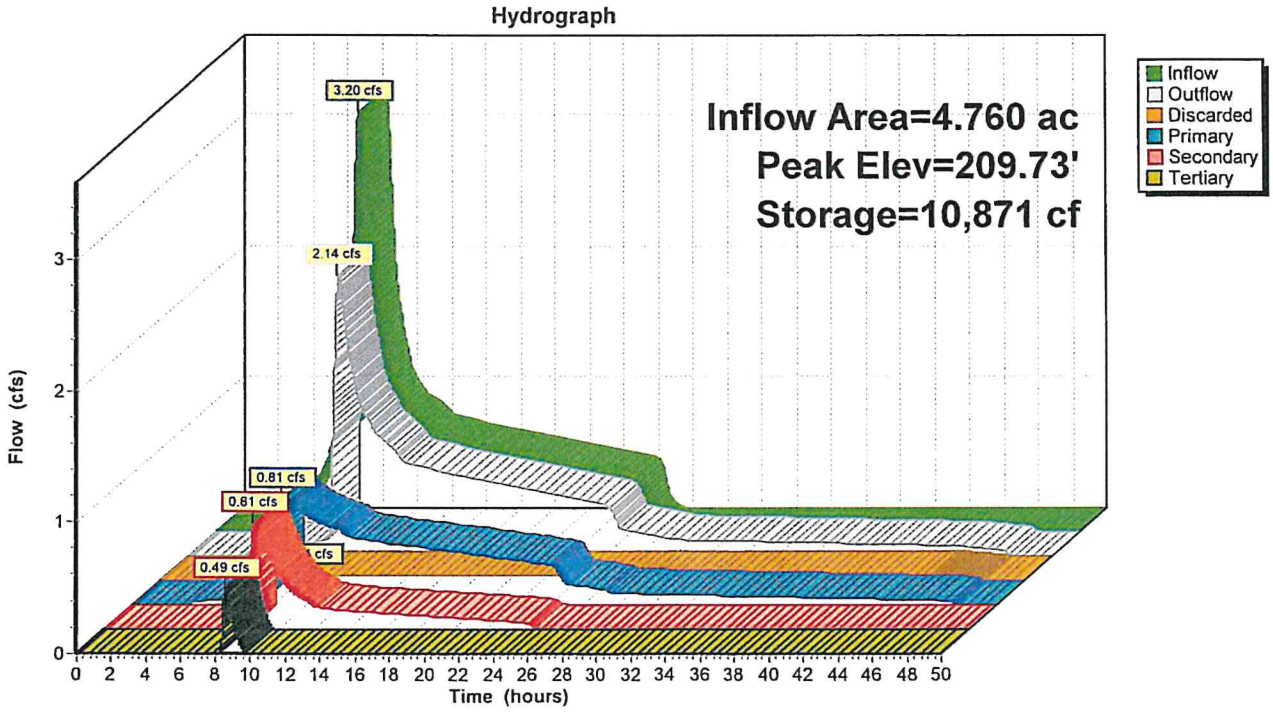
Discarded OutFlow Max=0.04 cfs @ 8.64 hrs HW=209.73' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.81 cfs @ 8.64 hrs HW=209.73' TW=208.17' (Dynamic Tailwater)
├**2=Orifice -1/2 of 2-year** (Orifice Controls 0.09 cfs @ 6.01 fps)
├**3=Orifice -2 year** (Orifice Controls 0.09 cfs @ 4.12 fps)
└**4=Orifice -10 year -1** (Orifice Controls 0.62 cfs @ 3.16 fps)

Secondary OutFlow Max=0.81 cfs @ 8.64 hrs HW=209.73' TW=208.17' (Dynamic Tailwater)
├**5=Orifice -10 year -2** (Orifice Controls 0.40 cfs @ 2.24 fps)
└**6=Orifice -10 year -3** (Orifice Controls 0.40 cfs @ 2.24 fps)

Tertiary OutFlow Max=0.49 cfs @ 8.64 hrs HW=209.73' TW=208.17' (Dynamic Tailwater)
└**7=Orifice/Grate** (Weir Controls 0.49 cfs @ 1.18 fps)

Pond 6P: Swale/Basin



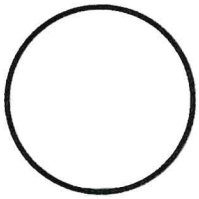
Summary for Reach 5R: (new Reach)

Inflow Area = 4.760 ac, 3.69% Impervious, Inflow Depth = 0.23" for 1/2 of 2 year event
Inflow = 0.08 cfs @ 17.52 hrs, Volume= 0.093 af
Outflow = 0.08 cfs @ 17.46 hrs, Volume= 0.093 af, Atten= 0%, Lag= 0.0 min

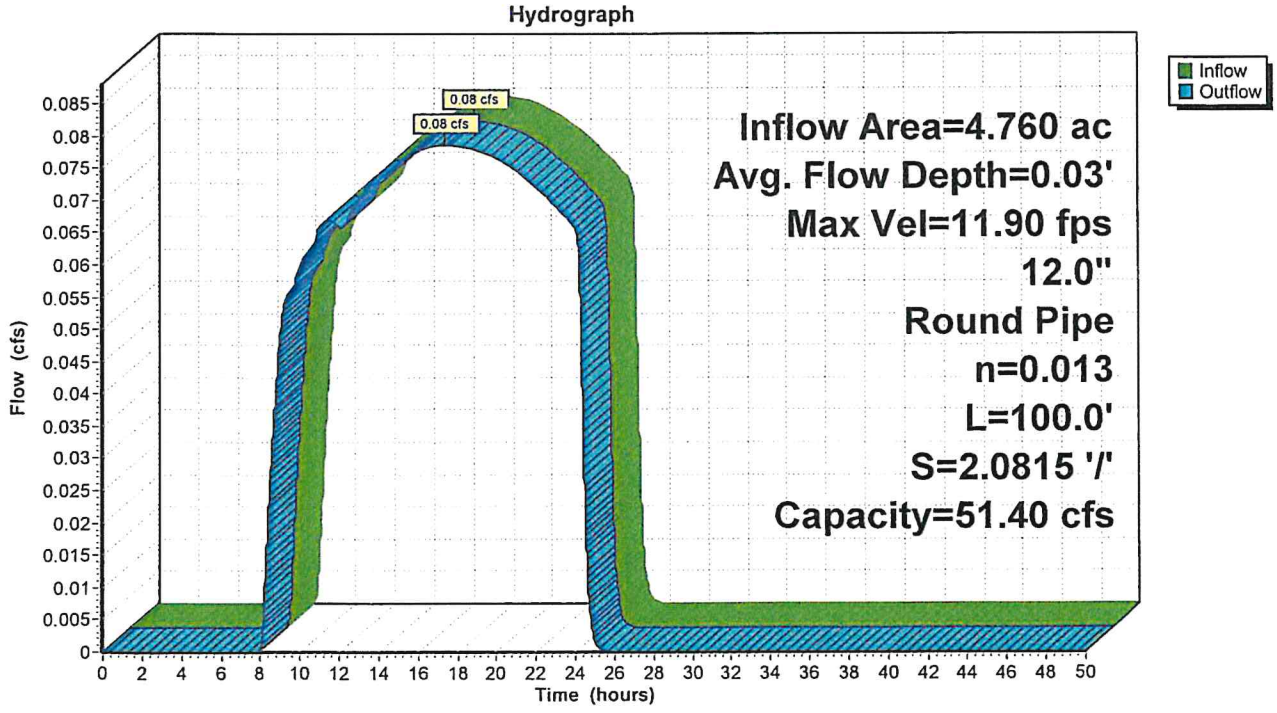
Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.90 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 11.18 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 17.46 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 51.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 100.0' Slope= 2.0815 '/'
Inlet Invert= 207.65', Outlet Invert= -0.50'



Reach 5R: (new Reach)



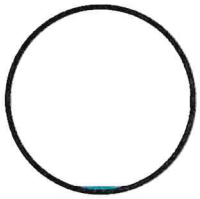
Summary for Reach 5R: (new Reach)

Inflow Area = 4.760 ac, 3.69% Impervious, Inflow Depth = 0.41" for 2 event
Inflow = 0.15 cfs @ 8.47 hrs, Volume= 0.163 af
Outflow = 0.15 cfs @ 8.47 hrs, Volume= 0.163 af, Atten= 0%, Lag= 0.1 min

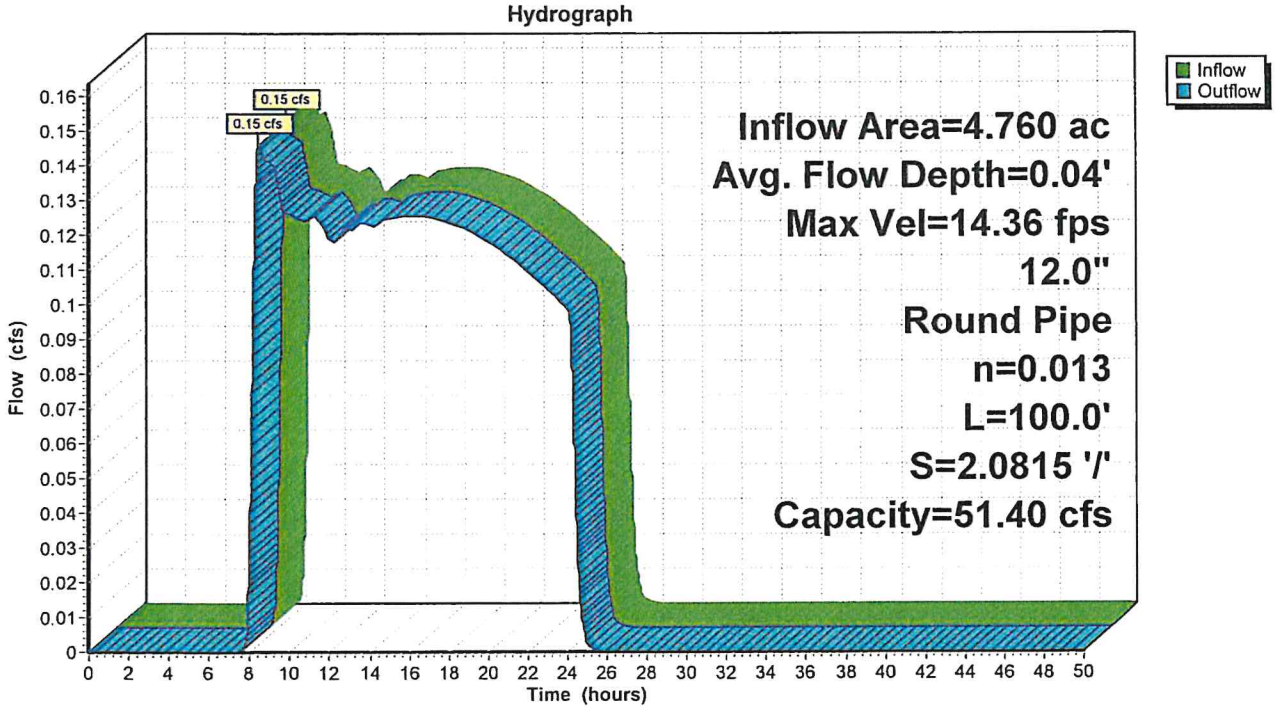
Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 14.36 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 13.13 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 8.47 hrs
Average Depth at Peak Storage= 0.04'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 51.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 100.0' Slope= 2.0815 '/'
Inlet Invert= 207.65', Outlet Invert= -0.50'



Reach 5R: (new Reach)



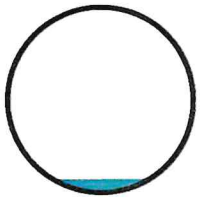
Summary for Reach 5R: (new Reach)

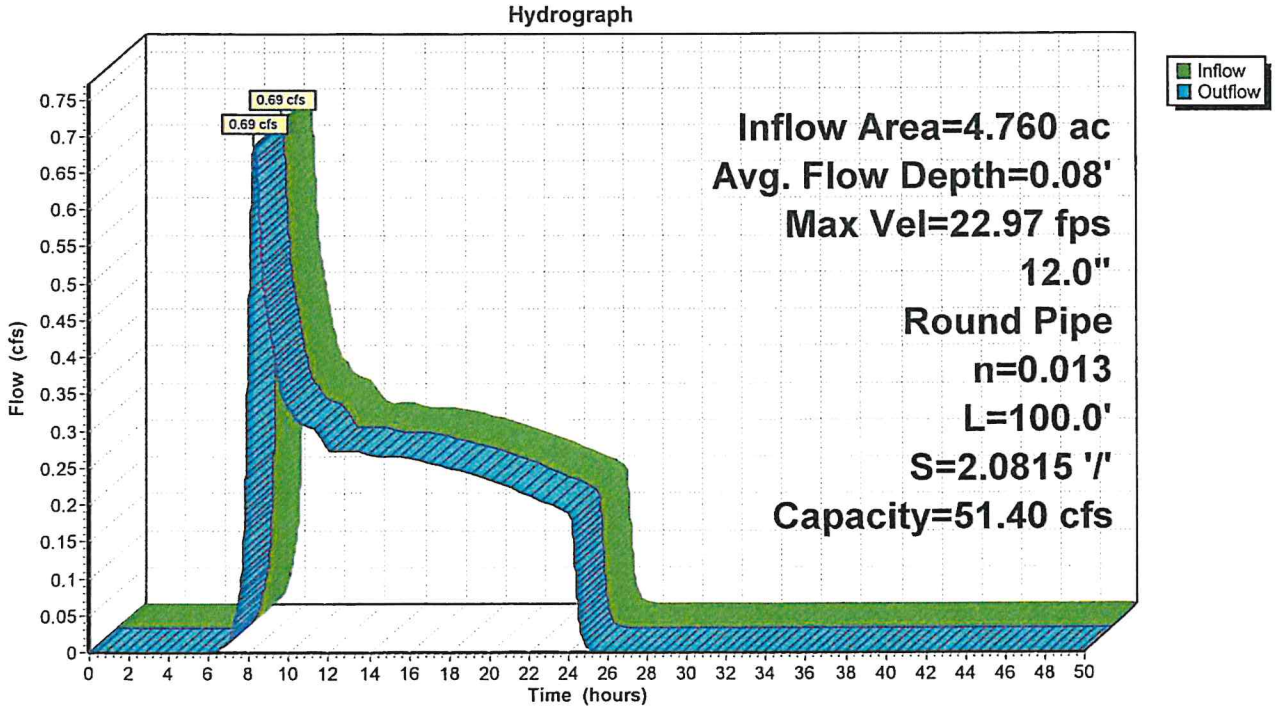
Inflow Area = 4.760 ac, 3.69% Impervious, Inflow Depth = 0.98" for 10 event
Inflow = 0.69 cfs @ 8.28 hrs, Volume= 0.388 af
Outflow = 0.69 cfs @ 8.28 hrs, Volume= 0.388 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 22.97 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 16.22 fps, Avg. Travel Time= 0.1 min

Peak Storage= 3 cf @ 8.28 hrs
Average Depth at Peak Storage= 0.08'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 51.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 100.0' Slope= 2.0815 '/'
Inlet Invert= 207.65', Outlet Invert= -0.50'





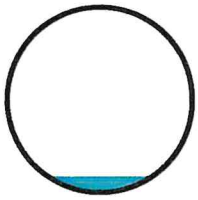
Summary for Reach 5R: (new Reach)

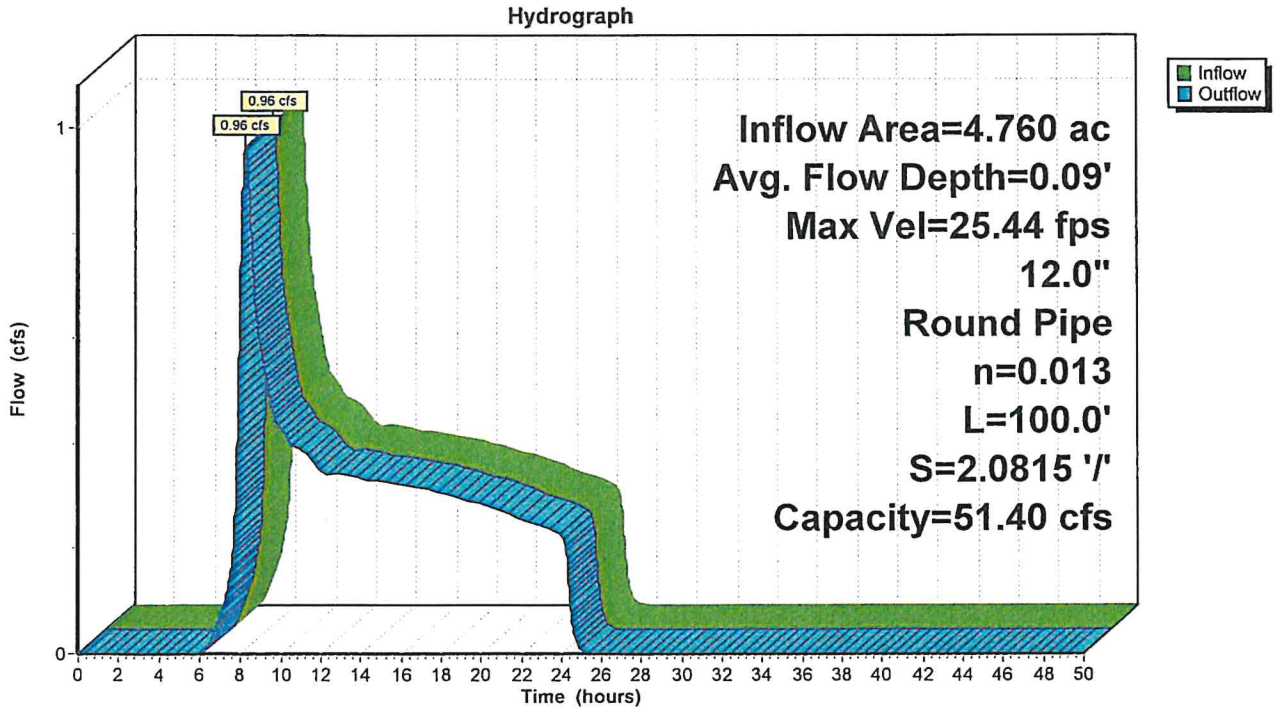
Inflow Area = 4.760 ac, 3.69% Impervious, Inflow Depth = 1.24" for 25 event
Inflow = 0.96 cfs @ 8.26 hrs, Volume= 0.493 af
Outflow = 0.96 cfs @ 8.26 hrs, Volume= 0.493 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 25.44 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 17.22 fps, Avg. Travel Time= 0.1 min

Peak Storage= 4 cf @ 8.26 hrs
Average Depth at Peak Storage= 0.09'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 51.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 100.0' Slope= 2.0815 '/'
Inlet Invert= 207.65', Outlet Invert= -0.50'





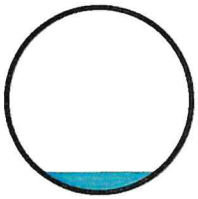
Summary for Reach 5R: (new Reach)

Inflow Area = 4.760 ac, 3.69% Impervious, Inflow Depth = 1.81" for 100 event
Inflow = 1.58 cfs @ 8.23 hrs, Volume= 0.719 af
Outflow = 1.58 cfs @ 8.23 hrs, Volume= 0.719 af, Atten= 0%, Lag= 0.0 min

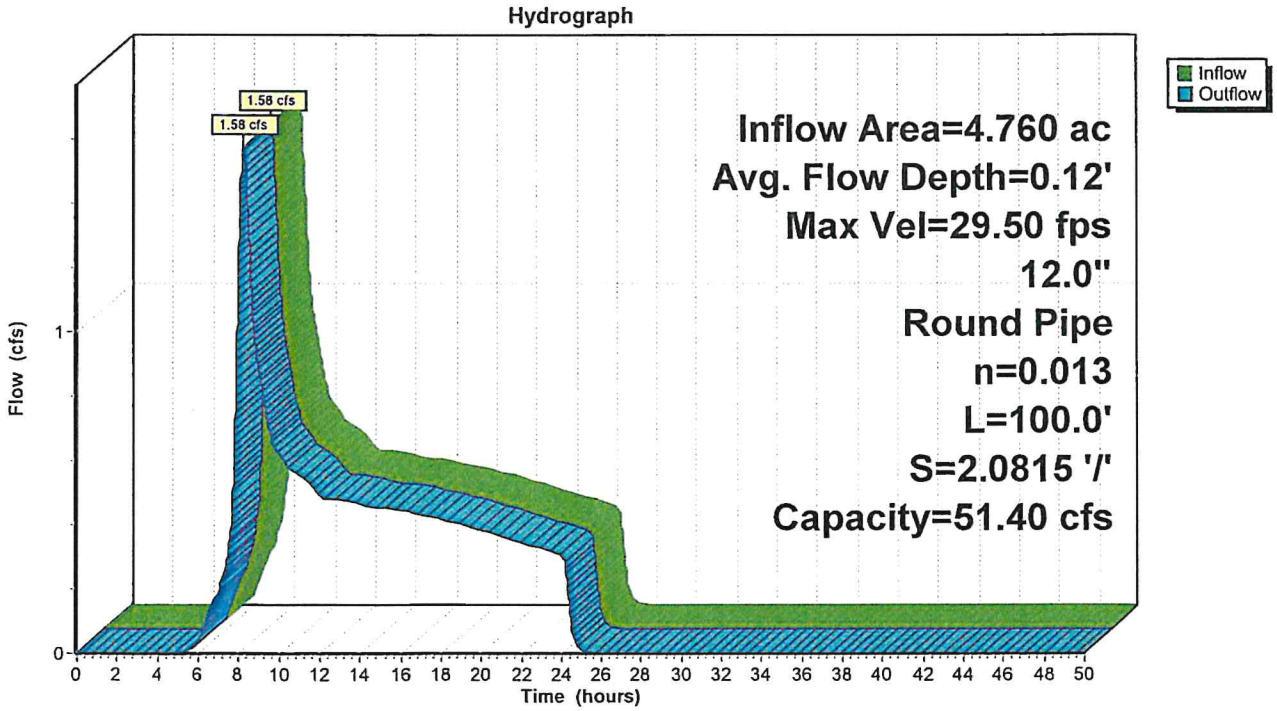
Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 29.50 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 18.94 fps, Avg. Travel Time= 0.1 min

Peak Storage= 5 cf @ 8.23 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 51.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 100.0' Slope= 2.0815 '/'
Inlet Invert= 207.65', Outlet Invert= -0.50'



Reach 5R: (new Reach)



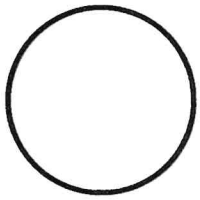
Summary for Reach 5R: (new Reach)

Inflow Area = 4.760 ac, 3.69% Impervious, Inflow Depth = 0.09" for WQ event
Inflow = 0.04 cfs @ 19.75 hrs, Volume= 0.037 af
Outflow = 0.04 cfs @ 19.82 hrs, Volume= 0.037 af, Atten= 0%, Lag= 3.9 min

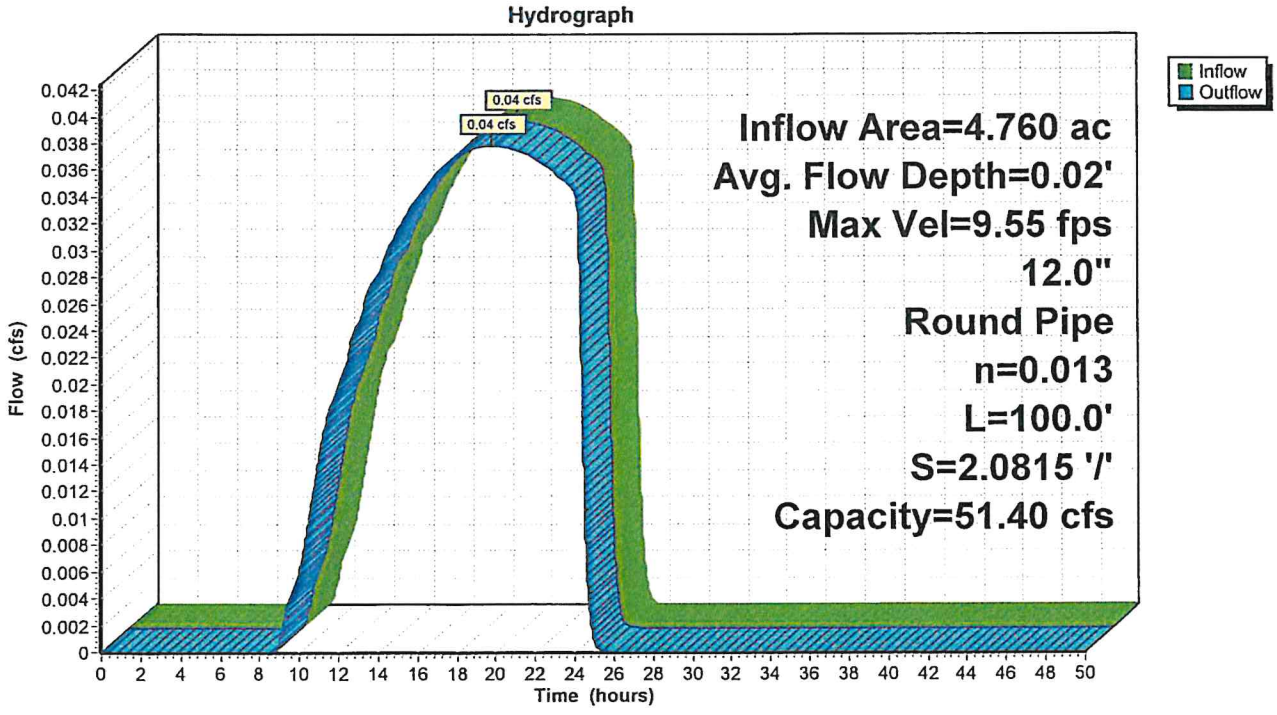
Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.55 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 8.62 fps, Avg. Travel Time= 0.2 min

Peak Storage= 0 cf @ 19.82 hrs
Average Depth at Peak Storage= 0.02'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 51.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 100.0' Slope= 2.0815 '/'
Inlet Invert= 207.65', Outlet Invert= -0.50'



Reach 5R: (new Reach)



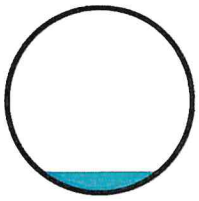
Summary for Reach 7R: Basin Outlet Pipe

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 0.48" for 1/2 of 2 year event
Inflow = 0.08 cfs @ 24.33 hrs, Volume= 0.192 af
Outflow = 0.08 cfs @ 24.33 hrs, Volume= 0.192 af, Atten= 0%, Lag= 0.1 min

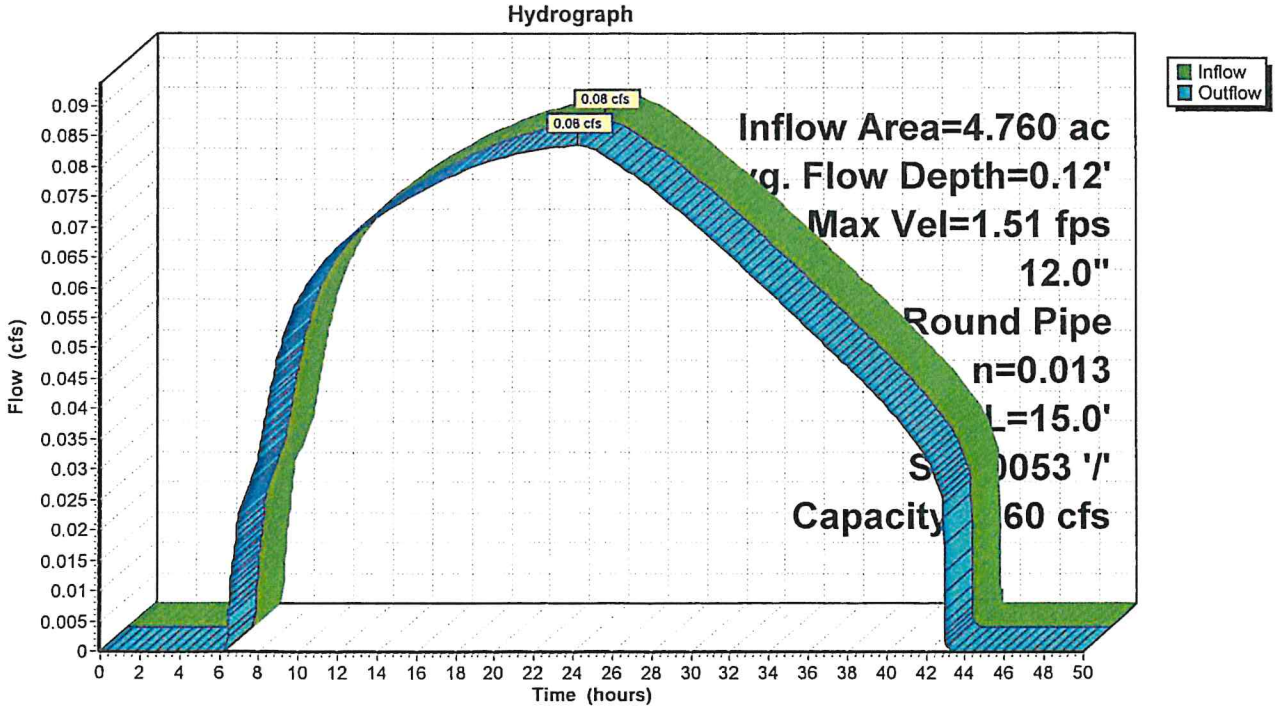
Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.51 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.37 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 24.33 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.60 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 15.0' Slope= 0.0053 '/'
Inlet Invert= 207.49', Outlet Invert= 207.41'



Reach 7R: Basin Outlet Pipe



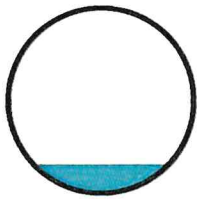
Summary for Reach 7R: Basin Outlet Pipe

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 0.75" for 2 event
Inflow = 0.15 cfs @ 22.15 hrs, Volume= 0.299 af
Outflow = 0.15 cfs @ 22.16 hrs, Volume= 0.299 af, Atten= 0%, Lag= 0.1 min

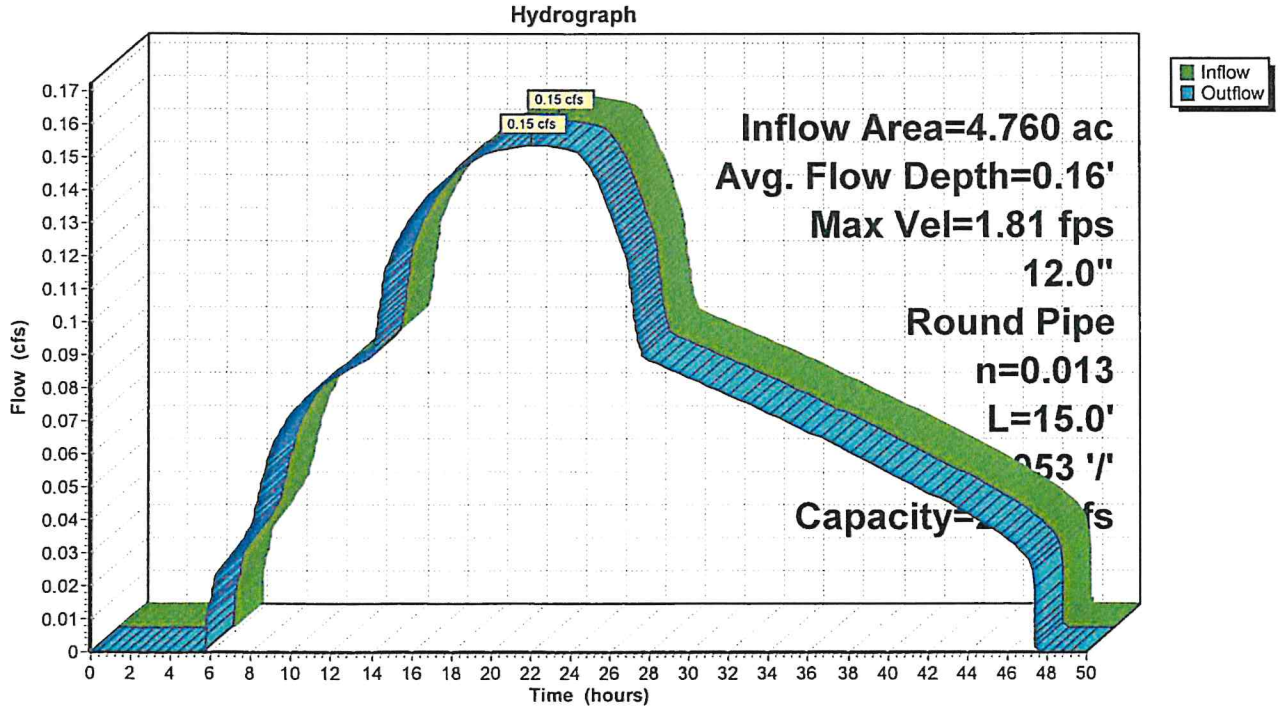
Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.81 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.49 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 22.16 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.60 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 15.0' Slope= 0.0053 '/'
Inlet Invert= 207.49', Outlet Invert= 207.41'



Reach 7R: Basin Outlet Pipe



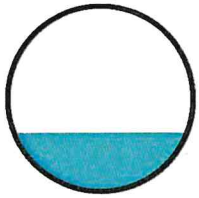
Summary for Reach 7R: Basin Outlet Pipe

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 1.59" for 10 event
Inflow = 0.59 cfs @ 10.45 hrs, Volume= 0.630 af
Outflow = 0.59 cfs @ 10.45 hrs, Volume= 0.630 af, Atten= 0%, Lag= 0.1 min

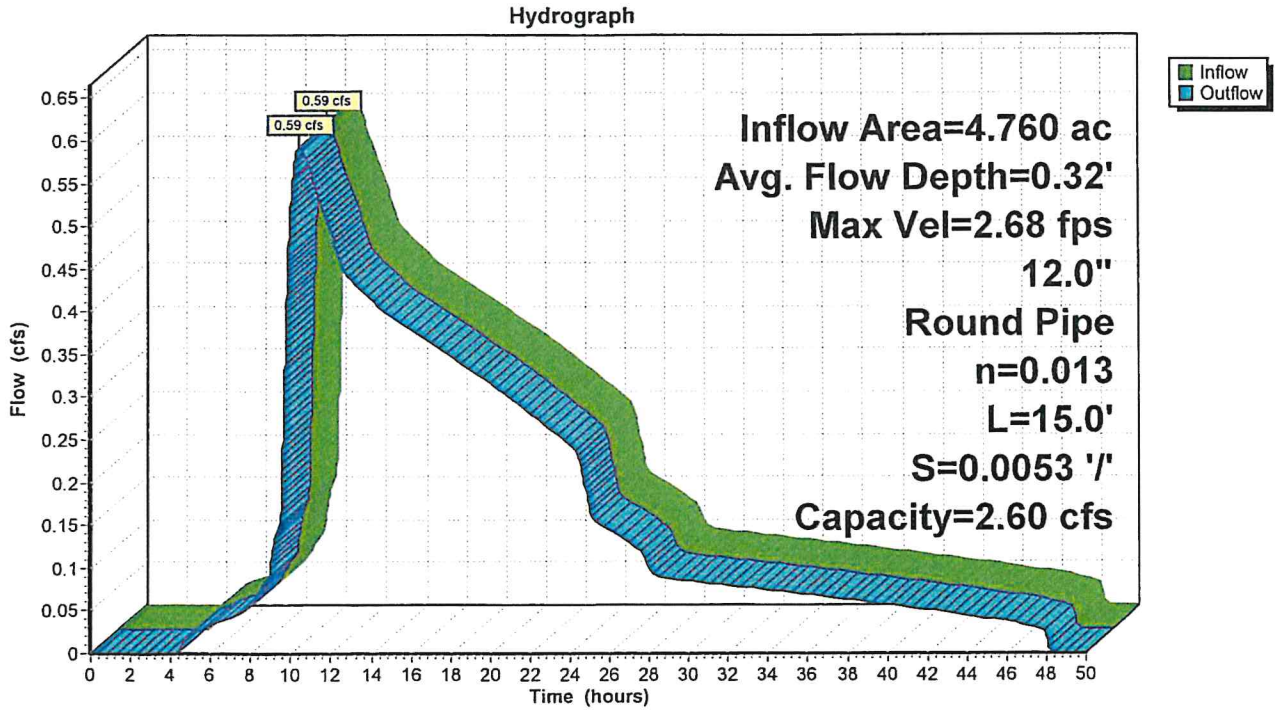
Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.68 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.72 fps, Avg. Travel Time= 0.1 min

Peak Storage= 3 cf @ 10.45 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.60 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 15.0' Slope= 0.0053 '/'
Inlet Invert= 207.49', Outlet Invert= 207.41'



Reach 7R: Basin Outlet Pipe



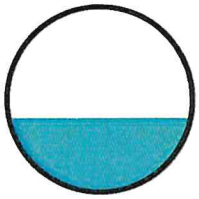
Summary for Reach 7R: Basin Outlet Pipe

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 1.94" for 25 event
Inflow = 0.91 cfs @ 9.63 hrs, Volume= 0.770 af
Outflow = 0.91 cfs @ 9.63 hrs, Volume= 0.770 af, Atten= 0%, Lag= 0.1 min

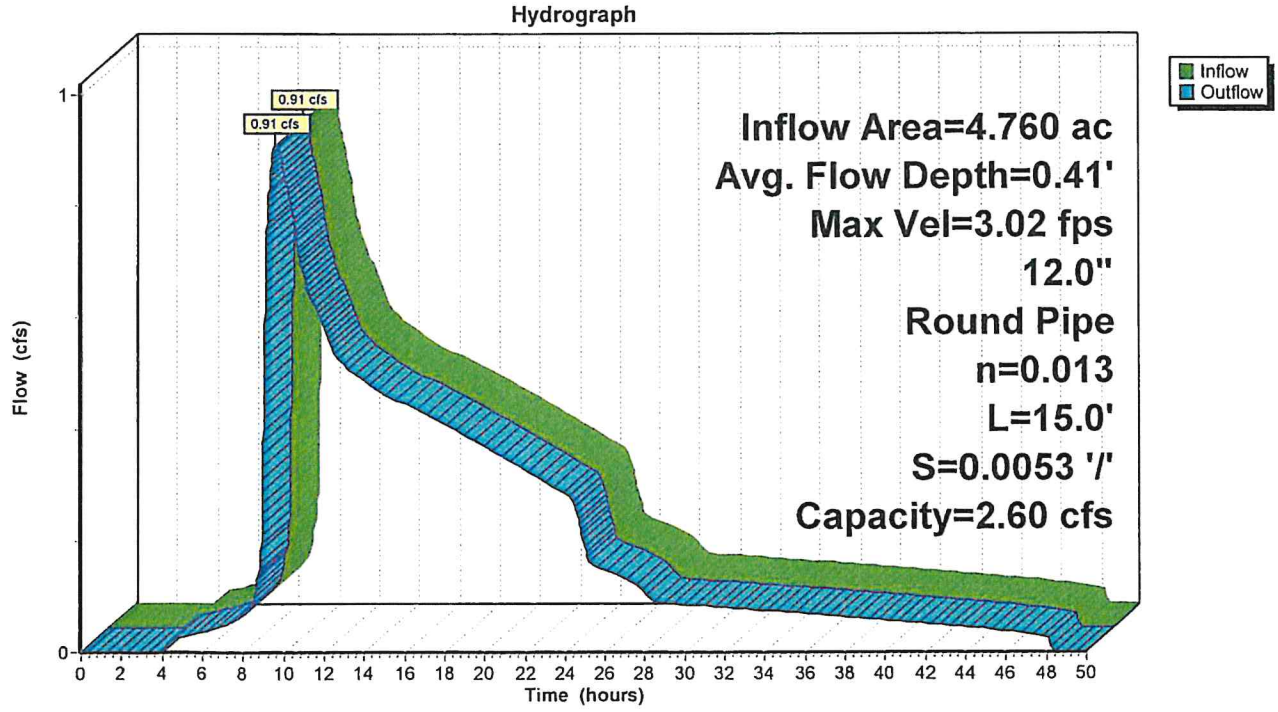
Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.02 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.78 fps, Avg. Travel Time= 0.1 min

Peak Storage= 5 cf @ 9.63 hrs
Average Depth at Peak Storage= 0.41'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.60 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 15.0' Slope= 0.0053 '/'
Inlet Invert= 207.49', Outlet Invert= 207.41'



Reach 7R: Basin Outlet Pipe



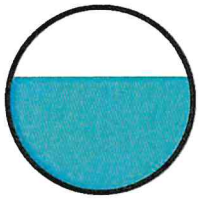
Summary for Reach 7R: Basin Outlet Pipe

Inflow Area = 4.760 ac, 53.18% Impervious, Inflow Depth = 2.67" for 100 event
Inflow = 1.89 cfs @ 8.88 hrs, Volume= 1.058 af
Outflow = 1.89 cfs @ 8.88 hrs, Volume= 1.058 af, Atten= 0%, Lag= 0.1 min

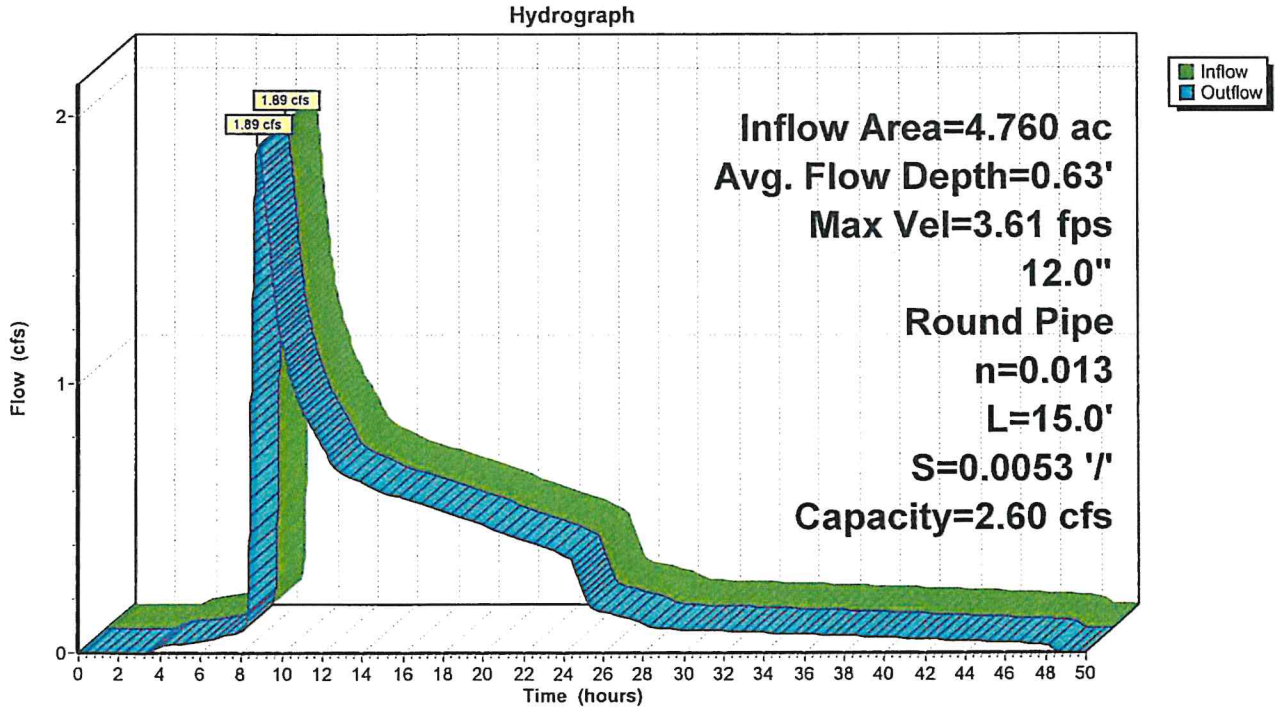
Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.61 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.87 fps, Avg. Travel Time= 0.1 min

Peak Storage= 8 cf @ 8.88 hrs
Average Depth at Peak Storage= 0.63'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.60 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 15.0' Slope= 0.0053 '/'
Inlet Invert= 207.49', Outlet Invert= 207.41'



Reach 7R: Basin Outlet Pipe



Summary for Reach 3R: West Vegetated Swale

Inflow Area = 3.346 ac, 52.77% Impervious, Inflow Depth = 0.45" for WQ event
Inflow = 0.24 cfs @ 8.25 hrs, Volume= 0.127 af
Outflow = 0.15 cfs @ 8.98 hrs, Volume= 0.127 af, Atten= 39%, Lag= 43.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.05 fps, Min. Travel Time= 53.6 min
Avg. Velocity = 0.03 fps, Avg. Travel Time= 95.8 min

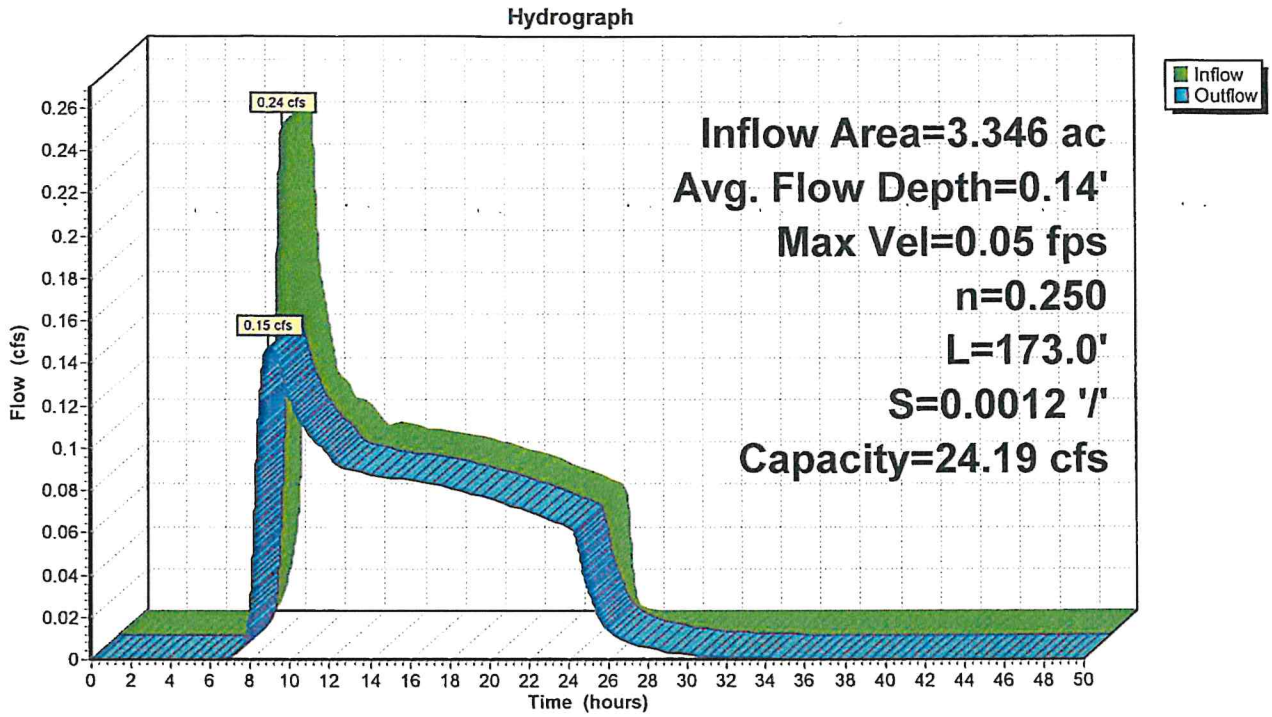
Peak Storage= 477 cf @ 8.98 hrs
Average Depth at Peak Storage= 0.14'
Bank-Full Depth= 3.20' Flow Area= 65.4 sf, Capacity= 24.19 cfs

Custom cross-section, Length= 173.0' Slope= 0.0012 '/'
Constant n= 0.250
Inlet Invert= 207.85', Outlet Invert= 207.65'

Offset (feet)	Elevation (feet)	Chan.Depth (feet)
0.00	210.95	0.00
0.45	207.75	3.20
20.45	207.75	3.20
20.90	210.95	0.00

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	20.0	0	0.00
3.20	65.4	26.5	11,321	24.19

Reach 3R: West Vegetated Swale



Summary for Reach 4R: East Vegetated Swale

Inflow Area = 1.414 ac, 54.13% Impervious, Inflow Depth = 0.45" for WQ event
Inflow = 0.10 cfs @ 8.28 hrs, Volume= 0.053 af
Outflow = 0.08 cfs @ 8.64 hrs, Volume= 0.053 af, Atten= 24%, Lag= 21.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.06 fps, Min. Travel Time= 30.5 min
Avg. Velocity = 0.04 fps, Avg. Travel Time= 42.7 min

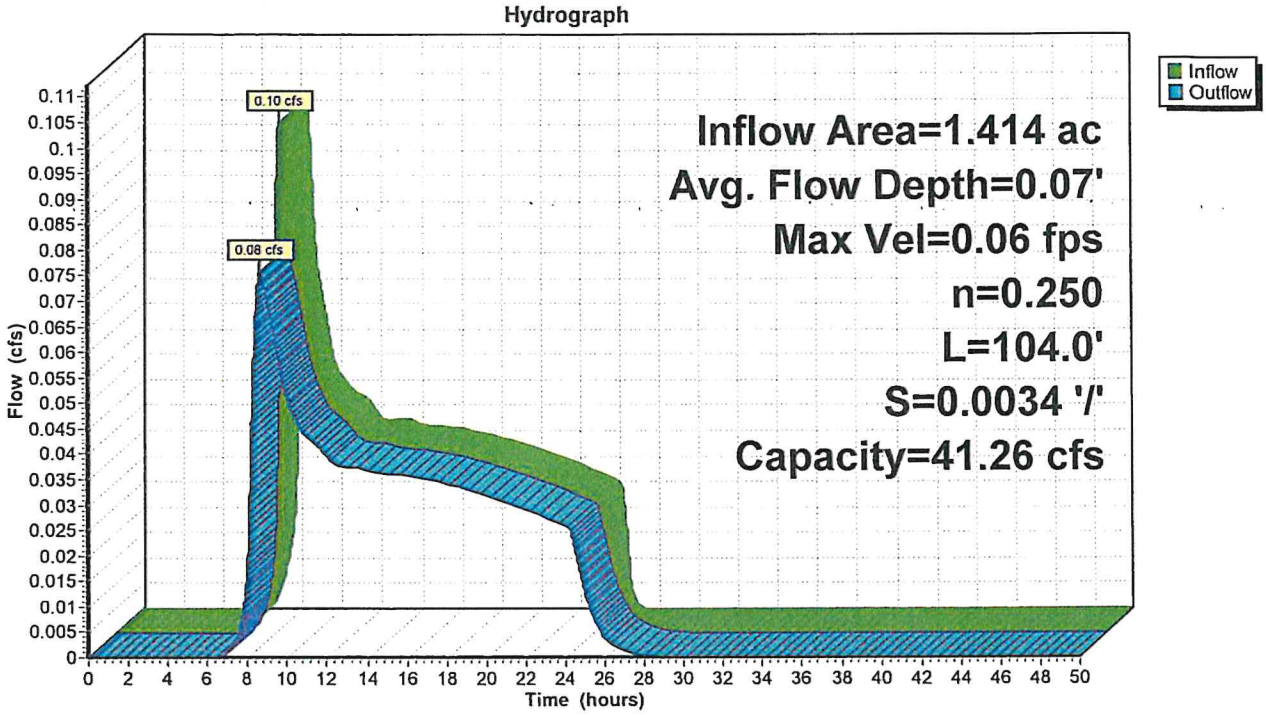
Peak Storage= 138 cf @ 8.64 hrs
Average Depth at Peak Storage= 0.07'
Bank-Full Depth= 3.20' Flow Area= 65.4 sf, Capacity= 41.26 cfs

Custom cross-section, Length= 104.0' Slope= 0.0034 '/'
Constant n= 0.250
Inlet Invert= 208.15', Outlet Invert= 207.80'

Offset (feet)	Elevation (feet)	Chan.Depth (feet)
0.00	210.95	0.00
0.45	207.75	3.20
20.45	207.75	3.20
20.90	210.95	0.00

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	20.0	0	0.00
3.20	65.4	26.5	6,806	41.26

Reach 4R: East Vegetated Swale



Summary for Reach 3R: West Vegetated Swale

Inflow Area = 3.346 ac, 52.77% Impervious, Inflow Depth = 2.27" for 25 event
Inflow = 1.69 cfs @ 8.19 hrs, Volume= 0.634 af
Outflow = 1.66 cfs @ 8.25 hrs, Volume= 0.634 af, Atten= 2%, Lag= 3.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.50 fps, Min. Travel Time= 5.7 min
Avg. Velocity = 0.26 fps, Avg. Travel Time= 11.2 min

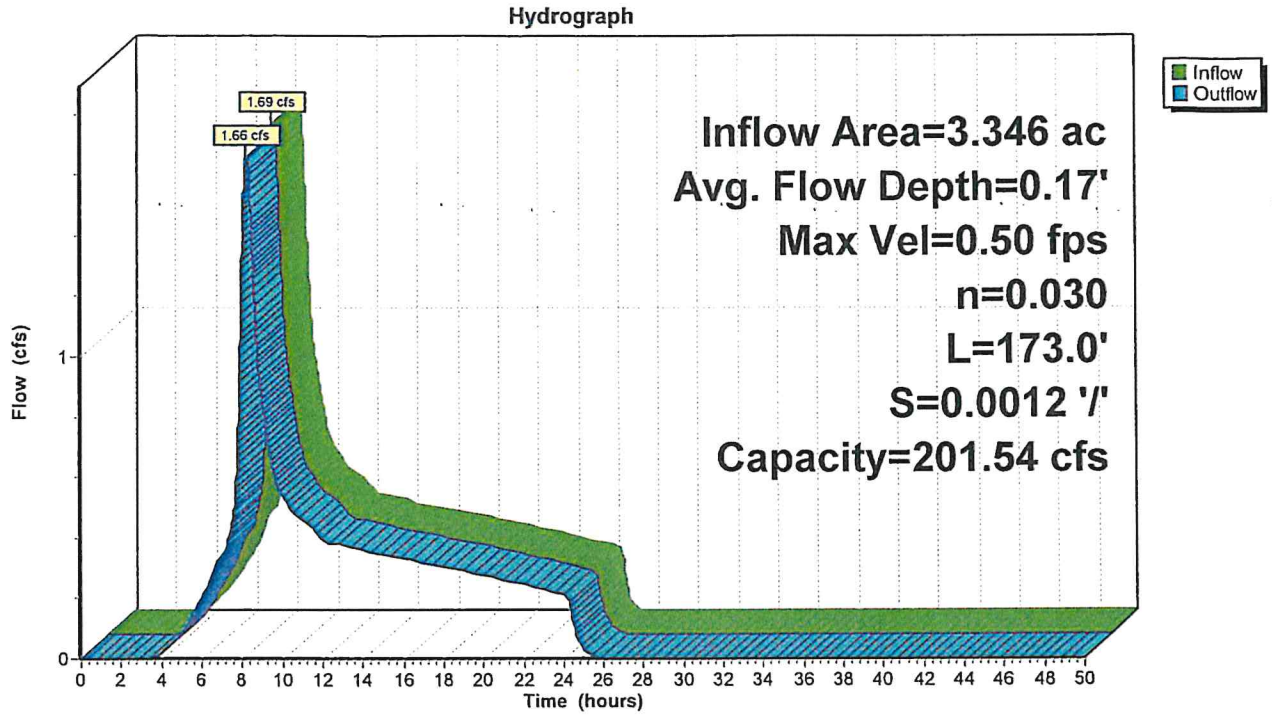
Peak Storage= 572 cf @ 8.25 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 3.20' Flow Area= 65.4 sf, Capacity= 201.54 cfs

Custom cross-section, Length= 173.0' Slope= 0.0012 '/'
Constant n= 0.030
Inlet Invert= 207.85', Outlet Invert= 207.65'

Offset (feet)	Elevation (feet)	Chan.Depth (feet)
0.00	210.95	0.00
0.45	207.75	3.20
20.45	207.75	3.20
20.90	210.95	0.00

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	20.0	0	0.00
3.20	65.4	26.5	11,321	201.54

Reach 3R: West Vegetated Swale



Summary for Reach 4R: East Vegetated Swale

Inflow Area = 1.414 ac, 54.13% Impervious, Inflow Depth = 2.27" for 25 event
Inflow = 0.70 cfs @ 8.22 hrs, Volume= 0.268 af
Outflow = 0.70 cfs @ 8.24 hrs, Volume= 0.268 af, Atten= 1%, Lag= 1.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.50 fps, Min. Travel Time= 3.5 min
Avg. Velocity = 0.30 fps, Avg. Travel Time= 5.8 min

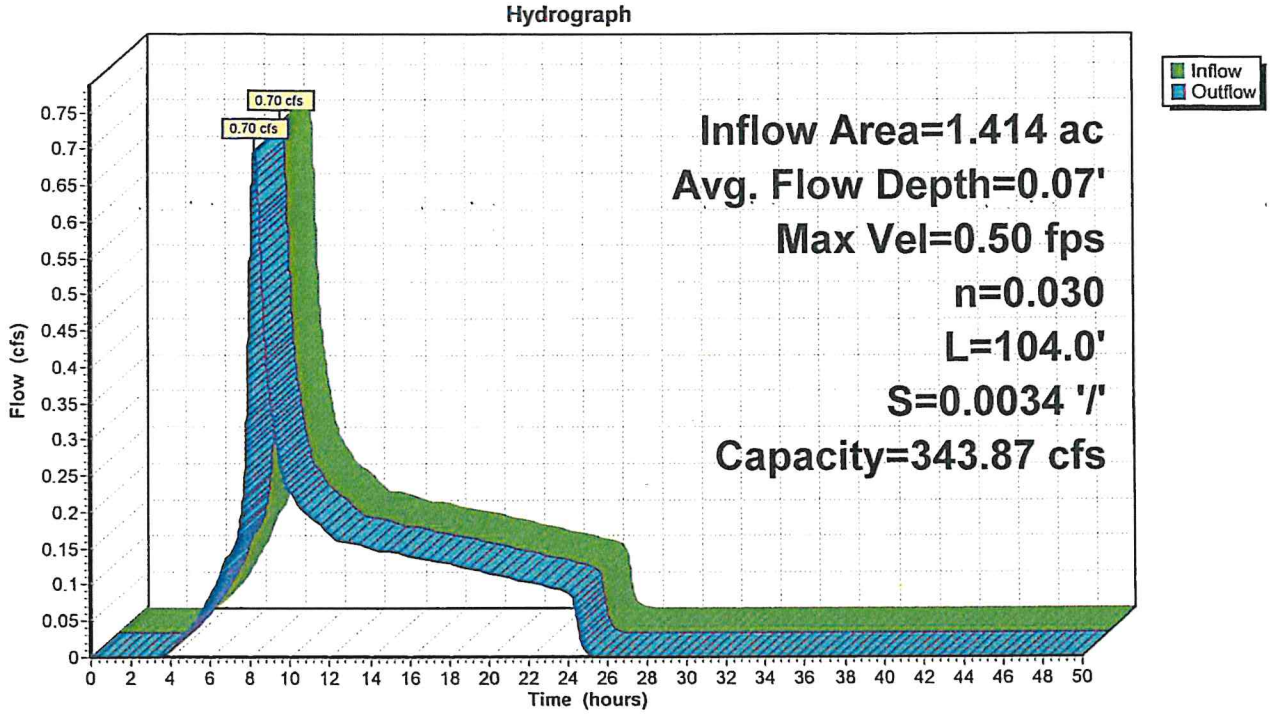
Peak Storage= 147 cf @ 8.24 hrs
Average Depth at Peak Storage= 0.07'
Bank-Full Depth= 3.20' Flow Area= 65.4 sf, Capacity= 343.87 cfs

Custom cross-section, Length= 104.0' Slope= 0.0034 '/'
Constant n= 0.030
Inlet Invert= 208.15', Outlet Invert= 207.80'

Offset (feet)	Elevation (feet)	Chan.Depth (feet)
0.00	210.95	0.00
0.45	207.75	3.20
20.45	207.75	3.20
20.90	210.95	0.00

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	20.0	0	0.00
3.20	65.4	26.5	6,806	343.87

Reach 4R: East Vegetated Swale



Summary for Reach 4R: East Vegetated Swale

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Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
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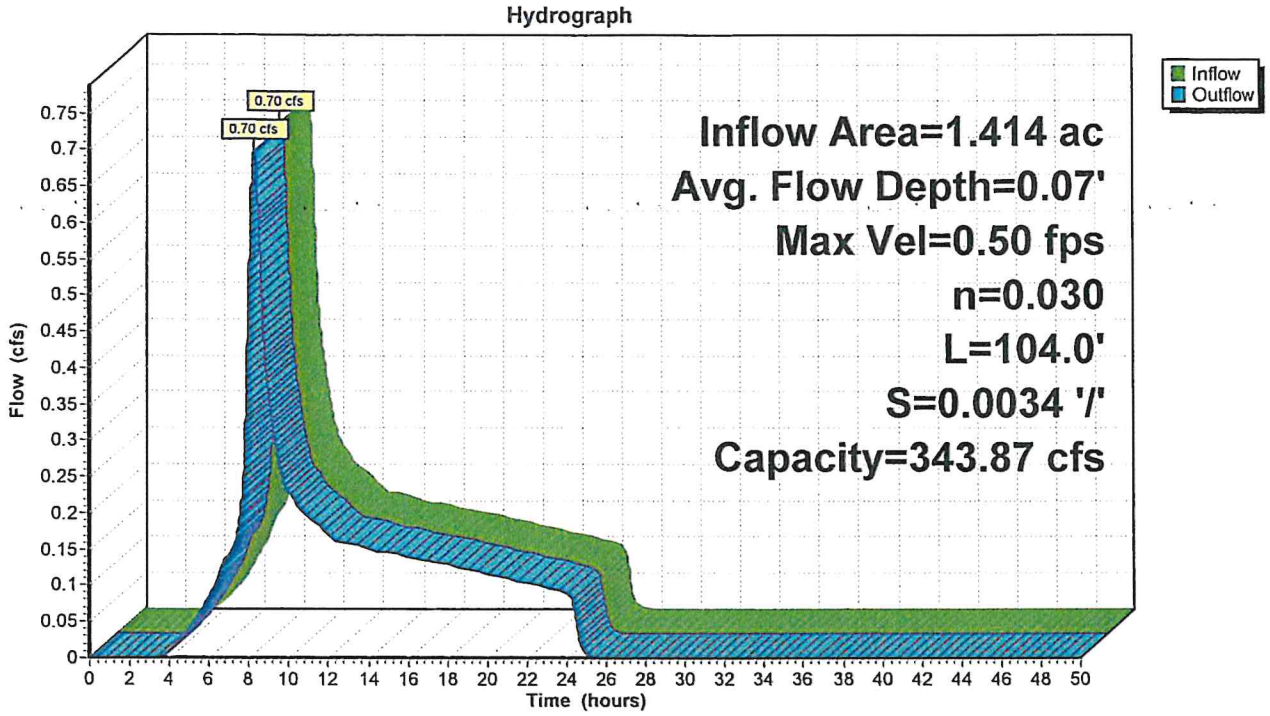
3.20	65.4	26.5	6,806	343.87

Reach 4R: East Vegetated Swale



APPENDIX E— STORMWATER MANAGEMENT SYSTEM INSPECTION AND MAINTENANCE PLAN FOR SLOPES

Inspection and Maintenance Plan for GSI BMPs of the Stormwater Management System of the Belle Plaine Estates Residential Subdivision

Date:
January 2019

Site Location:

4560 Center Street NE
072W30AA/8000 – 4.9 Acres

Prepared by:
Project Delivery Group, LLC
3772 Portland Road NE
Salem, Oregon 97301

Table of Contents

1. Overview:

This Plan is a summary of the expected routine maintenance and operation activities to be performed for the management of the low-impact development best management practices (BMPs) utilizing green stormwater infrastructure (GSI) implemented as part of the development of the Project Site: Belle Plaine Estates residential subdivision. The successful use of the Plan hinges on the inspection and maintenance of the GSI BMP facilities which primarily consists of pretreatment manholes, a combined vegetated swale/detention basin, an outflow control structure (OCS) and the upgradient stormwater collection and conveyance facilities. The inspection work performed triggers the maintenance work required of the GSI facilities to facilitate their successful operation. This plan needs to be a "living" document that will need to be revised periodically to reflect situations and conditions that occur with the Project Site's various GSI BMP and stormwater management facilities over the life of the Project Site.

2. Background

Rather than let stormwater runoff flow directly from the streets or lots directly into the existing underground stormwater piped conveyance system within Center Street NE that eventually discharges into the West Fork Little Pudding River, the runoff from low flow storm events from the Project Site will be filtered through pretreatment manholes before flowing through the vegetated swales of the combined vegetated swale/detention basin. The treated water will then flow by underground conveyance pipe to the existing underground conveyance system in Center Street NE.

By treating the water at the source, the toxicity, contaminant load, and flow rates of the water flowing into the West Fork Little Pudding River will be reduced. Additionally, construction BMPs from the Project's erosion and sediment control plan will continue to be implemented during infrastructure and residence development of Belle Plaine Estates, implementing these BMP items as a minimum:

Erosion Control
- Preserve Natural Vegetation
- Dust Control
- Temporary/Permanent Seeding
- Straw placement

Sediment Control
- Sediment Fence (Perimeter)
- Inlet Protection
- Construction Entrance
- Straw Wattles, and Wood Chip/Rock Bag Check Dams

Pollution Control
- Proper Signage
- Hazardous Waste Management
- Spill Kit on site
- Designated Fueling Area
- Concrete Washout Area
- Recycle Materials

As illustrated in the post-construction drainage map provided in Appendix A, collected stormwater run-off will flow through a pre-treatment manhole (Downstream Defender®) before being conveyed through a vegetated swale (with rock check dams for flow attenuation/spreading purposes) that is part of the vegetated swale/detention basin located parallel with and along the frontage of Center Street NE,

where it will be treated before being discharged out of the swale/detention basin and into the existing stormwater management system in Center Street, NE. The westerly vegetated swale portion of the swale/detention basin is approximately 176 feet in length; the easterly vegetated swale portion of the swale/detention basin is approximately 105 feet in length.

The flow out of the vegetated swale/detention basin is regulated by an outlet control manhole located out in the Center Street NE right-of-way. The manhole is equipped with two orifices for flow control, and an overflow riser pipe to address very large storm event flows without overtopping of the swale/detention basin.

3. Inspection Schedule and Process

Provided below is a brief description of the inspection process description and schedule for each GSI BMP.

3.1 General

During and immediately following active construction work, the site will be monitored daily, and during and immediately following significant (equal to or greater than 0.5 inches of rainfall in a 24-hour period) storm events to mitigate erosion and control sediment migration. Following the completion of infrastructure development and all planting work, the site will be periodically monitored (initially daily, progressing to weekly, and then to monthly) to ensure plant development and sustained growth, and address any erosion control and sediment migration/deposition problems. Best management erosion control and sediment migration practices will be continued to be employed to mitigate erosion and sediment migration/deposition and any resulting damage to the GSI BMPs.

3.2 Vegetated Swales/Detention Basin – General

It is assumed that the bottom and side-slopes of the vegetated swales will be planted as part of its initial development. The integrity, viability, and sustained propagation of the planted vegetation of the bottom and the side-slopes of the vegetated swales, and the accumulation of any sediment, debris, or other deleterious material (refuse, feces, weeds and other noxious vegetation, etc.) within the vegetated swales will be monitored and addressed on a routine basis as part of the erosion and sediment control plan of the Project and post construction monitoring and routine maintenance.

During planting and vegetation development, a permanent irrigation system will be designed and employed to foster vegetation development. The irrigation system will be a metered service off of the City's domestic water conveyance system. Once planted/seeded, the vegetation will be reviewed on an initial daily basis, progressing to weekly, and then to monthly basis to ensure that adequate irrigation is being performed, and that there is successful and sustained propagation of the vegetation planted. Once the vegetation is established, the vegetated bottom and side slopes will be inspected on a minimum bi-monthly basis and after significant rain events (i.e. 5-year design type storm event) for the presence of deleterious materials (refuse, sediment loads, feces, weeds and other noxious/invasive vegetation, etc.) that affect the operation of the vegetated swale; the presence of standing water within the vegetated bottom 48-hours after cessation of a storm event; vegetation stress, damage, loss, or

overgrowth; pest/rodent presence; the integrity and function of the rock check dams across the bottom of the vegetated swale; any structural damage to either the curb and gutter, sidewalk, and other hardscape or landscape areas surrounding the vegetated swales; any structural damage to the sloped sides, block wall sides, ditch inlet outlet, and the outlet flow control manhole.

During major storm events, the water flowing into the upper ends of the vegetated swale/detention basin will be periodically observed and compared to the water flowing out of the outlet flow control manhole to determine presence (i.e. is the detention pond infiltrating surface water); and for overall turbidity/suspended and conveyed solids comparison.

A blank inspection log for the vegetated swale/detention basin, is provided at the end of this plan.

3.3 Detention Basin – OCS

Following construction completion of the OCS of the detention basin, the OCS and associated detention basin will be inspected on a minimum semi-annual basis with more frequent inspections performed during the wet weather portion of the year (October to May) after major storm events (5-year frequency events or larger) as needed by City Public Works staff for overall OCS operation (noting flow though orifices, any overflow indication (i.e. staining or sediment accumulation in the overflow riser pipe); debris or flow stopping vegetation accumulation on or in front of the ditch inlet grate in the detention basin; sediment accumulation; debris or other deleterious material presence; structural facility damage; or blockage/clogging of inlets or outlets (including grates and orifices) of the ditch inlet and OCS. The inlet grates/manhole covers will be removed and replaced as needed to facilitate inspection work

3.5 Catch Basins, Manholes, and Conveyance Pipes

Following construction completion of the catch basins, manholes, and conveyance piping of the stormwater management system, these facilities will be inspected on a minimum semi-annual basis with more frequent inspections performed during the wet weather portion of the year (October to May) after major storm events (5-year frequency events or larger) as needed by City Public Works staff for sediment accumulation; debris or other deleterious material presence; weed or other vegetation presence in pavement or other non-planted areas; structural facility damage; or blockage/clogging of inlets or outlets or conveyance pipes of these facilities. Catch basin grates and manhole covers will be removed and replaced as needed to facilitate a visual inspection of the insides of the structure.

4 Maintenance Activities

Provided below is a brief description of the maintenance activities for the GSI BMPs. In the event that the maintenance activities outlined below are not effective in providing the required storm water conveyance, quality preservation/enhancement, treatment, and detention required, then an action plan will be developed and implemented which will either reinforce or remediate the measures implemented to ensure the continued management of storm and surface water run-off from the development; the viability and function of the vegetated swale and associated rock check dams; adequate conveyance and detention of accumulated flows; the detention of storm water flows to minimize downgradient

flooding; and the containment and treatment of storm and surface water pollutants typically expected in storm water run-off within a residential development.

4.1 General

During and immediately following active construction work (including dwelling structure development), the routine maintenance work will be what is specified in the erosion and sediment control plan for the Project for the control of pollutants, and the mitigation of any erosion or sediment migration. Following construction completion, routine maintenance activities include immediate removal of deposited feces by applicable pet owners (a City requirement) from street, sidewalk, or landscaped areas within the City rights-of-way and adjoining front yards and driveways; routine street sweeping by City forces; twice annual leaf collection performed by subcontracted City forces (performed in the Fall); and routine landscape strip, driveway, and front yard maintenance (including grass cutting, clipping removal, and leaf removal) work performed by the various homeowners. There will be no logging of these general maintenance activities.

4.2 Vegetated Swale/Detention Basin

During the year after development (under the City's public infrastructure "warranty period"), the vegetated swale/Detention Basin maintenance shall be performed by qualified contracted contractor or landscape workers retained by the Developer. The contracted contractor or landscape workers will be qualified in the maintenance of the vegetated swales and their associated plantings. At the end of the "warranty period", the maintenance of the vegetated swales and detention basin, including the planted vegetation, and outlet pipes, inlets, and outflow control structure will be the responsibility of the City, similar to any other public infrastructure owned by the City.

Sediment accumulation shall be removed in the vegetated swales/detention basin if it is found to be more than 4-inches thick; so thick as to damage or kill vegetation; or to impair the permeable function of the vegetated swales. Sediment removal shall be performed to minimize damage to vegetation utilizing proper erosion and sediment migration control measures. The vegetated swales will have sediment removal either performed utilizing a vacuum truck (with a long piped "stinger") or removed utilizing hand tools and buckets/wheelbarrows. Debris, garbage, floatables, and other deleterious materials will be removed from the vegetated swales as necessary.

The vegetated swale/detention basin will be inspected monthly and after every major storm event for debris which could inhibit the proper flow into and through the pre-treatment manholes and the vegetated swale/detention basin. Any debris and sediment will be removed immediately and disposed of or placed in a location to prevent future maintenance and to not cause impact up- or downstream of the pipe. Sources of the debris and sediment shall be identified and corrected. Mowing of the bank slopes and area around the vegetated swales bi-monthly during the growing season and as needed during the cooler months is recommended. The swale's vegetation shall be trimmed as necessary to keep sedge, rush, tall grass and other herbaceous vegetation heights between 6 to 9 inches. Shrubs will be trimmed to manageable widths and heights to not present an overgrown appearance, and to keep the vegetation in a healthy and ever-growing state, except during dormant periods of the year. The trimmings/

prunings shall be properly bagged, removed, and disposed of/recycled off-site. Fallen leaves, thatch, and debris shall be raked, bagged, removed, and disposed/recycled off-site. Weeds and other nuisance, noxious, or invasive vegetation contributing up to 20 percent of vegetation of all species shall be removed and replaced with original specification vegetation, as needed. Dead herbaceous and shrub vegetation shall be removed and replaced as needed to maintain less than 10 percent of area cover loss or when the vegetated swale's function is impaired. Dead vegetation shall be replaced within 3 months, or immediately if required to maintain cover density and control erosion where soils are exposed.

Rip-rap around the outlet piping and the rock check dams shall be replenished (i.e. removed, replaced, or reconstucted) as necessary to maintain their erosion control, energy dissipation, and flow spreading functions.

The detention basin's outlet catch basin (ditch inlet) will be cleaned with removal of any accumulated sediment in the inlet's sump removed by use of a vacuum truck with "stinger" hose or by hand methods. Any refuse/debris that fouls the grate will be removed. Any vegetation that interferes with free flow of water into and through the grate will be removed. Any dirt accumulation or debris/refuse found within the inlet shall be removed. The outlet pipe shall be checked for the accumulation of any sediment or other blockage, and the sediment or blockage items shall be removed.

The vegetated swale's underlying growing/filtering media shall allow storm water to percolate. If the swales do not drain within 12 hours of the cessation of inflows into the vegetated swales, then the growing/filtering media layers shall be tilled (and if necessary the enhanced soil growing media replaced) and replanted to original specifications. Slopes and bottoms of the vegetated swale shall be maintained to minimize erosion and keep their original configuration. Sediment from the site may accumulate in the swale bottom and reduce the swale to below design volume requirements. The vegetated swales bottom should be excavated or the accumulated soils removed (i.e. by vacuum truck "stinger pipe' methods) if the pond bottom elevation reached a level that allows excessive aquatic growth or reduces the vegetated swales efficiency such that the sediments are passing the discharge structure and release off site. Sources of sediment deposition and debris shall be identified and corrected.

The side slopes and bottoms of the vegetated swales will be reviewed for any soil/growing mediums displacement, with the side slopes and bottom being restored with replacement soils or growing medium to the original configuration as needed. Adjoining hardscape (i.e. block retaining wall, sidewalks, etc.) or landscape that becomes damaged shall be removed and replaced as needed to restore the hardscape/landscape to its original condition and function. Stabilization or re-grading of side slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.

Shrub and tree pruning, fertilizing, and replacement (to be typically performed during the winter [dormant] and early part of the growing season, as applicable) shall be performed to ensure active and vigorous growth of the planted items.

Insects and rodents shall not be harbored in the vegetated swales/detention basin. All rodent holes shall be filled upon detection. Approved pest control measures shall be taken when insects/rodents are found to be present. All pesticide/herbicide spray application shall be performed by a licensed individual or contractor using environmentally sensitive pesticides and herbicides.

Supplemental irrigation will be provided as necessary by use of above-ground sprinklers facilitated by a pressurized irrigation system, which will utilize domestic water as supplied through a metered service from the City's domestic water distribution system.

Training and /or written guidance information for operating and maintaining the vegetated swales/detention basin will be provided to the Developer as needed.

4.3 Catch Basins, Manholes, and Conveyance Piping

Maintenance of the catch basins, manholes (including pre-treatment and flow control), and conveyance piping will be performed by City forces as part of the City's routine stormwater collection and conveyance system maintenance work. If catch basin grates are found to be plugged with leaves or other deleterious material, they will be cleaned by City staff as needed to allow the free flow of surface water through the grate. If sediment (at ½ the sump depth or higher), refuse, or other deleterious material accumulation is noted in the catch basins, manholes, or inlet structure, the structure will be cleaned by City staff and equipment, or City contracted forces with the use of a vacuum truck and stinger pipe, with recovered materials being properly disposed or recycled off-site.

Stormwater conveyance piping will be hydro-flushed periodically to ensure their continued operation and to facilitate the removal of any accumulated sediments which may interfere with the proper operation of these facilities. During flushing operations, downgradient check dams will be incorporated to trap the "flushed-out" materials. Any removed materials shall be properly dewatered, reutilized and/or disposed of off-site, as required.

4.4 OCS

Similar to the detention basin within the public rights-of-way, the OCMHs will be maintained by the developer and then City. If OCMHs are found to be overflowing through the riser pipe and not through the orifice(s), the orifice hole(s) will be cleared of any sediment or debris accumulation using the inspection port or manhole access points, and a wooded handle or other suitable probe will be utilized to clear the orifice hole(s) as needed. Any debris, sediment, floatables, or other deleterious material accumulations within the OCMHs shall be removed using a vacuum truck.

4. Legal and Fiscal Responsibility

The party responsible for the vegetated swales/detention basin inspection, operation, and maintenance will initially be the Developer of Belle Plaine Estates as part of the infrastructure warranty process within the City of Salem (1 year). During this warranty period, the Developer is legally and financially responsible for the stormwater management system within the Project, including the pre-treatment manholes, vegetated swales/detention basin, and outlet and flow control structures. The Developer will be responsible to provide inspection and timely correction of any deficiencies noted with the

stormwater management system. At the end of this period, the operation, maintenance, inspection, inspection logging, and legal and fiscal responsibility for the stormwater management system of the Project will be transferred to the City of Salem who will continue with the inspection (including inspection log documentation), operation, and maintenance of the stormwater management system of the Project.

The contacts for these parties, is as follows:

- Developer: Jack Yarbrough, 503-390-4730, jry_icu@comcast.net
- City of Salem: 503-588-6211

Belle Plaine Estates
Vegetated Swales/Detetion Basin Inspection Checklist Log
Inspector: _____ Photos Attached: Y/N
Date:_____

Item No.	Inspection Item	Checked Y/N/NC	Maintenance Required Y/N/NA	Repair Work Required Y/N/NA	Comments (use back of sheet for more description)
1A	Veg. Swale Bottom- West				
1B	Veg. Swale Bottom- East				
2A	Veg. Swale Slopes-West				
2B	Veg. Swale Slopes-East				
3A	Inlet Pipe and Rip-Rap- West				
3B	Inlet Pipe and Rip-Rap- East				
4A	Rock Check Dams - West				
4B	Rock Check Dams - East				
5	Outlet Control Structure				

Inspection Legend: Y=Yes; N=No; NC=Not Constructed; NA=Not Applicable; FP=Feces Presence; LP=Leaves Presence; DRP=Debris/Refuse Presence; DV=Dead/Damaged Vegetation; OGV=Overgrown Vegetation; WP=Weed/Noxious Vegetation Presence; SDP=Sediment Deposition Presence; PP=Pest Presence; RP=Rodent Presence; I/O=Inlet/Outlet Plugged; BE=Bottom Erosion; SE=Slope Erosion; BNR=Bottom Needs Repair; SNR=Slopes Need Repair; IPW/OPW=Inlet Pipe Working/Outlet Pipe Working; LD=Landscape Damage; IPC=Inlet Pipe Clogged; OPC=Outlet Pipe Cloggged; IPS=Sediment in Inlet Pipe; OPS=Sediment in Outlet Pipe; BS=Bare Spots; HD=Hardscape Damage; RR=RipRap Replacement; GrateP=Grate Plugged; SD=Structure Damage; GD=Grate Damage; RCDR=Rock check dam damage;BWG=Blockwall graffitti; BWD= Blockwall damage; FenceD = Fence Damage

Maintenance Legend: TH=Trim Herbaceous; TS=Trim Shrubs; TT=Trim Trees; XC=Remove Clippings; XL=Remove Leaves; XSedV=Remove Sediment-Vac Truck; XSedH=Remove Sediment-Hands Method; XR=Remove Refuse/Debris; XF=Remove Feces; MB= Mow Bottom; MS=Mow Slopes; RHV=Replace Herbaceous Vegetation; RS=Replace Shrubs; RT=Replace Tree; RRB=Restore Bottom; RRS=Restore Slopes; RRR=Restore Riprap; RRH=Restore Hardscape; RRL=Restore Landscape; RRGM=Restore Growing Medium; ARR=Add Rock to Riprap; RRP=Remediate Pest Presence; RRR=Remediate Rodent Presence; RRPerc=Restore Percolation; FI=Flush Inlet Pipe; FO=Flush Outlet Pipe; RRAer=Aerate Growing Medium; RRStruc=Restore Structure; RRRiser=Restore Riser; CGrate=Clean Grate; RGrate=Replace Grate; UOrifice=Unplug/Unclog Orifice; RCDR=Rock Check Dam Rebuild; RCDRR=Rock Check Dam Remove & Replace; RBW=Repair Block Wall; RRBW=Removed and Replace Block Wall; BWRG= Block Wall-Remove Graffiti

Item No.	More Description

Belle Plaine Estates
Vegetated Swales/Detention Basin Maintenance Log
Inspector: _____ Photos Attached: Y/N
Date:_____

Item No.	Inspection Item	Maintenance Required	Repair Work Required	Date Completed	Work Performed (use back of sheet for more description)
		Y/N/NA	Y/N/NA		
1A	Veg. Swale Bottom- West				
1B	Veg. Swale Bottom- East				
2A	Veg. Swale Slopes-West				
2B	Veg. Swale Slopes-East				
3A	Inlet Pipe and Rip-Rap- West				
3B	Inlet Pipe and Rip-Rap- East				
4A	Rock Check Dams - West				
4B	Rock Check Dams - East				
5	Outlet Control Structure				

Maintenance Legend: TH=Trim Herbaceous; TS=Trim Shrubs; TT=Trim Trees; XC=Remove Clippings; XL=Remove Leaves; XSedV=Remove Sediment-Vac Truck; XSedH=Remove Sediment-Hands Method; XR=Remove Refuse/Debris; XF=Remove Feces; MB= Mow Bottom; MS=Mow Slopes; RHV=Replace Herbaceous Vegetation; RS=Replace Shrubs; RT=Replace Tree; RRB=Restore Bottom; RRS=Restore Slopes; RRR=Restore Riprap; RRH=Restore Hardscape; RRL=Restore Landscape; RRGM=Restore Growing Medium; ARR=Add Rock to Riprap; RRP=Remediate Pest Presence; RRR=Remediate Rodent Presence; RRPerc=Restore Percolation; FI=Flush Inlet Pipe; FO=Flush Outlet Pipe; RRAer=Aerate Growing Medium; RRStruc=Restore Structure; RRRiser=Restore Riser; CGrate=Clean Grate; RGrate=Replace Grate; UOrifice=Unplug/Unclog Orifice; RCDR=Rock Check Dam Rebuild; RCDRR=Rock Check Dam Remove & Replace; RBW=Repair Block Wall; RRBW=Removed and Replace Block Wall; BWRG= Block Wall-Remove Graffiti

Item No.	More Description

Belle Plaine Estates
Curb Inlet and Manhole Inspection Checklist Log
Inspector: _____
Date:_____

Photos Attached: Y/N

Item No.	Inspection Item	Checked Y/N/NC	Maintenance Required Y/N/NA	Repair Work Required Y/N/NA	Comments (use back of sheet for more description)
46th Ave. NE					
1	SDCI - Lot 15				
2	SDCI - Lot 14South				
3	SDMH Lot 14				
4	SDCI - Lot 14North				
5	SDCI - Lot 24				
6	SDCI - Lot 13				
7	SDMH - Lot 11				
8	SDCI - Lot 21				
9	SDCI Lot 2				
10	SDMH Lot 3				
11	PTSDMH (DD) Lot 4				
12	SDMH Lot 5				
Center St./46th Ave.					
13	SDCI Lot 1 E				
14	SDCI Lot 1 W				
15	SDCI Lot 1 N				
16	SDMH Lot 1 N				
17	PTSDMH (DD) Lot 1				
18	OCMH - Center St Landscape Strip				
19	SDMH - Center St. DWS of OCMH				
20	SDMH INTX 46 & Center				

Inspection Legend: Y=Yes; N=No; NC=Not Constructed; NA=Not Applicable; FP=Feces Presence; LP=Leaves Presence; RVI=Root/Vegetation Intrusion; DRP=Debris/Refuse Presence; WP=Weed/Noxious Vegetation Presence; SDP=Sediment Deposition Presence; PP=Pest Presence; RP=Rodent Presence; WI=Water Infiltration/Sidewall Inflow; IPC=Inlet Pipe Clogged; OPC=Outlet Pipe Clogged; GrateP=Grate Plugged; SD=Structure Damage; GD=Grate Damage; MHD=Manhole Frame and Cover Damaged; MHOP=Manhole Orifice Plugged

Maintenance Legend: FI=Flush Inlet Pipe; FO=Flush Outlet Pipe; XV=Remove Vegetation; XF=Remove Feces; XL=Remove Leaves; XR=Remove Refuse/Debris; XSedV=Remove Sediment-Vac Truck; XSedH=Remove Sediment-Hand Methods; RRP=Remediate Pest Presence; RRR=Remediate Rodent Presence; RRMH=Restore MH Frame and Cover; RRStruc=Restore Structure; RWater=Remediate Water Intrusion; Rroot=Remediate Root Intrusion; CGrate=Clean Grate; RGrate=Replace Grate; MHOU=Manhole Orifice Unplug

Item No.	More Description

Belle Plaine Estates
Curb Inlet and Manhole Maintenance Log
Inspector: _____
Date: _____

Photos Attached: Y/N

Item No.	Inspection Item	Maintenance Required	Repair Work Required	Date Completed	Work Performed (use back of sheet for more description)
		Y/N/NA	Y/N/NA		
46th Ave. NE					
1	SDCI - Lot 15				
2	SDCI - Lot 14South				
3	SDMH Lot 14				
4	SDCI - Lot 14North				
5	SDCI - Lot 24				
6	SDCI - Lot 13				
7	SDMH - Lot 11				
8	SDCI - Lot 21				
9	SDCI Lot 2				
10	SDMH Lot 3				
11	PTSDMH (DD) Lot 4				
12	SDMH Lot 5				
Center St./46th Ave.					
13	SDCI Lot 1 E				
14	SDCI Lot 1 W				
15	SDCI Lot 1 N				
16	SDMH Lot 1 N				
17	PTSDMH (DD) Lot 1				
18	OCMH -Center St Landscape Strip				
19	SDMH -Center St DWS of OCMH				
20	SDMH INTX 46 & Center				

Maintenance Legend: FI=Flush Inlet Pipe; FO=Flush Outlet Pipe; XV=Remove Vegetation; XF=Remove Feces; XL=Remove Leaves; XR=Remove Refuse/Debris; XSedV=Remove Sediment-Vac Truck; XSedH=Remove Sediment-Hand Methods; RRP=Remediate Pest Presence; RRR=Remediate Rodent Presence; RRMH=Restore MH Frame and Cover; RRStruc=Restore Structure; RWater=Remediate Water Intrusion; Rroot=Remediate Root Intrusion; CGrate=Clean Grate; RGrate=Replace Grate; MHOU=Manhole Orifice Unplug

Item No.	More Description

REEL 3801 PAGE 111
MARION COUNTY
BILL BURGESS, COUNTY CLERK
03-23-2016 03:19 pm.
Control Number 406309 $ 61.00
Instrument 2016 00014529

GRANTOR:
Averette Gems, LLC, Kevin Bennett, The Vernon Co., and LeLands Gemstone, LLC
2840 Round Tree Ave NW
Salem, OR 97304

GRANTEE:
Jack R. Yarbrough
P O Box 20756
Keizer, OR 97307

SEND TAX STATEMENTS TO:
Jack R. Yarbrough
P O Box 20756
Keizer, OR 97303

AFTER RECORDING RETURN TO:
Jack R. Yarbrough
P O Box 20756
Keizer, OR 97303

Escrow No: 471814035587-TTMIDWIL20
R76062
4560 Center Street NE
Salem, OR 97301

Ticor Title # 471814035587

SPACE ABOVE THIS LINE FOR RECORDER'S USE

STATUTORY WARRANTY DEED

Averette Gems, LLC, an Oregon limited liability company, Kevin C. Bennett, The Vernon Co., an Oregon corporation, and LeLands Gemstone, LLC, an Oregon limited liability company, Grantor, conveys and warrants to Jack R. Yarbrough, Grantee, the following described real property, free and clear of encumbrances except as specifically set forth below, situated in the County of Marion, State of Oregon:

Lot 39, HAMPDEN PARK, in the City of Salem, County of Marion and State of Oregon.

THE TRUE AND ACTUAL CONSIDERATION FOR THIS CONVEYANCE IS $415,000.00. (See ORS 93.030)

Subject to and excepting:

1. City lien in favor of the City of Salem,
   Purpose: Assessments - Potential/Deferred
   Amount: $3,843.01
   Reference No: 00512D/Tracking No. 1178335

2. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
   Granted to: Suburban East Salem Water District
   Purpose: Water pipelines
   Recording Date: July 30, 1959
   Recording No: Volume 525, Page 71
   Affects: Reference is hereby made to said document for full particulars.

3. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document
   Recording Date: July 7, 1964
   Recording No: Reel 588, Page 196

4. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document
   Recording Date: January 27, 1967

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

DATED: March 3, 2016

Averette Gems, LLC

BY: The Averette Family Trust, Sole Member

By: Beauford E. Averette, Trustee
Beauford E. Averette
Trustee

The Vernon Co.

BY: James Munson
James Munson
President

LeLands Gemstone, LLC

BY: Ronald J. Leland
Ronald J. Leland
Managing Member

Kevin C. Bennett

State of OREGON

COUNTY of Marion

This instrument was acknowledged before me on March 17, 2016, by Beauford E. Averette, as the Trustee of The Averette Family Trust, Sole Member of Averette Gems, LLC, an Oregon limited liability company, on behalf of the company.

Notary Public - State of Oregon
My commission expires: 11-12-17

OFFICIAL STAMP
DELLA JEAN SENEY
NOTARY PUBLIC - OREGON
COMMISSION NO. 922147
MY COMMISSION EXPIRES NOVEMBER 12, 2017

State of CALIFORNIA

COUNTY of _____

This instrument was acknowledged before me on March _____, 2016, by Kevin C. Bennett.

Notary Public - State of California
My commission expires: _____

State of OREGON

COUNTY of Marion

This instrument was acknowledged before me on ~~February~~ March 23, 2016, by James Munson, as President of The Vernon Co., an Oregon corporation, on behalf of the corporation.

Notary Public - State of Oregon
My commission expires: 11-12-17

OFFICIAL STAMP
DELLA JEAN SENEY
NOTARY PUBLIC - OREGON
COMMISSION NO. 922147
MY COMMISSION EXPIRES NOVEMBER 12, 2017

State of OREGON

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

DATED: March 3, 2016

Averette Gems, LLC

BY: The Averette Family Trust, Sole Member

By: _____
Beauford E. Averette
Trustee

_____
Kevin C. Bennett

The Vernon Co.

BY: _____
James Munson
President

LeLands Gemstone, LLC

BY: _____
Ronald J. Leland
Managing Member

State of OREGON

COUNTY of _____

This instrument was acknowledged before me on March _____, 2016, by Beauford E. Averette, as the Trustee of The Averette Family Trust, Sole Member of Averette Gems, LLC, an Oregon limited liability company, on behalf of the company.

_____
Notary Public - State of Oregon
My commission expires: _____

State of CALIFORNIA

COUNTY of Santa Clara

This instrument was acknowledged before me on March 18, 2016, by Kevin C. Bennett.

_____
Notary Public - State of California
My commission expires: 4-5-16

ALBERTO C. GOMEZ
COMM. #1971502
Notary Public - California
Santa Clara County
My Comm. Expires Apr. 5, 2016

State of OREGON

COUNTY of _____

This instrument was acknowledged before me on February _____, 2016, by James Munson, as President of The Vernon Co.,an Oregon corporation, on behalf of the corporation.

_____
Notary Public - State of Oregon
My commission expires: _____

State of OREGON

COUNTY of Marion

This instrument was acknowledged before me on ~~February~~ March 23, 2016, by Roland J. Leland, as Managing Member of Leland's Gemstone, LLC, an Oregon limited liability company, on behalf of the company.

Notary Public - State of Oregon
My commission expires: 11-12-17

OFFICIAL STAMP
DELLA JEAN SENEY
NOTARY PUBLIC - OREGON
COMMISSION NO. 922147
MY COMMISSION EXPIRES NOVEMBER 12, 2017

REEL: 3801 **PAGE: 111**

March 23, 2016, 03:19 pm.

CONTROL #: 406309

State of Oregon
County of Marion

I hereby certify that the attached instrument was received and duly recorded by me in Marion County records:

FEE: $ 61.00

BILL BURGESS
COUNTY CLERK

THIS IS NOT AN INVOICE.

City of Salem - Permit Application Center
Planning Information Counter
555 Liberty St. SE / Room 320
Salem, OR 97301-3503
Phone: 503-588-6256 ext.7427
Fax: 503-588-6005

Planning Pre-Application Conference Waiver

CITY OF Salem AT YOUR SERVICE
Web: www.cityofsalem.net

❶ *Please complete the following contact information:*

Applicant: Jensen Consulting and Development, LLC
Name: Don Jensen
Company: Jensen Consulting and Development, LLC
Phone: 503-932-2259
Fax: 971-208-5425

Mailing Address: 5190 Kale St NE
Salem, OR 97305

E-Mail: don.jensen@jensencollc.com

❷ *Please complete the following property information:*
Site Address(es): 4560 Center St NE, Salem OR 97301
Site Size: 4.71 acres
Existing Use & Structures: Vacant

❸ *Please complete the following proposed development information:*
Type of Land Use Application Pre-Application Conference Waiver is Requested for: Subdivision Tentative Plan, Class 1 Adjustment and Tree Conservation Plan
Brief Description of Proposed Development on the Site: 24-Lot Single-Family Residential Subdivision

❹ ***Please attach a written statement explaining why a pre-application conference waiver is requested***

The Planning Administrator may grant pre-application conference waivers in cases where the application is relatively simple and good cause is shown by the applicant to support the waiver.

❺ *Please sign and date below:*

SIGNATURE: Don C Jensen DATE: 3/28/16

FOR PLANNING DIVISION USE ONLY - DO NOT WRITE BELOW

Date Received: _____ AMANDA No. _____ Staff Initial: _____

The requested Pre-Application Conference Waiver is:

☐ **Approved. The Planning Administrator finds that the application is relatively simple, and the applicant has shown good cause to waive the pre-application conference in this case. The pre-application conference is hereby waived pursuant to SRC 300.310(b).**

☐ **Denied** ***(See Attached Reasons)***

Planning Administrator Signature: _____ **Date:** _____

Belle Plaine Estates Subdivision Tentative Plan Submittal
Justification for Pre-Application Conference Waiver

Request: The Applicant, Jensen Consulting and Development, LLC is requesting a waiver of the required pre-application conference.

Rationale: The previous property owner received a Tentative Subdivision Plan approval on August 15, 2016 for Case No. 16-106532LD. That conditional approval was for 25 lots and has expired. The property ownership has changed, and this Tentative Plan Submittal is for 24 lots. Given that this is just a revised submittal with, a one lot reduction, the Applicant respectively requests the staff concurrence with this waiver request.

WETLAND DETERMINATION AND DELINEATION REPORT

for the

46th Avenue Project

City of Salem

Marion County, Oregon

ZION
Natural Resources Consulting

Prepared for:

Encore Development, LLC
Attn: Jim Seely
941 Player Drive N.
Keizer, OR 97303

Submitted by:

ZION Natural Resources Consulting
P.O. Box 545
Monmouth, OR 97361
Phone: 503-838-0103
Fax: 503-623-7425
ZNR Project #: 1343

January 2015

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A. Landscape Setting and Land Use

At the request of Encore Development, LLC; Zion Natural Resources Consulting performed a wetland delineation on a 9.7 acre parcel that included tax lots 7800 and 8000 located south of Center Street and north of 46th Avenue, Salem, OR (T7S, R2W, Sec. 30 AA). The northern portion of tax lot 8000 contains a single family residence and tax lot 7800 is the location of Salem Community of Christ Church. Both parcels have access to Center Street and the balance of the properties are vacant. The study area is surrounded by residential development to the north, west, and south with a remnant orchard and residence to the east.

B. Possible Site Alterations

Tax lot 8000 includes a single family residence with a gravel driveway off of Center Street. The front yard of the home was used as a staging area for street improvements associated with Center Street in 2011. The rest of the site consisted of trees and shrubs in 2007 and was cleared in 2008. This clearing resulted in irregular topography presumably from the removal of stumps. Tax lot 7800 is the location of a church with a parking lot and landscaping surrounding these improvements. The rest of the site appears to have had some use as a hay field based on aerial photographs, but does not appear to have been under cultivation.

Site alterations that likely affected the presence, location, or geographic boundaries of any wetlands or waters on the site included a roadside ditch along Center Street and culverts throughout the site. The roadside ditch includes three culverts for driveways accessing Center Street. A culvert is also located at the north end of 46th Avenue NE in the southern part of tax lot 8000. This culvert conveys stormwater into the study area which flows in a shallow ditch within the center of a broad swale that crosses into tax lot 7800 in a northeasterly direction. The ditch enters into another culvert beneath the church parking lot then daylights and continues to Center Street where both the road side ditch and this ditch converge before entering into a culvert that connects to the Center Street storm sewer.

C. Precipitation Data and Analysis

The precipitation on the day of site investigation and the precipitation approximately 1-3 weeks before the dates of the field investigation are listed below.

	December 5th, 2014	**12/1-12/5**
National Weather Service	0.07	0.58

Since January 1: 23.28 inches
Since October 1: 0.58
% of normal precipitation for the water year-to-date (October 1): 89%

The percent of normal precipitation for the water year to date and the monthly percent of normal precipitation were obtained through the NRCS WETS table for the county. The precipitation for the three months preceding the field investigation was obtained for the Salem area through the National Weather Service and is listed below.

Month	Average	WETS Rainfall Percentile (in)		Measured Rainfall	Departure from Normal	% of Normal Precipitation
		30th	*70th*			
Nov.	*1.85*	*0.79*	*2.48*	1.02	-0.83	**78%**
Oct.	*0.86*	*0.30*	*1.35*	0.12	-0.74	**98%**
Sept.	*0.74*	*0.31*	*1.14*	1.07	0.33	**89%**

D. Site-Specific / Field Methodology

A total of 18 sample plots were established on December 5th, 2014 to document wetland and upland conditions within the project area. Plot locations were placed on all sides of the contiguous wetland area. The number of sample plots documented is believed to be representative of the change in plant communities, soil features, or level of groundwater hydrology found within the study area. Wetland boundaries in the field were primarily identified by the topography, hydric soils, and hydrology. Vegetation primarily consisting of pasture grasses throughout the study area had been reduced to 2 to 3 inches of growth due to depredation by Canada geese and was not a good indicator for the wetland boundaries. There were no ordinary high water lines associated with the vegetated ditches. Wetland area labeling and calculations of Figure 6 were separated at the request of the two landowners.

E. Wetland / Waters of the State Description

Wetlands identified onsite consist of three areas (A, B, and C). The wetlands begin onsite to the south as Wetland A-W and A-E at a storm water culvert at the north end of 46th Avenue NE and continue in a northeasterly direction following the mapped hydric soils (Concord silt loam). The wetlands are contained within a broadswale with a shallow ditch in the center of the swale. Hydrology then enters a culvert under the church parking lot and daylights approximately 50 feet to the north. This is the beginning of Wetland B. This ditch continues through wetland B with the wetlands to the west side of the ditch are part of the landscaping associated with the church. The hydrology then converges with Wetland C-W and C-E before entering into a culvert beneath Center Street. Wetland C-W and C-E is comprised of a grassed roadside ditch interrupted by three culverts beneath driveways. Wetland boundaries in the field were primarily identified by the topography, hydric soils, and groundwater hydrology. Dominant vegetation primarily consisting of pasture grasses (*Agrostis spp.*, *Holcus lanatus*, and *Festuca arundinacea*) throughout the study area had been reduced to 2 to 3 inches of growth due to depredation by Canada geese and resulted in a poor indicator for identifying the wetland boundaries specific to this site.

F. Deviation From National and/or Local Wetlands Inventory

There are no wetland/waters of the state associated with this site as depicted on the National Wetland Inventory (NWI) Map (Figure 3a). The City of Salem Local Wetland Inventory only depicts two wetland areas (PU-U; PEM and PSS) within the south central portion of the study area which is the location of wetland A-W in this delineation.

G. Mapping Method and Estimated Accuracy

The boundary of the wetland area was determined and marked on the ground by Zion Natural Resources Consulting. Surveying measurements were performed by Project Delivery Group. These measurements were made using a Trimble 5600 Electronic Total Station. The angular measurements were recorded to the nearest two seconds of arc and distances to the nearest one-hundredth of a foot. Observations of angles and distances were corrected for earth curvature, parallax, atmospheric pressure, refraction and standard temperature. A positional accuracy of the wetland points are within one-hundredth of a foot. The elevations are based on GPS measurements of project control (NAVD 1988).

H. Additional Information to Help Establish State Jurisdiction

Historic aerial photographs from Google Earth from 1994 to 2013 were reviewed. The 2005 and 2011 aerials have been included to show the site alterations that have taken place within the two tax lots. The wetlands within the study area do not contain a fish presence due to the lack of aquatic features.

Datasheet Information: According to the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region; hydrophytic vegetation with a wetland indicator status of "Not on List" (NOL) is calculated as having an upland indicator status unless other wise noted as a different status based on the best professional judgment of the consultant. Hydrophytic vegetation identified with a wetland indicator status of "No regional indicator" (NI) or "no known occurrence" (NO) will have the nearest adjacent regional indicator applied to it (for western Oregon, the nearest regional indicator is California). If no adjacent regional indicator status exists the vegetation species will be listed on the datasheets but will not be utilized in the calculations for the dominance test or the prevalence test.

I. Results and Conclusions

Based upon our site reconnaissance and sampling of the three required wetland criteria (wetland hydrology, hydric soils, and hydrophytic vegetation), ZNR has identified approximately 1.52 acres of potentially jurisdictional wetlands classified as palustrine emergent wetlands. Figure 6 depicts the location of the potentially jurisdictional wetlands and sample sites. Upland in most instances is quite apparent and somewhat topographically defined (Photos 1-4).

J. LIMITATIONS AND REQUIRED DISCLAIMER

This report was prepared for the use of the client, its affiliates, lenders and assigns, their consultants and various governmental agencies. Any results and conclusions within this report represent our professional judgment based on the most recent information provided from publications, maps aerial photos, and field investigations as defined within the scope of services.

This report documents the investigation, best professional judgment and conclusions of the investigator. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-09-0055. The review process must be completed and the boundary concurred with, prior to any detailed site planning or construction activities take place.

APPENDIX A:

Criteria, Methodology, and Definitions

I. CRITERIA, METHODOLOGY, AND DEFINITIONS

A. WETLAND AND WATERS OF THE STATE DEFINITION

The ACOE (Federal Register 1982) and the Environmental Protection Agency (EPA) (Federal Register 1980) jointly define wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Except under certain situations defined in the ACOE Wetlands Delineation Manual, evidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination".

Waters of the State are defined as "natural waterways including all tidal and non-tidal bays, intermittent streams, continually flowing streams, lakes, wetlands and other bodies of water in this state, navigable and non-navigable..." "Natural waterways" is further defined as waterways created naturally by geological and hydrological processes, waterways that would be natural but for human-caused disturbances (i.e. channelized or culverted streams, partially drained wetlands or ponds created in wetlands)..." (DSL 1995).

B. CRITERIA 1 - WETLAND HYDROLOGY

Wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface or within the major portion of the root zone (usually above 12 inches) at some time (typically at least 12.5%) during the growing season.

1987 Manual defines the "growing season" as the portion of the year when soil temperature (measured 20 inches below the surface) is above biological zero (5 degrees Celsius, or 41 degrees Fahrenheit). This period can be approximated by the number of frost free days based on air temperature. Data for the growing season can be acquired via the Natural Resources Conservation Service (NRCS).

Indicators of hydrologic conditions that occur in wetlands may include, but are not limited to: drainage patterns, drift lines, sediment deposits, watermarks, stream gage data and flood predictions, historic records, visual observation of saturated soils, visual observation of inundation, and oxidized rhizospheres with living roots. Oxidized rhizospheres are defined as yellowish-red zones around the roots and rhizomes of some plants that grow in frequently saturated soils.

C. CRITERIA 2 - HYDRIC SOILS

The definition of a hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are

sufficiently wet because of artificial measures are included in the concept of hydric soils. Also, soils in which the hydrology has been artificially modified are hydric if the soil, in an unaltered state, was hydric. Some series, designated as hydric, have phases that are not hydric depending on water table, flooding, and ponding characteristics.

Soil field indicators are characteristics which are documented to be strictly associated only with hydric soils and are an efficient on-site means to confirm the presence of hydric soil. The indicators are designed to identify soils which meet the hydric soil definition without further data collection. Some hydric soils exist for which no field indicators have yet been recorded and documented, and to identify these soils as hydric, evidence must be gathered to demonstrate that the definition is met.

Soil field indicators include: organic content of greater that 50% by volume, sulfidic material or "rotten egg" odor, and/or presence of redoximorphic features and dark soil matrix as determined by the use of a Munsell Soil Color Chart. This chart establishes chroma, value, and hue of soils based on comparison with the color chips. The field data is then brought in-house and compared to the site-specific soils data mapped by the NRCS.

D. Criteria 3 - Wetland Vegetation

Wetland vegetation is more specifically termed hydrophytic vegetation. This type of plant life occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils to influence the plant species present. Vegetation that is not hydrophytic lack the morphological and physiological adaptations to grow, effectively compete, or persist in areas that are subject to prolonged inundation or saturated soil conditions.

Plant indicators, along with their definitions and indicator codes are listed in Table 2. Once plants are identified in the field they are researched through the U.S. Fish and Wildlife Service Region 9 (encompasses all of Oregon) Plant list to identify their corresponding indictor status. Wetland vegetation criteria are met when the percent dominant species is OBL, FACW, and/or FAC.

Table 2. Plant Indicator categories and definitions.

Indicator Symbol	Indicator Category	Definition
OBL	Obligate wetland	Plants that occur almost always in wetlands (>99%).
FACW	Facultative wetland	Plants that occur usually in wetlands (67-99%).
FAC	Facultative	Plants that occur in equally in wetlands and non-wetlands (34-66%).
FACU	Facultative upland	Plants that occur sometimes in wetlands (1-33%).
UPL	Obligate upland	Plants that occur rarely in wetlands (>99%).
NOL	Not on list	Has not yet received a wetland indicator status.

E. Delineation Methodology

Prior to beginning field work, Zion Natural Resources Consulting will review available information in order to ascertain where potential wetlands may exist on-site and to facilitate the gathering of data. This review includes the U.S. Geological Survey (USGS) topographic quadrangle, the Natural Resource Conservation Service soil series maps, the list of Oregon hydric soils by County, and the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map. If available, a Local Wetland Inventory map (LWI) will also be obtained as well as any public records for prior wetland determinations at or near the property.

Zion Natural Resources Consulting evaluated the site utilizing the routine on-site method as described in the *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). Data sheets were completed at each sample plot documenting the vegetation, soils, and hydrology. Areas in which wetland hydrology, hydric soils, and hydrophytic vegetation were all simultaneously present would likely be considered wetlands by the U.S. Army Corps of Engineers (ACOE) or Oregon Department of State Lands (DSL).

Approximately one-foot diameter soil pits were excavated to a depth of 16 inches in selected locations. The soil profiles were examined for wetland hydrology and hydric soil field indicators. In addition, a visual percent-cover estimate of the dominant species of the plant community was performed using the soil pit locations as the center of reference. Dominant plant species are based on estimates of percent cover for shrub/scrub and herbaceous species within a 5-foot radius of the sample point and a basal area cover for tree species within a 30-foot radius of the sample point. Plant species in each vegetative layer, which are estimated at less than 20%, are not considered to be dominant. The wetland indicator status is then used to determine if there is an overall dominance (greater than 50%) of wetland or upland plant species.

F. Regulatory Jurisdiction

Wetlands and waters of the State are regulated by the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act and by the Oregon Department of State Lands (DSL) under the Removal-Fill Law (ORS 196.800-196.990).

The principal regulatory reference material for wetland delineations within Oregon is the Army Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (Environmental Laboratory 1987) which is recognized by both ACOE and DSL.

APPENDIX B:

Literature and Data Sources

LITERATURE AND DATA SOURCES

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S.D.I. Fish and Wildlife Service. FWS/OBS-79/31.45 pp.

Environmental Laboratory. 1987. Corps. of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, US Army Corps of Engineers Waterway Experiment Station, Vicksburg, MS.

Hitchcock, C.L. and A. Cronquist, 1973. Flora of the Pacific Northwest. University of Washington Press. Seattle, WA. 730 pp.

Munsell Color. 1990, revised 1994. Munsell Soil Color Charts. Macbeth Division of Kollmorgen Corporation. Baltimore, MD.

Natural Resource Conservation Service, USDA, 2015 (Soil Survey Data and Hydric Soils by County). Soil Data Mart, http://soildatamart.nrcs.usda.gov.

NOAA National Weather Service Forecast Office, Portland OR, 2014 (Climatological Data). http://newweb.wrh.noaa.gov/climate/index.php?wfo=pqr.

Oregon Department of Revenue, The Oregon Map, 2015 (County Tax Lot Maps). ORMAP Online Maps http://www.ormap.org/maps/maps.htm.

Reed, P.B. Jr. 1988. National List of Plant Species That Occur in Wetlands: Northwest (Region 9). USDI Fish and Wildlife Service, Biological Report 88 (26.9). 89 pp.

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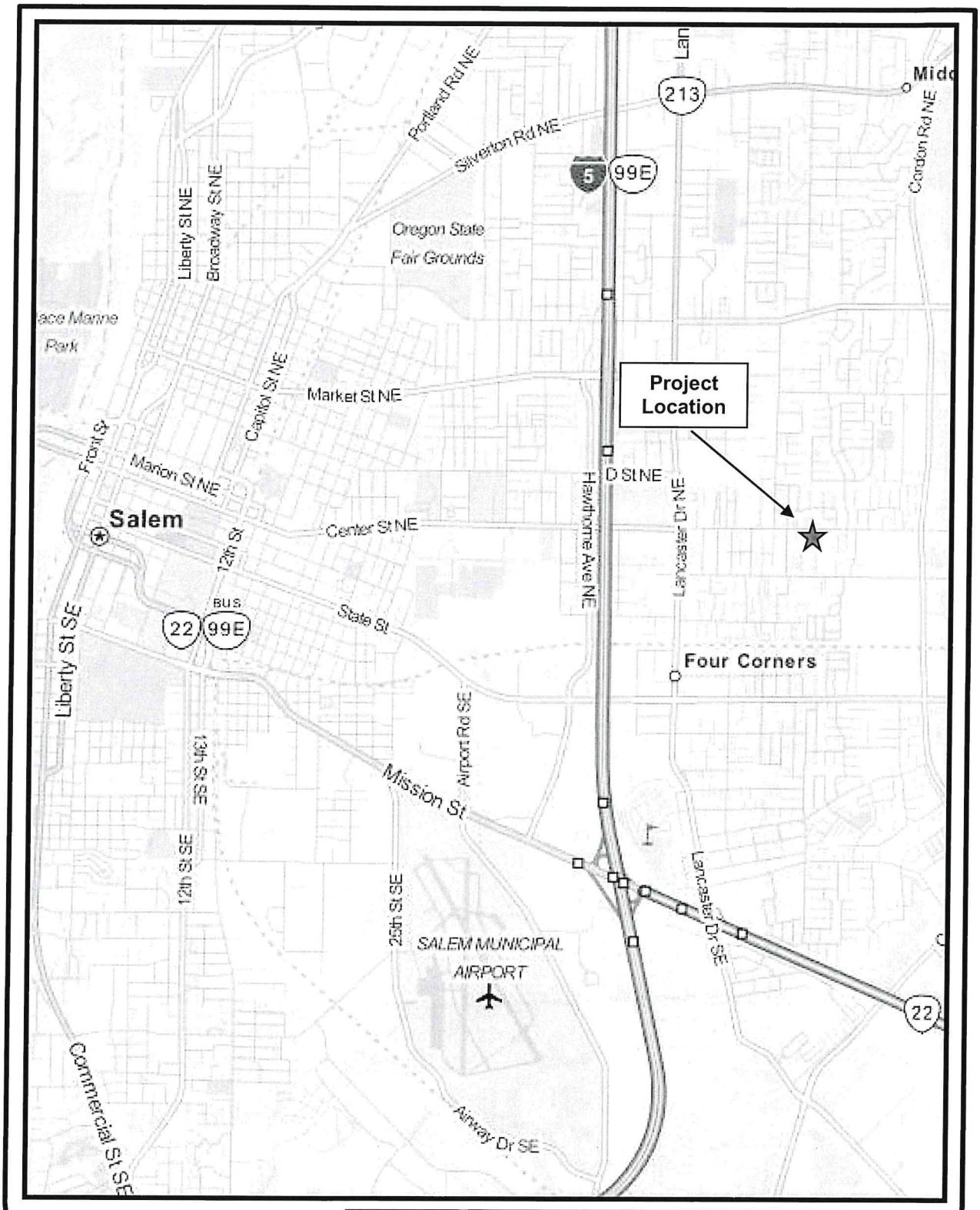
APPENDIX C:

Site Figures

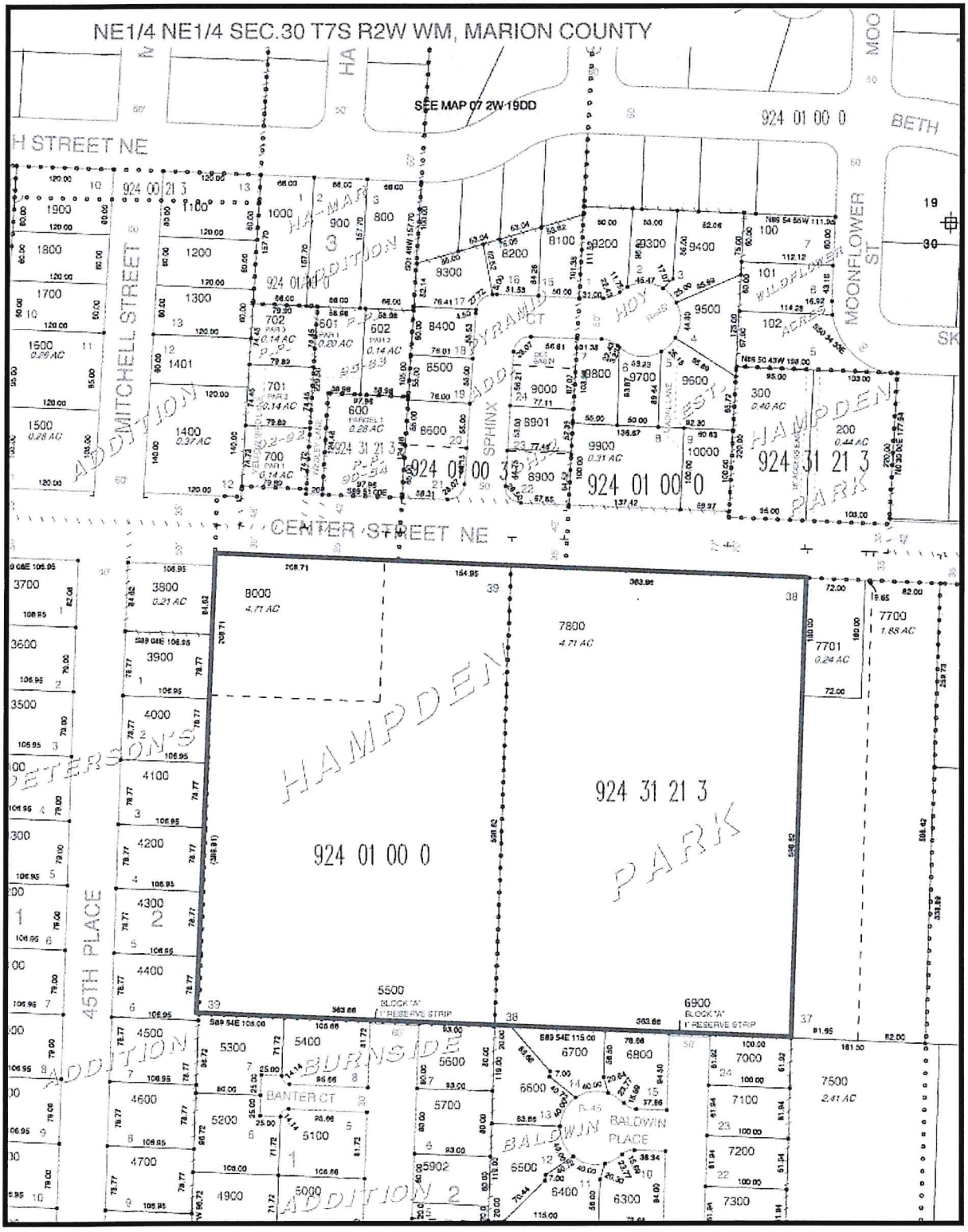


ZION
Natural Resources Consulting

FIGURE 1
Vicinity Map

Project: 46th Avenue

N
W E
S



ZION
Natural Resources Consulting

FIGURE 2
Tax Lot Map

Project: 46th Avenue

N
W E
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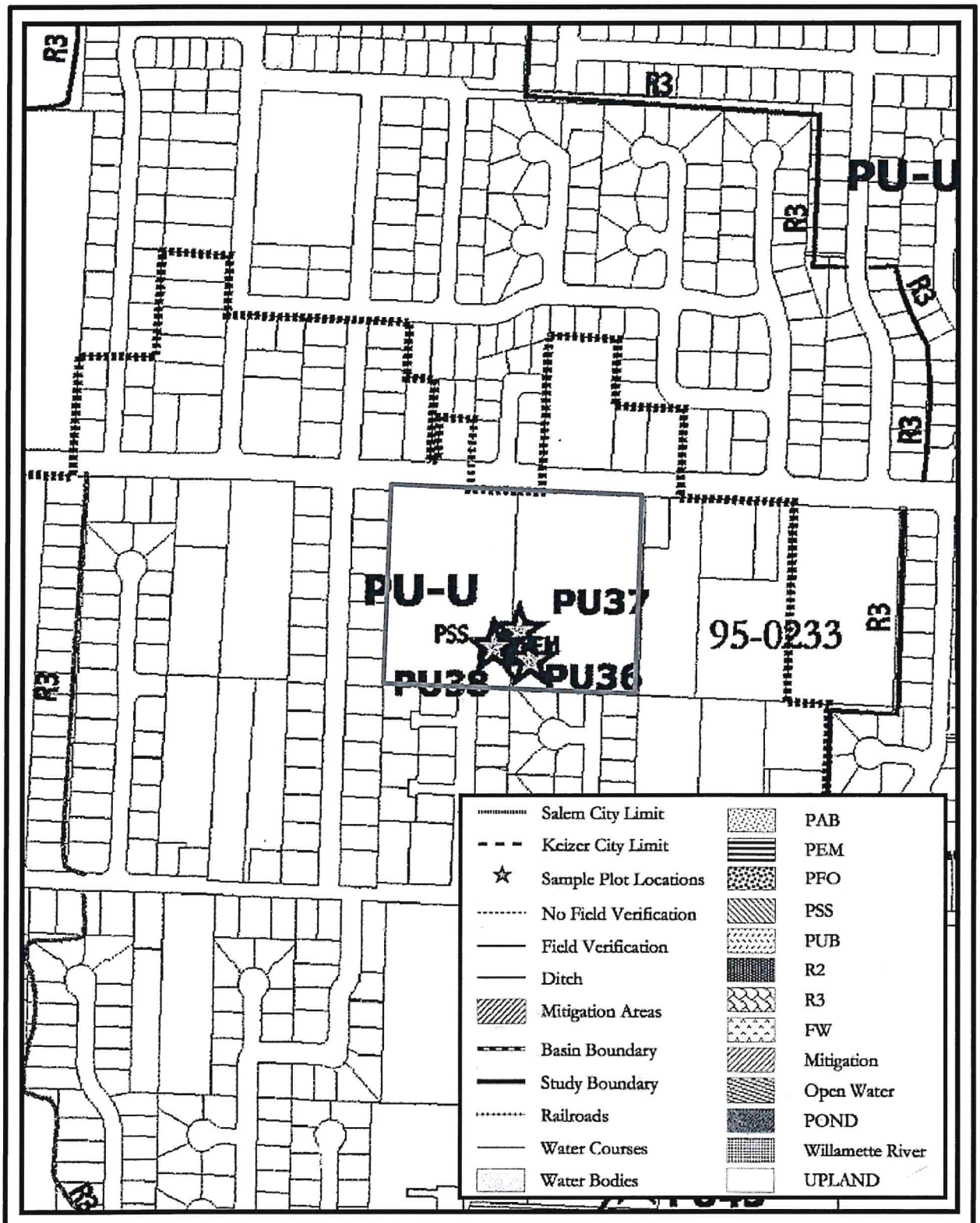
ZION
Natural Resources Consulting

FIGURE 3a
National Wetlands Inventory Map

Project: 46th Avenue

N
W E
S



ZION
Natural Resources Consulting

FIGURE 3b
Local Wetlands Inventory Map

Project: 46th Avenue

ZION
Natural Resources Consulting

FIGURE 4
County Soils Survey Map - NRCS

Project: 46th Avenue

N
W E
S

ZION
Natural Resources Consulting

FIGURE 5a

Aerial Photo – Google Earth 7/14/2014

Project: 46th Avenue

N
W E
S

ZION
Natural Resources Consulting

FIGURE 5b
Aerial Photo – Google Earth 11/16/2011

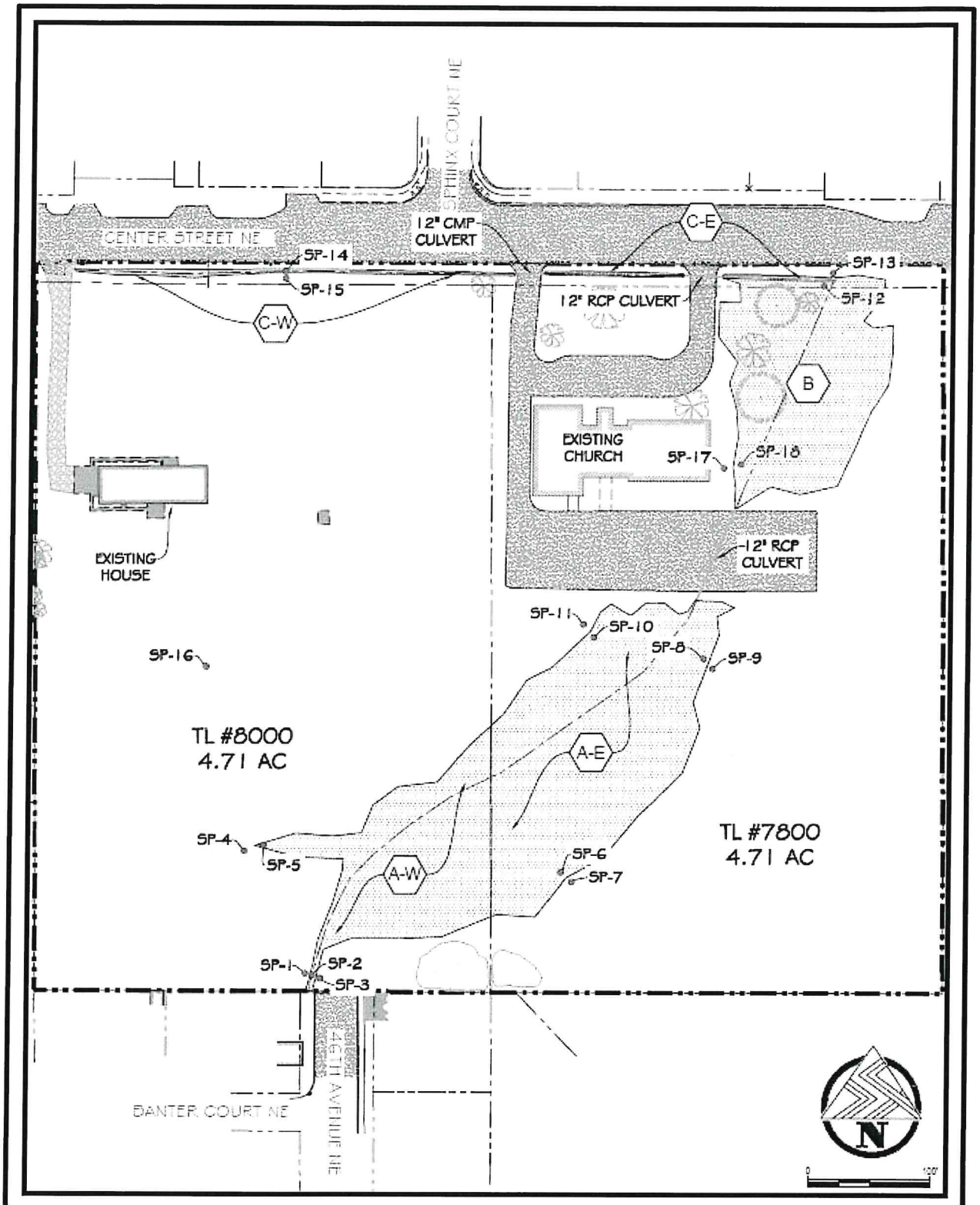
Project: 46th Avenue

N
W E
S

ZION
Natural Resources Consulting

FIGURE 5c
Aerial Photo – Google Earth 12/30/2005
Project: 46th Avenue

N
W E
S



ZION
Natural Resources Consulting

FIGURE 6
Wetland Site Location Map

Project: 46th Avenue

N
W E
S

APPENDIX D:

Site Photographs

Photo Point #1 – Located in the south central portion of the study area at Wetland A looking south along the ditch.

Photo Point #2 – Located at the south central portion of the site looking north along the ditch located within Wetland A.

Photo Point #3 – Located in the center of tax lot 7800 south of the church parking lot looking south at Wetland A.

Photo Point #4 – Located on the northern boundary of tax lot 7800 at Center Street looking south along Wetland B.

APPENDIX E:

Climatological Data

WETS Station : SALEM MCNARY FLD, OR232 Creation Date: 01/14/2015
Latitude: 4454 Longitude: 12300 Elevation: 00205
State FIPS/County(FIPS): 41047 County Name: Marion
Start yr. - 1971 End yr. - 2000

	Temperature (Degrees F.)			Precipitation (Inches)				
					30% chance will have		avg # of days w/.1 or more	avg total snow fall
Month	avg daily max	avg daily min	avg	avg	less than	more than		
January	47.0	33.5	40.3	5.84	3.63	7.05	12	1.3
February	51.2	34.7	43.0	5.09	3.26	6.14	12	2.1
March	56.3	36.6	46.5	4.17	2.96	4.94	11	0.1
April	61.1	38.8	50.0	2.76	1.83	3.30	8	0.0
May	67.5	43.6	55.6	2.13	1.23	2.59	6	0.0
June	74.0	48.4	61.2	1.45	0.85	1.76	4	0.0
July	81.5	52.0	66.8	0.57	0.13	0.67	2	0.0
August	81.9	52.1	67.0	0.68	0.13	0.81	2	0.0
September	76.6	47.7	62.2	1.43	0.46	1.73	4	0.0
October	64.5	41.3	52.9	3.03	1.54	3.70	7	0.0
November	52.4	37.9	45.2	6.39	4.15	7.68	13	0.4
December	46.4	33.9	40.2	6.46	4.30	7.75	13	1.9
Annual	-----	-----	-----	------	34.67	44.29	--	----
Average	63.4	41.7	52.6	------	------	------	--	----
Average	-----	-----	-----	40.00	------	------	93	6.0

Climatological Report (Daily)

```
000
CDUS46 KPQR 061204
CLISLE


CLIMATE REPORT
NATIONAL WEATHER SERVICE PORTLAND OREGON
404 AM PST SAT DEC 6 2014


.....................................

...THE SALEM OR CLIMATE SUMMARY FOR DECEMBER 5 2014...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1892 TO 2014


WEATHER ITEM   OBSERVED TIME   RECORD YEAR NORMAL DEPARTURE LAST
                VALUE   (LST)  VALUE       VALUE  FROM      YEAR
                                                   NORMAL
.............................................................
TEMPERATURE (F)
 YESTERDAY
  MAXIMUM         50    236 PM  59    1944  47      3       33
  MINIMUM         44   1140 PM  17    2013  35      9       17
  AVERAGE         47                       41      6       25

PRECIPITATION (IN)
  YESTERDAY        0.35          1.90 1981   0.24   0.11     0.00
  MONTH TO DATE    1.22                      1.23  -0.01     0.84
  SINCE OCT 1     11.89                     10.76   1.13     4.15
  SINCE JAN 1     35.91                     34.04   1.87    23.15

DEGREE DAYS
 HEATING
  YESTERDAY       18                        24     -6       40
  MONTH TO DATE  123                       117      6      137
  SINCE DEC 1    123                       117      6      137
  SINCE JUL 1    889                      1234   -345     1180

 COOLING
  YESTERDAY        0                         0      0        0
  MONTH TO DATE    0                         0      0        0
  SINCE DEC 1      0                         0      0        0
  SINCE JAN 1    605                       290    315      502
.............................................................
```

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: SALEM OR
MONTH: SEPTEMBER
YEAR: 2014
LATITUDE: 44 55 N
LONGITUDE: 123 0 W

TEMPERATURE IN F:							:PCPN:		SNOW:	WIND			:SUNSHINE:		SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
									12Z	AVG	MX	2MIN						
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	83	51	67	1	0	2	0.00	0.0	0	4.4	13	300	M	M	1		17	310
2	80	58	69	3	0	4	0.00	0.0	0	8.3	23	290	M	M	3		29	280
3	75	48	62	-3	3	0	0.00	0.0	0	5.4	15	20	M	M	2		20	20
4	86	50	68	3	0	3	0.00	0.0	0	8.3	24	10	M	M	0		28	360
5	93	53	73	8	0	8	0.00	0.0	0	7.1	21	30	M	M	0		27	30
6	97	52	75	10	0	10	0.00	0.0	0	4.0	13	320	M	M	0		17	320
7	87	48	68	3	0	3	0.00	0.0	0	1.8	9	270	M	M	0		11	270
8	81	49	65	1	0	0	0.00	0.0	0	5.9	18	310	M	M	2		22	310
9	76	57	67	3	0	2	0.00	0.0	0	5.1	15	310	M	M	4		20	300
10	81	52	67	3	0	2	0.00	0.0	0	6.9	16	360	M	M	1		19	340
11	82	47	65	1	0	0	0.00	0.0	0	10.5	23	10	M	M	0		28	10
12	86	50	68	4	0	3	0.00	0.0	0	5.0	14	30	M	M	0		18	20
13	89	48	69	5	0	4	0.00	0.0	0	2.6	9	330	M	M	0		12	340
14	89	47	68	5	0	3	0.00	0.0	0	2.0	9	10	M	M	0	8	11	360
15	88	50	69	6	0	4	0.00	0.0	0	3.0	12	220	M	M	2	8	15	210
16	80	50	65	2	0	0	0.00	0.0	0	4.9	9	330	M	M	1		14	210
17	75	61	68	6	0	3	T	0.0	0	2.4	13	330	M	M	2		13	320
18	74	58	66	4	0	1	0.01	0.0	0	3.7	10	160	M	M	8		13	120
19	84	53	69	7	0	4	0.00	0.0	0	4.2	14	30	M	M	0		18	350
20	95	57	76	14	0	11	0.00	0.0	0	5.5	12	360	M	M	0		16	40
21	86	56	71	10	0	6	0.00	0.0	0	6.5	16	260	M	M	0		18	260
22	70	57	64	3	1	0	T	0.0	0	4.9	10	200	M	M	6		13	210
23	68	56	62	1	3	0	0.47	0.0	0	3.4	10	200	M	M	7	1	15	200
24	67	59	63	3	2	0	0.57	0.0	0	7.9	16	170	M	M	7	1	21	160
25	72	55	64	4	1	0	0.08	0.0	0	8.5	20	240	M	M	4	1	25	250
26	74	52	63	3	2	0	0.00	0.0	0	6.8	17	170	M	M	2		23	170
27	70	53	62	2	3	0	0.00	0.0	0	5.3	13	40	M	M	6		17	40
28	80	49	65	6	0	0	0.00	0.0	0	3.9	12	20	M	M	0	1	14	10
29	67	48	58	-1	7	0	0.04	M	0	6.9	16	190	M	M	6	18	20	190
30	70	48	59	1	6	0	0.03	M	0	5.3	14	300	M	M	7	1	17	300
SM	2405	1572		28	73	1.20		0.0	160.4				M		71			
AV	80.2	52.4								5.3	FASTST		M	M	2		MAX(MPH)	
								MISC ---->		# 24	10						# 29	280

[TEMPERATURE DATA]
AVERAGE MONTHLY: 66.3
DPTR FM NORMAL: 3.7
HIGHEST: 97 ON 6

[PRECIPITATION DATA]
TOTAL FOR MONTH: 1.20
DPTR FM NORMAL: -0.08
GRTST 24HR 1.04 ON 23-24

SYMBOLS USED IN COLUMN 16
1 = FOG OR MIST
2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: SALEM OR
MONTH: OCTOBER
YEAR: 2014
LATITUDE: 44 55 N
LONGITUDE: 123 0 W

TEMPERATURE IN F:							:PCPN:	SNOW:	WIND				:SUNSHINE:		SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	12Z DPTH	AVG SPD	MX SPD	2MIN DIR	MIN	PSBL	S-S	WX	SPD	DR
1	69	47	58	0	7	0	0.00	0.0	0	3.9	15	350	M	M	3	1	20	20
2	73	43	58	0	7	0	0.00	0.0	0	4.5	13	360	M	M	0		17	350
3	80	45	63	6	2	0	0.00	0.0	0	1.9	10	10	M	M	0		13	20
4	84	47	66	9	0	1	0.00	0.0	0	1.3	8	40	M	M	0		12	10
5	86	50	68	11	0	3	0.00	0.0	0	3.8	12	10	M	M	0		16	20
6	87	54	71	15	0	6	0.00	0.0	0	3.5	13	360	M	M	0		18	350
7	84	54	69	13	0	4	0.00	0.0	0	1.6	8	20	M	M	0	1	12	60
8	79	50	65	9	0	0	0.00	0.0	0	1.8	9	360	M	M	0	1	12	10
9	77	48	63	8	2	0	0.00	0.0	0	1.6	8	360	M	M	1	1	10	20
10	73	47	60	5	5	0	0.00	0.0	0	2.9	9	180	M	M	4	18	12	180
11	73	51	62	7	3	0	0.06	0.0	0	7.9	20	280	M	M	6	1	26	290
12	69	48	59	5	6	0	0.00	0.0	0	4.1	13	20	M	M	1		15	10
13	75	43	59	5	6	0	0.18	M	0	7.6	21	190	M	M	3	1	26	200
14	59	53	56	2	9	0	0.25	0.0	0	6.9	16	160	M	M	7	1	20	160
15	61	50	56	3	9	0	0.49	0.0	0	13.8	26	180	M	M	7	1	36	190
16	71	49	60	7	5	0	T	M	0	3.8	10	160	M	M	1		13	160
17	62	54	58	5	7	0	0.48	0.0	0	3.2	13	160	M	M	9	1	15	170
18	75	54	65	13	0	0	0.01	0.0	0	6.5	15	160	M	M	6	1	20	170
19	75	53	64	12	1	0	0.01	0.0	0	4.4	12	210	M	M	5	1	16	190
20	63	53	58	6	7	0	0.19	0.0	0	9.0	17	190	M	M	5	1	23	190
21	63	53	58	6	7	0	0.15	0.0	0	13.3	20	160	M	M	9	1	28	170
22	60	54	57	6	8	0	1.22	0.0	0	10.1	21	180	M	M	9	1	26	180
23	61	53	57	6	8	0	0.48	0.0	0	8.6	16	200	M	M	7	1	21	200
24	54	48	51	0	14	0	0.32	M	0	4.6	9	350	M	M	7	12	12	350
25	65	46	56	6	9	0	0.30	M	0	13.3	39	180	M	M	9	128	51	180
26	59	46	53	3	12	0	0.17	M	0	8.7	20	200	M	M	6		24	220
27	62	47	55	5	10	0	T	M	0	5.5	14	150	M	M	4		16	140
28	61	54	58	8	7	0	0.16	0.0	0	11.4	23	180	M	M	9	138	31	180
29	63	55	59	10	6	0	0.11	0.0	0	4.5	15	180	M	M	9	1	19	180
30	60	55	58	9	7	0	0.66	0.0	0	4.3	13	160	M	M	9	1	17	150
31	59	44	52	3	13	0	0.56	M	0	4.5	18	280	M	M	6	1	24	290
SM	2142	1548		177	14		5.80	0.0	182.8				M		142			
AV	69.1	49.9								5.9	FASTST		M	M	5		MAX(MPH)	
									MISC ---->	# 39	180						# 51	180

[TEMPERATURE DATA]

AVERAGE MONTHLY: 59.5
DPTR FM NORMAL: 6.3
HIGHEST: 87 ON 6

[PRECIPITATION DATA]

TOTAL FOR MONTH: 5.80
DPTR FM NORMAL: 2.77
GRTST 24HR 1.50 ON 22-23

SYMBOLS USED IN COLUMN 16

1 = FOG OR MIST
2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: SALEM OR
MONTH: NOVEMBER
YEAR: 2014
LATITUDE: 44 55 N
LONGITUDE: 123 0 W

TEMPERATURE IN F:							:PCPN:		SNOW:	WIND			:SUNSHINE:		SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
									12Z	AVG	MX	2MIN						
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	54	41	48	-1	17	0	0.01	M	0	3.1	10	170	M	M	9	12	12	170
2	53	45	49	1	16	0	0.06	M	0	11.0	17	160	M	M	10	1	25	180
3	57	51	54	6	11	0	0.16	0.0	0	11.7	18	170	M	M	9	1	24	200
4	61	54	58	10	7	0	0.39	0.0	0	9.7	22	170	M	M	10	1	31	170
5	64	51	58	10	7	0	0.00	0.0	0	1.2	6	150	M	M	8	12	7	130
6	62	43	53	5	12	0	0.26	M	0	8.2	23	180	M	M	6	12	31	180
7	58	40	49	2	16	0	0.00	0.0	0	3.7	15	360	M	M	5	128	17	30
8	54	38	46	-1	19	0	0.00	0.0	0	2.3	9	150	M	M	7	12	10	160
9	59	41	50	3	15	0	0.01	M	0	8.4	21	180	M	M	8	1	27	180
10	57	40	49	2	16	0	0.00	0.0	0	6.5	17	350	M	M	5	12	21	360
11	55	32	44	-2	21	0	0.00	0.0	0	8.2	21	40	M	M	0		25	40
12	48	32	40	-6	25	0	0.00	0.0	0	9.6	17	350	M	M	3		20	350
13	38	33	36	-10	29	0	0.98	M	0	8.1	13	340	M	M	10	16	16	350
14	42	29	36	-10	29	0	0.03	M	0	5.3	12	360	M	M	6	1	13	30
15	48	23	36	-10	29	0	0.00	0.0	0	5.8	16	20	M	M	0		20	10
16	48	21	35	-10	30	0	0.00	0.0	0	3.8	10	340	M	M	0		13	360
17	48	22	35	-10	30	0	0.00	0.0	0	2.6	10	10	M	M	0		15	360
18	44	23	34	-11	31	0	0.00	0.0	0	1.7	7	230	M	M	0		8	180
19	49	32	41	-4	24	0	0.15	M	0	2.4	8	140	M	M	5	1	10	20
20	49	40	45	1	20	0	0.03	M	0	1.6	7	340	M	M	9	128	8	310
21	56	45	51	7	14	0	0.68	M	0	12.9	33	180	M	M	10	12	44	190
22	56	42	49	5	16	0	0.27	M	0	7.6	17	190	M	M	6	1	23	200
23	55	46	51	7	14	0	0.48	M	0	11.7	23	180	M	M	8	13	30	180
24	55	43	49	5	16	0	T	M	0	8.2	17	180	M	M	7		21	170
25	62	55	59	16	6	0	0.00	0.0	0	9.8	16	170	M	M	9		21	210
26	62	51	57	14	8	0	T	0.0	0	8.3	17	180	M	M	4		21	170
27	60	53	57	14	8	0	0.25	0.0	0	12.9	23	180	M	M	10	18	29	180
28	56	44	50	7	15	0	0.98	M	0	14.2	29	190	M	M	9	1	39	180
29	46	31	39	-3	26	0	0.13	M	0	7.6	17	290	M	M	8	1	23	280
30	42	28	35	-7	30	0	0.00	0.0	0	10.2	17	350	M	M	3		22	10
SM	1598	1169			557	0	4.87		0.0	218.3			M		184			
AV	53.3	39.0								7.3	FASTST		M	M	6		MAX(MPH)	
								MISC ---->		# 33	180					# 44	190	

[TEMPERATURE DATA]

AVERAGE MONTHLY: 46.1
DPTR FM NORMAL: 0.6
HIGHEST: 64 ON 5

[PRECIPITATION DATA]

TOTAL FOR MONTH: 4.87
DPTR FM NORMAL: -1.63
GRTST 24HR 1.13 ON 27-28

SYMBOLS USED IN COLUMN 16

1 = FOG OR MIST
2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: SALEM OR
MONTH: DECEMBER
YEAR: 2014
LATITUDE: 44 55 N
LONGITUDE: 123 0 W

TEMPERATURE IN F:							:PCPN:	SNOW:	WIND				:SUNSHINE:	SKY			:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
									12Z	AVG	MX	2MIN						
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	38	30	34	-8	31	0	0.02	M	0	4.0	10	360	M	M	10	1	13	360
2	42	32	37	-5	28	0	0.00	0.0	0	10.8	20	350	M	M	4		23	10
3	49	37	43	1	22	0	0.04	M	0	8.1	14	350	M	M	9		16	360
4	44	38	41	0	24	0	0.81	M	0	1.4	8	360	M	M	10	1	9	360
5	50	44	47	6	18	0	0.35	M	0	4.4	14	270	M	M	9	1	15	280
6	57	40	49	8	16	0	0.20	M	0	7.7	23	180	M	M	8	18	31	180
7	50	36	43	2	22	0	T	M	0	1.4	10	150	M	M	5	12	13	140
8	60	39	50	9	15	0	T	M	0	3.2	15	180	M	M	7	12	18	180
9	63	54	59	19	6	0	0.35	0.0	0	11.3	25	190	M	M	10	1	34	180
10	63	44	54	14	11	0	0.73	M	0	10.3	23	240	M	M	6	12	31	240
11	63	41	52	12	13	0	0.33	M	0	11.5	39	190	M	M	7	12	53	200
12	54	38	46	6	19	0	0.02	M	0	3.0	7	330	M	M	6	1	9	160
13	52	34	43	3	22	0	0.00	0.0	0	3.1	8	30	M	M	7	12	10	30
14	48	33	41	1	24	0	T	M	0	2.6	9	20	M	M	7	1	10	20
15	49	36	43	3	22	0	0.03	M	0	2.7	9	10	M	M	8		11	360
16	49	41	45	5	20	0	0.04	M	0	4.9	9	350	M	M	8		12	10
17	50	36	43	3	22	0	0.10	M	0	5.1	16	170	M	M	9	1	21	170
18	55	38	47	7	18	0	0.28	M	0	6.7	18	230	M	M	10	1	23	200
19	52	45	49	9	16	0	0.36	M	0	9.8	20	160	M	M	8	1	26	180
20	59	48	54	15	11	0	1.63	M	0	18.7	31	170	M	M	10	1	44	170
21	59	50	55	16	10	0	0.20	0.0	0	8.4	20	230	M	M	10	1	27	230
22	57	45	51	12	14	0	0.02	M	0	1.6	7	40	M	M	9	1	9	190
23	57	47	52	13	13	0	T	M	0	6.8	17	190	M	M	9	1	23	200
24	55	39	47	8	18	0	1.07	M	0	7.9	20	360	M	M	10	1	24	30
25	52	39	46	7	19	0	T	M	0	4.5	10	270	M	M	9		12	270
26	50	36	43	3	22	0	0.00	0.0	0	3.3	9	140	M	M	8		12	140
27	47	40	44	4	21	0	0.19	M	0	9.9	20	180	M	M	10	1	27	170
28	49	40	45	5	20	0	0.04	M	0	6.9	14	190	M	M	8		18	190
29	44	30	37	-3	28	0	0.06	M	0	8.4	22	20	M	M	5	1	26	20
30	37	24	31	-9	34	0	0.00	0.0	0	9.4	22	20	M	M	0		25	20
SM	1554	1174			579	0	6.87		0.0	197.8			M		236			
AV	51.8	39.1								6.6	FASTST		M	M	8		MAX(MPH)	
									MISC ---->	# 39	190						# 53	200

[TEMPERATURE DATA]
AVERAGE MONTHLY: 45.5
DPTR FM NORMAL: 5.3
HIGHEST: 63 ON 11,10
LOWEST: 24 ON 30

[PRECIPITATION DATA]
TOTAL FOR MONTH: 6.87
DPTR FM NORMAL: 0.21
GRTST 24HR 1.75 ON 19-20

SYMBOLS USED IN COLUMN 16

1 = FOG OR MIST
2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS
3 = THUNDER

APPENDIX F:

Wetland Determination Datasheets

City of Salem, Oregon
Community Development Department
Planning Division

Permit Application Center
Phone: 503-588-6213
Fax: 503-588-6005
www.cityofsalem.net/planning
@Salem_Planning

Expedited Land Division Application Form (ORS 197.360-380)

What is an Expedited Land Division?

The expedited land division process provides an alternative to the standard procedures for certain land division requests. An applicant may choose to use the expedited land division process if their land division request meets all of the applicable requirements specified in Oregon Revised Statute (ORS) 197.360 (see reverse side). The steps in this procedure differ from the regular subdivision procedure, but still include a public review and opportunity for appeal. The steps are described in ORS 197.365-375.

Is it faster than the regular subdivision process?

The expedited land division process is intended to streamline the regular land use process that land divisions normally follow under state law, which allows up to 120 days for final city approval. In Salem, however, the typical processing time for a land division application (subdivision, partition, or replat) that meets city standards and is complete when submitted, is far less than the 120 days that state law allows. Therefore, in Salem, in many cases there is no difference in processing time between a regular land division and expedited land division.

What are the requirements to qualify for the Expedited Land Division process?

ORS 197.360 lists the requirements to qualify for an expedited land division review. These requirements are summarized below. The full text of ORS 197.360 is included on the reverse side of this form.

The proposed land division (i.e. subdivision, partition, or replat):

1. Must be on residentially zoned land and must be solely for the purposes of residential use;
2. Must not create building lots that provide for dwellings or accessory buildings within areas that contain natural resource protections, such as, but not limited to, the Willamette Greenway;
3. Must satisfy all City street standards and connectivity requirements; and
4. Must either:
    a. *Create enough lots or parcels to allow building residential units at 80 percent or more of the maximum net density permitted by the zoning designation of the site; or*
    b. *Will be sold or rented to households with incomes below 120 percent of the median family income for the county in which the project is built.*

Why am I receiving this application form for Expedited Land Division now?

The expedited land division process has existed since 1995; however, the 2015 Oregon Legislature required that all land division applicants be notified of the expedited land division option and how to apply.

Are you applying for an Expedited Land Division?

Yes ☐ **No** ☑ (If yes, then attach a written description of how the proposal satisfies ORS 197.360)

Applicant Name: Don Jensen Telephone: 503-932-2259

Applicant Mailing Address: 5190 Kale St NE, Salem, OR 97305

Site Address: 4560 Center St. NE, Salem OR 97301

Don C Jensen (Signature) | Don Jensen (Print Name) | 11/22/19 (Date)

MARION COUNTY
SUBDIVISION/CONDOMINIUM NAME REQUEST

Marion County Surveyor – 5155 Silverton Road NE, Salem, OR 97305
Fax 503-588-7970 Phone 503-588-5155

Proposed Subdivision Name* : (Please do not use the word "Subdivision" as part of the name.)

NOTE: Reserved names expire 2 years from original approval date.

Subject to consent by prior party if name was previously used in a recorded plat, as outlined in ORS 92.090(1).

Belle Plaine Estates

Applicant Name: Don Jensen

Address: 5190 Kale St SE, Salem OR 97305

Owner/Developer: Don Jensen

Phone: 503-932-2259 Date: 11/18/2019

Location: Is the subdivision in a city? Yes X No

City Name: Salem

Section: 30 Township: 7S Range: 2W

Office Use Only

Date Received: _____

The Proposed Name is:

_____ Approved as Submitted ***(approval expires in 2 years)***

_____ Not Approved for the following reason(s):

_____ Date _____
Marion County Surveyor

OPERATING AGREEMENT

OF

JENSEN CONSULTING & DEVELOPMENT LLC,
An Oregon Limited Liability Company

The undersigned members, desiring to form a limited liability company under the Oregon Limited Liability Company Act, hereby agree as follows:

ARTICLE 1
FORMATION

1.1 Name. The name of the limited liability company (the "LLC") is JENSEN CONSULTING AND DEVELOPMENT

1.2 Articles of Organization. Articles of organization were filed with the Oregon Secretary of State on April 12, 2013.

1.3 Duration. The LLC shall be perpetual.

1.4 Principal Place of Business. The principal office of the LLC shall initially be at 6424 Hazelgreen Rd NE, Salem, Oregon 97305. The members may relocate the principal office or establish additional offices from time to time.

1.5 Registered Office and Registered Agent. The LLC's initial registered office shall be at 494 State St Ste 230 Salem, OR 97301-3654 and the name of the initial registered agent at such address shall be Lawrence W. Andrews.

ARTICLE 2
MEMBERS, CONTRIBUTIONS, AND INTERESTS

2.1 Name and Addresses. The name and addresses of the members of the LLC, the agreed value of their initial capital contributions, and their initial percentage ownership interests are:

Name and Address	Contribution /Value Percentage	
Ashely J. Jensen 2327 SE Ankney St Portland, OR 97214	100% /	$100.00

If additional members join each member's percentage ownership interest at any time shall be the ratio of that member's capital contribution to all member's capital contributions.

Members contributions:

Ashley J. Jensen will be the managing member and overseeing all operations.

2.2 Other Business Of Members. Any member shall engage independently or with others in other business and investment ventures of every nature and description and shall have no obligation to account to the LLC for such business or investments or for business or investment purposes.

2.3 Additional Members. Additional members shall not be admitted except upon the affirmative vote of members holding a total of at least 51 percent of the ownership interests. Notwithstanding the foregoing, a person shall not become an additional member unless and until such person becomes a party to this Operating Agreement as a member by signing an admission agreement and executes such documents and instructions as the members may reasonably request as may be necessary or appropriate to confirm such person as a member in the company such person's agreement to be bound by the terms and conditions hereof.

No additional member shall be entitled to any retroactive allocation of losses, income or expense deductions incurred by the company, unless 100% of the existing members agree. The members may at the time an additional member is admitted, close the company books (as though the company's tax year had ended) or make pro rata allocations of loss, income and expense deductions to additional member for that portion of the company's tax year in which such member was admitted in accordance with the provisions of Section 706 (d) of the Code of the Regulations promulgated there under.

2.4 Additional Contributions. Additional capital contributions shall be accepted from existing members only if the members unanimously approve and set the maximum total amount of the additional capital contributions. If the members do so, the members shall have the opportunity (but not the obligation) to make such additional capital contributions on a pro rata basis in accordance with their ownership interests. If any member elects to make less than the member's pro rata share of any additional capital contributions, the others may contribute the difference on a pro rata basis in accordance with their ownership interests or on any other basis they may agree upon.

2.5 No Interests on Capital Contributions. No interests shall be paid on capital contributions.

2.6 Capital Accounts. An individual capital account shall be maintained for each member. Each member's capital account shall be: (i) credited with all capital contributions by such member and the member's distributive share of all income and gain (including any income exempt from federal income tax); and (ii) charged with the amount of all distributions to such member and the member's distributive share of losses and deductions. Capital accounts shall be maintained in accordance with federal income tax accounting principles as set forth in Treas. Reg. '1.704-1(b)(2)(iv) or any successor provision.

ARTICLE 3
MEMBER MEETINGS

3.1 Meetings. A meeting of members shall be held (a) if it is called by the members; or (b) if members holding at least 51 percent of the ownership interests sign, date, and deliver to the LLC's principal office a written demand for the meeting, describing the purpose or purposes for which it is to be held. Meetings of members shall be held at the principal office of the LLC or any other place specified in the notice or meeting.

3.2 Notice of Meeting. Notice of the date, time and place of each members' meeting shall be given to each member not earlier than 60 days nor less than 10 days before the meeting date. The notice must include a description of the purpose or purposes for which the meeting is called.

3.3 Record Date. The persons entitled to notice of and to vote at a members' meeting, and their respective ownership interests, shall be determined as of the record date for the meeting. The record date shall be a date, not earlier than 70 days nor less than 10 days before the meeting, selected by the members. If the members do not specify a record date, the record date shall be the date on which notice of the meeting was first mailed or otherwise delivered.

3.4 Quorum. The presence, in person or by proxy, of members holding at least 51 percent of the ownership interests shall constitute a quorum.

3.5 Proxies. A member may be represented at a meeting in person or by written proxy.

3.6 Voting. On each matter requiring action by the members, each member shall be entitled to vote the member's ownership interest. Except as otherwise stated in the articles of organization, this operating agreement, or applicable law, a matter submitted to a voted of the members shall be deemed

approved if the ownership interests voted in favor exceed those voted against the matter.

ARTICLE 4
ACTIONS WITHOUT NOTICE, WITHOUT MEETING, OR BY TELEPHONE

4.1 Meeting of All Members. Notwithstanding any other provision of this operating agreement, if all the members shall hold a meeting at any time and place, such meting shall be valid without call or notice, and any lawful action taken at such meeting shall be the action of the members.

4.2 Action Without Meeting. Any action required or permitted to be taken by the members at a meeting may be taken without a meeting if a consent in writing, describing the action taken, is signed by members holding 51 percent of the ownership interests or by all the members, as the case may be, and is included in the minutes or filed with the LLC's records of meeting.

4.3 Meetings by Telephone. Meetings of the members may be held by conference telephone or by any other means of communication by which all participates can hear each other simultaneously during the meeting, and such participation shall constitute presence in person at the meeting.

ARTCLE 5
ACCOUNTING AND RECORDS

5.1 Books of Account. The LLC's books and records, a register showing the names, addresses, and ownership interest of the members, and this operating agreement shall be maintained by the members. Each member shall have access thereto at all reasonable time. The members shall keep books and records of the operation of the LLC, which are appropriate and adequate for the LLC's business and for the carrying out of this agreement.

5.2 Fiscal Year. The fiscal year of the LLC shall be the calendar year.

5.3 Accounting Reports. Within 90 days after the close of each fiscal year, the members shall cause each member to receive an unaudited report of the activities of the LLC for the preceding fiscal year, including a copy of a balance sheet of the LLC as of the end of such year and a statement of income or loss for such year.

5.4 Tax Returns. The members shall cause all required federal and state income tax returns for the LLC to be prepared and timely filed with the appropriate authorities. Within 90 days after the end of each fiscal year, each member shall be furnished a statement suitable for use in the preparation of the member's income tax return, showing the amounts of any distributions,

contributions, gains, losses, profits, or credits allocated to the member during such fiscal year.

ARTICLE 6
ALLOCATIONS AND DISTRIBUTIONS

6.1 Allocations of Income and Loss for Tax Purposes. All items of income, gain, loss, deduction, and credit shall be allocated among all the members in proportion to their ownership interests.

6.2 Distributions to Pay Tax Liabilities. Within 90 days after the end of each fiscal year, the LLC shall make a distribution in an amount equal to at least (a) the LLC's net taxable income during the fiscal year multiplied by (b) the lesser of (i) 45 percent or (ii) the sum of the maximum federal and state individual income tax rates of any member in effect for the fiscal year (taking into account the deductibility of state taxes for federal income tax purposes), less (c) the amount of any distributions made by the LLC during the fiscal year (other than distributions made during the fiscal year that were required to be made under the provisions of the section with respect to a prior fiscal year).

For purposes of this section, an LLC's net taxable income shall be the net excess of items of recognized income and gain over the items of recognized loss and deduction reported on the LLC's federal income tax return for the taxable year with respect to which the distribution is being made. The LLC's obligation to make such a distribution is subject to the restrictions governing distributions under the Oregon Limited Liability Company Act.

ARTICLE 7
WITHDRAWAL AND DISSOLUTION

7.1 Withdrawal. No member shall have the right to voluntarily withdrawal from the LLC. A withdrawal in violation of this section shall constitute a breach of this operating agreement for which the LLC and other members shall have the remedies provided under applicable law.

7.2 Events of Dissolution. Except as otherwise provided in this operating agreement, the LLC shall dissolve upon the earlier of: (a) the time, if any, for dissolution specified in the articles of organization; (b) the death, incompetence, withdrawal, expulsion, bankruptcy, or dissolution of any member within 120 days after any such event all the remaining members, other than the member to whom such event occurred, do not consent to continue the business and affairs of the LLC; or (c) approval of dissolution by a vote of the members.

7.3 Restrictions on Transfers. Except as otherwise permitted by this agreement, no member or assignee shall transfer all of any portion of such

person's interest in the company. In the event that any member or assignee pledges or otherwise encumbers any of such person's interest in the company as security for the payment of a debt, any such pledge or hypothecation shall not constitute a transfer but shall only be made pursuant to pledge or hypothecation agreement that requires the pledgeee or secured party to be bound by all of the terms and conditions of this Operation Agreement.

7.4 Permitted Transfers. A member or assignee may at any time transfer all or any portion of such person's interests in the company to:

a. Any other member
b. Any member of the transferor's family
c. Any affiliate of the transfereor,
d. The transferor's executor, administrator, trustee, or personal representative to whom such interests are transferred at death or involuntarily by operation of law, or
e. Any purchaser in accordance with Section 7.5
"Affiliate" shall mean, with the respect to any person,
f. Any person directly or indirectly controlling, controlled by or under common
Control with such person,
g. Any person owning or controlling ten percent or more of the outstanding voting interests of such persons,
h. Any officer, director, manager, or member of such person, or
i. Any person who is an officer, director, manager, member, trustee, or holder of ten percent or more of the voting interests of any person described in clauses (a) through (c) of this paragraph.

For purposes of this definition, the term "controls", "is controlled by", or "is under common control with" shall mean the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting, securities, by contract or otherwise.

7.5 Right of First Refusal. In addition to the other limitations and restrictions set forth in this Article 7, except as permitted by Section 7.4 hereof, no members shall transfer all of any portion of such person's interests in the company unless such members first offers to sell the offered interest to the remaining members.

7.6 Rights and Obligations of Assignees and Assignors. An assignment or a person's interest in the company does not itself dissolve the company or entitle the assignee to become a member or exercise any management rights. A person who acquires a person's interest in the company (other than a permitted transferee) but who is not admitted as a member shall be entitled only to the economic rights with respect to such interests, and shall have

no right to any information or accounting of the affairs of the company and shall not be entitled to inspect the books or records of the company.

A member's assignment of an interest in the company shall not cause the member to cease to be a member or have the power to exercise the management rights associated with the member's membership interest, and an assignee has no liability as a member solely as a result of the assignment.

7.7 Effect of Death of a Member. In the event of the death of a member, the remaining members may within 120 days elect to:

(a) Continue the LLC and admit the deceased member's spouse, estate, or other beneficiary as a member in place of the deceased member, or

(b) If there are at least one remaining member, continue the LLC among the surviving members and purchase the interest of the deceased member pursuant to the provisions of Sections 7.10 and 7.11.

7.8 Effect of Withdrawal or Other Event. Upon the incompetence, withdrawal, expulsion, bankruptcy, or dissolution of a member, if there is at least one remaining member, the remaining member(s) may within 120 days, without waiving any remedies in the case of voluntary withdrawal, elect to continue the LLC among themselves and to purchase the interest of the affected member pursuant to the provisions of Sections 7.10 and 7.11. The election shall be at the sole discretion of the remaining members and shall require their unanimous consent. If the remaining members do not so elect, the LLC shall be dissolved.

7.9 Liquidation upon Dissolution and Winding Up. Upon the dissolution of the LLC, the members shall wind up the affairs of the LLC. A full account of the assets and liabilities of the LLC shall be taken. The assets shall be promptly liquidated and the proceeds thereof applied as required by the Oregon Limited Liability Company Act. With approval by vote of the members, the LLC may, in the process of winding up the LLC, elect to distribute certain property in kind.

7.10 Valuation of Member's Interest. Upon an election by the LLC to purchase the interest of a member the value of the affected member's interest shall be determined by multiplying the member's percentage ownership interest by the fair market value of all LLC assets. The fair market value of the LLC assets shall be determined by agreement between the remaining members (acting by vote) and the affected member or the affected member's personal representative. In the event agreement as to such value cannot be obtained, the LLC's assets shall be valued by a third party appraiser acceptable to both the LLC and the affected member or affected member's personal representative.

7.11 Payment for Member's Interest. The purchase price for a member's interest purchased shall be paid in 24 equal, consecutive monthly payments, including principal and interest. Interest shall accrue at the rate of eight and one-half percent (8 ½ %) annually. The first payment shall be made not later than 90 days following such date. The LLC may prepay the remaining amount of the purchase price at any time.

7.12 Effect of Purchase of Member's Interest. A member shall cease to be a member upon the LLC's election to purchase the member's interest. During the period in which the LLC is making payments to the former member, the former member shall have no rights as a member in the LLC.

ARTICLE 8
INDEMNIFICATION

8.1 Indemnification. The LLC shall indemnify each of its members to the fullest extent permissible under Oregon law, as the same exists or may hereafter be amended, against all liability, loss, and costs (including, without limitation, attorney fees) incurred or suffered by such person by reason of or arising from the fact that such person is or was a member of the LLC, or is or was serving at the request of the LLC as a member, director, officer, partner, trustee, employee, or agent of another foreign or domestic limited liability company, corporation, partnership, joint venture, trust benefit plan, or other enterprise. The LLC may, by action of the members, provide indemnification to employees and agents of the LLC. The indemnification provided in this section shall not be exclusive of any other rights to which any person may be entitled under any statue, bylaw, agreement, resolution of members, contract, or otherwise.

ARTICLE 9
AMENDMENTS

9.1 By Members. The members may amend or repeal the provisions of this operating agreement by unanimous agreement set forth in writing or by action taken at a meeting of members called for that purpose. This operating agreement may not be amended or repealed by oral agreement of the members.

ARTCLE 10
MISCELLANEOUS

10.1 Additional Documents. Each member shall execute such additional documents and take such actions as are reasonably requested by the members in order to complete or confirm the transactions contemplated by this operating agreement.

10.2 Arbitration. Any dispute among the members or among the members and the LLC concerning this operating agreement shall be settled by arbitration before a single arbitrator, using the rules of commercial arbitration of the American Arbitration Association. Arbitration shall occur in Salem, Oregon. The parties shall be entitled to conduct discovery in accordance with the Federal Rules of Civil Procedure, subject to limitation by the arbitrator to secure just and efficient resolution of the dispute. If the amount in controversy exceeds $10,000, the arbitrator's decision shall include a statement specifying in reasonable detail the basis for and computation of the amount of the award, if any. A party substantially prevailing in the arbitration shall also be entitled to recover such amount for its cost and attorney fees incurred in connection with the arbitration as shall be determined by the arbitrator. Judgment upon the arbitration award may be entered in any court having jurisdiction. Nothing herein, however, shall prevent a member from resort to a court of competent jurisdiction in those instances where injunctive relief may be appropriate.

10.3 Counterparts. This operating agreement may be executed in two or more counterparts, which together shall constitute one agreement.

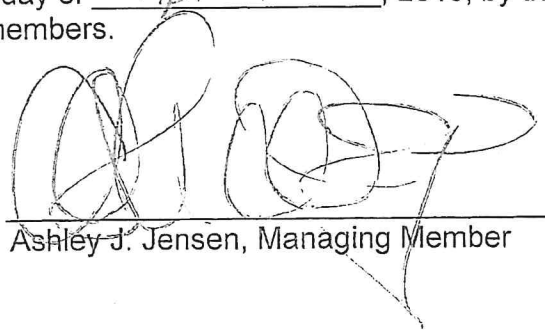
10.4 Governing Law. Oregon law shall govern this operating agreement.

10.5 Headings. Headings in this operating agreement are for convenience only and shall not affect its meeting.

10.6 Severability. The invalidity or unenforceable or any provision of this operating agreement shall not affect the validity or enforceability of the remaining provisions.

10.7 Third-Party Beneficiaries. The provisions of this operating agreement are intended solely for the benefit of the members and shall create no rights or obligations enforceable by any third party, including creditors of the LLC, except as otherwise provided by applicable law.

ADOPTED as of the 12 day of April, 2013, by the undersigned constituting all of the members.



Ashley J. Jensen, Managing Member

FIRST AMENDMENT
TO
OPERATING AGREEMENT
OF
Jensen Consulting and Development, LLC

THIS FIRST AMENDMENT TO THE OPERATING AGREEMENT is made, adopted and executed this 1 day of January, 2015 by the undersigned person(s).

All of the capitalized words and terms in the Amendment shall have the meaning ascribed to them in the Operating Agreement of Jensen Consulting and Development, LLC.

1. Name. The name of the limited liability company is Jensen Consulting and Developmnet,LLC (sometimes referred to as the "Company").

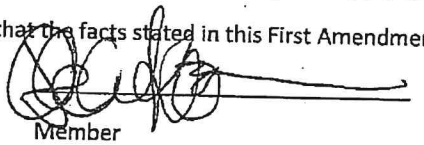
2. Amendments. The Company's Operating Agreement is amended as follows::

Donald C. L. Jensen has purchased 90% ownership of the Company for $90.

Donald C. L. Jensen has becoming the managing member of the Company

3. Ratification. The Company's Operating Agreement, as amended, is hereby ratified, confirmed and approved by the Member(s).

The undersigned hereby affirm(s) that he/she/they is (are) the Member(s) of the Company and that the facts stated in this First Amendment to the Company's Operating Agreement are true.



Member

SECOND AMENDMENT

TO

OPERATING AGEEMENT

OF

Jensen Consulting and Development, LLC

THIS SECOND AMENDMENT TO THE OPERATING AGREEMENT is make, adopted

And executed this 1 day of January 2017 by undersigned person (s).

All the capitalized words and terms in the Amendment shall have the meaning ascribed

to them in the Operating Agreement of Jensen Consulting and Development, LLC.

1. Name. The name of the limited liability company is Jensen Consulting and Development, LLC (sometimes referred to as the "Company").
2. Amendments. The Company's Operating Agreement is amended as follows:

Donald C. L. Jensen has purchased the remaining 10% of ownership of the company for $36,000 paid out over the next 36 months at $1,000 per month.

Donald C.L. Jensen is still the managing member of the Company.

3. The Principle Place of Business address change: 6912 Wheatland Ln N, Keizer, OR 97303
4. Ratification. The Company's Operating Agreement, as amended, is herby ratified, confirmed and approved by Member(s).

The undersigned herby affirm(s) that they are Members of the company and that the facts stated in this Second Amendment to the Company's Operating Agreement are true.

Donald C. L. Jensen (Managing Member)

SECOND AMENDMENT

TO

OPERATING AGEEMENT

OF

Jensen Consulting and Development, LLC

THIS SECOND AMENDMENT TO THE OPERATING AGREEMENT is make, adopted

And executed this 1 day of January 2017 by undersigned person (s).

All the capitalized words and terms in the Amendment shall have the meaning ascribed

to them in the Operating Agreement of Jensen Consulting and Development, LLC.

1. Name. The name of the limited liability company is Jensen Consulting and Development, LLC (sometimes referred to as the "Company").
2. Amendments. The Company's Operating Agreement is amended as follows:

Donald C. L. Jensen has purchased the remaining 10% of ownership of the company for $36,000 paid out over the next 36 months at $1,000 per month.

Donald C.L. Jensen is still the managing member of the Company.

3. Ratification. The Company's Operating Agreement, as amended, is herby ratified, confirmed and approved by Member(s).

The undersigned herby affirm(s) that they are Members of the company and that the facts stated in this Second Amendment to the Company's Operating Agreement are true.

_____

Ashley Koster (Jensen) – (past member)

_____

Donald C. L. Jensen (Managing Member)

March 5, 2016

Bryce Bishop

City of Salem Planning

555 Liberty St SE

Salem OR 97301

RE: Salem Community of Christ Future Development

Dear Mr. Bishop:

I appreciate you including input from Salem Community of Christ in your decision making regarding the development which will be contiguous to our property at 4570 Center St. NE.

As per my discussion with you and Lisa, I want to reiterate our need to retain flexibility to expand our church through additions to our current building and by expanding and making improvements to our south parking lot.

The City of Salem is requiring the developer of the subdivision to include a stub street, to the east, in their design. Requiring the developer to include the stub street will eliminate our ability to expand our church in the manner which we anticipate. We also do not want any street separating us from any section of our wetlands, in case we develop that area for a playground.

Thank you again for your time in reviewing this letter and your consideration of our concerns for the future of our neighborhood and church.

Sincerely,

Margaret Polly

Margaret Polly

Representative for Salem Community of Christ

Cc: Pastorate, McFarlin, Bessonette

NOTICE OF DECISION

PLANNING DIVISION
555 LIBERTY ST. SE, RM 305
SALEM, OREGON 97301
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CITY OF Salem AT YOUR SERVICE

Si necesita ayuda para comprender esta información, por favor llame 503-588-6173.

DECISION OF THE PLANNING ADMINISTRATOR

SUBDIVISION CASE NO. SUB16-01

APPLICATION NO.: 16-106532-LD

NOTICE OF DECISION DATE: AUGUST 15, 2016

APPLICATION SUMMARY: A 25-lot subdivision on the south side of Center Street NE, just west of Salem Community of Christ church.

REQUEST: A tentative subdivision plan to divide approximately 4.71 acres into 26 lots ranging in size from 4,645 square feet to 9,310 square feet.

The subject property is approximately 4.71 acres in size, zoned RA (Residential Agriculture), and located at 4560 Center Street NE (Marion County Assessor's Map and Tax Lot Number 072W30AA08000).

APPLICANT: JACK YARBROUGH

LOCATION: 4560 CENTER ST NE

CRITERIA: Salem Revised Code Chapter 205

FINDINGS: Findings are in the attached Findings and Order dated August 15, 2016.

DECISION: The Planning Administrator **GRANTED** Subdivision SUB16-01, subject to the following conditions of approval:

Condition 1. Obtain a demolition permit and remove the existing building on the property.

Condition 2: "NO PARKING—FIRE LANE" signs shall be posted on both sides of the segments of the proposed flag lots accessways that are fire apparatus roadways and "NO PARKING" signs shall be posted on both sides of the remainder of the accessways.

Condition 3: Vehicular and pedestrian connectivity is required to 46th Avenue NE. The applicant shall obtain applicable permits from Marion County to gain access across the existing 1-foot reserve strip on 46th Avenue NE.

Condition 4: Dedicate a 10-foot public utility easement (PUE) along the street frontage of all internal streets.

Condition 5: Convey land for dedication equal to 48-feet from the centerline along the entire frontage of Center Street NE.

Condition 6: Construct a 23-foot-wide half-street improvement along the entire frontage of Center Street NE.

Condition 7: Construct an eastbound-to-northbound left-turn lane and a westbound-to-southbound left-turn lane at the Center Street/Sphinx Court intersection. The turn lanes shall include 40 feet of storage and tapers as specified in the Public Works Design Standards.

The rights granted by the attached decision must be exercised, or an extension granted, by **August 31, 2018,** or this approval shall be null and void.

Application Deemed Complete:	June 14, 2016
Notice of Decision Mailing Date:	August 15, 2016
Decision Effective Date:	August 31, 2016
State Mandate Date:	October 12, 2016

Case Manager: Chris Green, cgreen@cityofsalem.net

This decision is final unless written appeal from an aggrieved party is filed with the City of Salem Planning Division, Room 305, 555 Liberty Street SE, Salem OR 97301, **no later than 5:00 p.m., AUGUST 30, 2016**. The notice of appeal must contain the information required by SRC 300.1020 and must state where the decision failed to conform to the provisions of the applicable code section in SRC Chapter 205. The appeal must be filed in duplicate with the City of Salem Planning Division. The appeal fee must be paid at the time of filing. If the appeal is untimely and/or lacks the proper fee, the appeal will be rejected. The Planning Commission will review the appeal at a public hearing. After the hearing, the Planning Commission may amend, rescind, or affirm the action, or refer the matter to staff for additional information.

The complete case file, including findings, conclusions and conditions of approval, if any, is available for review at the Planning Division office, Room 305, City Hall, 555 Liberty Street SE, during regular business hours.

http://www.cityofsalem.net/planning

BEFORE THE PLANNING ADMINISTRATOR
OF THE CITY OF SALEM
(SUBDIVISION PLAT NO. 16-01)

Si necesita ayuda para comprender esta información, por favor llame 503-588-6173
http://www.cityofsalem.net/planning

IN THE MATTER OF THE	)	**FINDINGS AND ORDER**
TENTATIVE APPROVAL OF	)	
SUBDIVISION PLAT NO. 16-01;	)	
4560 CENTER STREET NE	)	**AUGUST 15, 2016**

REQUEST

A tentative subdivision plan to divide approximately 4.71 acres into 25 lots ranging in size from 4,645 square feet to 9,310 square feet.

The subject property is approximately 4.71 acres in size, zoned RA (Residential Agriculture), and located at 4560 Center Street NE (Marion County Assessor Map and Tax Lot Number 072W30AA08000).

DECISION

The tentative subdivision plan is APPROVED subject to the applicable standards of the Salem Revised Code, the findings contained herein, and the following conditions of final plat approval, unless otherwise indicated:

Condition 1: Obtain a demolition permit and remove the existing building on the property.

Condition 2: "NO PARKING—FIRE LANE" signs shall be posted on both sides of the segments of the proposed flag lots accessways that are fire apparatus roadways and "NO PARKING" signs shall be posted on both sides of the remainder of the accessways.

Condition 3: Vehicular and pedestrian connectivity is required to 46th Avenue NE. The applicant shall obtain applicable permits from Marion County to gain access across the existing 1-foot reserve strip on 46th Avenue NE.

Condition 4: Dedicate a 10-foot public utility easement (PUE) along the street frontage of all internal streets.

Condition 5: Convey land for dedication equal to 48-feet from the centerline along the entire frontage of Center Street NE.

Condition 6: Construct a 23-foot-wide half-street improvement along the entire frontage of Center Street NE.

Condition 7: Construct an eastbound-to-northbound left-turn lane and a westbound-to-southbound left-turn lane at the Center Street/Sphinx Court intersection. The turn lanes shall include 40 feet of storage and tapers as specified in the Public Works Design Standards.

PROCEDURAL FINDINGS

1. On March 28, 2016, an application for a Tentative Subdivision Plan was filed proposing to divide a 4.71 acre property at 4560 Center Street NE (Attachment B) into 25 lots.

2. The application was deemed complete for processing on June 14, 2016. Notice to surrounding property owners was mailed pursuant to Salem Revised Code on June 17, 2016. A revised notice was issued on June 20, 2016 to correct the listed owner of the property. The state-mandated local decision deadline is October 12, 2016.

SUBSTANTIVE FINDINGS

1. Background

The subject property was annexed into the City of Salem in 2011, and a 30-lot tentative subdivision plan (SUB11-01) and tree conservation plan (TCP11-01) were approved the same year. In 2013, a two-year extension was granted for SUB11-01, and the approval expired in 2015. The configuration of SUB11-01 varied slightly from the subject tentative subdivision plan; in addition to relatively minor differences in the number and layout of lots, SUB11-01 proposed a connection to future development on the abutting property to the east via a dead-end street stubbed to the property line.

Subsequent to the approval of SUB11-01, but prior to the application for SUB16-01, federal agency staff advised that removal-fill permits would be unlikely to be approved within the right-of-way of the proposed stub street to the east, as construction of a stub street would tend to encourage further filling of the remaining portion of the wetland on the property to the east.[1] The northern half of this abutting property is developed with a church building and parking lot, but is vacant on the southern portion. A delineated wetland on the southern half of the church property extends to onto the southeast corner of the subject property. Federal agency staff have indicated that wetland removal/fill permits are likely to be approved for the portions of this wetland within proposed Lots 16, 17, and 18 and the east-west segment of the proposed internal street.

2. Proposal

The tentative plan proposes to divide the property into 25 lots for residential development (Attachment B), with lots ranging in size from 4,645 square feet to 9,310

[1] 4750 Center Street NE; Marion County Assessor's Map and Tax Lot Number 072W30AA07800.

square feet. Of the 25 lots within the subdivision, 21 are proposed to take access directly from public streets and 4 lots take access from flag lot accessways.[2]

The proposal includes two points of connectivity to existing surrounding streets; an extension of Sphinx Drive NE is proposed through the property, connecting with 46th Avenue NE at the property's southern boundary. Additional future connectivity is available at the property's eastern boundary, by way of a segment of unimproved right-of-way dedicated between Lots 17 and 18. Portions of the existing wetland within this right-of-way segment would be retained within the proposed subdivision. If development were to occur on the abutting property to the east, and the portion of the wetland on that property were filled, an improved street or pedestrian pathway could be constructed within the right-of-way segment to allow for necessary connectivity between developments. No points of access are available from the existing residential developments abutting the subject property to the west.

The applicant has not proposed any specific phasing for the subdivision or residential development.

3. Existing Conditions

Site and Vicinity

The subject property contains approximately 4.71 acres and consists of a single, rectangular tax lot, approximately 360 feet in width and 570 feet in depth. One single-family dwelling is currently located on the site. The applicant plans to remove this building prior to development. The subject property was originally part of the Hamden Park subdivision, platted in 1889. The Salem city limits run along the east, west, and south boundaries of the subject property. The subject property was annexed into the City of Salem in 2011. The development pattern in the immediate vicinity is a mixture of rural residential lots and single family residential subdivisions, including Peterson's Addition (1962) on the abutting property to the west and Burnside Addition (1968) immediately to the south of the subject property.

Salem Area Comprehensive Plan (SACP) Designation

Urban Growth Policies: The subject property is located inside of the Salem Urban Growth Boundary and inside the corporate city limits.

Comprehensive Plan Map: The subject property is designated "Developing Residential" on the Salem Area Comprehensive Plan (SACP) Map. The surrounding properties are designated as follows:

[2] Lots 5, 6, 18, and 19 are proposed to take access from flag lot accessways. Although Lots 5 and 6 take access from a flag lot accessway, they have street frontage on Center Street NE that exceeds the minimum requirement for lots in the RS zone. Therefore, only lots 18 and 19 are flag lots.

North: (Across Center Street NE) – Single Family Residential and Developing Residential

South: Single Family Residential

East: Multi-Family Residential

West: Single Family Residential

Urban Growth Policies: The subject property is located inside of the Salem Urban Growth Boundary and inside the corporate city limits.

Growth Management: The subject property is within the City's Urban Service Area.

Zoning and Surrounding Land Use

The subject property is zoned RA (Residential Agriculture) and is currently occupied by a single family residence. The surrounding properties are zoned and used as follows:

North: (Across Center Street NE) – RS (Single Family Residential); single family dwellings

South: In Marion County – RS (Single Family Residential); single family dwellings

East: In Marion County – UD (Urban Development); church

West: In Marion County – RS (Single Family Residential); single family dwellings

Natural Features

The subject property is approximately 210 feet above mean sea level and is essentially flat, with less than 2 feet of total elevation change. The site is vegetated only by grass and two deciduous two trees near the northeast and northwest corners of the property.

The Salem-Keizer Local Wetland Inventory (LWI) identifies one wetland, located on the eastern portion of the subject property and continuing onto the abutting property to the east, which is outside of city limits. The wetland was delineated in 2015 and is approximately 0.37 acres in size.

Relationship to Urban Service Area

The subject property is within the City's Urban Service Area.

Infrastructure

Water: The subject property is located within the G-0 water service level. A 12-inch City of Salem water line is located on the north side of

Center Street NE and a 6-inch Suburban East Salem Water District main is located in 46th Avenue NE.

Sewer: A 15-inch sanitary sewer main, constructed in 2009, is located in Center Street NE.

In addition, an older parallel 8-inch sanitary sewer main is located in Center Street NE.

Storm Drainage: There is an existing open roadside ditch along the Center Street NE frontage that appears to drain to the east.

There is also an existing drainage ditch located in the southeast portion of the subject property. This ditch appears to be fed by the existing Marion County public main on 46th Avenue NE, and drains to the northeast.

There is an existing 12-inch public storm main located in the north side of Center Street NE.

Streets: Center Street NE abuts the northern boundary of the subject property, and is designated as a Major Arterial in the Salem Transportation System Plan (TSP).

- The standard for this street classification is a 68-foot improvement within a 96-foot right-of-way.
- The abutting portion of Center Street NE currently has an approximately 32-foot wide improvement within a 70- to 83-foot-wide right-of-way.

46th Avenue NE terminates just to the south of the subject property, across a one-foot reserve strip owned by Marion County. This street is designated as a local street in the TSP.

- The standard for this street classification is a 30-foot-wide improvement within a 60-foot-wide right-of-way.
- The abutting portion of 46th Avenue NE has an approximate 32-foot-wide improvement within a 60-foot-wide right-of-way.

4. Land Use History

- **Annexation Case No. C-693:** Voter-approved annexation of the subject property into the City of Salem.

- **Subdivision Case No. SUB11-01:** Tentative subdivision approval for a 30-lot subdivision on the subject property with a similar, but not identical configuration to the subject proposal. A two-year extension was granted to SUB11-01 in 2013, and the subdivision approval expired in 2015.

- **Tree Conservation Plan No. TCP11-01:** A Tree Conservation Plan submitted in conjunction with SUB11-01, identifying two trees on the subject property, both to be removed. There is no expiration date for TCP11-01.

5. Public and Private Agency Review

Public Works Department - The City of Salem Public Works Department, Development Services Section, reviewed the proposal and has provided their comments and recommendation for plat approval. Their memorandum is included as Attachment D.

Fire Department - The Salem Fire Department submitted comments indicating that fire hydrants are to be located within 600 feet of all structures, and within the subdivision shall comply with City standards. The Fire Department noted that the flag lot accessway serving Lots 18 and 19 shall require posting of "NO PARKING – FIRE LANE" signs.

Salem-Keizer Public Schools – Planning and Property Services staff for the school district reviewed the proposal and submitted comments indicating that sufficient school capacity exists at the elementary, middle, and high school levels to serve future development within the proposed subdivision. The school district indicated that middle school and high school students residing at the subject property would be eligible for school transportation services. The area is within the "walk zone" of the assigned elementary school.

Portland General Electric (PGE) reviewed the proposal and indicated that development costs are determined by current tariff and service requirements and that a 10-foot public utility easement (PUE) is required on all front street lots

6. Neighborhood Association Comments

The subject property is within the East Lancaster Neighborhood Association (ELNA). Notice of the application was provided to the neighborhood association, pursuant to SRC 300.620(b)(2)(B)(iii), which requires public notice to be sent to "any City-recognized neighborhood association whose boundaries include, or are adjacent to, the subject property." ELNA submitted comments (Attachment E) regarding the following issues:

Wetlands and Drainage: In summary, ELNA describes a history of flooding in the area, at the same time new residential subdivisions have been developed. ELNA's comments attribute some of this flooding to a high water table in the area, and some to inadequate mitigation plans for the fill of nearby wetlands.

Staff Response: Wetland fill permits are regulated at the state and federal level. As described in SRC 809.025, the City's involvement in wetland fill permits is limited. Pursuant to these requirements, City staff sent notification (a Wetland Land Use Notice or "WLUN") to the Oregon Department of State Lands (DSL). DSL returned a response notifying the applicant that wetland fill permits are required for the proposed subdivision. Discussions with wetland permit staff at the federal level indicated that wetlands are being preserved to the greatest extent possible by delaying street improvements in the proposed right-of-way running toward the east property line. Any other requirements to mitigate wetland fill will be addressed in the state and federal permitting process.

Stormwater facilities constructed to serve the proposed development are subject to the Public Works Design Standards and must be designed by a licensed civil engineer. Pursuant to PWDS 4A.2, the applicant's engineer is required to submit a Stormwater Management Report, which would include those issues raised in ELNA's letter. The historical drainage information included in ELNA's comments are available for the applicant's engineer to review and consider as part of the stormwater design for the site.

Interior Street Alignment Concerns: In summary, ELNA's raises concerns that the radius of turns along the proposed internal street may cause vision clearance problems for motorists.

Staff Response: The Assistant City Traffic Engineer has reviewed the proposed street alignment and has found that the street system meets the approval criteria. Visibility along the 90-degree curves in the street is preserved through the vision clearance requirements established in SRC Chapter 805, which is monitored throughout the development process and after the homes are occupied in order to prevent obstructions that may compromise traffic safety. Driveways generally provide sufficient gaps between parked cars in order to maintain sufficient visibility. Additional safety measures can be installed over time if traffic safety problems are observed in the area.

7. Public Comments

All property owners within 250 feet of the subject property were mailed notification of the proposed subdivision. Prior to the comment deadline, two public comments were received:

- One public comment expressed general support for the proposal

- Salem Community of Christ owns the abutting property to the east (4750 Center Street NE / Tax Lot 072W30AA07800) and maintains a church on the north half of the lot. The church submitted a comment letter indicating possible future plans on the south portion of the lot, including an expansion of the existing church building, improvements to the south parking lot, and development of a playground. Comments from the church express concerns that a stub street to the east would separate the existing development from the remainder of the lot.

Staff Response: The applicant's revised proposal includes a segment of unimproved right-of-way extending eastward to the church property, rather than an improved street. Because a street or pedestrian connection at this location would only be improved if need to serve development on the church site, the proposal to dedicate unimproved right-of-way allows the church a full range of configurations in future development of the south half of their property.

8. Criteria for Granting a Tentative Subdivision

The Salem Revised Code (SRC), which includes the Unified Development Code (UDC), implements the Salem Area Comprehensive Plan land use goals, and governs development of property within the city limits. The subdivision process reviews development for compliance with City standards and requirements contained in the UDC, the Salem Transportation System Plan (TSP), and the Water, Sewer, and Storm Drain System Master Plans. A second review occurs for the created lots at the time of site plan review/building permit review to assure compliance with the UDC. Compliance with conditions of approval to satisfy the UDC is checked prior to city staff signing the final subdivision plat.

SRC Chapter 205.010(d) sets forth the criteria that must be met before approval can be granted to a subdivision request. The following subsections are organized with approval criteria shown in bold, followed by findings of fact upon which the Planning Administrator's decision is based. The requirements of SRC 205.010(d) are addressed within the specific findings which evaluate the proposal's conformance with the applicable criteria. Lack of compliance with the following criteria is grounds for denial of tentative plan or for the issuance of conditions of approval to more fully satisfy the criteria.

SRC 205.010(d)(1): The tentative subdivision complies with all standards of this Chapter and with all applicable provisions of the UDC, including, but not limited to, the following:

(A) Lot standards, including, but not limited to, standards for lot area, lot width and depth, lot frontage, and designation of front and rear lot lines.

SRC Chapter 511 (Single Family Residential): The proposed subdivision would divide the 4.71-acre property into 25 lots with no remainder. The subject property is currently zoned RA (Residential Agriculture). However, SRC Chapter 265.015 provides that any land within an RA zone district that is subject to a subdivision approval shall automatically be re-classified to an RS zone district on the date the subdivision plat is recorded. This provision applies to the subject property. Because the zoning of the property will be changed to RS with the recording of the plat, the following analysis of the subdivision for conformance with the requirements of the UDC is based upon the property being rezoned to RS (Single Family Residential). The minimum lot area requirements of the RS zone are established under SRC 511.010(a) as follows:

Lot Standards for RS zone (*see* SRC Chapter 511, Table 511-2)

Requirement	Minimum Standard
Lot Area (Single Family)	4,000 square feet
Lot Width	40 feet
Lot Depth (Single Family)	70 feet
Street Frontage	40 feet

Proposed lots in the subdivision range from approximately from 4,482 square feet to 9,310 square feet in size. The proposed lots exceed minimum lot area, dimension, and frontage requirements and therefore conform to the applicable standards. The proposed lots within the subdivision are also of sufficient size and dimension to permit future development of uses allowed within the zone.

SRC 511.010(a) establishes a minimum lot depth of 120 feet for double frontage lots. Proposed lots 1-4 are double frontage lots. Each of the proposed double frontage lots is 120 feet in depth or greater.

Setback Requirements: SRC Chapter 511 establishes the following setback standards for development within an RS (Single Family Residential) zone:

Front Yards and Yards Adjacent to Streets:

- Minimum 12 feet (minimum 20 feet when adjacent to a street designated 'Collector', 'Arterial', or 'Parkway')

- Minimum 20 feet for garages

Rear Yards:

- Minimum 14 feet (for any portion of a main building not more than one story in height); or

- Minimum 20 feet (for any portion of a main building greater than one story in height)

Interior Side Yards:

- Minimum 5 feet

Setback requirements for the proposed lots will be reviewed at the time of application for building permits on those individual parcels.

SRC Chapter 800 (General Development Standards):

SRC 800.015(a) (Buildings to be on a Lot): Pursuant to SRC 800.015(a), every building or structure shall be entirely located on a lot. The subject property is primarily undeveloped, except for a single family residence on the western portion of the property. The applicant plans to remove this building prior to development. Relative to the tentative subdivision plan, the existing house would cross proposed lot lines and the proposed right-of-way for a portion of the internal street. In order to ensure that the subdivision complies with this provision upon recording of the plat, the following condition shall apply:

Condition 1: Obtain a demolition permit and remove the existing building on the property.

SRC 800.020 (Designation of Lot Lines): SRC 800.020 establishes front lot line designation requirements for corner lots, double frontage lots, flag lots, and all other lots. For lots that have frontage on a public street, other than corner lots, the front lot line shall be the property line that has frontage on the public street. Corner lots are lots located at the intersection of two streets, typically with street frontage on two sides. Proposed lots 1, 15, 17, 22, and 25 are corner lots. Provided that lot dimension requirements are met, the front lot line for a corner lot shall be the property line abutting a street provided by the building permit applicant.

SRC 800.025 (Flag Lots): Proposed lots 6 and 9 are flag lots. Subsections (a) and (b) specify that minimum lot area and dimensions for a flag lot shall be calculated exclusively of the flag lot accessway. Both proposed flag lots exceed the minimum lot area and dimensions exclusive of the flag lot accessway.

Subsection (c) establishes standards for flag lots and flag lot accessways. Pursuant to SRC Chapter 800, Table 800-1, flag lot accessways serving 1 to 2 lots must be a minimum of 20 feet in overall width and must be paved to a minimum width of 15 feet.

Subsection (d) prohibits parking on flag lot accessways. In order to ensure that resident and emergency access remains unobstructed, the following condition shall apply:

Condition 2: "NO PARKING—FIRE LANE" signs shall be posted on both sides of the segments of the proposed flag lots accessways that are fire apparatus roadways and "NO PARKING" signs shall be posted on both sides of the remainder of the accessways.

Subsection (e) limits the maximum number of flag lots within a subdivision to 15 percent of the proposed lots. The proposed subdivision includes two flag lots (Lots 6 and 19), or 8% of the total proposed lots, therefore meeting the standard provided in SRC 800.025(e).

The proposal conforms to the requirements of SRC Chapter 800.

(B) City Infrastructure Standards.

The Public Works Department reviewed the proposal for compliance with the City's public facility plans pertaining to provision of water, sewer, and storm drainage facilities. While SRC Chapter 205 does not require submission of utility construction plans prior to tentative subdivision plan approval, it is the responsibility of the applicant to design and construct adequate City water, sewer, and storm drainage facilities to serve the proposed development prior to final plat approval without impeding service to the surrounding area.

SRC Chapter 200 (Urban Growth Management): The Urban Growth Management Program requires that an Urban Growth Area (UGA) Development Permit must be obtained prior to development of property outside the Salem Urban Service Area. The subject property is inside of the Urban Service Area. Therefore, a UGA permit is not required and the proposal conforms to the requirements of SRC Chapter 200.

SRC Chapter 802 (Public Improvements): Comments from the Public Works Department indicate that water and sewer infrastructure is available along the perimeter of the site and appears to be adequate to serve the proposed subdivision. Specifications for required public improvements are summarized in the Public Works Department memo dated July 22, 2016 (Attachment D).

SRC Chapter 803 (Streets and Right-of-Way Improvements):

SRC 803.015 (Traffic Impact Analysis): The proposed 25-lot subdivision generates less than 1,000 average daily vehicle trips to Center Avenue NE, a Major Arterial street. Therefore, a TIA is not required as part of the proposed subdivision submittal.

SRC 803.020 (Public and Private Streets): The applicant proposes for all internal streets within the subdivision to be public streets.

SRC 803.025 (Right-of-Way and Pavement Widths): The abutting portion of Center Street NE is designated as a Major Arterial in the TSP and has an approximate 32-foot-wide improvement within a 70-to-83-foot-wide right-of-way. As specified in SRC Chapter 803, Tables 803-1 and 803-2, the standard for a Major Arterial street is a 68-foot-wide improvement within a 96-foot-wide right-of-way. Conditions 5 and 6, described below in findings on SRC 803.040, requires dedication of right-of-way and construction of improvements on the development side of Center Street NE in order to comply with boundary street requirements and required right-of-way and improvements widths specified in SRC 803.025. As conditioned, the proposal meets these requirements.

SRC 803.030 (Street Spacing): The proposed alignment of streets within the subdivision does not result in any street spacing in excess of the maximum lengths established in subsection (a).

SRC 803.035 (Street Standards): Subsection (a) requires streets within the subdivision to provide connectivity to existing streets and undeveloped properties within the vicinity

of the subject property. The subject property abuts a row of existing single family residences along the west boundary, precluding street connectivity to the west. The proposed subdivision plan includes street connections at the north and south, with the proposed internal street connecting directly to the existing alignments of Sphinx Court NE (across Center Street NE) and 46th Avenue NE. Right-of-way dedicated just to the north of lots 20 and 21, abutting the proposed internal street, allows for a future connection to the abutting property to the east, in the event that the existing church site is redeveloped in the future.

The applicant's site plan also includes a segment of unimproved right-of-way between Lots 17 and 18. The unimproved right-of-way shall comply with current Local Street standards for the purpose of providing connectivity to underdeveloped property to the east. Comments from the U.S. Army Corps of Engineers indicate that wetland/fill permits for wetlands on the east portion of the subject property require that the street connection to the east remain unimproved in order to preserve the natural wetland area, which extends onto the abutting property to the east, to the greatest extent possible. In the event that wetlands on the property to the east are allowed to be filled in the future, the dedication of this segment of right-of-way allows for future connectivity between the properties, consistent with subsection (d). Therefore, no street improvements are required in this unimproved segment of right-of-way at this time.

There is an existing 1-foot reserve strip at the existing northern terminus of 46th Avenue NE that is owned by Marion County. In order to ensure that vehicular and pedestrian connectivity is provided between the subdivision and 46th Avenue NE, the following condition shall apply:

Condition 3: Vehicular and pedestrian connectivity is required to 46th Avenue NE. The applicant shall obtain applicable permits from Marion County to gain access across the existing 1-foot reserve strip on 46th Avenue NE.

Subsection (m) requires streets identified in the Salem Transportation System Plan (TSP) Bicycle System Map as requiring a bicycle facility to conform to the designation of the TSP and Public Works Design Standards. The TSP Bicycle Map designates Center Street NE at the location of the subject property as a "Constructed Bike lane" route. Major arterial boundary street improvements along Center Street are required with the proposal, and shall include a bike lane.

Pursuant to subsection (n), public utility easements (PUEs) may be required for all streets. Comments from Portland General Electric, the franchise utility provider of electricity for the subject property, request a 10-foot-wide PUE on all street front lots. In order to ensure adequate access for the provision of electricity and other utilities, the following condition shall apply:

Condition 4: Dedicate a 10-foot public utility easement (PUE) along the street frontage of all internal streets.

As conditioned, the proposal conforms to applicable street standards.

SRC 803.040 (Boundary Streets): Center Street NE abuts the subject property and does not meet the current right-of-way or improvement width standards for a Major Arterial street. Comments from the Public Works Department indicate that due to the existing configuration of Center Street NE in the vicinity of the subject property, a 23-foot-wide alternate street standard is acceptable for required half-street improvements along this frontage. In order to ensure that boundary street improvements are implemented consistent with the Transportation System Plan and Public Works Design Standards, the following conditions shall apply:

Condition 5: Convey land for dedication equal to 48-feet from the centerline along the entire frontage of Center Street NE.

Condition 6: Construct a 23-foot-wide half-street improvement along the entire frontage of Center Street NE.

As conditioned, the proposal conforms to applicable boundary street requirements.

(C) Any special development standards, including, but not limited to, floodplain development, special setbacks, geological or geotechnical analysis, and vision clearance.

SRC Chapter 808 (Preservation of Trees and Vegetation): The City's tree preservation ordinance protects Heritage Trees, Significant Trees (including Oregon White Oaks with diameter-at-breast-height of 24 inches or greater), trees and native vegetation in riparian corridors, and trees on lots and parcels greater than 20,000 square feet.

In addition, SRC 808.035(a) requires a Tree Conservation Plan for a development proposal involving the creation of lots or parcels to be used for the construction of single-family dwelling units, where trees are proposed for removal. A Tree Conservation Plan (TCP11-01) was submitted in conjunction with the previous tentative subdivision plan approved on the subject property (SUB11-01). TCP11-01 identified two trees on the subject property, both proposed for removal, and was approved on November 3, 2011. Neither of the trees proposed for removal are significant trees, heritage trees, or within riparian corridors. There is no expiration date for tree conservation plans established in the UDC. Therefore, TCP11-01 remains in effect and a new tree conservation plan is not required with the subject tentative subdivision plan.

As proposed, the tentative subdivision plan conforms to all applicable SRC Chapter 808 requirements.

SRC Chapter 809 (Wetlands): Grading and construction activities within wetlands are regulated by the Oregon Department of State Lands (DSL) and US Army Corps of Engineers. State and Federal wetlands laws are also administered by the DSL and Army Corps, and potential impacts to jurisdictional wetlands are addressed through application and enforcement of appropriate mitigation measures. SRC Chapter 809

establishes requirements for notification of DSL when an application for development is received in an area designated as a wetland on the official wetlands map.

The Salem-Keizer Local Wetland Inventory (LWI) identifies one wetland, located on the eastern portion of the subject property and continuing onto the abutting property to the east, which is outside of city limits. The wetland was delineated in 2015 and is approximately 0.37 acres in size. Due to the presence of this wetland and wetland soils on the site, the City submitted a Wetland Land Use Notification (WLUN) to DSL. DSL submitted a response to the WLUN confirming that there is a jurisdictional wetland on the property and that a state permit is required because more than 50 cubic yards of removal/fill will be involved in the subdivision proposal.

As proposed, the tentative subdivision plan conforms to all applicable SRC Chapter 809 requirements.

SRC Chapter 810 (Landslide Hazards): City's landslide hazard ordinance (SRC Chapter 810) establishes standards and requirements for the development of land within areas of identified landslide hazard susceptibility. According to the City's adopted landslide hazard susceptibility maps, there are no areas of landslide susceptibility on the subject property.

SRC 205.010(d)(2): The tentative subdivision plan does not impede the future use or development of the property or adjacent land.

Finding: The proposed subdivision would divide a 4.71-acre property into 25 lots and an internal street right-of-way with no remainder. Vehicular access to lots within the proposed subdivision is provided by new internal streets, with two lots served by flag lot accessways. The subject property abuts built-out single family residential subdivisions to the south and west, and single family homes are located across Center Street NE to the north of the property. No street or pedestrian connections are available from abutting properties to the west.

The abutting property to the east is developed with a church and associated parking areas. The southern half of the church property remains undeveloped, and is partially covered by wetlands. The segment of unimproved right-of-way between Lots 17 and 18 allows for future street and/or pedestrian connectivity to serve the abutting property to the east, if that property is developed in the future. The new internal streets align to provide an additional means of access to the abutting residential subdivision to the south, which is located outside of the city limits.

The lots within the proposed subdivision, as proposed and conditioned, are of sufficient size and dimensions to permit future development of one single family dwelling each, or development of other SRC Chapter 511 "permitted," "special," or "conditional" uses. As proposed, no corner lots will be large enough for a duplex. There is no evidence that the subdivision and subsequent development of the lots will adversely affect public services to any surrounding properties. Approval of the subdivision does not impede future use of the subject property or access to abutting properties. This criterion has been met.

The proposal meets this criterion.

SRC 205.010(d)(3): Development within the tentative subdivision plan can be adequately served by City infrastructure.

Finding: Water and sewer infrastructure is available along the perimeter of the site and appears to be adequate to serve the property as shown on the applicant's preliminary utility plan. Developments are required to extend public utility services to serve upstream and neighboring properties; the tentative utility plan appears to meet that requirement.

As a condition of sewer service, all developments will be required to provide public sewers to adjacent upstream parcels. This shall include the extension of sewer mains in easements or rights-of-way across the property to adjoining properties, and across the street frontage of the property to adjoining properties when the main is located in the street right-of-way. The tentative subdivision plan shows public sewer extensions to adjacent upstream parcels.

The proposed development is subject to SRC Chapter 71 and the revised Public Works Design Standards as adopted in Administrative Rule 109, Division 004. To demonstrate the proposed parcels can meet the Public Works Design Standards, the applicant shall provide an engineered tentative stormwater design to accommodate future impervious surface on all proposed lots.

All public and private City infrastructure proposed to be located in the public right-of-way shall be constructed or secured per SRC 205.035(c)(6)(B) prior to final plat approval. Any easements needed to serve the proposed parcels with City infrastructure shall be shown on the final plat.

The proposal meets this criterion.

SRC 205.010(d)(4): The street system in and adjacent to the tentative subdivision plan conforms to the Salem Transportation System Plan.

Finding: Center Street NE abuts the subject property and does not meet the current standard for a Major Arterial street. As identified in the conditions of approval, the applicant is required to construct a half-street improvement along the entire frontage of Center Street. An alternate street standard of a 23-foot-wide half-street improvement is acceptable due to the existing configuration of Center Street in the vicinity of the subject property.

An internal street will provide access to lots within the subdivision, and is proposed as a public street with right-of-way width and improvements in conformance with TSP standards. The proposed unimproved right-of-way between lots 17 and 18 will be meet right-of-way width standards and provide a future street connection to the adjacent property to the east.

The proposal meets this criterion.

SRC 205.010(d)(5): The street system in and adjacent to the tentative subdivision plan is designed so as to provide for the safe, orderly, and efficient circulation of traffic into, through, and out of the subdivision.

Finding: Conditions 5 and 6 implement required boundary street improvements along the abutting portion of Center Street NE. In addition to the boundary improvement, the applicant shall construct an eastbound-to-northbound left-turn lane and a westbound-to-southbound left-turn lane at the intersection of Center Street NE and Sphinx Court NE. These turn lanes will allow for safe turning movements for traffic entering and existing onto the arterial street network from the proposed subdivision. In order to ensure that adequate circulation into and out of the subdivision is provided, the following condition shall apply:

Condition 7: Construct an eastbound-to-northbound left-turn lane and a westbound-to-southbound left-turn lane at the Center Street/Sphinx Court intersection. The turn lanes shall include 40 feet of storage and tapers as specified in the Public Works Design Standards.

There is an existing 1-foot reserve strip at the northern terminus of 46th Avenue NE that is owned by Marion County. Vehicular and pedestrian connectivity is required to 46th Avenue NE. Condition 3 requires the applicant to obtain applicable permits from Marion County to gain access across the existing 1-foot reserve strip on 46th Avenue NE, thereby allowing the internal street to continue to the south and connect to 46th Avenue NE.

The applicant's site plan includes unimproved right-of-way between lots 17 and 18. This unimproved right-of-way shall comply with current Local Street standards and for the purpose of providing access and connectivity to underdeveloped property to the east. The Army Corps of Engineers provided feedback to City staff that wetland/fill permits require that the street connection to the east remain unimproved in order to preserve the natural wetland area to the greatest extent possible. Therefore, no street improvements are required in the unimproved right-of-way at this time.

The subdivision, as proposed and conditioned, is served with adequate transportation infrastructure. The street system adjacent to the subdivided property will conform to the Salem Transportation System Plan, and provide for safe, orderly, and efficient circulation of traffic into, through, and out of the subdivision.

The proposal meets this criterion.

SRC 205.010(d)(6): The tentative subdivision plan provides safe and convenient bicycle and pedestrian access from within the subdivision to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development. For purposes of this criterion, neighborhood activity centers

include, but are not limited to, existing or planned schools, parks, shopping areas, transit stops, or employment centers.

Finding: The proposed subdivision is situated within one-half mile of five neighborhood activity centers:

- Salem-Keizer Transit District ("Cherriots") stops for bus routes 5 and 5A, located along Center Street at the intersections with 45th Avenue NE and Mitchell Street NE.

- Auburn Elementary School and Auburn Park, a public elementary school and developed Marion County park located 600-800 feet south of the closest lots within the proposed subdivision, located at 4612 Auburn Road NE.

- Salem Academy, a private Pre-K-12 school located approximately 1,500 feet northeast of the subject property at 942 Lancaster Drive NE.

- Weathers Street Park, a developed city park located approximately 0.5 miles northeast of the closest lots within the proposed subdivision, at 4188 Weathers Street NE.

- Commercial development centered on the intersection of Center Street and Lancaster Drive NE is approximately 0.5 miles west of the subject property and includes Lancaster Mall, a Roth's IGA grocery store, and the Lancaster Center East retail center.

The proposed subdivision is accessed by an existing arterial street. The subject property will provide internal streets with safe and convenient bicycle and pedestrian access, and provide boundary street improvements where necessary in order to connect multi-modal transportation facilities with the existing transportation system. Frequent service transit service is directly available to the subject property on Center Street by way of Salem Keizer Transit's Route 5 bus line, which runs along Center Street to downtown Salem.

The Public Works Department reviewed the proposal for consistency with the Comprehensive Parks Master Plan Update and found that the subject property is served by two developed parks; Weathers Street Park and Royal Oaks Park. Sidewalk connections are available from the subject property to each park. No park-related improvements are required as a condition of development.

The TSP Bicycle Map designates Center Street NE at the location of the subject property as a "Constructed Bike lane" route. Major arterial boundary street improvements along Center Street are required with the proposal, and shall include a bike lane.

The proposal meets this criterion.

SRC 205.010(d)(7): The tentative subdivision plan mitigates impacts to the transportation system consistent with the approved Traffic Impact Analysis, where applicable.

Finding: The Public Works Department has reviewed the proposal and finds that the 25-lot subdivision will generate less than 1,000 average daily vehicle trips to Center Street NE, designated in the Transportation System Plan as a Major Arterial. Accordingly, a Transportation Impact Analysis is not required as part of the review of the tentative subdivision plan.

SRC 200.010(d)(8): The tentative subdivision plan takes into account the topography and vegetation of the site so the need for variances is minimized to the greatest extent practicable.

Finding: The proposed subdivision has been reviewed to ensure that adequate measures have been planned to alleviate natural or fabricated hazards and limitations to development, including topography and vegetation of the site. The relatively flat site and minimal vegetation present few potential disruptions to the reasonable development of the proposed lots within the subdivision or the internal street system. The layout allows for reasonable development of all lots within the subdivision without variances from the UDC. The Salem-Keizer Local Wetland Inventory (LWI) identifies one wetland, located on the eastern portion of the subject property and continuing onto the abutting property to the east, which is outside of city limits. The wetland was delineated in 2015 and is approximately 0.37 acres in size.

As described in findings above, the applicant proposes to dedicate a corridor of unimproved right-of-way to allow for a potential street extension to undeveloped portions of the abutting property to the east. Given the uncertainty of future development on the property to the east, this approach takes into account both the existing wetlands within the right-of-way and the potential future need for connectivity. The proposal meets this criterion.

SRC 200.010(d)(9): The tentative subdivision plan takes into account the topography and vegetation of the site, such that the least disruption of the site, topography, and vegetation will result from the reasonable development of the lots.

Finding: The relatively flat site and minimal vegetation present few potential disruptions to the reasonable development of the proposed lots within the subdivision or the internal street system. The Salem-Keizer Local Wetland Inventory (LWI) identifies one wetland, located on the eastern portion of the subject property and continuing onto the abutting property to the east, which is outside of city limits. Rather than developing an improved stub street to the east at this time, the applicant proposes an unimproved right-of-way that would allow for existing wetlands to remain unless development requiring street connectivity occurs on the abutting property to the east.

While wetlands would be filled on portions of Lots 16, 17, and 18 and within the proposed right-of-way of the east-west portion of the internal street, the portion of wetland on the unimproved right-of-way would remain intact and retain a connection to the larger wetland area on the abutting property to the east. If state and federal regulators were to approve filling of the wetland on the church property in the future, the importance of the portion preserved within the unimproved right-of-way on the subject property declines significantly, while development to the east necessitating the wetland fill would also likely require street and/or pedestrian connectivity to the subject property. This approach avoids unnecessary street construction and the disruption of topography it would entail, while allowing appropriate connectivity in the event of development on the church property.

A tree conservation plan (TCP11-01) has been approved in conjunction with a similar tentative subdivision plan (SUB11-01) previously approved for the subject property. TCP11-01 identifies two trees on the subject property, both proposed for removal. No heritage trees, riparian areas, or significant trees are identified on the tree conservation plan, and none are currently present on the subject property.

The proposal meets this criterion.

SRC 200.010(d)(10): When the tentative subdivision plan requires an Urban Growth Preliminary Declaration under SRC Chapter 200, the tentative subdivision plan is designed in a manner that ensures that the conditions requiring the construction of on-site infrastructure in the Urban Growth Preliminary Declaration will occur, and, if off-site improvements are required in the Urban Growth Preliminary Declaration, construction of any off-site improvements is assured.

Finding: The subject property is located within the Urban Service Area. Therefore, this criterion does not apply.

9. Conclusion

Based upon review of SRC 205.005, the findings contained under Section 8 above, and the comments described, the tentative subdivision plan complies with the requirements for an affirmative decision. Approval will not adversely affect the safe and healthful development and access to any adjoining lands.

IT IS HEREBY ORDERED

That Tentative Subdivision Plan Case No. 16-01, on property zoned RA (Residential Agriculture), and located at 4560 Center Street NE (Marion County Assessor Map and Tax Lot Number 072W30AA08000), is **APPROVED** subject to the applicable standards of the Salem Revised Code, the findings contained herein, and the conditions of approval listed below, which must be completed prior to final plat approval, unless otherwise indicated:

Condition 1: Obtain a demolition permit and remove the existing building on the property.

Condition 2: "NO PARKING—FIRE LANE" signs shall be posted on both sides of the segments of the proposed flag lots accessways that are fire apparatus roadways and "NO PARKING" signs shall be posted on both sides of the remainder of the accessways.

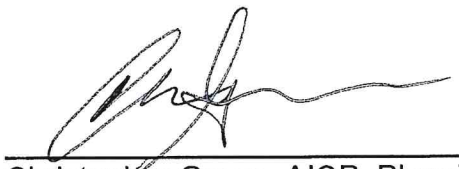
Condition 3: Vehicular and pedestrian connectivity is required to 46th Avenue NE. The applicant shall obtain applicable permits from Marion County to gain access across the existing 1-foot reserve strip on 46th Avenue NE.

Condition 4: Dedicate a 10-foot public utility easement (PUE) along the street frontage of all internal streets.

Condition 5: Convey land for dedication equal to 48-feet from the centerline along the entire frontage of Center Street NE.

Condition 6: Construct a 23-foot-wide half-street improvement along the entire frontage of Center Street NE.

Condition 7: Construct an eastbound-to-northbound left-turn lane and a westbound-to-southbound left-turn lane at the Center Street/Sphinx Court intersection. The turn lanes shall include 40 feet of storage and tapers as specified in the Public Works Design Standards.



Christopher Green, AICP, Planning Administrator Designee

Attachments: A. Vicinity Map
B. Tentative Subdivision Plan
C. Applicant's Written Statement on Tentative Subdivision Plan
D. City of Salem Public Works Department Comments
E. East Lancaster Neighborhood Association (ELNA) Comments

Application Deemed Complete:	June 14, 2016
Notice of Decision Mailing Date:	August 15, 2016
Decision Effective Date:	August 31, 2016
State Mandated Decision Date:	October 12, 2016

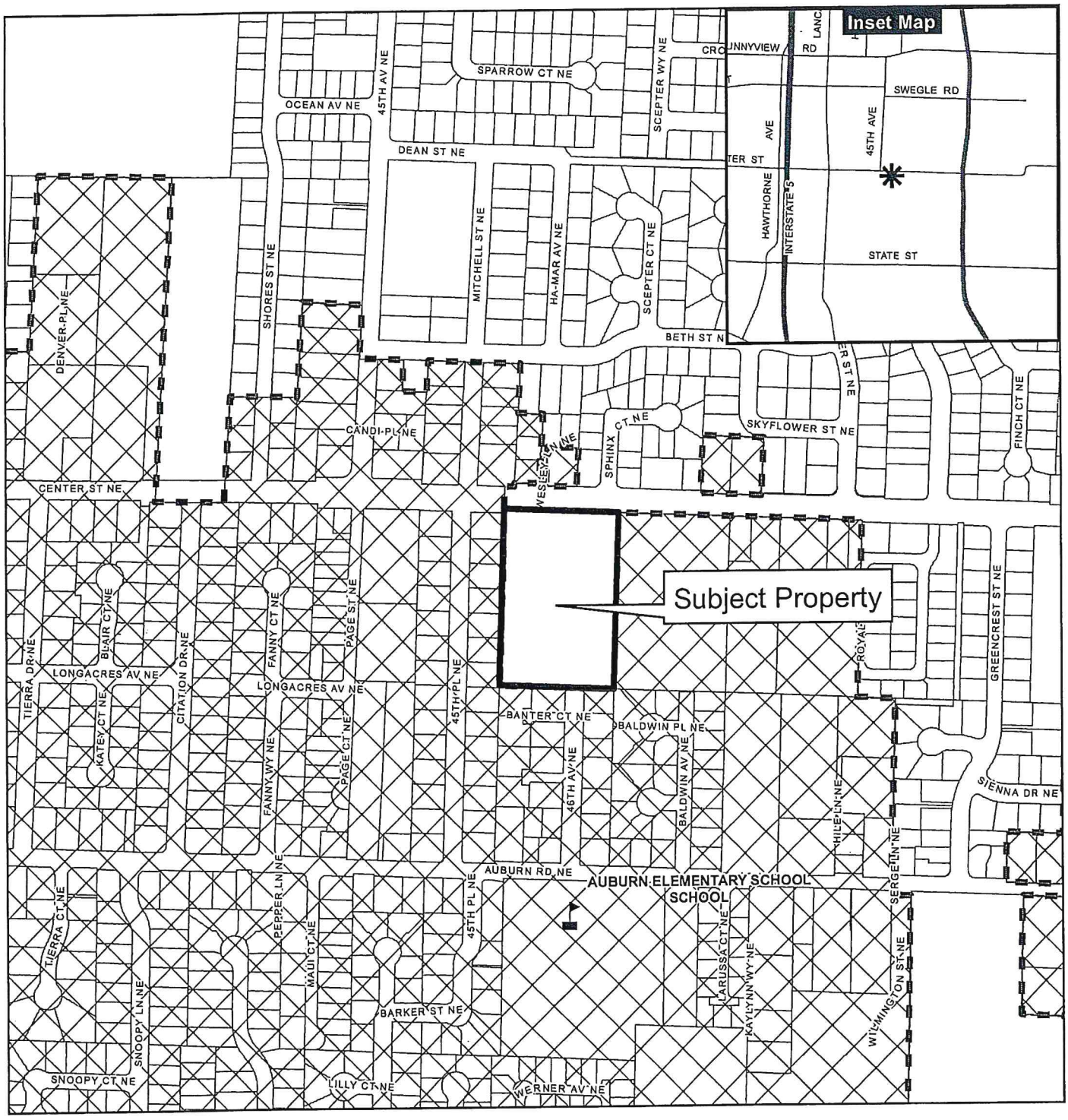
The rights granted by this decision must be exercised or extension granted by August 26, 2018 or this approval shall be null and void.

A copy of the complete Case File is available for review during regular business hours at the Planning Division office, 555 Liberty Street SE, Room 305, Salem OR 97301.

This decision is final unless written appeal from a party with standing to appeal, along with an appeal fee, is filed with the City of Salem Planning Division, Room 305, 555 Liberty Street SE, Salem, Oregon 97301, no later than **Tuesday, August 30, 2016, 5:00 p.m.** The notice of appeal must contain the information required by SRC 300.1020. The notice of appeal must be filed in duplicate with the City of Salem Planning Division. The appeal fee must be paid at the time of filing. If the notice of appeal is untimely and/or lacks the proper fee, the notice of appeal will be rejected. The Salem Planning Commission will review the appeal at a public hearing. The Planning Commission may amend, rescind, or affirm the action or refer the matter to staff for additional information.

ATTACHMENT A

Vicinity Map
4560 Center Street NE



Legend

- Taxlots
- Urban Growth Boundary
- City Limits
- Outside Salem City Limits
- Historic District
- Schools
- Parks

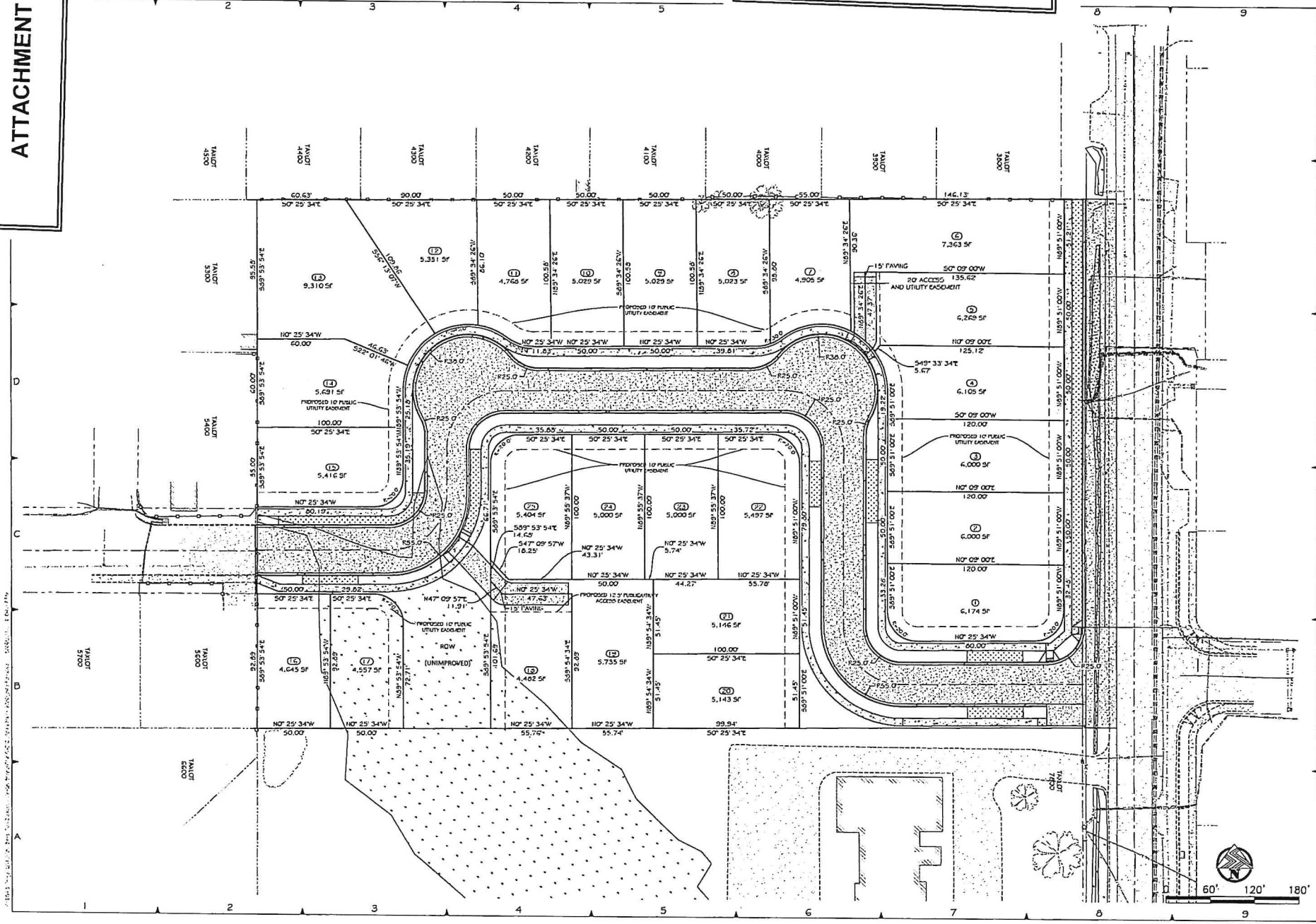
0 100 200 400 Feet

CITY OF Salem AT YOUR SERVICE
Community Development Dept.

G:\CD\PLANNING\Chris Green\LD - Land Division\SUB16-xx - Belle Plaine subdivision\16-106532-LD-MAP.mxd - 3/30/2016 @ 9:16:44 AM

ATTACHMENT B

ATTACHMENT B



ATTACHMENT C

PROJECT DELIVERY GROUP
Engineers | Land Surveyors | Project Managers

BELLE PLAINE ESTATES APPLICATION NARRATIVE

March 25, 2016

SITE INFORMATION. The site is generally located south of Center Street NE, west of Cordon Road NE, and east of 45th Avenue NE. The tax map and lot numbers for the site are 072W30AA 08000.

The current zoning of the site is Residential Agriculture (RA). Pursuant SRC Chapter 265.015(a)(2), at the time this tentative subdivision plan is approved the zoning will automatically change to Single Family Residential (RS). This automatic zone change is supported by the current Comprehensive Plan designation.

Belle Plaine Estates was originally approved on November 3, 2011, Application No. 11-112375-LD by the City of Salem. A time extension was granted on this approval, which expired on November 19, 2015. Unfortunately, the property owner did not become aware of the expiration of the time extension until after the November 19, 2015 date. The City has determined the subdivision application for the site is no longer valid and if the owner desires to develop the property a new subdivision application needs to be submitted to the city. This application is submitted as a result of the expired subdivision approval.

The site design generally follows the same design as the original subdivision approval with the exception of a couple of items. The Toth Street stub to the east boundary of the site has been eliminated due to the fact that U.S. Army Corp of Engineers will not allow wetland impact by this street stub based on future development of the adjoining property. In addition, the lot count has been reduced from the original lot count of 30 lots to 26 lots. Other than these two items, the subdivision design remains unchanged from the original design.

The applicant proposes 26 single-family lots on the 4.71-acre site and the proposed density of the site is approximately 5.5 lots per acre. Four of the lots are designed as flag lots, but do not exceed the 15% maximum requirement of the total lots within a subdivision. The site is generally rectangular in shape and the topography of the site is relatively flat. Approximately 0.4 acres of wetlands are present on the site, which are proposed to be filled with mitigation occurring in an off-site wetland mitigation bank. A Joint Permit Application has been submitted to the Oregon Department of State Lands (DSL) and the U.S. Army Corps of Engineers (Corps) to permit the wetland impact. DSL has reviewed the wetland delineation for the site and has concurred and approved the wetland boundaries per a letter dated May 20, 2015. The lot and street layout was presented to both DSL and the Corps, due to the presence of wetlands, and has support from both organizations so long as the Toth Street stub is eliminated from the design. The Joint Permit Application was submitted to DSL and the Corps in October, 2015 and is currently undergoing review by the Corps. DSL has tentatively approved the wetland fill permit subject to purchase of mitigation credits in an approved wetland mitigation bank. The applicant is currently pursuing the mitigation credit purchase.

WRITTEN STATEMENT. The following is a written statement describing the applicant's proposal and how it meets the requirements for a Subdivision Tentative Plan (SRC 205.010(d)).

1. The tentative subdivision plan complies with the standards of this Chapter and with all applicable provisions of the UDC, including, but not limited to, the following:

- Lot standards, including, but not limited to, standards for lot area, lot width and depth, lot frontage and designation of front and rear lot lines.
- City infrastructure standards.
- Any special development standards, including, but not limited to, floodplain development, special setbacks, geological or geotechnical analysis, and vision clearance.

***Applicant's Response to item 1**: The proposed tentative subdivision plan complies with the applicable provisions of the Salem Revised Code (SRC) which includes the UDC in regards to the lot area and dimensions (Chapter 510 SRC) within the RS zone. The minimum lot area requirement for single family dwellings is 4,000-square feet excluding the area of an accessway, except for infill lots, in which the minimum lot area shall be 5,500-square feet, excluding the area of any accessway. As shown on the Belle Plain Subdivision Concept Plan, the smallest lot proposed is 4,645-square feet and the largest lot proposed is 9,310-square feet with the average lot size being 5,003-square feet. All lots have a minimum of 40-feet of frontage and the knucklehead bulbs have a minimum of 30-feet at the property line and a minimum of 40-feet at the front building setback line. All lots have a minimum 40-feet width and a 70-feet in depth.*

The tentative subdivision plan complies with City of Salem Public Works infrastructure standards, including the proposed stormwater management system. The local street, 46th Avenue is designed with a minimum of 30-feet of pavement width and a minimum right-of-way width of 60-feet as required in SRC, Chapter 803.

The sanitary sewer system for the site is designed in conformance with the City of Salem Public Works design standards and is a public system and is consistent with the original subdivision approval.

The water system for the site is designed in conformance with the City of Salem Public Works design standards and is a public system and is consistent with the original subdivision approval.

The storm sewer system for the site is designed as agreed to by the City Engineering Department and Project Delivery Group during a meeting at the city on September 20, 2014. The purpose of the meeting was to determine the city design standards to use for two areas of the site. The City and Project Delivery Group agreed that the southern 3.9 acres of the site will be designed in accordance with the 2007 Design Standards. The northern 1.0 acres of the site which drain towards Center Street will be designed in accordance with the 2014 Design Standards. The storm sewer system for the site has been designed in accordance with these standards.

The Preliminary Drainage Report is included with this submittal.

The applicant is requesting that the design of the storm sewer system for the site be allowed to meet the above mentioned design standards.

According to the City of Salem Floodplain Map, the proposed development is not in a mapped flood plain and no special setback requirements apply.

2. The tentative subdivision plan does not impede the future use or development of the property or adjacent land.

***Applicant's Response to item 2**: The tentative subdivision plan is consistent with the land use of the adjacent properties and does not impede the future use or development of this property or*

adjacent land. The properties bordering the site to the west and south are developed with single family homes, which is a use consistent with this proposal. The property bordering to the east is developed and is used for a church congregation. There is the potential for future development of the church property. However, DSL and the Corps have stated that they will not permit filling of the wetlands located in the southeast corner of the site in order to allow the Toth Street stub, which was included in the original subdivision approval to be extended from 46th Avenue NE to the church property. As discussed previously in the Site Information section of this narrative, the Toth Street stub to the east church property has been eliminated from the current design. The City of Salem planning staff has requested that the applicant provide a street stub to the east church property north of the on-site wetlands and the original Toth Street stub location so that no on-site wetlands are impacted by the street stub and future street connectivity can be provided through the church property.

The most logical place to provide a connection to the church property from 46th Avenue NE is at the location where 46th Avenue NE makes the 90 degree bend just before connecting to Center Street NE; however, due to the existence of the church building and parking areas, it is not possible to provide access to the church property at this location. South of this location and north of the on-site wetlands and the original Toth Street stub location lies a very small area where a street stub could be stubbed to the church property; however, the church has plans to expand in the future and this area of the church property would be encumbered with the church building expansion and parking area expansion.

The church has submitted a letter to the City of Salem asking that the requested street stub to their property not be required as it will have a direct impact on their future ability to expand in the manner which they are planning. This letter is also included as Attachment A.

The elimination of a street stub from 46th Avenue NE to the church property does not prohibit the church property from future development of a portion of their property. The church property has access to the existing public street Baldwin Avenue, which is stubbed to the south boundary of the church property and to Center Street NE, which runs along the frontage of the site. These two public street connections will provide the required access and connectivity if a portion of the church property becomes available for future development. Please see the future development plan for more information regarding the church expansion.

3. Development within the tentative subdivision plan can be adequately served by City infrastructure.

***Applicant's Response to item 3**: The proposed development can be adequately served by City infrastructure with the proposed improvements. Public sanitary and storm sewers are in place in Center Street NE and have adequate capacity for use by this development. The public water system in Center Street NE and 46th Avenue NE will be looped together and will provide the required fire and domestic water protection. Center Street NE is a major arterial street and is adequate to serve the development. 46th Avenue NE is a local street and will be continued through the site connecting with Center Street NE directly opposite of Sphinx Drive. Franchise utilities are available to the site and will be designed into the site to service individual lots. Please reference the sanitary/water plan and the grading and drainage plan for details regarding the utility design. Along the entire frontage on the development side of Center Street NE, the*

applicant will construct improvements for curb and sidewalk which will comply with the City of Salem Transportation System Plan for a major arterial.

4. The street system in and adjacent to the tentative subdivision plan conforms to the Salem Transportation System Plan.

   ***Applicant's Response to item 4**: The extension of 46th Avenue NE through the site is consistent with the recommendations for the local street connectivity element included in the Salem Transportation Plan.*

5. The street system in and adjacent to the tentative subdivision plan is designed so as to provide for the safe, orderly, and efficient circulation of traffic into, through and out of the subdivision.

   ***Applicant's Response to item 5**: The extension of 46th Avenue NE through the site is designed in such a way that it lines up with Sphinx Court NE, directly to the north of the proposed subdivision. This new connection, along with the curb and sidewalk improvements to 46th Avenue NE, within the subdivision, will provide for safe, orderly and efficient circulation of traffic into, through and out of the subdivision.*

6. The tentative subdivision plan provides safe and convenient bicycle and pedestrian access from within the subdivision to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development. For purposes of this criterion, neighborhood activity centers include, but are not limited to, existing or planned schools, parks, shopping areas, transit stops, or employment centers.

   ***Applicant's Response to items 6:** To the north of the development is Center Street NE. Center Street NE is designated as a major arterial street in the Salem Transportation System Plan (TSP), and as such is subject to a 68-foot wide curbed improvement, centered within the right-of-way. This improvement will include a bicycle lane and sidewalks which meet the ADA requirements. The applicant will comply with the requirements of the TSP and make improvements to Center Street NE on the development side of the street.*

   To the south of the subject property is 46th Avenue NE. 46th Avenue NE is designated as a local street in the Salem TSP, and as such is subject to a 30-foot wide improvement within a 60-foot right-of-way. The proposed subdivision plan will connect 46th Avenue NE to Center Street NE and will have the required curbed and sidewalk improvement. Thus providing safe, orderly and efficient circulation of traffic into, through and out of the subdivision. Together, the Center Street NE and 46th Avenue NE improvements will provide improved pedestrian, bicycle, and vehicular circulation between the new and existing subdivision areas. Additionally, with the extension of 46th Avenue NE, contiguous sidewalks will be available from the proposed subdivision to Auburn Elementary School.

7. The tentative subdivision plan mitigates impacts to the transportation system consistent with the approved Traffic Impact Analysis, where applicable.

   ***Applicant's Response to item 7**: Pursuant to the City of Salem Revised Code (SRC) Chapter 803.015 and the adopted Institute of Transportation Engineer's Trip Generation Manual, a Traffic Impact Study (TIA) is not required for this subdivision.*

8. The tentative subdivision plan takes into account the topography and vegetation of the site so the need for variances is minimized to the greatest extent practicable.

   ***Applicant's Response to items 8**: On November 3, 2011, the City of Salem approved a tree conservation plan for this site (Subdivision Case No. SUB11-01). There are a total of 2 trees on the property, as noted in the previously approved tree conservation plan. The site does not have any significant or heritage trees or riparian corridors on the site. Both trees on the site (one Walnut tree and one Pine tree) are to be removed as these trees are located on land to be dedicated as public right-of-way along Center Street NE. The excavation and paving as well as the relocation of the fire hydrant will cause significant damage to the root systems of these trees which necessitates their removal. There is not any vegetation other than field grass or unusual topography at the site. The site is a cleared grass field with flat topography; therefore disruption to this topography and vegetation is expected and approved by the city on development sites.*

9. The tentative subdivision plan takes into account the topography and vegetation of the site, such that the least disruption of the site, topography, and vegetation will result from the reasonable development of the lots.

   ***Applicant's Response to items 9**: On November 3, 2011, the City of Salem approved a tree conservation plan for this site (Subdivision Case No. SUB11-01). There are a total of 2 trees on the property, as noted in the previously approved tree conservation plan. The site does not have any significant or heritage trees or riparian corridors on the site. Both trees on the site (one Walnut tree and one Pine tree) are to be removed as these trees are located on land to be dedicated as public right-of-way along Center Street NE. The excavation and paving as well as the relocation of the fire hydrant will cause significant damage to the root systems of these trees which necessitates their removal. There is not any vegetation other than field grass or unusual topography at the site. The site is a cleared grass field with flat topography; therefore disruption to this topography and vegetation is expected and approved by the city on development sites.*

10. When the tentative subdivision plan requires an Urban Growth Preliminary Declaration under SRC Chapter 200, the tentative subdivision plan is designed in a manner that ensures that the conditions requiring the construction of on-site infrastructure in the Urban Growth Preliminary Declaration will occur, and, if off-site improvements are required in the Urban Growth Preliminary Declaration, construction of any off-site improvements is assured.

    ***Applicant's Response to item 10**: An Urban Growth Preliminary Declaration application is not required for this subdivision because the property is within the Urban Service Area.*

ATTACHMENTS.

Attachment A – Salem Community of Christ Future Development Letter

March 5, 2016

Bryce Bishop

City of Salem Planning

555 Liberty St SE

Salem OR 97301

RE: Salem Community of Christ Future Development

Dear Mr. Bishop:

I appreciate you including input from Salem Community of Christ In your decision making regarding the development which will be contiguous to our property at 4570 Center St. NE.

As per my discussion with you and Lisa, I want to reiterate our need to retain flexibility to expand our church through additions to our current building and by expanding and making improvements to our south parking lot.

The City of Salem is requiring the developer of the subdivision to include a stub street, to the east, in their design. Requiring the developer to include the stub street will eliminate our ability to expand our church in the manner which we anticipate. We also do not want any street separating us from any section of our wetlands, in case we develop that area for a playground.

Thank you again for your time in reviewing this letter and your consideration of our concerns for the future of our neighborhood and church.

Sincerely,

Margaret Polly

Margaret Polly

Representative for Salem Community of Christ

Cc: Pastorate, McFarlin, Bessonette

ATTACHMENT D

CITY OF Salem AT YOUR SERVICE

MEMO

TO: Christopher Green, Planner II
Community Development Department

FROM: for Glenn Davis, PE, CFM, Chief Development Engineer
Public Works Department

DATE: July 22, 2016

SUBJECT: **PUBLIC WORKS RECOMMENDATIONS**
SUBDIVISION PLAT NO. 16-01 (16-106532-LD)
4560 CENTER STREET NE
25-LOT SUBDIVISION

RECEIVED
JUL 22 2016
COMMUNITY DEVELOPMENT

PROPOSAL

A tentative subdivision plan to divide approximately 4.71 acres into 26 lots ranging in size from 4,645 square feet to 9,310 square feet.

The subject property is approximately 4.71 acres in size, zoned RA (Residential Agriculture), and located at 4560 Center Street NE (Marion County Assessor Map and Tax Lot Number 072W30AA08000).

RECOMMENDED CONDITIONS OF PLAT APPROVAL

1. Obtain a demolition permit and remove the existing building on the property.

2. Vehicular and pedestrian connectivity is required to 46th Avenue NE. The applicant shall obtain applicable permits from Marion County to gain access across the existing 1-foot reserve strip on 46th Avenue NE.

3. Convey land for dedication to equal 48-feet from the centerline of Center Street NE.

4. Construct a 23-foot-wide half-street improvement along the entire frontage of Center Street Avenue NE.

5. Construct an eastbound to northbound left-turn lane and a westbound to southbound left-turn lane at the Center/Sphinx intersection. The turn lanes shall include 40 feet of storage and tapers as specified in the PWDS.

6. Dedicate a 10-foot public utility easement (PUE) along the street frontage of all internal streets.

Code authority references are abbreviated in this document as follows: *Salem Revised Code* (SRC); *Public Works Design Standards* (PWDS); *Salem Transportation System Plan* (Salem TSP); and

FACTS

1. Center Street NE

   a. Existing Conditions—This street has an approximate 32-foot improvement within a 70- to 83-foot-wide right-of-way abutting the subject property.

   b. Standard—This street is designated as a Major Arterial street in the Salem TSP. The standard for this street classification is a 68-foot-wide improvement within a 96-foot-wide right-of-way.

2. 46th Avenue NE

   a. Existing Conditions—This street has an approximate 32-foot improvement within a 60-foot-wide right-of-way abutting the subject property.

   b. Standard—This street is designated as a local street in the Salem TSP. The standard for this street classification is a 30-foot-wide improvement within a 60-foot-wide right-of-way.

Storm Drainage

1. Existing Conditions

   a. There is an existing open roadside ditch along the Center Street NE frontage that appears to drain to the east.

   b. There is an existing drainage ditch located in the southeast portion of the subject property. This ditch appears to be feed by the existing Marion County public main in 46th Avenue NE, and drains the northeast.

   c. There is an existing 12-inch storm public main located on the north side of Center Street NE.

Water

1. Existing Conditions

   a. The subject property is located in the G-0 water service level.

   b. There is a 12-inch public City of Salem waterline located on the north side of Center Avenue NE.

   c. There is a 6-inch Suburban East Salem Water District main located in 46th Avenue NE.

Sanitary Sewer

1. Existing Sewer

   a. There is a 15-inch sanitary sewer main located in Center Street NE that was constructed in 2009. There is also an older parallel 8-inch sanitary sewer main located in Center Avenue NE.

Parks

1. Existing Conditions

   a. Weathers Street Park is located approximately one-half mile to the northwest of the subject property.

   b. Royal Oaks Park is located approximately one-half mile to the northeast of the subject property.

CRITERIA AND FINDINGS

SRC 205.010(d) indicates the criteria that must be found to exist before an affirmative decision may be made. The applicable criteria and the corresponding findings are as follows:

SRC 205.010(d)(1)—The tentative subdivision plan complies with the standards of this Chapter and with all applicable provisions of the Unified Development Code, including, but not limited to the following:

   a. Lot standards, including, but not limited to, standards for lot area, lot width and depth, lot frontage, and designation of front and rear lot lines;

   b. City infrastructure standards; and

   c. Any special development standards, including, but not limited to floodplain development, special setbacks, geological or geotechnical analysis, and vision clearance.

Findings—The applicant shall provide the required field survey and partition plat per Statute and Code requirements outlined in the *Oregon Revised Statutes* (ORS) and SRC. If said documents do not comply with the requirements outlined in ORS and SRC, and as per SRC Chapter 205, the approval of the partition plat by the City Surveyor may be delayed or denied based on the non-compliant violation. It is recommended the applicant request a pre-plat review meeting between the City Surveyor and the applicant's project surveyor to ensure compliance with ORS 672.005(2)(g)&(h), 672.007(2)(b), 672.045(2), 672.060(4), *Oregon Administrative Rules* 850-020-0015(4)&(10), 820-020-0020(2), and 820-020-0045(5).

According to the City's adopted landslide hazard susceptibility maps and SRC Chapter 810 (Landslide Hazards), there are no areas of landslide susceptibility on the subject property.

The Oregon Department of State Lands submitted a response indicating that state wetland/fill permits are required because of wetlands present on the property.

SRC 205.010(d)(3)—Development within the tentative subdivision plan can be adequately served by City infrastructure.

Findings—Water and sewer infrastructure is available along the perimeter of the site and appears to be adequate to serve the property as shown on the applicant's preliminary utility plan. Developments are required to extend public utility services to serve upstream and neighboring properties; the tentative utility plan appears to meet that requirement.

As a condition of sewer service, all developments will be required to provide public sewers to adjacent upstream parcels. This shall include the extension of sewer mains in easements or rights-of-way across the property to adjoining properties, and across the street frontage of the property to adjoining properties when the main is located in the street right-of-way. The tentative subdivision plan shows public sewer extensions to adjacent upstream parcels.

The proposed development is subject to SRC Chapter 71 and the revised PWDS as adopted in Administrative Rule 109, Division 004. To demonstrate the proposed parcels can meet the PWDS, the applicant shall provide an engineered tentative stormwater design to accommodate future impervious surface on all proposed lots.

All public and private City infrastructure proposed to be located in the public right-of-way shall be constructed or secured per SRC 205.035(c)(6)(B) prior to final plat approval. Any easements needed to serve the proposed parcels with City infrastructure shall be shown on the final plat.

SRC 205.010(d)(4) and SRC 205.0010(d)(5)—The street system in and adjacent to the tentative subdivision plan conforms to the *Salem Transportation System Plan*. The street system in and adjacent to the tentative subdivision plan is designed so as to provide for the safe, orderly, and efficient circulation of traffic into, through, and out of the subdivision.

Finding—Center Street NE abuts the subject property and does not meet the current standard for a Major Arterial street. As identified in the conditions of approval, the applicant is required to construct a half-street improvement along the entire frontage of Center Street. An alternate street standard of a 23-foot-wide half-street improvement is acceptable due to the existing configuration of Center Street NE in the vicinity of the subject property.

In addition to the boundary improvement, the applicant shall construct an eastbound to

northbound left-turn lane and a westbound to southbound left-turn lane at the Center/Sphinx intersection. The turn lanes shall include 40 feet of storage and tapers as specified in the PWDS. Off-site pavement widening may be needed in order to provide adequate lane widths and taper lengths pursuant to PWDS.

There is an existing 1-foot reserve strip at the northern terminus of 46th Avenue NE that is owned by Marion County. Vehicular and pedestrian connectivity is required to 46th Avenue NE. The applicant shall obtain applicable permits from Marion County to gain access across the existing 1-foot reserve strip on 46th Avenue NE.

The applicant's site plan includes unimproved right-of-way between lots 17 and 18. This unimproved right-of-way shall comply with current Local Street standards and for the purpose of providing access and connectivity to underdeveloped property to the east. The Army Corps of Engineers provided feedback to City staff that wetland/fill permits require that the street connection to the east remain unimproved in order to preserve the natural wetland area to the greatest extent possible. Therefore, no street improvements are required in the unimproved right-of-way at this time.

SRC 205.010(d)(6)—The tentative subdivision plan provides safe and convenient bicycle and pedestrian access from within the subdivision to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development. For purposes of this criterion, neighborhood activity centers include, but are not limited to, existing or planned schools, parks, shopping areas, transit stops, or employment centers.

Findings—The Comprehensive Parks Master Plan Update shows that the subject property is served by developed parks. Weathers Street Park and Royal Oaks Park are both developed parks located approximately one-half mile from the subject property. Pedestrian sidewalk connections are available from the subject property to the park.

SRC 205.010(d)(7)—The tentative subdivision plan mitigates impacts to the transportation system consistent with the approved Traffic Impact Analysis (TIA), where applicable.

Findings— The proposed 25-lot subdivision generates less than 1,000 average daily vehicle trips to Center Avenue NE, a Major Arterial street. Therefore, a TIA is not required as part of the proposed subdivision submittal.

RESPONSE TO CITIZEN CONCERNS:

Summarized below are comments received from the East Lancaster Neighborhood Association, followed by staff responses:

1. Wetlands and drainage:

   Wetland fill permits are regulated at the state and federal level. Pursuant to the City's involvement in wetland fill permits is limited as described in SRC 809.025, City

staff sent notification to the Oregon Department of State Lands, who returned a response notifying the applicant that wetland fill permits are required. Based on discussions with wetland permit staff at the federal level, wetlands are being preserved to the greatest extent possible by delaying street improvements in the street connection toward the east. Any other requirements to mitigate wetland fill will be addressed in the state and federal permitting process.

Stormwater facilities constructed to serve the proposed development are subject to the Public Works Design Standards and must be designed by a licensed civil engineer. Pursuant to PWDS 4A.2, the applicant's engineer is required to submit a Stormwater Management Report, which would include those issues raised in ELNA's letter. The historical drainage information included in ELNA's response is available for the applicant's engineer to review and consider as part of the stormwater design.

2. Interior street alignment concerns

The Assistant City Traffic Engineer has reviewed the proposed street alignment and has found that the street system meets the approval criteria. Visibility along the 90-degree curves in the street is preserved through the vision clearance requirements in SRC Chapter 805, which is monitored throughout the development process and after the homes are occupied in order to prevent obstructions that may compromise traffic safety. Driveways generally provide sufficient gaps between parking cars to in order to maintain sufficient visibility. Additional safety measures can be installed over time if traffic safety problems are observed in the area.

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Prepared by: Curt Pellatz, Project Coordinator
cc: File

ATTACHMENT E

ELNA
East Lancaster Neighborhood Association
555 Liberty Street SE, Room 305, Salem, Oregon 97301, 503-588-6207

July 5, 2016

To: Chris Green, Case Manager, City of Salem Planning Division
From: Susann Kaltwasser, co-chairperson, ELNA
RE: Subdivision Case No. 16-01 located at 4560 Center Street NE

On behalf of the East Lancaster Neighborhood Association as the co-chairperson and the land use representative, I have reviewed the subdivision at 4560 Center Street NE. – Subdivision Case No. 16-01 and submit the following comments.

The neighborhood association board had a preliminary presentation on the proposal back in March. At the time we expressed concern about the plan to build houses on the wetlands in this area. The plat shows two lots on the existing wetlands. The applicant representative at the time, Don Jensen, indicated that they planned to mitigate the wetlands prior to building the houses. It was explained that some of the neighbors are aware that the wetlands is part of the headwaters of the North Fork of the Little Pudding River and it will be difficult to fully mitigate the wetlands.

In this area the water table is very shallow and this is what creates the wetlands. It is not caused by water being trapped in a shallow due to rain, but rather it is the ground water accumulating from below and in the vicinity to create the wetlands. These wetlands once covered in large lakes throughout the area. In the 1960s Marion County attempted to drain the area for farming and residential development by "ditching" the area. In part this was successful for farming purposes, but once houses have been placed in the area and more and more impervious materials have been introduced, the streambeds have had to be enlarged to accommodate the increased run off. However, flooding still happens in this area when we get heavy rains, as seen in 1996.

Unfortunately all of the water cannot be made to drain into the artificial waterways. The natural tendency is for lakes and streams to continue under the houses.

I have lived in and currently own a house in this area since 1980. I have been the land use person for ELNA since 1992. In that time I have witnessed many subdivisions being built in the area. Water has been a constant issue. Multiple engineers have used a variety of techniques to address standing water issues as well as attempted to mitigate wetlands.

Some have been successful, but others have not. The most successful mitigation plans have been to create retention ponds on wetlands. Drainage strategies have had minimal success over time. Some subdivisions have even had houses flooded during significant rainy periods.

Currently we are experiencing a relatively dry period, so it may not be clear what the long-term conditions are on this section of the subdivision. It will be very difficult for an engineer not familiar and not have long-term data to calculate what is necessary to mitigate the wetlands.

A few years back a similar subdivision was built in a wetlands area. The first rainy weather proved a disaster for several homes that flooded. The contractors were required to remediate the damage to several homes. One flooded a second time and the homeowner sued to have them buy back the home. That contractor subsequently sued the City of Salem for issuing the permits. They made the point that the contractor believed that once the City had approved a subdivision plan, they were ensuing that the land was developable. Then once the City issued a permit and then when the inspectors signed off on the construction, the City assumed liability for those decisions. The case was I believe settled out of court, but a staff person was held accountable for the erroneous assumptions.

I note this because if the City moves forward with this proposed plan, they must do so with the understanding that they assume the liability for the potential flooding of the houses.

It is not possible from the map provided whether the plot next to No 17 is going to be used for this purpose, but it still leaves a question about lot 17's mitigation plan, but ELNA hopes that you will proceed with all due diligence to not leave the homeowners in the vicinity of the wetlands in danger of flooding.

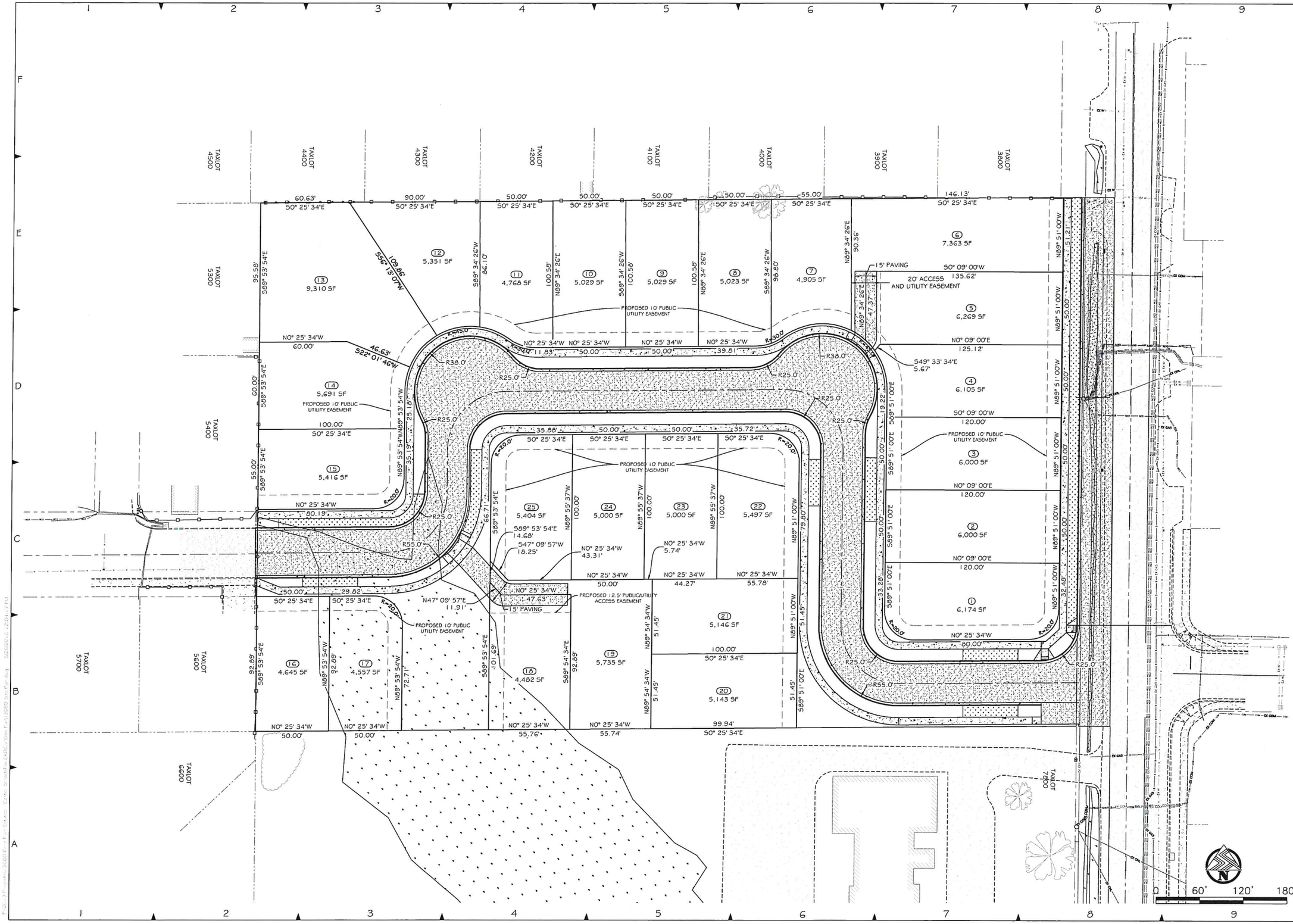
Part of the problem is that nature of the area. The other part is the fact that the City's jurisdiction is limited to just 18 inches below grade. If the developer is order to add fill to raise the land up to a dry level (determined a bit arbitrarily) the actual contractor will still have to go down to the solid ground of the original subsoil in order to set the footings. Thus digging below the fill. This will likely mean that the foundation will be built below the water table during wet periods.

Historically many of the homes in the Royal Oaks and near by subdivisions over the years have had to put sump pumps under their houses in order to maintain dry foundations. This is likely to be the case here. One approach might be to require that these lots have sump pumps. The other would be to not allow for them to be built and to require a retention pond instead.

Second concern is the street. Putting curves in subdivisions that are essentially 90-degree turns has proven to create sight issue for the residents in other subdivisions. It adds to

long-term safety issues for neighbors. If there are to be sharp curves we need to limit the on street parking to increase visibility.

Thank you for your consideration of the neighborhood association's concerns in this matter.



PROJECT DELIVERY GROUP
Engineers | Land Surveyors | Project Managers

REGISTERED PROFESSIONAL ENGINEER
16670PE
OREGON
JULY 20, 1993
DAVID CHARLES NICHOLS
RENEWAL
EXPIRES:
DATE SIGNED:

BELLE PLAINE ESTATES SUBDIVISION

ENCORE DEVELOPMENT GROUP, LLC

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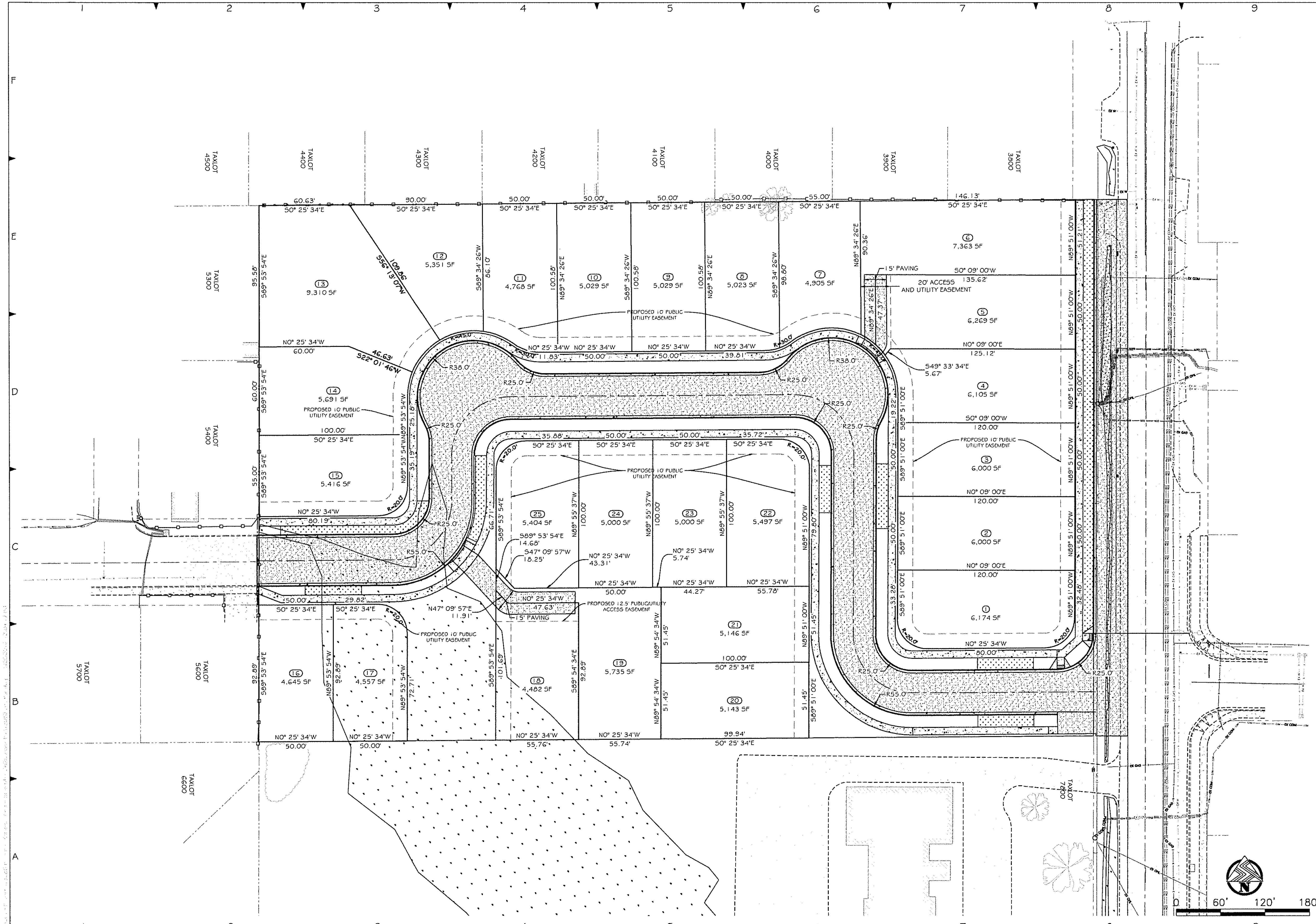
NO	REVISIONS DESCRIPTION	DATE	BY

PROJECT NO.	13080-1
DESIGNATION	LOCAL
DATUM	NGVD 29 (47)
HORZ. SCALE	AS SHOWN
VERT. SCALE	AS SHOWN
DESIGN	KW
DRAWN	AF
CHECKED	
APPROVED	

SHEET TITLE

SITE PLAN

C-1.05



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####

	13080-1
	LOCAL
	NGVD 29 (47)
	AS SHOWN
	AS SHOWN
	KW
	AF

SITE PLAN

C-1.05

NOTICE OF DECISION

PLANNING DIVISION
555 LIBERTY ST. SE, RM 305
SALEM, OREGON 97301
PHONE: 503-588-6173
FAX: 503-588-6005

CITY OF Salem AT YOUR SERVICE

Si necesita ayuda para comprender esta informacion, por favor llame 503-588-6173

APPLICATION NO. 11-112375-LD

DATE OF DECISION: November 3, 2011 – ORIGINAL NOTICE.

APPLICANT: Beauford Averette

ISSUE:
To subdivide approximately 4.7 acres into 30 lots ranging in size from 4,000 square feet to 7,045 square feet for property that is zoned RA (Residential Agriculture) and located at 4560 Center Street NE, 97301 (Marion County Assessor's Map and Tax Lot numbers: 072W30AA / 8000).

The Planning Administrator **GRANTED** Subdivision Case No. SUB11-01 subject to the conditions of approval listed below, which must be completed prior to final plat approval, unless otherwise indicated:

Condition 1: Obtain a demolition permit and remove the existing building from the property.

Condition 2: Vehicular and pedestrian connectivity is required to 46th Avenue NE (46th) at the south line of the subject property. The applicant shall obtain applicable permits from Marion County as needed to gain access across the existing reserve strip on the northern portion of 46th.

Condition 3: Except as described below, design and construct utilities as shown on the tentative plan or in alternate alignments as approved by the Public Works Director in compliance with the City Design Standards and Construction Specifications that are in effect at the time of construction plan submittal:

a. Extend the proposed sanitary sewer main in Toth Street NE (Toth) to the east line of the subject property.

b. Construct a minimum 8-inch water main within 46th from Toth to the northerly terminus of the existing SESWD water main in 46th. The system shall include an isolation valve consistent with Water Distribution Design Standards.

c. To mitigate downstream stormwater impacts of the proposed development, either:

i. Acquire a public storm easement between the proposed stormwater outfall near the easterly terminus of Toth and the approved point of disposal in Center; or

ii. Construct an alternative stormwater outfall location consistent with the City of Salem Design Standards; or

iii. Restrict stormwater discharge from the proposed development such that the quality and quantity of runoff is equivalent to the nature of flow prior to development.

Condition 4: Convey land for dedication to equal a half-width right-of-way of 48 feet on the development side of Center Street NE.

Condition 5: Along the entire frontage of the development side of Center, construct a minimum 34 foot-wide half-street improvement as defined in SRC 63.030(pp)(8).

Condition 6: The alignment of Sphinx Drive NE along the east line of the subject property shall accommodate for a future street extension to the east as approved by the Public Works Director.

Condition 7: Lot 17 shall provide a minimum of 40 feet street frontage.

Condition 8: Lots 14 and 16 shall provide a minimum of 40 feet lot width at the front building setback line.

The rights granted by the attached decision must be exercised by November 19, 2013, or this approval shall be null and void.

A copy of the decision is attached.

Application Deemed Complete:	September 26, 2011
Decision Mailing Date:	November 3, 2011
Decision Effective Date:	November 19, 2011
State Mandate Date:	January 24, 2012

This attached decision is final unless written appeal from an aggrieved party is filed with the City of Salem Planning Division, Room 305, 555 Liberty Street SE, Salem OR 97301, **no later than 5:00 p.m., November 18, 2011**. Any person who presented evidence or testimony at the hearing may appeal the decision. The appeal must state where the decision failed to conform to the provisions of the applicable code section, SRC Chapter 63. The appeal must be filed in duplicate with the City of Salem Planning Division. The appeal fee must be paid at the time of filing. If the appeal is untimely and/or lacks the proper fee, the appeal will be rejected. The Salem Planning Commission will review the appeal at a public hearing. After the hearing, the Planning Commission may amend, rescind, or affirm the action, or refer the matter to staff for additional information.

Case Manager: Bryan Colbourne
Email: bcolbourne@cityofsalem.net
Ph. 503-588-6173 ext 7463

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BEFORE THE SUBDIVISION REVIEW COMMITTEE
OF THE CITY OF SALEM
(TENTATIVE SUBDIVISION PLAT NO. 11-01)

IN THE MATTER OF	)	
TENTATIVE SUBDIVISION	)	FINDINGS AND ORDER
PLAT APPLICATION NO. 11-01;	)	NOVEMBER 3, 2011
4560 CENTER STREET NE	)	

REQUEST

To subdivide approximately 4.7 acres into 30 lots ranging in size from 4,000 square feet to 7,045 square feet for property that is zoned RA (Residential Agriculture) and located at 4560 Center Street NE, 97301 (Marion County Assessor's Map and Tax Lot numbers: 072W30AA / 8000).

DECISION

APPROVED subject to the conditions of approval listed below, which must be completed prior to final plat approval, unless otherwise indicated:

Condition 1: Obtain a demolition permit and remove the existing building from the property.

Condition 2: Vehicular and pedestrian connectivity is required to 46th Avenue NE (46th) at the south line of the subject property. The applicant shall obtain applicable permits from Marion County as needed to gain access across the existing reserve strip on the northern portion of 46th.

Condition 3: Except as described below, design and construct utilities as shown on the tentative plan or in alternate alignments as approved by the Public Works Director in compliance with the City Design Standards and Construction Specifications that are in effect at the time of construction plan submittal:

a. Extend the proposed sanitary sewer main in Toth Street NE (Toth) to the east line of the subject property.

b. Construct a minimum 8-inch water main within 46th from Toth to the northerly terminus of the existing SESWD water main in 46th. The system shall include an isolation valve consistent with Water Distribution Design Standards.

c. To mitigate downstream stormwater impacts of the proposed development, either:

i. Acquire a public storm easement between the proposed stormwater outfall near the easterly terminus of Toth and the approved point of disposal in Center; or

ii. Construct an alternative stormwater outfall location consistent with the City of Salem Design Standards; or

iii. Restrict stormwater discharge from the proposed development such that the quality and quantity of runoff is equivalent to the nature of flow prior to development.

Condition 4: Convey land for dedication to equal a half-width right-of-way of 48 feet on the development side of Center Street NE.

Condition 5: Along the entire frontage of the development side of Center, construct a minimum 34 foot-wide half-street improvement as defined in SRC 63.030(pp)(8).

Condition 6: The alignment of Sphinx Drive NE along the east line of the subject property shall accommodate for a future street extension to the east as approved by the Public Works Director.

Condition 7: Lot 17 shall provide a minimum of 40 feet street frontage.

Condition 8: Lots 14 and 16 shall provide a minimum of 40 feet lot width at the front building setback line.

PROCEDURAL FINDINGS

1. On August 11, 2011, an application for a subdivision was submitted to the Community Development Department. After additional information was provided by the applicant, the application was deemed complete for processing on September 26, 2011.

2. On September 26, 2011, notification of filing for the proposed subdivision was sent to the owners of all property located within 250 feet of the subject property and to the East Lancaster Neighborhood Association.

SUBSTANTIVE FINDINGS

1. Salem Area Comprehensive Plan (SACP)

Land Use Plan Map: The subject property is designated as "Developing Residential" on the Salem Area Comprehensive Plan (SACP) Map.

Urban Growth Policies: The subject property is located inside the Salem Urban Growth Boundary and inside the corporate city limits.

Growth Management: The subject property is inside of the City's Urban Service Area.

2. Zoning and Land Uses

The subject property is zoned RA (Residential Agriculture). Zoning and uses of surrounding properties include:

North: Across Center Street NE, RS (Residential Single Family) and Marion County UD (Urban Development) and Marion County SF (Single Family); single family dwellings
East: Marion County UD; church
South: Marion County SF; single family dwellings
West: Marion County SF; single family dwellings

3. Existing Site Conditions

Trees: Pursuant to the requirements of the City's Tree Preservation Ordinance, SRC Chapter 68.100(a), a tree conservation plan is required in conjunction with any development proposal for the creation of lots or parcels to be used for the construction of single family dwelling units or duplex dwelling units if the development proposal will result in the removal of trees. Under the City's tree preservation ordinance, tree conservation plans are required to preserve all heritage trees, significant trees, trees and native vegetation in riparian corridors, and a minimum of 25 percent of the remaining existing trees on the property. If less than 25 percent of the existing trees are proposed for preservation and significant trees and native vegetation in riparian corridors are proposed for removal, the applicant must show that only those trees reasonably necessary to accommodate the development shall be designated for removal and that there are no reasonable design alternatives that would enable preservation of such trees.

The applicant has submitted a tree inventory and application for tree conservation plan approval in conjunction with the subdivision application (TCP11-01). There are two trees on the subject property; both of which are proposed for removal.

Wetlands: Grading and construction activities within jurisdictional waters of the state are regulated by the Oregon Department of State Lands (DSL) and U.S. Army Corps of Engineers. State and federal wetlands laws are also administered by DSL and the Army Corps of Engineers, and potential impacts to jurisdictional wetlands are addressed through application and enforcement of appropriate mitigation measures. The Salem-Keizer Local Wetland Inventory (LWI) identifies areas of mapped wetlands and hydric soils on the subject property. Pursuant to the requirements of the City's wetlands ordinance (SRC Chapter 126), staff mailed notice of the proposed development to the Department of

State Lands (DSL). Any necessary State or Federal permits must be obtained before beginning a project.

Landslide Hazards: SRC Chapter 69 "Landslide Hazards" sets forth the mitigation requirements that may be imposed if landslide hazards are present on a property. This is done primarily through establishing the sum of landslide hazard points (a combination of the mapped landslide hazard points and those points associated with the type of proposed development) in order to determine what mitigation, if any, is required to ensure a safe and healthful development. The subject property contains no mapped landslide hazard points and a subdivision request incurs three "activity" points. The cumulative total of three landslide hazard susceptibility points indicates a "low landslide hazard," therefore a geological assessment is not required. There is no evidence that the site is geologically or geotechnically unsuitable for development. There is no evidence that development of the property will have a negative geological or geotechnical impact on adjacent properties.

4. Site Analysis and Lot Layout

Proposal: The subject property contains approximately 4.7 acres and consists of a single tax lot. One single-family dwelling is currently located on the site. The applicant's tentative subdivision plan proposes a total of 30 lots ranging in size from 4,000 square feet to 7,045 square feet (Attachment 2). An extension of Sphinx Drive NE is proposed through the property, connecting with 46th Avenue NE at the property's southern boundary. Additional future connectivity is proposed at the property's eastern boundary, by way of a stubbed street.

The minimum lot size and dimension standards for subdivisions are established under SRC Chapter 63 (Subdivisions) and within the zoning district the property is located.

The subject property is currently zoned RA (Residential Agriculture). However, SRC Chapter 113.160 (Newly Developed Areas in an RA District) provides that any land within an RA zone district that is subject to a subdivision approval shall automatically be re-classified to an RS zone district on the date the subdivision plat is recorded with the county clerk.

Because the property is zoned RA and the property is proposed to be subdivided, the provisions of SRC 113.160 apply and the zoning of the property will automatically be changed to RS upon the date of recording the approved subdivision plat with the county clerk. Because the zoning of the property will be changed to RS with the recording of the plat, the following analysis of the subdivision for conformance with the requirements of the subdivision and zoning codes will be based upon the property being rezoned to RS (Single Family Residential).

Minimum Lot Area: SRC Chapters 63.145(c) and SRC 146.070(a) require a minimum lot area of 4,000 square feet for a single family dwelling. SRC 146.070(a) requires a minimum lot area of 7,000 for a duplex on a corner lot. For flag lots in subdivisions, SRC Chapter 63.295(c) requires a minimum lot area of 4,000 square feet, exclusive of the accessway serving the lots.

The proposed areas of the lots within the subdivision range from 4,000 square feet to 7,045 square feet. All of the proposed lots within the subdivision exceed minimum lot area requirements. No duplex lots are proposed.

Minimum Lot Dimensions: SRC Chapters 63.145(a) & (b) and SRC 146.070(b) require a minimum lot width of 40 feet and a minimum average lot depth of 70 feet. All of the proposed lots within the subdivision satisfy minimum lot width and depth requirements.

SRC Chapter 63.145(b) and SRC 146.070(b) also establish a maximum lot depth requirement of 300 percent of the average lot width. All of the proposed lots within the subdivision comply with maximum lot depth requirements.

Street Frontage: SRC Chapter 63.145(d) establishes a minimum frontage requirement of 40 feet for lots adjacent to streets.

Proposed Lot 17 lacks the required 40 feet of street frontage. The final plat layout shall provide the required 40 feet street frontage for Lot 17, as detailed and conditioned under Finding 10.C., below.

Lots along cul-de-sac turnarounds and on the outside of curves having a radius of 200 feet or less and

a direction change of 60-degrees or more may have a minimum of 30 feet street frontage on the curve, but provided that in no case shall the lot width be less than 40 feet at the front building setback line.

Proposed lots 14 and 16 both have approximately 30 feet of street frontage and are located along the outside of a proposed 90-degree street curve having a radius of less than 200 feet. Pursuant to SRC 63.145(d), Lots 14 and 16 require a minimum 40 feet lot width at their 12-foot front building setback line. The tentative plan does not indicate whether this 40 feet is provided for these two lots, and in the case of proposed Lot 16 it is clear that the 40 feet is not provided. The final plat layout shall provide the required 40 feet lot width at the applicable 12-foot front building setback line for proposed Lots 14 and 16, as detailed and conditioned under Finding 10.C., below.

Maximum Number of Flag Lots: SRC Chapter 63.295(a) establishes a maximum limitation on the total number of flag lots allowed within a subdivision. Under this requirement, no more than 15 percent of the lots within a subdivision can be developed as flag lots without street frontage. The proposed subdivision includes a total of 30 lots. Pursuant to the requirements of SRC 63.295(a), a maximum of five flag lots are allowed. The proposed subdivision includes four flag lots and therefore complies with this standard. Proposed Lots 5, 6, 7, and 15 are flag lots.

Front Lot Line Designation: SRC Chapter 63.145(e) establishes front lot line designation requirements for corner lots, double frontage lots, flag lots, and all other lots.

For corner lots, the front lot line shall be the property line that has frontage on a street designated by the building permit applicant and approved by the Planning Administrator (SRC 63.145(e)(1)). Corner lots are lots located at the intersection of two streets. Proposed Lots 1, 18, 19, 24, and 27 are corner lots. The proposed lot dimensions dictate here that the north line of proposed Lots 18 and 19, and the west line of Lots 24 and 27 shall be the front lot line for building setback purposes. Lot 1 is both a corner lot and a double frontage lot. The dimensions of proposed Lot 1 also dictate that its south line shall be the front lot line for building setback purposes.

For flag lots, the front lot line shall be that outside property line that is an extension of the accessway or the line separating the flag portion of the lot or parcel from the lot or parcel between it and the street from which access is provided to the flag lot (SRC 63.145(e)(3)). The proposal includes four flag lots. Lots 5, 6, and 7 are flag lots and double frontage lots. The dimensions of Lots 5, 6, and 7 dictate that the south lines of these lots shall be considered the front lot line for building setback purposes. Lot 15 is also a flag lot. The proposed dimensions of this flag lot dictate that its northern line, which is the line that is an extension of the accessway, shall be the front lot line for building setback purposes.

For lots that have frontage on a public street, other than corner lots, the front lot line shall be the property line that has frontage on the public street (SRC 63.145(e)(4)).

Setback Requirements: For development within an RS (Single Family Residential) zone, SRC Chapter 146 establishes the following setback standards:

Front Yards and Yards Adjacent to Streets:

-Minimum 12 feet (Minimum 20 feet when adjacent to a street designated 'Collector', 'Arterial', or 'Parkway'); and

-Minimum 20 feet for garages

Rear Yards:

-Minimum 14 feet (for any portion of a main building not more than one story in height); or

-Minimum 20 feet (for any portion of a main building greater than one story in height)

Interior Side Yards:

-Minimum 5 feet

Setback requirements for the lots within the proposed subdivision will be reviewed for compliance with all applicable code requirements at the time of application for building permits on the individual lots.

Garages and Setbacks:

The RS (Single Family Residential) zone under SRC Chapter 146.130 establishes requirements for the provision of garages for single family dwellings and the setbacks for those garages. SRC 146.130 specifically requires that:

> Each dwelling constructed after February 8, 2006, within an RS district shall have, at the time of original construction, a garage that is constructed of like materials and color as the dwelling, and that may be attached or detached from the dwelling.

Setback requirements to the required garages are included under SRC Chapter 146.130(c), which establishes the following:

> Garages for single family dwellings, or garages or carports for manufactured homes on individual lots, having a vehicle entrance facing a street or accessway shall be set back at least 20 feet from one of the following lines, whichever is closest to the proposed entrance of the garage or carport:
>
> (1) The right-of-way line, property line abutting an accessway, or most interior access easement line;
> (2) The outside curbline; or
> (3) The edge of the sidewalk furthest from the street.

Because the future dwellings to be constructed within the proposed subdivision will be constructed after February 8, 2006, they will be required to have garages meeting the setback requirements described above.

Block Lengths and Widths (SRC 63.135): Blocks shall be a maximum of 600 feet between street centerlines unless the planning administrator determines that the adjacent layout or special conditions justify greater length. Except where topographical or other physical features dictate otherwise, block widths shall be not less than 120 feet and not more than 400 feet. Planning Staff have reviewed the block length and widths of the proposed subdivision for compliance with SRC 63.135. The length and width of blocks within the new subdivision, and between new streets and existing streets in the general vicinity, satisfy all applicable block standards.

5. Transportation Facilities

Street standards for subdivisions are set forth in SRC 63.225, SRC 63.235, the Salem Area Transportation System Plan (TSP), and the City's Public Works Design Standards. Adequate street system access for all lots must be provided and sufficient boundary and connecting streets must be provided or improved, if they already exist, in order to provide sufficient multi-modal transportation connectivity.

Access and Circulation: Center Street NE, designated as a major arterial in accordance with the Salem Transportation System Plan (TSP), abuts the northern boundary of the subject property. The tentative subdivision plan proposes internal streets extending from the intersection of Center Street and Sphinx Court, south through the property to connect with 46th Avenue at the southern boundary of the property and a local street stubbed at the eastern property boundary for future street connectivity (proposed Toth Street).

Driveways for new dwellings will be located on proposed Sphinx Drive, 46th Avenue, and Toth Street. Two flag lot accessways, meeting the standards of SRC Table 63-1, are also proposed on the western side of Sphinx Drive, serving a total of four proposed flag lots. In this way, all the proposed lots within the subdivision will take access on the new internal streets, which connect to Center Street at the development's northern boundary and 46th Avenue at the southern boundary.

Street Improvements: City of Salem Public Works Department comments (Attachment 3) address applicable street improvement requirements for the level of development proposed by the subdivision. The Street Standards of SRC 63.225 set forth standards for street improvements for all streets, both public and private. Street right-of-way and pavement widths standards are set forth in SRC 63.235. In general, local streets shall have a minimum right-of-way width of 60 feet, with a curb-to-curb improved width of 30 feet with parking on both sides. The development, as proposed and

conditioned, can meet the applicable standards. Review of the final street design will take place at time of public construction plans review.

Connectivity: SRC 63.225(p) states that:

> Applicants submitting preliminary development plans shall provide for local streets oriented to or connecting with existing or planned streets, existing or planned schools, parks, shopping areas, transit stops, and employment centers located within one half mile of development and shall provide for extension of local streets to adjoining major undeveloped properties and eventual connection with the existing street system. Connections to existing or planned streets and undeveloped properties along the border of the parcel shall be provided at no greater than 600-foot intervals unless the planning administrator determines that one or more of the following conditions exist:
>
> (1) Physical or topographic conditions make a connection impracticable. Such conditions include but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided; or
> (2) Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or
> (3) Streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.

The proposed subdivision conforms with these requirements by providing a new local street connection from the intersection of Center Street and Sphinx Court, south through the property to connect with 46th Avenue at the southern boundary of the property, and a local street stubbed at the eastern property boundary for future street connectivity (proposed Toth Street). To the west, the existing residences built along 45th Place NE physically preclude a connection now or in the foreseeable future.

Bicycle System Map: SRC 63.235(g) states that:

> Streets identified in the Salem Transportation System Plan Bicycle Map as requiring a bicycle facility must meet the designation of the Salem Transportation System Plan and the City of Salem Public Works Street Design Standards.

The TSP Bicycle Map designates Center Street NE at the location of the subject property as a "Constructed Bike lane" route. Major arterial boundary street improvements along Center Street are required with the proposal, and shall include a bike lane.

6. Neighborhood Association and Citizen Comments

The subject property is located within the East Lancaster Neighborhood Association (ELNA). The Neighborhood Association was notified of the proposed subdivision. At the time of this decision, no comments were received from ELNA.

All property owners within 250 feet of the subject property were mailed notification of the proposed subdivision. The City received six written responses from citizens by the public comment deadline. One response stated no objections to the proposal, two responses objected to the proposal, and three responses contained specific comments or questions about certain aspects of the proposal:

1. One property owner indicated she had reviewed the proposal and had no objections to it;

2. One commented that he had reviewed the proposal and objects because he believes the subdivision will lower the value of his property;

3. One commented that he opposes the project until infrastructure is improved in the area. This property owner is concerned about the lack of sidewalks, pedestrian crossing lights, and too much vehicular traffic in the area. In particular, he noted that school children from Auburn Elementary School and parents with young children appear at risk when walking along Center Street near its intersection with 45th Avenue. He also commented that a left turn lane is needed for eastbound traffic on Center Street turning onto Sphinx Court. He requested that

the subdivision applicant be required to contribute to the cost of eventual off-site street frontage improvements along Center Street from 45th Avenue to Wildflower Street. In addition, he commented that an additional pedestrian crosswalk with signal is needed on Center Street immediately east of 45th Avenue;

4. One property owner submitted three questions about the proposal:

   A. Will existing Sphinx Court north of Center Street be renamed Sphinx Drive, as shown on the applicant's tentative plan?
   B. Are proposed lots large enough to accommodate duplexes?
   C. Can the speed limit be reduced from 45 MPH to 35 MPH along Center Street from 45th to Cordon Road?

5. One property owner submitted five questions about the proposal:

   A. Will this be a mobile home park or 'stick-built' housing development?
   B. Will duplexes or triplexes be allowed?
   C. Will this be 'government assistance' low income housing?
   D. Will a turn lane be added for eastbound Center Street traffic turning left onto Sphinx Court?
   E. Will the 45 MPH speed limit be reduced to 35 MPH along Center Street?

6. One commented that street lighting is very poor on Center Street at this location. She also stated concerns over pedestrian safety along streets in the area and described the difficulty turning east onto Center Street from Yellowbird Lane and from 45th Avenue.

Staff Response: *Property Values* – City staff reviews all proposed subdivisions to ensure that each proposal does not "adversely affect the safe and healthful development of the remainder [of the property] or any adjoining land or access thereto," and that the applicant provides required services, access and safety measures. This subdivision application, as proposed by the applicant and with conditions of approval, has met this criterion. With respect to property values, Goal E.b. (Residential Development) of the Salem Area Comprehensive Plan (SACP) states that "residential development shall provide housing opportunities for Salem's diverse population." As such, while the SACP encourages a diversity of housing property values, the Salem Revised Code neither directly nor indirectly regulates such property values.

Pedestrian Safety – Street improvements, including sidewalk, planter strip, a widened vehicle travel lane, and bike lane are required along the development side of Center Street NE abutting the subject property, as a condition of approval. In addition, proposed internal streets will provide sidewalks for safe pedestrian access.

Traffic – The development is estimated to generate a net increase of approximately 287 average daily trips. Developments located along arterial streets such as Center Street that generate a net increase of fewer than 1,000 average daily trips do not warrant further traffic impact analysis. Based on this relatively low average daily trip estimate, the impacts of the proposed development do not warrant off-site improvements or turn lanes. Turn lanes will be provided when a significant portion of Center Street NE is constructed to its ultimate 68-foot-wide street improvement width, which is the standard for a major arterial street.

Street Names – SRC Chapter 84 sets forth street naming criteria and standards. Approval of street names and street types takes place during review of the final subdivision plat, upon consultation with emergency services and the Mid Willamette Valley Council of Governments (COG).

Duplex Development – The property is zoned for single family residential development, as such generally only one single family dwelling per lot is allowed. Duplexes are only allowed on corner lots that exceed 7,000 square feet in area. None of the proposed lots meet those criteria, therefore no duplexes will be permitted.

Low Income Housing – The application gives no indication as to what price range the single family dwellings will be marketed and sold for. Salem Area Comprehensive Plan, Policy E.5. (Residential Development, Subsidized Housing) states that "subsidized housing shall be provided

at a variety of locations within the urban area." However, while the SACP encourages the provision of subsidized housing throughout the city, the Salem Revised Code does not require such low income or subsidized housing at specific locations as part of development review or subdivision approval. As such, there is no evidence in the application that the proposal will or will not provide low income or subsidized housing, and this issue is not directly relevant to the subdivision approval criteria of the Salem Revised Code.

Speed Limit – Speed limits are set by the State of Oregon. A neighborhood association may contact the City's Public Works Department, Traffic Engineering Section, with concerns about the speed limit for a particular street in the City. The Traffic Engineering Section will then review the concerns raised and coordinate with the State of Oregon as needed.

Street Lighting – The applicant is required to install street lighting along the subject property's Center Street frontage and along the new internal streets.

7. City Department Comments

The Police Department has reviewed the proposal and indicated they have no comments.

The Building and Safety Division has reviewed the proposal and commented that the applicant is required to obtain demolition permits prior to removal of any existing buildings from the site.

Staff Response: The existing house is located across a proposed subdivision lot line and new street right-of-way. This existing house will need to be removed in order to make way for the proposed development. The applicant must obtain all necessary demolition permits and remove the existing house prior to plat approval. To ensure this happens, the following condition of approval shall apply:

Condition 1: Obtain a demolition permit and remove the existing building from the property.

The Fire Department has reviewed the proposal and indicated they have no objections.

The Public Works Department, Development Services Section reviewed the proposal and submitted comments which are included as attachment 3.

8. Public Agency Comments

Marion County Public Works Department reviewed the proposal and submitted a letter outlining their comments (Attachment 4). In summary, Marion County requested that proper coordination take place between the City and County where public infrastructure improvements are made that affect County lands. In addition, a County-owned 3-foot-wide reserve strip exists at the northern terminus of 46th Avenue. The developer will need to obtain permits from Marion County Public Works in order to make the required street connection from the proposed internal street across this reserve strip to 46th Avenue. The County also recommended that the City require the applicant to construct a linking section of sidewalk where there is currently an approximate 160-foot-long gap on the toward the north end of the west side of 46th Avenue NE.

Staff Response: *Reserve Strip* – The developer will need to obtain permits necessary for work within the existing reserve strip. To ensure the proper County permits are obtained by the applicant, the following condition of approval shall apply:

Condition 2: Vehicular and pedestrian connectivity is required to 46th Avenue NE (46th) at the south line of the subject property. The applicant shall obtain applicable permits from Marion County as needed to gain access across the existing reserve strip on the northern portion of 46th.

Missing Sidewalk on 46th Avenue – The missing sidewalk connection is located within Marion County and outside City jurisdiction. Pedestrian access is available on the east side of 46th Street.

The Salem-Keizer Public School District also reviewed the proposal and submitted a letter outlining

their comments (Attachment 5).

9. Private Service Providers

Century Link communications provider reviewed the proposal and submitted comments indicating no objections.

10. Criteria for Granting Approval to Tentative Subdivision

Salem Revised Code (SRC) Chapter 63.046(b) and 63.051 set forth the criteria that must be met before approval can be granted to a subdivision request. This staff report addresses the approval criteria of SRC 63.046 (decision of the Planning Administrator for a Subdivision) and evaluates the considerations of SRC 63.051(Purpose of Tentative Plan Review; Requirements and Conditions).

The following subsections are organized with approval criteria shown in **bold**, followed by findings of fact upon which the Planning Administrator bases his findings. The requirements of SRC 63.051 are addressed within the specific findings which evaluate the proposal's conformance with the criteria of SRC 63.046. Lack of compliance with the following land division standards is grounds for denial of tentative plat approval or for the issuance of certain conditions necessary to more fully satisfy such conditions. The applicant's proposed subdivision, for the purpose of dividing the subject property as described above, was reviewed for compliance with the following standards, and as detailed in the facts and findings of this staff report, including all attachments hereto, the following approval criteria have been sufficiently addressed to warrant approval of the tentative subdivision plan, subject to conditions.

Note: A second review will occur for the created lots at the time of building permit application to assure compliance with the zoning ordinance. Compliance with conditions of approval to satisfy the subdivision ordinance is checked prior to city staff signing the final subdivision plat.

A. SRC 63.046(b)(1): Approval of the tentative subdivision plan does not impede the future use of the remainder of the property under the same ownership, or adversely affect the safe and healthful development of the remainder or any adjoining land or access thereto:

Finding: The proposed subdivision divides the 4.7-acre property into 30 lots with no remainder. Existing single family homes abut the property on the west, and single family homes are located across Center Street NE to the north of the property. A church abuts the property on the east. Vehicular access to lots within the proposed subdivision is provided by new internal streets. Future street connectivity will be possible to serve the abutting property to the east, when that property is developed, and the new internal streets will provide an additional means of access to the abutting residential subdivision to the south, which is located in the County.

The lots within the proposed subdivision, as proposed and conditioned, are of sufficient size and dimensions to permit future development of one single family dwelling each, or development of other SRC Chapter 146 "permitted," "special," or "conditional" uses. As proposed, no corner lots will be large enough for a duplex. There is no evidence that the subdivision and subsequent development of the lots will adversely affect public services to any surrounding properties. Approval of the subdivision does not impede future use of the subject property or access to abutting properties. This criterion has been met.

B. SRC 63.046(b)(2): Provisions for water, sewer, streets, and storm drainage facilities comply with the city's public facility plan:

Finding: The Public Works Department has reviewed the request and provided comments regarding the provisions for water, sewer, streets, and storm drainage facilities. They are included as attachment 3. The water, sewer, and storm infrastructure is available and appears adequate to serve the existing development, except where noted.

Storm Drainage: A 12-inch public storm drain line is located in Center Street NE. There is also a drainage ditch within the subject property along Center Street NE that drains to the east into a Marion

County storm system. Public drainage discharging from the subject property must be discharged to an approved point of disposal, which in this case is Center Street. In order to discharge to the existing drainage system east of Toth Street, the applicant shall acquire a public storm easement between the proposed stormwater outfall and the approved point of disposal in Center Street.

Water: The subject property is located in the G-0 water service level. A 12-inch City of Salem public water line is in Center Street NE and terminates at Wesley Lane NE. A 12-inch Suburban East Salem Water District (District) water line is located in Center Street NE that terminates at the west line of the subject property. The subject property is located within the District. There is a 6-inch District water line in 46th Avenue NE. To provide adequate interconnectivity and to ensure that provisions for water facilities comply with the city's public facility plan, the applicant is required to construct a minimum 8-inch water main within 46th Avenue from Toth Street to the northerly terminus of the existing SESWD water main in 46th Avenue NE.

Sanitary Sewer: An 8-inch sewer line is located in Center Street NE. An 8-inch public sanitary sewer line is located in 46th Avenue NE that terminates at the intersection of 46th Avenue NE and Banter Court NE just south of the subject property.

To ensure that all necessary utilities are designed and constructed in compliance with the City's Design Standards and in conformance with the approved tentative plan, the following condition shall apply:

Condition 3: Except as described below, design and construct utilities as shown on the tentative plan or in alternate alignments as approved by the Public Works Director in compliance with the City Design Standards and Construction Specifications that are in effect at the time of construction plan submittal:

a. Extend the proposed sanitary sewer main in Toth Street NE (Toth) to the east line of the subject property.

b. Construct a minimum 8-inch water main within 46th from Toth to the northerly terminus of the existing SESWD water main in 46th. The system shall include an isolation valve consistent with Water Distribution Design Standards.

c. To mitigate downstream stormwater impacts of the proposed development, either:

i. Acquire a public storm easement between the proposed stormwater outfall near the easterly terminus of Toth and the approved point of disposal in Center; or

ii. Construct an alternative stormwater outfall location consistent with the City of Salem Design Standards; or

iii. Restrict stormwater discharge from the proposed development such that the quality and quantity of runoff is equivalent to the nature of flow prior to development.

Streets: The property has frontage on both Center Street NE and 46th Avenue NE. Center Street NE has an approximate 32-foot improvement within a 70-foot-wide right-of-way abutting the subject property. This street is designated as a major arterial street in the Salem TSP. The standard for this street classification is a 68-foot-wide improvement within a 96-foot-wide right-of-way.

46th Avenue NE has an approximate 32-foot-wide improvement within a 60-foot-wide right-of-way abutting the subject property. This street is designated as a local street in the Salem TSP. The standard for this street classification is a 30-foot-wide improvement within a 60-foot-wide right-of-way.

All boundary and internal streets shall comply with the street designations in the Salem TSP. The conditions of approval will provide boundary streets that conform to the Salem TSP. The local street connection southerly to 46th Avenue and easterly through Toth Avenue is consistent with the connectivity provisions of SRC 63.225(p). The following conditions shall apply:

Condition 4: Convey land for dedication to equal a half-width right-of-way of 48 feet on the development side of Center Street NE.

Condition 5: Along the entire frontage of the development side of Center, construct a minimum 34 foot-wide half-street improvement as defined in SRC 63.030(pp)(8).

Condition 6: The alignment of Sphinx Drive NE along the east line of the subject property shall accommodate for a future street extension to the east as approved by the Public Works Director.

Condition 2: Vehicular and pedestrian connectivity is required to 46th Avenue NE (46th) at the south line of the subject property. The applicant shall obtain applicable permits from Marion County as needed to gain access across the existing reserve strip on the northern portion of 46th.

C. 63.046(b)(3): The tentative subdivision plan complies with all applicable provisions of the Salem Revised Code, including the Salem zoning ordinance:

Finding: The Salem Revised Code (SRC), which includes the Salem Zoning Code, implements the Salem Area Comprehensive Plan land use goals and governs development of property within the city limits. The subdivision process reviews development for compliance with City standards and requirements contained in the Subdivision Code, Zoning Code, Salem TSP and the Water, Sewer and Storm Drainage System Master Plans, and adopted design documents applicable to residential development. A second review occurs for the created lots at the time of building permit application to assure compliance with the zoning ordinance. Compliance with conditions of approval to satisfy the subdivision ordinance is checked prior to city staff signing the final subdivision plat. The proposed subdivision meets all applicable provisions of the Salem Revised Code as detailed below:

SRC Chapter 63 (Subdivisions): The intent of the SRC Chapter 63 subdivision code is to provide for orderly development through the application of appropriate standards and regulations. The applicant met all application submittal requirements necessary for adequate review of the proposed land division. As conditioned, the subdivision conforms to SRC Chapter 63 land division standards as follows:

Lot Configuration: SRC Chapter 63.145(d) establishes a minimum frontage requirement of 40 feet for lots adjacent to streets. Lots along cul-de-sac turnarounds and on the outside of curves having a radius of 200 feet or less and a direction change of 60-degrees or more, in which case the minimum lot line fronting the curve shall be 30 feet, but provided that in no case shall the lot width be less than 40 feet at the front building setback line.

Proposed Lot 17 lacks the required 40 feet of street frontage. To ensure Lot 17 provides the required 40 feet of street frontage at time of final plat, the following condition shall apply:

Condition 7: Lot 17 shall provide a minimum of 40 feet street frontage.

Proposed lots 14 and 16 both have approximately 30 feet of street frontage and are located along the outside of a proposed 90-degree street curve having a radius of less than 200 feet. Pursuant to SRC 63.145(d), Lots 14 and 16 require a minimum 40 lot width at their applicable 12-foot front building setback line. The tentative plan does not indicate whether this 40 feet is provided for these two lots, and in the case of proposed Lot 16 it is clear that the required 40 feet width is not provided. The lots must be reconfigured so that the final plat layout provides the required 40 feet lot width at the applicable 12-foot front building setback line for proposed Lots 14 and 16. To ensure Lot 14 and 16 comply with this standard at time of final plat, the following condition shall apply:

Condition 8: Lots 14 and 16 shall provide a minimum of 40 feet lot width at the front building setback line.

Each of the lots will also be suitable for the general purpose for which they are intended to be used, such as future development of one single family dwelling each, or development of other SRC Chapter 146 "permitted," "special," or "conditional" uses. As conditioned, the lots are of a size and design that will not be detrimental to the health, safety, or sanitary needs of the existing and/or future residents.

Street Connectivity: Applicants submitting preliminary development plans shall provide for local streets oriented to or connecting with existing or planned streets, existing or planned schools, parks, shopping areas, transit stops, and employment centers located within one half mile of development and shall provide for extension of local streets to adjoining major undeveloped properties and eventual connection with the existing street system. Connections to existing or planned streets and undeveloped properties along the border of the parcel shall be provided at no greater than 600-foot intervals unless the planning administrator determines that one or more of the following conditions exist:

(1) Physical or topographic conditions make a connection impracticable. Such conditions include but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided; or
(2) Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or
(3) Streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.

The proposed subdivision conforms to these requirements by providing a new local street connection from the intersection of Center Street and Sphinx Court, south through the property to connect with 46th Avenue at the southern boundary of the property, and a local street stubbed at the eastern property boundary for future street connectivity (proposed Toth Street). To the west, the existing residences built along 45th Place NE physically preclude a connection now or in the foreseeable future.

Adequate Utilities: The subdivision, as conditioned, can be adequately served with water supply, sewage disposal, and storm drainage facilities, as detailed in the Public Works Memo incorporated herein as Attachment 3. The subdivision can also be served with other utilities appropriate to the nature of the development. Costs for the installation and extension of adequate utilities to serve the subject property, without impeding service to the surrounding area, are the responsibility of the developer. SRC Chapter 63.165 requires provision of public construction and maintenance easements for maintenance of all public utilities.

Hazards, Site Disruption, and Limitations to Development: The proposed subdivision has been reviewed to ensure that adequate measures have been planned to alleviate natural or fabricated hazards and limitations to development, including topography and vegetation of the site, in order that no additional variances from the Salem Zoning Code are required for development of the lots created, that buildings may be reasonably sited thereon, and the least disruption of the site, topography, and vegetation will result from development of the lots.

The LWI identifies areas of hydric soils and potential wetlands on the subject property. Wetland Land Use Notification for the subdivision proposal was sent to DSL, pursuant to SRC Chapter 126.

The topography of the property is generally flat. According to the City's adopted landslide hazard susceptibility maps, there are no mapped landslide hazard points on the subject property, and a subdivision request incurs three "activity" points. The cumulative total of three landslide hazard susceptibility points indicates a "low landslide hazard" and no geological assessment is required for conformance with the requirements of SRC Chapter 69.

The City of Salem requires an erosion control permit for ground disturbance involving 25 cubic yards of material, 2,000 square feet of land, or on slopes 25 percent or greater. These requirements are applied at the time of development of the property. There are no significant impacts anticipated related to sediment or erosion control.

SRC Chapter 64 (Comprehensive Planning): The subdivision, as conditioned, conforms to the Salem Area Wastewater Management Master Plan, the Stormwater Master Plan, the Water System Master Plan, and the Salem Transportation System Plan, adopted under SRC 64.230, as detailed in the findings of this report.

SRC Chapter 65 (Excavations and Fills): The provisions of SRC Chapter 65 insure that any excavation or fill adjacent to public right-of-way or within a public easement, designated waterway, or floodplain overlay zone creates no imminent danger to public safety or public facilities and does not

create a public nuisance. SRC Chapter 65 also prohibits excavation or fill that causes surface drainage to flow over adjacent public or private property in a volume or location materially different from that which existed before the grading occurred. Development of the property is required to conform to the requirements of SRC Chapter 65. There is no evidence that the subject property cannot be developed consistent with the provisions of SRC Chapter 65.

SRC Chapter 66 (Urban Growth Management): The Urban Growth Management Program, detailed in SRC Chapter 66, requires that prior to subdivision of property outside of the Salem Urban Service Area (USA), an Urban Growth Area (UGA) Development Permit must be obtained. The subject property is located inside the Urban Service Area; therefore, no UGA development permit was required for the proposed development.

SRC Chapter 68 (Preservation of Trees and Vegetation): Pursuant to the requirements of the City's Tree Preservation Ordinance, SRC Chapter 68.100(a), a tree conservation plan is required in conjunction with any development proposal for the creation of lots or parcels to be used for the construction of single family dwelling units or duplex dwelling units if the development proposal will result in the removal of trees. Under the City's tree preservation ordinance, tree conservation plans are required to preserve all heritage trees, significant trees, trees and native vegetation in riparian corridors, and a minimum of 25 percent of the remaining existing trees on the property. If less than 25 percent of the existing trees are proposed for preservation and significant trees and native vegetation in riparian corridors are proposed for removal, the applicant must show that only those trees reasonably necessary to accommodate the development shall be designated for removal and that there are no reasonable design alternatives that would enable preservation of such trees.

The applicant has submitted a tree inventory and application for tree conservation plan approval in conjunction with the subdivision application (TCP11-01). There are two trees on the subject property; both of which are proposed for removal.

SRC Chapter 69 (Landslide Hazards): As already stated, the proposed subdivision has been reviewed for conformance with the requirements of SRC Chapter 69 in order to assess whether the proposed activity will adversely affect the stability and landslide susceptibility of the area.

The topography of the property is generally flat. According to the City's adopted landslide hazard susceptibility maps, there are no mapped landslide hazard points on the subject property, and a subdivision request incurs three "activity" points. The cumulative total of three landslide hazard susceptibility points indicates a "low landslide hazard" and no geological assessment is required for conformance with the requirements of SRC Chapter 69.

SRC Chapter 132 (Landscaping): The provisions of SRC Chapter 132 require that all significant trees located within required yards (e.g., setback areas) be retained. If trees are removed from required yards, the removal is mitigated through replanting measures. No trees are proposed to be removed from required yards.

SRC Chapter 145 (Residential Agriculture Zone) & SRC Chapter 146 (Single Family Residential Zone): The subject property is currently zoned RA (Residential Agriculture). However, SRC Chapter 113.160 (Newly Developed Areas in an RA District) provides that any land within an RA zone district that is subject to a subdivision approval shall automatically be re-classified to an RS zone district on the date the subdivision plat is recorded with the county clerk.

Because the property is zoned RA and the property is proposed to be subdivided, the provisions of SRC 113.160 apply and the zoning of the property will automatically be changed to RS upon the date of recording the approved subdivision plat with the county clerk. Because the zoning of the property will be changed to RS with the recording of the plat, the following analysis of the subdivision for conformance with the requirements of the subdivision and zoning codes will be based upon the property being rezoned to RS (Single Family Residential).

The subdivision code, SRC 63.145(i), requires that lots be suitable for the general purpose for which they are likely to be used. No lots can be of such a size or configuration that is detrimental to public health, safety, or welfare; or sanitary needs of users of the lot. The proposed lots are of sufficient size and dimensions to permit the future development of one single family dwelling each, or development of other SRC Chapter 146 "permitted," "special," or "conditional" uses.

Final review of site plans for individual dwellings to be constructed within the proposed subdivision is conducted as part of the building permit process where compliance with the requirements of the SRC Chapter 146 and all other applicable code requirements is determined. Construction plans for facilities within the development will be reviewed for compliance with conditions of approval and design standards.

There is an existing house on the property, which is located across a proposed subdivision lot line and new street right-of-way. This existing house will need to be removed in order to make way for the proposed development. The applicant must obtain all necessary demolition permits and remove the existing house prior to plat approval. To ensure this happens, the following condition of approval shall apply:

Condition 1: Obtain a demolition permit and remove the existing building from the property.

D. 63.046(b)(4): The proposed subdivision provides safe and convenient bicycle and pedestrian access from within the subdivision to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development.

Finding: The proposed subdivision is accessed by an existing arterial street. The subject property will provide internal streets with safe and convenient bicycle and pedestrian access, and provide boundary street improvements where necessary in order to connect multi-modal transportation facilities with the existing transportation system. Frequent service transit service is directly available to the subject property on Center Street by way of Salem Keizer Transit's Route 5 bus line, which runs along Center Street to downtown Salem.

The subdivision, as proposed and conditioned, is served with adequate transportation infrastructure, and the street system adjacent to the subdivided property will conform to the Salem Transportation System Plan and the State Transportation Planning Rule, and provide for safe, orderly, and efficient circulation of traffic into, through, and out of the subdivision.

11. Conclusion

Based upon review of SRC 63.046(b) and the findings contained herein, the tentative plan complies with the applicable provisions of the Subdivision Code and the Salem Zoning Code, and is in conformance with the purpose expressed in SRC 63.020 and the Salem Area Comprehensive Plan.

IT IS HEREBY ORDERED

That Subdivision Plat No. 11-01 to subdivide approximately 4.7 acres into 30 lots ranging in size from 4,000 square feet to 7,045 square feet for property that is zoned RA (Residential Agriculture) and located at 4560 Center Street NE, 97301 (Marion County Assessor's Map and Tax Lot numbers: 072W30AA / 8000) shall be GRANTED subject to the conditions of approval listed below prior to final plat approval unless otherwise indicated:

Condition 1: Obtain a demolition permit and remove the existing building from the property.

Condition 2: Vehicular and pedestrian connectivity is required to 46th Avenue NE (46th) at the south line of the subject property. The applicant shall obtain applicable permits from Marion County as needed to gain access across the existing reserve strip on the northern portion of 46th.

Condition 3: Except as described below, design and construct utilities as shown on the tentative plan or in alternate alignments as approved by the Public Works Director in compliance with the City Design Standards and Construction Specifications that are in effect at the time of construction plan submittal:

a. Extend the proposed sanitary sewer main in Toth Street NE (Toth) to the east line of the subject property.

b. Construct a minimum 8-inch water main within 46th from Toth to the northerly terminus of the existing SESWD water main in 46th. The system shall include an isolation valve consistent with Water Distribution Design Standards.

c. To mitigate downstream stormwater impacts of the proposed development, either:

i. Acquire a public storm easement between the proposed stormwater outfall near the easterly terminus of Toth and the approved point of disposal in Center; or

ii. Construct an alternative stormwater outfall location consistent with the City of Salem Design Standards; or

iii. Restrict stormwater discharge from the proposed development such that the quality and quantity of runoff is equivalent to the nature of flow prior to development.

Condition 4: Convey land for dedication to equal a half-width right-of-way of 48 feet on the development side of Center Street NE.

Condition 5: Along the entire frontage of the development side of Center, construct a minimum 34 foot-wide half-street improvement as defined in SRC 63.030(pp)(8).

Condition 6: The alignment of Sphinx Drive NE along the east line of the subject property shall accommodate for a future street extension to the east as approved by the Public Works Director.

Condition 7: Lot 17 shall provide a minimum of 40 feet street frontage.

Condition 8: Lots 14 and 16 shall provide a minimum of 40 feet lot width at the front building setback line.

This tentative decision is valid and remains in effect for a period of two years. Under SRC 63.049 and 300.860, this tentative decision is void after two years if not finalized. To finalize the subdivision the applicants must complete the conditions listed above and prepare a final plat for approval by the City of Salem, per SRC 63.052, before recordation. Approval of the final plat does not relieve the applicants from complying with other applicable provisions of the Salem Revised Code or the Oregon Revised Statutes that may govern development of this property.

Decision issued according to Salem Revised Code 63.046.

Application Deemed Complete: September 26, 2011
Decision Date: November 3, 2011
State Mandated Decision Date: January 23, 2012

This decision is final unless written appeal from an aggrieved party is received by the City of Salem Planning Division, Room 305, 555 Liberty Street SE, Salem, OR 97301, not later than **November 18, 2011, 5:00 p.m.** The appeal must state where the decision failed to conform to the provisions of the subdivision ordinance (SRC Chapter 63). The appeal is to be filed in duplicate with the City of Salem Planning Division. The appeal fee is to be paid at the time of filing. The Salem Planning Commission will review the appeal at a public hearing. After the hearing, the Planning Commission may amend, rescind, or affirm the action, or refer the matter to staff for additional information.

Glenn W. Gross, Urban Planning Administrator

Attachments:
1. Vicinity Map
2. Applicant's Tentative Subdivision Plan
3. Public Works Department Comments
4. Marion County Comments
5. Salem-Keizer School District Comments

Prepared by Bryan Colbourne, Planner III

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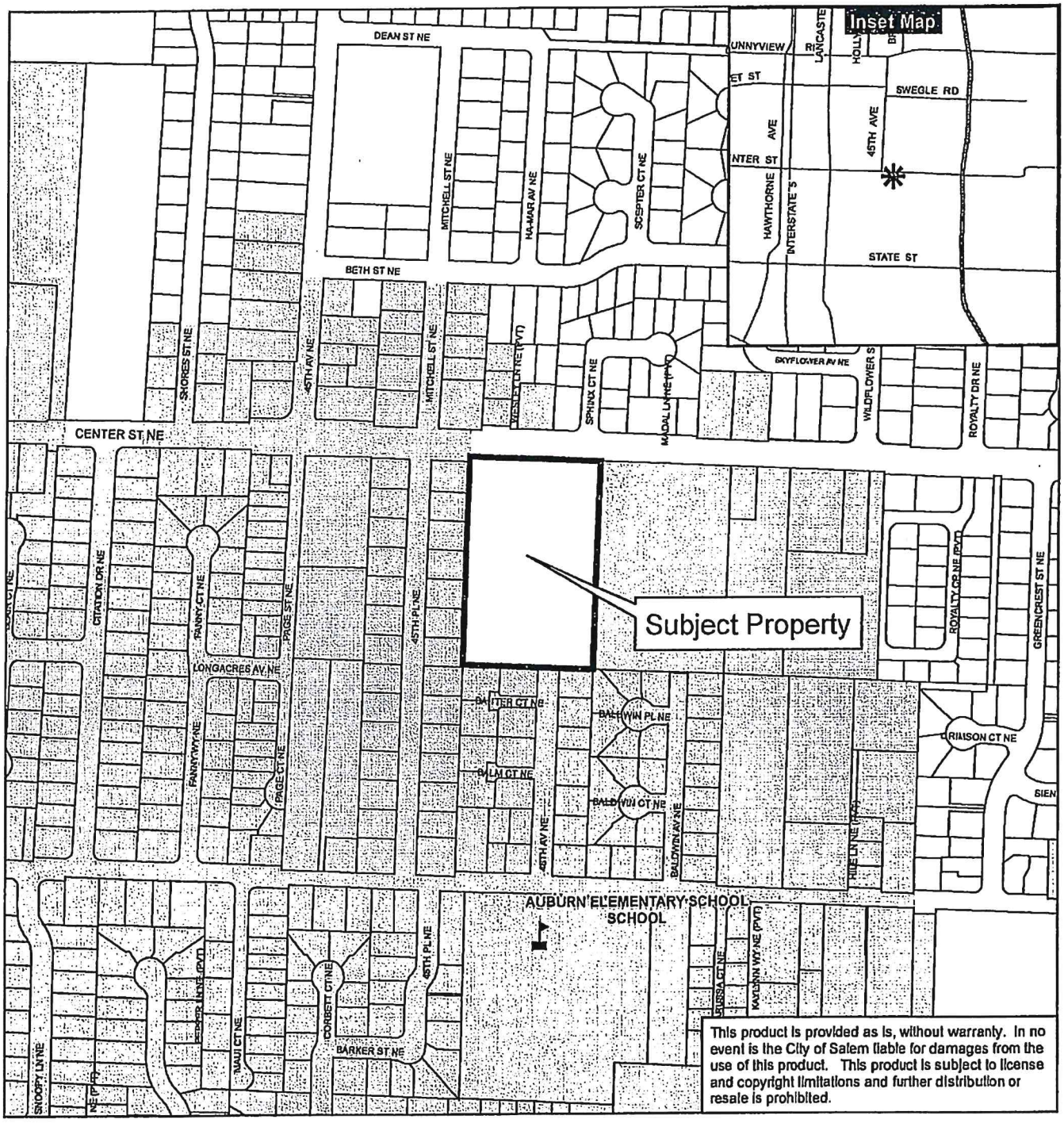
Vicinity Map
4560 Center Street NE

Taxlot: 072W30AA08000



Legend

- Outside Salem City Limits
- Urban Growth Boundary
- Taxlots
- Historic District
- Schools
- Parks

0 100 200 400 Feet

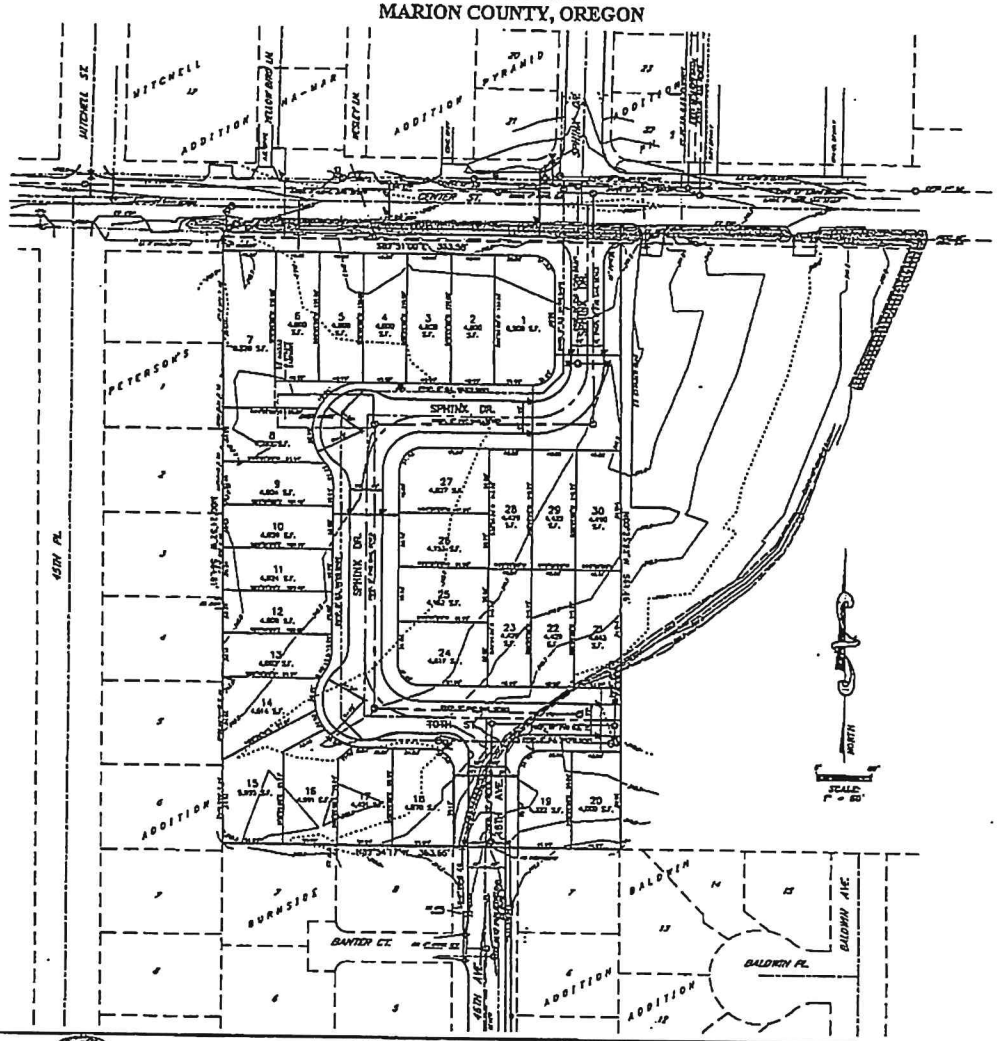
N:\CD\Proj\CP\Vicinity_Maps\072w30aa08000.mxd 9/2/2011

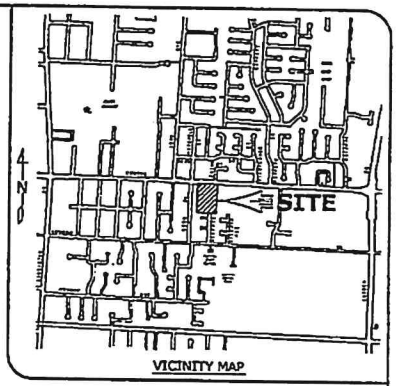
ATTACHMENT 1

ATTACHMENT 2

AVERETTE PROPERTY

SEC. 30, T. 7 S., R. 2 W., W.M.
CITY OF SALEM
MARION COUNTY, OREGON





VICINITY MAP

Owner / Developer:
BEAUFORD AVERETTE
2480 ROUND TREE AVE. N.W.
SALEM, OREGON 97304

PARCEL SIZE:
DEVELOPABLE AREA ____ 4.71 AC.
NUMBER OF UNITS ____ 30
DENSITY ____ 6.37 UNITS/ACRE
LARGEST LOT ____ 8,220 SQ. FT.
SMALLEST LOT ____ 4,000 SQ. FT.
AVERAGE ____ 4,711 SQ. FT.

ADDRESS: ____ 4560 CENTER ST., SALEM, OR
EXISTING ZONE ____ RESIDENTIAL AGRICULTURE
COMPREHENSIVE DESG. ____ RESIDENTIAL SINGLE FAMILY

UTILITIES:
CABLE ____ COMCAST CABLE SERVICES
POWER ____ P.G.E.
PHONE ____ QWEST COMMUNICATIONS
GAS ____ N.W. NATURAL
STORM DRAIN,
SANITARY SEWER,
WATER ____ CITY OF SALEM

ATTACHMENT 2

RECEIVED
SEP 15 2011
COMMUNITY DEVELOPMENT

MULTI/TECH ENGINEERING SERVICES, INC.

NOT FOR CONSTRUCTION UNLESS OTHERWISE APPROVED HERE

NO CHANGES, MODIFICATIONS OR REPRODUCTIONS TO BE MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM THE DESIGN ENGINEER.

DIMENSIONS & NOTES TAKE PRECEDENCE OVER GRAPHICAL REPRESENTATION.

Design: R.G.G.
Drawn: R.G.G.
Checked: R.G.G.
Date: JULY, 2011
Scale: AS SHOWN
As-Built: ____

AVERETTE PROPERTY

PRELIMINARY PLAN

Project Number 5262
Sheet Number 1 of 1

PUBLIC WORKS

CITY OF Salem AT YOUR SERVICE

MEMO

TO: Bryan Colbourne, Planner III
Community Development Department

FROM: for Glenn Davis, P.E., C.F.M., Chief Development Engineer
Public Works Department

DATE: November 1, 2011

SUBJECT: **PUBLIC WORKS RECOMMENDATIONS**
SUBDIVISION NO. 11-01 (11-112375)
4560 CENTER STREET NE
THIRTY-LOT SUBDIVISION

PROPOSAL

To subdivide approximately 4.7 acres into 30 lots ranging in size from approximately 4,000 square feet to 7,045 square feet for property that is zoned RA (Residential Agriculture) and located at 4560 Center Street NE.

RECOMMENDED CONDITIONS OF PLAT APPROVAL

1. Convey land for dedication to equal a half-width right-of-way of 48 feet on the development side of Center Street NE (Center).

2. Along the entire frontage of the development side of Center, construct a minimum 34-foot-wide half-street improvement as defined in SRC 63.030(pp)(8).

3. The alignment of Sphinx Drive NE along the east line of the subject property shall accommodate for a future street extension to the east as approved by the Public Works Director.

4. Vehicular and pedestrian connectivity is required to 46th Avenue NE (46th) at the south line of the subject property. The applicant shall obtain applicable permits from Marion County as needed to gain access across the existing reserve strip on the northern portion of 46th.

5. Except as described below, design and construct utilities as shown on the tentative plan or in alternate alignments as approved by the Public Works Director in compliance with the City Design Standards and Construction

ATTACHMENT 3

Code authority references are abbreviated in this document as follows: *Salem Revised Code* (SRC); *Public Works Design Standards* (PWDS); *Salem Transportation System Plan* (Salem TSP); and *Stormwater Management Plan* (SMP).

Specifications that are in effect at the time of construction plan submittal:

a. Extend the proposed sanitary sewer main in Toth Street NE (Toth) to the east line of the subject property.

b. Construct a minimum 8-inch water main within 46th from Toth to the northerly terminus of the existing SESWD water main in 46th. The system shall include an isolation valve consistent with Water Distribution Design Standards.

c. To mitigate downstream stormwater impacts of the proposed development, either:

   i. Acquire a public storm easement between the proposed stormwater outfall near the easterly terminus of Toth and the approved point of disposal in Center; or

   ii. Construct an alternative stormwater outfall location consistent with the City of Salem Design Standards; or

   iii. Restrict stormwater discharge from the proposed development such that the quality and quantity of runoff is equivalent to the nature of flow prior to development.

FACTS

1. Center Street NE

   a. Existing Conditions – This street has an approximate 32-foot improvement within a 70-foot-wide right-of-way abutting the subject property.

   b. Standard – This street is designated as a major arterial street in the Salem TSP. The standard for this street classification is a 68-foot-wide improvement within a 96-foot-wide right-of-way.

2. 46th Avenue NE

   a. Existing Conditions – This street has an approximate 32-foot improvement within a 60-foot-wide right-of-way abutting the subject property.

   b. Standard – This street is designated as a local street in the Salem TSP. The standard for this street classification is a 30-foot-wide improvement within a 60-foot-wide right-of-way.

Storm Drainage

1. Existing Conditions

   a. A 12-inch public storm drain line is located in Center.

   b. There appears to be a drainage ditch within the subject property along Center that drains to the east into a Marion County storm system.

Water

1. Existing Conditions

   a. The subject property is located in the G-0 water service level.

   b. A 12-inch City of Salem public water line located in Center that terminates at Wesley Lane NE.

   c. A 12-inch Suburban East Salem Water District (District) line is located in Center that terminates at the west line of the subject property. The subject property is located within the District.

   d. There is a 6-inch District water line in 46th.

Sanitary Sewer

1. Existing Conditions

   a. An 8-inch sewer line is located in Center.

   b. An 8-inch public sanitary sewer line is located in 46th that terminates at the intersection of 46th and Banter Court NE just south of the subject property.

Parks

1. Existing Conditions

   c. Weathers Street Park is located approximately one-half mile to the northwest of the subject property.

   d. Royal Oaks Park is located approximately one-half mile to the northeast of the subject property.

CRITERIA AND FINDINGS

Salem Revised Code 63.046(b) and 63.051 indicate the criteria that must be found to exist before an affirmative decision may be made. These criteria and the corresponding findings are as follows:

SRC 63.046(b)(1): Approval does not impede the future use of the remainder of the property under the same ownership, or adversely affect the safe and healthful development of the remainder or any adjoining land or access thereto.

Finding – The tentative plan does not impede the future use of the property. Toth is extended to the east line to ensure adequate connectivity and utility services to the easterly neighboring property.

SRC 63.046(b)(2): Provisions for water, sewer, streets, and storm drainage facilities comply with the city's public facility plan.

Finding – The Public Works Department has reviewed the applicant's preliminary plan for this site. The following improvements are needed to ensure that the water, sewer, and storm infrastructure is adequate to serve the proposed development:

a. The proposed sanitary sewer main in Toth shall be extended to the east line of the subject property to serve future development to the east.

b. To provide adequate interconnectivity, the proposed water system shall be extended and connected to the existing SESWD water main in 46th. The system shall include an isolation valve consistent with Water Distribution Design Standards.

c. Public drainage discharging from the subject property must be discharged to an approved point of disposal, which in this case is Center. In order to discharge to the existing drainage system east of Toth, the application shall acquire a public storm easement between the proposed stormwater outfall and the approved point of disposal in Center.

d. Right-of-way dedication and boundary street improvements are required along Center to meet its major arterial classification. Internal streets shall be local streets as designated in the Salem TSP. The local street connection southerly to 46th and easterly through Toth is consistent with the provisions of SRC 63.225(p).

SRC 63.047(b)(3): The tentative plan complies with all applicable provisions of this Code, including the Salem zoning ordinance, except as may be waived by variance granted as provided in this chapter.

Findings – Public Works staff has analyzed the proposed development for compliance with applicable provisions of SRC Chapters 21, 63, 65-66, 69-70, 72-78, 80, and 140.

Any Code provisions found to be out of compliance are shown in the recommended conditions of development.

SRC 63.046(b)(4): The proposed subdivision provides safe and convenient bicycle and pedestrian access from within the subdivision to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development.

Findings – All boundary and internal streets will be constructed at widths specified in the Salem TSP to provide safe vehicular, bicycle, and pedestrian access within and abutting the subdivision. The street system in the vicinity of the proposed development is inadequate to provide safe and convenient bicycle and pedestrian access, and the requirements will be addressed in the recommended conditions of development.

Sidewalks shall be constructed along the east boundary of the subject property from Center to proposed lot 30 in conjunction with internal street construction. Remaining sidewalk construction along the internal street boundaries can be deferred until building permits are issued for individual lots.

RESPONSE TO CITIZEN AND AGENCY COMMENTS:

Summarized below are comments from concerned citizens and agencies, followed by the staff response to each concern:

1. *School Crossing zone and signage should be reconsidered on Center Street NE.* Response: The existing school crossing zone and signage is within Marion County and outside City jurisdiction.

2. *Sidewalks in this area are discontinuous between the proposed development and the Auburn Elementary School. It is recommended that sidewalks be required on the County portion of 46th Street NE, an approximate 160-foot long gap on the north end of the west side of 46th Avenue NE.* Response: The missing sidewalk connection is located within Marion County and outside City jurisdiction. Pedestrian access is available on the east side of 46th Avenue NE.

3. *The County owns a 3-foot-wide reserve strip at the northern terminus of 46th Avenue NE:* Response: As described in the conditions of approval, the developer will need to obtain permits necessary for work within the existing reserve strip.

Prepared by: Robin Bunse, Administrative Analyst II
Public Works, Development Services

cc: File

Marion County
OREGON

PUBLIC WORKS

October 10, 2011

Via email: bcolbourne@cityofsalem.net
Bryan Colbourne, Case Manager
Planning Division
City of Salem
555 Liberty Street SE, Rm 305
Salem OR 97301

RE: Response to Request for Comments
Proposed Subdivision, Sub11-001, 4560 Center St NE, Salem

Dear Bryan,

Thank you for the opportunity to comment on the proposal for subdivision of the above-referenced property into 30 lots, on a 4.7-acre parcel zoned RA (Residential Agriculture). Approval of the proposal will generate traffic affecting Center Street NE, 46th Street NE, as well as other roads and intersections in the area. The County had previously submitted comments for annexation pre-application No 09-58A for the subject property. The Public Works Department has the following expanded set of comments pertaining to anticipated future development enabled by the proposed subdividing.

1. The City of Salem requires linking street improvements. Many roads in the area are under Marion County jurisdiction. If the linking street improvements affect County facilities, they shall be to City and County standards. All appropriate engineering reviews and permits will be required for all improvements on County facilities.

2. Portions of frontage improvements (such as tapers) that will extend or connect into the adjacent County roads shall be designed and constructed to County standards. The applicant will need to submit signed and sealed engineering plans to County Public Works for review and approval. The applicant is also responsible to acquire the appropriate permits for construction activity affecting County facilities. This includes such traffic control elements as flagging and detours associated with construction.

3. Design of improvements on private property should not block historical or naturally occurring runoff from adjacent properties. Closed system stormwater drainage from the northern end of 46th Street NE discharges to an open ditch traversing the subject property.

ATTACHMENT 4

County mapping also indicates the possibility of a second active drainage line following a circuitous path crossing Banter Court NE that connects to the aforementioned ditch north of 46th Street NE. The Developer is advised to conduct offsite topographic survey work to gather more detailed drainage information. A portion of County East Salem Service District (ESSD) Drainage Map #17 for this area is attached for reference.

4. The County owns a 3-foot wide Reserve Strip at the northern terminus of 46th Avenue NE. To reiterate, the Developer will also need to secure permits from Public Works for any work within or directly abutting this strip, such as paving, drainage and utility work.

5. Due to the property's proximity to an elementary school, we recommend that the City require the applicant to design and construct linking sidewalk improvements on the County portion of 46th Street NE. Although there is continuous curbline sidewalk along the east side of 46th Street NE north of Auburn Road NE to the subject property, an approximate 160-foot long gap exists on the north end of the west side of the 46th Street NE.

If you have any questions, please contact me at (503) 584-7706.

Sincerely,

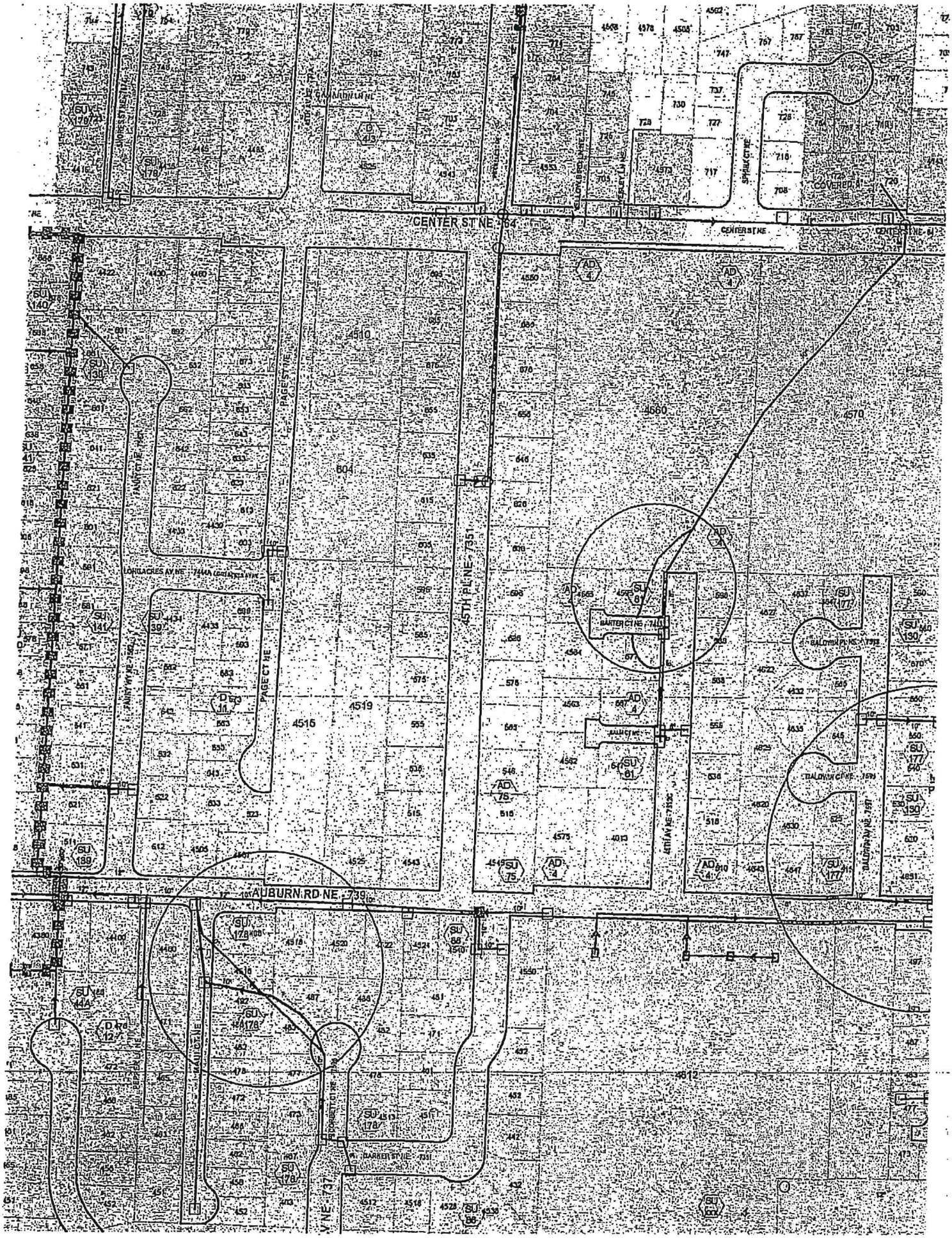
John Rasmussen

John Rasmussen, Civil Engineering Associate
Land Development Engineering & Permits

JR:dls

Attachment: County ESSD Drainage Map

G:\Engineering\LDEng&Permits\PlanningActions\2011\Cities\Salem\Sub 11-01.doc


CENTER ST NE
45TH PL NE
AUBURN RD NE
PAGE CT NE
PAGE ST NE
LONGACRES AV NE
BARKER CT NE
BARKER ST NE
4510
4519
4516
4560
4570
4812

LEARNING FOR A LIFETIME
SALEM•KEIZER
PUBLIC SCHOOLS

DAVID FRIDENMAKER, Manager
Facilities and Planning Department
Planning and Property Services
3630 State Street, Bldg. C • Salem, Oregon 97301
503-399-3290 • Mobile: 503-932-4727 • FAX: 503-375-7847
E-mail: fridenmaker_david@salkeiz.k12.or.us

Sandy Husk, Superintendent

October 7, 2011

Bryan Colbourne, Planner III
Planning Division, City of Salem
555 Liberty Street SE, Room 305
Salem OR 97301

FAX No. 503-588-6005

RE: Land Use Activity
Salem Subdivision Case SUB11-01, 4560 Center St. NE

SUMMARY OF COMMENTS
School District: The proposed subdivision is located within the Salem-Keizer School District
School Assignment: The proposed subdivision is located within the attendance areas of Auburn Elementary School, Houck Middle School and North Salem High School.
School Capacity: Sufficient school capacity currently exists to serve the proposed development.
School Tranportation Services: The proposed subdivison is within the school walk zone for Auburn Elementary School. School transportation is provided for middle and high school students.
School proximity, school zones and school crossings:
1. Auburn Elementary School is located about 600 feet south of the proposed subdivison. The school zone should be physically identified with signs and/or beacons for vehicles using 46th Ave. and Sphinx Dr.
2. There is a school crossing across Center St. at 45th Place. The school crossing zone and signage is located about where the proposed new Sphinx Dr. intersects with Center St. Appropriate school crossing zone traffic devices should be provided.
3. With the opening of a new street, Sphinx Dr. at Center St. through to Auburn Rd., consider whether the marked crossing across Center St. at 45th Pl. is the best location for a marked crossing. Both Auburn Elementary School and adjacent Marion County's Auburn Park are pedestrian destinations in this neighborhood.
4. Also, with the new connecting street of Sphinx Dr./46th Ave. at Auburn Rd., consider whether the marked crossing across Auburn Rd. at 45th Pl. is the best location for a marked pedestrian crossing and whether a marked crossing across 45th Pl. at Auburn Rd., or other locations, are needed.
5. Sidewalks in this area are discontinuous between the proposed development and the Auburn Rd. school crossing and discontinuous between the proposed development and Auburn Elementary School. Connectivity in the pedestrian system is needed.
6. Assess vehicular traffic and potential for thru traffic on Sphinx Dr./46th Ave. between Auburn Rd. and Center St. Address, if needed, to minimize vehicular and vehicular-pedestrian conflicts.
7. Assess parking and vision clearances at intersections and pedestrian crossings. Address, if needed, to minimimize vehicular and vehiclular-pedestrian conflicts.

Below is data and the District's comments regarding the proposed land use activity identified above. If you have questions, please call at (503) 399-3290.

ATTACHMENT 5

ELEMENTARY SCHOOL INFORMATION (GRADES K TO 5)

1. School Name: Auburn Elementary School, 4612 Auburn Rd. NE
2. Estimated change in student enrollment due to proposed development: 8
3. Current school capacity: 718
4. Estimate of school enrollment including new development: 647
5. Ratio of estimated school enrollment to total capacity including new development: 90%.
6. Walk Zone Review: Within walk zone of Elementary School.
7. Estimate of additional students due to previous 2010 land use applications: 170
8. Estimate of additional students due to previous 2011 land use applications: 1
9. Estimated cumulative impact of 2010-11 land use actions on school capacity: 114% of capacity.

MIDDLE SCHOOL INFORMATION (GRADES 6 TO 8)

1. School Name: Houck Middle School, 1155 Connecticut St. SE
2. Estimated change in student enrollment due to proposed development: 4
3. Current school capacity: 1,232
4. Estimate of school enrollment including new development: 964
5. Ratio of estimated school enrollment to total capacity including new development: 78%
6. Walk Zone Review: Eligible for transportation to Middle School.
7. Estimate of additional students due to previous 2010 land use applications: 74
8. Estimate of additional students due to previous 2011 land use applications: 1
9. Estimated cumulative impact of 2010-11 land use actions on school capacity: 84% of capacity.

HIGH SCHOOL INFORMATION (GRADES 9 TO 12)

1. School Name: North Salem High School, 765 14th St. NE
2. Estimated change in student enrollment due to proposed development: 5
3. Current school capacity: 2,015
4. Estimate of school enrollment including new development: 1,928
5. Ratio of estimated school enrollment to total capacity including new development: 96%
6. Walk Zone Review: Eligible for transportation to High School.
7. Estimate of additional students due to previous 2010 land use applications: 89
8. Estimate of additional students due to previous 2011 land use applications: 1
9. Estimated cumulative impact of 2010-11 land use actions on school capacity: 100% of capacity.

ESTIMATE SUMMARY (GRADES K TO 12):

1. Total estimated change in student enrollment: 17
2. Total estimated student enrollment over capacity: 8
3. Estimated short-term cost to District for new facilities, beyond current facility capacity, due to change in student enrollment: **$ 47,408**
4. Total estimated additional income to District for new facilities due to change in student enrollment: **$ 0**

Developer should provide paved walk route(s) to allow pedestrian access and bicycle access to school(s) from all residences within the new development and should provide all improvements required by the City of Salem where new transportation routes are established or existing transportation routes change, such as school flashers, crosswalks, and signage. As per ORS 195.115, when the walk zone review indicates "eligible for transportation due to hazard" the District requests that the City initiate a planning process with the District to identify the barriers and hazards to children walking or bicycling to and from school, determine if the hazards can be eliminated by physical or policy changes and include the hazard elimination in the City's planning and budgeting process.

ASSUMPTIONS:

1. When land use request is granted, 30 new residence(s) will be built.
2. Estimates are computed using the Student Rate per Dwelling Method described in the District's Facility Study for years 2001-2020.
3. If current capacity exists at the schools currently serving the parcel then an estimate of zero cost, or no significant impact, is made.
4. If current capacity does not exist at the schools currently serving the parcel then an estimate of cost for one-time capital improvements is made.
5. Income from the proposed land use for capital improvement is assumed to be zero since capital improvement funds come from voter approved bond measures that can be an unpredictable and irregular source of income.
6. Income from a State School Facilities grant may be available depending on state funding. The grant amount ranges from 0% to 8% of the construction cost. Since the funding is unpredictable, it has not been included as income. The current 2007-08 facility grant funding is estimated at $46,244.
7. General Fund Budget Amount for the 2009-10 school year is $8,597 per student (ADM). The State School Fund Revenue for 2009-10 is estimated to be $7,490 per student (ADM). ADM is "Average daily membership" as defined in ORS 327.006 (3).

Sincerely,

David Fridenmaker, Manager
Planning and Property Services

c: Mike Wolfe, Asst. Superintendent
Luis Caraballo, Director of Facilities and Planning
Kelly Carlisle, Director of Secondary Education
Melissa Cole, Director of Secondary Education
Ron Speck, Director of Elementary Education
Meera Kreitzer, Director of Elementary Education
Mike Bednarek, Special Projects Coordinator
Gene Bloom, Risk Management Dept.
Michael Shields, Transportation Dept.

Bonnie Brennan

From: Bonnie Brennan
Sent: Monday, December 9, 2019 9:27 AM
To: susann@kaltwasser.com; nanasue03@yahoo.com
Cc: Mark B. Ferris
Subject: Notification of Tentative Subdivision Land Use Application in the ELNA
Attachments: 60-PRELIMINARY-SITE-PLAN.pdf.pdf

Dear Ms. Kaltwasser and Ms. Fowler, co-chairs of the East Lancaster Neighborhood Association,

In accordance with SRC 300.310, this email shall serve as notification that Don Jensen, (503.932.2259/don.jensen@jensencollc.com) of Jensen Consulting and Development, LLC is submitting a Tentative Subdivision Land Use Application for Tax Map, 072W30AA, Tax Lot 08000, located at 4560 Center Street NE, Salem OR 97301 to the City of Salem. This proposed 24-Lot Residential Subdivision is located on the south side of Center Street NE, in between 45th Place NE and Royalty Circle NE and is within the East Lancaster Neighborhood Association. According, to Table 300.2 in Section 300.110, an Open House is not required. Please see the attached Preliminary Site Plan for more Information. Please call or email if you have any questions.

Thank You,
Bonnie Brennan

BONNIE BRENNAN | Project Coordinator
PROJECT DELIVERY GROUP, LLC
503-364-4004 (Salem) | 530-215-1024 (Redding)
Salem Office | 200 Hawthorne Ave Suite A-100 Salem, OR 97301
Redding Office | 1890 Park Marina Drive Suite 210 Redding, CA 96001
bonnieb@PDGNW.com pdg@pdgnw.com

MARION COUNTY
SUBDIVISION/CONDOMINIUM NAME REQUEST

Marion County Surveyor – 5155 Silverton Road NE, Salem, OR 97305
Fax 503-588-7970 Phone 503-588-5155

Proposed Subdivision Name* : (Please do not use the word "Subdivision" as part of the name.)

NOTE: Reserved names expire 2 years from original approval date.

Subject to consent by prior party if name was previously used in a recorded plat, as outlined in ORS 92.090(1).

Belle Plaine Estates

Applicant Name: Don Jensen

Address: 5190 Kale St SE, Salem OR 97305

Owner/Developer: Don Jensen

Phone: 503-932-2259 Date: 11/18/2019

Location: Is the subdivision in a city? Yes X No

City Name: Salem

Section: 30 Township: 7S Range: 2W

Office Use Only

Date Received: 12/6/2019

The Proposed Name is:

X Approved as Submitted ***(approval expires in 2 years)***

_____ Not Approved for the following reason(s):

Phil R. Jones FOR Marion County Surveyor Date 12/9/2019

REEL 4259 PAGE 126
MARION COUNTY
BILL BURGESS, COUNTY CLERK
10-24-2019 03:02 pm.
Control Number 574071 $ 96.00
Instrument 2019 00052164

Recording Requested by and when recorded Return to:
RYAN W. COLLIER
COLLIER LAW
1020 LIBERTY ST. SE
SALEM, OR 97302
(503) 485-7224

Grantor:
Jack R. Yarbrough
PO Box 20756
Keizer, OR 97307

Grantee:
Jack Yarbrough
TRUSTEE OF THE JACK YARBROUGH REVOCABLE LIVING TRUST DATED November 9, 2015
PO Box 20756
Keizer, OR 97307

True and actual consideration
VALUE OTHER THAN MONEY

Send Tax Statements to:
NO CHANGE

STATUTORY WARRANTY DEED

Jack R. Yarbrough, Grantor, conveys and warrants to JACK YARBROUGH, TRUSTEE OF THE JACK YARBROUGH REVOCABLE LIVING TRUST DATED November 9, 2015, Grantee, the following described real property situated in the County of Marion, State of Oregon, free of encumbrances except as specifically set forth herein:

Lot 39, HAMPDEN PARK, in the City of Salem, County of Marion and State of Oregon.

Subject to and excepting:

1. City lien in favor of City of Salem,
   Purpose: Assessments - Potential/Deferred
   Amount: $3,843.01
   Reference No: 00512D/Tracking No. 1178335

2. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
   Granted to: Suburban East Salem Water District
   Purpose: Water pipelines
   Recording Date: July 30, 1959
   Recording No: Volume 525, Page 71
   Affects: Reference is hereby made to said document for full particulars

3. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document
   Recording Date: July 7, 1964
   Recording No: Reel 588, Page 196

4. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document
Recording Date: January 27, 1967

Situs Address: 4560 Center Street NE, Salem, Oregon 97302

Subject to regulations and excepting covenants, conditions and restrictions of record. Less portions heretofore conveyed.

True consideration for this conveyance is value other than money.

The liability and obligations of the Grantor to Grantee and Grantee's heirs and assigns under the warranties and covenants contained herein or provided by law shall be limited to the amount, nature and terms of any right or indemnification available to Grantor under any title insurance policy, and Grantor shall have no liability or obligation except to the extent that reimbursement for such liability or obligation is available to Grantor under any such title insurance policy.

Recorded at the Request of the Grantor. The draftsman assumes no responsibility for the legal description and stated title owner(s) herein which were supplied by the parties hereto.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300 (Definitions for ORS 195.300 to 195.336), 195.301 (Legislative findings) AND 195.305 (Compensation for restriction of use of real property due to land use regulation) TO 195.336 (Compensation and Conservation Fund) AND SECTIONS 5 TO 11, CHAPTER424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 (Definitions for ORS 92.010 to 92.192) OR 215.010 (Definitions), TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930 (Definitions for ORS 30.930 to 30.947), AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300 (Definitions for ORS 195.300 to 195.336), 195.301 (Legislative findings), AND 195.305 (Compensation for restriction of use of real property due to land use regulation) TO 195.336 (Compensation and Conservation Fund) AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, AND SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 9, OREGON LAWS 2010.

The foregoing language is included for the purpose of compliance with Oregon statutory requirements only, and is not intended to affect, limit or impair the rights and obligations of the parties under any other terms and conditions of this instrument.

Dated this 21st day of August, 2019

Grantor: _____
Jack R. Yarbrough

STATE OF OREGON)
County of Marion) ss.

The foregoing instrument was acknowledged before me this 21st day of August, 2019, by Jack R. Yarbrough.

_____
Sarah M. Lowe, Notary Public
My commission expires August 20, 2022

REEL: 4259 PAGE: 126

October 24, 2019, 03:02 pm.

CONTROL #: 574071

State of Oregon
County of Marion

I hereby certify that the attached instrument was received and duly recorded by me in Marion County records:

FEE: $ 96.00

BILL BURGESS
COUNTY CLERK

THIS IS NOT AN INVOICE.

Fidelity National Title - Oregon
500 Liberty St. SE, Ste 200, Salem, OR 97301

Preliminary Report

Fidelity National Title - Oregon
500 Liberty St. SE, Ste 200, Salem, OR 97301

Escrow Officer: Shelby Keys
Email: teamshelby@fnf.com
Phone: (503)585-7219
File No.: 60221908783

Property Address: 4690 Center Street NE, Salem, OR 97301

Introducing LiveLOOK

LiveLOOK title document delivery system is designed to provide 24/7 real-time access to all information related to a title insurance transaction.

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Effortless, Efficient, Compliant, and Accessible

Fidelity National Title
Company of Oregon

PRELIMINARY REPORT

In response to the application for a policy of title insurance referenced herein Fidelity National Title Company of Oregon hereby reports that it is prepared to issue, or cause to be issued, as of the specified date, a policy or policies of title insurance describing the land and the estate or interest hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations or Conditions of said policy forms.

The printed Exceptions and Exclusions from the coverage of said policy or policies are set forth in Exhibit One. Copies of the policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Fidelity National Title Insurance Company, a/an Florida corporation.

Please read the exceptions shown or referred to herein and the Exceptions and Exclusions set forth in Exhibit One of this report carefully. The Exceptions and Exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land.

This preliminary report is for the exclusive use of the parties to the contemplated transaction, and the Company does not have any liability to any third parties nor any liability until the full premium is paid and a policy is issued. Until all necessary documents are placed of record, the Company reserves the right to amend or supplement this preliminary report.

Countersigned

Randall S. Leeper Jr.

Fidelity National Title
Company of Oregon
500 Liberty St. SE, Ste 200, Salem, OR 97301
(503)585-7219

PRELIMINARY REPORT

ESCROW OFFICER: Shelby Keys
teamshelby@fnf.com
(503)585-7219

ORDER NO.: 60221908783

TITLE OFFICER: Patty Smith and Tom Skinner

TO: Fidelity National Title Company of Oregon
500 Liberty St. SE, Ste 200
Salem, OR 97301

ESCROW LICENSE NO.: 960100001
OWNER/SELLER: Jensen Consulting and Development LLC, an Oregon limited liability company
BUYER/BORROWER: Buyer to Come
PROPERTY ADDRESS: 4690 Center Street NE, Salem, OR 97301

EFFECTIVE DATE: December 3, 2019, 08:00 AM

1. THE POLICY AND ENDORSEMENTS TO BE ISSUED AND THE RELATED CHARGES ARE:

		AMOUNT		PREMIUM
ALTA Owner's Policy 2006 **Owner's Standard**	$	100,000.00	$	450.00
ALTA Loan Policy 2006 **Extended Lender's**	$	TBD	$	TBD
OTIRO 209.10-06 - Restrictions, Encroachments, Minerals - Current Violations (ALTA 9.10-06)			$	100.00
OTIRO 222-06 - Location (ALTA 22-06)			$	0.00
OTIRO 208.1-06 - Environmental Protection Lien (ALTA 8.1-06)			$	0.00
Government Lien Search			$	20.00

2. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

   A Fee

3. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

   Jack Yarbrough, Trustee of the Jack Yarbrough Revocable Living Trust, dated November 9, 2015

4. THE LAND REFERRED TO IN THIS REPORT IS SITUATED IN THE CITY OF SALEM, COUNTY OF MARION, STATE OF OREGON, AND IS DESCRIBED AS FOLLOWS:

   SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

EXHIBIT "A"

Legal Description

Lot 39, HAMPDEN PARK, in the City of Salem, County of Marion and State of Oregon.

AS OF THE DATE OF THIS REPORT, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN THE POLICY FORM WOULD BE AS FOLLOWS:

GENERAL EXCEPTIONS:

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; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency 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, or claims of easement, which are not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Any encroachment (of existing improvements located on the Land onto adjoining land or of existing improvements located on adjoining land onto the subject Land), encumbrance, violation, variation or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the subject Land.

5. Any lien or right to a lien for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

SPECIFIC ITEMS AND EXCEPTIONS:

6. Unpaid Property Taxes with partial payment are as follows:

Fiscal Year:	2019-2020
Original Amount:	$2,818.50
Unpaid Balance:	$97.08, plus interest, if any
Levy Code:	92401000
Account No.:	R76062
Map No.:	072W30AA08000

Prior to close of escrow, please contact the Tax Collector's Office to confirm all amounts owing, including current fiscal year taxes, supplemental taxes, escaped assessments and any delinquencies.

7. City lien in favor of the City of Salem,

Purpose:	Assessments - Potential/Deferred
Amount:	$3,843.01, plus interest and penalties, if any.
Reference No:	00512D/Tracking No. 1701373

8. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Suburban East Salem Water District
Purpose:	Water pipelines
Recording Date:	July 30, 1959
Recording No:	Volume 525, Page 71

9. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

   Recording Date: July 7, 1964
   Recording No: Reel 588, Page 196

10. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

    Recording Date: January 27, 1967
    Recording No: Reel 627, Page 79

11. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

12. In order to complete this report, the Company requires a Statement of Information to be completed by the following party(s),

    Party(s): Jack R. Yarbrough

    The Company reserves the right to add additional items or make further requirements after review of the requested Statement of Information.

    NOTE: The Statement of Information is necessary to complete the search and examination of title under this order. Any title search includes matters that are indexed by name only, and having a completed Statement of Information assists the Company in the elimination of certain matters which appear to involve the parties but in fact affect another party with the same or similar name. Be assured that the Statement of Information is essential and will be kept strictly confidential to this file.

13. Any invalidity or defect in the title of the vestees in the event that the trust referred to herein is invalid or fails to grant sufficient powers to the trustee(s) or in the event there is a lack of compliance with the terms and provisions of the trust instrument.

    If title is to be insured in the trustee(s) of a trust (or if their act is to be insured), this Company will require a copy of said Trust Agreement or a Trust Certification pursuant to ORS Chapter 130.860.

    The Company reserves the right to make additional requirements or add additional items or exceptions after review of the requested documentation.

    If the forthcoming conveyance/encumbrance is to be executed by the original trustee(s), it will not be necessary to furnish a copy of the trust agreement.

14. The Company has on file a copy of the Operating Agreement for Jensen Consulting and Development LLC, an Oregon limited liability company , dated April 12, 2013. A copy of any amendments subsequent to the date of said Operating Agreement should be furnished for review prior to closing.

    The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

    The Oregon Corporation Commission records show that as of December 10, 2019, Jensen Consulting and Development LLC is an active Oregon limited liability company and is currently in good standing.

15. We find no Notice of Completion recorded on said Land.

16. 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.

    To remove this item, the Company will require an affidavit and indemnity on a form supplied by the Company.

17. Any lien or right to a lien for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

    To remove this item, the Company will require an affidavit and indemnity on a form supplied by the Company.

18. Any encroachment (of existing improvements located on the subject Land onto adjoining land or of existing improvements located on adjoining land onto the subject Land), encumbrance, violation, variation or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject Land.

    The Company will require a survey of the Land by a professional surveyor, and this exception may be eliminated or limited as a result thereof.

ADDITIONAL REQUIREMENTS/NOTES:

A. In addition to the standard policy exceptions, the exceptions enumerated above shall appear on the final 2006 ALTA Policy unless removed prior to issuance.

B. Note: The name(s) of the proposed insured(s) furnished with this application for title insurance is/are:

    No names were furnished with the application. Please provide the name(s) of the buyers as soon as possible.

C. Note: The only conveyance(s) affecting said Land, which recorded within 24 months of the date of this report, are as follows:

Grantor:	Jack R. Yarbrough
Grantee:	Jack Yarbrough, Trustee of the Jack Yarbrough Living Revocable Trust, dated November 9, 2015
Recording Date:	October 24, 2019
Recording No:	Reel 4259, Page 126

D. Note: No utility search has been made or will be made for water, sewer or storm drainage charges unless the City/Service District claims them as liens (i.e. foreclosable) and reflects them on its lien docket as of the date of closing. Buyers should check with the appropriate city bureau or water service district and obtain a billing cutoff. Such charges must be adjusted outside of escrow.

E. Note: Effective January 1, 2008, Oregon law (ORS 314.258) mandates withholding of Oregon income taxes from sellers who do not continue to be Oregon residents or qualify for an exemption. Please contact your Escrow Closer for further information.

F. THE FOLLOWING NOTICE IS REQUIRED BY STATE LAW: YOU WILL BE REVIEWING, APPROVING AND SIGNING IMPORTANT DOCUMENTS AT CLOSING. LEGAL CONSEQUENCES FOLLOW FROM THE SELECTION AND USE OF THESE DOCUMENTS. YOU MAY CONSULT AN ATTORNEY ABOUT THESE DOCUMENTS. YOU SHOULD CONSULT AN ATTORNEY IF YOU HAVE QUESTIONS OR CONCERNS ABOUT THE TRANSACTION OR ABOUT THE DOCUMENTS. IF YOU WISH TO REVIEW TRANSACTION DOCUMENTS THAT YOU HAVE NOT SEEN, PLEASE CONTACT THE ESCROW AGENT.

G. Recording Charge (Per Document) is the following:

County	First Page	Each Additional Page
Marion	$86.00	$5.00
Benton	$108.00	$5.00
Polk	$91.00	$5.00
Linn	$105.00	$5.00

Note: When possible the company will record electronically. An additional charge of $5.00 applies to each document that is recorded electronically.

Note: Please send any documents for recording to the following address:
Portland Title Group
Attn: Recorder
1433 SW 6th Ave.
Portland, OR. 97201

H. Note: This map/plat is being furnished as an aid in locating the herein described Land in relation to adjoining streets, natural boundaries and other land. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances or acreage shown thereon.

I. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

EXHIBIT ONE

2006 AMERICAN LAND TITLE ASSOCIATION LOAN POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning) restricting, regulating, prohibiting or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions or location of any improvement erected on the land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with the applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in the Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

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; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. 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, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
5. Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

2006 AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses that arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning) restricting, regulating, prohibiting or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions or location of any improvement erected on the land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in the Covered Risk 9 of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage.

SCHEDULE B - GENERAL EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

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; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. 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, or claims of easement, not shown by the Public Records; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
5. Any lien for services, labor or material heretofore or hereafter furnished, or for contributions due to the State of Oregon for unemployment compensation or worker's compensation, imposed by law and not shown by the Public Records.

WIRE SAFE™ | Inquire before you wire!

WIRE FRAUD ALERT

This Notice is not intended to provide legal or professional advice.
If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the number of relevant parties to the transaction as soon as an escrow account is opened.** DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
http://www.fbi.gov

Internet Crime Complaint Center:
http://www.ic3.gov

FIDELITY NATIONAL FINANCIAL
PRIVACY NOTICE
Revised May 1, 2018

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF", "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

Types of Information Collected

We may collect two types of information from you: Personal Information and Browsing Information.

Personal Information. FNF may collect the following categories of Personal Information:

- contact information (e.g., name, address, phone number, email address);
- demographic information (e.g., date of birth, gender, marital status);
- identity information (e.g. Social Security Number, driver's license, passport, or other government ID number);
- financial account information (e.g. loan or bank account information); and
- other personal information necessary to provide products or services to you.

Browsing Information. FNF may automatically collect the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or mobile device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website.

How Personal Information is Collected

We may collect Personal Information about you from:

- information we receive from you on applications or other forms;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

How Browsing Information is Collected

If you visit or use an FNF Website, Browsing Information may be collected during your visit. Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics

Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to other websites. FNF is not responsible for the privacy practices or the content of any of those other websites. We advise you to read the privacy policy of every website you visit.

Use of Personal Information

FNF uses Personal Information for three main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates', and third parties' products and services, jointly or independently.

When Information Is Disclosed

We may make disclosures of your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Please see **"Choices With Your Information"** to learn the disclosures you can restrict.

Security of Your Information

We maintain physical, electronic, and procedural safeguards to guard your Personal Information. We limit access to nonpublic personal information about you to employees who need to know that information to do their job. When we provide Personal Information to others as discussed in this Privacy Notice, we expect that they process such information in compliance with our Privacy Notice and in compliance with applicable privacy laws.

Choices With Your Information

If you do not want FNF to share your information with our affiliates to directly market to you, you may send an "opt out" request by email, phone, or physical mail as directed at the end of this Privacy Notice. We do not share your Personal Information with nonaffiliates for their use to direct market to you.

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties, except as permitted by California law.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not disclose information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

Information From Children

The FNF Websites are meant for adults and are not intended or designed to attract persons under the age of eighteen (18). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users

FNF's headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence for any of the purposes described in this Privacy Notice. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans

Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the "Service Websites"). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender's privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender's privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except (1) as required or authorized by contract with the mortgage loan servicer or lender, or (2) as required by law or in the good-faith belief that such disclosure is necessary to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The revised Privacy Notice, showing the new revision date, will be posted on the FNF Website. Each time you provide information to us following any amendment of this Privacy Notice, your provision of information to us will signify your assent to and acceptance of the terms of the revised Privacy Notice for all previously collected information and information collected from you in the future. We may use comments, information or feedback that you submit to us in any manner that we may choose without notice or compensation to you.

Accessing and Correcting Information; Contact Us

If you have questions, would like to access or correct your Personal Information, or want to opt-out of information sharing for affiliate marketing, send your requests via email to privacy@fnf.com, by phone to (888) 934-3354, or by mail to:

Fidelity National Financial, Inc.
601 Riverside Avenue,
Jacksonville, Florida 32204
Attn: Chief Privacy Officer