forest grove

FOREST GROVE PLANNING COMMISSION MEETING

COMMUNITY AUDITORIUM, 1915 MAIN STREET
MONDAY, SEPTEMBER 15, 2014-- 7:00 P.M.

PLANNING COMMISSION

Tom Beck, Chair

Lisa Nakajima, Vice Chair
Carolyn Hymes
Dale Smith
Hugo Rojas
Phil Ruder
Sebastian B. Lawler

The Planning Commission welcomes your attendance and participation. If you wish to speak on an agenda item, please feel free to do so. However, in fairness to others, we respectively ask that you observe the following:

* Please follow sign-in procedures on the table by the entrance to the auditorium.
* Please state your name and address clearly for the record.
* Groups or organizations are asked to designate one speaker in the interest of time and to avoid repetition.
* When more than one citizen is heard on any matter, please keep your comments to five minutes and avoid repetition in your remarks. Careful attention to the previous speaker's points will help in this regard.
* The Planning Commission carefully considers all the facts before a decision is made. Brief statements are most helpful in reaching a decision based on sound judgment.

Planning Commission meetings are electronically recorded and are handicap accessible. Assistive Listening Devices (ALD) or qualified sign language interpreters are available for persons with impaired hearing or speech. For any special accommodations, please contact the City Recorder at 503.992.3235, at least 48 hours prior to the meeting.

AGENDA

(1.) Roll Call
(2.) Public Meeting
1. Public Comment Period for Non-Agenda Items
2. **Action Item: Review of re-location of two unplatted and undeveloped streets in Pacific Crossing PRD.**
3. **Public Hearing: Silverstone PRD-14-00141 - A Planned Residential Development consisting of 204 single-family detached residential lots, several open space / recreational tracts, and several water quality tracts (located at 2465 NW Highway 47).**
4. Work Session Items: None.

(3) Business Meeting
1. Approval of Minutes
2. Reports from Commissioners/Subcommittees
3. Director's Report
4. Announce next meeting
5. Adjourn

Planned Residential Development Staff Report and Recommendation

Community Development Department, Planning Division

REPORT DATE:	September 8, 2014
HEARING DATE:	September 15, 2014
LAND USE REQUEST:	Re-location of two unplatted and undeveloped streets in Pacific Crossing, a Planned Residential Development
FILE NUMBER:	PRD-04-01
FILE NAME:	Pacific Crossing
PROPERTY LOCATION:	Pacific Crossing Subdivision
LEGAL DESCRIPTION:	Washington County Tax Lot 1N4 36-3500
APPLICANT:	Applicant: Venture Properties Inc. (Mimi Doukas), 4230 Galewood Street, Lake Oswego, Oregon 97035
OWNER:	Owner: Pacific Crossing Land, LLC, 1918 8th Avenue, Suite 3400, Seattle, Washington 98101
ZONING AND PLAN DESIGNATIONS:	Comprehensive Plan Map Designation: Low Density Residential – Standard (LDR-B) Base Zone Designation: R-7 Single-Family Residential
APPLICABLE STANDARDS AND CRITERIA:	City of Forest Grove Development Code: ❑ Section 10.4.200 et. seq. *Planned Developments* ❑ Section 10.6.095 et. seq. *Subdivisions* ❑ Section 10.8.600 et. seq. *Public Improvements* ❑ Section 10.8.900 et. seq. *Land Division Standards*
REVIEWING STAFF:	James Reitz (AICP), Senior Planner
RECOMMENDATION:	Staff recommends approval with conditions

I. LAND USE HISTORY

Pacific Crossing was approved as a planned development in 2005 by Ordinance No. 2005-05 (see Attachment B). Consisting of 305 lots, it was to be constructed in four phases. Phase 1 would have been in the northwest quadrant of the project site, and the subsequent phases were to be developed in counterclockwise order.

The then-developer (Renaissance Homes) opted to revise the phasing and develop mostly those home sites on the north side of Goff Road (only three homes and the community building and pool were built on the south side). In essence, both Phase 1 and Phase 4 were constructed at the same time. Home building commenced, but Renaissance Homes fell victim to the Great Recession and lost the project.

Homes continued to be built however, by a variety of builders, and all the lots north of Goff Road have been built-out or are committed. With continued strength in the local home market, another developer - Venture Properties - is interested in picking up Pacific Crossing's original Phase 2.

Phase 2 was originally planned for 85 lots. The applicant proposes to split this phase into two phases: Phase 2A would have 46 lots and Phase 2B would have 39 lots.

The applicant examined the preliminary grading plan for all of Phase 2 and concluded that the approved street layout would result in excessive (and expensive) earthwork. The applicant has teamed with the original Pacific Crossing civil engineer and developed an alternative that would result in much less earthwork. This alternative would require shifting two proposed streets to the southeast of their originally-proposed locations. While the proposed relocations would affect only a small number of lots and would not significantly modify the street network, the change is significant enough to warrant Planning Commission review.

No public notice is required for the Planning Commission's review of this request. The applicant has approached the owners of abutting property to confirm their agreement with the proposed street stub locations into their respective properties. The agent representing the properties adjacent to the Heartwood / Strasburg Drive intersection has submitted an email in support of this application (see Attachment C). The applicant hopes to have a letter of support from the other property owner in time for the meeting.

II. REQUIRED APPROVALS

As noted above, this project was originally approved in 2005. In 2009 the City adopted a new Development Code. The City Attorney has advised that the request to modify the tentative plat, and the resultant street grade changes, should be reviewed against current code criteria.

Development Code Section 10.4.205(B) stipulates that "The final plan for the PD is reviewed under Type II administrative procedures. The applicant must submit detailed and technical information necessary to demonstrate that all applicable City standards, requirements, and conditions have been met. Approval will only be granted if the final plan is in substantial conformance with the preliminary plan."

While the proposed modification would affect only a small number of lots and would not significantly alter the street network, the change is significant enough to warrant a Type III - Planning Commission - review.

III. ANALYSIS

A. DESCRIPTION OF PROPOSAL:

The applicant is proposing to develop Pacific Crossing Phase 2. This phase was originally proposed to have 85 lots. The applicant proposes to split this phase into two phases: Phase 2A would have 46 lots and Phase 2B would have 39 lots. The requested street relocations would be in Phase 2B.

The streets proposed to be relocated would be Heartwood and Terrawood. Each would be designated as Local streets on the City's Transportation System Plan (TSP). Each is proposed to be shifted approximately 100 feet to the southeast of their originally-proposed locations. Heartwood would still connect with Strasburg Drive. Terrawood would still be stubbed into the adjacent, undeveloped property to the south, where it could be further extended. Lot configurations would need to be revised as a result of this modification, but no other changes to the planned development are requested: building types, setbacks, the number of lots, etc. would continue as per the adopted ordinance.

The intersection of Heartwood with Strasburg Drive has already been platted and improved as part of the Knox Ridge project. If the Commission approves the relocation of Heartwood, it will be necessary to vacate this right-of-way and remove those public improvements. Staff has proposed a **condition** to do so.

B. STREET STANDARD GRADE REQUIREMENTS:

The 2005 Pacific Crossing staff report noted that:

"All streets would meet grade requirements, except two: Terrawood and Heartwood. Terrawood would have up to a 12.93% section for a distance of 100-110 feet. Heartwood would have up to a 15% section for a distance of 60-65 feet. Both would be defined as Local streets. The Fire Department has reviewed these requests and found them acceptable. The Department's acceptance of the proposal is based on the fact that the proposed sections are comparable both in length and grade to others elsewhere in the vicinity and their experience in working within those parameters."

Heartwood is proposed to be modified to have a stretch of 15.00% grade for 185 feet. Terrawood is proposed to be modified to have a maximum grade of 12.39% for 3 feet. The Fire Marshal has reviewed this proposal and confirmed that the proposed street grades are acceptable.

The 1980 Land Division Ordinance (LDO) was in effect when Pacific Crossing was approved in 2005. LDO Section 9.110(1)(i) allowed grades of up to 10% for Local streets, and up to 12% for 250 feet if they were through streets. The current Development Code (Section 10.8.610 *Grades and Curves)* allows Local streets to have grades of up to 12%, or up to 15% for distances not to exceed 250 feet. As both relocated streets would comply with current standards, no conditions of approval are warranted.

C. CITY SERVICES:

All City services could be accommodated in the relocated streets. Some reconfiguration of the lots would be necessary of course, and the water quality facility for this phase would also need to be relocated.

IV. ALTERNATIVES

The Planning Commission has the following alternatives:

1. Approve the street re-locations as proposed.
2. Approve the street re-locations with conditions.
3. Deny the application, stating reasons for doing so.
4. Continue the matter for further consideration.

V. SUMMARY AND RECOMMENDATION

Staff finds that the application to relocate Heartwood and Terrawood streets would not adversely affect the approved Pacific Crossing street network. Two intersections with Vista Oaks Drive would be maintained, as would one connection to Strasburg Drive. Access to the adjacent parcel to the south would be maintained, allowing both streets and public utilities to be extended.

Based on the above, staff recommends that the Planning Commission approve the application, subject to the following conditions.

VI. PROPOSED CONDITIONS OF APPROVAL

1. The applicant is bound to the project description and all representations made by the applicant during the application and decision-making proceeding.
2. The applicant must comply with all applicable City building and development standards, including all dimensional standards and public works specifications except as modified by these conditions of approval.
3. The applicant shall initiate a right-of-way vacation request for the Heartwood Street stub located at Strasburg Drive. The applicant shall be responsible for the removal of any public utilities in this street stub.

VII. LIST OF ATTACHMENTS

The following attachments were received, marked, and entered into the record as evidence for this application at the time this staff report was written. Attachments of evidence received after the date of this report will be marked beginning with the next consecutive letter and will be entered into the record at the time the Public Hearing is opened, prior to oral testimony.

Attachment A	Application Materials, prepared and submitted by Venture Properties, Inc.
Attachment B	Ordinance Number 2005-05
Attachment C	Knox Ridge Agent – email in favor of application

VentureProperties
INCORPORATED

Creating
Tomorrow's
Communities
Today

August 12, 2014

James Reitz, AICP, Associate Planner
City of Forest Grove
P.O. Box 326
1924 Council Street
Forest Grove, Oregon 97116

Re: Pacific Crossing PUD Adjustment Phase 2 (PRD 04-01)
Location of Street Stubs to the west and south

Dear James,

Venture Properties is moving forward with developing the next phase of the Pacific Crossing development (PRD-04-01) south of Goff Road. We have submitted construction documents for a portion of the original Phase 2, which we are now calling Phase 2a.

As you know, Venture Properties was not the original developer/application for Pacific Crossing. In reviewing the original preliminary engineering design for the land south of Goff Road, we realized that the current design requires approximately 20 feet of topographic cut in the middle of Phase 2. This is driven by the locations of the street connections of Heartwood Street to the west and Terrawood Street to the south. Our project must match the existing grades at these locations and then transition into our project. The existing grades are very low at both of these locations and the streets need to 'chase' the grades up for a long distance before they can level out.

If Heartwood can be relocated approximately 150 feet to the south, and if Terrawood can be relocated approximately 100 feet to the east, the project can be raised by eighteen feet, allowing the design to match the natural topography. This reduces the amount of dirt that will need to be hauled off the site which reduces the impact to the community. It is also much more economical to have a balanced site. In addition, it allows more of the lots to have usable yards instead of retaining walls and large sloped areas.

The relocated streets still meet the connectivity standards of Forest Grove and the State Transportation Planning Rule. The new locations simply work better with the existing topography.

Venture Properties has been working with the property owner to the west on completion of the off-site right-of-way dedication as well as the future division of the remainder land at the end of Strasburg Drive. He is comfortable with the proposed change.

Q:\Projects\Forest Grove - Pacific Crossing\Land Use Apps\relocation of S and W street stubs\PC2-lett PC relocation of streets-2014-08-12.docx

The revised location of Terrawood Street still allows for reasonable future development of the land to the south.

Venture Properties believes that these are minor revisions to the approved Preliminary Plat, but understand that Staff would like to discuss this matter with the Planning Commission because they were the original decision making body. We are happy to attend a hearing to explain the proposed changes and answer any additional questions the Commission may have.

Please let me know if you need any additional information, and we look forward to meeting with the Planning Commission.

Sincerely,

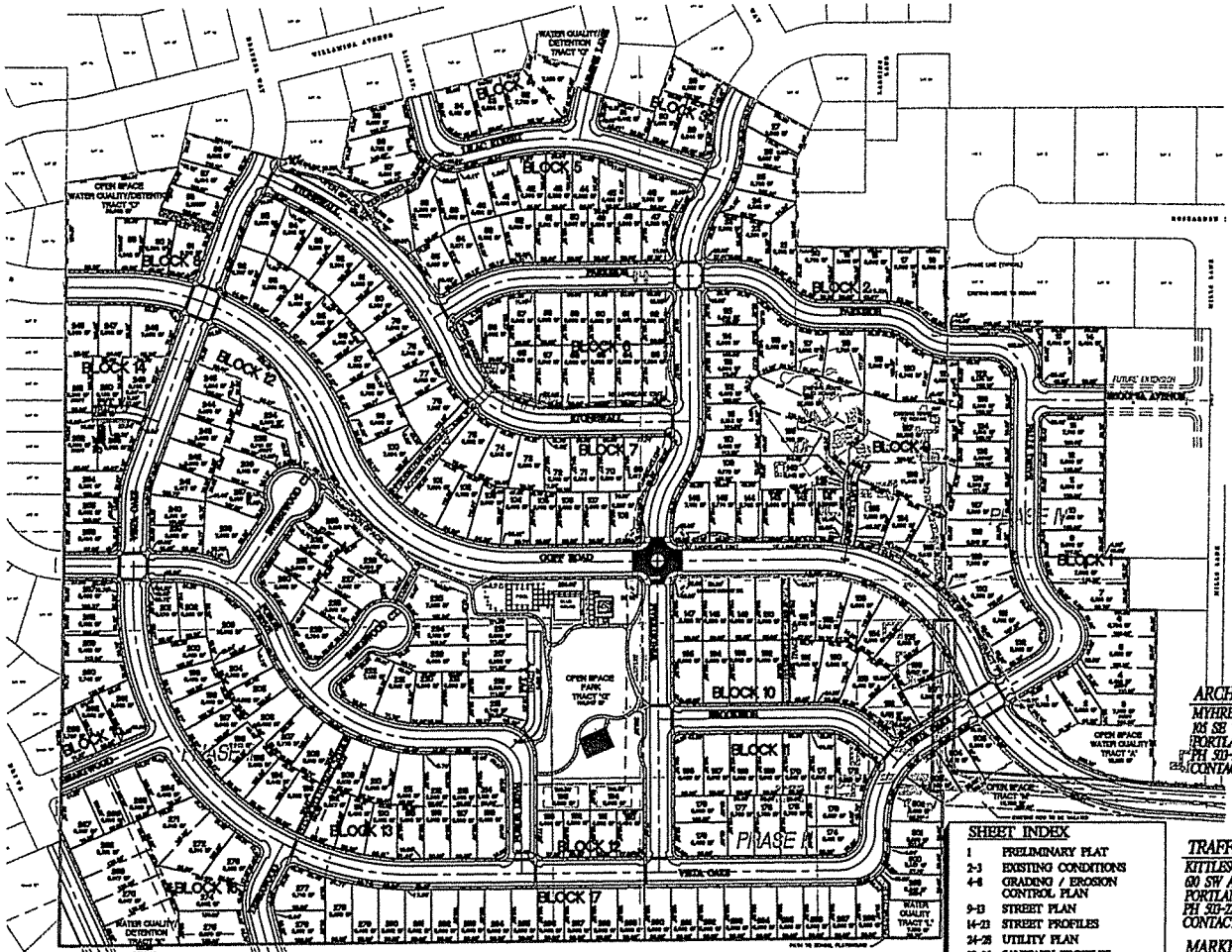
Mimi Doukas, AICP, RLA
Venture Properties, Inc

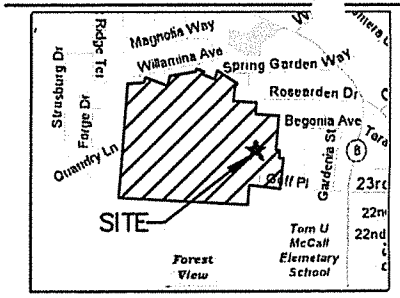
Enclosure: Map of existing approved plan for Pacific Crossing
Map of proposed revisions for Pacific Crossing

4230 Galewood Street, Suite 100 • Lake Oswego, Oregon 97035 • 503.387-7600 • fax 503.387-7617

PACIFIC CROSSING
BY RENAISSANCE

Approved Plan





VICINITY MAP
N.T.S.

APPLICANT:
RENAISSANCE DEVELOPMENT
16771 BOONES FERRY ROAD
LAKE OSWEGO, OR 97035
PHONE 503-636-5600 / FAX 503-635-8400
CONTACT: RANDY SEBASTIAN

OWNER:
GOFF LIMITED PARTNERSHIPS
2433 GOFF PLACE
FOREST GROVE, OR 97116
(TAX LOTS : 100,300,700)

KENNETH C. & GLADYS E. PAGEL
2430 GOFF PLACE
FOREST GROVE, OR 97116
(TAX LOTS : 400,500)

RENAISSANCE DEVELOPMENT
16771 BOONES FERRY ROAD
LAKE OSWEGO, OR 97035
(TAX LOTS : 600)

ROLFE A. SELBERG
2220 GOFF PLACE
FOREST GROVE, OR 97116
(TAX LOTS : 800,900,1000,2200,3000)
TRUSTEE (TAX LOTS : 1800)

RICHARD W. MAY
P.O. BOX 596
N. PLAINS, OR 97133
(TAX LOTS : 3500)

TIMOTHY C. & MARY ANN SHIEL
2250 GOFF PLACE
FOREST GROVE, OR 97116
(TAX LOTS : 1800)

ARCHITECT:
MYHRE GROUP ARCHITECTS
101 SE TAYLOR ST., STE. 307
PORTLAND, OR 97214
PH 503-236-6000 / FAX 503-236-7500
CONTACT : JEFF MYHRE

PLANNING/ENGINEERING:
SFA DESIGN GROUP, LLC.
9020 SW WASHINGTON SQUARE DRIVE
SUITE 350, PORTLAND, OR 97223
(503) 641-8311 / FAX (503) 643-7505
CONTACT: MATT SPRAGUE/BRENT FITCH

ARBORIST:
7625 SW DUNSMUIR LANE
BEAVERTON, OR 97007
(503) 646-4349 / FAX (503) 646-4349
CONTACT: WALT KNAPP

TRAFFIC ENGINEER:
KITTELSON & ASSOCIATES
610 SW ALDER, SUITE 700
PORTLAND, OR 97205
PH 503-228-5230 / FAX 503-273-8169
CONTACT : MATT HUGHART

SURVEYOR:
G & L LAND SURVEYORS, INC
8216 SW NIMBUS AVE
BEAVERTON, OR 97008
PH 503-641-0308 / FAX 503-671-0877
CONTACT : PAUL PERRY

MARKET ANALYST:
REAL VISION RESEARCH, INC
16394 9TH AVE SE, STE 206
MILL CREEK, WA 98012
(425) 787-4359 / FAX (425) 742-3200
CONTACT: SUZANNE BRITSCH

LANDSCAPE ARCHITECT:
PERRON COLLABORATIVE
UNION STATION, SUITE 326
800 NW SIXTH AVENUE
(503) 223-2266 / FAX (503) 223-3217
CONTACT: JIM HENSLEY

SHEET INDEX

LOCATION:
TIN IN SEC 30CL
TAX LOT [illegible]
TIN IN SEC 31
TAX LOT [illegible]
TIN IN SEC 30CB
TAX LOT [illegible]

BENCH MARK:
CITY OF FOREST GROVE BENCHMARK, FCGS
1-MAP DR. BRASS CAP SET IN CONCRETE
45F EAST OF C.L. MILLS LANE
AT JUNC. OF DRIVEWAY AND
CURB AT 2500 ROSEARDEN DR.
ELEVATION = 264.61

NOTE:
LOTS MARKED "SIGHT" ARE NOT REQUIRED TO MEET "SIGHT CONNECTION" REQUIREMENTS OF THE ZONING AND LAND DIVISION CODE.
BLOCK 1 (TYP) = BLOCK NUMBER 1 FOR REFERENCE ONLY
ALL LOOP, CIRCLES OR INTERSECTIONS AT SIDEWALKS ARE 24 FEET WIDE

GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.

SFA Design Group, LLC
Planning • Engineering • Surveying
9020 SW Washington Square Dr., Suite 350
Portland, Oregon 97223
P: (503) 641-8311 E: (503) 643-7505
sfadesigngroup.com

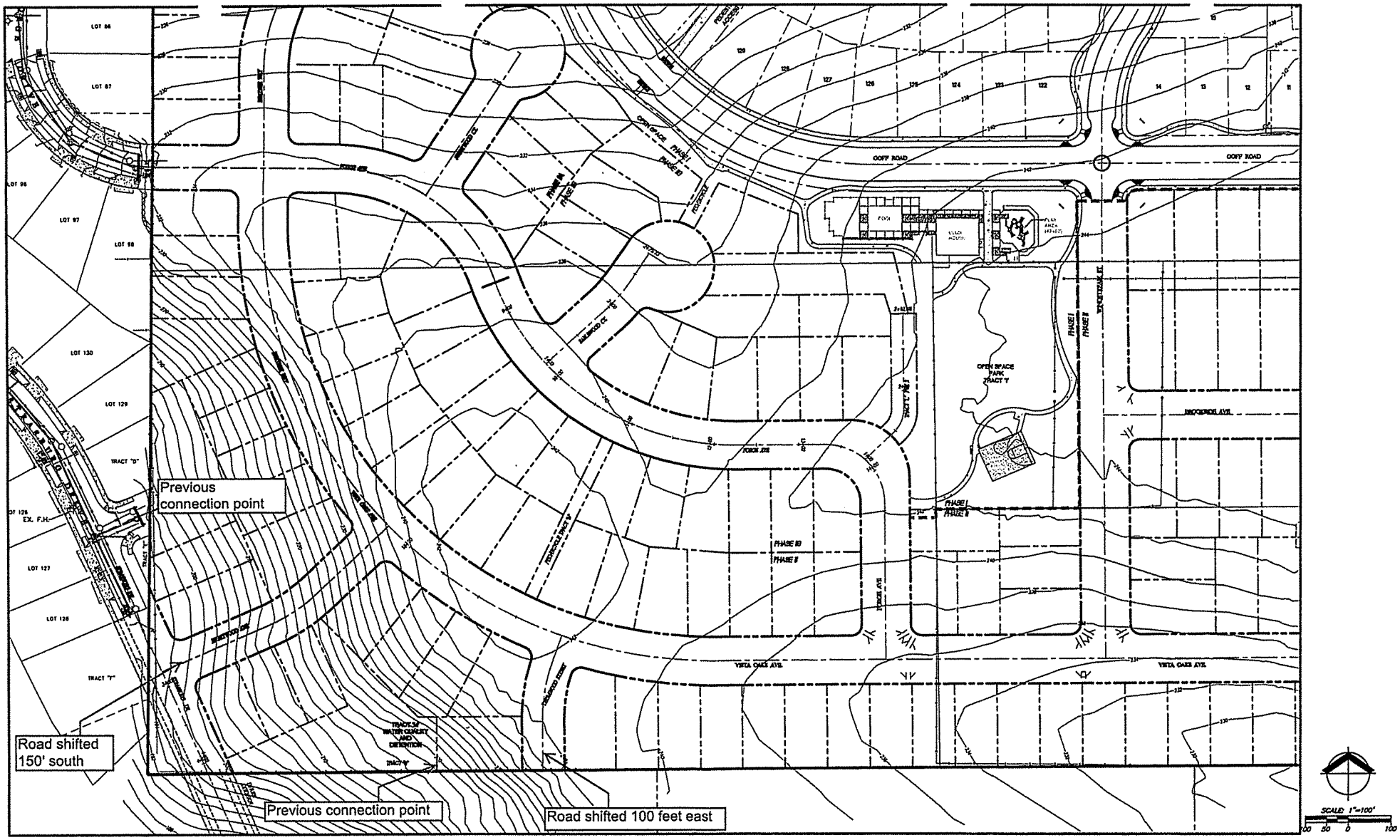
PRELIMINARY PLAT
PACIFIC CROSSING
RENAISSANCE DEVELOPMENT

NO.	DATE	REVISION	BY

DESIGNED BY: MC DATE: 3/30/2006
DRAWN BY: RM DATE: 3/30/2006
REVIEWED BY: MP DATE: 3/30/2006
PROJECT NO. 328-002 SHT. 1
SCALE: HORIZ: 1"=100' VERT: 1"=10'
DISPLAYING

SHEET 1 OF 42

PROJECT: PACIFIC
NO. 328-002
TYPE: PLANNING

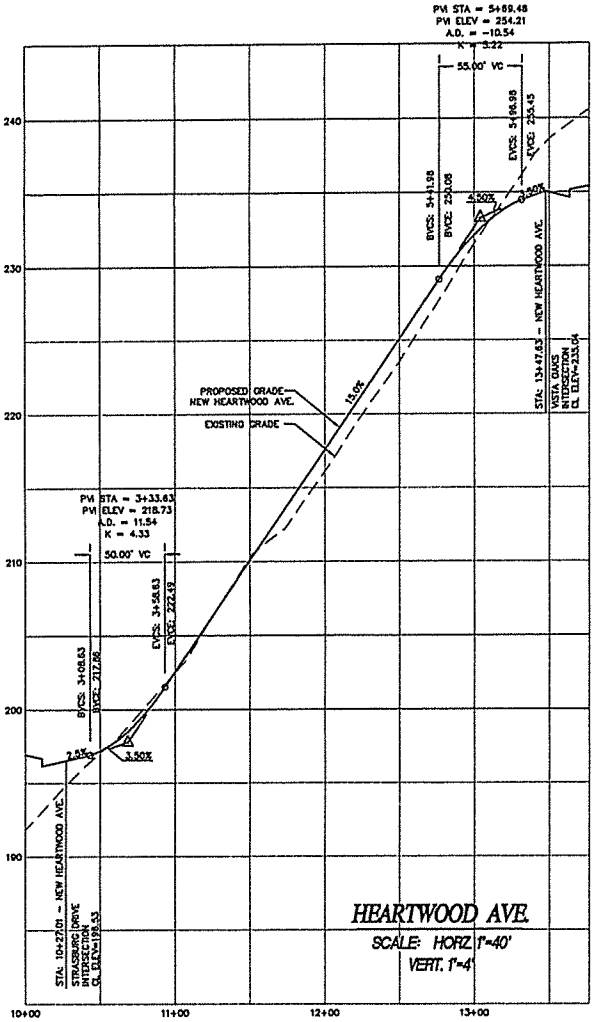


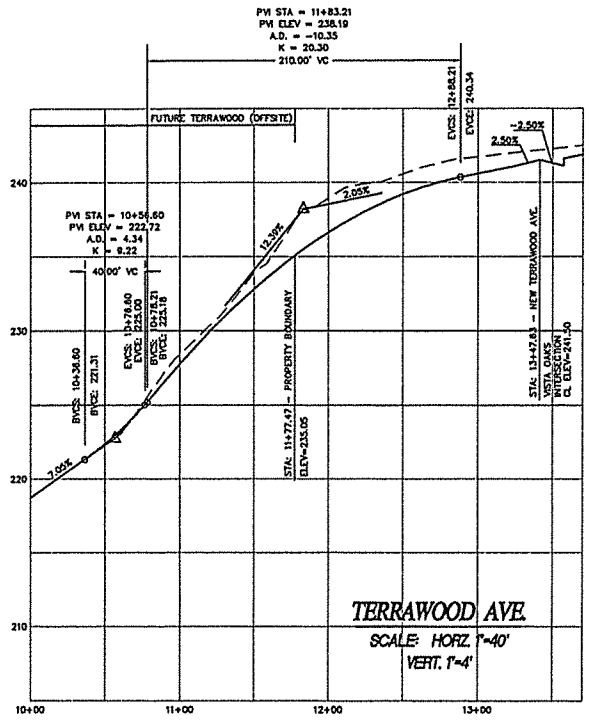
VentureProperties INCORPORATED

Pacific Crossing Proposed Revisions - Forest Grove

HEARTWOOD AND TERRAWOOD AVE. PROFILES

PACIFIC CROSSING - PHASE 2A





*NOTE: DRAWING IS HALF-SCALE FOR THIS EXHIBIT

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Portland, Oregon 97223
ph: (503) 641-8311 fax: (503) 643-7905
http://www.sfadg.com

DESIGNED BY GAM DATE 09/02/14
DRAWN BY GAM DATE 09/02/14
REVIEWED BY BEF DATE 09/02/14
PROJECT NO. REF.
SCALE H: 1"=80' V: 1"=8'

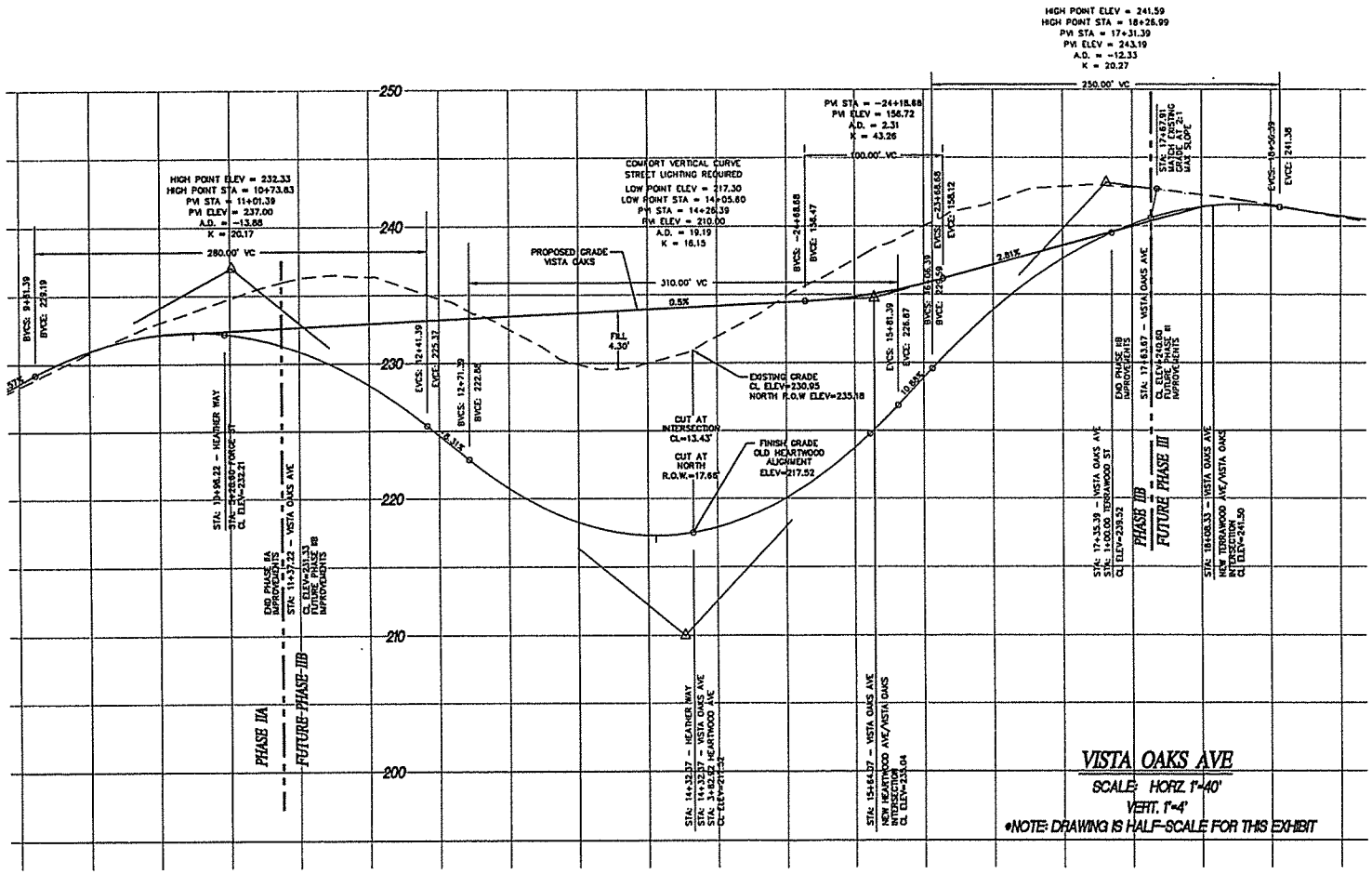
CUT/FILL EXHIBIT

SHEET 2 OF 2

PROJECT PACIFIC CROSSING
NO. 106-002
TYPE ENGINEERING

HEATHER WAY/VISTA OAKS PROFILE

PACIFIC CROSSING - PHASE 2A



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DESIGNED BY GAM DATE 09/02/14
DRAWN BY GAM DATE 09/02/14
REVIEWED BY BEF DATE 09/02/14
PROJECT NO. REF.
SCALE H: 1"=80' V: 1"=8'

CUT/FILL EXHIBIT

SHEET 1 OF 2

PROJECT PACIFIC CROSSING
NO. 106-002
TYPE ENGINEERING

James Reitz

From: Mark Rockwell <mrockwell@anthemmemorycare.com>
Sent: Wednesday, September 03, 2014 11:28 AM
To: James Reitz
Cc: Kelly Ritz (kelly@ventureprop.com)
Subject: PACIFIC CROSSING PUD ADJUSTMENT PHASE 2 / PRD 04-01

James...this is to advise as the managing principal of the ownership entity for the remaining tracts of undeveloped land from the Knox Ridge subdivisions, I approve of the above referenced changes.

Respectfully,
Mark Rockwell

Mark Rockwell
Anthem Memory Care

New Phone Numbers:
Direct: (503) 924-8750
Main: (503) 924-8777
Cell: (503) 784-7205

New Address:
5335 SW Meadows Road / Suite 140
Lake Oswego, Oregon 97035

ORDINANCE NO. 2005-15

ORDINANCE AMENDING THE FOREST GROVE ZONING MAP TO DESIGNATE 14 PARCELS AS THE PACIFIC CROSSING PLANNED RESIDENTIAL DEVELOPMENT

WHEREAS, the Pacific Crossing Planned Residential Development application was filed on December 21, 2004; and

WHEREAS, the application was deemed complete on April 14, 2005; and

WHEREAS, notice of the Planning Commission hearing on this request was mailed to property owners and residents within 300 feet of the subject site on April 22, 2005, as required by Zoning Ordinance Section 9.915. Notice was also published in the *News Times*, as required by Zoning Ordinance Section 9.915; and

WHEREAS, the Planning Commission held a public hearing on the proposed planned residential development on May 16 and June 6, 2005; and

WHEREAS, the Planning Commission recommended approval of the proposal; and

WHEREAS, notice of the City Council hearing on this request was mailed to affected parties on June 16, 2005, as required by Zoning Ordinance Section 9.915. Notice was also published in the *News Times*, as required by Zoning Ordinance Section 9.915; and

WHEREAS, the City Council held a public hearing on the proposed planned residential development on June 27 and July 11, 2005; and

WHEREAS, there is on file with the City Council a staff report which includes the criteria, facts, and conclusions which collectively are the findings supporting this request:

NOW, THEREFORE, THE CITY OF FOREST GROVE ORDAINS AS FOLLOWS:

SECTION 1. The findings for adoption of this ordinance are attached as Exhibit "A ."

SECTION 2. The minutes of the Planning Commission meetings of May 16 and June 6, 2005 are hereby incorporated by reference into this ordinance.

SECTION 3. Based on the above findings, the Forest Grove Zoning Ordinance Map is hereby amended to designate Washington County tax lots 1N4 36-1800, 1801 and 3500; 1N4 36CA-100, 300, 400, 500, 600, 700, 800, 900 and 1000; and 1N4 36DB-2901 and 3000 with a Planned Residential Development Overlay, with the conditions listed in Exhibit "B", and as further described in the attached map, listed as Exhibit "C".

PRESENTED AND PASSED the first reading the 27th day of June, 2005.

PASSED the second reading the 11th day of July, 2005.

Anna D. Ruggles, City Recorder

APPROVED by the Mayor this 11th day of July, 2005.

Richard G. Kidd, Mayor

EXHIBIT A
ORDINANCE NUMBER 2005-15

Criterion: Public facilities serving the proposed development, including but not limited to, sanitary sewers, water, streets, storm sewers, electrical power facilities, parks, public safety and schools shall be adequate and meet current City standards; or it is guaranteed that inadequate or nonexistent public facilities will be upgraded or constructed by the applicant prior to occupancy of the project.

Findings:

- Public facilities including sanitary sewers, water, storm sewers and electrical power are located in the adjacent Knox Ridge and Talisman Hills neighborhoods, and meet current City standards. Utilities within the site will be constructed to City standards and specifications by the applicant.
- The project, as proposed, includes a traffic circle on Goff Road which is designated a collector on the City's *Transportation System Plan* (TSP). The City's policy is not to allow traffic circles or other traffic slowing devices on collectors or arterials. The City is willing to consider the use of the traffic circle as a special case for several reasons. First, to evaluate its impact on a collector provided that the Public Works Director finds the design appropriate. Second, the development will pay the cost of the circle. Third, this circle is being allowed as part of the overall design of the planned residential development and proximity to the community center which is anticipated to generate pedestrian traffic.
- Goff Road is a designated Collector and would receive a majority of the traffic generated by the project. It would be fully improved by the applicant within the site and east to Canterbury Estates. Goff Road adjacent to Canterbury Estates has been improved to City Collector street standards to its intersection with "E" Street. Once Goff Road west of Canterbury Estates is improved, it would be adequate to serve the traffic from the development.
- Several streets in the vicinity that would provide access to Pacific Crossings have a Pavement Condition Index (PCI) rating of 75 or less. Streets with a PCI rating of less than 75 require some level of additional maintenance. It was found that the primary street which would be impacted by the project would be Spring Garden Way. To prevent their further deterioration as a result of the traffic generated by Pacific Crossing, the project will participate on a fair share basis (based on projected traffic generation) in the upgrade of Spring Garden Way.
- The Forest Grove *Transportation System Plan* (TSP) has identified the "E" Street/Goff Road intersection for signalization. If warranted, the applicant shall be required to participate in the signalization, at a level commensurate with the demand created by Pacific Crossings.
- Pacific Crossing is within an area served by the Forest Grove School District. As of the writing of this report, no response to the proposal has been received from the district.
- The proposed project is near both Knox Ridge Park and Talisman Park. No public park is required as part of the project, but each home will be assessed the standard parks system development charge.
- The project is within an area served by City police and fire services.
- To assure adequate access for emergency vehicles, all private streets need a width of 28 feet.

Conclusion: Because public facilities, including but not limited to sanitary sewers, water, streets, storm sewers, electrical power facilities, parks, public safety and schools are adequate and meet current City standards or can be made adequate with the proposed conditions of approval, the project meets the public facilities requirement. The one possible exception is the installation of a traffic circle on Goff Road that may affect its ability to function as a collector. However, the City is willing to allow it for this planned residential development for the reasons cited above.

Criterion: The impact of the proposed development on public facilities shall not exceed the impact anticipated for the site in the formulation of the public facilities master plans contained in the Comprehensive Plan.

Findings:

- Sanitary sewers, water, storm sewers and electrical power facilities within the project will be constructed to City Master Plan or other municipal specifications.
- The underground utilities within street right-of-ways and utility easements will be public and built to City master plan specifications.

Conclusion: Since the proposed single-family project is for fewer units than the overall targeted density for the site and the public facilities will be built to master plan specifications, staff finds that there would not be any adverse impact on the City's public utility system. Because the proposed development's impact on public facilities will not exceed the anticipated impact for the site as contained in the Comprehensive Plan, the project meets the public facility master plan criteria.

Criterion: Any uses proposed for the development which are not listed as uses permitted outright in the zone in which the proposed PD is located shall be designed to achieve compatibility with both the remainder of the PD and properties adjacent to the PD site.

Findings: Because a single-family dwelling development is a permitted use in both the R-7 Single-Family and A-1 Two-Family Residential zones, this criterion is met. The proposed recreation center would be located central to the project and would therefore have no effect on adjacent properties.

Criterion: The proposal shall provide adequate open space, landscaping, and design features to minimize significant adverse effects on adjacent properties and uses.

Findings:

- The proposal includes approximately five acres of open space scattered throughout the project site. The open space would take a variety of forms: water quality facilities, pedestrian walkways, a landscaped area along Goff Road, and an active recreation area with a club house, pool, sport court, and play area. The open space equals approximately 11% the net area (gross area less rights-of-way) of the project site.
- Each single-family home would have its own private landscaped yard space for use by the residents.
- Street trees will be installed following home construction. Tracts adjacent to streets will be landscaped concurrent with street construction. Staff has also proposed a condition to require the installation of 35 Oregon White Oak trees and several giant sequoia trees in a number of the tracts.
- Because the dedicated open space is over 11% of the net project site area, and individual homes would be landscaped to provide privacy, the requirement for adequately-sized open space and minimal adverse effects on adjacent properties would be met.

Criterion: The location, shape, size and character of common open space areas shall be suitable and appropriate to the scale and character of the project, considering its size, density, expected population, topography, and the number, type and location of buildings to be provided.

Findings:

- The proposal includes approximately five acres of open space scattered throughout the project site. The open space would take a variety of forms: water quality facilities, pedestrian walkways, a landscaped area along Goff Road, and an active recreation area with a club house, pool, sport court, and play area. The open space equals approximately 11% the net area (gross area less rights-of-way) of the project site.
- Of the 305 proposed lots, approximately 62 would be located adjacent to or across the street from an open space tract. This represents over 20% of the proposed lots.
- Because the open space fits the character of the project, is both suitable and appropriately sized for the development, and will provide surface water management as well as active recreation opportunities, the criteria for the open space is met.

Criterion: The proposed development shall not result in creation of any nuisance, including but not limited to air, land, or water degradation, noise, glare, heat, vibration or other conditions which may be injurious to public health, safety, and welfare.

Findings:

- The proposed development consists exclusively of single-family homes and accessory uses and the creation of any nuisance, including but not limited to air, land, or water degradation, noise, glare, heat, or vibration is not anticipated.
- The addition of individual lot landscaping will be beneficial in improving air quality, overall site temperature and reducing glare as well as providing a vegetative screen.
- The surface water leaving the site would be treated for water quality as directed by Clean Water Services' *Design and Construction Standards for Surface Water Management.*
- Decorative streetlights shall be required to comply with the City's standards and specifications. Street illumination shall be comparable to that created by existing street lights, and is not anticipated to have any adverse impact on adjacent properties.
- Because this development will not result in creation of any nuisance, including but not limited to air, land, or water degradation, noise, glare, heat, vibration or other conditions which may be injurious to public health, safety, and welfare this criteria is met.

Criterion: The proposal shall meet the intent and objectives for a Planned Development as expressed in Section 9.680 (Planned Residential Development).

Findings: It is the intent of Zoning Ordinance Section 9.680 to accommodate creative and planned residential development in residential districts. In addition the intent is to facilitate the development of parcels suitable for residential use but are difficult to develop by virtue of topography, natural landscape features, unique historical character, or being an isolated problem area by being passed over and subsequently surrounded by development. A PRD would permit those innovations in the technology of land development, which are in the best interest of the City of Forest Grove. In order to accomplish this intent, it is the purpose of these regulations:

(1) to permit in a PRD a variety of dwelling types, including single-family, two-family and multi-family dwellings such as townhouses, garden apartments, and high-rise types.

Finding: The proposed development consists exclusively of single-family homes and accessory uses and therefore the intent is met.

(2) to permit the flexible spacing of lots and buildings in order to encourage:

(a) the separation of pedestrian and vehicular circulation;

Finding: Sidewalks will be provided on both sides of all public streets, including the Goff Road extension east of the project site. Pedestrian connections will be provided through those blocks exceeding 500 feet, and to Tom McCall School. The project be conditioned to require a sidewalk on at least one side of the private streets.

(b) the conservation of natural amenities of the landscape;

Finding: Many of the existing trees will be retained, as will the Oregon white oak. The applicant will be required to install Oregon white oaks and giant sequoias throughout the project site. As a significant number of trees are being conserved and enhanced, the project meets the intent of the regulation.

(c) the provision of readily accessible open space;

Finding: The open space area abuts or is across the street from 62 of the proposed 305 lots. The remainder of the homes will have access to the open space by a pedestrian walkway network. Therefore the intent of the regulation is met.

(d) the creation of functional and interesting residential areas, and

Finding: The proposed project would create a neighborhood community of 305 single-family homes. The individual lots will be landscaped to provide privacy between homes. The addition of open space

throughout the project site and the pedestrian walkway network will provide additional amenities to the development. Therefore the intent of the regulation is met.

(e) the provision of a necessary complement of community facilities.

Finding: The proposal includes various open space areas, a club house, swimming pool, play area, and sport court. The open space and recreation areas occupy about 11% of the site's net area, and would be accessible to all residents via the pedestrian walkway network. The open space and recreation facilities are adequate in terms of necessary community facilities and the intent of the regulation is met.

EXHIBIT B
ORDINANCE NUMBER 2005-15

To ensure compliance with all of the applicable provisions of the Zoning Ordinance and Land Division Ordinance, the City of Forest Grove hereby adopts the following conditions of approval:

GENERAL:

1. The applicant is bound to the project description and all representations made by the applicant during the application and decision-making proceeding.
2. The applicant must comply with all applicable City building and development standards, including all dimensional standards and public works specifications.

FINAL PLAT REQUIREMENTS:

3. The final plat must comply with Land Division Ordinance Section 9.107 et. seq., and substantially comply with the tentative plat (LDO Section 9.105(3) *Action on Final Plat).*
4. The Begonia Avenue right-of-way shall align with the existing street in Canterbury Estates (LDO Section 9.110(1)e. *Future Extension of Streets).*
5. A pedestrian way tract shall be platted in the vicinity of lots 8 and 9 to allow for the eventual connection with the Pansy Court walkway (LDO Section 9.110(2)b. *Pedestrian Ways).*
6. A Local street shall be platted in Block 2 to permit the extension of Larkins Lane to Parkside Street (LDO Section 9.110(2)a. *Block Size).*
7. Lots with alternate access shall not be permitted vehicular access to Goff Road. This restriction shall be noted on the final plat (LDO Section 9.110(1)l. *Access Control).*
8. Street names shall be revised as follows (LDO Section 9.110(1)j. *Street Names):*

   - Heather Way shall be continued south to the Heartwood intersection.
   - With the exception of named streets extending into Pacific Crossing, east-west trending streets shall be avenues, and north-south trending streets shall be streets (Municipal Code Section 9.205).

9. A ten-foot-wide utility and sidewalk easement is required adjacent to all property lines abutting a street (including any tracts) (LDO Section 9.110(2)c.i. *Easements).*
10. Separate tracts shall be created for each storm water quality facility. The facilities shall remain in private ownership. An easement to the City of Forest Grove shall be provided over said tracts for maintenance of the facilities and conveyance system (LDO Section 9.109 *Required Improvements-Storm Sewers and Erosion Control Facilities).*
11. Reciprocal access easements shall be recorded for the mutual benefit of lots 3 and 4 (LDO Section 9.1107(36) *Easements).*
12. Lot numbers and tract letters shall be sequential, and shall reflect the actual project phasing (LDO Section 9.107(19) *Information Required on Final Plats).*
13. Lots 121, 136, 137 and 192 shall be platted wholly within a single phase.
14. Tract M and lots 155, 156, 157, 303, 304, and 305 shall not be platted until the existing Goff Road right-of-way is vacated.
15. Submit a copy of the proposed final deed restrictions concurrent with the final plat. The CCRs shall provide adequate provisions including but not limited to funding for the maintenance of all privately maintained open space and recreation areas, the water quality tract, and access ways. To ensure the funding mechanism is adequate, provide an estimate of the total anticipated maintenance expenses for a ten-year period, and describe how those expenses will be met (LDO Section 9.107(42) *Final Plat Requirements).*
16. At least 75% of those lots with less than 9,000 square feet of lot area shall comply with LDO Sections 9.110(3)(h) *Street Connection Requirement*, and 9.110(3)(i) *Diversity Requirement.* Lots exempt from these requirements shall be noted within the conditions, covenants, and restrictions (CCRs) (LDO Section 9.110(3)h and i.).
17. Phase 1 shall be recorded within one year of tentative plat approval, pursuant to LDO Section 9.105 *Final Plat For Subdivisions.* Upon satisfactory completion, provide a Mylar copy of the recorded plat to the Community Development Department. Home building permits will not be issued until the Mylar is received.

IMPROVEMENTS (GENERALLY): All plans submitted to date are considered *conceptual* only. Detailed plans and specifications must be submitted that demonstrate compliance with standards and regulations adopted by the City of Forest Grove and/or all other agencies that have jurisdiction. Please note that no home building permits will be issued until all required public improvements have been constructed and accepted by the City of Forest Grove and/or others having jurisdiction.

18. All site grading and public improvement work shall conform to the City of Forest Grove *Municipal Code,* Pacific Crossing Subdivision *Conditions of Approval*, City of Forest Grove *Standard Specifications*, Uniform Building Code Appendix Chapter 33 *Excavation and Grading*, and the *Agreement Allowing Developer to Construct Public Improvement.*
19. All utilities shall be constructed to Master Plan specifications, and all construction shall comply with CWS Resolution and Order 04-09 *Design and Construction Standards for Sanitary Sewer and Surface Water Management.*
20. The recommendations of the geotechnical report shall be incorporated into the construction plans for the subdivision.
21. Permits for grading and erosion control shall be obtained from the Building Division prior to any excavation. Site grading shall conform to 1994 Uniform Building Code Appendix Chapter 33 Table 33-A. The application shall include a grading plan complying with 1994 UBC Appendix Chapter 33 for engineered grading, erosion control plan, and the geotechnical report. The soils and geotechnical report shall be provided prior to issuance of a grading permit.

ELECTRICAL SYSTEM

22. Underground utility lines shall be required throughout. Electrical plans need to be coordinated with the Light and Power Department. Submit an electronic copy of the utility plans to Light and Power Department (503/992-3256).
23. A minimum eight-foot distance shall be maintained between electrical transformers and any combustible materials (National Electrical Supply Code (NESC) Section 15 and Forest Grove Light and Power Department *Electrical Service Requirements and Guidelines* Section 1.09 *Clearances From Utility Equipment).*
24. Decorative street lighting fixtures shall comply with the City's standards and specifications.

STREETS

25. The Heartwood street grade shall not exceed 15% for a distance of 110 feet.
26. The Terrawood street grade shall not exceed 13% for a distance of 65 feet.
27. Goff Road through the project site to Canterbury Estates shall be improved to City Collector street standards.
28. The proposed traffic circle at the intersection of Goff Road and Windstream Street shall be subject to the approval of the Public Works Director. If the Director finds that the traffic circle design is inappropriate, the traffic circle shall be removed and replaced with the use of pavers or other such improvements that maintain a design focus of the intersection, subject to the approval of the Director.
29. The applicant shall provide for 41 percent of the cost for the repaving of Spring Garden Way between the boundary of the project site and "E" Street. The City shall perform the repaving work. The applicant shall make the full payment of its share of the paving work within thirty (30) days of written notice to applicant by the City that the City has all necessary funds for the repaving work budgeted or by July 1, 2006, whichever date is later.
30. Submit a traffic control signage plan prior to or concurrent with the Phase 1 final plat. This plan shall include all streets within Pacific Crossing and all adjacent intersections.
31. All construction traffic shall be directed to use Goff Road. No construction traffic (including that associated with home building) will be permitted to use any of the adjacent local streets, except as necessary to extend them into the site (Municipal Code Section 6.015(2)(f)).
32. All signage (including, but not limited to, street names, vehicular parking restrictions, and vehicular and pedestrian traffic protection and direction) for public rights-of-way and easements; pavement striping and marking; and pavement reflectors (including, but not limited to, blue fire hydrant markers), shall be shown on the approved plans and installed by the developer, as required by the Engineering Department. To minimize conflict with driveway locations and street trees, signs shall be attached to street light poles wherever possible (LDO Section 9.109(1)a. *Required Improvements - Streets).*
33. The Geotechnical Investigation and Report shall contain a separate section addressing public improvements. In that section, address structural design and construction of public streets and roadways referencing the *Washington County Uniform Road Improvements and Design Standards.* Include alternate design considerations for "wet-weather" construction. The street design shall meet or exceed minimum standards

established by the City Engineer.

34. A mid-block crosswalk with curb extensions shall be installed across Goff Road in alignment with Tract C (LDO Section 9.110(2)b.i. *Pedestrian Ways).*

STORM AND SANITARY

All sanitary and storm drainage improvement work shall conform (as applicable) with the following City of Forest Grove/CWS-approved plans and specifications.

35. Submit an application for a new NPDES General Permit #1200-C along with the DEQ-required Land Use Compatibility Statement (LUCS). Application forms are available from the Community Development Department.
36. Provide storm drainage calculations for each water quality facility and address detention, as per CWS standards and specifications (LDO Section 9.109(1)b. *Required Improvements-Storm Sewers and Erosion Control Facilities).*
37. All storm water runoff from any newly created impervious surface areas shall drain to an approved public storm water facility (LDO Section 9.109(1)b. *Required Improvements-Storm Sewers and Erosion Control Facilities).*
38. Once the water quality facilities in the storm water quality tracts are constructed to City and CWS standards and accepted by the City, these tracts shall be dedicated to the declarant or an approved homeowners association. An easement for purposes of maintenance, conveyance, treatment and detention of storm and surface water runoff shall be granted to the City of Forest Grove (LDO Section 9.109(1)b. *Required Improvements-Storm Sewers and Erosion Control Facilities).*
39. Water-quality (sumped) manholes will be required at each inlet pipeline to water quality facilities. Unless approved otherwise, water-quality manholes shall not substitute for standard flow-through or junction manholes (LDO Section 9.109(1)b. *Required Improvements-Storm Sewers and Erosion Control Facilities).*
40. Storm drain and sanitary sewer piping materials shall be approved by the City Engineer. Storm drain piping between a water quality manhole and discharge into the water quality facility shall be concrete pipe with a beveled end section and rip-rap designed for the discharge location (LDO Section 9.109(1)b. *Required Improvements-Storm Sewers and Erosion Control Facilities).*
41. Lots 137 and 138 shall connect to the sanitary system (Municipal Code Section 4.405 *Connection Required).*

FIRE

42. New fire hydrants shall be installed as per City requirements. Hydrants shall be equipped with 4-inch Storz fittings, and their locations identified with blue reflective pavement markers at the street centerline (Municipal Code Section 5.635 *Amendments to the Uniform Fire Code).*
43. Private roads 20 to 26 feet in width shall be posted on both sides as a fire lane (OFC Section D 103.6.1).
44. Dead end fire apparatus roads in excess of 150 feet in length shall be provided with an approved turnaround prior to the issuance of building permits on any of the abutting lots (OFC Section 5.03.2.5).

DRIVEWAYS

45. Tracts I, J, and P driveways shall have a minimum width of twenty-eight feet. The applicant shall provide and record, prior to approval of final plat(s) involving lots with private roads, a maintenance agreement for shared, private driveways that is acceptable to the City.
46. "No Parking Fire Lane" signs shall be installed on Tracts I, J and P prior to approval of the first home building permit served by those tracts (Oregon Uniform Fire Code 901.4.5 and Appendix III-E).
47. Tracts I, J and P shall not be gated or made inaccessible by any other means.
48. The driveway serving lots 3 and 4 shall have a minimum paved width of twelve feet and shall be posted for no parking. Cross-access easements shall be noted on the final plat. The applicant shall provide and record, prior to approval of final plat(s) involving lots with private roads, a maintenance agreement for shared, private driveways that is acceptable to the City.
49. Street lights installed on private streets shall be included with the project's electrical layout. Maintenance expenses for these street lights shall be billed to the affected property owners on a fair share basis at the City's prevailing Outdoor Area Lighting Service rate.

SIDEWALKS AND WALKWAYS

50. Property-line type or meandering sidewalks shall be installed adjacent to all tracts concurrent with street construction (LDO Section 9.109(1)e. *Sidewalks).*
51. The City shall allow curvilinear sidewalks within and outside of the public rights-of-way and adjacent public utility easements of Goff Road, Stonewall Street and Windstream Street, provided the sidewalks are entirely within a public right-of-way or public access easement.
52. Sidewalks shall be installed at street corner radius returns concurrent with street construction (LDO Section 9.109(1)e.).
53. Sidewalks shall be installed along the Goff Road extension concurrent with street construction (LDO Section 9.109(1)e.).
54. Walkways shall be constructed to the following standards (LDO Section 9.110(2)(b) *Pedestrian Ways).*

    a. Minimum width of eight feet.
    b. Constructed of Portland cement concrete, six inches thick.
    c. Any remaining area shall be landscaped or otherwise improved; the design shall be approved by the Community Development Department prior to construction.
    d. Fence locations and height along the walkways in Tract H and O may be restricted, to ensure pedestrian safety.

55. A walkway shall be constructed in the vicinity of lots 8 and 9, generally in alignment with the Pansy Court walkway (LDO Section 9.110(2)b. *Pedestrian Ways).*
56. A sidewalk is required on at least one side of the private street in Tract J. The width of this sidewalk may be reduced to 4.5 feet. The sidewalk shall be installed prior to or concurrent with each new home construction (ZO Section 9.830(5) *Private Walkways).*
57. A sidewalk shall be required on at least one side of the private street in Tract P. The width of this sidewalk may be reduced to 4.5 feet. The sidewalk shall be installed prior to or concurrent with each new home construction (ZO Section 9.830(5) *Private Walkways).*

SETBACKS

58. Standard front and rear setback requirements shall apply (ZO Section 9.624 *Setback and Lot Width Requirements).* Interior side yard setbacks shall not exceed five (5) feet.
59. The following setback and siting requirements shall apply:

    a. The front/side yard setback shall be a minimum of ten feet for two-story homes. The front/side yard setback shall be a minimum of twelve feet for one-story homes or homes with eaves at the first-story level.
    b. Homes may encroach into public utility easements on street side yards no more than two (2) feet with second-story eaves, provided the applicant and the City agree prior to issuance of building permits for such structures that the encroachment may occur.
    c. In no event shall any portion of a combustible structure encroach into the clearance zone eight feet in any direction from a transformer at ground level. The clearance zone includes all space below and above the eight-foot ground level clearance zone.
    d. The street connection requirements of ZO Section 9.624(1)(a)-(c) shall apply (ZO Section 9.624 *Setback and Lot Width Requirements* and LDO Section 9.110(2)c.).

ARCHITECTURAL STANDARDS

60. Provide elevations for all the homes to be constructed in Pacific Crossing and prepare a list of specific architectural features to be required, such as porches, the siding material, the roof material and pitch, garage type and location, window types, brick or masonry finishes, etc. (ZO Section 9.816(2)(c) *Procedure for Review of a Final Plan).*
61. Any modifications to the proposed design types must be submitted to the Community Development Department for review and approval by the Director or his designee prior to submitting for building permits (ZO Section 9.816.5 *Compliance with Final Plan).*
62. At least 75% of the homes shall comply with the Street Connection Requirement of LDO Section 9.110(3)h.
63. Front elevations shall comply with the Diversity Requirement of LDO Section 9.110(3)i.

TREES

64. The existing Oregon White Oak tree in Tract G and all other trees to be preserved shall be protected as recommended by the Arborist's Report. Protection measures shall be included in the grading plans and shall be in place prior to any grading activity. Measures shall remain in place for the duration of construction (ZO Section 9.945(D)(3) *Protection Plan*).
65. Existing off-site trees that may be adversely affected by street or utility extensions or on-site grading shall be identified and protected. Protection measures shall be included on the grading plans and shall be in place prior to any grading activity. Measures shall remain in place for the duration of construction (ZO Section 9.945(D)(3) *Protection Plan*).
66. Chain-link fencing shall be installed around all tree protection zones.
67. City staff shall be notified prior to commencement of grading or excavation near any of the protected trees, to verify that the tree protection measures are in place.
68. A tree removal permit shall be required for all trees to be removed. The tree removal permit application shall include an analysis performed by a certified arborist analyzing the probability of wind throw damage to the remaining trees. If the arborist determines that the remaining trees would likely be damaged by wind throw or would otherwise pose a safety hazard to pedestrians, those trees shall be removed, and the landscape plan revised to include replacement trees (ZO Section 9.942 *Permit Requirements*).
69. Oregon white oak trees shall be installed as follows:

    a. Two trees in Tract A, along Goff Road adjacent to Lot 1.
    b. Five trees in Tract B, along Stonewall Avenue.
    c. Four trees in Tract C.
    d. Two trees in Tract D, along Goff Road.
    e. One tree in Tract F.
    f. Twelve trees in Tract G, along the south side of Goff Road.
    g. Three trees in Tract M, along Goff Road.
    h. Three trees in Tract N.
    i. Where feasible, Oregon white oak trees shall also be planted in landscape easement areas.
    j. These trees shall be spaced approximately 40-to-60 feet on-center, have a minimum two-inch caliper and shall otherwise comply with LDO Section 9.109(1)g.ii. *Street Trees*.
    k. All Oregon white oak tree locations shall be identified on the final landscape plan (ZO Section 9.816(2)(b) *Final Detailed Landscape Plans)*.
    l. Where Oregon white oaks are proposed to be located, landscape plans shall be revised to minimize the need for irrigation. Grass, ferns, azaleas, rhododendrons, or any other vegetation that needs summer irrigation should not be planted near the Oregon white oaks.
    m. Under story trees (e.g. dogwoods) shall be planted between the Oregon white oaks.

69. Giant sequoia trees shall be installed as follows:

    a. One each in Tract A and Tract M.
    b. Four-to-six giant sequoia trees in Tract "G."

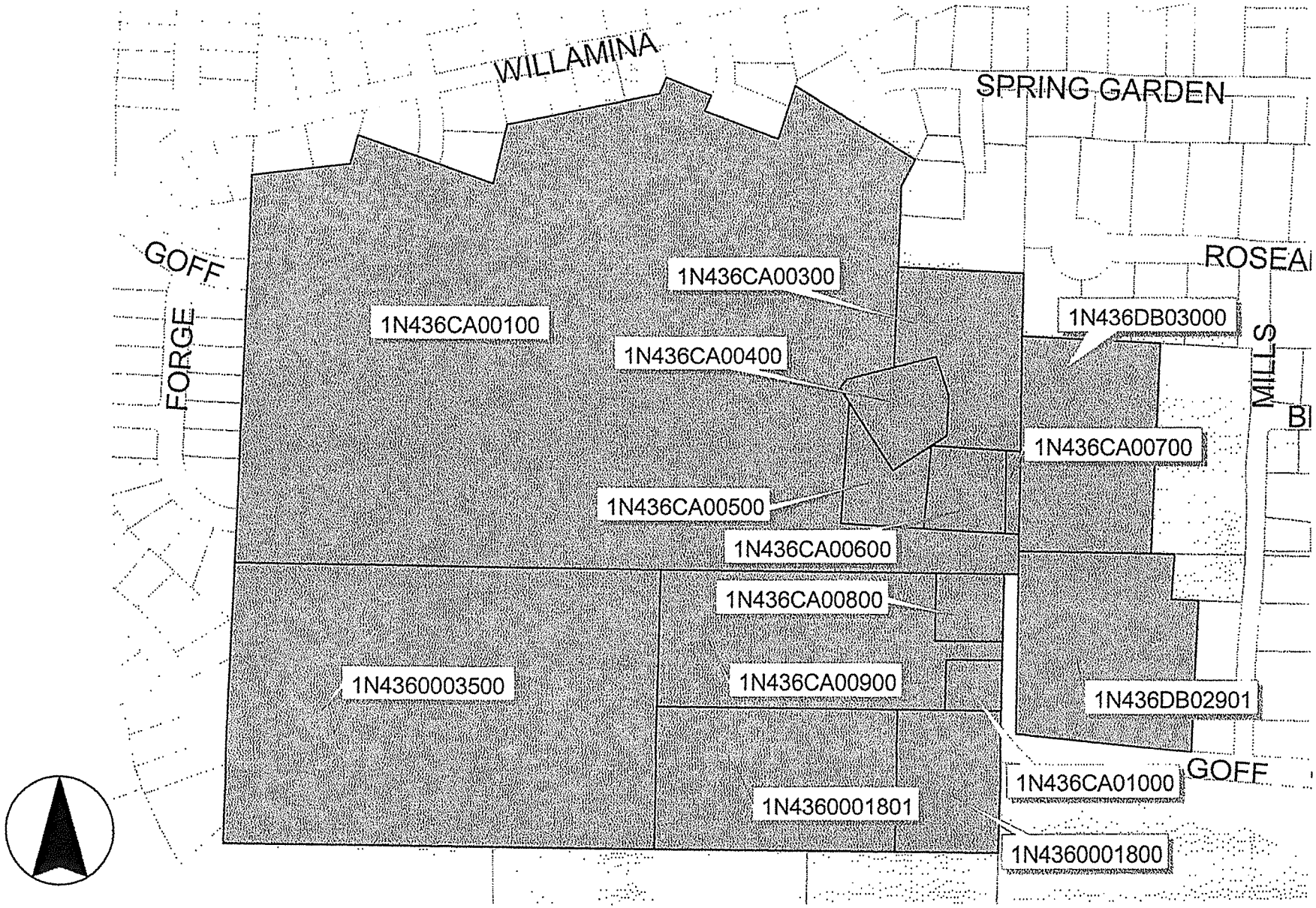
70. Street trees adjacent to buildable lots shall be charged a street tree installation fee at the time of building permit issuance (LDO Section 9.109(1)g.iv. *Street Trees)*.

OTHER

71. Mailboxes and newspaper receptacles (serving at least four but not more than eight homes) are required; locking mailboxes are recommended. These facilities shall be located in the vicinity of streetlights. Locations and specifications should be confirmed with the Forest Grove Post Office (contact Gerard Brosnan) prior to installation. Installation shall occur prior to occupancy of the first home (LDO Section 9.109(1)h. *Mailboxes*).
72. No construction shall be permitted on lots 268, 269 and 270 until full street improvements and utilities are constructed to City standards (LDO Section 9.109(2) *Required Improvements)*.
73. The applicant shall make a good faith attempt to obtain Knox Ridge Tract D for incorporation into lot 263 and Knox Ridge Tract E for incorporation into lot 267. If acquired, the applicant shall enlarge lots 261 and 262 and reduce the area of lot 263 to allow for its attachment to Knox Ridge Tract D and incorporate Knox Ridge Tract E into lot 267. If an agreement cannot be reached for one or both tracts, lots 261 to 263 and lot 267 will be platted and built upon as shown on the preliminary plat.

74. A six-foot-tall cedar "good-neighbor" fence shall be installed around the perimeter of the project by phase. Fencing of the tracts shall be installed concurrent with the construction of public improvements for each phase. Home-site fencing shall be installed prior to final inspection of each home (ZO Section 9.682(5) *Perimeter Requirements).*

Exhibit "C"
Pacific Crossing Planned Residential Development



Planned Residential Development Staff Report and Recommendation

Community Development Department, Planning Division

REPORT DATE:	September 8, 2014
HEARING DATE:	September 15, 2014
LAND USE REQUEST:	A Planned Residential Development consisting of 204 single-family detached residential lots, several open space / recreational tracts, and several water quality tracts
FILE NUMBER:	PRD-14-00141
FILE NAME:	Silverstone
PROPERTY LOCATION:	2465 NW Highway 47
OWNERS/APPLICANT(S):	Applicant / Property Owner: RRA LLC, 19813 NW Metolius Drive, Portland, Oregon 97229 Applicant's Representative: Venture Properties Incorporated, (Mimi Doukas) 4230 Galewood Street, Suite 100, Lake Oswego, Oregon 97035
ZONING AND PLAN DESIGNATIONS:	Comprehensive Plan Map Designation: Low Density Residential – Medium (LDR-A) Base Zone Designation: R-5 Single-Family Residential
APPLICABLE STANDARDS AND CRITERIA:	City of Forest Grove Development Code: ❑ Section 10.3.100 et. seq. *Residential Zones* ❑ Section 10.4.200 et. seq. *Planned Developments* ❑ Section 10.6.095 et. seq. *Subdivisions* ❑ Section 10.8.600 et. seq. *Public Improvements* ❑ Section 10.8.900 et. seq. *Land Division Standards*
REVIEWING STAFF:	James Reitz (AICP), Senior Planner
RECOMMENDATION:	Staff recommends approval with conditions

I. LAND USE HISTORY

Silverstone planned residential development is proposed for a largely vacant lot located at 2465 NW Highway 47. The site was previously approved for a 171-lot subdivision in 2007; that project did not move forward due to the Great Recession.

Public notice was mailed to property owners and residents within 300 feet of the site on August 22, 2014, as required by Development Code (DC) Section 10.1.610. Notice of this request was also published in the *News Times* on September 10, 2014. Copies of the application materials were provided to the Plans Review Board, Washington County, and ODOT. Comments from the PRB, County and ODOT are incorporated into this report. No written responses from the public have been received.

Pursuant to Development Code (DC) Section 10.4.215(A), "The development standards of the base zone apply, unless they are superseded by the standards of this section or the PD approval." The City Attorney has advised that planned developments cannot be used to achieve waivers or exceptions from other sections of the Development Code e.g. the General Development standards of DC Article 8 must be met.

II. ANALYSIS

A. DESCRIPTION OF PROPOSAL:

The applicant is proposing to develop a 204-lot subdivision. All homes would be single-family detached. Three open space tracts would be set aside in the location of the stream corridor, along with one tract for active recreation and water quality. Several tracts exclusively for water quality treatment would also be created.

A planned development is being requested in order to allow for the flexible application of these base zone standards of DC Section 10.3.130:

- Reduced front yard setbacks (10 feet versus the required 14 feet).
- Reduced corner lot side yard setbacks (10 feet versus the required 14 feet)
- Reduced side yard setbacks (5 feet versus increasing the setback based on building height).

In addition, the applicant proposes to:

- Relocate and improve the drainage way. A new stream corridor would be created south of the existing drainage ditch, closer to the BPA easement. The new stream would be created to have a more natural meander and would be planted with native vegetation. The drainage ditch would be filled in and incorporated into developed lots.
- Narrow the paved width of Main Street and "B" Street through the stream corridor (pursuant to DC Section 10.8.610(A)(6))
- Create blocks longer than 330 feet (those abutting David Hill Road) pursuant to DC Section 10.8.905(B) and (C).

Each will be addressed later in this report.

Lot areas would range up to 8,177 square feet (lot 181). Average lot area would be approximately 5,380 square feet, which would exceed the 5,000-square-foot average required in the R-5 zoning district. Lot depths would vary but would generally be between 90 feet and about 108 feet, except for those lots overtopped with the Bonneville Power Administration (BPA) and Tualatin Valley Irrigation District (TVID) easements; those would be about 125 feet deep. Most lots would be about 50 feet wide, except for those on cul-de-sac bulbs, and a tier of lots at the extreme northeast and east end of the project site; those lots would be 40 feet wide. Several water quality tracts would be created, in each of the four phases. One of those tracts would also serve as an active recreation space; further discussion about that aspect follows in the Site Design section below.

Silverstone is proposed to be a four-phase project. DC Section 10.6.005(D) stipulates a time limit for phased subdivisions. The final plat for the final phase must be submitted no more than eight years from the date of tentative plat approval. If that final plat is not submitted within eight years, the tentative plat will need to be resubmitted for review against the Development Code criteria in effect at that time.

B. SITE EXAMINATION:

The site consists of a single parcel and has a gross area of 49.09 acres. It is bisected by a drainage ditch. The elevation gently decreases to the drainage ditch, decreasing from about 177 feet at the north property line and 173 feet at the south property line to the ditch boundary elevation of about 168 feet. The site consists of a field used for agriculture, a house with two small outbuildings, and several trees around the home site. These improvements are all proposed to be removed.

The site is bordered by David Hill Road on the north, Highway 47 on the east, the Forest Grove High School campus on the west, and the Lancaster Square subdivision on the south. BPA and TVID both have easements along the south property line. BPA has the wider easement, with a total width of 100 feet, half of which is located on the project site.

The area north of David Hill Road was recently included in the urban growth boundary as part of the "Grand Bargain". The City has not yet adopted a Comprehensive Plan designation for this area. Washington County has designated it as FD-20 (Future Development - 20 acre minimum lot area).

C. EXISTING COMPREHENSIVE PLAN DESIGNATION AND ZONING OF SITE AND AREA:

LOCATION	COMPREHENSIVE PLAN DESIGNATION	ZONE DISTRICT	LAND USE
Project Site	Low Density Residential (LDR-A)	Single-Family Residential (Medium Density) (R-5)	Agriculture Rural Residential
North	County FD-20	County FD-20	Agriculture Rural Residential
South	Low Density Residential (LDR-A)	Single-Family Residential (Medium Density) (R-5)	Single-Family Residential
East	Low Density Residential (LDR-A)	Single-Family Residential (Medium Density) (R-5)	Single-Family Residential
West	Institutional	Institutional	Forest Grove High School

D. DENSITY:

The proposed project includes 204 single-family units to be constructed on 49.09 gross acres of land. Net area (gross area less the tracts set aside for common usage) would total 25.04 acres.

Development is required to achieve 80% of the target density. The R-5 zone district has a target density of 8.71 units per net acre, which calculates to 218 units (25.04 x 8.71 = 218.10). The minimum required to comply with the 80% standard would be 174 units (218.10 x 0.80 = 174.48).

With 204 units, the project exceeds the minimum density required and does not exceed the maximum allowed by the Development Code.

E. SITE DESIGN:

General – *Note that the proposed lot layout has been revised since the application was received. The private street and Tract D have been eliminated. The application has not been revised – please see the Preliminary Plat Overview sheet for the current proposal.*

The project design is for a conventional single-family detached subdivision. Two Collector streets (Main and "B") would be extended north from Hartford Drive through to David Hill Road. Two Local streets (Silverstone Drive and "A" Street) would also intersect with David Hill Road. Other Local streets would be developed within the project site to provide access.

The project has a west/east orientation due to both the rectangular shape of the property and the drainage way running through the project site, also from west to east. This ditch was created to provide drainage for the site while it was in agricultural production. It drains into a tributary of Council Creek near the Beal Road pond, just off-site at the southeast corner. The applicant is in the process of applying to the Oregon Division of State Lands (DSL) and Clean Water Services (CWS) to relocate this drainage way southward, and restore it to a more natural state. The application as submitted is dependent on the approvals of DSL and CWS, as the applicant proposes to develop the existing ditch area with home sites.

This would be a phased project. Depending on market conditions, one phase would be developed annually. In the meantime, the undeveloped phases would remain in agricultural production.

Council Creek Regional Trail - Several tracts (A, B, and C) would be set aside for the stream restoration project. These tracts are also under study as a potential link for a segment of the Council Creek Regional Trail. The trail route through the area has not yet been identified, but could be located within the BPA easement. The applicant has offered to provide a public pedestrian easement for the trail, if it is proposed to be routed through the project site. Staff has proposed a **condition** to ensure this option remains available over the tracts noted above, as well as Tract K and lots 138 through 151 where the BPA easement is located. A decision on the trail route is expected sometime in 2015.

This same area could also be used for a future City trail, although at this time the City's Parks and Recreation Director has not expressed any interest for such a trail due to alternative routes in the area.

Recreation Tract - Tract H would be set aside for use as both a water quality facility and as an active recreation space. The tract would be 11,509 square feet in area (0.26 acres) with about half the area used for a water quality facility; the balance would be developed with a tot lot/play structure, small lawn area, and perimeter plantings.

Tract H would be located near the center (east-to-west) of the site, and therefore equally accessible to the residents. It would be in a highly visible location along Silverstone Drive at "A" Street where the residents and Police patrols could easily monitor activities. Because of its central location and visibility, staff finds the location acceptable.

The proposed recreational improvements would be consistent with the Planning Commission's approvals of much smaller projects, but would not compare favorably with the recreational facilities provided in subdivisions of a similar scale. For example, The Parks subdivision has 193 lots, and three active recreation tracts of 0.72 acres, 0.70 acres, and 1.42 acres (2.84 acres in total). Oak Hill Settlement has an active recreation tract of 0.72 acres serving 194 lots. Pacific Crossing's recreation tract is over two acres in area, and has been developed for both active (pool, club house and ball court) and passive (walking trail) recreational pursuits. When built out, Pacific Crossing will have 305 lots.

Lincoln Park is the nearest public park; at its northern extremity it would be about 2/3 of a mile away from Silverstone's southeast corner. The Forest Grove High School campus abuts the Silverstone site on the west, but it is not developed for recreational use by the general public. Staff is therefore recommending a **condition** that Tract H be enlarged so that a minimum of 3/4 of an acre (32,670 square feet) could be developed for active recreational use, over and above the area set aside for the water quality facility. Staff is proposing ¾ of an acre because it would be equivalent to the minimum area provided in Oak Hill Settlement, the subdivision closest in lot yield to what is proposed in Silverstone (194 lots v. Silverstone's 204 lots). This acreage would be equivalent to six lots (as noted above, the average lot area in Silverstone would be 5,380 square feet) although there wouldn't necessarily be a decrease in lot yield, as some of the larger lots could be reduced in area to compensate. Staff is also recommending a **condition** that the tract be developed to include something more than just a tot lot or play structure. Such equipment would be sufficient for the pre-10 age group but would offer nothing for older children or adults. Staff has written the condition to include a ball court and fitness trail, but other amenities could be considered. Staff is also recommending that the tract include several Oregon white oak trees and more passive recreation furniture including picnic tables and benches, and a wetland viewing platform with educational displays about the stream restoration project.

Block Lengths - Development Code Section 10.8.905(B) allows block lengths of between 330 and 660 feet. All of the proposed blocks abutting David Hill Road would exceed 330 feet; most would exceed 660 feet:

- Silverstone Drive to "B" Street - about 700 feet

- "B" Street to "A" Street – about 550 feet
- "A" Street to Main Street – about 750 feet
- Main Street to Highway 47 – about 900 feet

DC Section 10.8.905(C) allows exceptions to the block length standards due to physical conditions, buildings or other existing development, barriers such as freeways or railroads, or slopes exceeding 15%.

As will be further discussed in the City Services – Streets section below, David Hill Road is a designated Arterial street. It will be constructed as a three-lane section with a center landscaped median, with turn lanes created at least at the Main Street and "B" Street intersections. Those intersections are required as both Main and "B" streets are designated Collectors, and will likely be extended north in the future. The other streets (Silverstone Drive and "A" Street) would both be Local streets.

Because David Hill Road is a designated Arterial street with restricted access and intersection spacing, staff concludes that the proposed block lengths would be in substantial compliance with the "barriers such as freeways" exception noted above. Staff would propose one **condition** however, for a walkway connection from David Hill Road to 35th Avenue over the storm drainage easement proposed on lots 166 and 167. This location would align with Birch Street, near the mid-point of the Main Street-to-Highway 47 block. It would be improved with a pedestrian and bicycle path at least 8 feet wide, in compliance with DC Section 10.8.905(E)(3).

F. SETBACKS:

The applicant proposes to modify the front and corner lot side yard setbacks:

- Front yard setbacks are proposed to be 10 feet to the dwelling and 20 feet to the garage. Standard dimensions are 14 feet and 20 feet respectively.

  Construction of homes with reduced front yard setbacks has proven problematic: the City has confronted issues with encroachments into the standard 10-foot-wide front yard utility easement. Because setbacks are measured to the foundation, builders submit plans with projections such as footings and eaves that encroach into the easement. Prohibiting encroachment into the air space and the subterranean space is critical in order to ensure adequate access to the utilities located within the easement, and to ensure adequate maneuvering space for utility maintenance equipment. To ensure there is no encroachment, site plans and home plans have to be modified (at additional time and expense). To ensure there would be no projections into the 10-foot-wide PUE, staff is proposing a **condition** to increase the front yard setback to at least 11 feet. This dimension would apply to both the front yard and front/side yard of corner lots.

- Side yard setbacks are proposed to be 5 feet. The City standard for a side yard is a minimum of 5 feet with a potential increase based on building height. The City has approved a 5-foot-wide setback in one other project: Pacific Crossing.

  Electrical meter bases are usually placed on the side wall. The electrical code requires a minimum 3-foot distance from the face of the meter (which

projects several inches from the wall face) to the nearest property line. A minimum 5-foot-wide setback would comply with the electrical code.

- Rear yard setbacks are proposed to be 15 feet. The standard rear yard setback is 15 feet. No modifications or conditions appear necessary.

G. OFF-STREET PARKING:

DC Section 10.8.515 Table 8-5 *Parking Requirements* stipulates a minimum of one off-street parking space for each single-family detached home. Each home in Silverstone is proposed to have a garage for at least two cars, and a 20-foot-long driveway. Each lot would therefore have at least four off-street parking spaces, for a total of 816 over the project site. No common off-street parking bays are proposed.

Lots in Silverstone would have street frontages generally ranging from 40 to 50 feet wide. Because the Local streets are proposed to be of a width (28 feet) that would only allow parking on one side (see City Services - Streets section below), only about half of the lots (102) would have on-street parking available. Even assuming only one on-street space for 102 lots (corner lots would have more), staff does not anticipate an under-supply of parking in this project as 918 spaces overall (816 on-site plus 102 on-street) would be available. No conditions of approval pertaining to parking appear necessary.

H. ARCHITECTURE:

The applicant has proposed about thirty different one- and two-story house plans, all of which could be built with different roof structures and architectural details. All would be front-loaded designs. Architectural details include a variety of siding materials (lap with variable reveal, board and batten, and shingle); stone trim; slider windows; double-hung windows (some with the appearance of divided lights). Front doors all appear to have six panels with no variation; and most garage doors appear largely the same as well. Staff would anticipate that the doors are merely representational and that they would vary depending on the client's choice, but the Commission may want to include a condition to ensure a variety of both front door and garage door designs.

Development Code Section 10.8.880(C)(3) *Dwelling Diversity Standard* stipulates that "Front elevations shall not be replicated more than five times along a block-face on both sides of a street segment...For this section, the definition of replication includes mirrored images (where the main features such as windows, door location, garage location, roof peak, etc. are reversed), and minor trim and paint changes." With about 30 different plans proposed, staff does not anticipate an issue with replication.

I. CITY SERVICES: All City services are available for extension into the development site.

Streets –

David Hill Road – As noted in the Narrative (p.5) "David Hill Road is classified as an arterial and is under the jurisdiction of Washington County. The planned right-of-way width is 70 feet. Existing right-of-way is 40 feet wide. (Note: The applicant would be dedicating an additional 30 feet of right-of-way to achieve

the required 70-foot width. Staff has included this dedication as a recommended **condition** of approval). The road is fully funded for construction by Washington County through the MSTIP program in 2015. The engineering work is currently underway." After it has been improved to urban standards, jurisdiction will be transferred to the City.

Per an agreement with ODOT, Washington County is also taking the lead in the development, design and construction of the Verboort Road/Purdin Road intersection, north of the project site. David Hill Road and its intersection improvement at Highway 47 will be incorporated into this design. The County is coordinating with ODOT Region 2 for both projects. Roundabouts are proposed for both intersections.

David Hill Road will be constructed as a three-lane section with a center landscaped median, with turn lanes created at the Main Street and "B" Street intersections. Those intersections are required as both Main and "B" streets are designated Collectors, and will likely be extended north in the future. The other proposed intersections (Silverstone Drive and "A" Street) would both be Local streets. They may or may not be extended north across David Hill Road.

Washington County regulates access to its arterial streets. County code stipulates that direct access to arterial streets shall be from collector or other arterial streets, not local streets. Other access (like a driveway) is allowed if there is no other alternative, and then it must be at least 600 feet distant from any other access.

Because the jurisdiction of David Hill Road will be transferred to the City, the County will defer to the City in regards to intersection spacing. As proposed, the spacing between intersections would be approximately 700 feet from Silverstone Drive to "B" Street; 550 feet from "B Street to "A" Street; 750 feet from "A" Street to Main Street; and 900 feet from Main Street to Highway 47.

Main Street and "B" Street are both collectors and would comply with the County spacing standard. Silverstone Drive and "A" Street would not be allowed to connect to David Hill Road because they would both be local streets. Applying the 600-foot spacing criterion, the spacing between "A" Street and "B" Street would not comply.

The City only has roadway spacing standards for "T" intersections (DC Section 10.8.610(G)) with a distance of at least 300 feet. There are no standards for four-way intersections.

The City has discretion since the Development Code – unlike the County's code - does not prohibit local street connections with arterial streets. Many such connections already exist, especially along the Pacific Avenue / 19th Avenue corridor, where intersections occur every 400 feet.

The application as proposed would meet the Development Code minimum 300-foot spacing standard. The question for the Commission to consider is whether the Silverstone Drive and "A" Street connections are needed and desirable.

- Silverstone Drive could become a cut-through route for eastbound traffic heading to "B" Street, although it's not really possible to predict just how much traffic this would be.

- "A" Street as proposed would provide access to only a few lots. Because it would "T" into Silverstone Drive after just a short distance, it really wouldn't offer much benefit to the neighborhood's overall circulation system.
- Lots 47 and 48 would have 51 and 53 feet of frontage onto "A" Street respectively. DC Section 10.8.130 *Location of Curb Cut* requires that driveways be located a minimum of 50 feet from arterials with two or three travel lanes. As configured, these two lots would not be allowed vehicular access onto "A" Street. This same issue exists for lots 103 and 104 fronting Silverstone Drive.
- Either or both streets could be replaced with cul-de-sacs that would comply with the maximum 200-foot-long standard required by DC Section 10.8.610(K) *Cul-de-Sacs.*

Because Silverstone Drive would be located 700 feet more or less from the "B" Street intersection, staff concludes that it would comply with both City and County intersection spacing standards (300 feet and 600 feet respectively), and no conditions of approval appear warranted.

Because the proposed "A" Street intersection would be only 550 feet more or less from the "B" Street intersection, staff concludes that it would not comply with the County intersection spacing standard although it would comply with the City intersection spacing standard. Furthermore, "A" Street would appear to offer little benefit to the neighborhood's overall circulation plan, as it would be bracketed by two nearby collectors (Main and "B" streets). Staff is therefore recommending a **condition** that "A" Street not connect through to David Hill Road. In the alternative, 35th Avenue could be extended or "A" Street could be designed as a cul-de-sac. In either event, staff would also recommend a **condition** to construct a pedestrian walkway through to the David Hill Road sidewalk.

If "A" Street continues as a through street, lots 46 through 48 would need to be reconfigured to ensure that the driveways on lots 47 and 48 would comply with DC Section 10.8.130 *Location of Curb Cut.* Staff has included this as a proposed **condition.** This condition would also include lots 103 and 104

Highway 47 is under State Highway (ODOT) jurisdiction. ODOT staff have reviewed the Silverstone application and recommended several approval **conditions,** which are also included in staff's recommendation. The recommendations include installation of a sidewalk and bicycle facilities along Highway 47 concurrent with Phase 4, along with the usual permits required for performing work in the ODOT right-of-way. ODOT's review letter is included as Attachment B.

David Hill Road and Highway 47 Perimeter Treatment – Both streets are classified as Arterials on the Forest Grove TSP. The applicant proposes the construction of a perimeter fence along both streets. This fence would consist of cedar boards between masonry pillars (a photo example is on the very last page of the applicant's submittal).

Staff acknowledges that such a fence would be attractive, over the short term. Over the long term however, wood fencing would rot and need to be replaced. The relatively smooth surface of wood fencing would also provide an attractive medium for graffiti.

Staff is therefore recommending a **condition** that the perimeter treatment along both David Hill Road and Highway 47 consist of a more durable material, such as the masonry wall installed along the north boundary of Oak Hill Settlement nearby. Alternative materials such as faux rock would also be acceptable. Not only would they be more durable, their textured surfaces would discourage graffitists.

Main Street and "B" Street are both designated Collector streets. The applicant has proposed to maintain the City-standard 66-foot right-of-way widths through the project site.

City-standard Collector streets are 40 feet wide with on-street parking allowed on both sides, resulting in a travel way of 22 feet. To minimize impacts on the wetland, the applicant has proposed to reduce the improved width through the relocated stream corridor, from 40 feet to 28 feet (similar to the 26th Avenue section in Casey Meadows). No on-street parking would be allowed through the reduced-width section.

DC Section 10.8.610(A)(6) stipulates that "Improvements to streets shall be made according to adopted City standards, unless the approval authority determines that the standards will result in an unacceptable adverse impact on existing development or on the proposed development or on natural features such as wetlands, steep slopes or existing mature trees."

The reduced-width section would not affect the width of the travel way. Because there would be no developed lots adjacent to these sections that might create demand for on-street parking, staff concludes that the proposed reduction in street width would be appropriate to minimize the impact on the adjacent wetland, and no conditions to mitigate the impacts of this design element appear necessary.

The parkway width through these same sections is also proposed to be reduced, from 5 feet to 4 feet to minimize bridge width. To address landscaping in the parkway area, staff is proposing a **condition** that a landscape plan is included with the public improvement plans, to be reviewed and approved by Engineering and Community Development staff.

- As noted above, the driveways for lots 7, 8 and 9 abutting Main Street would be located very close to David Hill Road. Backing movements from those lots might conflict with the traffic exiting the arterial, thereby decreasing traffic safety. They would also be located at the 35th Avenue intersection, adding another variable. Furthermore, DC Section 10.8.130(C) *Widths and Locations of Driveways and Curb Cuts* requires driveways to be located at least 50 feet from an intersection on Collector streets. As Main Street is a Collector, Lot 7 would not be permitted driveway access. Staff is therefore recommending a **condition** that at least lots 7 and 8 be reconfigured to allow compliance with the driveway spacing standard.

Local Streets would include Silverstone Drive; 35th Avenue; "A", Ash, Birch, and Chestnut streets; and Ardith and Arleen courts. All would have 54-fot-wide rights-of-way and 28-foot-wide streets, in compliance with DC Section 10.8.610(E) Table 8-8. Pursuant to Table 8-8 Footnote #7, parking would be allowed on one side only.

Sidewalks – Sidewalks adjacent to home sites would be constructed as each home is built. For other sidewalks and walkways, staff is proposing three sidewalk **conditions:**

- Property-line type sidewalks shall be installed adjacent to all tracts concurrent with street construction, except for Tract H.
- A curvilinear sidewalk shall be installed in Tract H concurrent with street construction. If located outside the right-of-way, a public pedestrian access easement shall be required.
- Construct a pedestrian / bicycle connection from David Hill Road to 35th Avenue over the storm drainage easement proposed on lots 166 and 167. It shall be improved with Portland cement concrete eight feet wide and six inches thick. The remaining area shall be landscaped or otherwise improved; the design shall be approved by the Community Development Director prior to construction (DC Section 10.8.905(E)(3)).

Sanitary Sewerage – An 8-inch City sanitary sewer line is available for extension from Hartford Drive at "B" Street and Main Street. Capacity is adequate to serve the proposed project. The applicant would be responsible for construction of all the sanitary lines into the project site in compliance with the sanitary sewerage master plan.

Water – An 8-inch water line is available in Hartford Drive, Main Street and "B" Street. The applicant would be responsible for construction of all the water lines into the project site. When all phases of Silverstone are completed, multiple loops will have been created thus maintaining both adequate fire flows and water quality.

Storm Drainage – The applicant would be responsible for construction of all storm drain lines serving the project site. None of these would connect to the City's existing storm drainage system, as that system is located south of the stream corridor. Storm water runoff from Silverstone will be treated in several water quality facilities, and then drain into the stream.

As noted above, David Hill Road is on schedule to be constructed in 2015. It would extend the full length of the Silverstone project. The David Hill Road storm water conveyance system is still being designed, as a component of the County's road project. It is not known at this time what the storm drainage design will be.

Fire Protection - The Fire Department has proposed only one **condition**: that the project complies with Municipal Code Section 5.635 *Fire Hydrant Locations and Distribution.*

Electrical Service – The project would be served by underground utilities. This coincides with current Light and Power policies for new residential sub-divisions. Provided that there are no encroachments into the 10-foot-wide front public utility easement, no conditions appear necessary.

III. REQUIRED APPROVALS AND FINDINGS

DC Section 10.4.220(C) *Approval Criteria* authorizes the Planning Commission to approve a Planned Development if it finds that all of the following approval criteria are met.

1. The plan fulfills the purpose for PDs stated in DC Section 10.4.200 (as follows);

   The purpose of the Planned Development (PD) provisions is to provide greater flexibility in the development of land for residential, commercial or industrial purposes than allowed by the conventional standards of the Development Code. The PD provisions are intended to:

   A. Promote flexibility and innovation in site design and permit diversity in the location of structures;

   Applicant's Response: Venture Properties is requesting the Planned Development for this project in order to reduce the interior side setbacks to five feet, the street side yard setbacks to ten feet, and the rear setback to 15 feet. No incentive density increases are requested. A variety of lot sizes is proposed as well, allowing for housing diversity. Generally, lot widths are 40 feet, 50 feet, or 60 feet.

   The property's unique value that provides the opportunity for design exceptions lies in the future vegetated corridor. Currently, the property is bisected from east to west by an agricultural ditch. This corridor will need to be enhanced per Clean Water Services standards, but rather than investing in the enhancement of a straight, unnatural ditch, Venture proposes to relocate the stream to the south along the BPA corridor with a more natural meander to become a community resource. This corridor will also provide a buffer between the new development and the existing homes to the south. This property is isolated; it is bounded by the high school sports fields to the west, the proposed stream corridor along the south, Highway 47 to the east, and David Hill Road to the north. The requested design exceptions will not have an impact on the surrounding neighborhoods.

   Staff Analysis and Findings:

   Finding: A planned development is being requested in order to allow for the flexible application of the base zone standards of DC Section 10.3.130:

   - Reduced front yard setbacks (10 feet versus the required 14 feet).
   - Reduced corner lot side yard setbacks (10 feet versus the required 14 feet)
   - Reduced side yard setbacks (5 feet versus increasing the setback based on building height).

   The applicant requested review of this project as a planned development in order to have flexibility in the application of the above setback standards. The application is, in all other respects, a conventional subdivision.

Finding: While planned developments allow flexibility, they also require innovation in site design. The application as submitted lacks the enhancements that would differentiate this neighborhood from any other and rise to the level of "planned development." With the conditions to include additional enhancements (a larger park with more facilities, and a more durable perimeter treatment), the project design would be improved and thus, so would the quality of life for the future residents.

Finding: Construction of homes with reduced front yard setbacks is proving more problematic than initially anticipated. In particular, the City is confronting issues with encroachments into the standard 10-foot-wide front yard utility easement. Because setbacks are measured to the foundation, projections such as footings and the eaves would encroach into the easement. Site plans and home plans have to be modified (at additional expense) to ensure there is no encroachment. With the condition to require a minimum front yard setback of 11 feet – which would also be applicable to corner lot side yards - this conflict would be eliminated.

Finding: Side yard setbacks are proposed to be 5 feet. The City standard for a side yard is a minimum of 5 feet with a potential increase based on building height. The City has approved a 5-foot-wide setback in one other project (Pacific Crossing).

Finding: Electrical meter bases are usually placed on the side wall. The electrical code requires a minimum 3-foot distance from the face of the meter (which projects several inches from the wall face) to the nearest property line. A minimum 5-foot-wide setback would comply with the electrical code.

B. *Promote efficient use of land and facilitate a more economical arrangement of buildings, circulation systems, land uses, and utilities when compared with conventional development patterns;*

Applicant's Response: The proposed creek relocation allows for the developable land to be consolidated into the main portion of the property, rather than bisected by the creek. This allows for a more cohesive neighborhood and reduces the need for creek crossings with public streets.

Staff Analysis and Findings:

Finding: Relocating the creek would result in more developable land and therefore result in a more economical project. A previous subdivision application for this site (now lapsed) retained the drainage way in its current location; it would have had 171 lots. By relocating the creek, the applicant may achieve a lot yield of 204 lots, a nearly 20% increase.

Finding: The circulation system would extend two Collector streets (Main and "B") through to David Hill Road, in compliance with the Transportation System Plan. Other through streets would be created for local access and utilities. Only two cul-de-sacs are proposed, both of which would comply with the lengths stipulated by the Development Code.

C. *Preserve to the greatest extent possible existing landscape features and amenities, and incorporate such features into the design of the PD;*

Applicant's Response: The existing drainage way is fully farmed with no native plantings. The realignment is not proposed to have a substantial impact on the designated wetland areas on the site, and the relocation is limited to the areas of the ditch that do not have associated wetlands. The vegetated corridor will be fully enhanced per Clean Water Services standards. Street crossing of the stream corridor have been limited to the two designated collector street extensions of Main Street and "B" Street.

Staff Analysis and Findings: The only significant landscape feature on the site is a drainage ditch. Preservation of the ditch in its present state would do nothing to enhance water quality or provide any amenity to the project. The applicant has proposed to relocate the drainage way and restore it to a more natural state. The open space tracts surrounding the stream corridor may also be used for the Council Creek Regional Trail.

D. *Combine and coordinate architectural styles, building forms and building relationships within the PD; and*

Applicant's Response: The only buildings proposed are single-family detached homes. Designs for the homes will not be determined until a buyer chooses a lot and then determines what house they want to build.

Staff Analysis and Findings: The applicant has proposed about thirty different one- and two-story house plans, all of which could be built with different roof structures and architectural details. All would be front-loaded designs. Architectural details include a variety of siding materials (lap with variable reveal, board and batten, and shingle); stone trim; slider windows; double-hung windows (some with the appearance of divided lights). Front doors all appear to have six panels with no variation; and most garage doors appear largely the same as well.

Finding: Development Code Section 10.8.880(C)(3) *Dwelling Diversity Standard* stipulates that "Front elevations shall not be replicated more than five times along a block-face on both sides of a street segment...For this section, the definition of replication includes mirrored images (where the main features such as windows, door location, garage location, roof peak, etc. are reversed), and minor trim and paint changes." With about 30 different plans proposed, there should be no issue with replication.

E. Provide the applicant with reasonable assurance of ultimate approval before requiring detailed design and engineering, while providing the City with assurances that the project will retain the character envisioned at the time of approval.

Applicant's Response: This Planned Development application is being reviewed concurrently with a subdivision and partition plat, so the application includes a fairly high level of design detail and is more than just a conceptual plan approval.

Staff Analysis and Findings: With Planning Commission approval of this project, the applicant would be provided reasonable assurance of the ultimate approval of detailed designs and engineering. The City would be assured that the project would retain the character envisioned at the time of approval by the Planning Commission's adoption of the conditions listed below.

2. The plan meets the submittal requirements of DC Section 10.4.220(B) *Preliminary Plan Review:*

   Staff Analysis and Findings: The application was reviewed and deemed complete on June 19, 2014. This criterion has been satisfied.

3. Adequate public services exist or can be provided to serve the proposed PD; and

   Staff Analysis and Findings: All public services are adequate and can be extended into the project site. All public utilities would be constructed to City standards. This criterion is met.

4. Where a tentative subdivision plat is requested, the requirements of DC Article 8 *Land Division Standards* are met.

   Staff Analysis and Findings: The application was reviewed and determined to be in complete and in compliance with these Development Code standards on June 19, 2014. This criterion has been satisfied.

IV. ALTERNATIVES

The Planning Commission has the following alternatives:

1. Approve the PRD as proposed.
2. Approve the PRD with conditions.
3. Deny the application, stating reasons for doing so.
4. Continue the matter to a date certain for further consideration.

V. SUMMARY AND RECOMMENDATION

As noted at the beginning of this report, the applicant requested review of this project as a planned development in order to have flexibility in the application of the setback standards. The application is, in all other respects, a conventional subdivision.

While planned developments allow flexibility, they also require innovation in site design. The application as submitted lacks the enhancements that would differentiate this neighborhood from any other and rise to the level of "planned development." Staff has attempted to prepare a list of enhancements (a larger park with more facilities, a more durable perimeter treatment, and the potential for fewer vehicular connections to an arterial street) that would improve the quality of life for the future residents.

With those enhancements, staff finds that the application has adequately demonstrated compliance with the applicable provisions of the Development Code. Based on the above, staff recommends that the Planning Commission approve the

application for the Silverstone Planned Development, subject to the following conditions.

VI. PROPOSED CONDITIONS OF APPROVAL

GENERAL

1. The applicant is bound to the project description and all representations made by the applicant during the application and decision-making proceeding.
2. All plans submitted to date are considered conceptual only. Detailed plans and specifications must be submitted that demonstrate compliance with standards and regulations adopted by the City of Forest Grove and/or all other agencies that have jurisdiction.
3. Submit copies of documents from DSL and CWS confirming approval to relocate and improve the drainage ditch / stream corridor.

FINAL PLAT REQUIREMENTS

4. Thirty (30) feet of right-of-way shall be dedicated along David Hill Road adjacent to the project site.
5. A 10-foot-wide public utility easement shall be denoted along the front lines of all lots, parcels, and tracts (DC Section 10.8.900(E)). This condition shall not apply to the rear lot lines abutting David Hill Road or Highway 47.
6. Easements as necessary shall be granted for the installation of electrical distribution facilities (transformers, junction boxes, etc.)
7. If identified as the preferred route for the Council Creek Regional Trail, the applicant shall dedicate a public pedestrian easement at least 15 feet wide over tracts A, B, C and K; and lots 138 through 151.
8. Tract "H" shall be enlarged so that a minimum of 3/4 of an acre (32,670 square feet) could be developed for active recreational use, over and above the area set aside for the water quality facility.
9. The storm drainage easement over lots 166-167 shall be subject to a public pedestrian easement over its entirety, in compliance with DC Section 10.8.905(E)(3).
10. "A" Street shall be designed as a cul-de-sac (or 35th Avenue extended) to eliminate the intersection with David Hill Road. A pedestrian tract shall be required to connect through to the David Hill Road sidewalk in the vicinity of the proposed "A" Street connection (DC Section 10.8.615(C) *Easements.*
11. Lots 7, 8, 46-49, 103 and 104 shall be reconfigured to ensure compliance with the DC Section 10.8.130(C) *Widths and Locations of Driveways and Curb Cuts.*
12. Easements to the City of Forest Grove shall be provided over the water quality tracts for maintenance of the facilities and conveyance system (DC Sections 10.8.615(B), 10.8.635(B) and 10.8.905(E)(2)).
13. Submit a copy of the proposed final deed restrictions concurrent with the final plat. The CC&Rs shall provide adequate provisions including but not limited to funding for the maintenance of all privately maintained open space and recreation areas, water quality tracts, and access ways. To ensure the funding mechanism is adequate, provide an estimate of the total anticipated maintenance expenses for a ten-year period, and describe how those expenses will be met (DC Section 10.8.1000 *Conditions, Covenants, and Requirements).*
14. The final plat for Phase 1 shall be submitted within two years of tentative plat approval, pursuant to DC Section 10.6.115 *Effective Period of Tentative Plat Approval.* Upon satisfactory completion, a Mylar copy of the recorded plat shall be provided to the Community Development Department.

15. Home building permits shall not be issued for any lots until the recorded Mylar for each phase is received.

PUBLIC IMPROVEMENTS

16. All plans submitted to date are considered *conceptual* only. Public improvement plans shall comply with the Engineering Department's *Development Projects – General Submittal Requirements*; *Engineering Development Review Process;* Engineering Department *Conditions of Approval; Plan Requirements for Public Improvements; Plan Review Checklist;* and *Road Right-of-Way Testing and Inspection Practice.*
17. All sewer and storm improvement work shall conform to the City of Forest Grove *Municipal Code* and *Master Plans,* City of Forest Grove *Standard Specifications, Uniform Building Code Appendix Chapter 33 Excavation and Grading,* and the *Agreement Allowing Developer to Construct Public Improvements.* No home building permits will be issued until all required public improvements have been constructed and accepted by the City of Forest Grove and/or others having jurisdiction.
18. All sewer and storm improvements shall comply with CWS Resolution and Order 07-20 *Design and Construction Standards for Sanitary Sewer and Surface Water Management.*
19. Submit a landscape plan for the Main Street and "B" Street stream overcrossings for review and approval by Engineering and Community Development department staff.
20. The developer shall provide record drawings of all public utilities.
21. All signage (including, but not limited to, street names, vehicular parking restrictions, and vehicular and pedestrian traffic protection and direction) for public rights-of-way and easements; pavement striping and marking; and pavement reflectors (including, but not limited to, blue fire hydrant markers), shall be shown on the approved plans and installed by the developer, as required by the Engineering Department. To minimize conflict with driveway locations and street trees, signs shall be attached to street light poles wherever possible.
22. The recommendations of the geotechnical report shall be incorporated into the construction plans for the subdivision. It shall also contain a separate section addressing public improvements, including the structural design and construction of public streets and roadways referencing the *Washington County Uniform Road Improvements and Design Standards* and/or AASHTO standards. Alternate design considerations for "wet-weather" construction shall be included. The street design shall meet or exceed minimum standards established by the City Engineer.
23. Fire hydrants shall be installed in compliance with Municipal Code Section 5.635 *Fire Hydrant Locations and Distribution.* Hydrants shall be equipped with two 2 ½-inch ports and one 4-inch Storz fitting with a cap on the steamer port. Locations shall be identified with blue reflective pavement markers at the street centerline.
24. Compliance with ODOT conditions of approval as per the September 4, 2014 letter (see Attachment B)

SIDEWALKS AND WALKWAYS

25. Property-line type sidewalks shall be installed adjacent to all tracts concurrent with street construction, except for Tract H.
26. A curvilinear sidewalk shall be installed in Tract H concurrent with street construction. If located outside the right-of-way, a public pedestrian access easement shall be required.

27. Construct a pedestrian / bicycle connection from David Hill Road to 35th Avenue over the storm drainage easement proposed on lots 166 and 167. It shall be improved with Portland cement concrete eight feet wide and six inches thick. The remaining area shall be landscaped or otherwise improved; the design shall be approved by the Community Development Director prior to construction (DC Section 10.8.905(E)(3)).
28. A pedestrian walkway shall be constructed from the "A" Street vicinity through to the David Hill Road sidewalk to the standards of DC Section 10.8.905(E)(3).

SETBACKS

29. Front yard and corner lot side yard setbacks shall be a minimum of 11 feet.
30. Interior side yard setbacks shall be a minimum of 5 feet.
31. Garages shall be setback a minimum of 20 feet.
32. Rear yards shall be a minimum of 15 feet.
33. A minimum distance of eight feet shall be maintained between electrical transformers and any combustible structure, overhang, window, or door. Consult Forest Grove Light and Power Department *Electric Service Requirements & Guidelines* Section 1.09 Clearances from Utility Equipment for additional clearances and information and also National Electric Safety Code (NESC) Rule 012C.

ARCHITECTURE AND BUILDING FEATURES

34. The primary siding material of the front elevation shall wrap around all four elevations.
35. The *Single-Family Development Review Standards* of DC Section 10.8.880 shall apply to all homes constructed in this project.

TRACT H IMPROVEMENTS

36. At least six Oregon white oak trees shall be included in the Tract H landscape plan. Where Oregon white oaks are proposed to be located, landscape plans shall be revised to minimize the need for irrigation. Grass, ferns, azaleas, rhododendrons, or any other vegetation that needs summer irrigation shall not be planted near the Oregon white oaks.
37. Tract H shall be developed with picnic tables, benches, a tot lot or play structure, a ball court, fitness trail, and wetland viewing platform with educational displays about the stream restoration project.

OTHER

38. Mailboxes and newspaper receptacles are required; locking mailboxes are recommended. These facilities shall be located in the vicinity of streetlights. Locations and specifications should be confirmed with the Forest Grove Post Office prior to installation. Installation shall occur prior to occupancy of the first home.
39. Install a six-foot-tall masonry or faux masonry wall along both David Hill Road and Highway 47. The wall segments shall be installed with the construction of the public improvements for each phase.

VII. LIST OF ATTACHMENTS

The following attachments were received, marked, and entered into the record as evidence for this application at the time this staff report was written. Attachments of evidence received after the date of this report will be marked beginning with the next consecutive letter and will be entered into the record at the time the Public Hearing is opened, prior to oral testimony.

Attachment A	Application Materials, prepared and submitted by Venture Properties LLC
Attachment B	ODOT Review Letter

VentureProperties
INCORPORATED

Creating
Tomorrow's
Communities
Today

Application for a

Type III Planned Development,

A Type II Tentative Plat, and a Type II Three Lot Partition

for

Silverstone

Forest Grove, Oregon
By Venture Properties, Inc.
May 28, 2014

REVISED
Date:

Contents

Exhibits:

I. Introduction

General Information

Applicant/Contact:	Venture Properties, Inc. 4230 Galewood Street Lake Oswego, Oregon 97035 (503) 387-7600 Contact: Mimi Doukas, AICP, RLA
Engineer:	AKS Engineering & Forestry 12965 SW Herman Road, Suite 100 Tualatin, OR 97062 (503) 563-6151 Contact: Alex Hurley, PE, PLS
Owner Information:	R.A.A. LLC 19813 NW Metolius Drive Portland, Oregon 97229 Contact: Arleen Andrews
Property Address:	2465 NW Highway 47 Forest Grove, Oregon 97116
Tax Lot::	TL 1N33000 01200
Acreage:	49.09 acres
Comprehensive Plan Designation:	Low Density Residential
Zoning Designation:	R-5

Request

Venture Properties is requesting approval of a Type III residential Planned Unit Development for a 204 lot subdivision, a Type II Tentative Plat, and a Type II Partition Plat.

Existing Conditions and Project Description

Silverstone (TL 1N33000 01200) is located on the southwest corner of Highway 47 and the future extension of David Hill Road and carries a Forest Grove R-5 zoning designation. The property to the south is zoned R-7 with a Planned Unit Development overlay. The land to the west is the Forest Grove High School ball fields and is zoned Institutional. The land to the north of David Hill Road was recently and unexpectedly added to the Urban Growth Boundary as part of the "grand bargain" legislation and is awaiting a concept planning effort to determine the long term land use designations but is expected to be primarily industrial. The property is bounded on the east by Highway 47 which is the Urban Growth Boundary; the land to the east is designated as Rural Reserve and will remain in farm production for the foreseeable future.

This property has been in active farmland use for many years. A previous land use application for a subdivision was proposed and approved in 2006, but that decision has since expired.

III. Forest Grove Development Code

ARTICLE 2 LAND USE REVIEWS

REVIEW BODIES

10.2.020 ASSIGNMENT OF REVIEW AUTHORITY

Land use reviews are assigned to the review bodies stated below.

A. Community Development Director. The Community Development Director (Director) has the authority to consider all land use reviews that are subject to Type I and Type II review procedures. The Director may delegate review and decision-making authority to planning staff.

B. Planning Commission. The Planning Commission serves as the highest commission or board within the City of Forest Grove with respect to the review of land use permits. Where consideration of a landmark or significant tree registration or removal is part of another land use permit or legislative action requiring Planning Commission review, the consideration of the registration or removal shall be assigned to the Planning Commission as part of its public hearing process with recommendation from the Historic Landmarks Board or Community Forestry Commission. The Commission has the authority to consider land use reviews subject to Type III procedures. The Planning Commission also reviews Type IV legislative land use reviews and makes a recommendation to the City Council for a final decision.

C. Hearings Officer. Pursuant to ORS 197.360-.380, an applicant may request that a Hearings Officer consider an Expedited Land Division review subject to Type III procedures. The applicant shall pay all extra costs associated with the Hearings Officer review.

D. Historic Landmarks Board. Generally, the Historic Landmarks Board will consider matters related to historic resources. In some applications, the Historic Landmarks Board makes a recommendation for a final decision by the Planning Commission or City Council. The following land use reviews are assigned to the Historic Landmarks Board for at least an initial recommendation.

1. Landmark designations, and the removal of landmark designations;
2. Demolition review; and
3. Review of proposed work affecting the exterior of landmarks.

E. Community Forestry Commission. Generally, the Community Forestry Commission will consider matters related to protected trees. The Community Forestry Commission is responsible for the designation of Register trees and the removal of a designated tree from the Register. The Community Forestry Commission will also consider permits for removal or major pruning of protected trees if the Director's review or decision is referred or appealed. The CFC will also review development project which impact protected trees if referred by the Director.

F. Public Arts Commission. The Public Arts Commission will be responsible to review and make recommendations to the relevant decision making authority on any art proposed by a development where the art is visible to the public.

G. City Council. The City Council is responsible for final decisions on plan amendments and zone changes and all land use reviews subject to Type IV procedures. All appeals of land use reviews subject to Type II and Type III procedures are also assigned to the City Council.

Response: Venture Properties is requesting approval of a Type III Planned Unit Development, a Type II Partition Plat, and a Type II Tentative Plat. Venture is also requesting concurrent review of all three applications, with review by the Planning Commission as required for the

10.2.430 PROCEDURE

Site development review is categorized as a Type I procedure for one (1) single family detached dwelling on an individual lot; one (1) duplex on an individual lot; one (1) manufactured home on an individual lot. All other site development reviews shall follow the Type II procedure unless exempt.

Response: As noted above, Venture Properties is proposing concurrent review of the land use applications for Silverstone, so all applications will be reviewed by the Planning Commission with appeal to the City Council. This criterion is met.

10.2.440 SUBMITTAL REQUIREMENTS

In addition to the standard submittal requirements for a Type II application, the following plans and information are required for Site Development Review. The Director may waive specific submittal requirements at the pre-application conference, if warranted.

Site Development Plans shall be drawn to scale and fully dimensioned, and shall illustrate the following:...

Response: The required plans have been included in Exhibit A of this submittal package. This criterion is met.

10.2.450 REVIEW CRITERIA

The Director shall review and approve, conditionally approve, or deny the site development plan based on the following criteria:

A. The site development plan complies with all applicable standards of the base zoning district, any overlay district, and the applicable general development standards of Article 8.

Response: The standards of Article 8 are addressed below.

B. The site development plan ensures reasonable compatibility with surrounding uses as it relates to the following factors:

1. Building mass and scale do not result in substantial visual and privacy impacts to nearby residential properties; and
2. Proposed structures, parking lots, outdoor use areas or other site improvements that could cause substantial off-site impacts such as noise, glare and odors are oriented away from nearby residential uses and/or adequately mitigated through other design techniques.

Response: The adjacent property to the south and west has already developed at urban levels. The property to the north was unexpected added to the Urban Growth Boundary in February as part of the "grand bargain" legislation but has not completed concept planning or been annexed to Forest Grove. The land to the north is separated by the David Hill Road extension, so the design of Silverstone does not materially affect the future layout of the land to the north. Similarly, the land to the east is separated by Highway 47 and is designated as Rural Reserve; the design of Silverstone does not materially affect the future layout of the land to the east. This criterion is met.

C. The site development plan preserves or adequately mitigates impacts to unique or distinctive natural features including, but not limited to:

1. Significant on-site vegetation and trees;

housing type in this zone. Accessory dwelling units, duplexes and attached housing types are also permitted subject to the density limitations of the zone. A limited range of compatible non-residential uses such as parks and schools are also permitted or allowed with conditional use permit approval.

Response: Detailed density calculations are provided below in Section 10.3.130. Only single family detached homes are proposed with general lot sizes of 4,000 square feet, 5,000 square feet, and 6,000 square feet.

10.3.120 USE REGULATIONS

Refer to Article 12 for information on the characteristics of uses included in each of the Use Categories.

A. Permitted Uses. Uses allowed in the Residential zones are listed in Table 3-2 with a "P". These uses are allowed if they comply with the development standards and other regulations of this Code.

B. Limited Uses. Uses that are allowed subject to specific limitations are listed in Table 3-2 with an "L". These uses are allowed if they comply with the limitations listed in the footnotes to the table and the development standards and other regulations of this Code.

C. Conditional Uses. Uses that are allowed if approved through the conditional use process are listed in Table 3-2 with a "C". These uses are allowed provided they comply with the conditional use approval criteria, the development standards, and other regulations of this Code. The conditional use process and approval criteria are stated in Section 10.2.200.

D. Not Permitted Uses. Uses listed in Table 3-2 with an "N" are not permitted or prohibited. Existing uses may be subject to the regulations of Section 10.7.100, Nonconforming Development.

E. Accessory Uses. Uses that are accessory to a primary use are allowed if they comply with specific regulations for accessory uses and all development standards.

TABLE 3-2 Residential Zones: Use Table

USE CATEGORY	SR	R-10	R-7	R-5	RML	RMH
RESIDENTIAL Household Living	P	P	P	P	P	P
Group Living	L[1]	L[1]	L[1]	L[1]	L[1]	L[1]
Transitional Housing	N	N	N	N	C	C
Home Occupation	L[2]	L[2]	L[2]	L[2]	L[2]	L[2]
Bed and Breakfast	L[3]	L[3]	L[3]	L[3]	L[3]	L[3]
HOUSING TYPES Single Units, Detached	P	P	P	P	P	L[4]
Single Units, Attached	L[5]	L[5]	L[5]	L[5]	P	P
Accessory Units	L[6]	L[6]	L[6]	L[6]	L[6]	L[6]
Duplexes	L[5]	L[5]	L[5]	L[5]	P	P
Manufactured Homes	L[7]	L[7]	L[7]	L[7]	L[7]	L[7]
Manufactured Home Park	N	C	C	C	C	C
Multi-Family Units	N	N	N	N	P	P

P = Permitted L = Limited C = Conditional Use N = Not Permitted

Table Footnotes

[1] Group living with five (5) or fewer residents permitted by right, group living with six (6) or more residents requires conditional use approval

[2] Home occupation permitted as an accessory use in all residential zones, subject to compliance with the home occupation standards in Article 7

Proposed Net Density = 204 du/25.04 net ac = 8.15 du/net ac

The R-5 zone has a Target density of 8.71 du/net acre. The Target density for Silverstone is 218 dwelling units (25.04 net ac x 8.71 du/net ac).

The R-5 zone has a Minimum density of 6.97 du/net acre. The Minimum density for Silverstone is 175 dwelling units (25.04 net ac x 6.97 du/net ac).

The R-5 zone has an Incentive density of 10.0 du/net acre. The Incentive density for Silverstone is 250 dwelling units (25.04 net ac x 10.0 du/net ac).

The proposed Silverstone density of 204 dwelling units exceeds the minimum density of 175 dwelling units, and does not exceed the Target density of 218 dwelling units. No incentive density is requested. This criterion is met.

B. Calculating Potential Densities

The number of dwelling units allowed on a parcel in any of the five residential zones is calculated using Table 3-3. Density calculations count dwelling units (not structures), i.e., a duplex is counted as two (2) dwelling units. Accessory dwelling units are not counted as dwelling units for the purpose of calculating density.

1. The Target Density is permitted outright.
2. The Minimum Density is required to ensure:
   a. Land is being used at the appropriate intensity planned for the area;
   b. Enough dwelling units can be developed to accommodate the projected need for housing; and
   c. Compliance with the Metro Functional Plan.
3. The Incentive Density provides the opportunity for a density bonus to reward design features, amenities, and/or other improvements which can be shown to increase the value of the residential development for neighborhood residents and the general public and/or provide affordable housing. Incentive Density is only allowed as part of a Planned Development (see Article 4, Section 10.4.200).

Response: As noted above, the proposed Silverstone density of 204 dwelling units exceeds the minimum density of 175 dwelling units, and does not exceed the Target density of 218 dwelling units. No incentive density is requested. This criterion is met.

C. Density Reductions Due to Slope

All densities (target, minimum and incentive) listed in Table 3-3 shall be reduced based on the slope of the property as shown below. Where a parcel has areas of different slopes, the property shall be divided up into areas of like slopes, and the reductions applied to those areas. If the areas of similar slopes do not fit into the categories below, the Director shall use a percentage reduction that is based on the slope-to-density reduction relationship expressed in Table 3-4 (For example, an area of 13% to 18% slope would receive a reduction of around 25%).

the number of units allowed on a parcel is based on the target density allowed for the particular zone (See Table 3-3).

The City has established base minimum lot size and dimensional standards that apply after the potential number of units has been determined. These standards ensue that each lot has enough area for a house, garage, setbacks and private outdoor area. To ensure that development can be built near to and oriented toward the street, a minimum width at the front setback line is required.

The minimum lot size is the smallest permissible size of a building lot. See Article 6 Land Divisions for additional lot development standards.

TABLE 3-5 Lot Dimensional Requirements (Low Density Residential)

Housing Type	Minimum Lot Size	Lot Dimensions [1]	
Single-Family Detached	70% of average lot size	Depth: 75feet	Width: 50 feet
Manufactured Home	70% of average lot size	Depth: 75feet	Width: 50 feet
Duplex	5,000 Square Feet	Depth: 75feet	Width: 50 feet
Single-family Attached	2,500 Square Feet	Depth: 75feet	Width: 25 feet
Other Uses	5,000 Square Feet	Depth: 75feet	Width: 50 feet

Footnote [1] Lot width is measured at the front building line

Response: This application is proposed as a Planned Unit Development which does not have minimum lot sizes; this criterion does not apply.

G. Minimum Lot Size and Dimensions (RML and RMH Zones)...

Response: This property carries an R-5 zone; this criterion does not apply.

H. Setback Standards

Building setbacks have an important relationship to the character of the street. Because varied lot sizes and housing types are permitted in the residential zones, uniform setbacks are established to provide a consistent streetscape.

TABLE 3-7: Setback Requirements

Front Yard, Dwelling [1, 2]	20 feet (possible reduction to 14 feet)
Front Yard, Garage	20 feet
Interior Side Yard [3,4]	Either 5 feet or 1 foot for each 3 feet of building height, whichever is greater
Corner Side Yard	Same as front yard
Rear Yard [5, 6]	15 feet or 2 feet for every 3 feet in building height at the eave line, whichever is greater.

Footnotes:

[1] The front yard setback (for the dwelling or dwellings) may be reduced to 14 feet when the front facade is designed for orientation to and visibility from the street as follows: The front facade is designed to provide a line of sight starting at a point five (5) feet above the floor and two (2) feet directly back from any Standard Front Porch (see definitions) or front-facing window such that a person (if there were no vegetation) would be able to see 100% of their front property line

[2] On an infill lot in a developed neighborhood with established front yard setbacks that are less than the twenty (20) -foot standard, the setback for the new dwelling(s) and the location of the garage shall match front yard setback of the existing dwellings and garage location on abutting lots. Setback compatibility shall be determined through building plan check review, and shall not require a land use application or approval of an adjustment.

[3] The side yard setback for attached single-family dwellings shall be a minimum of zero (0) feet at common walls and five (5) feet or one (1) foot for each three (3) feet of building height at the eave line, from the

ARTICLE 4 OVERLAY DISTRICTS

PLANNED DEVELOPMENTS

10.4.200 PURPOSE

The purpose of the Planned Development (PD) provisions is to provide greater flexibility in the development of land for residential, commercial or industrial purposes than allowed by the conventional standards of the Development Code. The PD provisions are intended to:

A. Promote flexibility and innovation in site design and permit diversity in the location of structures;

Response: Venture Properties is requesting the Planned Development for this project in order to reduce the interior side setbacks to five feet, the street side yard setbacks to ten feet, and the rear setback to 15 feet. No incentive density increases are requested. A variety of lot sizes is proposed as well, allowing for housing diversity. Generally, lot widths are 40 feet, 50 feet, or 60 feet.

The property's unique value that provides the opportunity for design exceptions lies in the future vegetated corridor. Currently, the property is bisected from east to west by an agricultural ditch. This corridor will need to be enhanced per Clean Water Services standards, but rather than investing in the enhancement of a straight, unnatural ditch, Venture proposes to relocate the stream to the south along the BPA corridor with a more natural meander to become a community resource. This corridor will also provide a buffer between the new development and the existing homes to the south. This property is isolated; it is bounded by the high school sports fields to the west, the proposed stream corridor along the south, Highway 47 to the east, and David Hill Road to the north. The requested design exceptions will not have an impact on surrounding neighborhoods.

B. Promote efficient use of land and facilitate a more economical arrangement of buildings, circulation systems, land uses, and utilities when compared with conventional development patterns;

Response: The proposed creek relocation allows for the developable land to be consolidated into the main portion of the property, rather than bisected by the creek. This allows for a more cohesive neighborhood and reduces the need for creek crossings with public streets.

C. Preserve to the greatest extent possible existing landscape features and amenities, and incorporate such features into the design of the PD;

Response: The existing drainageway is fully farmed with no native plantings. The realignment is not proposed to have a substantial impact on the designated wetland areas on the site, and the relocation is limited to the areas of the ditch that do not have associated wetlands. The vegetated corridor will be fully enhanced per Clean Waste Services standards. Street crossing of the stream corridor have been limited to the two designated collector street extensions of Main Street and B Street.

D. Combine and coordinate architectural styles, building forms and building relationships within the PD; and

Council may require the expertise of other professionals on the design team if it is determined that the site merits special consideration to unique or adverse features or conditions.

Response: The Applicant, Mimi Doukas with Venture Properties, is a licensed landscape architect and registered planner (urban designer) and will serve as the project manager and primary contact for the City staff. In addition, the project team includes a licensed civil engineer and professional land surveyor. This criterion is met.

10.4.215 PD DEVELOPMENT STANDARDS

A. Base Zone Standards. The development standards of the base zone apply unless they are superceded by the standards of this section or the PD approval.

Response: The only base zone standards that are requested for deviation are for setbacks and lot size which are included in the list below for allowable exceptions. This standard is met.

B. Site Size. There are no minimum or maximum size limitations for a PD.

Response: There is no standard.

C. Calculation of Density. The number of dwelling units allowed in residential zone PDs shall be calculated on the basis of Table 3-2 in Article 3. All residential development shall be at a minimum of 80% of the target density for the parent zone. A request for incentive density may be approved for the PD, based on the criteria in Section 10.3.130 E.

Response: Density calculations are provided under Section 10.3.130. No incentive density is requested.

D. Multiple Base Zones. When a proposed PD site includes more than one base zone, the uses may be allocated throughout the site without regard to zoning boundaries.

Response: The entire Silverstone project is zoned R-5; this standard does not apply.

E. Lot Sizes. There are no required minimum lot sizes.

Response: The minimum lot size in the R-5 zone is 5,000 square feet. Through this exception in the Planned Development process, Venture is proposing a variety of lot sizes, with lot widths of 40 feet, 50 feet, and 60 feet to provide a variety of housing types. The average lot size is greater than 5,000 square feet, but the smallest lot is 3,946 square feet.

F. Housing Types Allowed. Housing types in zones that allow residential uses are not restricted in the PD.

Response: All proposed homes will be single family detached, as allowed in the R-5 zone.

G. Height. The height limits of the base zone apply.

Response: All proposed homes will be a maximum of two and a half stories or 35 feet, as allowed in the R-5 zone.

H. Building Setbacks. Building setbacks are established as part of the preliminary development plans approval.

L. Facilities and Services. It is the responsibility of the applicant to provide all service facilities necessary for the functioning of the PD. Service facilities such as streets, water supply facilities, sanitary sewers, and storm water detention facilities must be dedicated to the public if they are to provide service to any property not included in the PD. However, the review body may approve private service facilities with the consent of the appropriate service provider.

Response: Most streets are proposed to be public streets within public right-of-way. One private alleyway is proposed for Lots 100 to 106. All waterlines, sewer lines, and storm lines are proposed to be public and located within public right-of-way or public utility easements. This criterion is met.

M. Underground Utilities. All service facilities must be placed underground except those that by their nature must be on or above ground, such as fire hydrants and open water courses. The applicant is responsible for making the necessary arrangements with utility companies and other appropriate entities when installing all service facilities.

Response: All infrastructure conveyance shall be located underground except for water quality treatment swales. This criterion is met.

N. Construction to Standards. All service facilities dedicated to the public must be constructed to City standards.

All private service facilities must be designed by a qualified civil engineer to City standards or comparable design life as determined by the City Engineer.

Response: All water, sanitary sewer, and storm sewer systems are designed to public standards. All public streets will be built to Forest Grove public improvement standards. The private alleyway for Lots 100 to 106 will be designed by a licensed civil engineer and reviewed by the City Engineer. This criterion is met.

O. Building Size Standards. For areas designated as Planned Shopping Center by the Comprehensive Plan, commercial retail is limited to 20,000 square feet and commercial office is limited to 10,000 square feet.

Response: Only single family detached homes are proposed; this criterion does not apply.

10.4.220 PRELIMINARY PLAN REVIEW

A. Procedure. Preliminary plan reviews are processed through a Type III procedure.

B. Submittal Requirements. Applications for a preliminary plan review must contain the information stated below in addition to that required by Section 10.1.225.

1. General statement. A statement of how the purpose of Section 10.4.200 will be achieved by the proposed PD. The statement should include sketches or illustrations of the proposed character of the development, a description of how the PD will relate to surrounding land uses and whether other land use reviews are requested.

2. Summary report. A summary report identifying the different land uses, including the amount of land for housing, non-residential uses, open areas, streets and parking; the number and type of housing units; the amount and type of commercial or industrial areas, if any; and a statement of how necessary services will be provided and whether the services will be publicly or privately owned and operated.

B. For the entire subject property (natural resource area and non-natural resource area), applicants must submit a scale map of the property that includes:

1. Location of all natural resource areas on the property;
2. Outline of any existing disturbance area, including the location of existing adjacent streets and paved areas, utilities, culverts, stormwater management facilities, or bridges;
3. Location of any wetlands or water bodies on the property, including a delineation of the sensitive lands and vegetative corridors consistent with Clean Water Services Design and Construction Standards;
4. Location of 100-year floodplain and floodway boundary as defined by Section 5.805 and determined by Section 5.815 of the Municipal Code; and
5. Topography shown by contour lines of 2-foot intervals for slopes less than 15% and by 10-foot intervals for slopes 15% or greater. On properties that are two acres or larger, such a contour map is required only for the portion of the property to be developed.

C. The nature of the work proposed, and/or the reasons for removal of vegetation. If applicable, this shall include detailed site plan of proposed development outlining total disturbance area, including, proposed building footprints, site property improvements, utilities and landscaping.

D. The following additional information shall be provided about the natural resource area:

1. For properties containing less than one acre of natural resource area, the location of all trees within the natural resource area that are greater than six inches diameter at breast height (DBH), shall be identified by size and species. For properties containing one acre or more of natural resource area, the applicant may approximate the number of trees and the diameter range, and provide a listing of the dominant species;
2. For proposed disturbance areas containing less than one acre of natural resource area, all trees with a diameter of six inches or greater that will be removed shall be specifically identified as to diameter at breast height (DBH) and species. For proposed disturbance areas containing one acre or more of natural resource area an approximate of the number of trees, their diameters and the dominant species; and
3. If grading will occur within the natural resource area, a grading plan showing the proposed alteration of the ground at 1-foot vertical contours in areas of slopes less than 5%, and 2-foot vertical contours in areas of slopes 6-15%, and at 5-foot vertical contours of slopes 15% or greater.

E. A plan for mitigation or re-vegetation consistent with the applicable mitigation requirements of Section 10.5.035 or 10.5.040; and

F. Evidence of submittal of appropriate applications to local, state and/or federal agencies as required.

Response: There is an existing drainage ditch that transects the Silverstone property generally from east to west. A full wetland delineation has been prepared (Exhibit H) by SWCA and received concurrence from the Oregon Department of State Lands (Exhibit I). A wetland fill permit has been submitted to the United States Corps of Engineers and the Oregon Department of State Lands (Exhibit K) to relocate a portion of the creek to the south side of the property with a more natural meandering course. As explained in the fill permit application, this design will allow for the best long term ecological result rather than trying to develop around the existing alignment.

area within 300 feet of the location of the proposed disturbance area of the utility's project:

a. Impact Evaluation and Alternatives Analysis. An impact evaluation and alternatives analysis is required to determine compliance with the approval criteria and to evaluate development alternatives for a particular property. The alternatives must be evaluated on the basis of their impact on the NRA, the ecological functions provided by the NRA on the property, and off-site impacts within the subwatershed *(6th Field Hydrologic Unit Code)* where the property is located. The impact evaluation shall include all of the following items:...

b. Mitigation Plan. The purpose of a mitigation plan is to compensate for unavoidable significant detrimental impacts to ecological functions that result from the chosen development alternative as identified in the impact evaluation. However, when development occurs within delineated wetlands, then the mitigation required under subsection 10.5.040(D)(2)(d) shall not require any additional mitigation than the mitigation required by state and federal law for the fill or removal of such wetlands....

c. The Impact Evaluation and Alternatives Analysis required by subsection 10.5.040(D)(1)(a) and the Mitigation Plan required by subsection 10.5.040(D)(1)(b) shall be prepared and signed by either (A) a knowledgeable and qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist; or (B) a civil or environmental engineer registered in Oregon to design public sanitary or storm systems, storm water facilities, or other similar facilities. The application shall include a description of the qualifications and experience of all persons that contributed to the Impact Evaluation and Alternatives Analysis and to the Mitigation Plan, and, for each person that contributed, a description of the elements of such reports to which the person contributed.

Response: The submittal requirements of this section mirror the requirements for a Wetland Fill permit with the Corps of Engineers and Oregon Department of State Lands. A copy of the fill permit is included in Exhibit K; this criterion is met.

2. Approval Criteria.

a. All application requirements in subsection 10.5.040(D)(1) shall be met.

b. Avoid. An applicant shall first avoid the intrusion of development into the NRA to the extent practicable. The development that is proposed must have less detrimental impact to NRAs than other practicable alternatives, including significantly different practicable alternatives that propose less development within NRAs. If there is more than one type of NRA on a property then the applicant shall first avoid the intrusion of development into the higher-valued NRA, to the extent practicable, and the development that is proposed must have less detrimental impact to the higher-valued NRAs than other practicable alternatives. To avoid development in NRAs, and to the extent practicable, applicants shall use the approaches described in subsection 10.5.040(D)(1)(a)(iii).

c. Minimize. If the applicant demonstrates that there is no practicable alternative that will not avoid disturbance of the NRA, then the development proposed by the applicant within the NRA shall minimize detrimental impacts to the extent practicable. If there is more than one type of NRA on a property then the development within higher-valued NRAs shall be considered more detrimental than development within lower-valued NRAs....

h. Compliance with other ordinances or codes.

i. Need to install solar energy equipment.

For criteria d-g above, the applicant shall provide evidence of exploring alternate designs that would increase tree protection. Removal of register trees shall also comply with the criteria in Section 10.5.145.

Response: The Silverstone property contains seven existing trees are greater than six inches in diameter which will be regulated by this section, including apple trees, ach, sweet gum, and maples. They are all located around the existing house on the east side of the property and have been identified on Sheet 14 of Exhibit A along with an arborist health assessment. All of these trees will need to be removed to allow for the urbanization of the property in order to meet the minimum density standards, the minimum lot sizes, and for the installation of streets and utilities. The ash tree is unhealthy and considered a hazard.

SOLAR ACCESS

10.5.415 DESIGN STANDARD

At least 80% of the lots in a development subject to this section shall comply with one or more of the following options:

A. Basic Requirement (See Solar Lot Option 1 below). A lot complies with this section if it:

1. Has a north-south dimension of 90 feet or more; and

2. Has a front lot line that is oriented within thirty (30) degrees of a true east-west axis.

B. Protected Solar Building Line Option (See Solar Lot Option 2 below). A lot complies with this section if a solar building line is used to protect solar access as follows:

1. A protected solar building line for the lot to the north is designated on the plat, or documents recorded with the plat; and

2. The protected solar building line for the lot to the north is oriented within thirty (30) degrees of a true east-west axis; and

3. There is at least seventy (70) feet between the protected solar building line on the lot to the north and the middle of the north-south dimension of the lot to the south, measured along a line perpendicular to the protected solar building line; and

4. There is at least forty-five (45) feet between the protected solar building line and the northern edge of the buildable area of the lot, or habitable structures are situated so that at least 80 percent of their south-facing wall will not be shaded by structures or non-exempt vegetation.

C. Performance Option. A lot complies with this section if:...

Response: As shown on Plans 6, 7, and 8 in Exhibit A, 147 of the 204 proposed lots (shown with an (S)) meet the solar access standards. This is 72 percent, which is shy of the 80 percent standard but shows substantial conformance. The Planned Development land use process allows for flexibility in design standards such as this for larger well-planned developments. In order to achieve a higher solar access compliance, the design would need to be convoluted and awkward which does not serve a public good.

Right-of-way for David Hill Road will be dedicated with the Partition Plat, which is essentially Phase 0. Main Street will be built and dedicated in Phase 1. B Street will be built and dedicated in Phase 2.

E. Prohibition on Sale of Lots. No person shall sell or convey any interest in any subdivision or partition lot until the final plat has been approved and recorded with the recording officer of Washington County.

Response: All lots and parcels will be legally created prior to conveyance or sale.

F. Future Re-Division. When dividing tracts into large lots, the review authority shall require that the lots be of such size and shape to facilitate future re-division in accordance with the density targets established in Article 3.

Response: The three partition parcels are designed to allow for the future subdivision of lots per the proposed subdivision. No remaining dividable large parcels will remain after completion of the subdivision.

G. A building permit for the construction of a structure shall not be issued unless all applicable and needed services including vehicular access, power, sewerage, domestic and fire water supply and storm water drainage are available to the lot or parcel where the structure is to be built. This provision does not apply to permits for a structure that does not require such services (such as a storage shed).

Response: Building permits will be requested for each individual homes at the completion of the subdivision and public improvements for each phase.

PARTITIONS

10.6.060 REVIEW CRITERIA

Approval of a tentative partition plat will be granted if the Director finds that the applicant has met all of the following criteria:

A. The tentative partition plat complies with all applicable requirements for submittal.

Response: All required submittal materials have been provided in this submittal package. This criterion is met.

B. The tentative partition plat complies with all applicable standards and design requirements of this Code.

Response: This narrative addresses all applicable approval criteria and how the proposed partition complies with the criterion. This criterion is met.

C. Any special features of the site (such as topography, floodplains, wetlands, vegetation, historic sites) have been adequately considered and addressed in the design of the tentative plat.

Response: The property's unique value that provides the opportunity for design exceptions lies in the future vegetated corridor. Currently, the property is bisected from east to west by an agricultural ditch. This corridor will need to be enhanced per Clean Water Services standards, but rather than investing in the enhancement of a straight, unnatural ditch, Venture proposes to relocate the stream to the south along the BPA corridor with a more natural meander to become a community resource. This corridor will also provide a buffer between the new development and the existing homes to the south. This property

Response: A Final Partition Plat will be submitted within one year of the Preliminary Partition Plat approval. This criterion can be met.

SUBDIVISIONS

10.6.110 TENTATIVE PLAT REVIEW CRITERIA

Type II approval of a tentative subdivision plat will be granted if the Director finds that the applicant has met or can meet all of the following criteria without reliance on other parties not associated with the subject development, unless agreements with such other parties are in place prior to project approval to the satisfaction of the Director:

A. The tentative subdivision plat complies with all applicable requirements for submittal.

Response: This application package contains all required materials for review of a Tentative Plat. This criterion is met.

B. The subdivision plat complies with all applicable standards and design requirements of this Code.

Response: The standards for Tentative Plat approval have been addressed in this narrative. This criterion is met.

C. Any special features of the site (such as topography, floodplains, wetlands, vegetation, historic sites) have been adequately considered and addressed in the design of the tentative plat.

Response: The property's unique value that provides the opportunity for design exceptions lies in the future vegetated corridor. Currently, the property is bisected from east to west by an agricultural ditch. This corridor will need to be enhanced per Clean Water Services standards, but rather than investing in the enhancement of a straight, unnatural ditch, Venture proposes to relocate the stream to the south along the BPA corridor with a more natural meander to become a community resource. This corridor will also provide a buffer between the new development and the existing homes to the south. This property is isolated; it is bounded by the high school sports fields to the west, the proposed stream corridor along the south, Highway 47 to the east, and David Hill Road to the north. The requested design exceptions will not have an impact on surrounding neighborhoods. This criterion is met.

D. All lots shall be suitable for their intended use. No parcel shall be of such size or design as to be detrimental to the health, safety, or sanitary needs of the occupants of such lot or subdivision.

Response: All lots are suitable for single family detached homes. They are designed with a general lot width of 40 feet, 50 feet, or 60 feet to provide a variety of housing types. This criterion is met.

E. Development of any remainder of property under the same ownership can be accomplished in accordance with this Code.

Response: No other surrounding property is owned by R.A.A. LLC. This criterion is met.

F. Adjoining land can be developed or is provided access that will allow its development in accordance with this Code.

approve, approve with conditions, or deny an access plan submitted under the provisions of this Article in conjunction with another permit or land use action.

C. Conflict with Land Division Requirements. The requirements and standards of this article shall not apply where they conflict with the land division rules and standards of Article 6.

10.8.110 GENERAL PROVISIONS

A. Continuing Obligation of Property Owner. The provision and maintenance of access and egress stipulated in this section are continuing requirements for the use of any structure or parcel of real property in the City.

B. Access Plan Requirements. No building or other permit shall be issued until a scaled site plan is submitted that shows how access, egress and circulation requirements are to be fulfilled. The Director shall provide the applicant with information about the submittal requirements for an access plan.

Response: The Preliminary Plat outlines the full public roadway circulation system. This criterion is met.

C. Joint Access. Owners of two or more uses, structures, or parcels of land may agree to jointly use the same access and egress when the combined access and egress of both uses, structures, or parcels of land satisfies their requirements as designated in this Article, provided:

1. Satisfactory legal evidence shall be presented in the form of deeds, easements, leases or contracts to establish the joint use; and
2. Copies of the deeds, easements, leases or contracts are placed on permanent file with the City.

Response: No joint access is proposed or warranted. This criterion does not apply.

D. Public Street Access. All vehicular access and egress shall connect directly with a public or private street approved by the City for public use, except where joint access is provided through adjacent or other property which is connected to a street. Vehicular access to a residential use shall be provided within the same lot for single-family and two-family dwellings, and within the same lot or development for multi-family dwellings. Access to multi-family units shall avoid being located through single family residential areas before being connected to a collector or arterial as designated by the City's Transportation Plan.

Response: All streets are proposed to be public except for one small private alley to serve lots 100-106. The proposed street system for Silverstone provides an excellent internal network for vehicle and pedestrian circulation. Main Street and B Street are collectors that will be extended north through the property to David Hill Road. East-west connectivity is provided through local street network with two parallel roads wherever possible. Only two small cul-de-sacs are proposed to the spacing requirements along David Hill Road and the short distance between David Hill Road and the creek corridor prevent other design options. David Hill Road will have dedicated bicycle lanes. This criterion is met.

E. Transit Agency Referral. The City shall submit all development proposals located along the Pacific Avenue/19th Avenue transit corridor to Tri-Met for review and comment regarding facilities necessary to support transit. The following facilities may be required as a condition of a permit:...

2. A hammerhead, paved surface with each leg of the hammerhead having a minimum depth of forty (40) feet and a minimum width of twenty (20) feet.

3. The maximum cross slope of a required turnaround is 5%.

Response: One private access drive is proposed to provide access to Lots 100 to 106. This road is 235 feet in length and provided with a hammerhead turnaround. Two public cul-de-sacs are proposed with full public circular turnarounds. This criterion is met.

F. Driveway Grades shall not exceed a maximum of 20%.

Response: No driveway grades will exceed 20%; this criterion is met.

10.8.130 WIDTHS AND LOCATIONS OF DRIVEWAYS AND CURB CUTS

A. Minimum Driveway Widths at the street right-of-way line shall be fifteen (15) feet for institutional, commercial, industrial, and multi-family residential uses, and ten (10) feet for single-family and two-family residential uses.

Response: All proposed single family homes will be provided with a driveway with a typical width of 20 feet. This criterion is met.

B. Maximum Driveway Widths at the street right-of-way line shall be as follows:

1. 24 feet in residential zones
2. 36 feet in institutional, town center or commercial zones
3. 40 feet in industrial zones

Response: No driveway will exceed 24 feet in width. This criterion is met.

C. Location of Curb Cut. No portion of a curb cut shall be located closer to an intersecting street right-of-way line than:

1. 100 feet on an arterial street with four or more travel lanes
2. 50 feet on an arterial street with two or three travel lanes
3. 50 feet on a collector street
4. 20 feet on a local street

Response: Driveways will be located a minimum of 50 feet from David Hill Road, Main Street, or B Street, or a minimum of 20 feet from all local streets. This criterion is met.

D. Minimum Distance between Curb Cuts. On arterial and collector streets, minimum distances shall be maintained as follows between adjacent curb cuts on the same side of any such street:

1. 85 feet where the speed limit is 20 mph or less
2. 105 feet where the speed limit is 25 mph
3. 125 feet where the speed limit is 30 mph
4. 150 feet where the speed limit is 35 mph
5. 185 feet where the speed limit is 40 mph
6. 230 feet where the speed limit is 45 mph
7. 275 feet where the speed limit is 50 mph or greater

be considered open space but not be considered a recreational area unless so designed as to be integrated with a development's site design and available for access for residents in the development.

Response: The vegetated corridor enhancements and associated tracts exceed 100 square feet, has been integrated into the design, and is available for access. This land is considered recreational.

C. For land divisions:

1. Each open space and recreational facility shall be placed in separate tracts.
2. Having a net density of at least 9.60 units per acre, 20% of the entire site in open space with at least one recreational tract having minimum dimension of sufficient size to accommodate play equipment targeted for preschool and elementary aged children plus table(s) and bench(es) for passive recreation.

Response: The creek corridor is contained within Tracts A, B, and C. The proposed project density is 8.04 dwelling units per acre, therefore the 20 percent recreational tract requirement is not applicable.

D. For development not involved in a division of land, open space and recreation areas shall be held in common for residential condominiums or by the primary land owner for apartment complexes or non-residential development. The area shall be placed within an easement unless waived by the Director for minor recreation facilities or recreation facilities that are integrated with the developed portion of the project.

1. Residential projects in the Residential Multifamily Low (RML) and Residential Multifamily High (RMH) districts shall provide the following: All condominium, two-family dwellings, multi-family dwellings, residential care facilities, residential care institutions, and nursing or convalescent homes shall provide 20% of the lot area in open space, excluding that area designated in the site plan and improved for off-street parking and driveways. All dwelling units shall be immediately accessible to a minimum of 600 square feet of open space.
2. All condominium, two-family dwellings and multi-family dwellings of 20 units or more, residential care facilities, residential care institutions, and nursing or convalescent homes shall improve 1/2 of the required open space as recreation space. Recreation space shall be planted in grass and/or improved for recreational use, and have a minimum area of 870 square feet and a minimum dimension of 20 feet. For two-family and multi-family dwellings, the recreational area shall include a children's play area. A fence shall be installed that is a minimum of thirty (30) inches in height to separate a parking lot, street, or driveway from any children's play area.
3. For the development of condominiums, two-family and multi-family dwellings of 20 units or more, residential care facilities and residential care institutions, individual private open space (patio or balcony) shall be provided for each dwelling unit. All private open space shall be directly accessible from the dwelling unit through a doorway. Patios and balconies shall be at least 48 square feet in size with a minimum width dimension of four (4) feet.
4. Floor area of ground floor patios and all balconies for individual units can be used to meet no more than 1/2 of the recreational land area requirement. Private open space shall be separated from common open space through the use of perimeter landscaping, fencing or a change in vertical grade (e.g. second floor balconies).
5. Where a proposed condominium, multi-family development, residential care facility, residential care institution, or nursing or convalescent home will abut an existing or proposed public park or open space, the development shall integrate

and Open Space Master Plan. There shall be no waiver of park SDC for any reservation of an open space area or recreational facility.

3. If the developer is required to reserve land area for a park, playground, or other public use, such land shall be acquired by the appropriate public agency within eighteen (18) months following final land use approval including but not limited to final plat, site plan, conditional use or design review approvals. The price shall be agreed upon prior to final approval or such reservation shall be released to the subdivider.

Response: Tracts A, B, and C could be considered for acquisition by the City. If the City does not wish to pursue this, they will be owned and maintained by the Homeowners Association as outlined in the draft CC&R's in Exhibit N.

G. Where it is determined by the Director that to achieve a greater sense of open space of an area, open space that is proposed for two adjoining developments shall be located adjacent to each other.

Response: All surrounding land has been developed or is outside the Urban Growth Boundary. This criterion does not apply.

HAZARDS AND RESOURCES

10.8.305 RESOURCE AREAS

A. Wetlands, Wetland Buffer Areas, Wildlife Conservation Areas and Vegetated Corridors subject to the provisions of Section 10.5.005 shall be left undisturbed unless:

1. Division of State Lands has issued a permit to allow fill in a wetland; or
2. Enhancements that are required or allowed either by the report approved by the City for Wildlife Conservation Areas pursuant to Section 10.5.025 or by the Service Provider Letter issued by Clean Water Service.

B. Wetland buffer areas and vegetated corridors shall be provided consistent with the requirements of Clean Water Service (CWS) Design and Construction Standards. Pursuant to Section 10.5.025 A., a service provider letter from CWS shall be issued prior to filing for a land use permit with the City.

C. All development with Natural Resource Areas shall attempt to design development through avoidance of the resource area. If that cannot be achieved through standard development requirements, then the requirements of Section 10.5.005 et. seq. shall apply and shall override any conflicting development requirements established by other portions of the Development Code in order to minimize intrusion into the NRA.

D. All wetlands, wetland buffers, vegetated corridors and wildlife habitats shall be established as follows:

1. For divisions of land, the area shall be placed in an open space tract separate from areas intended for development. The open space tract is subject to the requirements of 10.8.200 et. seq.
2. For development not involved in a division of land, the area shall be held in common for residential condominiums or by the primary land owner for apartment complexes or non-residential development. The area shall be placed within an easement and adequate maintenance provisions shall be provided consistent with the requirements of Section 10.8.200.

Response: The wetland delineation report is included in Exhibit H, and a Service Provider Letter from Clean Water Services is included in Exhibit E. Venture Properties has also been in

C. Where a hazard area is proposed to be avoided:

1. For divisions of land, the area shall be placed in an open space tract separate from areas intended for development. The open space tract is subject to the requirements of 10.8.200 et. seq.
2. For development not involved in a division of land, the area shall be held in common for residential condominiums or by the primary land owner for apartment complexes or non-residential development. The area shall be placed within an easement and adequate maintenance provisions shall be provided consistent with the requirements of Section 10.8.200.
3. The tract or easement area shall be restricted to open space. Utilities may be located within the area provided that the report proposes acceptable measures to minimize hazard impacts. Open space tracts are subject to the provisions of Section 10.8.200.

D. Floodplains and Flood Management Areas:...

Response: No development is proposed within the Flood Management Areas; this criterion does not apply.

10.8.315 ENVIRONMENTAL PRACTICE

All property owners, developers, or other persons proposing to modify land in the city limits of Forest Grove are encouraged to integrate the habitat-friendly development practices listed in Table 8-1 as part of any modification of the site. Those practices within road rights-of-way or other public property shall be approved by the City Engineer. Other practices shall be approved by the Community Development Department. Said approvals shall be obtained:

A. Where no land use permit is required, prior to any physical modification of the site;

B. Where any land use permit is required by the Development Code, concurrent with an approval of the permit; or

C. Where there is a Natural Resource Area and alternative discretionary development standards are used pursuant to the requirements of Section 10.5.040.

Table 8-1: Habitat-Friendly Development Practices.[1]

Part (a): Design and Construction Practices to Minimize Hydrologic Impacts
1. Amend disturbed soils to original or higher level of porosity to regain infiltration and stormwater storage capacity.
2. Use pervious paving materials for residential driveways, parking lots, walkways, and within centers of cul-de-sacs.
3. Incorporate stormwater management in road right-of-ways.
4. Landscape with rain gardens to provide on-lot detention, filtering of rainwater, and groundwater recharge.
5. Use green roofs for runoff reduction, energy savings, improved air quality, and enhanced aesthetics.
6. Disconnect downspouts from roofs and direct the flow to vegetated infiltration/filtration areas such as rain gardens.
7. Retain rooftop runoff in a rain barrel for later on-lot use in lawn and garden watering.
8. Use multi-functional open drainage systems in lieu of more conventional curb-and-gutter systems.
9. Use bioretention cells as rain gardens in landscaped parking lot islands to reduce runoff volume and filter pollutants.

OFF-STREET PARKING AND LOADING

10.8.515 OFF-STREET PARKING REQUIREMENTS

A. Multiple Uses. In the event several uses occupy a single building or parcel of land, a reduction of 25% of the total required parking is allowed for projects that utilize shared parking on a blended ratio for complimentary uses.

B. Location of Off-Street Parking. Off-street parking spaces for dwellings shall be located on the same lot with the dwelling. For all other uses, required off-street parking spaces shall be located not farther than 500 feet from the building or use they are required to serve, except as exempted in the Town Center zones.

C. Improvements. Required parking spaces shall be improved to the standards as contained in this article and available for use at the time of the final building inspection.

D. Carpool/Vanpool Parking. Commercial, industrial, and institutional developments (including but not limited to hospitals, nursing and retirement homes, schools, churches, auditoriums, and transit park-and-ride facilities) with twenty (20) or more long-term parking spaces shall designate at least 10% of those spaces for carpool and vanpool parking. These spaces shall be located closer to the primary public or employee's entrance than all other parking spaces with the exception of handicapped parking spaces. Carpool and vanpool parking spaces shall be full-sized and clearly designated for use by carpools or vanpools.

E. Minimum/Maximum Parking. Unless specified below or otherwise exempted by this code, the minimum and maximum number of required parking spaces shall be provided for all uses in accordance with the specifications of Table 8-5.

F. Exemptions from Maximum Parking Standards. The following uses shall be exempt from the maximum allowable parking standards of Table 8-5. This exemption does not limit any provision or authority to restrict the size, location or design of such uses. On sites where the following parking is provided, it shall not be included in the parking count used for determining the maximum allowable number of parking spaces:

1. Structured parking;
2. Valet lots;
3. Pay lots;
4. Employee carpool parking, when such areas are dedicated by way of on-site reservation;
5. Fleet parking;
6. Automobile sales lots; and
7. Park-and-ride lots and area-wide public parking facilities.

G. Unlisted Use. Where a use is not specifically listed in Table 8-5, determination of the applicable parking standards shall be made in accordance with the following procedure:

1. The Director shall determine the minimum and maximum parking spaces for all uses not listed in Table 8-5, unless an application is under review by the Planning Commission or Design Review Commission, in which case the Commission shall make the determination.
2. In all determinations for unlisted uses, the applicant shall be required to submit studies or technical information about the use, parking demand, vehicle trip generation and/or other information as deemed necessary to make a determination. The City may consider testimony and publications of individuals,

PUBLIC IMPROVEMENTS

10.8.605 GENERAL PROVISIONS

A. When Standards Apply. Unless otherwise provided, the standard specifications for construction, reconstruction or repair of streets, sidewalks, curbs and other public improvements within the City shall occur in accordance with the standards of this article. No development may occur unless the public facilities related to development comply with the public facility requirements established in this section.

B. Standard Specifications. The City Engineer shall establish standard specifications consistent with the application of engineering principles.

C. Adjustments. Adjustments to the provisions in this chapter related to street improvements may be granted by means of a Type II procedure, as governed by Section 10.2.100.

D. Use of Pervious Surfaces. Where improvements subject to these off-street parking and loading provisions result in hard surfaces, previous surfaces should be used where possible. Where improvements are within the public rights-of-way, such surfaces can be used upon approval by the City Engineer.

E. Open Drainage Facilities. Where public storm sewer lines are proposed, drainage swales and other open drainage facilities may be used with the approval of the City Engineer.

10.8.610 STREETS

A. Improvements. No development shall occur unless the development has frontage or approved access to a public street:

1. Streets within a development and streets adjacent shall be improved in accordance with this article;
2. Any new street or additional street width planned as a portion of an existing street shall be dedicated and improved in accordance with this code;
3. New development shall be connected to a collector or arterial by a paved street;
4. Where transportation-related improvements are required as a result of a transportation study pursuant to Section 10.1.225 D, the developer shall install said improvements to the satisfaction of the City Engineer, or participate in the financing of said improvement where the impacts are beyond the responsibility of one project; and
5. The City Engineer may accept a future improvement guarantee in lieu of street or other transportation related improvements if one or more of the following conditions exist:
   a. A partial improvement is not feasible due to the inability to achieve proper design standards;
   b. A partial improvement may create a potential safety hazard to motorists or pedestrians;
   c. Due to the nature of existing development on adjacent properties it is unlikely that street improvements would be extended in the foreseeable future and the improvement associated with the project under review does not, by itself, provide a significant improvement to street safety or capacity;
   d. The improvement would be in conflict with an adopted capital improvement plan;
   e. The improvement is associated with an approved land partition on property zoned residential and the proposed land partition does not create any new streets; or

E. Minimum Rights-Of-Way and Street Widths. Unless otherwise indicated on an approved street plan, or as needed to continue an existing improved street, street right-of-way and roadway widths shall not be less than the minimum width described below. Where a range is indicated, the width shall be determined by the appropriate decision-making authority based upon anticipated average daily traffic (ADT) on the new street segment. These are presented in Table 8-8.

1. The decision-making body shall make its decision about desired right-of-way width and pavement width of the various street types within the subdivision or development after consideration of the following:

   a. The type, design and location of the road as set forth in the Transportation System Plan. Standards for specific streets identified in the Transportation System Plan shall apply;

   b. Anticipated traffic generation;

   c. On-street parking needs;

   d. Sidewalk and bikeway requirements;

   e. Requirements for placement of utilities;

   f. Street lighting;

   g. Drainage and slope impacts;

   h. Street tree location;

   i. Planting and landscape areas;

   j. Safety and comfort for motorists, bicyclists, and pedestrians;

   k. Access needs for emergency vehicles.

Table 8-8: Street Standards

Street Classification	Minimum R.O.W. Width	Minimum Roadway Width
Principal Arterial	90-96 feet	52-64 feet
Arterial	66 feet	40 feet
Collector	66 feet	40 feet
Local Industrial	66 feet	40 feet
Local Street	58 feet	32 feet
Local Street	54 feet	28 feet [1]
Local Street	50 feet	24 feet [2]
Local Street	50 feet [3]	15 feet [4]
Neighborhood Route	54 feet	28 feet[7]
Cul-de-sac	58 feet	32 feet
Circular end of cul-de-sac	55 feet (radius)	42 feet (radius)
Cul-de-sac	50 feet	24 feet [5]
Circular end of Cul-de-sac	40 feet (radius)	34 feet (radius) [6]
Alley	15 feet	12 feet
Half-Street	35 feet	24 feet [8]

Table 8-8 Footnotes

[1] These streets shall not exceed 330 feet in length for any one segment. Each end of the segment shall connect to an existing or planned street with a minimum roadway width of 32 feet. Fire hydrants shall be placed at one-third intervals along the street segment. Driveways shall be placed in a manner to provide queuing space to allow for adequate traffic passage including emergency vehicles.

[2] These streets shall not exceed 330 feet in length for any one segment or the length needed to traverse a wetland or natural resource area. Each end of the segment shall connect to an existing or planned street with a minimum roadway

constrained if the slope is greater than 15% for a distance of 250 feet or more. In the case of environmental or topographical constraints, the mere presence of a constraint is not sufficient to show that a street connection is not possible. The applicant must show why the constraint precludes some reasonable street connection.

Response: B Street and Main Street are existing collector streets that stub to the south boundary of the Silverstone property. Both streets are proposed to be extended to David Hill Road along the north boundary of the site. No other streets stub into the property. This criterion is met.

2. For new residential and mixed-use development, possible local street connections to contiguous vacant or primary undeveloped land must be identified in conformance with street projections outlined on the Local Street Connectivity Plan, as shown on the Comprehensive Plan Map.

Response: The adjacent property to the south and west has already developed at urban levels The property to the north was unexpected added to the Urban Growth Boundary in February as part of the "grand bargain" legislation but has not completed concept planning or been annexed to Forest Grove. The land to the north is separated by the David Hill Road extension, so the design of Silverstone does not materially affect the future layout of the land to the north. Similarly, the land to the east is separated by Highway 47 and is designated as Rural Reserve; the design of Silverstone does not materially affect the future layout of the land to the east.

3. Where necessary to give access or permit a satisfactory future division of adjoining land, streets shall be extended to the boundary lines of the tract to be developed, and
   a. These extended streets or street stubs to adjoining properties are not considered to be cul-de-sacs since they are intended to continue as through streets at such time as the adjoining property is developed.
   b. A barricade shall be constructed at the end of the street by the property owners which shall not be removed until authorized by the City Engineer, the cost of
4. Proposed street or street extensions shall be located to provide direct access to existing or planned transit stops, commercial services, and other neighborhood facilities, such as schools, shopping areas and parks.

Response: No public facitilities exist that need public access from the Silverstone roadway network. This criterion does not apply.

5. All developments should provide an internal network of connecting streets that provide short, direct travel routes and minimize travel distances within the development.

Response: The proposed roadway network in Silverstone has been designed to allow for a high level of connectivity with only two short cul-de-sacs and reasonable block lengths and perimeters.

H. Intersection Angles. Streets shall be laid out so as to intersect at an angle as near to a right angle as practicable, except where topography requires a lesser angle, but in no case shall the angle be less than 75° unless there is special intersection design, and:

provide a landing averaging 5% or less. Landings are that portion of the street within twenty (20) feet of the edge of the intersecting street at full improvement.

Response: No streets exceed a 10 percent grade. No curves are proposed for David Hill Road. The collector streets have a minimum centerline radius of 500 feet. All local streets have a minimum centerline radius of 150 feet. This criterion is met.

N. Curbs, Curb Cuts, Ramps, and Driveway Approaches. Concrete curbs, curb cuts, wheelchair, bicycle ramps and driveway approaches shall be constructed in accordance with standards specified in this chapter; and:

1. Concrete curbs and driveway approaches are required; except
2. Where no sidewalk is planned, an asphalt approach may be constructed with City Engineer approval; and
3. Asphalt and concrete driveway approaches to the property line shall be built to City configuration standards.

Response: All driveways will be constructed of concrete. This criterion is met.

O. Streets Adjacent To Railroad Right-Of-Way. Wherever the proposed development contains or is adjacent to a railroad right-of-way, provision shall be made for a street approximately parallel to and on each side of such right-of-way at a distance suitable for the appropriate use of the land. The distance shall be determined with due consideration at cross streets or the minimum distance required for approach grades and to provide sufficient depth to allow screen planting along the railroad right-of-way in nonindustrial areas.

Response: No railroad right-of-way is near this property; this criterion does not apply.

P. Access Control. Access control as described for each classification of street within the transportation element (Transportation System Plan (TSP), shall be implemented when a new street or street extension is built.

Response: Specific access control will be reviewed with the construction documents for conformance with the standards of the TSP.

Q. Access to Arterials and Major Collectors. Where a development abuts or is traversed by an existing or proposed arterial or major collector street, the development design shall provide adequate protection for residential properties and shall separate residential access and through traffic, or if separation is not feasible, the design shall minimize the traffic conflicts. The design shall include any of the following:

1. A parallel access street along the arterial or major collector;
2. Lots of suitable depth abutting the arterial or major collector to provide adequate buffering with frontage along another street;
3. Screen planting at the rear or side property line to be contained in a non-access reservation along the arterial or major collector; or
4. Other treatment suitable to meet the objectives of this subsection;
5. If a lot has access to two streets with different classifications, primary access should be from the lower classification street.

Response: Through lots are proposed along David Hill Road, which is an arterial street. No driveway access will be permitted to the arterial street and will be limited to the local street along the south side of the lots. A reserve strip or non-access easement can be provided along the north line of these proposed lots to regulate access. The David Hill Road frontage and

Where a proposed street intersection will result in an immediate need for a traffic signal, a signal meeting approved specifications shall be installed. The cost shall be included as a condition of development.

Response: No traffic signals have been warranted according to the Transportation Impact Analysis included in Exhibit F.

X. Street Light Standards. Street lights shall be installed in accordance with regulations adopted by the City's direction.

Response: Street lights will be constructed with the public street improvements in accordance with City standards.

Y. Street Name Signs. Street name signs shall be installed at all street intersections. Stop signs and other signs may be required.

Response: Specific signage will be reviewed with the construction documents. Signage will be installed by the City and financed by the developer.

Z. Street Cross-Sections. The final lift of asphalt concrete pavement shall be placed on all new constructed public roadways prior to final City acceptance of the roadway and within one (1) year of the conditional acceptance of the roadway unless otherwise approved by the City Engineer. The final lift shall also be placed no later than when 90% of the structures in the new development are completed or three (3) years from the commencement of initial construction of the development, whichever is less.

Response: The final lift of asphalt will be installed as required by City standards.

10.8.615 EASEMENTS

A. Easements. Easements for sewers, drainage, water mains, electric lines or other public utilities shall be either dedicated or provided for in the deed restrictions, and where a development traversed by a watercourse, or drainageway, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of the watercourse.

Response: Public utility easements have been provided along the first ten feet adjacent to all public rights-of-way, over the private street in Tract D, and over the western 50 feet of Lot 161. Tracts A, B, and C contain the creek and the CWS vegetated corridor and will be covered with a blanket storm drainage easement to the benefit of Clean Water Services.

B. Utility Easements. A property owner proposing a development shall make arrangements with the City, the applicable district and each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development. The City's standard width for public main line utility easements shall be fifteen (15) feet unless otherwise specified by the utility company, applicable district, or City Engineer.

Response: Any required utility easements for extension of public infrastructure lines will be a minimum width of fifteen feet.

C. Where the alignment of a utility easement (other than those required perimeter easements) is such that it would also serve as a suitable easement for originating or continuing a pedestrian/bicycle path, the Community Development Director may require that such easement be designated as serving both functions. The walkway shall

F. Council Initiation of Construction. In the event one or more of the following situations are found by the Council to exist, the Council may adopt a resolution to initiate construction of a sidewalk in accordance with City ordinances:

1. A safety hazard exists for children walking to or from school and sidewalks are necessary to eliminate the hazard;
2. A safety hazard exists for pedestrians walking to or from a public building, commercial area, place of assembly or other general pedestrian traffic, and sidewalks are necessary to eliminate the hazard; and
3. 50% or more of the area in a given block has been improved by the construction of dwellings, multiple dwellings, commercial buildings or public buildings and/or parks.

Response: This criterion does not apply.

10.8.625 SANITARY SEWERS

A. Sewers Required. Sanitary sewers shall be installed to serve each new development and to connect developments to existing mains in accordance with the provisions set forth in Design and Construction Standards for Sanitary and Surface Water Management (as adopted by Clean Water Services in 1996 and including any future revisions or amendments) and the adopted policies of the Comprehensive Plan and the City's Master Sewer Plan.

B. Sewer Plan Approval. The City Engineer shall approve all sanitary sewer plans and proposed systems prior to issuance of development permits involving sewer service.

C. Over-Sizing. Proposed sewer systems shall include consideration of additional development within the area as projected by the Comprehensive Plan.

D. Permits Denied. Development permits may be restricted by the Commission or Hearings Officer where a deficiency exists in the existing sewer system or portion thereof which cannot be rectified within the development and which if not rectified will result in a threat to public health or safety, surcharging of existing mains, or violations of state or federal standards pertaining to operation of the sewage treatment system.

Response: As shown in Exhibit A, the public sanitary sewer system has been designed to provide public sewer access to all proposed lots, and will allow access and capacity for future connectivity to the system for development to the north. Private lateral connections will be provided to each proposed lot from the public system.

10.8.630 WATER FACILITIES

A. Water Facilities Required. Water facilities shall be installed to serve each new development and to connect developments to existing mains in accordance with the provisions set forth in the adopted policies of the Comprehensive Plan and the City's Master Water Plan.

B. Water Plan Approval. The City Engineer shall approve all plans for water facilities and proposed systems prior to issuance of development permits involving water service.

C. Over-Sizing. Proposed water facilities shall include consideration of additional development within the area as projected by the Comprehensive Plan.

D. Permits Denied. Development permits may be restricted by the Planning Commission or Hearings Officer where a deficiency exists in the existing water system or portion thereof which cannot be rectified within the development and which, if not

and D through K will be covered with a blanket storm drainage easement to the benefit of Clean Water Services.

10.8.640 BIKEWAYS

A. Bikeway Extension. Developments adjoining proposed bikeways identified on the City's adopted pedestrian/bikeway plan shall include provisions for the future extension of such bikeways through the dedication of easements or rights-of-way.

B. Cost of Construction. Development permits issued for planned unit developments, conditional use permits, subdivisions, and other developments which will principally benefit from such bikeways shall be conditioned to include the cost or construction of bikeway improvements.

C. Minimum Width. Minimum width for bikeways within the roadway is five (5) feet per bicycle travel lane. Minimum width for two-way bikeways separated from the road is eight (8) feet.

Response: Bike lanes are planned along the David Hill Road corridor and will be constructed as part of Washington County's MSTIP improvements to that arterial roadway. The Applicant reached out to the Forest Grove Parks and Recreation Director concerning the plans for the "Emerald Necklace". With the relocation of the drainage ditch to the southern side of the property, there is no public benefit to a trail system along that corridor when there are parallel trails along David Hill Road and Hartford Drive. The Applicant is willing to dedicate a public access easement to the City of Forest Grove to allow for a future trail if desired. No other bikeways are proposed.

10.8.645 UTILITIES

A. Underground Utilities. All utility lines in new developments shall be placed underground, and:

1. The developer shall make all necessary arrangements with the serving utility to provide the underground services;
2. The City reserves the right to approve location of all surface mounted facilities;
3. All underground utilities, including sanitary sewers and storm drains installed in streets by the developer, shall be constructed prior to the surfacing of the streets; and
4. Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.

Response: All proposed utilities will be placed underground. The existing BPA powerlines are a regional transmission facility and are not permitted to be placed underground.

B. Information on Development Plans. The applicant for a development shall show on the development plan or in the explanatory information, easements for all underground utility facilities, and:

1. Plans showing the location of all underground facilities as described herein shall be submitted to the City Engineer for review and approval; and
2. Care shall be taken in all cases to ensure that above ground equipment does not obstruct vision clearance areas for vehicular traffic.

Response: Ten foot public utility easements have been provided adjacent to all public right-of-way to allow for the undergrounding of franchise utilities. The easements are shown on the

10.8.665 INSTALLATION CONFORMATION

A. Conformance Required. In addition to other requirements, improvements installed by the developer either as a requirement of these regulations or at his own option, shall conform to the requirements of this chapter and to improvement standards and specifications followed by the City.

B. Adopted Installation Standards. The Standard Specifications for Public Works Construction, Oregon Chapter A.P.W.A., and Design and Construction Standards for Sanitary and Surface Water Management (as adopted by Clean Water Services and including any future revisions or amendments) shall be a part of the City's adopted installation standard(s); other standards may also be required upon recommendation of the City Engineer.

Response: Construction documents shall be reviewed for compliance with City standards.

10.8.670 PLAN CHECK

A. Submittal Requirements. Work shall not begin until construction plans and construction estimates have been submitted and checked for adequacy and approved by the City Engineer in writing. The developer can obtain detailed information about submittal requirements from the City Engineer.

B. Compliance. All such plans shall be prepared in accordance with requirements of the City.

Response: Construction documents shall be reviewed and approved prior to the issuance of permits.

10.8.675 NOTICE TO CITY

A. Commencement. Work shall not begin until the City has been notified in advance.

B. Resumption. If work is discontinued for any reason, it shall not be resumed until the City is notified.

Response: A pre-construction meeting will be scheduled prior to any construction activity.

10.8.680 CITY INSPECTION

A. Inspection of Improvements. Improvements shall be constructed under the inspection and to the satisfaction of the City. The City may require changes in typical sections and details if unusual conditions arising during construction warrant such changes in the public interest.

Response: The City shall inspect construction activity.

10.8.685 ENGINEER'S CERTIFICATION

A. Written Certification Required. The developer's engineer shall provide written certification of a form provided by the City that all improvements, workmanship and materials are in accord with current and standard engineering and construction practices, and are of high grade, prior to City acceptance of the subdivision's improvements or any portion thereof for operation and maintenance.

Response: At the completion of construction, the project engineer will provide written certification that the improvements were constructed as approved.

OTHER DEVELOPMENT REVIEW STANDARDS

10.8.880 SINGLE-FAMILY AND DUPLEX

A. Purpose

b. Proposed duplex designs convey the appearance of single-family units. For larger subdivisions, a number of different duplex designs would be required to justify the increase percentage.

c. The units visibility to the street, for example by having front porches or provide vehicular or parking access from a back alley.

Response: Residential design standards will be reviewed with the building permits for individual homes. Actual home plans will be dependent on the purchaser of the home and their individual plan selection.

LAND DIVISION STANDARDS

10.8.905 STANDARDS

A. Block Design.

1. The length, width and shape of blocks shall be designed with due regard to providing adequate building sites for the use contemplated, consideration of needs for convenient access, circulation, control and safety of street traffic and recognition of limitations and opportunities of topography.

2. Blocks shall have sufficient width to provide for two tiers of lots of appropriate depths, except where blocks are adjacent to an arterial, a railroad, or waterway, and shall meet the following standards:

Response: All interior blocks allow for two rows of lots. The lots adjacent to David Hill Road and to the drainageway have a single row of lots. Access to the lots along David Hill Road will be limited to the local street; no driveway access will be permitted onto David Hill Road.

B. Block length and perimeter.

1. The layout of streets shall not create excessive travel lengths. Block lengths shall be a maximum of 500 feet and block perimeters shall be a maximum of 1,200 to 1,600 feet. Block length is defined as the distance along a street between the centerline of two intersecting through streets. Block perimeter is defined as the sum of the block lengths of all sides of a block.

2. In residential subdivisions and mixed-use developments, no block shall be more than 330 feet in length. This length can be exceeded up to a maximum length of 660 feet under Block Length Exceptions below.

Response: The block lengths along David Hill Road exceed 500 feet due to the limited access spacing requirements of Washington County, which is a minimum spacing of 600 feet. This also extends down to the western block between A Street and C Street which is 535 feet. The majority of the blocks are 330 feet or less.

C. Block Length Exceptions. An exception to the block length standard may be permitted during the land division review when one of more of the following conditions exist:

1. Physical conditions that preclude development of a public street. In certain situations where the physical features of the land create severe constraints, or natural features should be preserved, exceptions may be made. Such conditions may include, but are not limited to, topography, wetlands, mature trees, creeks, drainages, and rock outcroppings.

2. Buildings or other existing development on adjacent lands that preclude a street connection now or in the future, considering the potential for redevelopment.

2. Where a land division contains a watercourse or area serving for the accumulation or retention of surface water, easements shall be provided for such watercourses or retention area to ensure that no building or structure shall be erected therein.

3. Where the alignment of a utility easement (other than required perimeter easements) is such that it would also serve as suitable easement for originating or continuing a pedestrian/bicycle path, the Director may require that such easement be designated on the plat as serving both functions. In such cases, the minimum easement width shall be ten (10) feet and the pedestrian/bicycle path shall be improved with a hard surface to a minimum width of eight (8) feet.

Response: Ten foot wide public utility easements have been provided along the outside edge of all public right-of-way, in the front yards of all proposed homes.

F. Lots, Parcels and Common Areas

The size, dimensions, and orientation of lots and parcels shall be appropriate for the location of the subdivision or partition, for the type of development and use contemplated, and shall be consistent with all applicable standards of this Code and the following:

1. Lot and Parcel Side Lines. The side lines of parcels in partitions shall run at right angles to the street upon which they face to the maximum extent feasible, and on curved streets shall be radial to the curve wherever possible. The side lines of lots in subdivisions need not run at right angles to the abutting street, but may be laid out at any suitable angle to satisfy the solar access standards of Section 10.5.400, and to allow for a suitable subdivision design for the type of development and use contemplated.

Response: The majority of lots intersect the right-of-way lines with the side lot lines at a right angle or are radial to the centerline. There are some design exceptions where the design follows the creek alignment or along corners. Where lot lines cannot be at a right angle to the street, they are sometimes parallel to the adjacent lot to provide a logical placement of the future homes. No awkward lots are proposed.

2. Frontage. Each lot and parcel shall have a minimum frontage on a public street of at least twenty (20) feet with two exceptions:

   a. A lot or parcel on the radius of a curved street or on the circular end of a cul-de- sac shall have frontage of not less than thirty (30) feet upon the abutting street right-of-way measured on the arc.

   b. Where a flag lot is proposed and the access strip is serving only one lot, the frontage shall be not less than fifteen (15) feet.

Response: As stated above, the lots have been generally designed to have a lot width of 40 feet, 50 feet, or 60 feet. There are flag lots proposed along the cul-de-sacs and the eyebrow corner intersections. These flag lots all have a minimum of 15 feet of frontage, and some of them have been provided with shared access easements with the neighboring lot to allow for a driveway design with easier access for backing vehicles. It should also be noted that an access easement has been provided across Lot 161 to allow access off of the proposed local street for Taxlot 1201.

3. Through Lots and Parcels. Through lots and parcels are prohibited, except where they are necessary to provide separation of development from arterial streets or adjacent incompatible activities or developments. In such cases, the Director may require that evergreen screening, a masonry wall, a landscaped

1. Dedication Requirements.

   a. Where a proposed park, playground or other public use shown in a development plan adopted by the City is located in whole or in part in a subdivision, the Commission may require the dedication or reservation of such area within the subdivision.

   b. Where considered desirable by the Commission in accordance with adopted comprehensive plan policies, and where a development plan of the City does not indicate proposed public use areas, the Commission may require the dedication or reservation of areas within the subdivision or sites of a character, extent and location suitable for the development of parks and other public use.

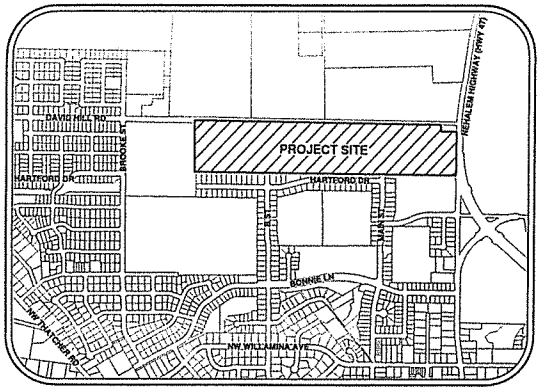
Response: The creek corridor will contained within Tracts that will be owned and maintained by the Homeowners Association in accordance with the draft CC&R's in Exhibit N.

2. Acquisition By Public Agency. If the developer is required to reserve land area for a park, playground, or other public use, such land shall be acquired by the appropriate public agency within eighteen (18) months following plat approval, at a price agreed upon prior to approval of the plat, or such reservation shall be released to the subdivider.

Response: Venture Properties is willing to discuss the public acquisition of Tracts A, B, and C.

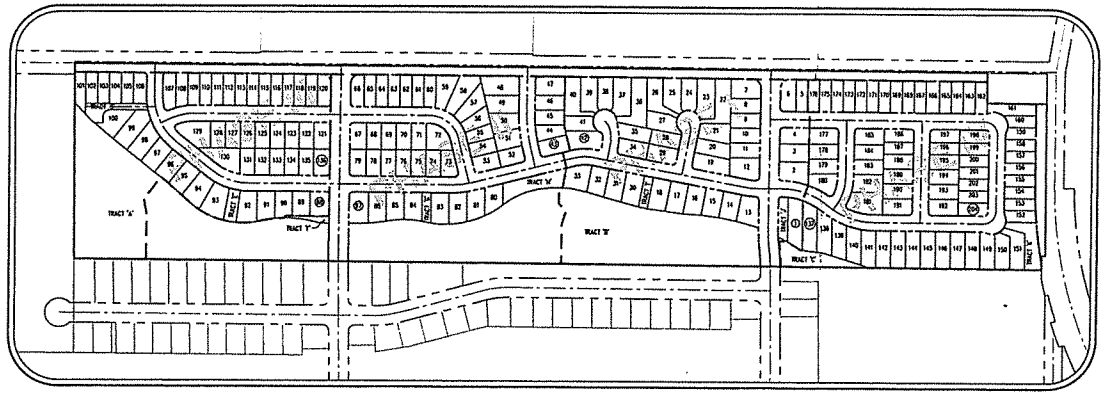
SILVERSTONE

SUBDIVISION APPLICATION



VICINITY MAP

1" = 750'



SITE MAP

1"=200'

LEGEND

	EXISTING	PROPOSED
DECIDUOUS TREE		
CONIFEROUS TREE		
FIRE HYDRANT		
WATER BLOWOFF		
WATER METER		
WATER VALVE		
DOUBLE CHECK VALVE		
AIR RELEASE VALVE		
SANITARY SEWER CLEAN OUT		
SANITARY SEWER MANHOLE		
SIGN		
STREET LIGHT		
MAILBOX		

	EXISTING	PROPOSED
STORM SEWER CLEAN OUT		
STORM SEWER CATCH BASIN		
STORM SEWER MANHOLE		
GAS METER		
GAS VALVE		
GUY WIRE ANCHOR		
POWER POLE		
POWER VAULT		
POWER JUNCTION BOX		
POWER PEDESTAL		
COMMUNICATIONS VAULT		
COMMUNICATIONS JUNCTION BOX		
COMMUNICATIONS RISER		

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE		
BOUNDARY LINE		
PROPERTY LINE		
CENTERLINE		
DITCH		
CURB		
EDGE OF PAVEMENT		
EASEMENT		
FENCE LINE		
GRAVEL EDGE		
POWER LINE		
OVERHEAD WIRE		
COMMUNICATIONS LINE		
FIBER OPTIC LINE		
GAS LINE		
STORM SEWER LINE		
SANITARY SEWER LINE		
WATER LINE		

SHEET INDEX

APPLICANT/PLANNER
VENTURE PROPERTIES
CONTACT: MIMI DOUKAS
4230 SW GALEWOOD ST. SUITE 100
LAKE OSWEGO, OR 97035
PH: 503.387.7615

CIVIL ENGINEERING/SURVEYING/ LANDSCAPE ARCHITECTURE FIRM
AKS ENGINEERING & FORESTRY, LLC.
CONTACT: ALEX HURLEY, PE, PLS
13910 SW GALBREATH DRIVE, SUITE 100
SHERWOOD, OR 97140
PH: 503.925.8799
FAX: 503.925.8969

PROJECT LOCATION: LOCATED WEST OF NEHALEM HIGHWAY (HWY 47), SOUTH DAVID HILL ROAD, NORTH OF HARTFORD DRIVE IN THE CITY OF FOREST GROVE, WASHINGTON COUNTY, OREGON

PROPERTY DESCRIPTION: TAX LOT 1200 (WASHINGTON COUNTY ASSESSOR'S MAP 1N 3 30) LOCATED IN SECTION 30, TOWNSHIP 1 NORTH, RANGE 3 WEST, WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON

EXISTING LAND USE: AGRICULTURE FIELD AND SINGLE FAMILY RESIDENCE WITH ACCESSORY STRUCTURES

PROJECT PURPOSE: SINGLE FAMILY DETACHED RESIDENTIAL 204 LOT SUBDIVISION

DATUM: VERTICAL DATUM: ELEVATIONS ARE BASED ON CITY OF FOREST GROVE VERTICAL DATUM, BEING THE U.S.C. & G.S. 1934 ADJUSTMENT OF THE NGVD 29 DATUM. THE FINAL ADJUSTMENT TO THE NGVD 29 DATUM OCCURRED IN 1947 WHILE THE CITY OF FOREST GROVE RETAINED THE 1934 ADJUSTMENT. BASIS FOR ELEVATIONS WAS TAKEN FROM WASHINGTON COUNTY BENCHMARK NO. 952, A 1-1/4" BRASS DISK LOCATED IN THE SIDEWALK ON THE EAST SIDE OF THATCHER ROAD, APPROXIMATELY 250 FEET SOUTH OF DAVID HILL ROAD, NEAR THE STEPS INTO A SUBDIVISION, WITH A NGVD 29 ELEVATION OF 236.654 FEET. 0.49 FEET WAS SUBTRACTED FROM THE NGVD 29 DATUM TO GET TO THE CITY OF FOREST GROVE DATUM.

AKS ENGINEERING AND FORESTRY, LLC
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SUITE 100
SHERWOOD, OR 97140
PHONE: 503.925.8799
FAX: 503.925.8969
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AKS ENGINEERING · PLANNING · SURVEYING
FORESTRY · LANDSCAPE ARCHITECTURE

SILVERSTONE SUBDIVISION
FOREST GROVE OREGON
TAX LOT 1200 WASHINGTON COUNTY TAX MAP 1N 3 30

COVER SHEET WITH VICINITY AND SITE MAP

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

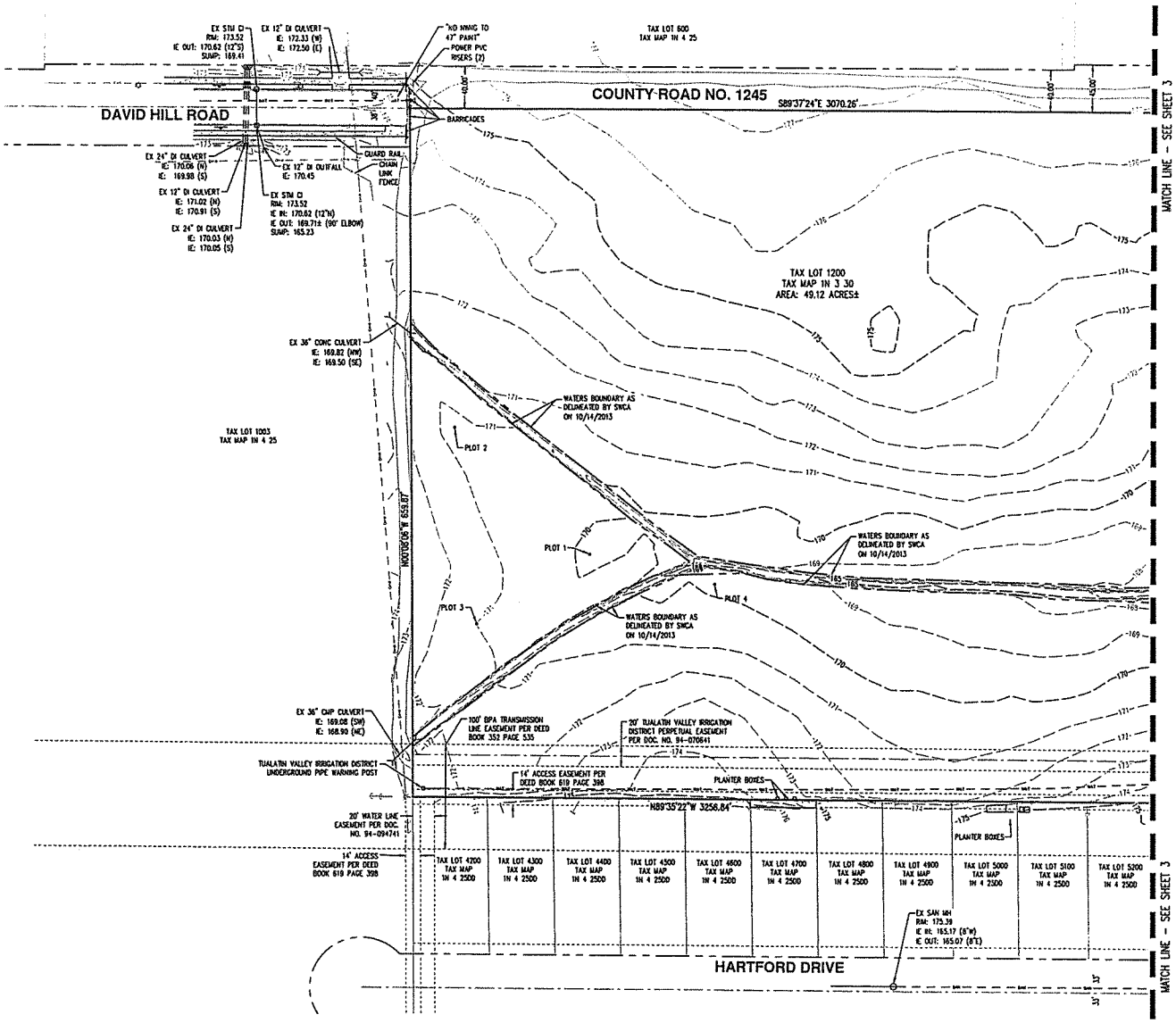
REGISTERED PROFESSIONAL ENGINEER
OREGON
ALEXANDER H. HURLEY
RENEWAL DATE: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
01

AKS DRAWING FILE: 3740-01 | LAYOUT: 01



SCALE 1" = 50 FEET

50 0 20 30 40 50

NOTES:

1. UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
2. FIELD WORK WAS CONDUCTED BY OTHERS IN 2006. ADDITIONAL FIELD SURVEYING WAS CONDUCTED BY AKS ENGINEERING & FORESTRY, LLC, IN OCTOBER 16-28, 2013.
3. VERTICAL DATUM: ELEVATIONS ARE BASED ON CITY OF FOREST GROVE VERTICAL DATUM, BEING THE U.S.C. & G.S. 1934 ADJUSTMENT OF THE NGVD 29 DATUM. THE FINAL ADJUSTMENT TO THE NGVD 29 DATUM OCCURRED IN 1947 WHILE THE CITY OF FOREST GROVE RETAINED THE 1934 ADJUSTMENT. BASIS FOR ELEVATIONS WAS TAKEN FROM WASHINGTON COUNTY BENCHMARK NO. 852, A 1-1/4" BRASS DISK LOCATED IN THE SIDEWALK ON THE EAST SIDE OF THATCHER ROAD, APPROXIMATELY 250 FEET SOUTH OF DAVID HILL ROAD, NEAR THE STEPS INTO A SUBDIVISION, WITH A NGVD 29 ELEVATION OF 236.654 FEET. 0.49 FEET WAS SUBTRACTED FROM THE NGVD 29 DATUM TO GET TO THE CITY OF FOREST GROVE DATUM.
4. THIS MAP DOES NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY.
5. SURVEY IS ONLY VALID WITH SURVEYOR'S STAMP AND SIGNATURE.
6. BUILDING FOOTPRINTS ARE MEASURED TO SIDING UNLESS NOTED OTHERWISE.
7. CONTOUR INTERVAL IS 1 FOOT.
8. FLOODPLAIN AND FLOODWAY LIMITS OF BEAL CREEK OBTAINED AND INTERPOLATED FROM FEMA COMMUNITY MAP NO. 41078C 0311E (PRELIMINARY MAP, FUTURE PROPOSED MAP). A DETAILED FLOODPLAIN ANALYSIS/DETERMINATION WAS NOT DETERMINED FOR THIS PROJECT.

TREE TABLE

TREE NUMBER	SPECIES	DBH (IN.)
11141	MAPLE	9
11143	MAPLE	11
11144	MAPLE	7
11145	MAPLE	11
11223	MAPLE	7
101753	UNKNOWN DECID.	12
101754	UNKNOWN DECID.	30
101755	UNKNOWN DECID.	24
101828	UNKNOWN DECID.	12
101866	UNKNOWN DECID.	10
101867	UNKNOWN DECID.	10
101868	UNKNOWN DECID.	24
102836	UNKNOWN DECID.	4
102837	UNKNOWN DECID.	4
102838	UNKNOWN DECID.	2
102839	UNKNOWN DECID.	4
103084	UNKNOWN DECID.	28
103085	UNKNOWN CONIF.	24
103108	UNKNOWN DECID.	20
103261	UNKNOWN DECID.	4
103277	UNKNOWN DECID.	8
103302	UNKNOWN DECID.	3
103303	UNKNOWN DECID.	5
103304	UNKNOWN DECID.	6

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FORESTRY · LANDSCAPE ARCHITECTURE

SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30 TAX LOT 1200

EXISTING CONDITIONS PLAN - WEST

DESIGNED BY:
DRAWN BY: MSK
CHECKED BY: TGL/MSM
SCALE: AS NOTED
DATE: 05/27/2014

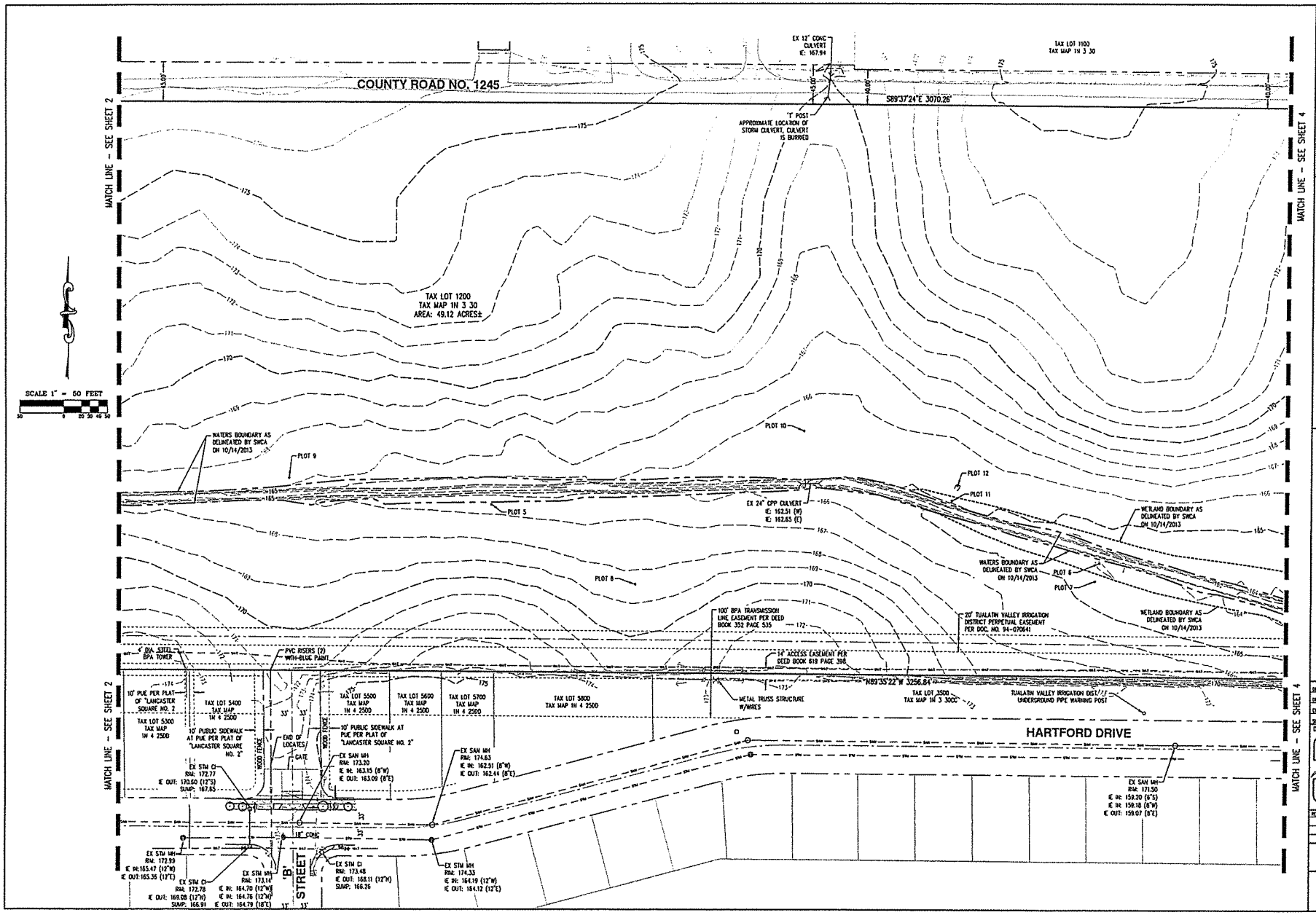
REGISTERED PROFESSIONAL LAND SURVEYOR
PRELIMINARY NOT FOR CONSTRUCTION
OREGON JULY 09, 2003 ALEXANDER R. HURLEY 54538LS
RENEWS: 6/30/15

REVISIONS

JOB NUMBER 3740

SHEET 02

AKS DRAWING FILE: 3740-TNG CONSLDNG | LAYOUT: 02



AKS ENGINEERING AND FORESTRY, LLC
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TUALATIN, OR 97062
PHONE: 503.563.3050
FAX: 503.563.6848
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ENGINEERING · PLANNING · SURVEYING
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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

EXISTING CONDITIONS PLAN - MIDDLE

DESIGNED BY:
DRAWN BY: MSK
CHECKED BY: TCL/MSW
SCALE: AS NOTED
DATE: 05/27/2014

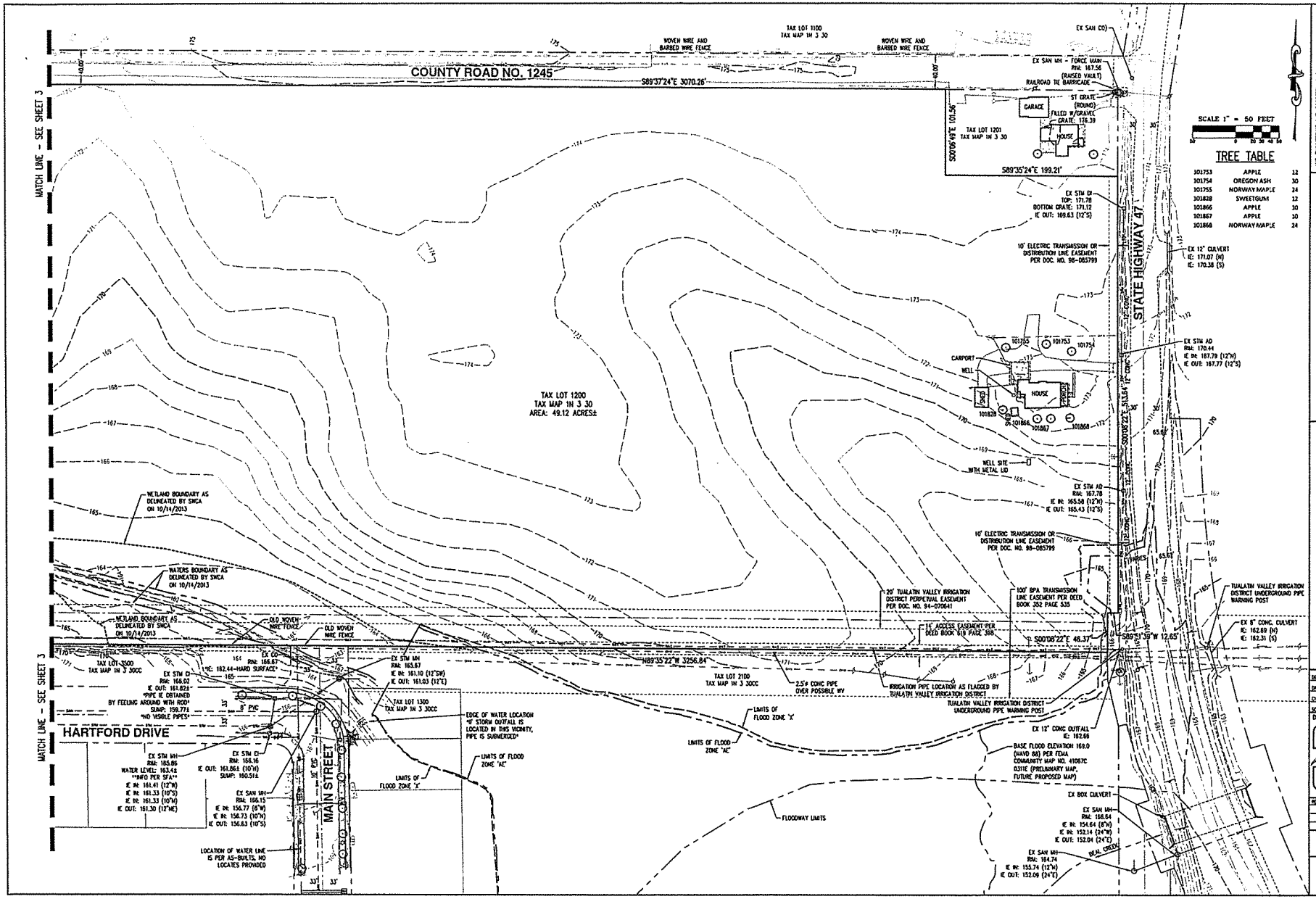
REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON JULY 19, 2005 ALEXANDER R. MURLEY 55539LS
RENEWS: 12/30/15
PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS

JOB NUMBER 3740

SHEET 03

AKS DRAWING FILE: 3740 INC CONDING | LAYOUT: 03



AKS ENGINEERING AND FORESTRY, LLC
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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON
WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

EXISTING CONDITIONS PLAN - EAST

DESIGNED BY:
DRAWN BY: MSK
CHECKED BY: TCL/MSW
SCALE: AS NOTED
DATE: 05/27/2014

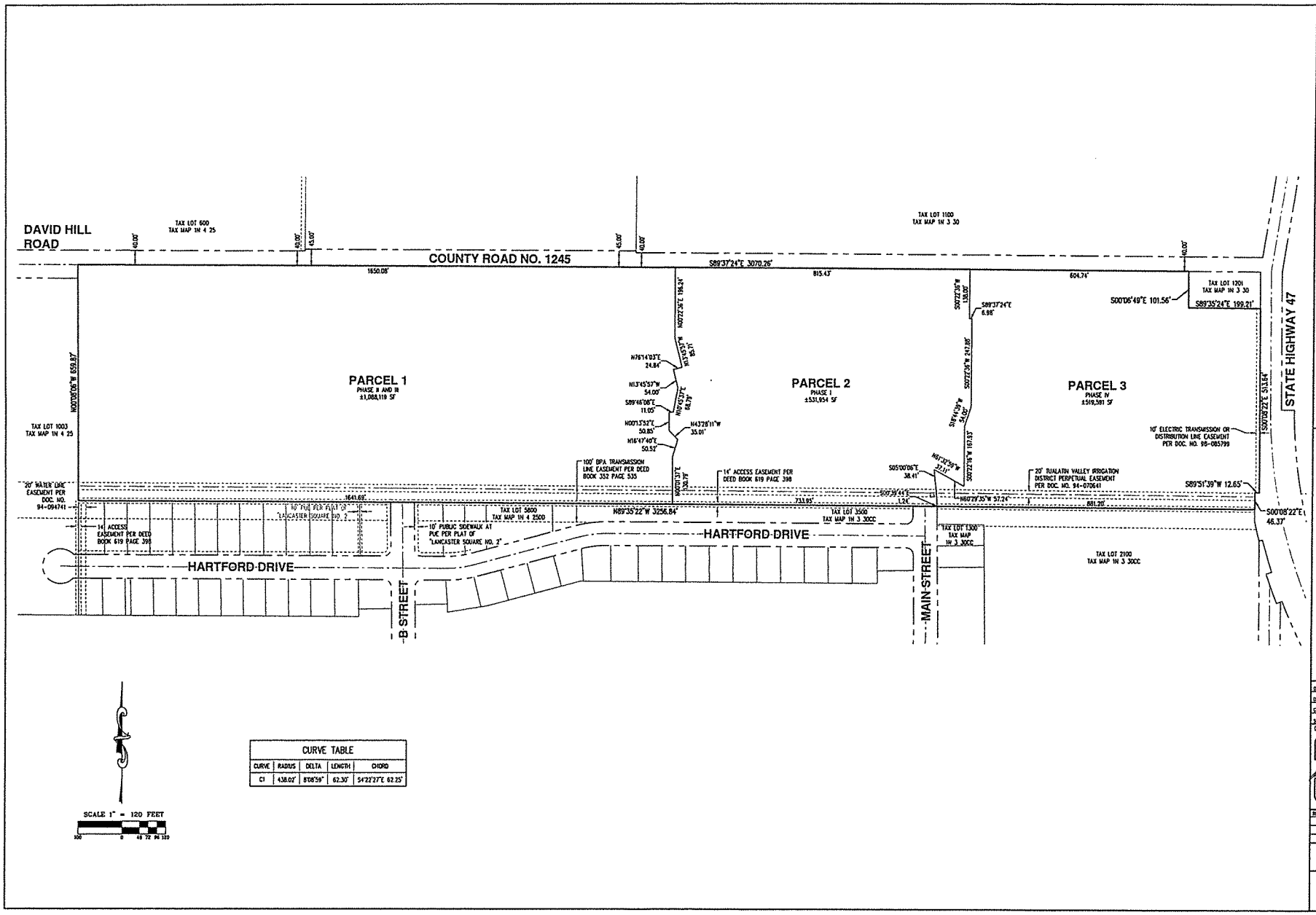
REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON JULY 20, 2001 ALEXANDER M. HURLEY 56533LS
RENEWAL 6/30/15
PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS

JOB NUMBER
3740

SHEET
04

AKS DRAWING FILE: 3740-
NE CORD/DWG | LAYOUT: 04



CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	438.00'	8°08'59"	62.30'	S4°22'27"E 62.25'

AKS ENGINEERING AND FORESTRY, LLC
12965 SW GARDEN PL
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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY PARTITION PLAN

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHR
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL LAND SURVEYOR
PRELIMINARY NOT FOR CONSTRUCTION
OREGON JULY 9, 2003 ALEXANDER H. HURLEY 53653LS
RENEWS: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
05

AKS DRAWING FILE: 3740-

CURVE TABLE

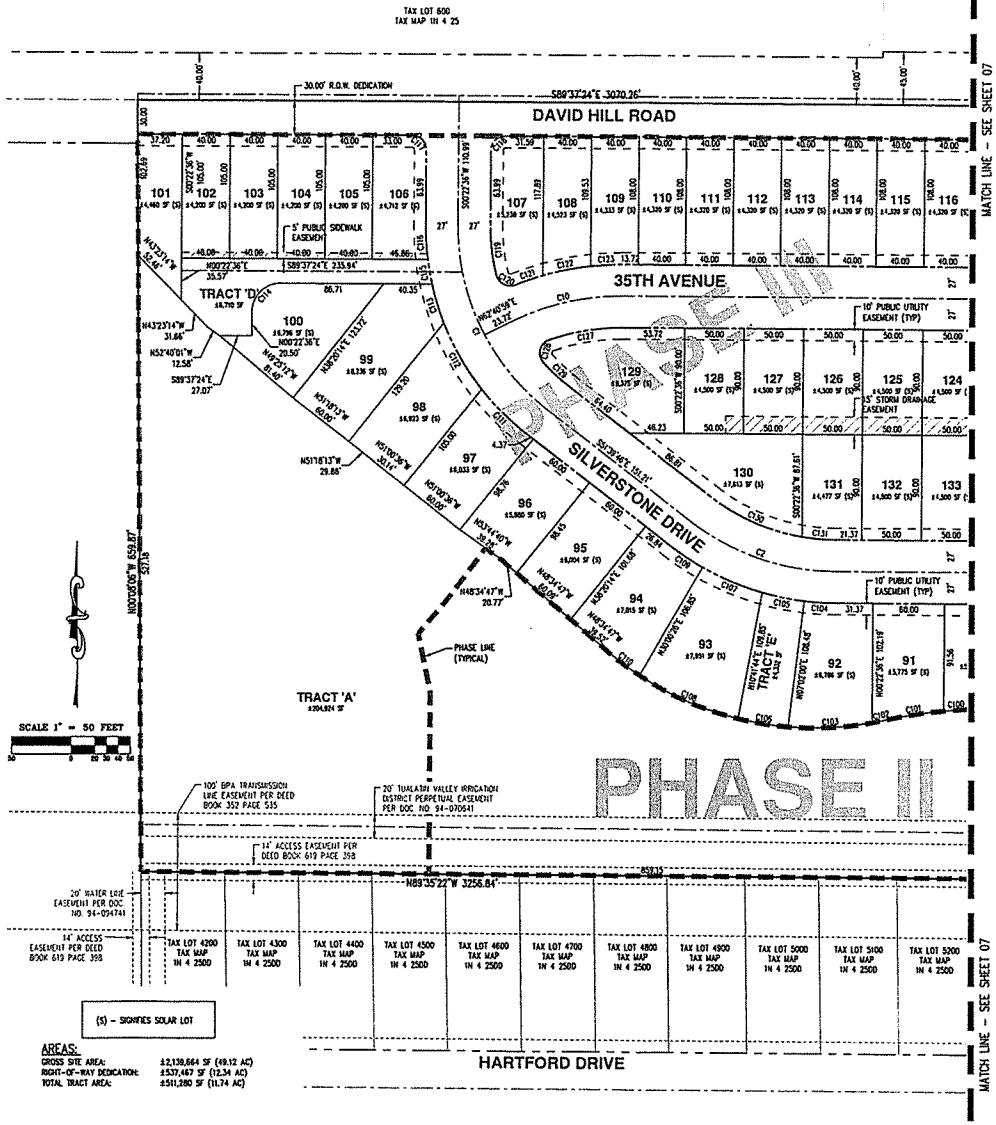
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	200.00'	52°02'22"	181.85'	S25°38'35"E 175.47'
C2	200.00'	37°57'38"	132.51'	S70°38'35"E 130.10'
C3	300.00'	14°08'33"	74.05'	N83°18'19"E 73.86'
C4	150.00'	24°31'34"	64.21'	N88°29'50"E 63.72'
C5	250.00'	10°23'01"	45.31'	S84°25'54"E 45.24'
C6	250.00'	38°47'39"	169.27'	S70°13'35"E 166.06'
C7	250.00'	38°47'39"	169.27'	S70°13'35"E 166.06'
C8	42.00'	90°00'00"	65.97'	N45°22'36"E 59.40'
C9	42.00'	90°00'00"	65.97'	N44°37'24"W 59.40'
C10	200.00'	27°41'37"	96.67'	N76°31'47"E 95.73'
C11	100.00'	75°51'27"	132.40'	S51°41'41"E 122.94'
C12	185.00'	1°01'47"	3.33'	N0°08'18"W 3.33'
C13	500.00'	14°08'33"	123.42'	N6°41'41"W 123.10'
C14	150.00'	21°10'36"	55.44'	N10°10'19"E 55.13'
C15	50.00'	42°16'07"	36.89'	N31°33'02"W 36.06'
C16	50.00'	42°16'07"	36.89'	N10°22'27"W 36.06'
C17	500.00'	6°41'46"	58.44'	N4°00'38"W 58.40'
C18	500.00'	7°44'07"	67.50'	N3°29'27"W 67.45'
C19	150.00'	33°47'44"	88.48'	S17°16'28"W 87.20'
C20	223.00'	13°09'19"	51.20'	S77°46'20"E 51.09'
C21	277.00'	18°30'48"	89.50'	N80°28'00"W 89.11'
C22	12.00'	90°06'00"	18.87'	N44°40'24"W 16.99'
C23	12.00'	90°00'00"	18.85'	N45°22'36"E 16.97'
C24	12.00'	90°00'00"	18.85'	N44°37'24"W 16.97'
C25	29.00'	90°00'00"	45.55'	N45°22'36"E 41.01'
C26	29.00'	90°00'00"	45.55'	S44°37'24"E 41.01'
C27	12.00'	93°15'37"	19.53'	S47°00'25"W 17.45'
C28	223.00'	7°07'24"	27.72'	N82°48'05"W 27.71'
C29	12.00'	87°37'13"	18.35'	S43°26'00"E 16.61'
C30	277.00'	8°00'14"	38.69'	S83°14'30"E 38.66'
C31	12.00'	90°00'00"	18.85'	N34°14'23"W 16.97'
C32	40.00'	5°50'53"	4.08'	N7°50'10"E 4.08'
C33	40.00'	21°44'54"	15.18'	N5°57'44"W 15.09'
C34	40.00'	43°54'05"	30.65'	N38°47'13"W 29.90'
C35	40.00'	57°46'16"	40.33'	N89°37'24"W 38.64'
C36	40.00'	21°46'03"	15.20'	S50°36'27"W 15.11'
C37	40.00'	21°36'50"	15.09'	S28°55'00"W 15.00'
C38	40.00'	65°31'42"	45.75'	S14°39'16"E 43.29'
C39	15.00'	55°05'14"	14.42'	S19°52'30"E 13.87'
C40	15.00'	3°05'29"	0.81'	S9°12'52"W 0.81'
C41	12.00'	90°00'00"	18.85'	S55°45'37"W 16.97'
C42	123.00'	24°31'34"	52.65'	N88°29'50"E 52.25'
C43	12.00'	90°00'00"	18.85'	N34°14'23"W 16.97'
C44	177.00'	11°32'47"	35.67'	N45°19'13"E 35.61'
C45	177.00'	9°37'48"	29.75'	N5°36'05"W 29.71'
C46	40.00'	13°33'25"	9.46'	N17°31'41"W 9.44'
C47	40.00'	36°45'52"	25.67'	N42°21'20"W 25.23'
C48	40.00'	57°46'16"	40.33'	N89°37'24"W 38.64'
C49	40.00'	21°46'03"	15.20'	S50°36'27"W 15.11'
C50	40.00'	21°36'50"	15.09'	S28°55'00"W 15.00'
C51	40.00'	78°09'28"	53.17'	S19°58'09"E 49.14'
C52	40.00'	9°38'19"	6.73'	S62°52'02"E 6.72'
C53	15.00'	63°58'07"	16.75'	S35°42'09"E 15.89'
C54	123.00'	14°28'42"	31.08'	S37°16'36"W 31.00'
C55	12.00'	90°00'00"	18.85'	S55°45'37"W 16.97'
C56	177.00'	24°31'34"	75.77'	S88°29'50"W 75.19'
C57	12.00'	90°00'00"	18.85'	N58°45'37"W 16.97'
C58	473.00'	1°53'05"	15.56'	N12°49'24"W 15.56'
C59	473.00'	7°02'16"	58.10'	N8°21'44"W 58.06'
C60	473.00'	4°58'25"	41.06'	N2°21'23"W 41.05'

CURVE TABLE

CURVE	RADIUS	DELTA	LENGTH	CHORD
C61	12.00'	90°00'00"	18.85'	N45°22'36"E 16.97'
C62	12.00'	90°00'00"	18.85'	S44°37'24"E 16.97'
C63	527.00'	5°21'09"	49.23'	S2°50'48"E 49.21'
C64	527.00'	6°33'05"	60.26'	S8°47'55"E 60.23'
C65	527.00'	1°41'30"	15.56'	S12°55'12"E 15.56'
C66	12.00'	90°00'00"	18.85'	S31°14'03"W 16.97'
C67	12.00'	90°00'00"	18.85'	N58°45'37"W 16.97'
C68	127.00'	6°06'26"	13.54'	N16°49'10"W 13.53'
C69	127.00'	15°35'26"	34.56'	N27°40'07"W 34.45'
C70	127.00'	15°35'26"	34.56'	N43°15'33"W 34.45'
C71	127.00'	15°35'26"	34.56'	N58°51'00"W 34.45'
C72	127.00'	15°35'26"	34.56'	N74°26'26"W 34.45'
C73	127.00'	7°23'15"	16.37'	N85°55'47"W 16.36'
C74	12.00'	90°00'00"	18.85'	N44°37'24"W 16.97'
C75	29.00'	90°00'00"	45.55'	N45°22'36"E 41.01'
C76	12.00'	90°00'00"	18.85'	N45°22'36"E 16.97'
C77	73.00'	75°51'27"	96.65'	S51°41'41"E 89.74'
C78	12.00'	100°58'24"	21.15'	S36°43'15"W 18.52'
C79	273.00'	3°10'09"	15.10'	S85°47'32"W 15.10'
C80	12.00'	90°00'00"	18.85'	N44°37'24"W 16.97'
C81	280.00'	37°38'33"	183.98'	S71°24'35"W 180.67'
C82	280.00'	0°06'07"	0.50'	S53°33'15"W 0.50'
C83	316.00'	12°42'23"	70.06'	S58°50'24"W 69.94'
C84	327.00'	4°10'39"	23.84'	N78°19'22"E 23.84'
C85	316.00'	11°33'14"	63.72'	S70°56'12"W 63.61'
C86	327.00'	9°57'54"	56.87'	N85°23'39"E 56.80'
C87	316.00'	11°00'22"	60.70'	S82°15'00"W 60.61'
C88	316.00'	10°54'31"	60.16'	N86°47'33"W 60.07'
C89	316.00'	4°06'19"	22.64'	N79°17'08"W 22.64'
C90	302.50'	1°29'43"	7.89'	N77°58'50"W 7.89'
C91	302.50'	11°25'48"	60.35'	N84°26'35"W 60.25'
C92	302.50'	9°47'28"	51.69'	S84°56'47"W 51.63'
C93	620.00'	0°48'25"	8.73'	S80°27'15"W 8.73'
C94	620.00'	5°35'07"	60.44'	S83°39'01"W 60.42'
C95	620.00'	4°03'21"	43.89'	S88°28'15"W 43.88'
C96	12.00'	90°00'00"	18.85'	N45°22'36"E 16.97'
C97	12.00'	90°00'00"	18.85'	S44°37'24"E 16.97'
C98	132.00'	14°03'16"	32.38'	N82°28'27"W 32.30'
C99	396.00'	15°04'45"	104.22'	N82°59'11"W 103.92'
C100	396.00'	5°04'49"	35.11'	S86°56'02"W 35.10'
C101	396.00'	7°14'50"	50.09'	S80°46'13"W 50.06'
C102	266.00'	2°20'42"	10.89'	S78°19'09"W 10.89'
C103	266.00'	15°12'09"	70.56'	S87°05'35"W 70.37'
C104	227.00'	6°39'24"	26.37'	S86°17'42"E 26.36'
C105	227.00'	9°06'36"	36.23'	S78°23'41"E 36.19'
C106	266.00'	9°17'56"	43.17'	N80°39'22"W 43.13'
C107	227.00'	13°49'48"	54.79'	S66°54'28"E 54.66'
C108	266.00'	19°43'24"	91.57'	N66°06'41"W 91.12'
C109	227.00'	8°19'48"	33.00'	S55°48'40"E 32.97'
C110	266.00'	7°42'12"	35.76'	N52°25'53"W 35.74'
C111	227.00'	14°11'05"	56.20'	S44°34'14"E 56.05'
C112	227.00'	16°25'13"	65.12'	S29°15'35"E 64.90'
C113	227.00'	8°41'25"	34.43'	S16°41'46"E 34.40'
C114	24.50'	90°00'00"	38.48'	N45°22'36"E 34.65'
C115	227.00'	5°23'05"	21.33'	S9°38'31"E 21.33'
C116	227.00'	7°20'34"	29.09'	S3°17'41"E 29.07'
C117	12.00'	90°00'00"	18.85'	S44°37'24"E 16.97'
C118	12.00'	90°00'00"	18.85'	N45°22'36"E 16.97'
C119	173.00'	13°58'42"	42.21'	N6°36'45"W 42.10'
C120	12.00'	98°56'51"	20.72'	N63°04'31"W 18.24'

CURVE TABLE

CURVE	RADIUS	DELTA	LENGTH	CHORD
C121	227.00'	5°56'56"	23.57'	S70°25'32"W 23.56'
C122	227.00'	10°19'43"	40.97'	S78°33'51"W 40.87'
C123	227.00'	6°36'54"	26.34'	S87°03'09"W 26.32'
C124	29.00'	90°00'00"	45.55'	S44°37'24"E 41.01'
C125	12.00'	90°00'00"	18.85'	S45°22'36"W 16.97'
C126	12.00'	90°00'00"	18.85'	S44°37'24"E 16.97'
C127	173.00'	20°24'52"	61.64'	N80°10'10"E 61.31'
C128	12.00'	111°48'28"	23.41'	N14°04'30"E 19.87'
C129	173.00'	9°51'04"	29.74'	N46°44'15"W 29.71'
C130	173.00'	28°28'03"	85.85'	N65°52'47"W 84.98'
C131	173.00'	9°31'35"	28.76'	N84°51'36"W 28.73'
C132	12.00'	90°00'00"	18.85'	S45°22'36"W 16.97'
C133	223.00'	14°18'41"	55.57'	S64°03'20"E 55.43'
C134	223.00'	8°05'15"	23.69'	S53°52'23"E 23.68'
C135	277.00'	7°50'43"	37.93'	S54°45'07"E 37.90'
C136	277.00'	11°22'57"	55.03'	S64°21'57"E 54.94'
C137	277.00'	10°41'05"	51.66'	S75°23'58"E 51.58'
C138	277.00'	8°52'53"	42.94'	S85°10'57"E 42.90'
C139	15.00'	27°06'11"	7.10'	S78°04'18"E 7.03'
C140	46.00'	34°24'41"	27.63'	S79°43'33"E 27.21'
C141	46.00'	24°54'40"	20.00'	N70°36'46"E 19.84'
C142	46.00'	27°12'55"	21.85'	N44°32'59"E 21.64'
C143	46.00'	24°27'09"	19.63'	N18°42'57"E 19.48'
C144	46.00'	33°12'57"	26.67'	N10°07'06"W 26.30'
C145	15.00'	27°06'11"	7.10'	N13°10'28"W 7.03'
C146	15.00'	27°06'11"	7.10'	N13°55'41"E 7.03'
C147	46.00'	21°44'42"	17.46'	N16°36'26"E 17.35'
C148	46.00'	56°17'24"	45.19'	N22°24'37"W 43.40'
C149	46.00'	66°10'15"	53.13'	N83°38'27"W 50.22'
C150	15.00'	11°31'08"	3.02'	S69°01'59"W 3.01'
C151	15.00'	15°35'03"	4.08'	S82°35'04"W 4.07'
C152	12.00'	90°00'00"	18.85'	S44°37'24"E 16.97'
C153	123.00'	28°32'42"	56.99'	S13°38'57"W 56.48'
C154	12.00'	97°58'47"	20.52'	S75°54'47"W 18.11'
C155	277.00'	16°06'41"	77.89'	N63°09'16"W 77.64'
C156	223.00'	23°19'24"	90.78'	N77°57'42"W 90.15'
C157	12.00'	95°43'26"	20.05'	N18°26'17"W 17.80'
C158	177.00'	13°58'54"	43.19'	N22°25'50"E 43.09'
C159	177.00'	15°03'56"	46.54'	N75°54'24"E 46.41'
C160	12.00'	90°00'00"	18.85'	N45°22'36"E 16.97'
C161	12.00'	90°00'00"	18.85'	S44°37'24"E 16.97'
C162	12.00'	90°00'00"	18.85'	S45°22'36"W 16.97'
C163	12.00'	90°00'00"	18.85'	N44°37'24"W 16.97'
C164	12.00'	90°00'00"	18.85'	N45°22'36"E 16.97'
C165	12.00'	90°00'00"	18.85'	S44°37'24"E 16.97'
C166	12.00'	90°00'00"	18.85'	S45°22'36"W 16.97'
C167	218.00'	1°01'47"	3.92'	S0°08'18"E 3.92'
C168	152.00'	1°01'47"	2.73'	N0°08'18"W 2.73'
C169	533.00'	7°44'07"	71.96'	S3°29'27"E 71.90'
C170	467.00'	6°41'46"	54.58'	S4°00'38"E 54.55'
C171	223.00'	5°24'35"	21.05'	S87°03'17"E 21.05'
C172	12.00'	89°51'44"	18.82'	N45°18'33"E 16.95'
C173	467.00'	3°01'16"	24.63'	N1°08'02"W 24.62'
C174	467.00'	4°42'50"	38.42'	N5°00'06"W 38.41'
C175	533.00'	6°41'46"	62.29'	N4°00'38"W 62.26'
C176	1453.45'	5°39'32"	143.55'	S7°30'33"E 143.49'
C177	1453.45'	1°34'53"	40.11'	S3°53'21"E 40.11'
C178	1453.45'	1°34'43"	40.05'	S2°18'33"E 40.05'
C179	1453.45'	1°22'49"	35.02'	S0°49'47"E 35.02'



AREAS:

GROSS SITE AREA:	±2,139,664 SF (49.12 AC)
RIGHT-OF-WAY DEDICATION:	±537,467 SF (12.34 AC)
TOTAL TRACT AREA:	±511,280 SF (11.74 AC)

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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 4 30

TAX LOT 1200

PRELIMINARY PLAT - WEST

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON JULY 9, 2003 ALEXANDER H. HURLEY 55591PLS
RENEWS: 6/30/15

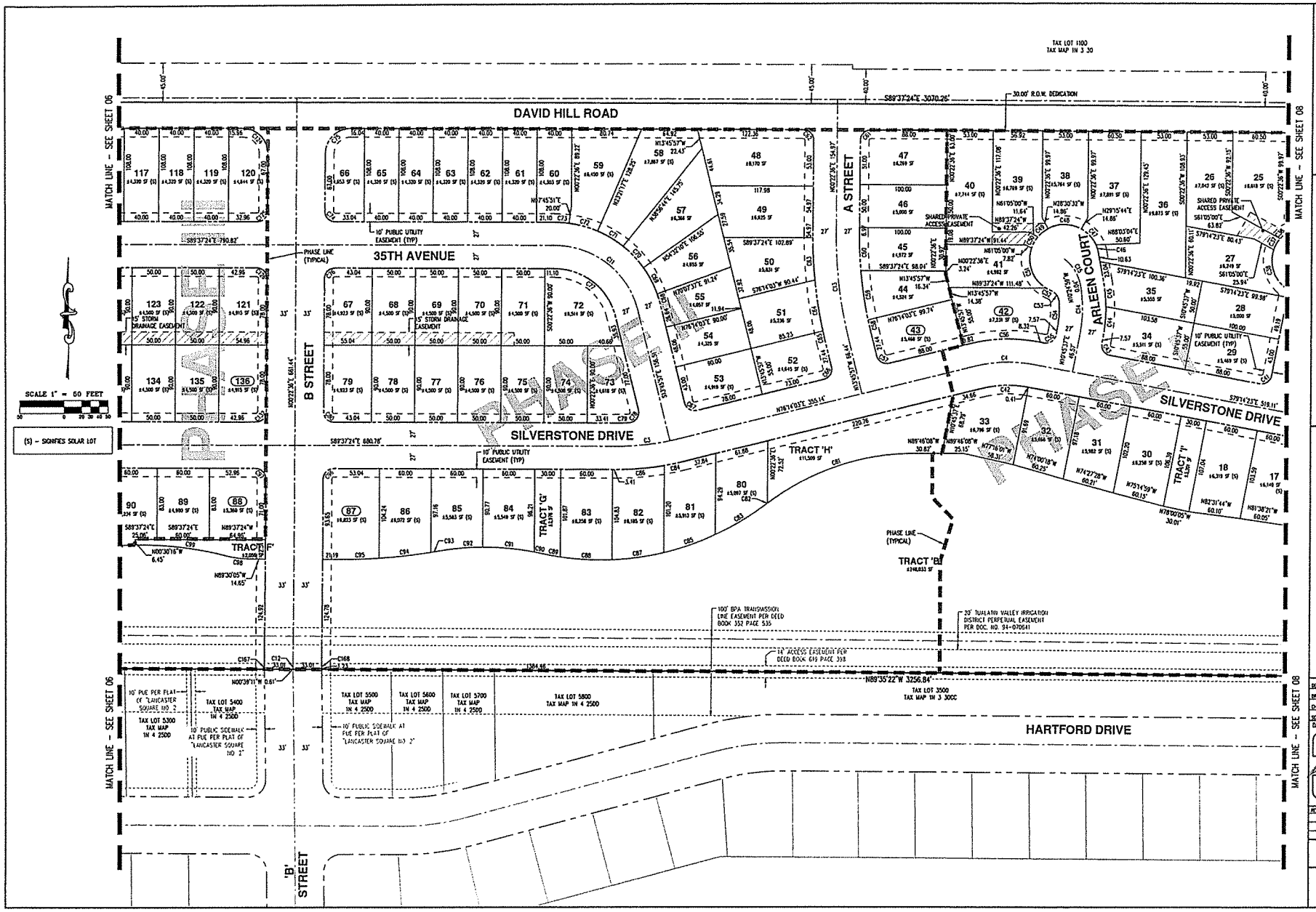
PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS

JOB NUMBER 3740

SHEET 06

AKS DRAWING FILE: 3740-PLATING | LAYOUT: 06



AKS ENGINEERING AND FORESTRY, LLC
13910 SW GALBRAITH DR
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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY PLAT - MIDDLE

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL LAND SURVEYOR
PRELIMINARY NOT FOR CONSTRUCTION
OREGON JULY 9, 2003 ALEXANDER H. HURLEY 53513PLS
RENEWS: 6/30/15

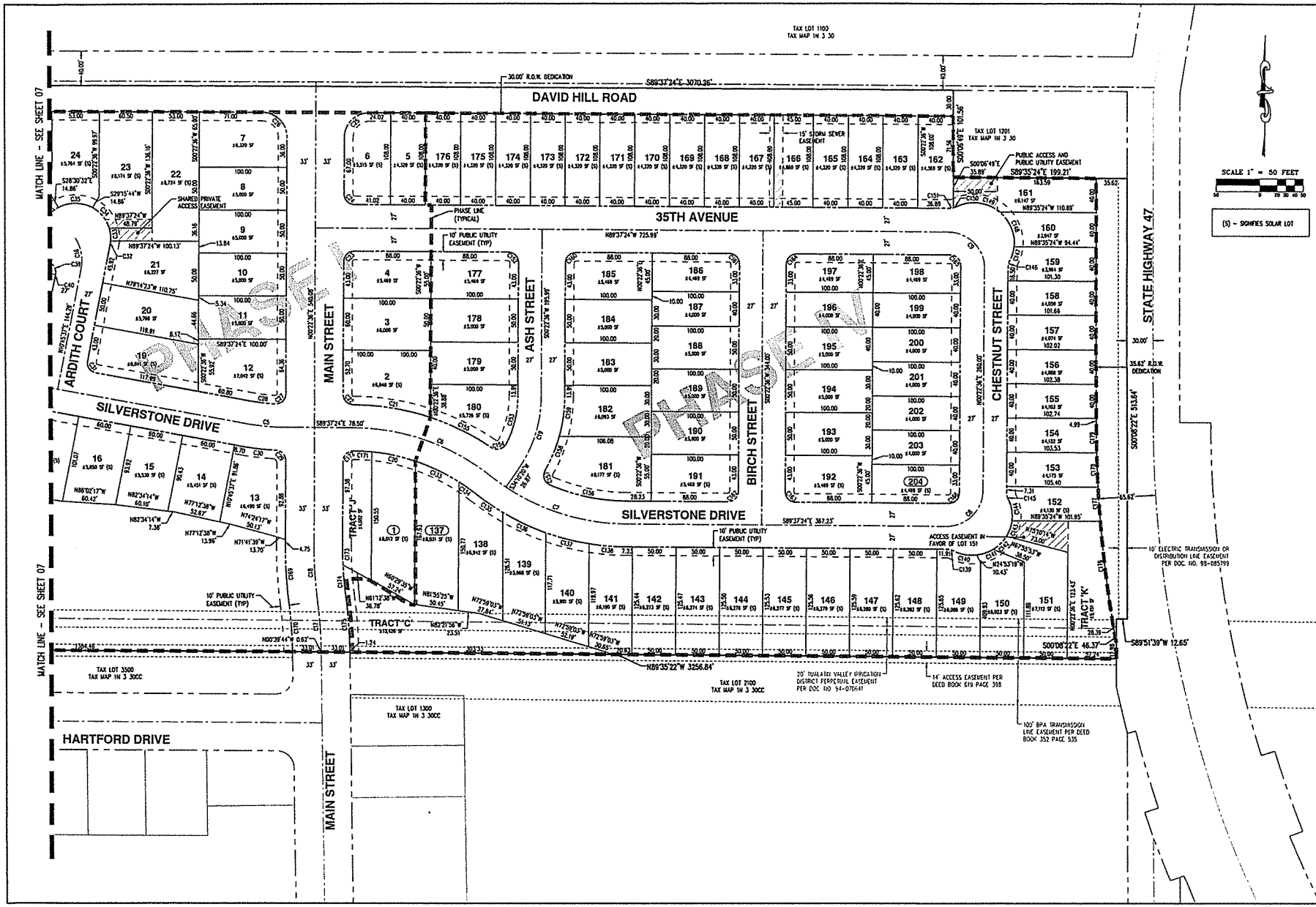
REVISIONS

JOB NUMBER 3740

SHEET 07

AKS DRAWING FILE: 3740

PLAT.DWG | LAYOUT: 07



AKS ENGINEERING AND FORESTRY, LLC
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SUITE 100
TUALATIN, OR 97062
PHONE: 503.563.3000
FAX: 503.563.6999
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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY PLAT - EAST

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

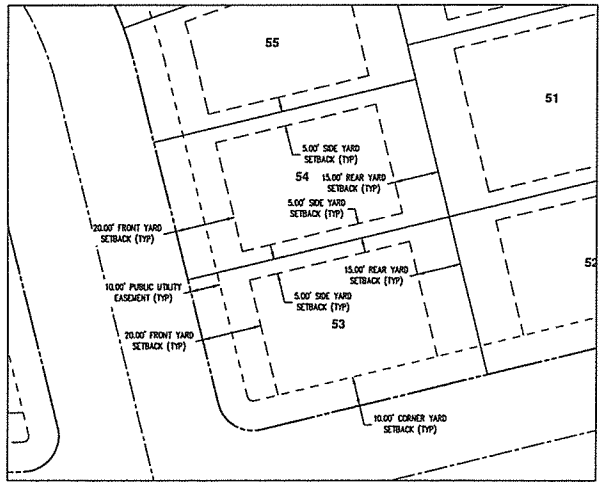
REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON JULY 14, 2003 ALEXANDER H. HURLEY
PRELIMINARY NOT FOR CONSTRUCTION
EXPIRES: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
08

AKS DRAWING FILE: 3740-PLAT-LAYOUT.DWG

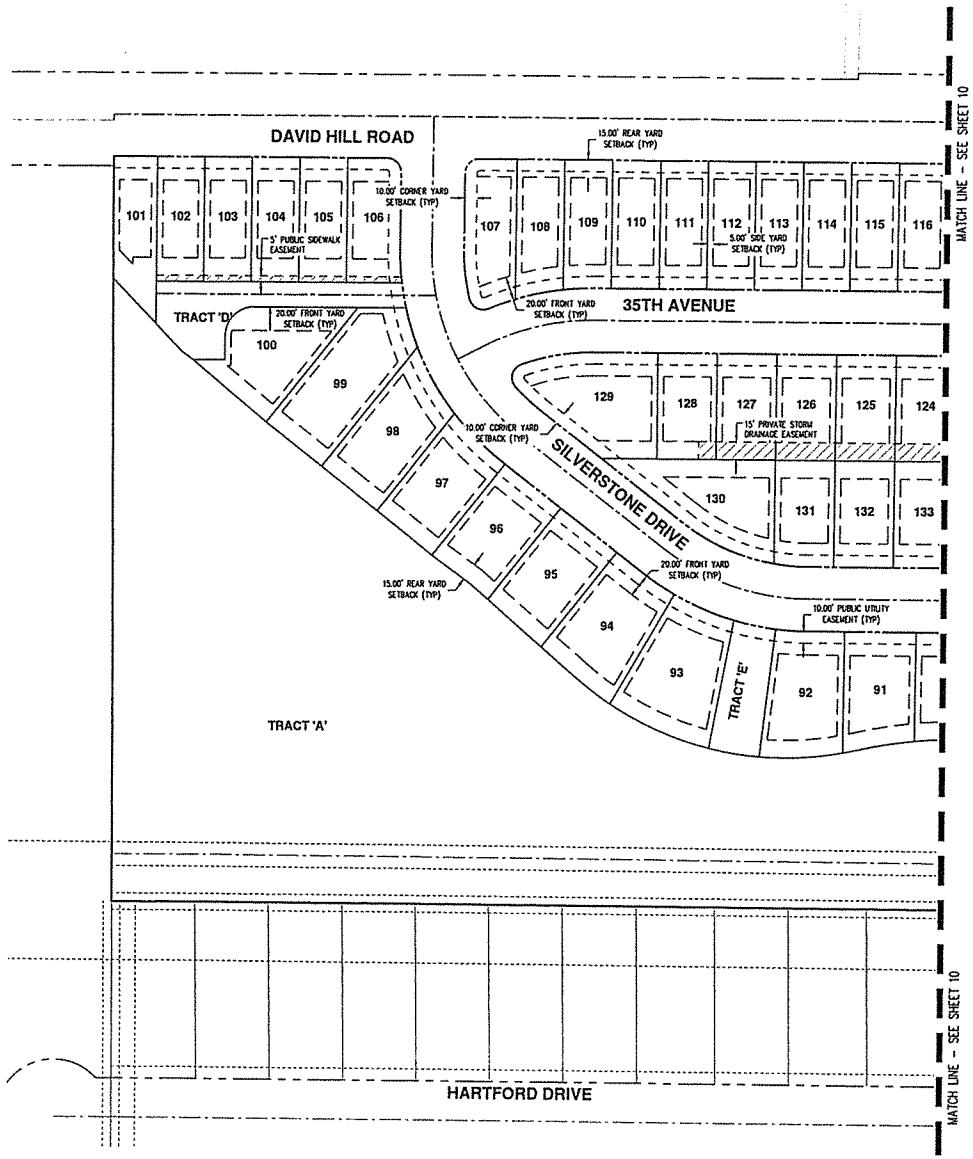


TYPICAL LOT BUILDING SETBACKS
1" = 20'

REQUIRED SETBACKS

FRONT YARD:	20 FT
SIDE YARD:	5 FT
CORNER SIDE YARD:	10 FT
REAR YARD:	15 FT

SCALE 1" = 50 FEET



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FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY BUILDING ENVELOPE AND SETBACK PLAN - WEST

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL ENGINEER
OREGON
ALEXANDER H. HUNSECKER
RENEWAL DATE: 6/30/15

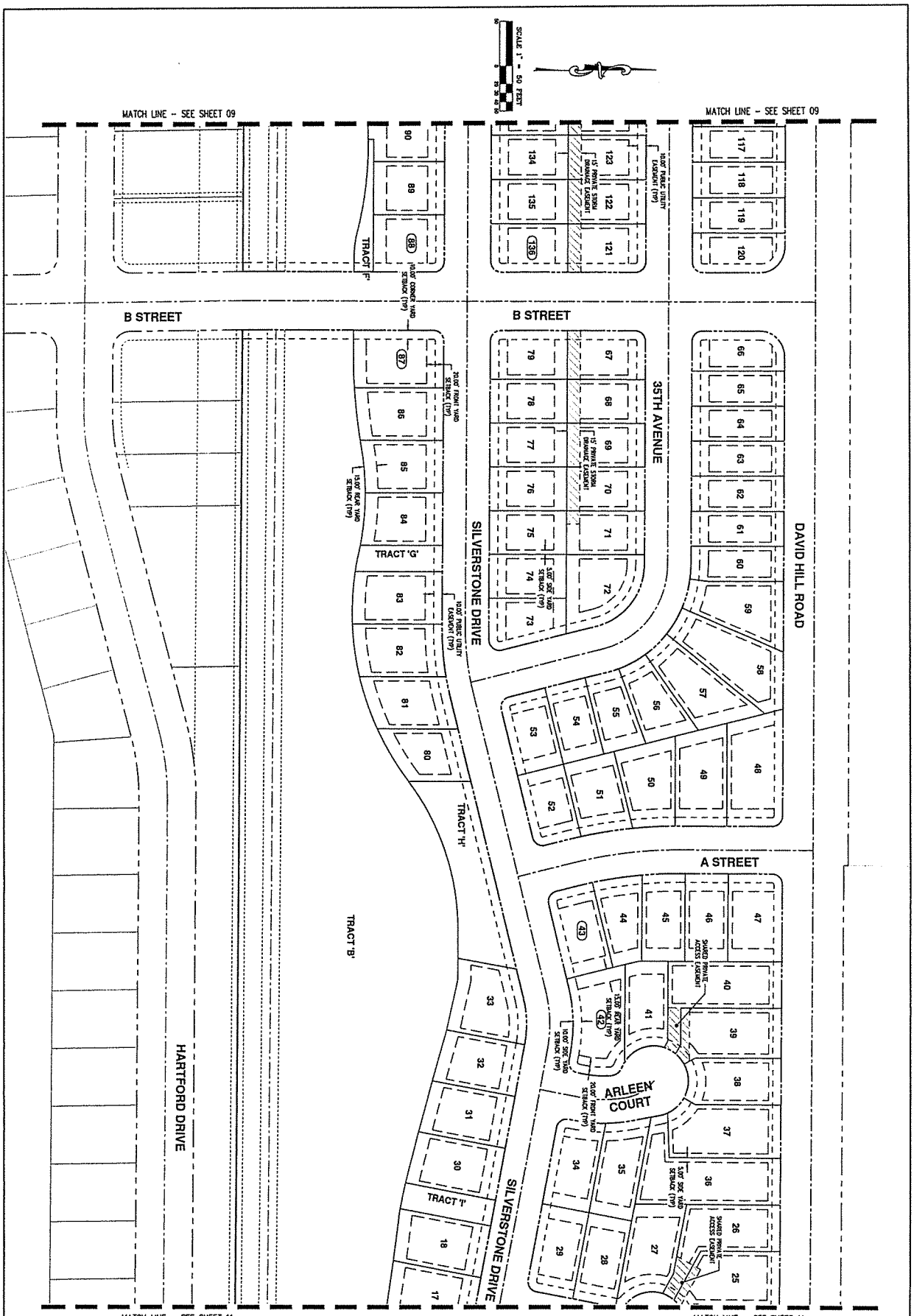
REVISIONS

JOB NUMBER
3740

SHEET
09

AKS DRAWING FILE: 3740-ENVELOPE.DWG | LAYOUT: 09

AKS DRAWING FILE: 3740-* ENVELOPE.DWG | LAYOUT: 10



JOB NUMBER 3740	SHEET 10	REGISTERED PROFESSIONAL ENGINEER / REGISTERED LANDSCAPE ARCHITECT	REVISIONS
SCALE: AS NOTED	DATE: 06/27/2014	DRAWN BY: AHH	CHECKED BY:

PRELIMINARY BUILDING ENVELOPE AND SETBACK PLAN - MIDDLE

SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

TAX LOT 1200 WASHINGTON COUNTY TAX MAP 1N 3 30

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13910 SW GALBREATH DR
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FAX: 503.925.8969
www.aks-eng.com

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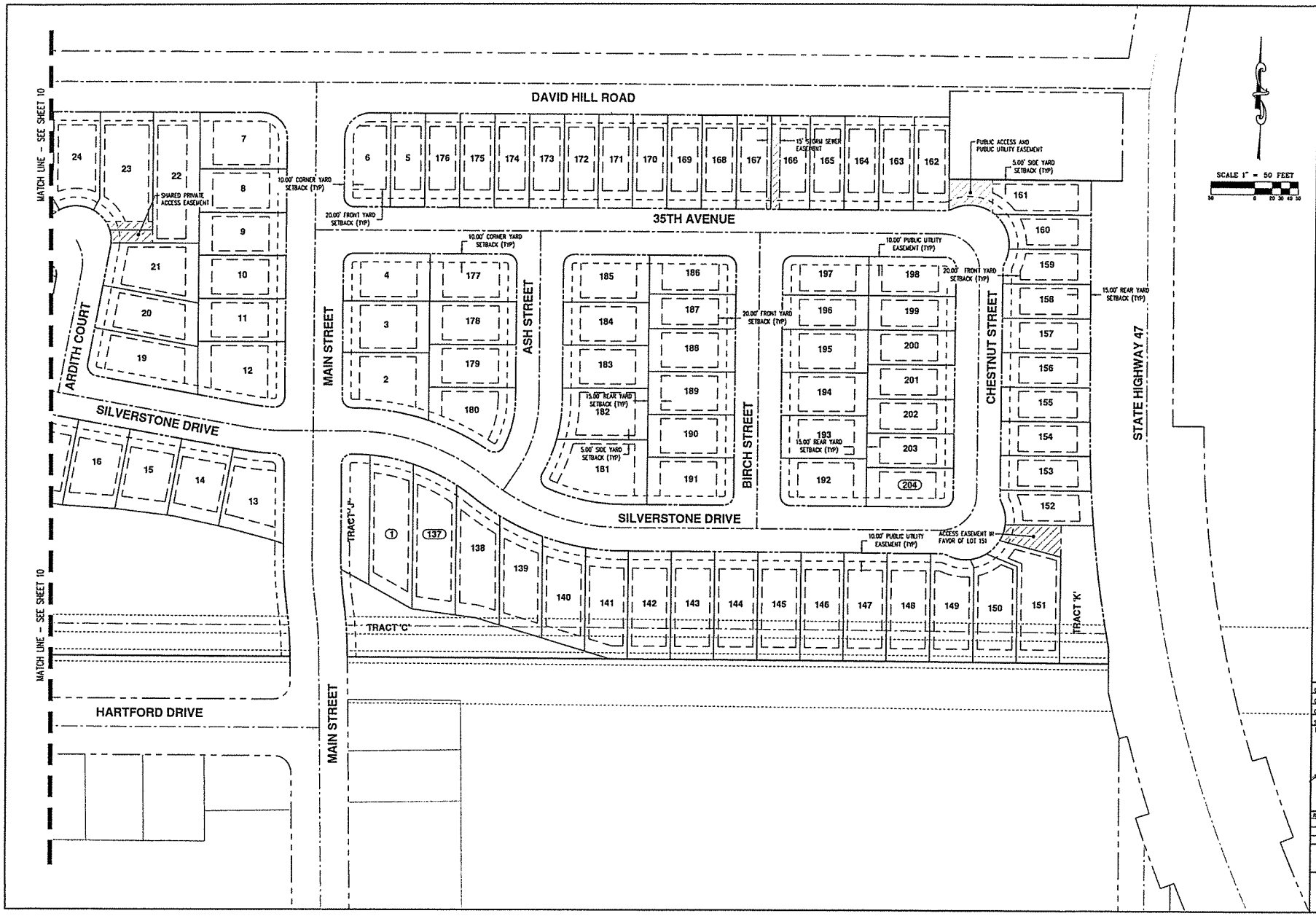

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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 3D
TAX LOT 1200

PRELIMINARY BUILDING ENVELOPE AND SETBACK PLAN - EAST

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 14, 1986
ALEXANDER H. HOVEY

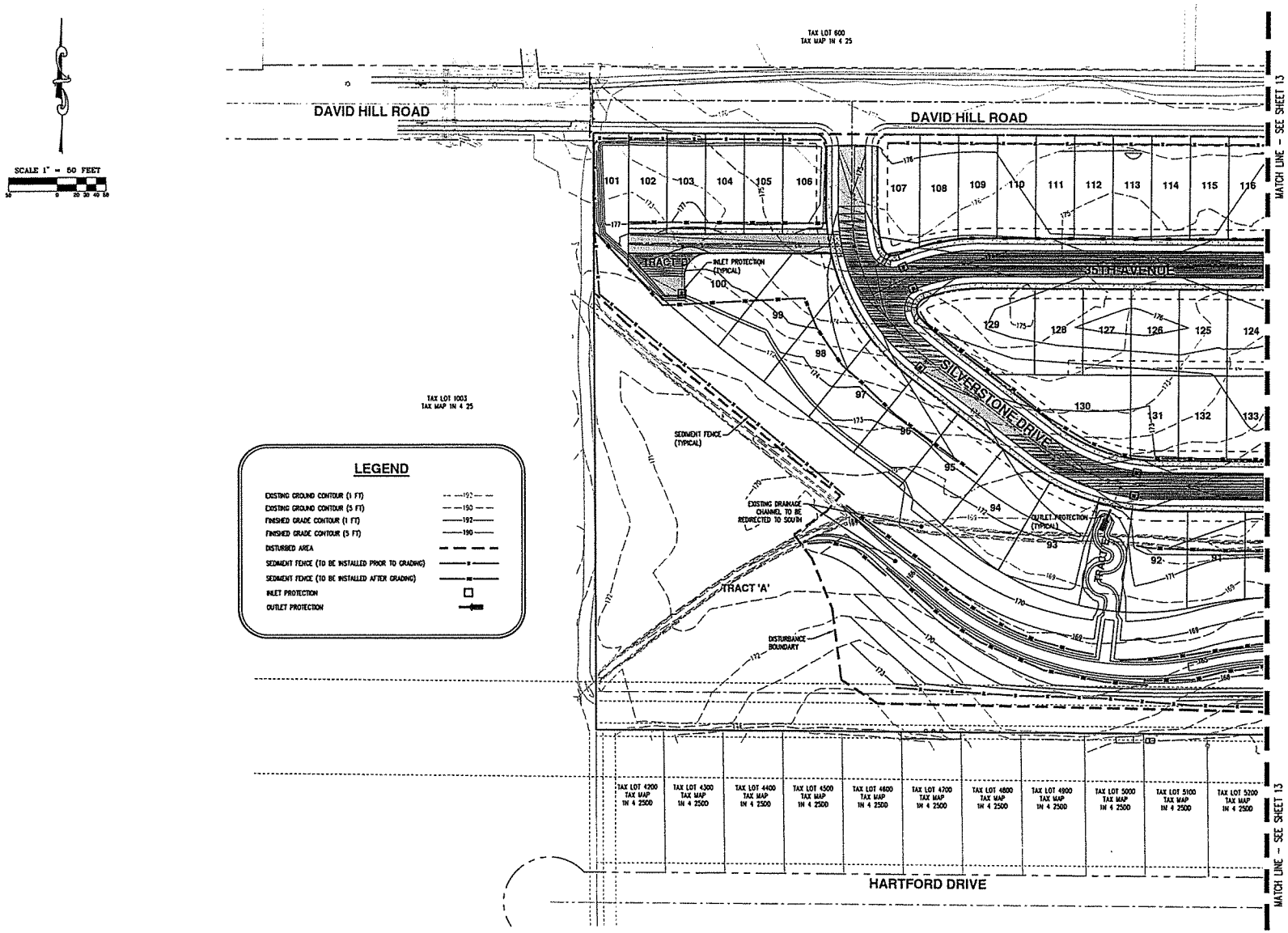
REVISION DATE: 8/30/15

REVISIONS

JOB NUMBER
3740

SHEET
11

AKS DRAWING FILE: 3740-ENVELOPE.DWG | LAYOUT: 11



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SUITE 100
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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

TAX LOT 1200

WASHINGTON COUNTY TAX MAP 1N 3 30

PRELIMINARY GRADING, DEMO, AND EROSION CONTROL PLAN - WEST

DESIGNED BY:	MTS
DRAWN BY:	MTS
CHECKED BY:	APM
SCALE:	AS NOTED
DATE: 05/27/2014	

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 14, 2014
STEPHANIE H. HURST

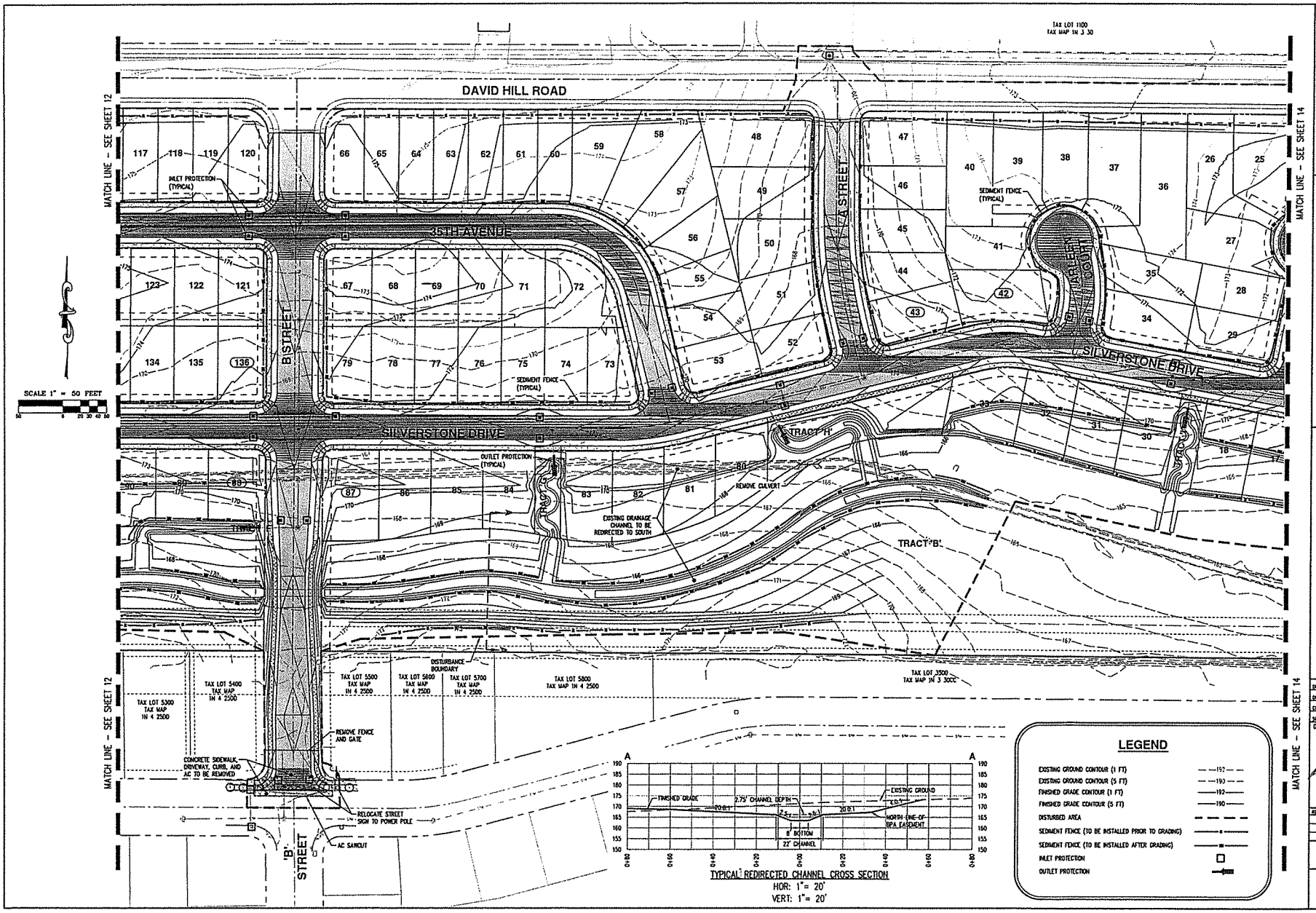
RENEWAL DATED 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
12

AKS DRAWING FILE: 3740-WALDING I LAYOUT: 12



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FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY GRADING, DEMO, AND EROSION CONTROL PLAN - MIDDLE

DESIGNED BY:	MTS
DRAWN BY:	MTS
CHECKED BY:	AHH
SCALE:	AS NOTED
DATE: 05/27/2014	

REGISTERED PROFESSIONAL ENGINEER
OREGON
NOVEMBER 17, 1992
ANDREW H. HURST

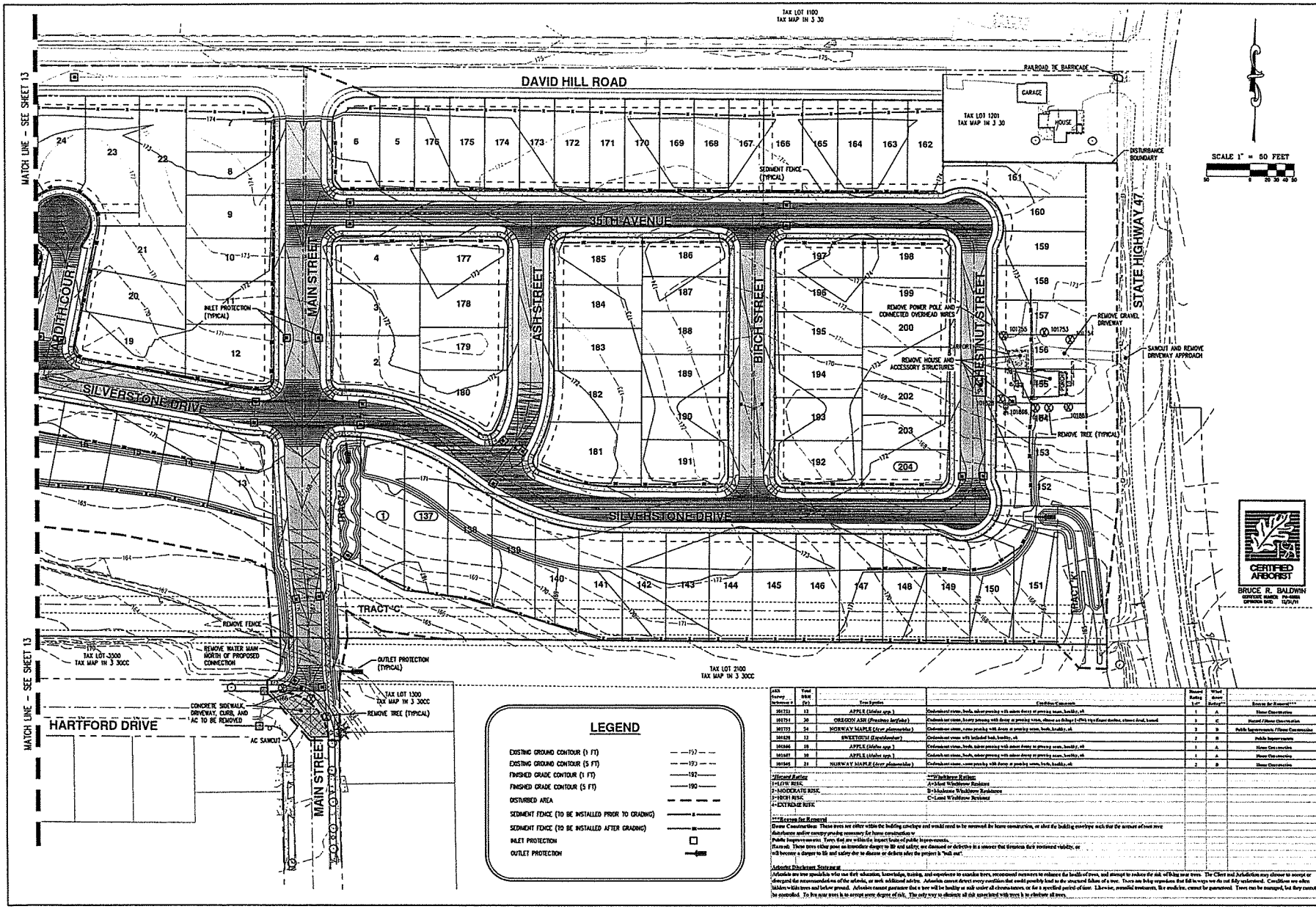
RENEWAL DATE: 6/30/13

REVISIONS:

JOB NUMBER
3740

SHEET
13

AKS DRAWING FILE: 3740-13 "HACIENDA" | LAYOUT: 13



LEGEND

- EXISTING GROUND CONTOUR (1 FT) — 192 —
- EXISTING GROUND CONTOUR (5 FT) — 190 —
- FINISHED GRADE CONTOUR (1 FT) — 192 —
- FINISHED GRADE CONTOUR (5 FT) — 190 —
- DISTURBED AREA
- SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING) — S —
- SEDIMENT FENCE (TO BE INSTALLED AFTER GRADING) — SF —
- INLET PROTECTION
- OUTLET PROTECTION

AKS Survey Reference #	Trees DBH (in)	Tree Species	Condition Comments	Hazard Rating 1-4*	Wind Area Rating**	Reason for Removal***
101721	12	APPLE (*Malus spp.*)	Codominant stems, bark, minor pruning w/ th minor decay at pruning scars, healthy, sh	1	A	Home Construction
101724	30	OREGON ASH (*Fraxinus latifolia*)	Codomin ant stems, heavy pruning with decay at pruning scars, chlorosis foliage [illegible]	3	C	Hazard / Home Construction
101733	24	NORWAY MAPLE (*Acer platanoides*)	Codominant stems, some pruning with decay at pruning scars, bark, healthy, sh	3	B	Public Improvements / Home Construction
101828	12	SWEETGUM (*Liquidambar*)	Codominant stems with included bark, healthy, sh	2	B	Public Improvements
101846	10	APPLE (*Malus spp.*)	Codominant stems, bark, minor pruning with minor decay at pruning scars, healthy, sh	1	A	Home Construction
101847	10	APPLE (*Malus spp.*)	Codomin ant stems, bark, minor pruning with minor decay at pruning scars, healthy, sh	1	A	Home Construction
101848	21	NORWAY MAPLE (*Acer platanoides*)	Codominant stems, some pruning with decay at pruning scars, bark, healthy, sh	2	B	Home Construction

*Hazard Rating
1=LOW RISK
2=MODERATE RISK
3=HIGH RISK
4=EXTREME RISK

**Windthrow Rating
A=Most Windthrow Resistant
B=Moderate Windthrow Resistance
C=Least Windthrow Resistant

***Reason for Removal
Home Construction: These trees are either within the building envelope and would need to be removed for home construction, or after the building envelope such that the amount of root zone disturbance and/or canopy pruning necessary for home construction w
Public Improvements: Trees that are within the impact limits of public improvements.
Hazard: These trees either pose an immediate danger to life and safety, are diseased or defective in a manner that threatens their continued viability, or will become a danger to life and safety due to disease or defects after the project is "built out".

Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the health of trees, and attempt to reduce the risk of living near trees. The Client and Jurisdiction may choose to accept or disregard the recommendations of the arborist, or seek additional advice. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed. Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON
WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY GRADING, DEMO, TREE, AND EROSION CONTROL PLAN - EAST

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: ARH
SCALE: AS NOTED
DATE: 05/27/2014

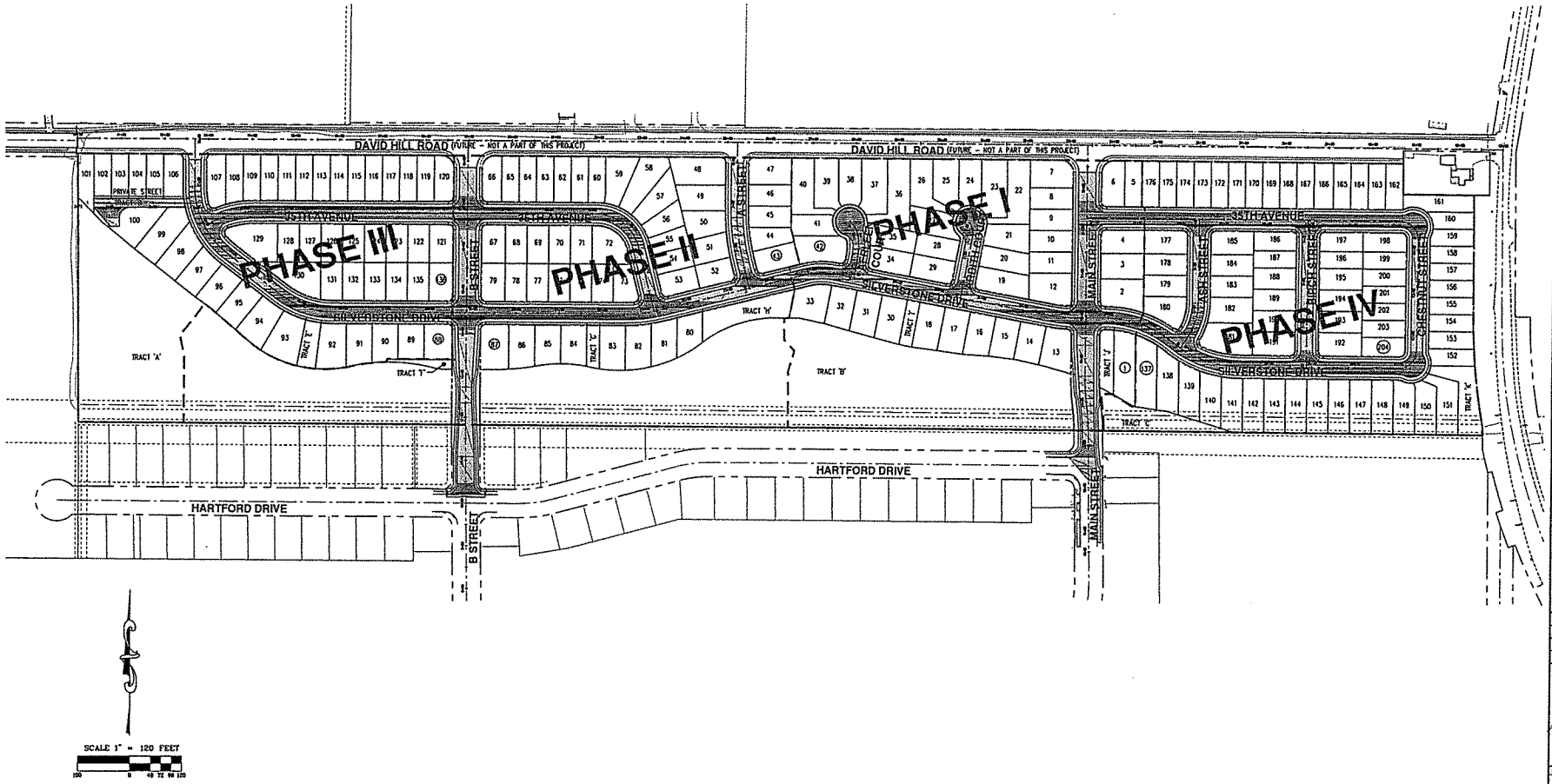
REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 19, 1988
ALEXANDER H. HOLLEY
RENEWAL DATE: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
14

AKS DRAWING FILE: 3740-



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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30

TAX LOT 1200

PRELIMINARY STREET PLAN OVERVIEW

DESIGNED BY:	MTS
DRAWN BY:	MTS
CHECKED BY:	AHH
SCALE:	AS NOTED

DATE: 05/27/2014

REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION
ALAN H. HUNT

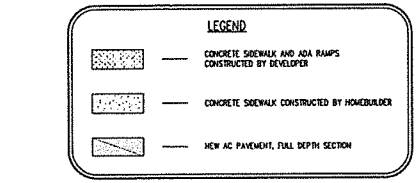
RENEWAL DATE: 6/30/15

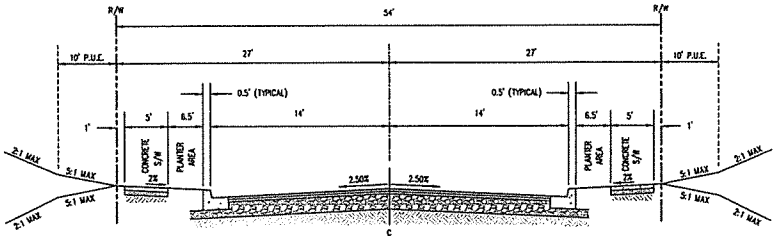
REVISIONS

JOB NUMBER
3740

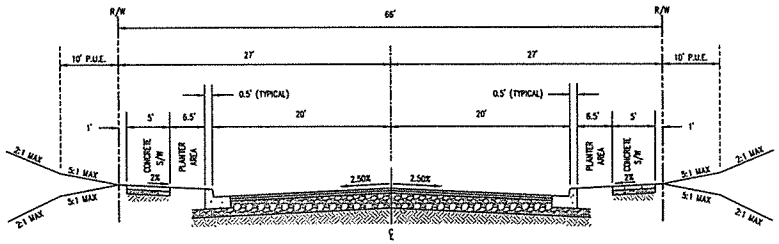
SHEET
15

AKS DRAWING FILE: 3740-T1-OVERVIEW.DWG | LAYOUT: 15

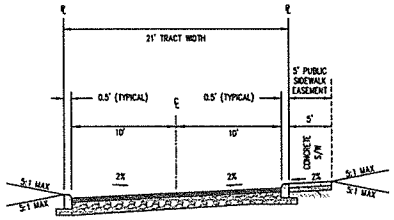




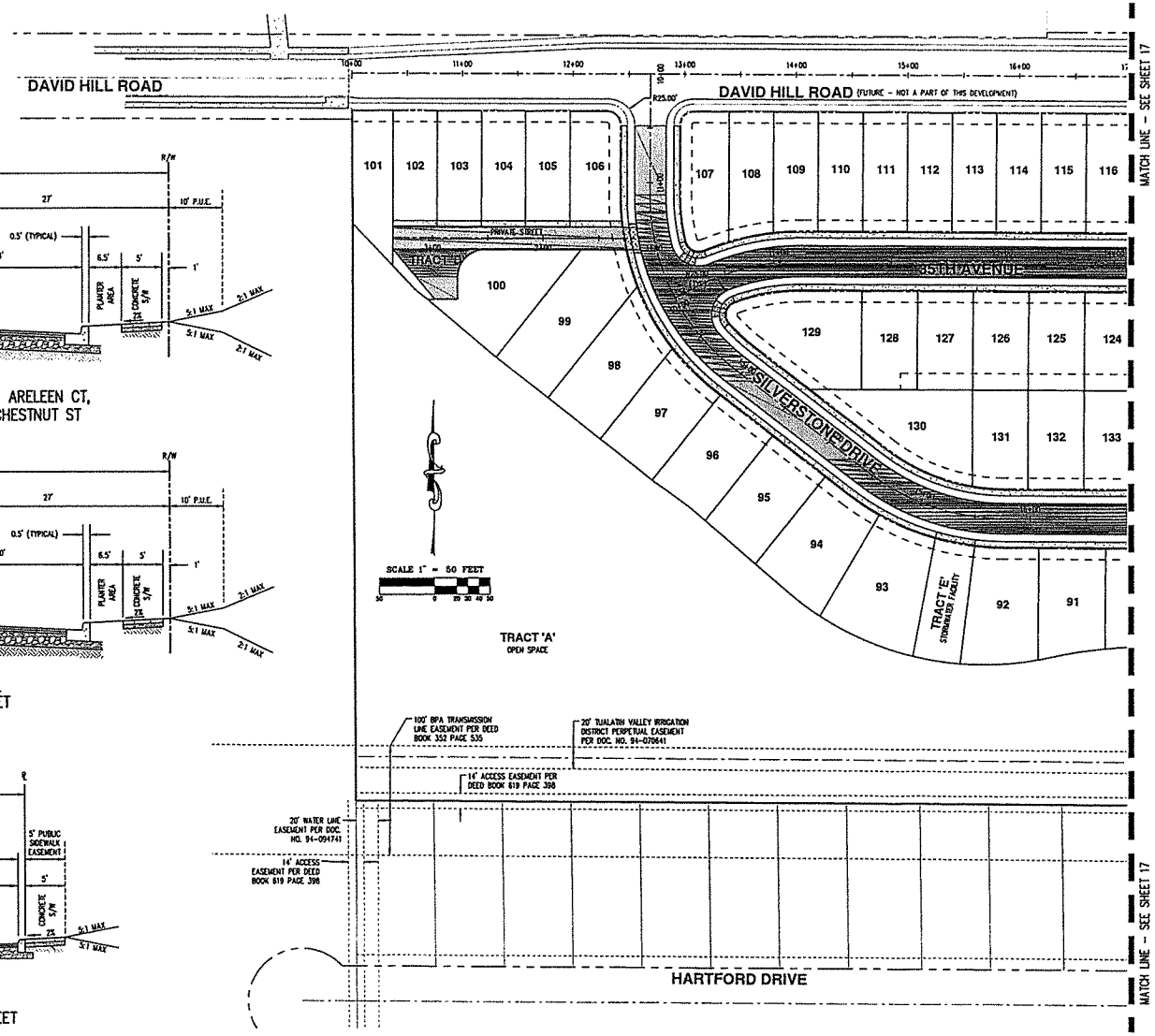
TYPICAL STREET SECTION
SILVERSTONE DR, 35TH AVE, A STREET, ARELEEN CT, ARDITH CT, ASH ST, BIRCH ST, AND CHESTNUT ST
NOT TO SCALE



TYPICAL STREET SECTION
MAIN STREET AND B STREET
NOT TO SCALE



STREET SECTION
TRACT 'D' – PRIVATE STREET
NOT TO SCALE



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SILVERSTONE SUBDIVISION

FOREST GROVE, OREGON
WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1300

PRELIMINARY CROSS SECTIONS AND STREET PLAN - WEST

DESIGNED BY:	MTS
DRAWN BY:	MTS
CHECKED BY:	AHH
SCALE:	AS NOTED
DATE: 05/27/2014	

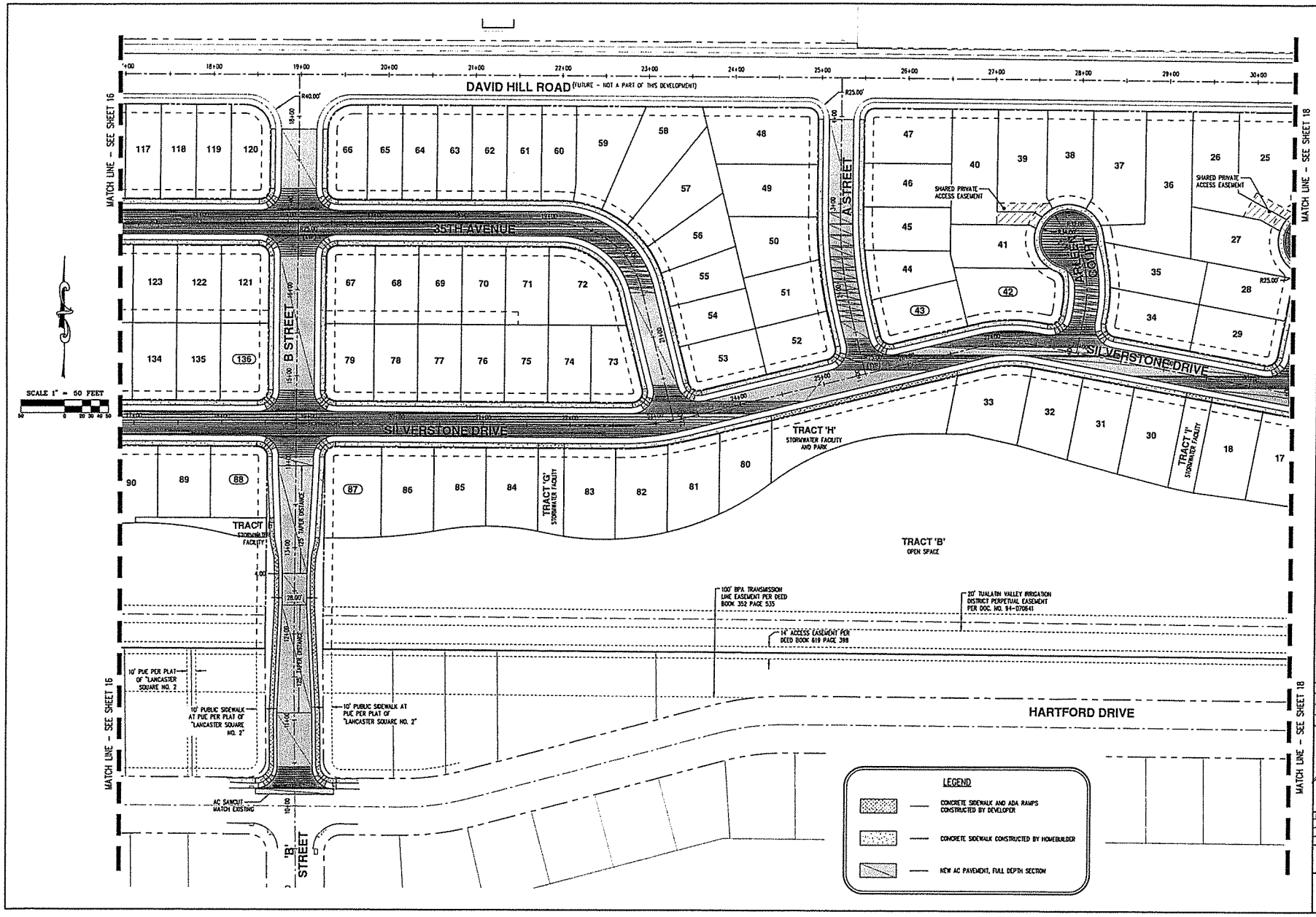
REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 19, 1982
ALEXANDER H. HOWLEY
RENEWAL DATE: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
16

AKS DRAWING FILE: 3740 TITLEMPC | LAYOUT: 16



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PHONE: 503.563.3159
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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1700

PRELIMINARY STREET PLAN - MIDDLE

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

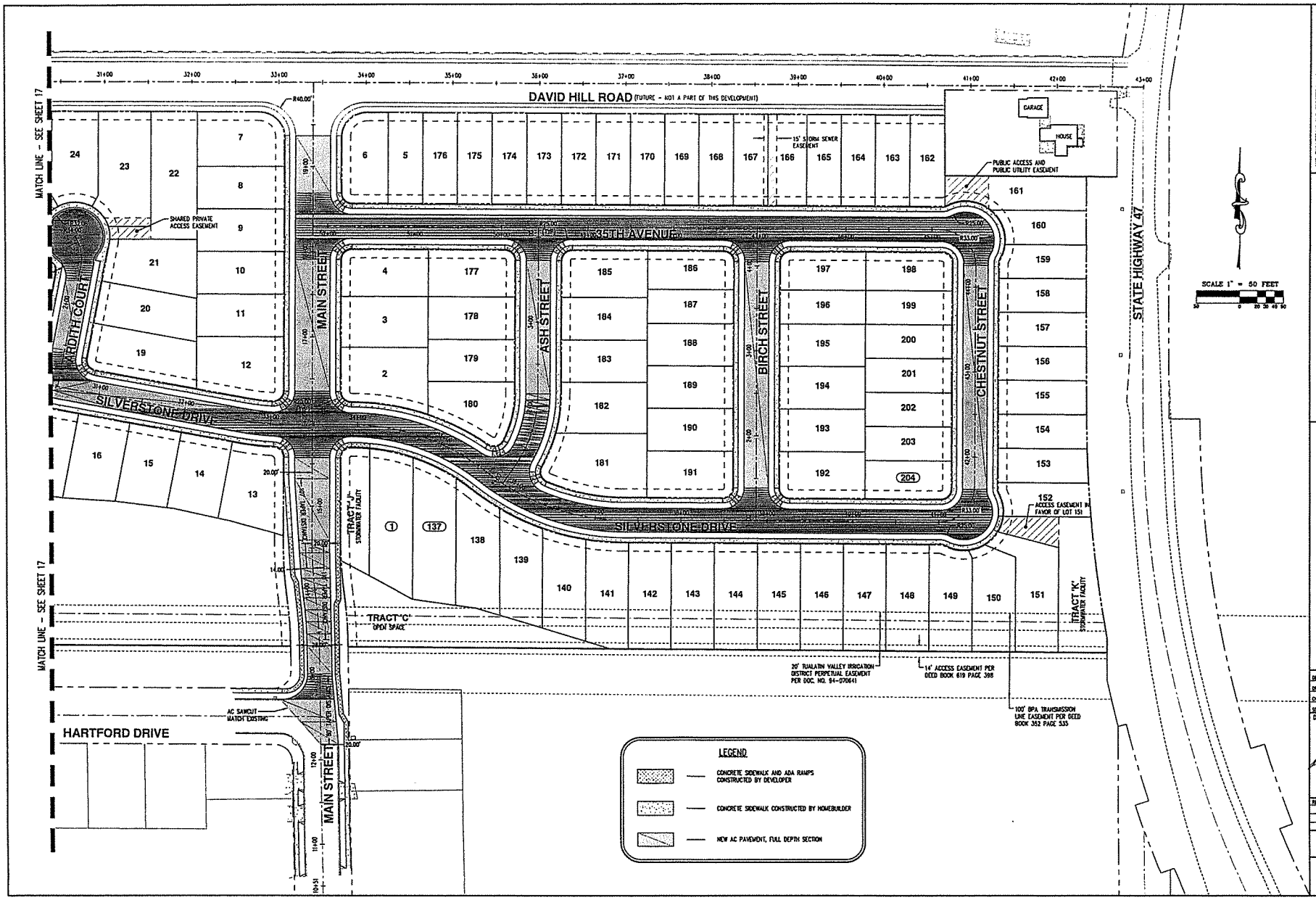
REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 11, 1972
CHANDLER H. HUNSICKER
RENEWAL DATE: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
17

AKS DRAWING FILE: 3740



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SUITE 100
BEAVERTON, OR 97005
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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY STREET PLAN - EAST

DESIGNED BY:	MTS
DRAWN BY:	MTS
CHECKED BY:	AHH
SCALE:	AS NOTED
DATE: 05/27/2014	

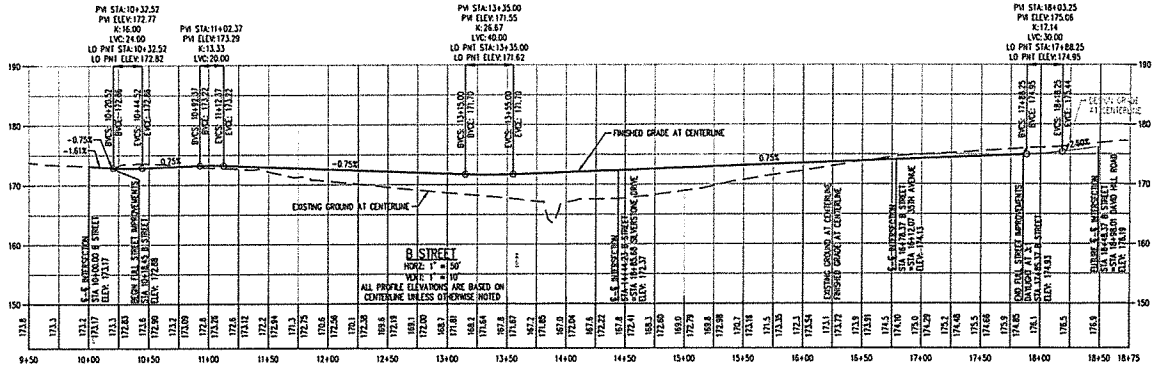
REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 19, 1982
MATTHEW T. SCHEELE
RENEWAL DATE 6/30/15

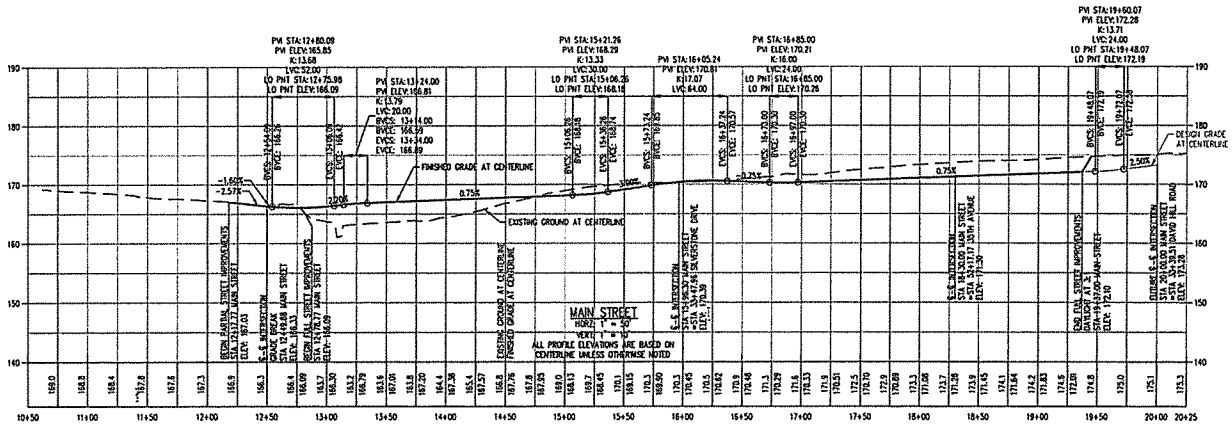
REVISIONS

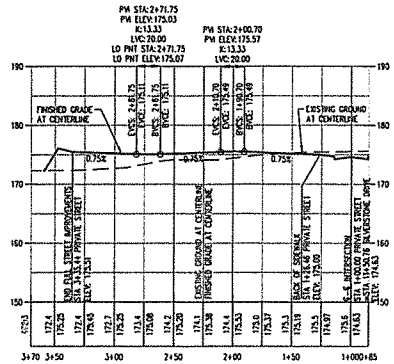
JOB NUMBER
3740

SHEET
18

AKS DRAWING FILE: 3740-SHEET 18







TRACT D
PRIVATE STREET
HORZ: 1" = 50'
VERT: 1" = 10'
ALL PROFILE ELEVATIONS ARE BASED ON CENTERLINE UNLESS OTHERWISE NOTED

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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY STREET PROFILES

DESIGNED BY:	MTS
DRAWN BY:	MTS
CHECKED BY:	AHH
SCALE:	AS NOTED
DATE: 05/27/2014	

REGISTERED PROFESSIONAL ENGINEER
OREGON
ALEXANDER H. HURST
RENEWAL DATE: 6/30/15

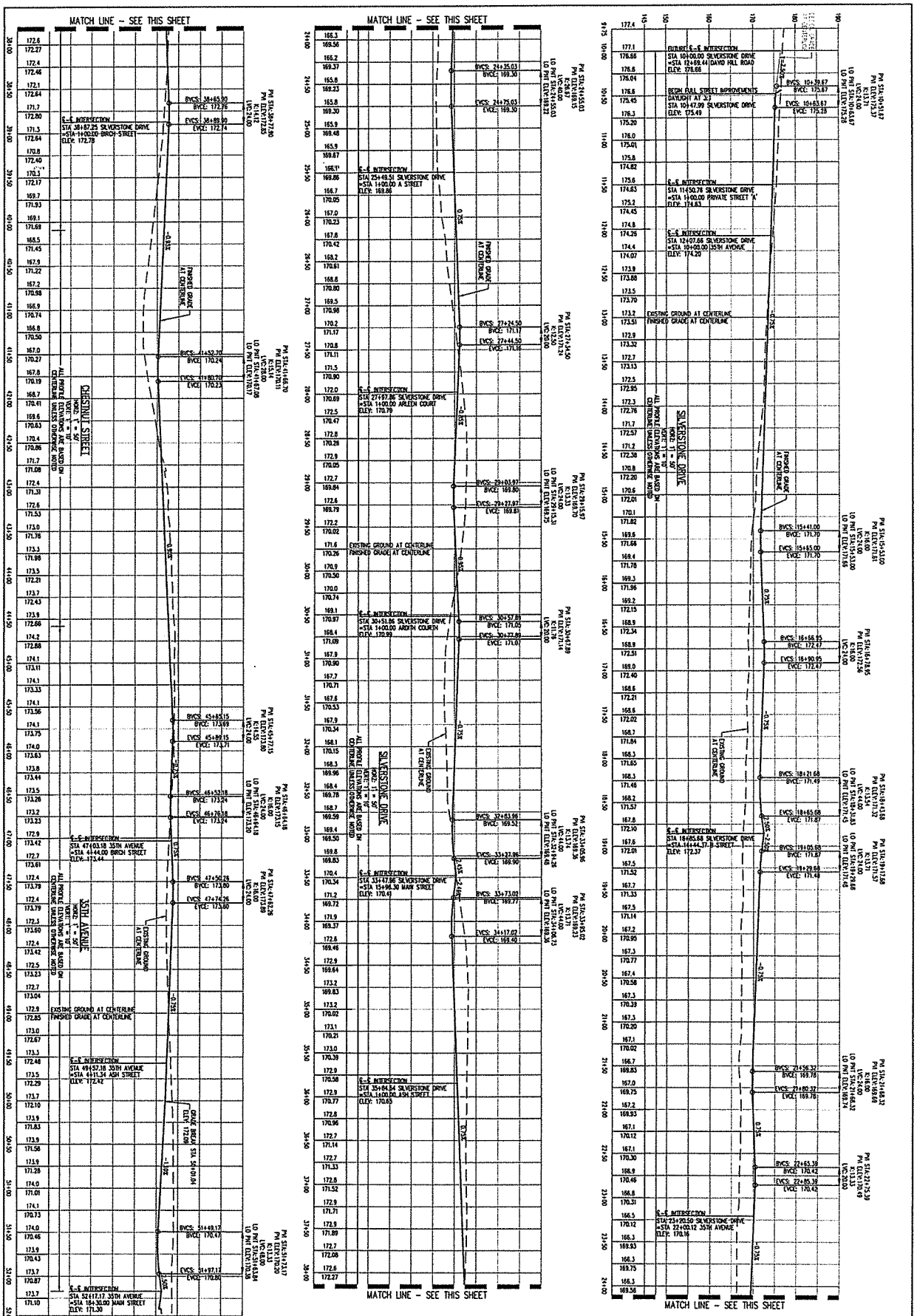
REVISIONS

JOB NUMBER
3740

SHEET
19

AKS DRAWING FILE: 3740-19 SILVERSTONE | LAYOUT: 19

AKS DRAWING FILE: 3740-[illegible]TS.DWG | LAYOUT: 20



PRELIMINARY STREET PROFILES

SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

TAX LOT 1200 WASHINGTON COUNTY TAX MAP 1N 3 30

JOB NUMBER 3740

SHEET 20

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHK
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 19, 1994
MICHAEL T. SCHERLE
EXPIRES: 12/31/14

AKS ENGINEERING AND FORESTRY, LLC
13910 SW GALBREATH DR
SUITE 100
SHERWOOD, OR 97140
PHONE: 503.925.8799
FAX: 503.925.8969
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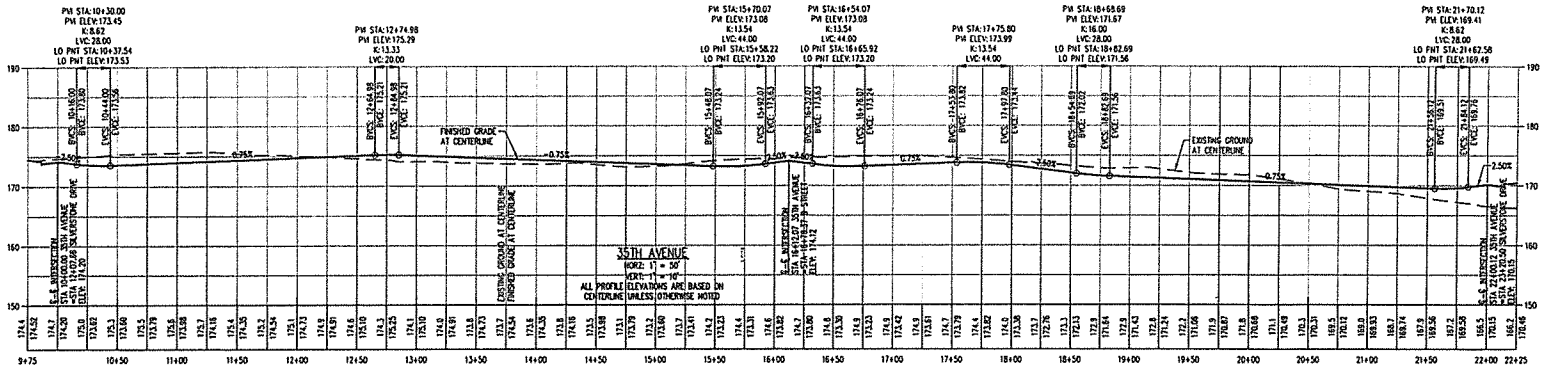

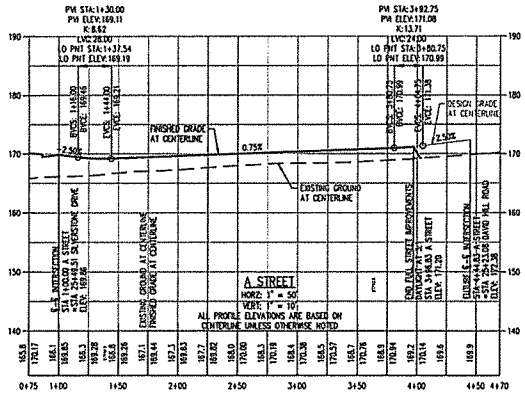

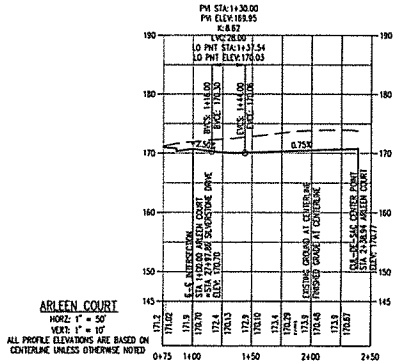

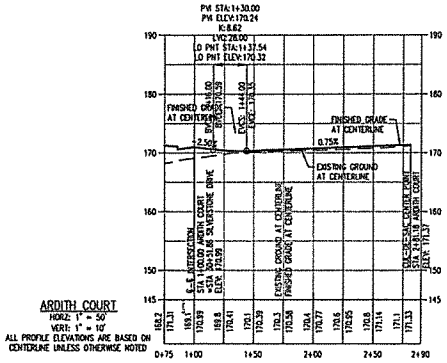

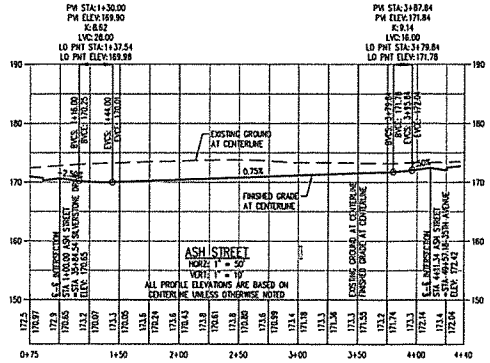

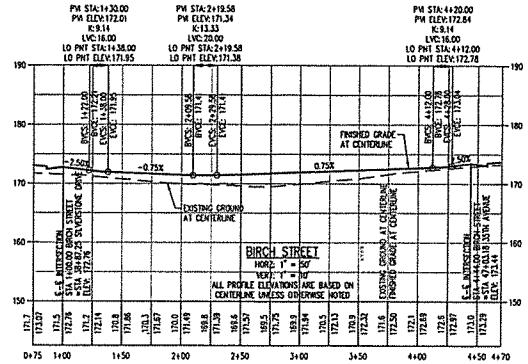

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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY STREET PROFILES

DESIGNED BY:	MTS
DRAWN BY:	MTS
CHECKED BY:	AHH
SCALE:	AS NOTED
DATE: 05/27/2014	

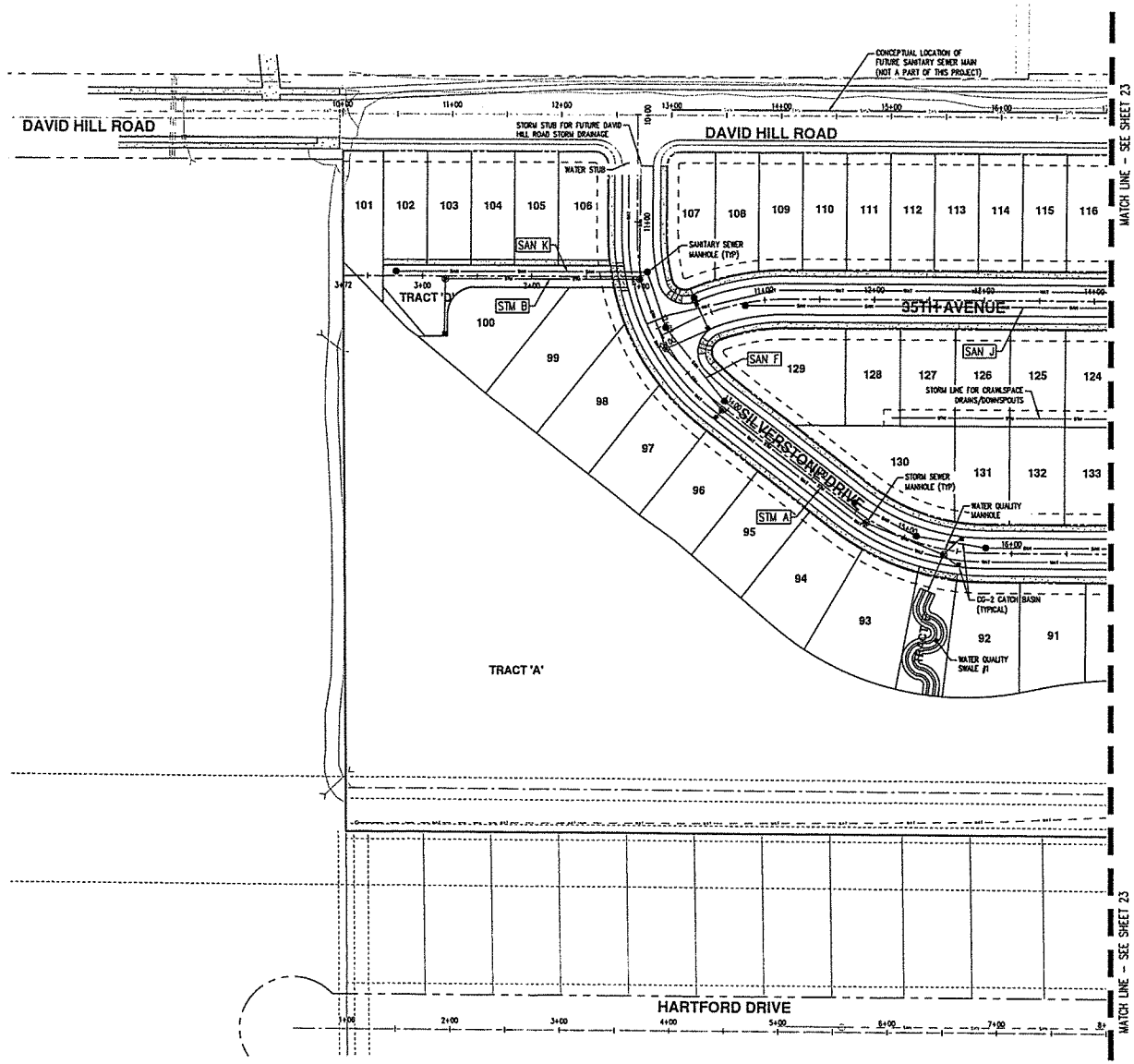
REGISTERED PROFESSIONAL ENGINEER
OREGON
ALEXANDER H. HURLEY
RENEWAL DATE: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
21

AKS DRAWING FILE: 3740



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FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY COMPOSITE UTILITY PLAN - WEST

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION
OREGON
ALLAN H. HUNT

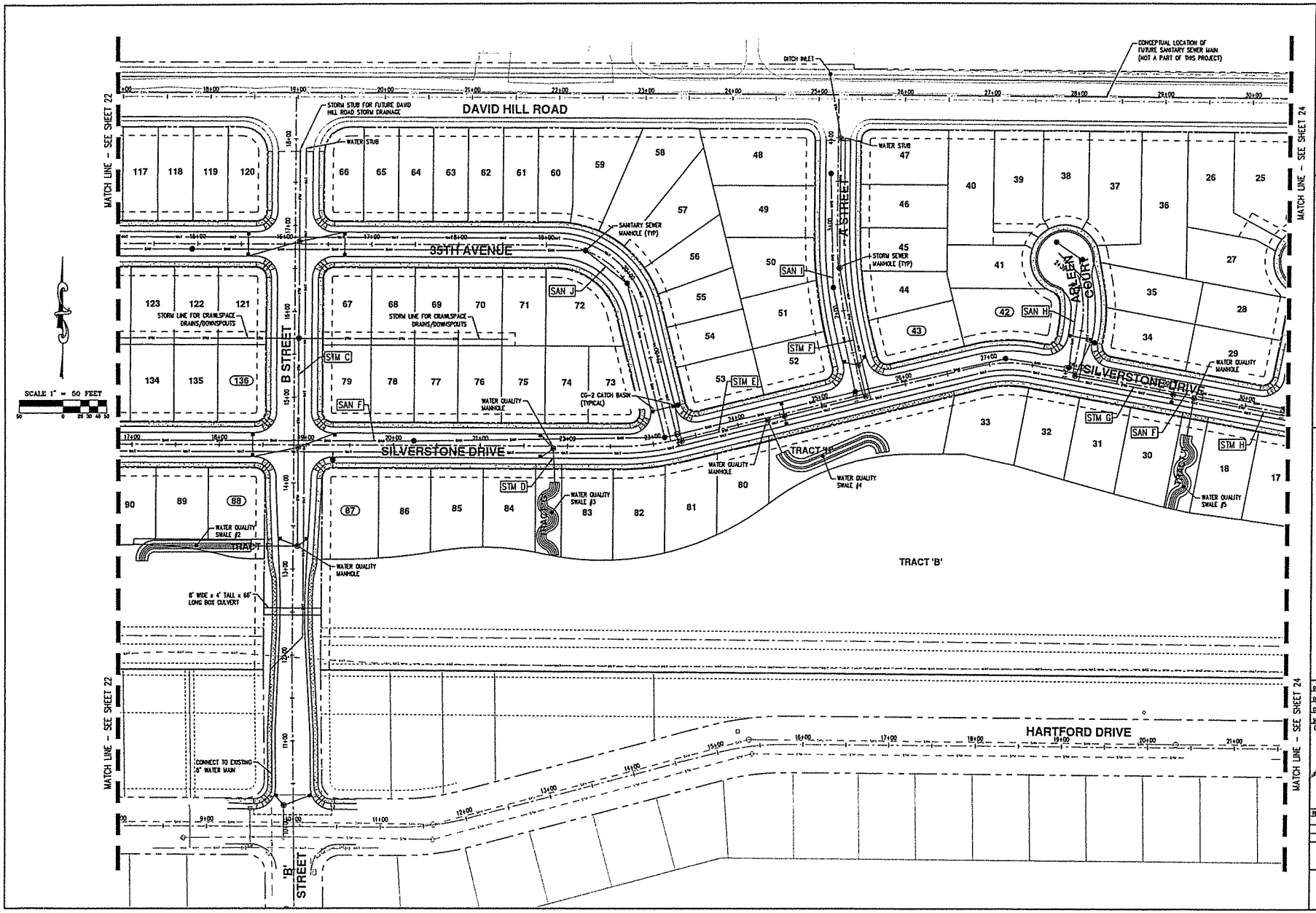
RENEWAL DATE: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
22

AKS DRAWING FILE: 3740-UTILITY.DWG | LAYOUT: 22



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FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY COMPOSITE UTILITY PLAN - MIDDLE

DESIGNED BY:	MTS
DRAWN BY:	MTS
CHECKED BY:	AHH
SCALE:	AS NOTED
DATE: 05/27/2014	

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 14, 1992
ANTHONY H. HURST
RENEWAL DATE: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
23

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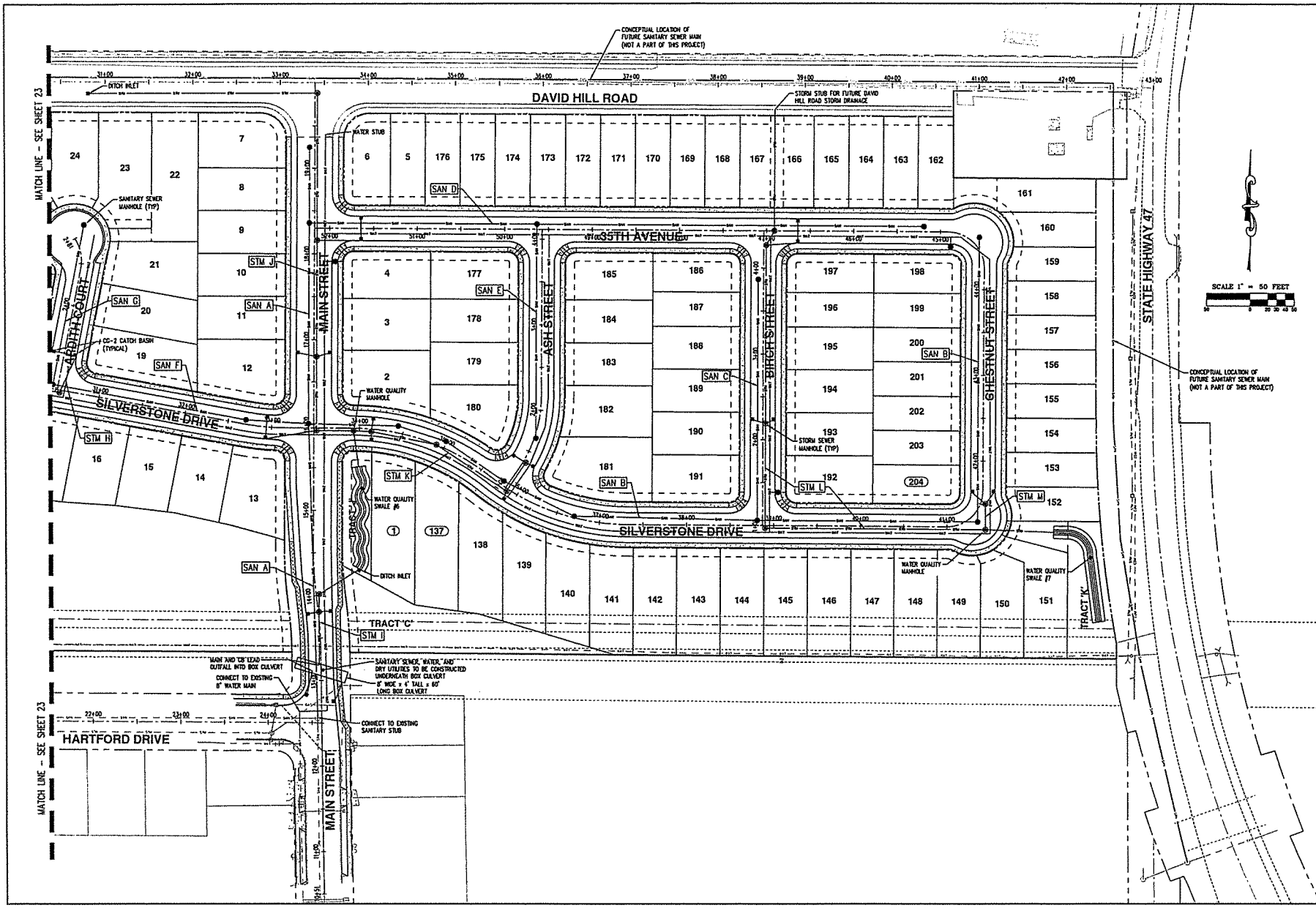

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FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 3D
TAX LOT 1200

PRELIMINARY COMPOSITE UTILITY PLAN - EAST

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL ENGINEER
OREGON
ALEXANDER H. HARTT

RENEWAL DATE: 6/30/15

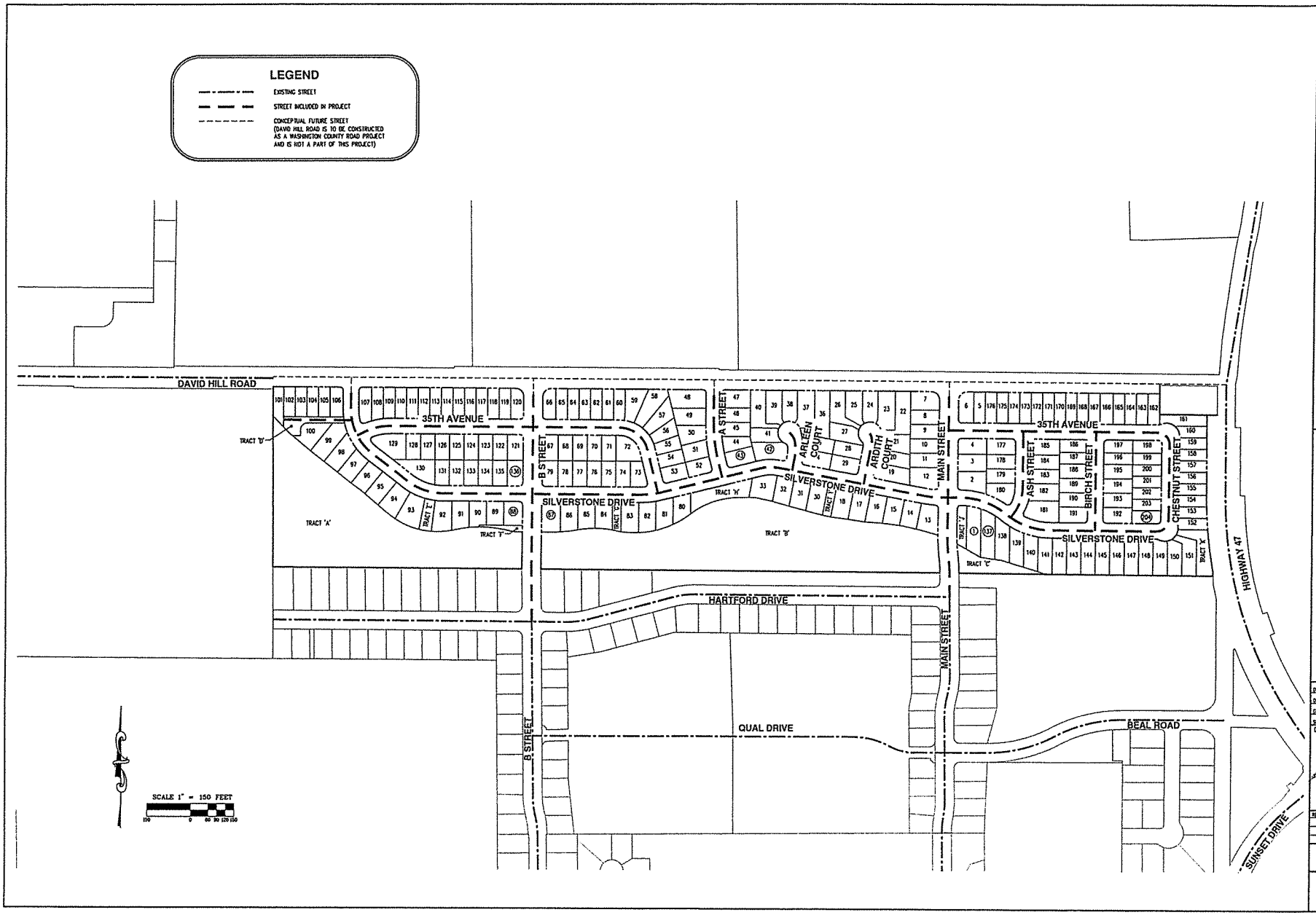
REVISIONS

JOB NUMBER
3740

SHEET
24

AKS DRAWING FILE: 3740

VAULT:DWG | LAYOUT: 24



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FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

CONCEPTUAL FUTURE STREET CONNECTIVITY PLAN

DESIGNED BY: MTS
DRAWN BY: MTS
CHECKED BY: AHH
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL ENGINEER
OREGON
ALEXANDER H. HURLEY
RENEWAL DATE: 6/30/15

REVISIONS

JOB NUMBER
3740

SHEET
25

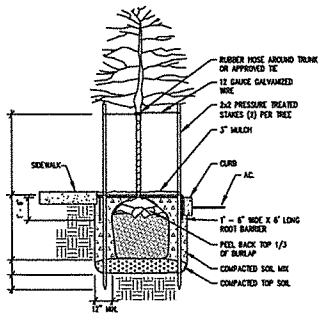
AKDWG | LAYOUT: 25

AKS DRAWING FILE: 3740

PLANT LEGEND

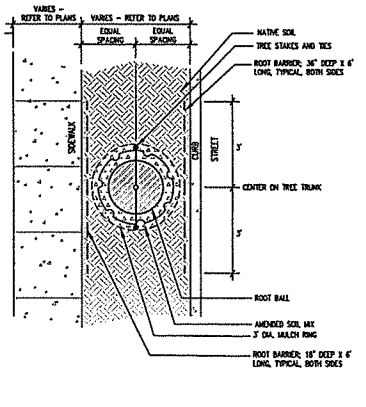
SYMBOL	QTY'S.	BOTANICAL NAME	COMMON NAME	CONDITION	SIZE	SPACING
+	197	ACER RUBRUM 'AUTUMN BLAZE'	AUTUMN BLAZE RED MAPLE	B&B	2" CAL.	AS SHOWN
o	48	ACER RUBRUM 'BOWHALL'	BOWHALL RED MAPLE	B&B	2" CAL.	AS SHOWN
•	57	ACER PLATANOIDES 'COLUMNARE'	COLUMNAR NORWAY MAPLE	B&B	2" CAL.	AS SHOWN
⊗	45	CERCIS CANADENSIS	EASTERN REDBUD	B&B	2" CAL.	AS SHOWN
▼	12	BETULA JACQUEMONTIE	JACQUEMONTIE BIRCH	B&B	2" CAL.	AS SHOWN

NOTES:
1. PLANTS SHOWN ARE PRELIMINARY AND MAY BE SUBSTITUTED OR REVISED BY THE LANDSCAPE ARCHITECT PRIOR TO FINAL SUBMITTAL DUE TO DRIVEWAY DROP LOCATIONS, UTILITIES, LIGHT POLES, FIRE HYDRANTS, AVAILABILITY, ETC. PLANT QUANTITIES, SPECIES, SPACING, ETC. ARE SUBJECT TO CHANGE OR SUBSTITUTION BY THE LANDSCAPE ARCHITECT WITHIN THE STANDARDS ADOPTED BY THE CITY OF FOREST GROVE.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PLANT QUANTITIES. IF DISCREPANCIES OCCUR, DESIGN INTENT PREVAILS OVER QUANTITIES LISTED.
3. ALL PLANTS AND PLANTINGS SHALL CONFORM TO THE CITY OF FOREST GROVE DESIGN STANDARDS AND TO AMERICAN NURSERY STANDARDS ASN 1260.1. PLANT IN ACCORDANCE WITH STANDARDS ADOPTED BY THE OREGON LANDSCAPE CONTRACTOR'S BOARD (OLCB).
4. TREES TO BE PLANTED SHALL MEET THE REQUIREMENTS OF THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS FOR NURSERY STOCK (ANSI Z60.2) FOR GRADE NO. 1 OR BETTER. DOUBLE STAKE AND CENTER ALL STREET TREES IN PLANTING STRIP. STAKE TREES PARALLEL TO SIDEWALK. ALL STREET TREES SHALL HAVE 18" DEEP BY 6' LONG ROOT BARRIERS ADJACENT TO SIDEWALK AND CURB. CENTER ROOT BARRIERS ON TREE TRUNK. REFER TO DETAILS 1 AND 2, THIS SHEET.
5. STREET TREES AND GROUNDCOVER PLANTINGS SHALL BE WATERED FOR A MINIMUM OF (2) YEARS OR UNTIL ESTABLISHED.
6. MULCH: PROVIDE 3" DIAMETER 3" DEEP LAYER OF BARK MULCH AROUND ALL STREET TREES. MULCH TO BE WELL-AGED MEDIUM GRIND DARK HEMLOCK OR FIR MULCH OR APPROVED EQUAL.
7. TREES AND LAWN IN FRONT OF INDIVIDUAL LOTS TO BE INSTALLED AND MAINTAINED BY HOME OWNER AT TIME OF HOME CONSTRUCTION.

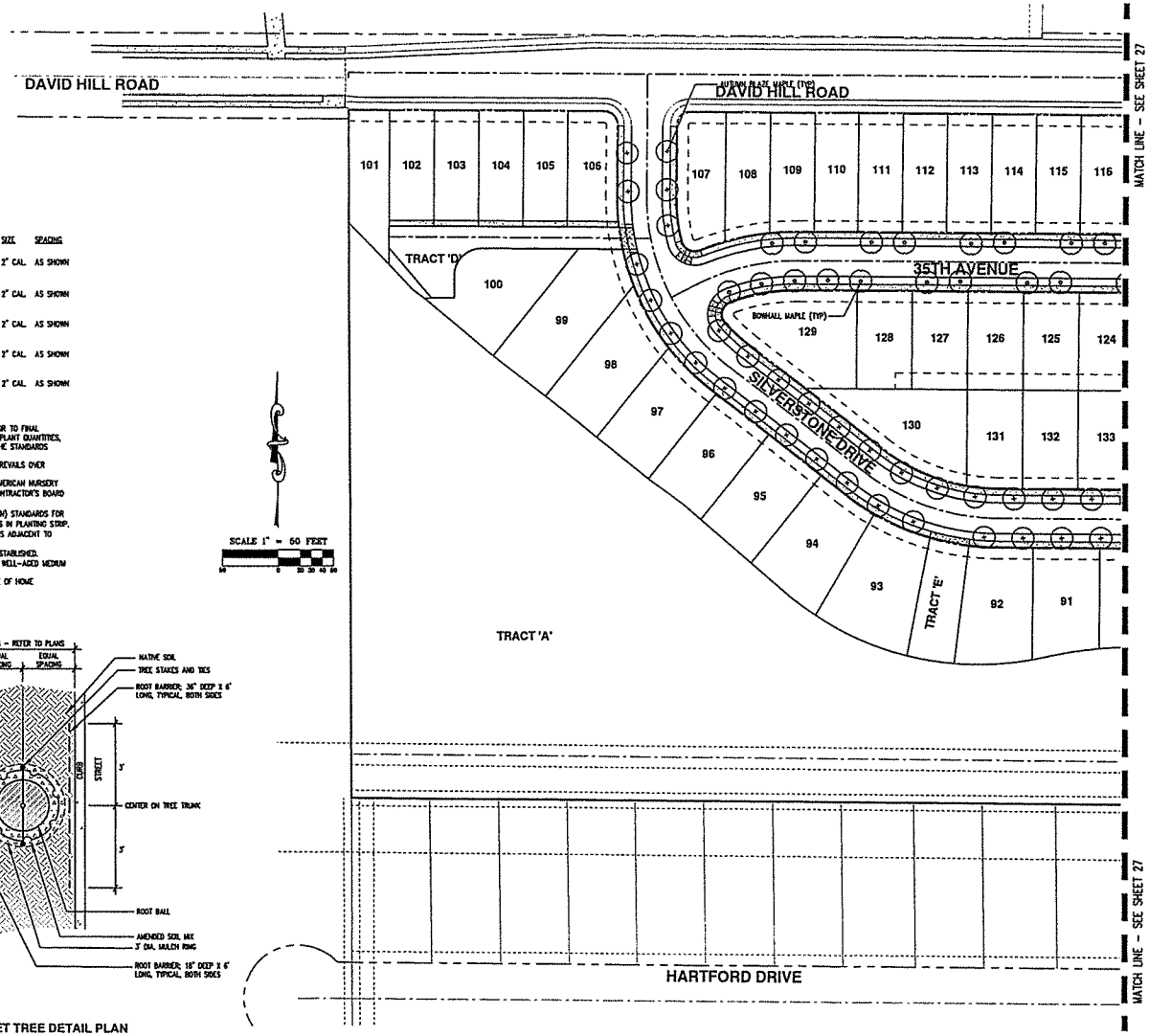


NOTES:
1. DRIVE STAKES OUTSIDE OF ROOTBALL PARALLEL TO STREET AND SIDEWALK. SINGLE STAKE TREES LESS THAN 6' TALL.
2. SET TREE 2" ABOVE FINISH GRADE TO ALLOW FOR SETTLING OF SOIL.
3. PROVIDE A 6' LONG ROOT BARRIER NEXT TO SIDEWALK AND CURB. CENTER BARRIER ON TREE TRUNK.
4. SOIL MIX FOR TREE PLANTING TO BE 1/3 ORGANIC MATERIALS, 1/3 TOPSOIL, AND 1/3 SANDY LOAM.

1/26 TYPICAL STREET TREE PLANTING DETAIL
NTS



2/26 TYPICAL STREET TREE DETAIL PLAN
NTS



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SILVERSTONE SUBDIVISION
FOREST GROVE OREGON
WASHINGTON COUNTY, T1S, R4W W.M. § 30
TAX LOT: 1200

PRELIMINARY STREET TREE PLAN - WEST

DESIGNED BY:	KAH
DRAWN BY:	TEB
CHECKED BY:	KAH
SCALE:	AS NOTED
DATE: 05/27/2014	

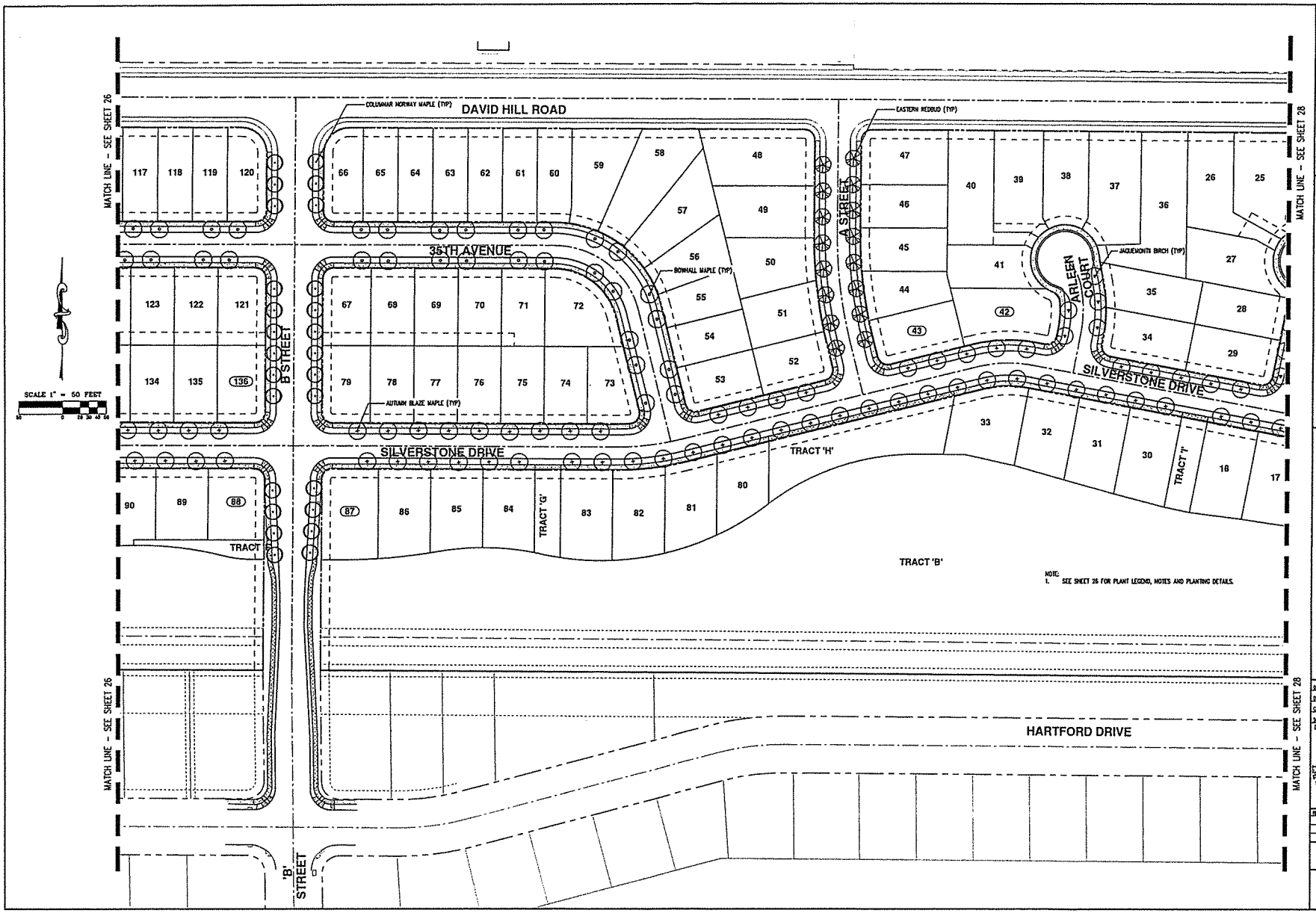
REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT
PRELIMINARY NOT FOR CONSTRUCTION
OREGON
KAREN A. HOFFIE
2009/12

REVISIONS

JOB NUMBER
3740

SHEET
26

AKS DRAWING FILE: 3740-PDS-STREET TREESLONG | LAYOUT: 26



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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY 1S4 1AP 1N 3 33

TAX LOT 1200

PRELIMINARY STREET TREE PLAN - MIDDLE

DESIGNED BY: KAH
DRAWN BY: TCB
CHECKED BY: KAH
SCALE: AS NOTED
DATE: 05/27/2014

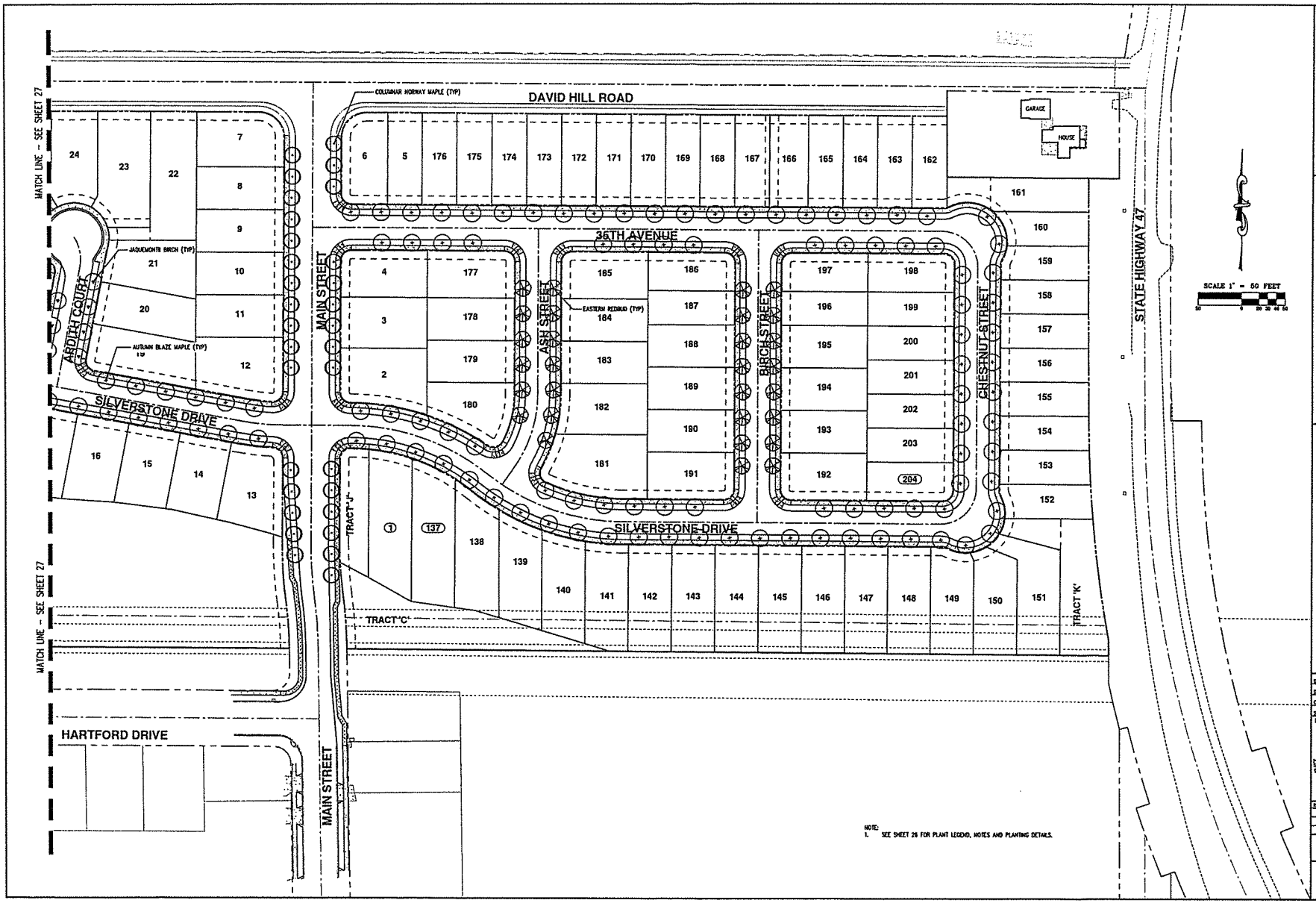
REGISTERED LANDSCAPE ARCHITECT
OREGON
KRISTIN A. HOLLAND
PRELIMINARY NOT FOR CONSTRUCTION
5/27/14

REVISIONS

JOB NUMBER
3740

SHEET
27

AKS DRAWING FILE: 3740-PSA-STREET TREE.DWG | LAYOUT: 27



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SILVERSTONE SUBDIVISION

FOREST GROVE OREGON

WASHINGTON COUNTY TAX MAP 1N 3 30
TAX LOT 1200

PRELIMINARY STREET TREE PLAN - EAST

DESIGNED BY: KAH
DRAWN BY: TEB
CHECKED BY: KAH
SCALE: AS NOTED
DATE: 05/27/2014

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT
KEVIN A. HUNSAKER
OREGON
05/30/13

REVISIONS

JOB NUMBER
3740

SHEET
28

AKS DRAWING FILE: 3740-PSS-STREET TREE.DWG | LAYOUT: 28

SILVERSTONE
TRAFFIC IMPACT STUDY

FOREST GROVE, OREGON

DATE:
February 20, 2014

PREPARED FOR:
Venture Properties, Inc.

PREPARED BY:
Michael Ard, PE

LANCASTER
ENGINEERING

321 SW 4th Ave., Suite 400 | Portland, OR 97204 | 503.248.0313 | lancasterengineering.com

TABLE OF CONTENTS

EXECUTIVE SUMMARY

1. A 204-lot residential development is proposed for a property located west of Nehalem Highway 47 north of NW Sunset Drive and south of the future David Hill Road extension alignment. The site will take access to the transportation system using street connections to the existing residential neighborhoods to the south via Main Street and B Street.

2. The proposed development is projected to result in 153 new trips during the morning peak hour, with 38 entering and 115 exiting the site. During the evening peak hour 204 new trips are projected, with 129 entering and 75 exiting the site. A weekday total of 1,942 site trips are projected, with half entering and half exiting the site.

3. Intersection sight distance was examined at the location of the future intersection of Highway 47 at David Hill Road in order to determine whether safe access can be taken at the proposed alignment. Based on the analysis, adequate sight distance is available in each direction from the proposed intersection location.

4. The existing pedestrian and bicycle facilities in the site vicinity are adequate for safe and efficient travel via these modes.

5. Based on the most recent three years of crash data, no significant safety hazards were identified in the site vicinity.

6. The study area intersections are projected to operate acceptably either with or without the addition of site trips from the proposed development under all analysis scenarios. No operational mitigations are necessary or recommended.

7. Traffic signal warrants were examined for the future intersection of Nehalem Highway 47 at David Hill Road. Based on the analysis, traffic signal warrants are not projected to be met under year 2022 traffic conditions even with completion of the proposed Silverstone development. Accordingly, installation of a new traffic signal is not recommended.

8. Left and right turn lane warrants were examined for the Highway 47 approaches to the new David Hill Road extension. Based on the analysis, left and right turn lanes will be warranted for the new roadway either with or without the addition of site trips from the proposed development. Accordingly, it is recommended that these turn lanes be included in the design for the David Hill Road extension. No changes to the intersection design are recommended in association with the proposed development.

1e

PROJECT DESCRIPTION

INTRODUCTION

A 204-lot residential development is proposed for a property located west of Nehalem Highway 47 north of NW Sunset Drive and south of the future David Hill Road extension alignment. The site will take access to the transportation system using street connections to the existing residential neighborhoods to the south via Main Street and B Street. The completed development will utilize the extension of David Hill Road between Forest Grove High School and Highway 47, which will provide connections to Brooke Street and NW Thatcher Road to the west and Highway 47 to the east.

This report addresses the impacts of the proposed development on traffic and transportation conditions on the nearby street system. The analysis includes capacity and level of service calculations for the affected intersections, as well as an analysis of crash history and safety of the study intersections, to identify any mitigation that might be necessary to safely support the development.

Detailed information on traffic counts, trip generation calculations, and level of service calculations is provided in the appendix to this report.

LOCATION DESCRIPTION

The subject property is located on the west side of Highway 47 (Nehalem Highway) north of NW Sunset Drive/Beal Road. The northern edge of the property is coincident with the future alignment of the NW David Hill Road extension, which is fully funded and planned for completion in 2018. The southern edge of the property extends to meet the existing residential development along the north side of Hartford Drive, although intervening wetlands limit development on the south side of the property. The western limits of the site extend to the sports fields at Forest Grove High School.

The proposed development consists of 204 single-family homes, which will take access via extensions of Main Street, B Street and NW David Hill Road. A local street network is also included in the proposed development in order to provide access to the individual lots, while minimizing access to the higher-classification streets.

It is anticipated that the development will be constructed with initial access via the existing residential street network immediately to the south. Construction of the NW David Hill Road extension is anticipated in 2018, which will provide improved connectivity to the northwest and northeast from the subject property.

Based on the trip generation and distribution of the proposed development, the intersections of Highway 47 at NW David Hill Road, Highway 47 at NW Sunset Drive/Beal Road, Bonnie Lane at B Street, Bonnie Lane at Main Street and Bonnie Lane at NW Sunset Drive were identified for detailed operational and safety analyses.

Highway 47 (Nehalem Highway) operates under the jurisdiction of the Oregon Department of Transportation. It is classified as a Statewide Highway and a Truck Route, with a posted speed limit of 50 mph in the vicinity of the future David Hill Road alignment and the existing Sunset Drive/Beal Road intersection. It generally has a two-lane cross-section in the site vicinity, although it widens in the vicinity of major intersections to provide turn lanes.

The existing segment of NW David Hill Road has one through lane in each direction with left-turn lanes provided at intersections. It has a posted speed limit of 35 mph in the site vicinity. A landscaped median is in place along road segments away from intersections, and bike lanes, curbs, sidewalks and planter strips are in place on both sides of the roadway.

NW Sunset Drive is classified by the City of Forest Grove as a Collector street. It has a three-lane cross-section, with one through lane in each direction and a center two-way left-turn lane. Bike lanes, curbs and sidewalks are in place along both sides of the roadway.

Bonnie Lane has a two-lane cross-section with no centerline striping and a posted statutory residential speed limit of 25 mph. It has on-street parking, curbs and sidewalks on both sides of the roadway between Main Street and NW Sunset Drive. West of Main Street on-street parking is prohibited in order to provide continuous bike lanes and sidewalks on both sides of the roadway.

B Street also has a two-lane cross-section with no centerline striping and a posted statutory residential speed limit of 25 mph. Curbs and sidewalks are in place along both sides of the roadway. On-street parking is also permitted along both sides of the roadway.

Main Street also has a two-lane cross-section with no centerline striping and a statutory speed limit of 25 mph. Curbs and sidewalks are in place along the frontages of developed properties; however the west side of the roadway lacks sidewalks immediately north of Bonnie Lane along the frontage of an undeveloped tract. On-street parking is permitted along both sides of the roadway.

The intersection of Highway 47 at Nehalem Highway will be constructed upon completion of the David Hill Road extension. The highway currently has a two-lane cross-section in the vicinity of the future intersection, with one through lane in each direction. It has a posted speed limit of 35 mph.

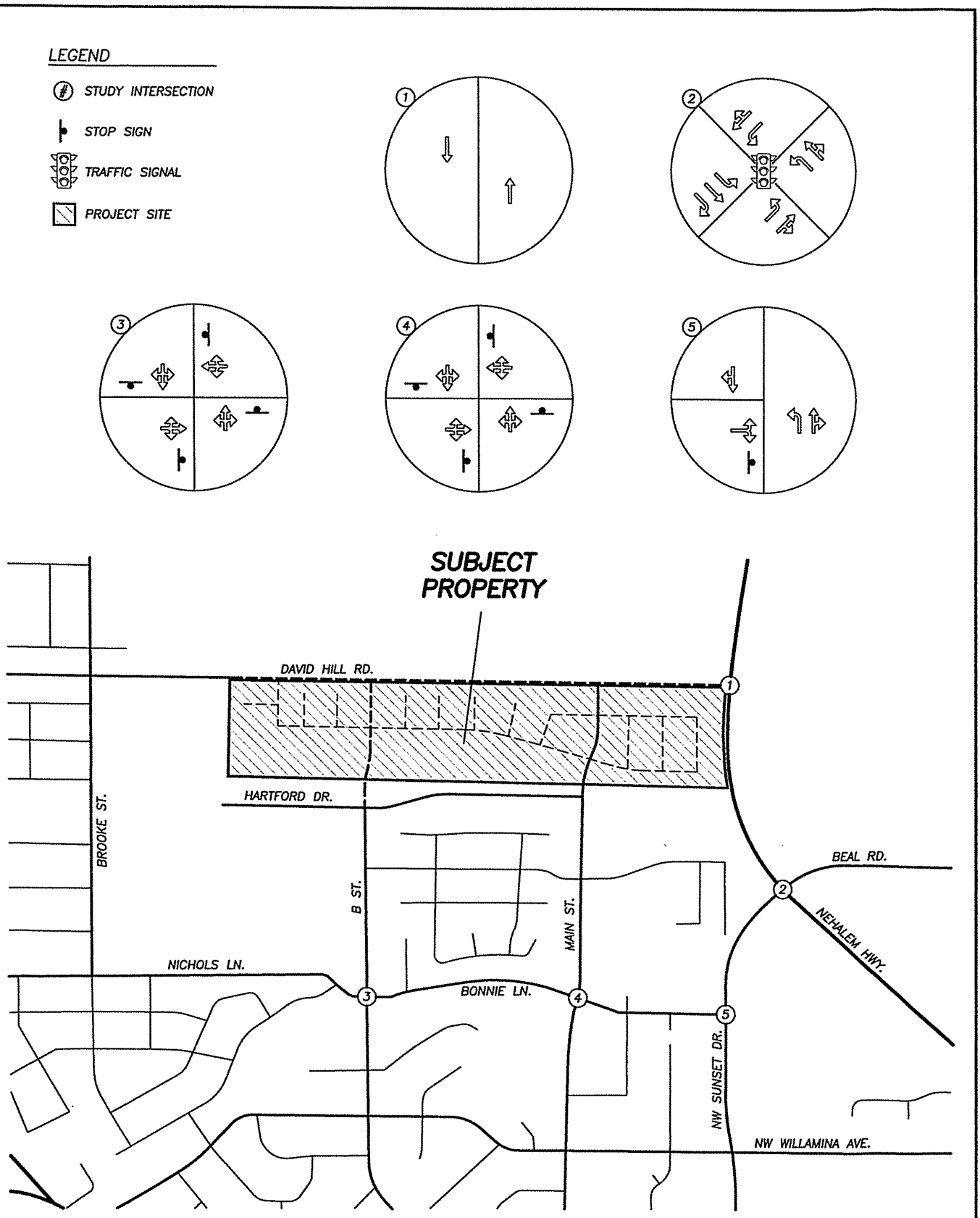
The intersection of Highway 47 at NW Sunset Drive is controlled by a traffic signal. The northwest-bound approach has a left-turn lane with protected signal phasing and a shared through/right lane. The southeast-bound approach has a protected left-turn lane, a dedicated through lane and a yield-controlled channelized right-turn lane. The northeast-bound and southwest-bound approaches each have a left-turn lane and a shared through/right lane and operate with permitted left-turn phasing. Marked and signal controlled crosswalks are in place crossing all four legs of the intersection.

The intersections of Bonnie Lane at B Street and Main Street operate under four-way stop control. Each approach has a single, shared lane for all turning movements. Marked crosswalks are in place on all four approaches at the intersection of Bonnie Lane at B Street and crossing the south and east legs at the intersection of Bonnie Lane and Main Street.

The intersection of NW Sunset Drive at Bonnie Lane is controlled by a stop sign on the eastbound Bonnie Lane approach. Through traffic traveling along NW Sunset Drive does not stop. The north-

bound approach accommodates left-turn movements within the two-way left-turn lane and has a dedicated through lane. The southbound approach has a shared through/right lane. The westbound approach has a single, shared left/right turn lane.

Figure 1 on page 7 shows the project study area and the location of the site within this area, as well as the lane configurations of the study intersections.



VICINITY MAP

no scale

FIGURE 1

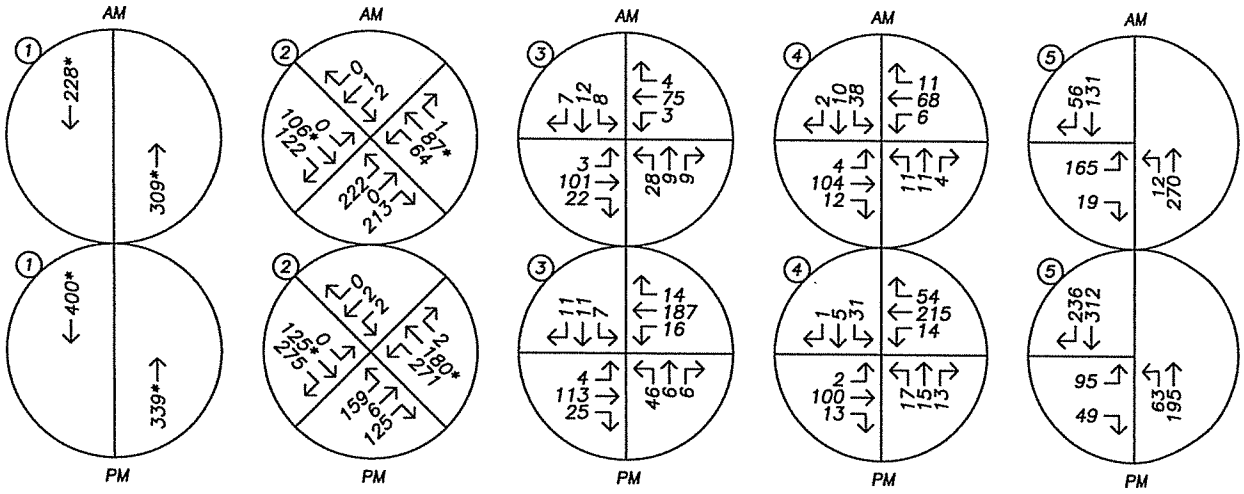
EXISTING TRAFFIC CONDITIONS

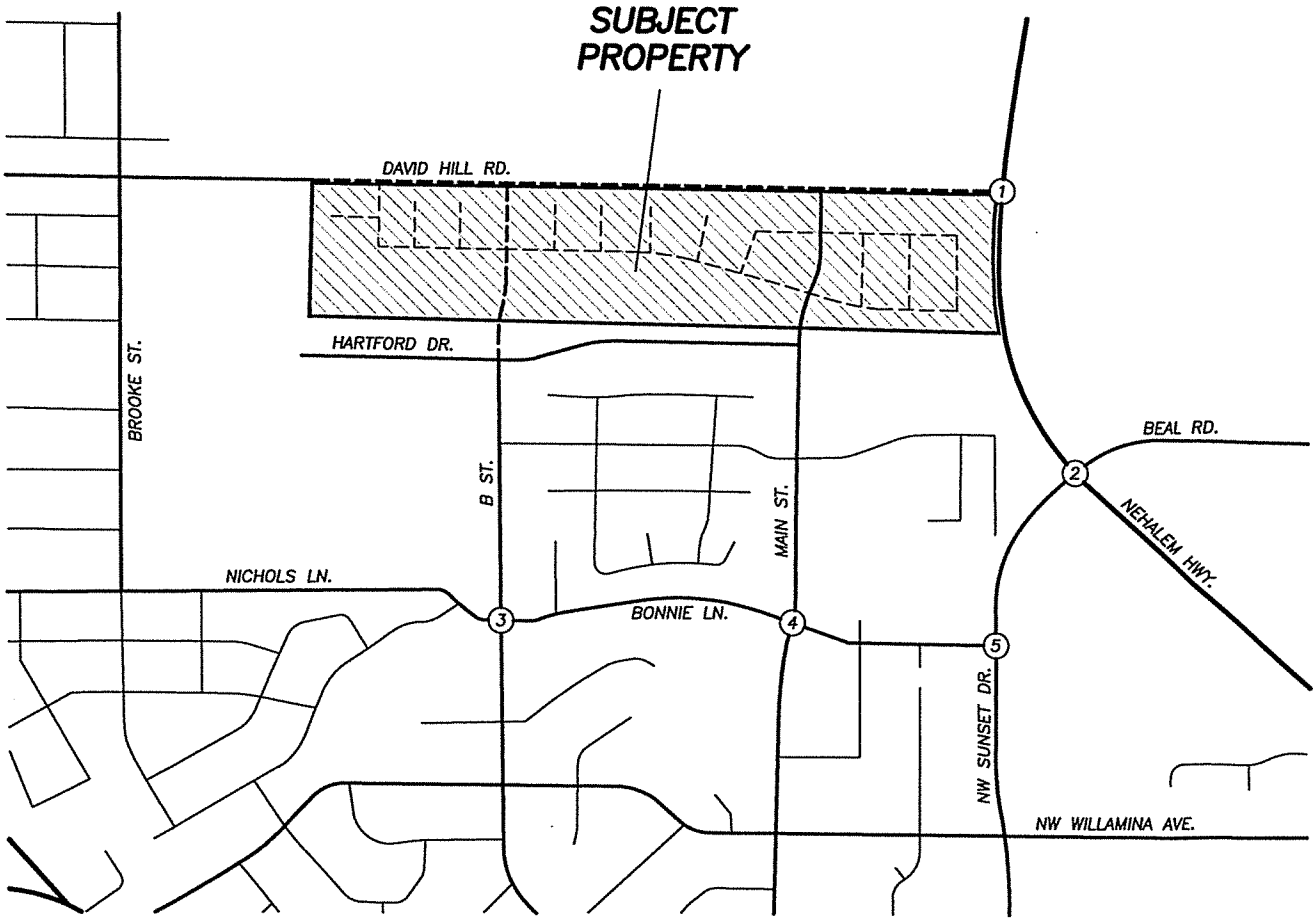
Turning movement counts were collected during October, 2013 at the study area intersections from 7:00 to 9:00 AM and from 4:00 to 6:00 PM. For the intersections of Bonnie Lane at B Street and Bonnie Lane at Main Street the morning peak hours occurred from 8:00 to 9:00 AM, likely due to the impact of site trips from the nearby Forest Grove High School campus. For the intersections of Sunset Drive at Bonnie Lane and Sunset Drive at Highway 47 the morning peak hours occurred from 7:00 to 8:00 AM. For all intersections the evening peak hour occurred from about 4:55 to 5:55 PM. Detailed turning movement count data is provided in the attached technical appendix.

For traffic traveling along Nehalem Highway 47, the counts obtained in October were adjusted to represent 30th highest hour volumes. A seasonal adjustment factor was calculated using the methodology outlined in ODOT's *Analysis Procedures Manual* (APM). There was no automatic traffic recorder (ATR) in the project area; however ATR station 07-002 was identified as having traffic characteristics similar to those on Highway 47 in the site vicinity. Based on the historical data for ATR 07-002, a seasonal adjustment factor of 8.7 percent was calculated. Based on data from ODOT's Seasonal Trend Table for commuter routes, a seasonal adjustment factor of 3.1 percent was calculated. In order to ensure a conservative analysis, the larger of these calculated values (8.7 percent) was used to determine the 30th highest hour volumes on the highway.

Figure 2 on page 9 shows the adjusted year 2013 traffic volumes at the study area intersections.

* SEASONAL ADJUSTMENT FACTOR: 1.087





TRAFFIC VOLUMES
2013 Existing Conditions (Seasonally Adjusted)
AM & PM Peak Hours

no scale

FIGURE 2

TRIP GENERATION & DISTRIBUTION

TRIP GENERATION

To estimate the number of trips that will be generated by the restaurant, trip rates from *TRIP GENERATION,* Eighth Edition, published by the Institute of Transportation Engineers (ITE), were used. The trip rates used were for land use code #210, *Single Family Detached Housing* and are based on the number of dwelling units. The trip generation was calculated for 204 dwelling units.

Based on the trip generation calculations, the proposed development is projected to result in 150 trips during the morning peak hour, with 38 entering and 115 exiting the site. During the evening peak hour 204 site trips are projected, with 129 entering and 75 exiting the site. A weekday total of 1,942 site trips is projected, with half entering and half exiting the site.

A summary of the trips generated by the proposed development is shown in the table below. Detailed trip generation calculations are included in the attached technical appendix.

TRIP GENERATION SUMMARY

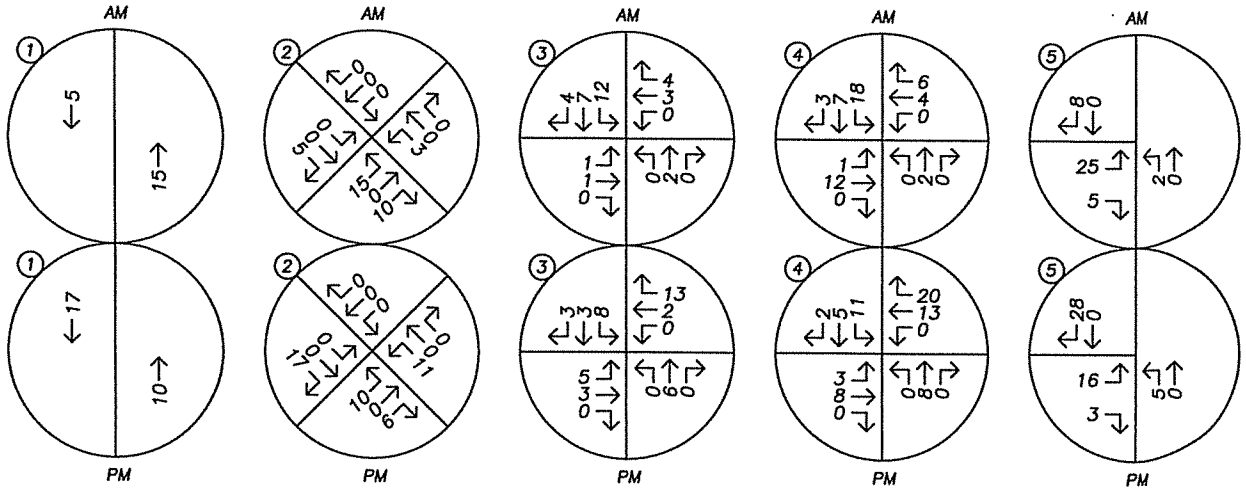
	AM Peak Hour			PM Peak Hour		
	Entering	Exiting	Total	Entering	Exiting	Total
204 Single-Family Homes	38	115	153	129	75	204

TRIP DISTRIBUTION

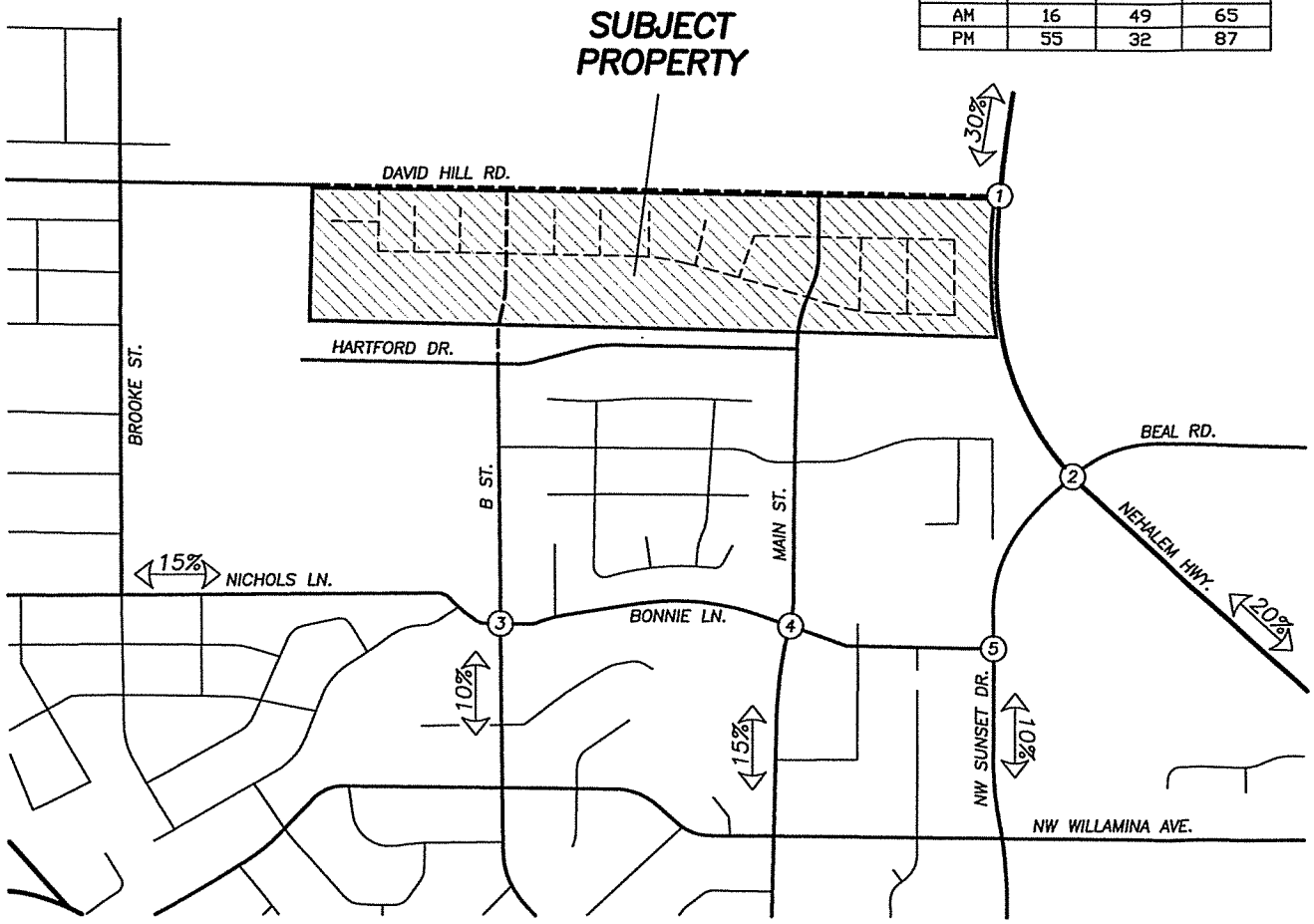
The proposed development includes the extension of David Hill Road to Highway 47. Some trips associated with existing residential development in the site vicinity are expected to divert to the new David Hill Road segment upon completion of the roadway. However, since this improvement is not expected to be completed at the start of the proposed development, background traffic volumes were determined for scenarios both with and without the completion of the David Hill Road extension.

For the scenario without completion of the David Hill Road extension, the distribution and assignment of site trips from the proposed development was estimated based on the existing travel patterns associated with residential uses in the site vicinity. These volumes were calculated for year 2018 traffic conditions, since after 2018 the new roadway will be in place. For the scenario including completion of David Hill Road, existing travel patterns were used in conjunction with planning model data from the February 13, 2014 David Hill Road Extension analysis prepared by CH2M Hill.

Figure 3 on page 11 shows the trip distribution and assignment of site trips from phases 1 and 2 (87 homes) without completion of David Hill Road. Figure 4 on page 12 shows the distribution and assignment of all site trips (204 homes) with completion of the David Hill Road extension.



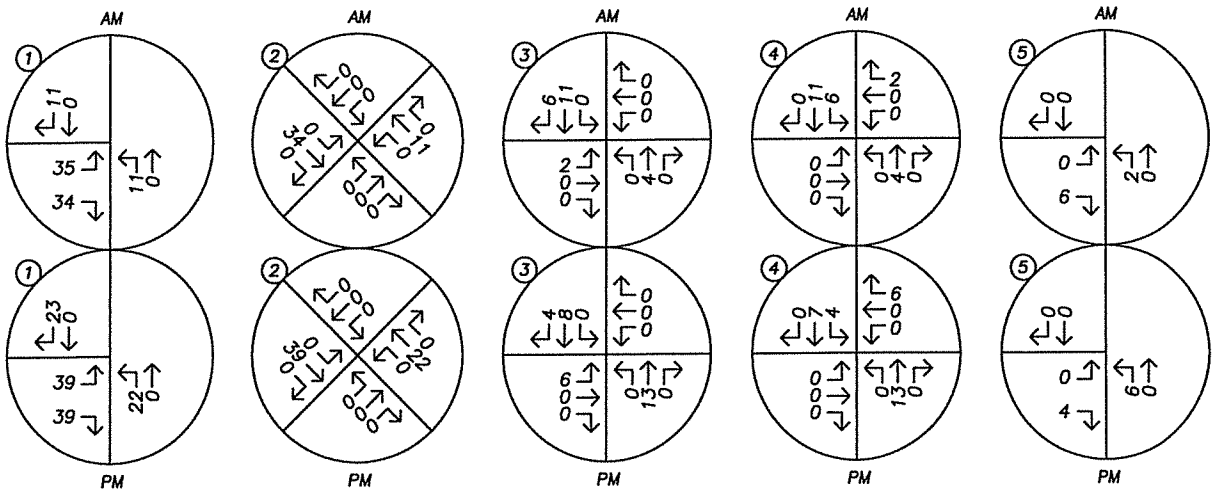
TRIP GENERATION			
	IN	OUT	TOTAL
AM	16	49	65
PM	55	32	87



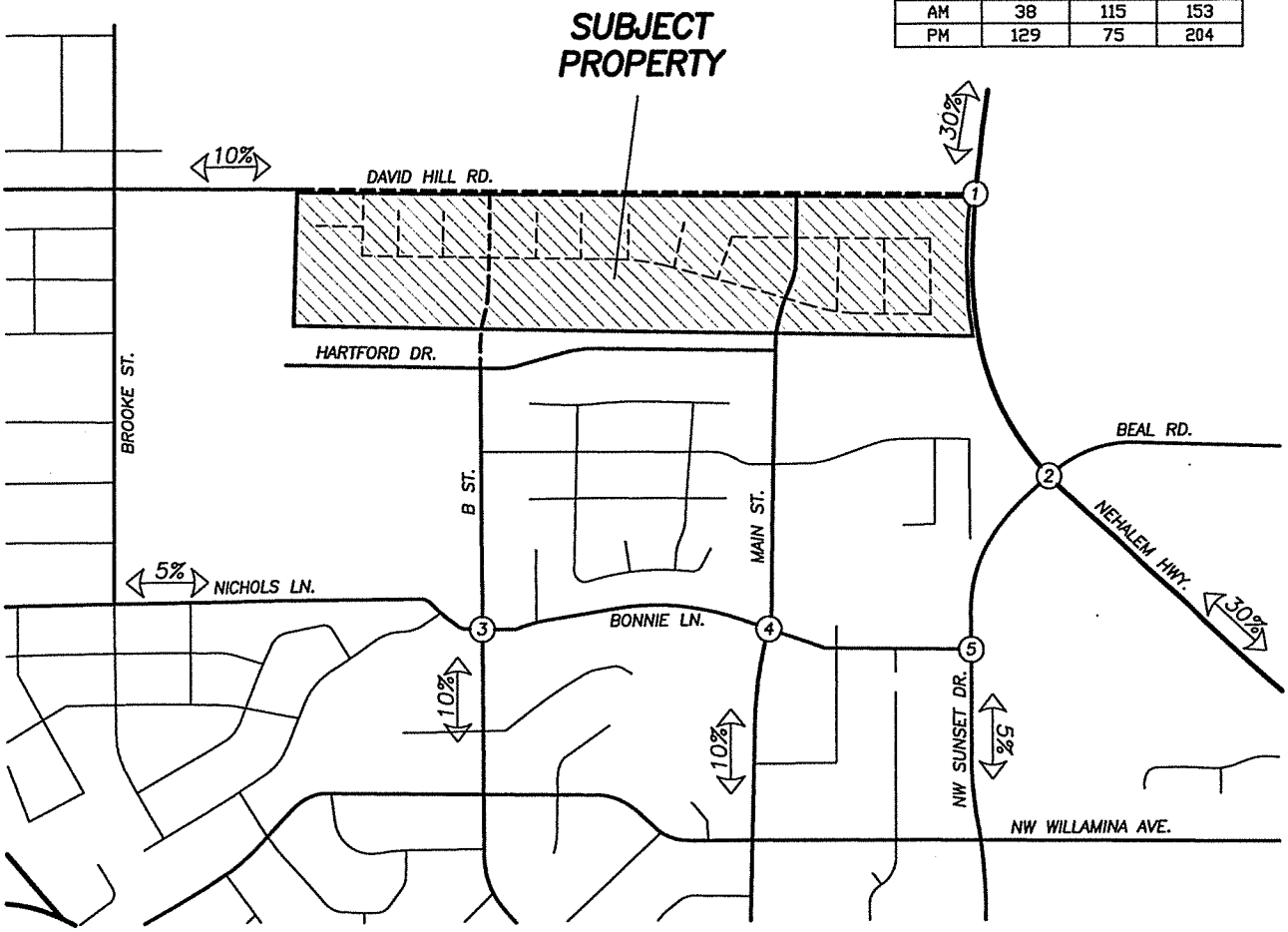
SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Phase 1 & 2 (87 Homes)
AM & PM Peak Hours

no scale

FIGURE 3



TRIP GENERATION			
	IN	OUT	TOTAL
AM	38	115	153
PM	129	75	204



SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Full Development (204 Homes)
AM & PM Peak Hours

no scale

FIGURE 4

SAFETY ANALYSIS

SIGHT DISTANCE

Sight distance was examined at the future alignment of David Hill Road on Highway 47 in order to determine whether improvements will be required in order to obtain adequate sight distance at the location of the proposed intersection. Required intersection sight distance was determined according to the methodology described in *A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS*, published in 2010 by the American Association of State Highway and Transportation Officials (AASHTO). The measurements are based on a driver's eye height of 3.5 feet above the roadway and an object height of 3.5 feet, with the driver's eye 15 feet behind the edge of the near side travel lane. Based upon the posted speed of 50 mph on Nehalem Highway 47, the minimum required intersection sight distance was calculated to be 555 feet in each direction.

The intersection sight distance measured in the field was found to be in excess of 600 feet in each direction. Accordingly, the available intersection sight distance is adequate for safe and efficient operation of this future intersection.

PEDESTRIAN AND BICYCLE FACILITIES

Existing bike lanes are in place along both sides of NW David Hill Road, NW Sunset Drive, the portion of Bonnie Lane west of B Street and along Highway 47 south of Sunset Drive. Bicycles can typically safely share the roadway with motorized vehicle traffic on low-speed residential roadways like B Street and Main Street.

For pedestrians, continuous sidewalks exist along both sides of most streets in the site vicinity. Where sidewalks are not continuous (such as along the west side of Main Street immediately north of Bonnie Lane), sidewalks are available on the opposite side of the roadway and pedestrians can safely cross the low-volume, low-speed residential streets.

CRASH DATA ANALYSIS

Using data obtained from ODOT's Crash Analysis and Reporting Unit, a review the most recent available three years of crash history (July, 2010 – June, 2013) at the study intersections was conducted. Crash rates were calculated by first assuming that traffic counted during the PM peak period represents 10% of AADT at the intersection.

The intersections of Highway 47 at Sunset Drive/Beal Road, Bonnie Lane at B Street and Bonnie Lane at Main Street had no reported crashes during the three-year analysis interval.

The intersection of Bonnie Lane at Sunset Drive had three reported crashes during the three-year analysis period. These included two turning-movement collisions and one rear-end collision. The crashes resulted in one possible injury/complaint of pain. No serious injuries or fatalities were re-

ported. The crash rate for this intersection was calculated to be 0.30 crashes per million entering vehicles.

Crash rates greater than 1.0 crashes per million entering vehicles are generally indicative of a need for further investigation and possible mitigation. Since the study intersections have crash rates well below this threshold and there are no apparent safety deficiencies at any of the intersections, no significant hazards were identified and no mitigation is recommended.

Detailed information about crashes and crash reports for the study intersections are included in the appendix to this report.

OPERATIONAL ANALYSIS

BACKGROUND TRAFFIC

A growth factor was applied to the year 2013 traffic volumes observed at the study intersections. For through traffic on Highway 47, a linear growth rate of 0.6 percent per year was calculated using the growth model data from ODOT's *Future Volume Tables.* Since the calculated growth rate was very low, a slightly more conservative one percent per year growth rate was applied to the highway volumes. For all other traffic volumes, a conservative background growth rate of two percent per year was applied to determine the projected background traffic volumes for the analysis years.

Background traffic volumes were calculated for year 2018 traffic conditions without the completion of the David Hill Road extension and for year 2022 traffic condition with the completion of David Hill Road.

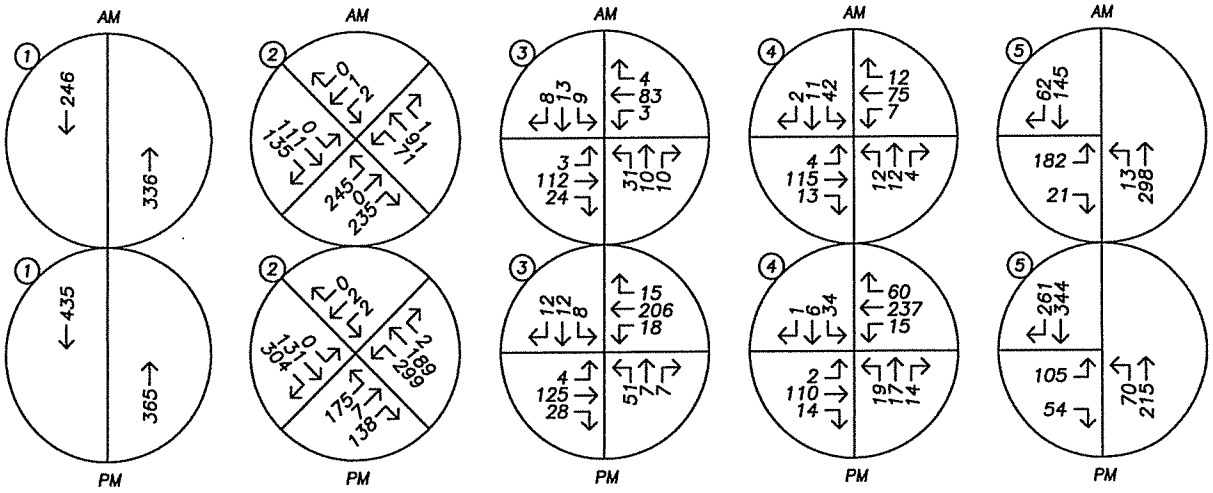
It is anticipated that phases 1 and 2 of the proposed development can be completed and occupied by 2018. Phase 1 consists of 42 homes and phase 2 consists of 45 homes, so a total of 87 homes are expected to be completed by 2018. In order to verify whether the transportation system is capable of safely supporting the traffic volumes associated with this level of development without relying on the David Hill Road extension to serve site traffic, background plus site trips volumes were also calculated for year 2018 traffic condition with the addition of site trips from 87 new single-family homes.

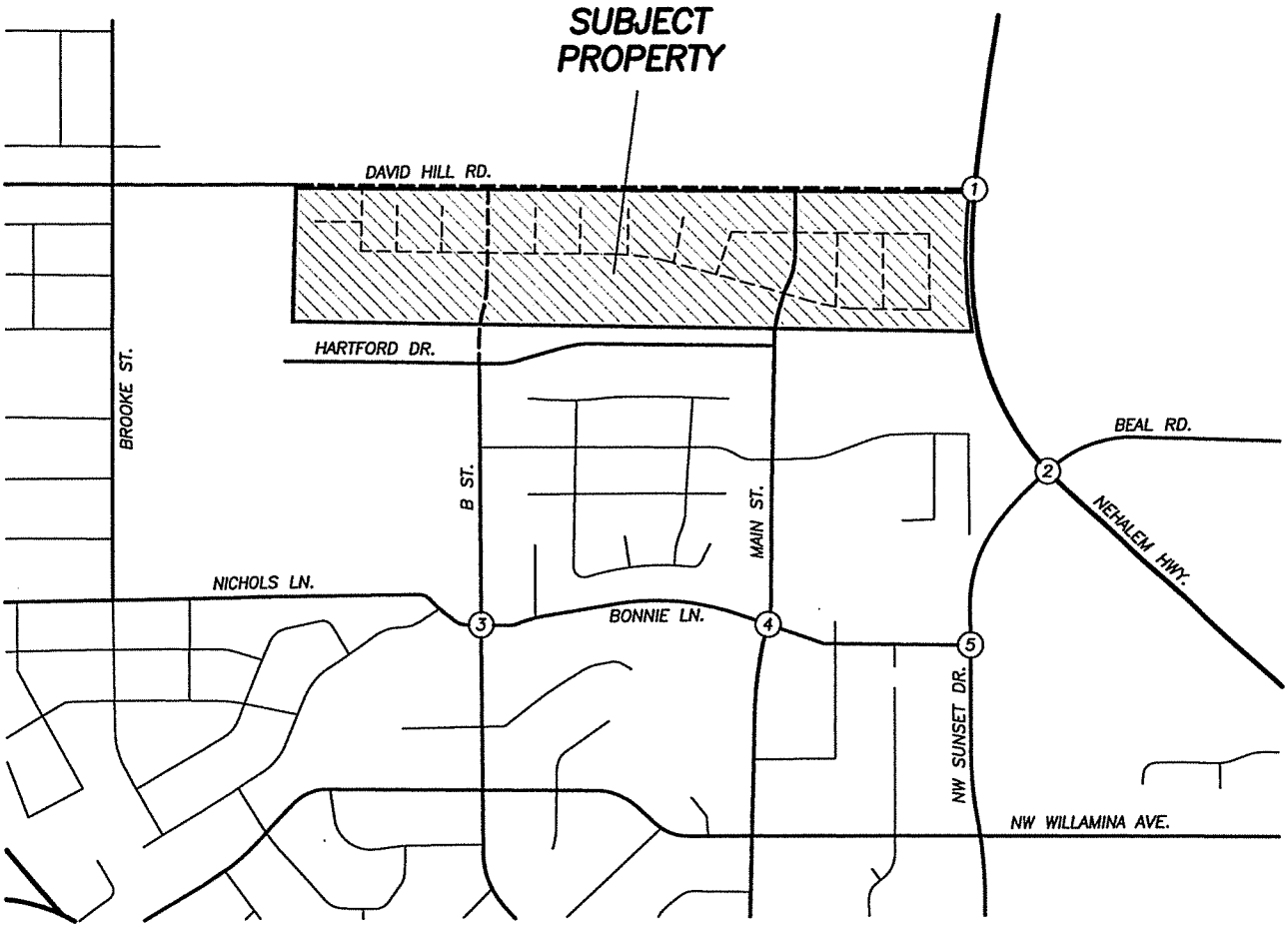
Following the completion of David Hill Road, the full 204-home Silverstone development is projected to be completed and occupied by 2022. Accordingly, background traffic volumes were calculated for year 2022 traffic conditions with the completion of the David Hill Road extension but without the addition of site trips from the proposed development (i.e. the no-build scenario). Background plus site trips volumes were also calculated for year 2022 traffic conditions with the addition of 204 single-family homes within the Silverstone property.

The year 2018 background traffic volumes are shown in Figure 5 on page 16. Year 2018 background plus phase 1 and 2 volumes (87 homes) are shown in Figure 6 on page 17.

The year 2022 background traffic volumes are shown in Figure 7 on page 18. Year 2022 traffic volumes including full development of the Silverstone property are shown in Figure 8 on page 19.

LOCAL JURISDICTION GROWTH RATE: 2% PER YEAR COMPOUNDED
ODOT FACILITY GROWTH RATE: 1% PER YEAR LINEAR

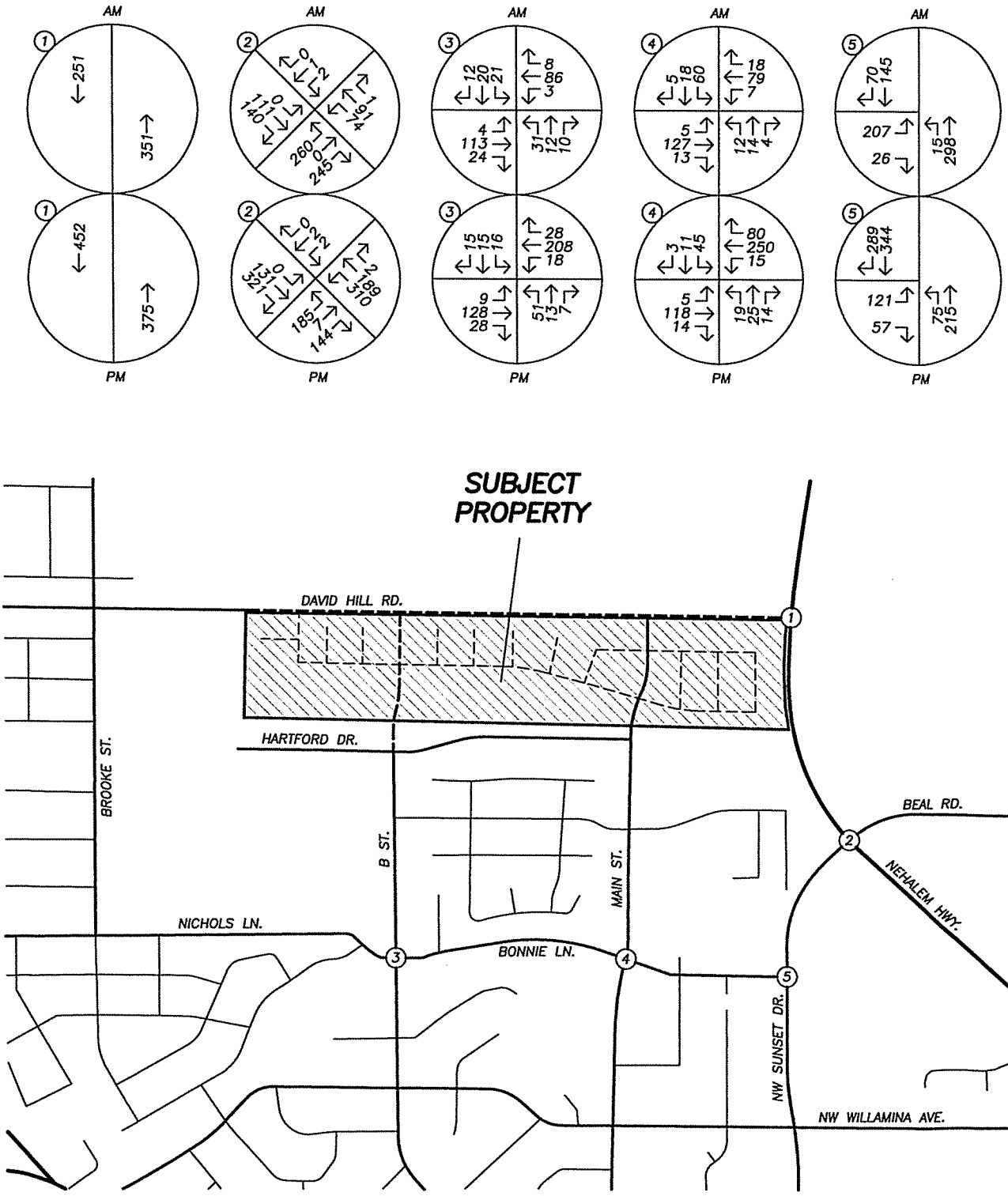




TRAFFIC VOLUMES
Year 2018 Background Conditions w/o David Hill Connection
AM & PM Peak Hours

no scale

FIGURE 5

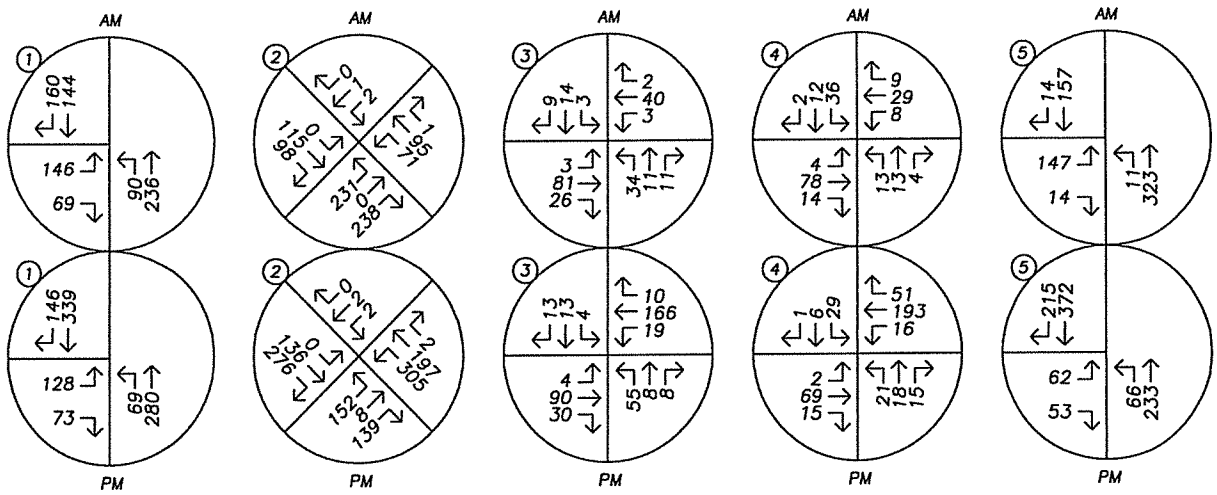


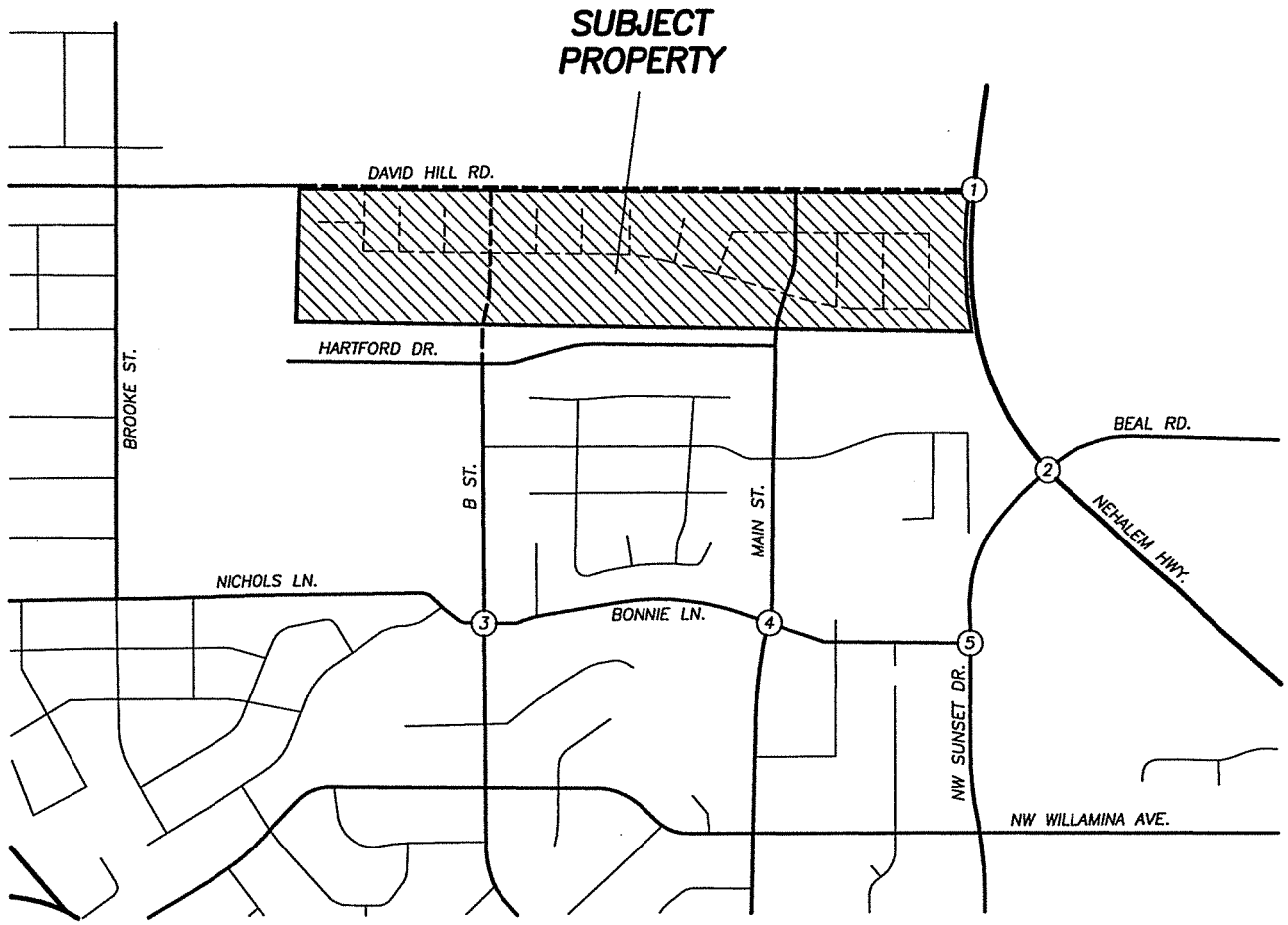
TRAFFIC VOLUMES
Year 2018 Background + 87 Homes w/o David Hill Connection
AM & PM Peak Hours

no scale

FIGURE 6

LOCAL JURISDICTION GROWTH RATE: 2% PER YEAR COMPOUNDED
ODOT FACILITY GROWTH RATE: 1% PER YEAR LINEAR

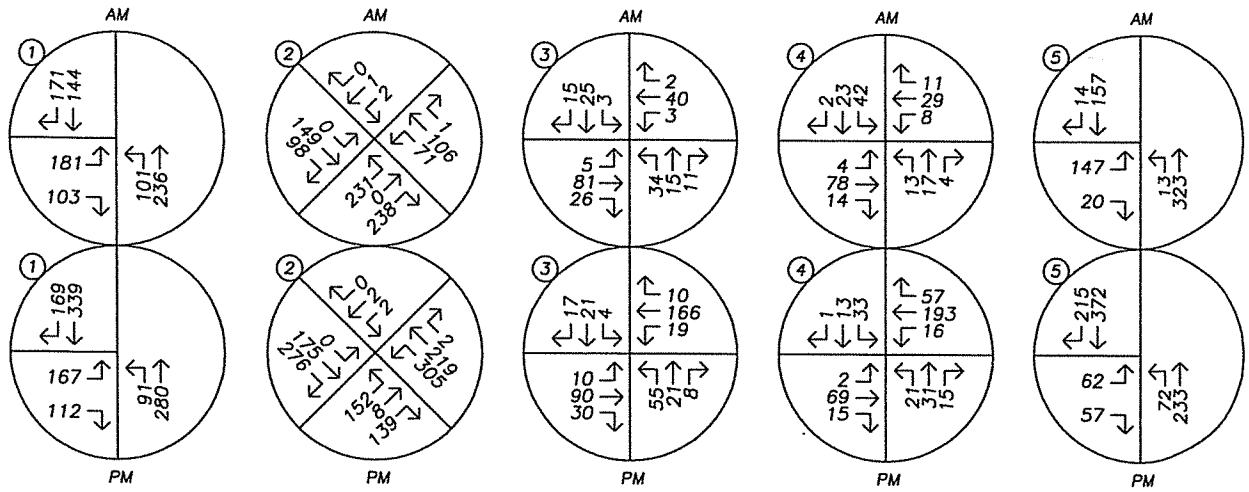


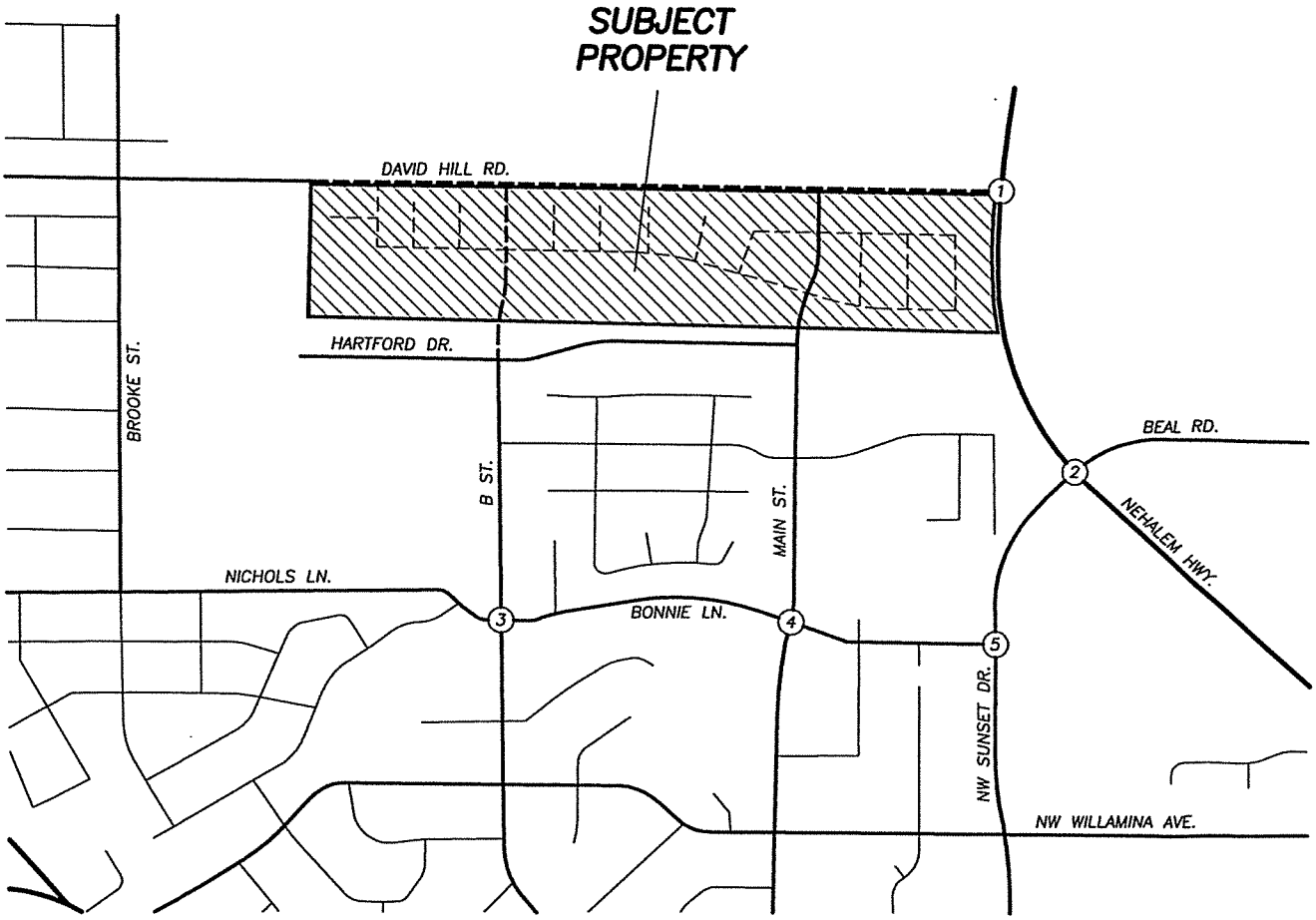


TRAFFIC VOLUMES
Year 2022 Background Conditions w/ David Hill Connection
AM & PM Peak Hours

no scale

FIGURE 7





TRAFFIC VOLUMES
Year 2022 Background + 204 Homes w/ David Hill Connection
AM & PM Peak Hours

no scale

FIGURE 8

1e

CAPACITY ANALYSIS

To determine the level of service at the study intersections, a capacity analysis was conducted. The analysis was conducted according to the signalized and unsignalized intersection analysis methodologies in the *HIGHWAY CAPACITY MANUAL* (HCM) published by the Transportation Research Board. Level of service can range from A, which indicates little or no delay, to F, which indicates a significant amount of congestion and delay. Detailed level of service descriptions are included in the appendix to this report.

The intersections of Highway 47 at Sunset Drive/Beal Road and Highway 47 at the future David Hill Road extension operate under the jurisdiction of the Oregon Department of Transportation and are required to operate acceptably per the requirements of the Oregon Highway Plan. ODOT assesses intersection performance based on the volume to capacity ratio (v/c) rather than delay and level of service. The v/c ratio expresses the portion of the design capacity of the intersection that will be utilized by the projected traffic. A v/c ratio of 1.0 indicates that the intersection is operating at capacity. ODOT requires that the study intersections under their jurisdiction operate with a v/c ratio of 0.99 or less during the peak hours.

The intersection of Nehalem Highway 47 at the future David Hill Road alignment will not yet exist under the year 2018 traffic analysis scenarios. Accordingly, operation of this future intersection was analyzed only for year 2022 traffic conditions with and without the addition of site trips from the proposed development. Under year 2022 traffic conditions, the intersection is projected to operate at level of service C during the morning peak hour and level of service D during the evening peak hour. The intersection is projected to operate with a v/c ratio of 0.62 or less for all approaches under all analysis scenarios. Intersection operation is acceptable and no mitigations are necessary or recommended.

The intersection of Nehalem Highway 47 at Sunset Drive is currently operating at level of service B during the morning and evening peak hours. It is projected to continue to operate at level of service B during the morning and evening peak hours through 2022 either with or without the addition of site trips from the proposed development. The intersection is projected to operate with a critical v/c ratio of 0.57 or less under all analysis scenarios. Intersection operation is acceptable and no mitigations are recommended.

The intersections of Bonnie Lane at B Street and Bonnie Lane at Main Street are currently operating at level of service B or better during the morning and evening peak hours. These intersections are projected to continue to operate at level of service B or better ether with or without the addition of site trips from the proposed development under all analysis scenarios. No operational mitigations are necessary or recommended.

The intersection of Bonnie Lane at Sunset Drive is currently operating at level of service C during the morning and evening peak hours. Under year 2018 traffic conditions the intersection is projected to operate at level of service C during the morning peak hour and level of service D during the evening peak hour either with or without the addition of site trips from 87 homes within the subject property. Under year 2022 traffic conditions the intersection is projected to operate at level of service C during the morning and evening peak hours either with or without the addition of full development

of the subject property. Intersection operation is acceptable under all analysis scenarios. Accordingly, no mitigations are necessary or recommended.

The results of the capacity analysis, along with the levels of service (LOS) and delay are shown in the table on the following page. Detailed capacity analysis results are included in the appendix to this report.

LEVEL OF SERVICE SUMMARY

	AM Peak Hour			PM Peak Hour		
	LOS	Delay	V/C	LOS	Delay	V/C
Highway 47 at David Hill Road						
2022 Background[2]	C	20	0.41	D	26	0.46
2022 Background + Site[2]	C	25	0.53	D	35	0.62
Highway 47 at Sunset Drive						
Existing Conditions	B	12	0.43	B	16	0.50
2018 Background[1]	B	13	0.45	B	16	0.55
2018 Background + Site[1]	B	13	0.47	B	16	0.57
2022 Background[2]	B	13	0.44	B	14	0.53
2022 Background + Site[2]	B	12	0.47	B	15	0.56
Bonnie Lane at B Street						
Existing Conditions	A	8	N/A	A	9	N/A
2018 Background[1]	A	8	N/A	A	9	N/A
2018 Background + Site[1]	A	9	N/A	A	9	N/A
2022 Background[2]	A	8	N/A	A	9	N/A
2018 Background + Site[2]	A	8	N/A	A	9	N/A
Bonnie Lane at Main Street						
Existing Conditions	A	8	N/A	A	9	N/A
2018 Background[1]	A	8	N/A	A	10	N/A
2018 Background + Site[1]	A	9	N/A	B	10	N/A
2022 Background[2]	A	8	N/A	A	9	N/A
2018 Background + Site[2]	A	8	N/A	A	9	N/A
Bonnie Lane at Sunset Drive						
Existing Conditions	C	17	0.43	C	21	0.41
2018 Background[1]	C	20	0.51	D	26	0.50
2018 Background + Site[1]	C	23	0.59	D	31	0.59
2022 Background[2]	C	17	0.34	C	20	0.37
2018 Background + Site[2]	C	17	0.35	C	21	0.36

[1] Without completion of the David Hill Road extension
[2] With completion of the David Hill Road extension
LOS = Level of service
Delay = Average delay per vehicle in seconds
V/C = Volume-to-capacity ratio

TRAFFIC SIGNAL AND TURN LANE WARRANT ANALYSIS

Traffic signal warrants and left and right turn lane warrants were examined for the planned intersection of Nehalem Highway 47 at NW David Hill Road. The turn-lane warrant analyses were conducted using the methodology adopted by the Oregon Department of Transportation in the Analysis Procedures Manual.

Based on the traffic signal warrant analysis, installation of a new traffic signal will not be warranted even with full development of the subject property. Accordingly, no new traffic signal installations are recommended.

Based on the turn lane warrant analyses, both a northbound left-turn lane and a southbound right-turn lane are projected to be warranted on the Highway 47 approaches to David Hill Road under year 2022 background traffic conditions. The turn lanes are projected to be necessary either with or without the addition of site trips from the proposed development. Accordingly, these turn lanes should be included in the design plans for the NW David Hill Road extension. No changes to the intersection design are recommended in association with the proposed development.

CONCLUSIONS

Intersection sight distance was examined at the location of the future intersection of Highway 47 at David Hill Road in order to determine whether safe access can be taken at the proposed alignment. Based on the analysis, adequate sight distance is available in each direction from the proposed intersection location.

The existing pedestrian and bicycle facilities in the site vicinity are adequate for safe and efficient travel via these modes.

Based on the most recent three years of crash data, no significant safety hazards were identified in the site vicinity.

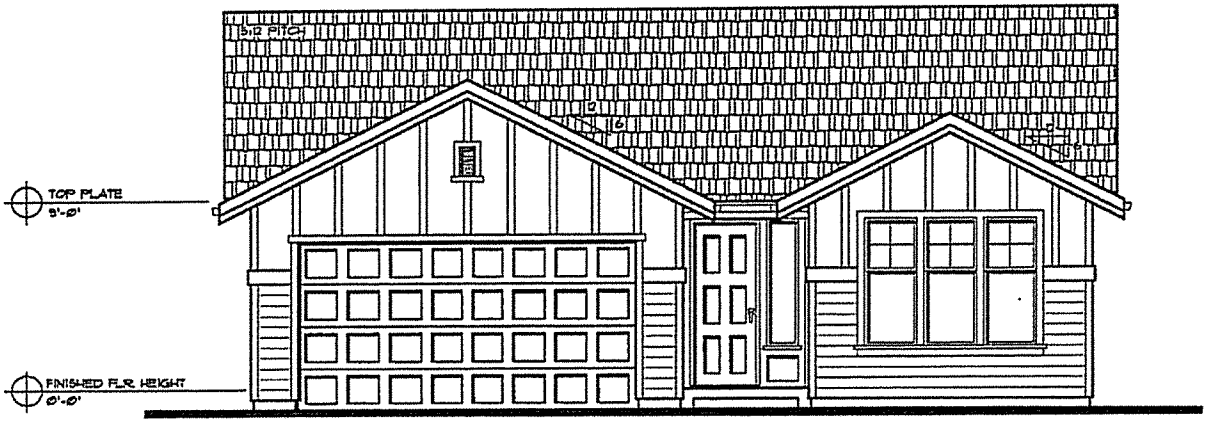
The study area intersections are projected to operate acceptably either with or without the addition of site trips from the proposed development under all analysis scenarios. No operational mitigations are necessary or recommended.

Traffic signal warrants were examined for the future intersection of Nehalem Highway 47 at David Hill Road. Based on the analysis, traffic signal warrants are not projected to be met under year 2022 traffic conditions even with completion of the proposed Silverstone development. Accordingly, installation of a new traffic signal is not recommended.

Left and right turn lane warrants were examined for the Highway 47 approaches to the new David Hill Road extension. Based on the analysis, left and right turn lanes will be warranted for the new roadway either with or without the addition of site trips from the proposed development. Accordingly, it is recommended that these turn lanes be included in the design for the David Hill Road extension. No changes to the intersection design are recommended in association with the proposed development.

Exhibit M: Example Architecture

*SQUARE FOOT
ESTIMATED FR
MAY VARY.
*ALL DIMENSIONS ARE ESTIMATES,
SOME MAY VARY.
*PLANS ARE DESIGNED FOR
FLAT LOTS. IF MASONRY IS
INCLUDED IN PLAN, THERE
IS AN ADDITIONAL CHARGE IF
HOME SITE IS NOT FLAT.
*ARCHITECTURAL DRAWINGS
ARE ESTIMATES OF HOW
HOME WILL LOOK.



OPTION 1 ELEVATION

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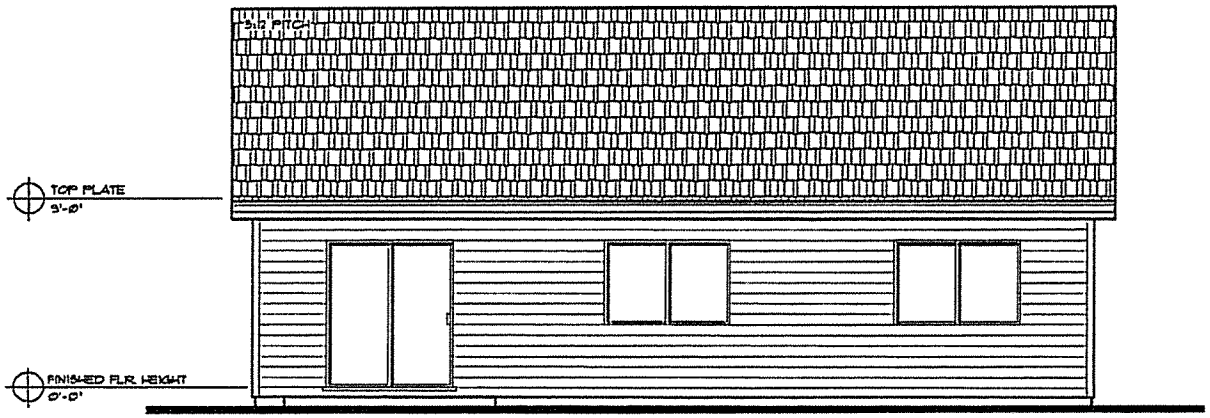


REAR ELEVATION

1/4"=1'-0"

PLAN 219
OPTION 1
1,452 SQ. FT.

STONEBRIDGE
HOMES NW LLC

PLAN No.	219-OPTION-1
DRAWN BY:	G.F.
DATE:	5/18/08
SCALE:	1/4"=1'-0"
FILE:	219OPTI-1

DRAWINGS:

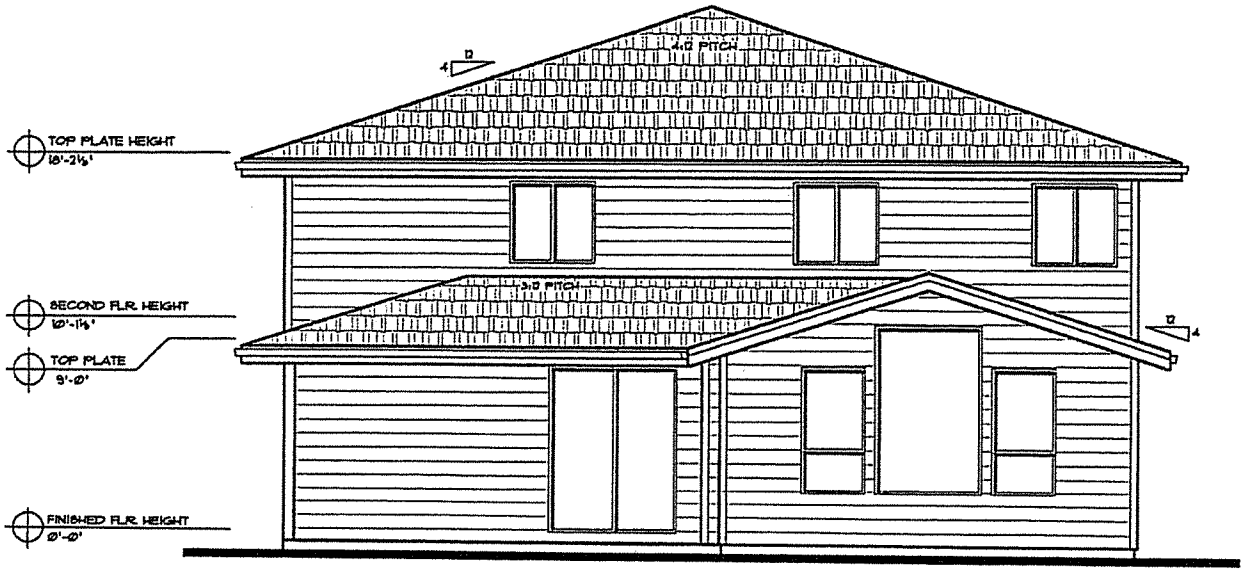
EXTERIOR
ELEVATION
OPTION-1

SHEET No.

1

*SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
*ALL DIMENSIONS ARE ESTIMATES, SOME MAY VARY.
*PLANS ARE DESIGNED FOR FLAT LOTS. IF MASONRY IS INCLUDED IN PLAN, THERE IS AN ADDITIONAL CHARGE IF HOME SITE IS NOT FLAT.
*ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.

FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 244
3,122 SQ. FT.

STONE BRIDGE HOMES NW

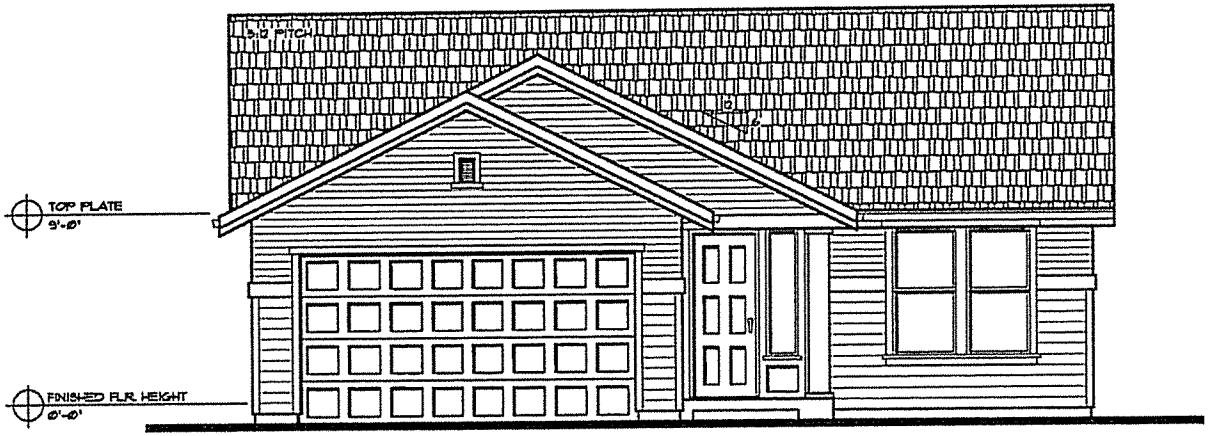
PLAN No.	244
DRAWN BY:	GF
DATE:	7/17/13
SCALE:	1/4"=1'-0"
FILE:	1652-244-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1


5:12 PITCH
TOP PLATE
9'-0"
FINISHED FLR. HEIGHT
0'-0"

*SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
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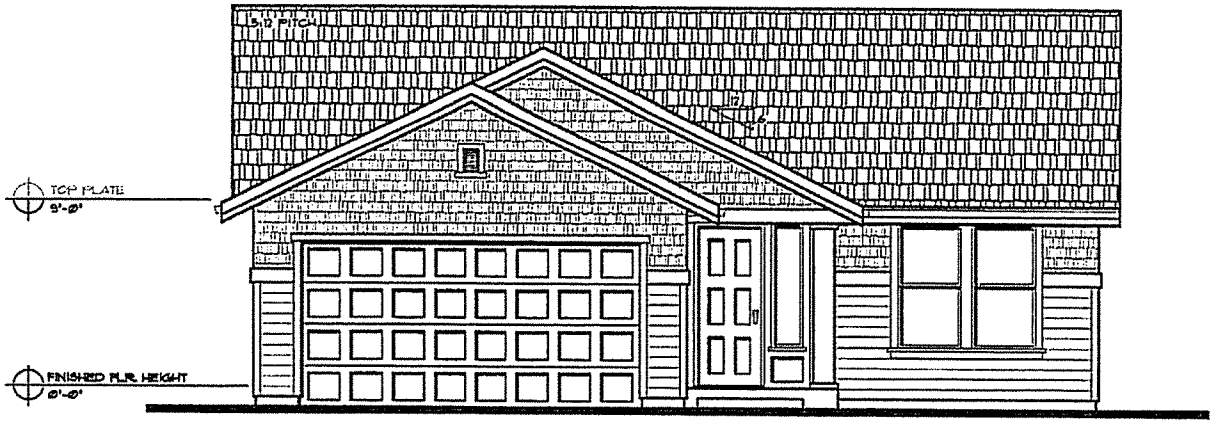
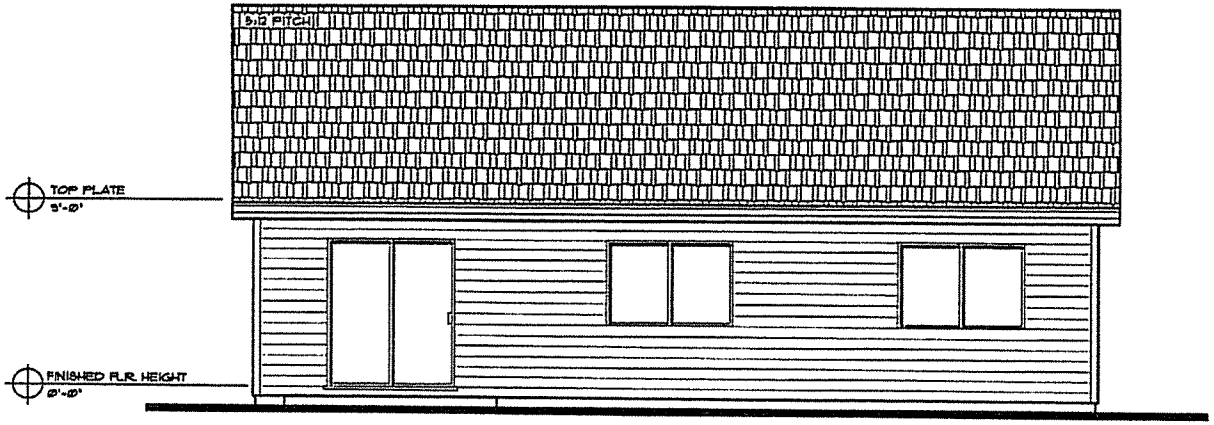
*ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.



STANDARD ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 219
STANDARD
1,452 SQ. FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	219
DRAWN BY:	G.F.
DATE:	5/18/08
SCALE:	1/4"=1'-0"
FILE:	219-1

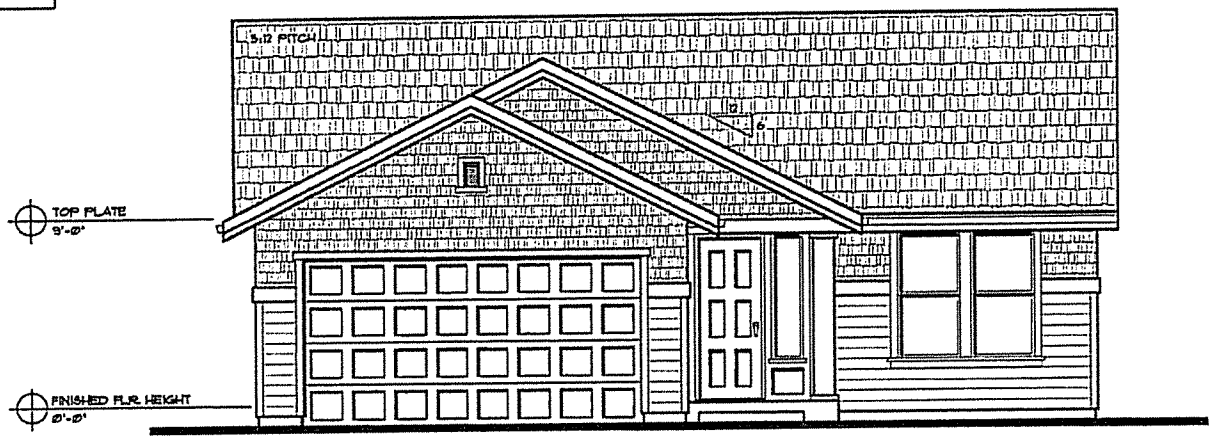
DRAWINGS:

EXTERIOR ELEVATION STANDARD

SHEET No.

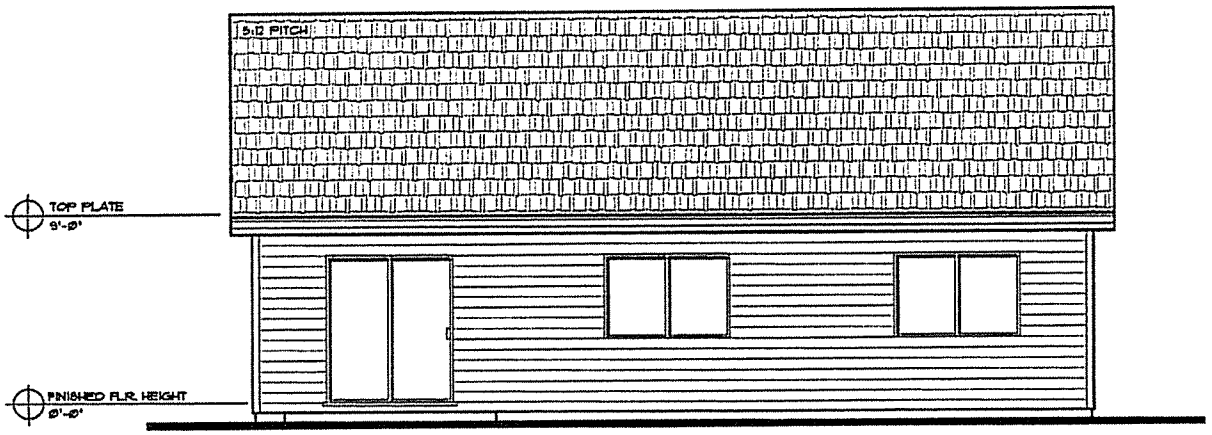
1

...ESTIMATES,
...SIGNED FOR
...MASONRY IS
...IN PLAN. THERE
...ADDITIONAL CHARGE IF
...THE SITE IS NOT FLAT.
ARCHITECURAL DRAWINGS
ARE ESTIMATES OF HOW
HOME WILL LOOK.



STANDARD ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

PLAN 219
STANDARD
1,452 SQ. FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	219
DRAWN BY:	G.F.
DATE:	5/18/08
SCALE:	1/4"=1'-0"
FILE:	219-1

DRAWINGS:

EXTERIOR ELEVATION STANDARD

SHEET No.

1

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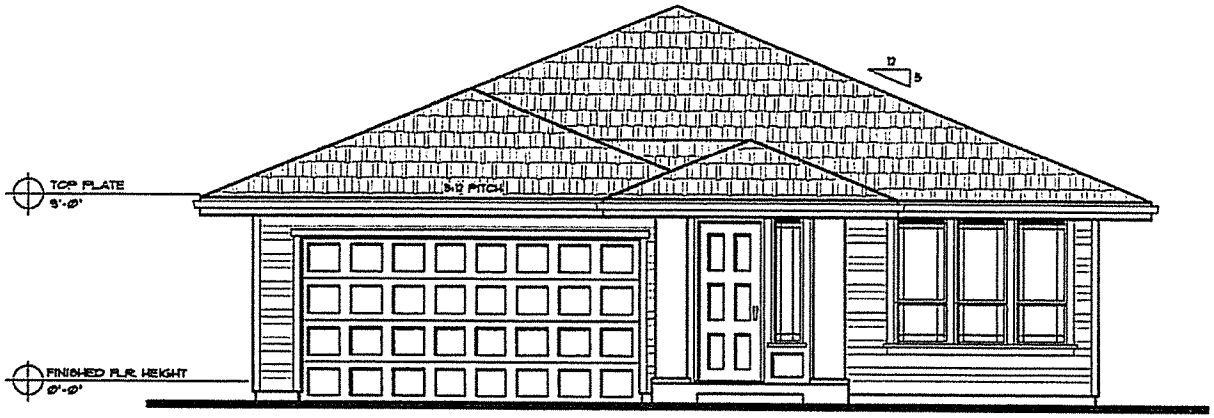
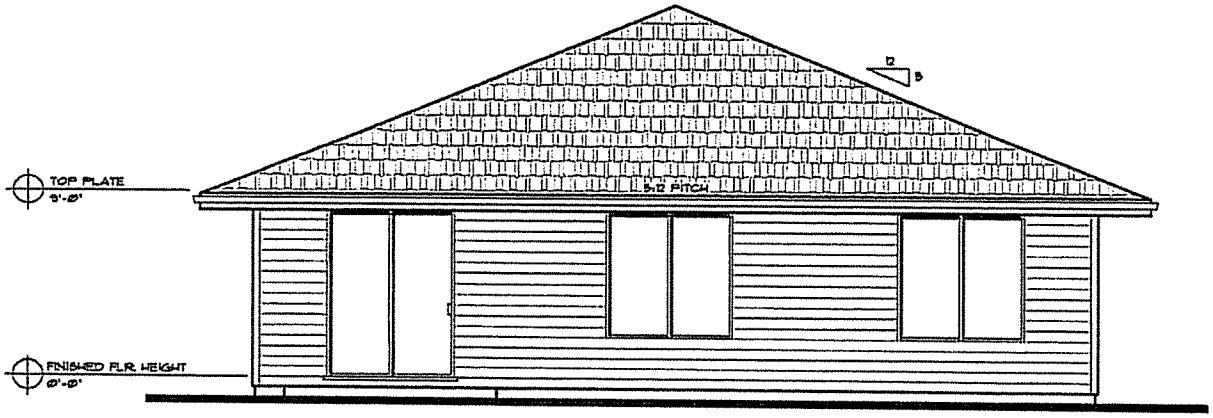
*ARCHITECTURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.



PRAIRIE ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 219
OPTION 2
1,452 SQ. FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	219-OPTION-2
DRAWN BY:	G.F.
DATE:	5/9/08
SCALE:	1/4"=1'-0"
FILE:	219-OPT2-1

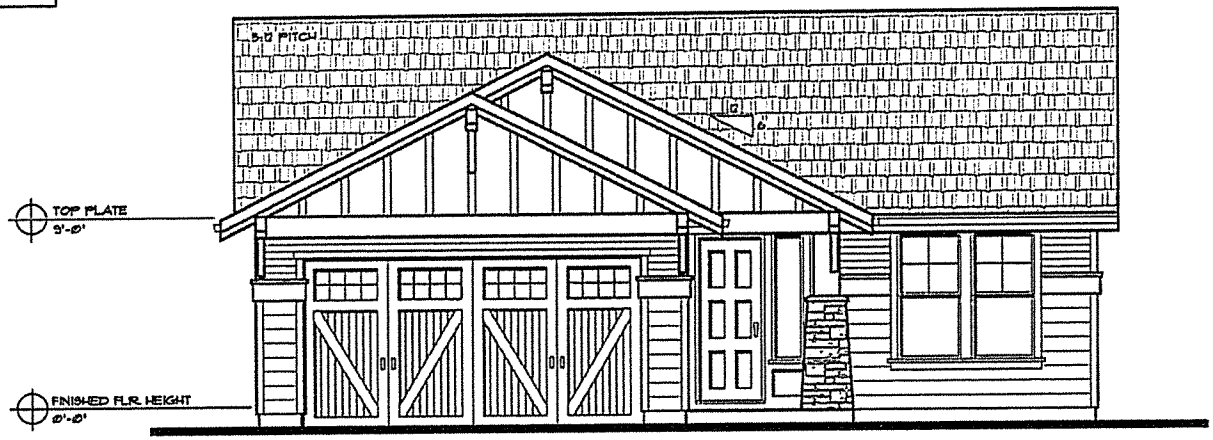
DRAWINGS:

EXTERIOR ELEVATION OPTION-2

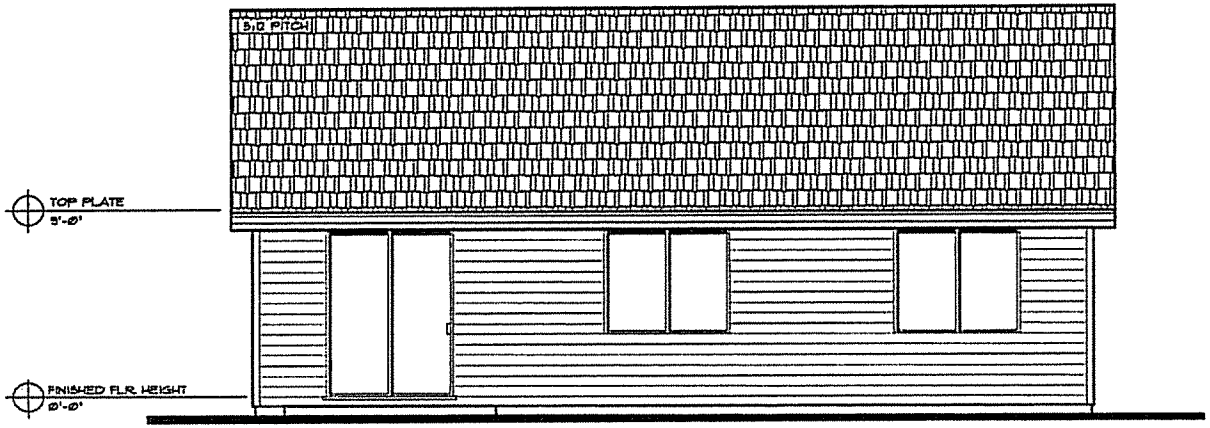
SHEET No.

1

*ALL DIMENSIONS ARE ESTIMATES, SOME MAY VARY.
*PLANS ARE DESIGNED FOR FLAT LOTS. IF MASONRY IS INCLUDED IN PLAN, THERE IS AN ADDITIONAL CHARGE IF HOME SITE IS NOT FLAT.
*ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.



STANDARD ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 1
STANDARD
1,472 SQ. FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	1
DRAWN BY:	G.F.
DATE:	9/1/11
SCALE:	1/4"=1'-0"
FILE:	1-1

DRAWINGS:

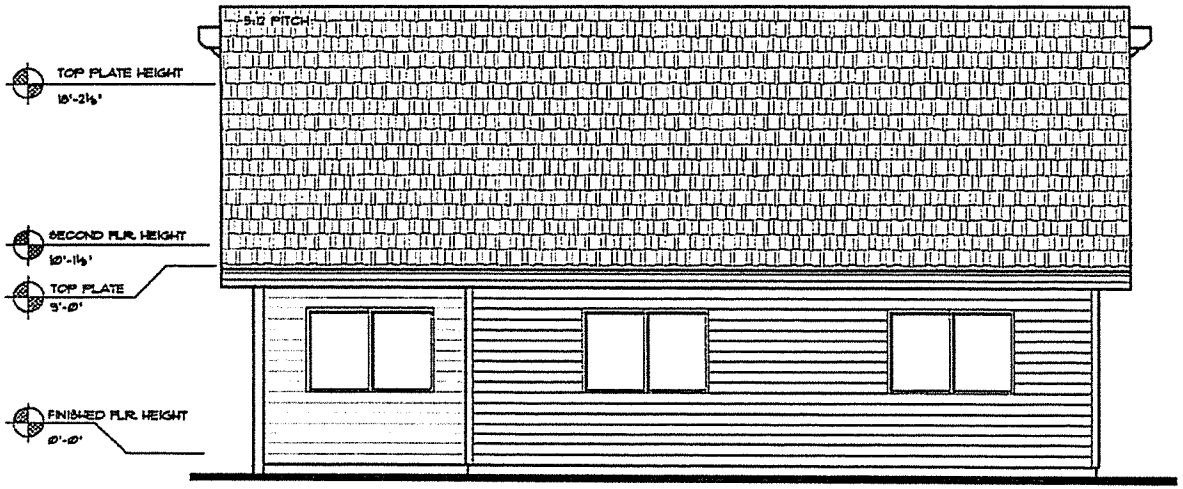
EXTERIOR ELEVATION STANDARD

SHEET No.

1

CRAFTSMAN ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

Square footage [illegible] rated figure. It may vary.
All dimensions a[illegible] ate estimates. They may be subject to change.

197
CRAFTSMAN
2,872 SQ. FT.

PLAN No.	197-OPTION-2
DRAWN BY:	G.F.
DATE:	10/10/02
SCALE:	1/4"=1'-0"
FILE:	197OP2-1
DRAWINGS:	

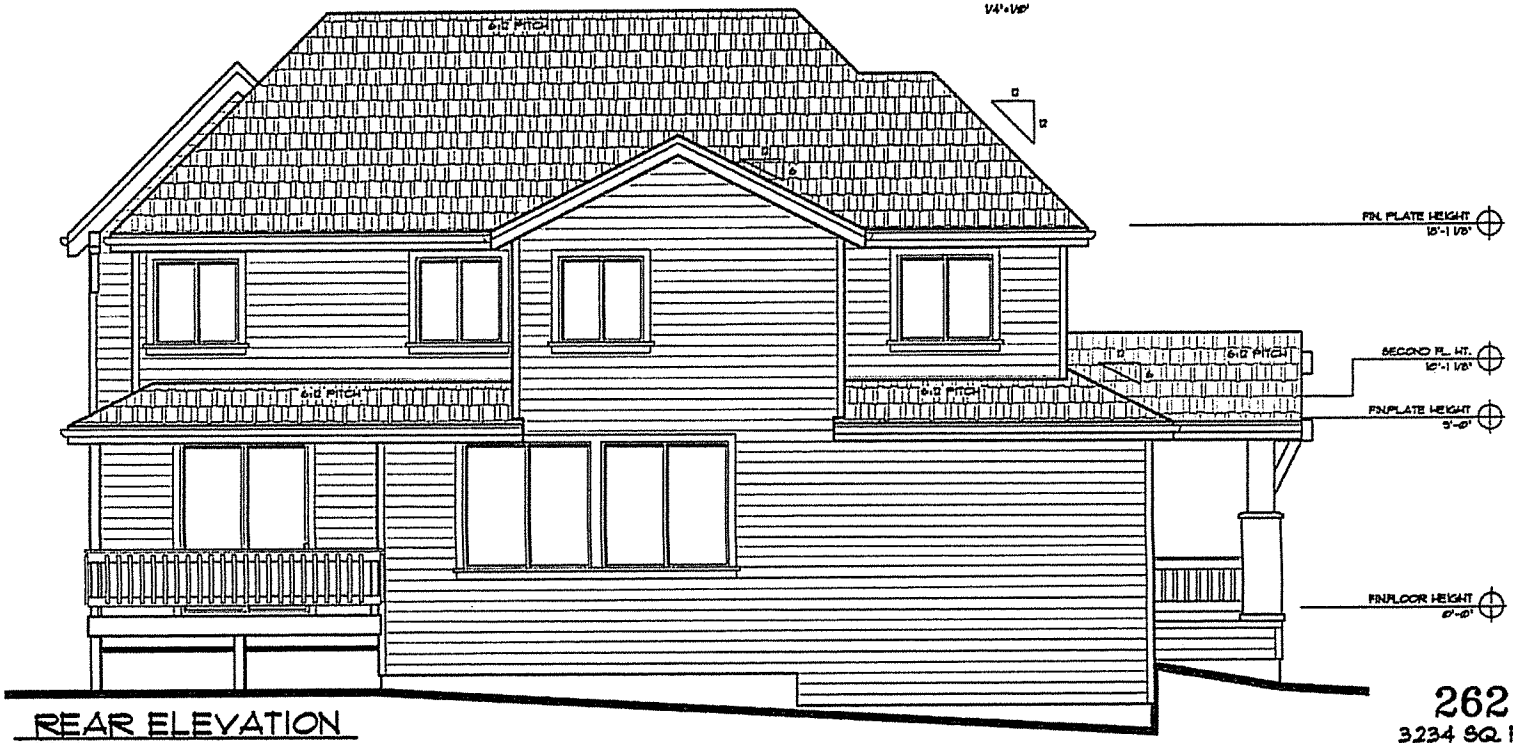
EXTERIOR ELEVATION OPTION-2

SHEET No.

1

FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

262

3,234 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	262
DRAWN BY:	GF
DATE:	9/18/12
SCALE:	1/4"=1'-0"
FILE:	5Ø7-262-1
DRAWINGS:	

EXTERIOR ELEVATIONS

SHEET No.

1

FRONT ELEVATION

1/4"=1'0"

REAR ELEVATION

1/4"=1'0"

262

3,400 SQ. FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	262
DRAWN BY:	GF
DATE:	6/22/12
SCALE:	1/4"=1'-0"
FILE:	1507-262-1

DRAWINGS:

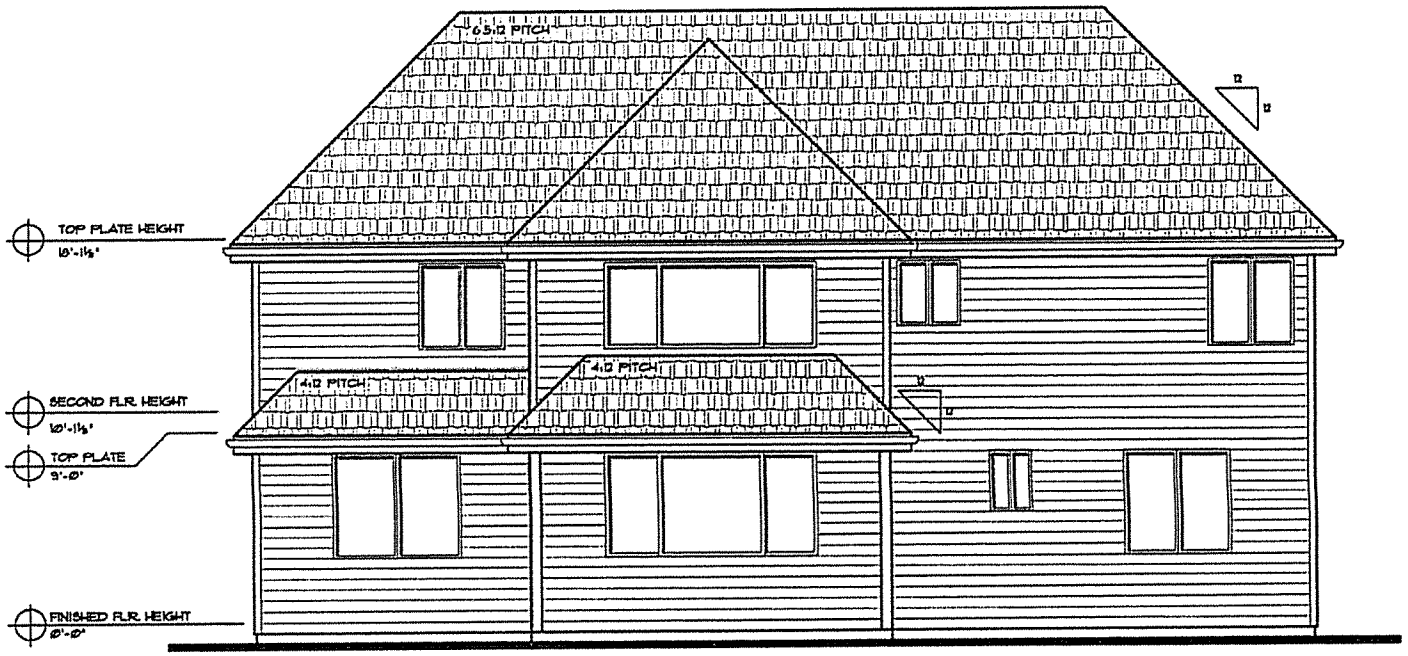
EXTERIOR ELEVATIONS

SHEET No.

1

FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

245
OPTION.12
3,645 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	245
DRAWN BY:	GF
DATE:	2/3/12
SCALE:	1/4"=1'-0"
FILE:	B56-245-1

DRAWINGS:

EXTERIOR ELEVATION OPTION.12

SHEET No.

1

*SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
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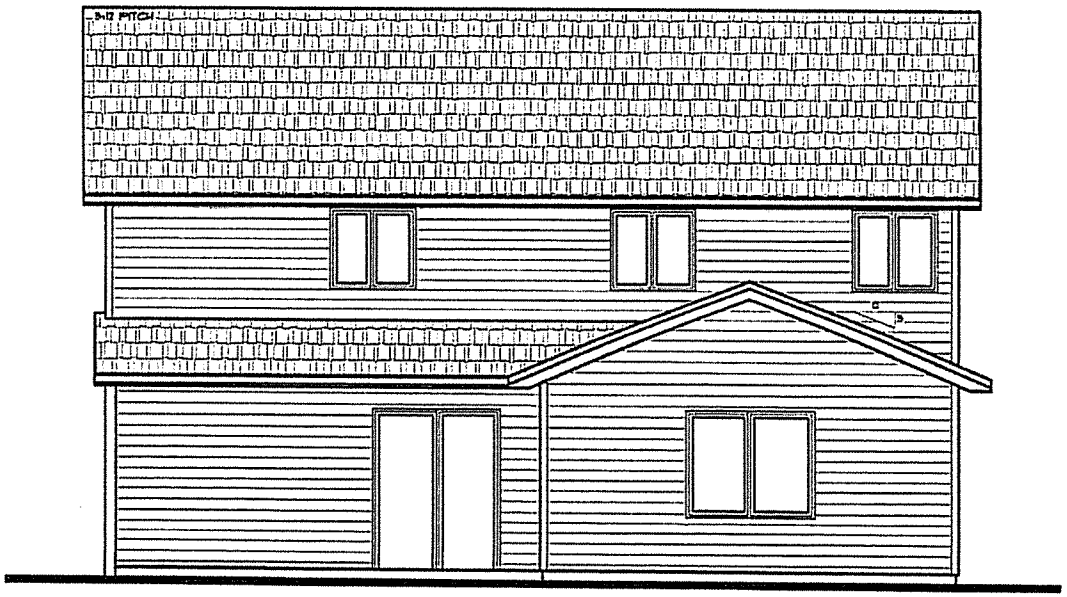
*ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.

FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 244
3,067 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	244
DRAWN BY:	GF
DATE:	9/14/12
SCALE:	1/4"=1'-0"
FILE:	244-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

*SQUARE FOOT[illegible]N ESTIMATED FI[illegible] MAY VARY.
*ALL DIMENSIONS ARE ESTIMATES, SOME MAY VARY.
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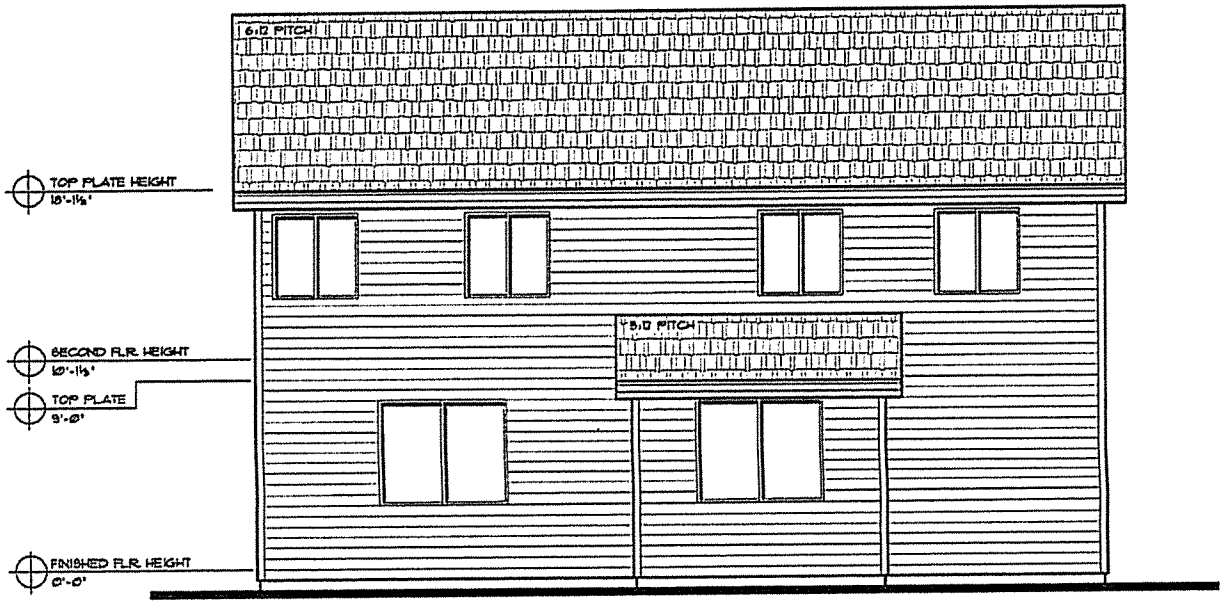
FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

PLAN 225

2,610 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	225
DRAWN BY:	GF
DATE:	9/14/12
SCALE:	1/4"=1'-0"
FILE:	225-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

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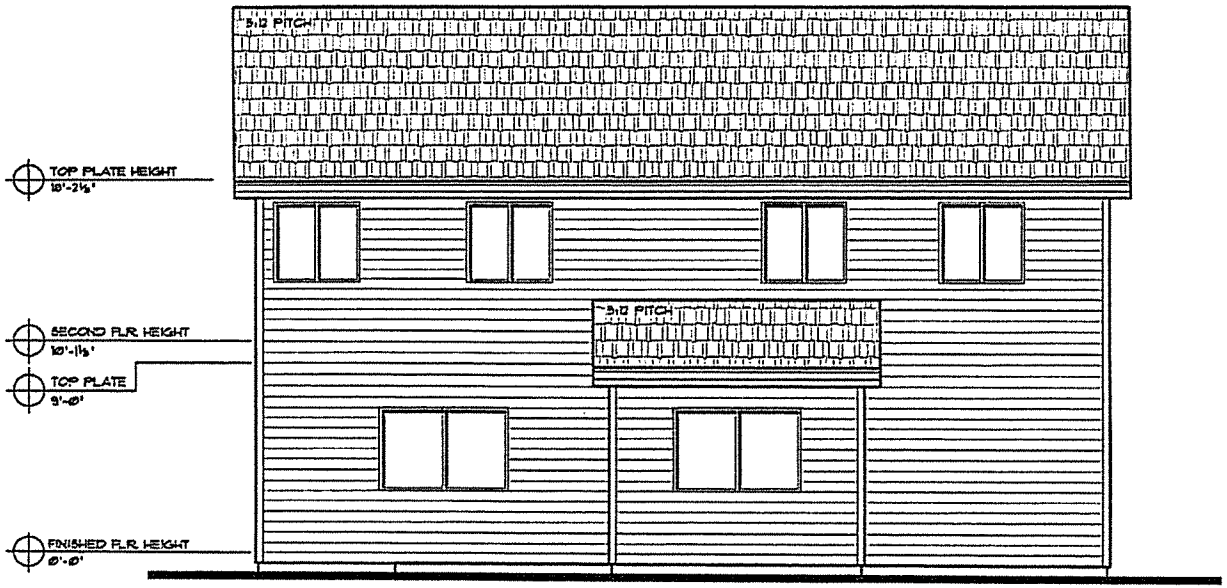
FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 225
STANDARD
2,594 SQ. FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	225
DRAWN BY:	G.F.
DATE:	4/25/08
SCALE:	1/4"=1'-0"
FILE:	225-1

DRAWINGS:

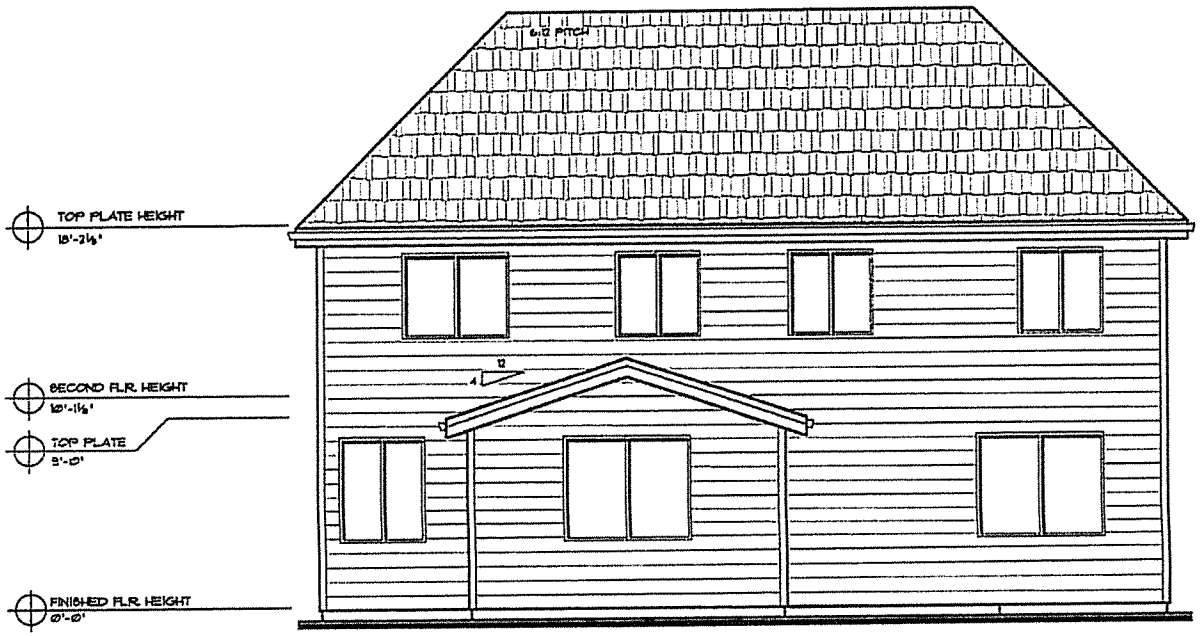
EXTERIOR ELEVATION STANDARD

SHEET No.

1

FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

*SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
*ALL DIMENSIONS ARE ESTIMATES, SOME MAY VARY.
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PLAN 17C
OPTION 12
2,975 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	17C
DRAWN BY:	GF/D.BRITT
DATE:	R:8/1/13
SCALE:	1/4"=1'-0"
FILE:	17C-OPT12-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-12

SHEET No.

1

•SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
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•PLANS ARE DESIGNED FOR FLAT LOTS. IF MASONRY IS INCLUDED IN PLAN, THERE IS AN ADDITIONAL CHARGE IF HOME SITE IS NOT FLAT.
•ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.

FRONT ELEVATION
1/4"=1'-0"

PLAN 197
OPTION 12
2,594 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	197-OPTION-12
DRAWN BY:	G.F./D.BRITT
DATE:	R:9/3/13
SCALE:	1/4"=1'-0"
FILE:	197OP12-4

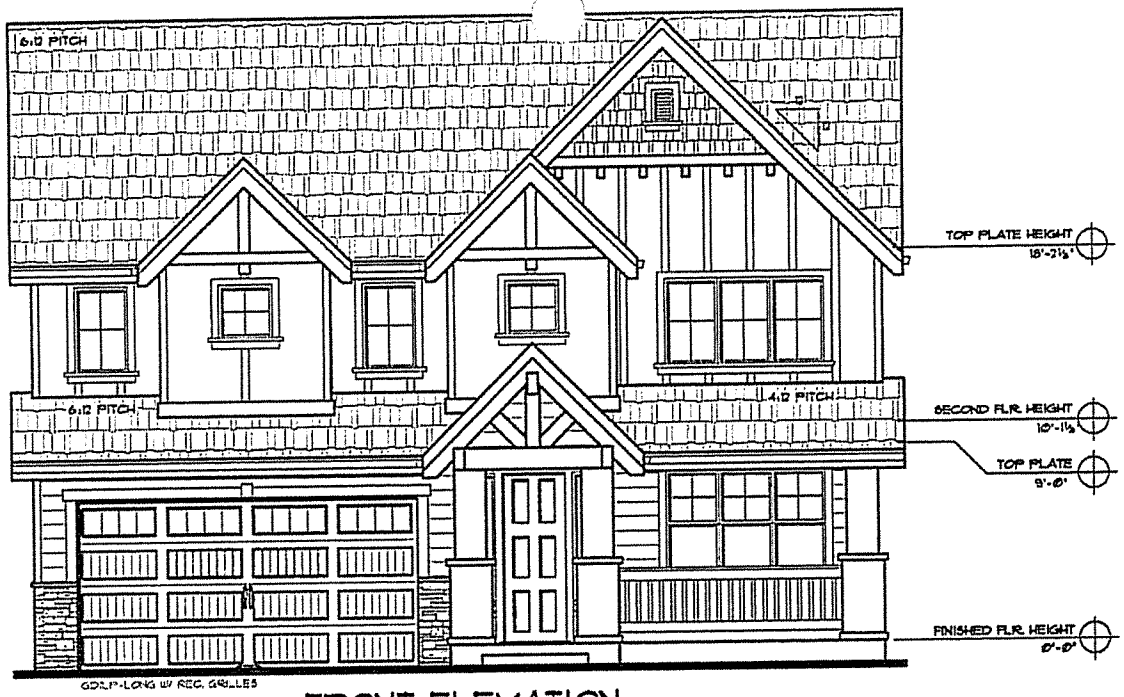
DRAWINGS:

EXTERIOR ELEVATION OPTION-12

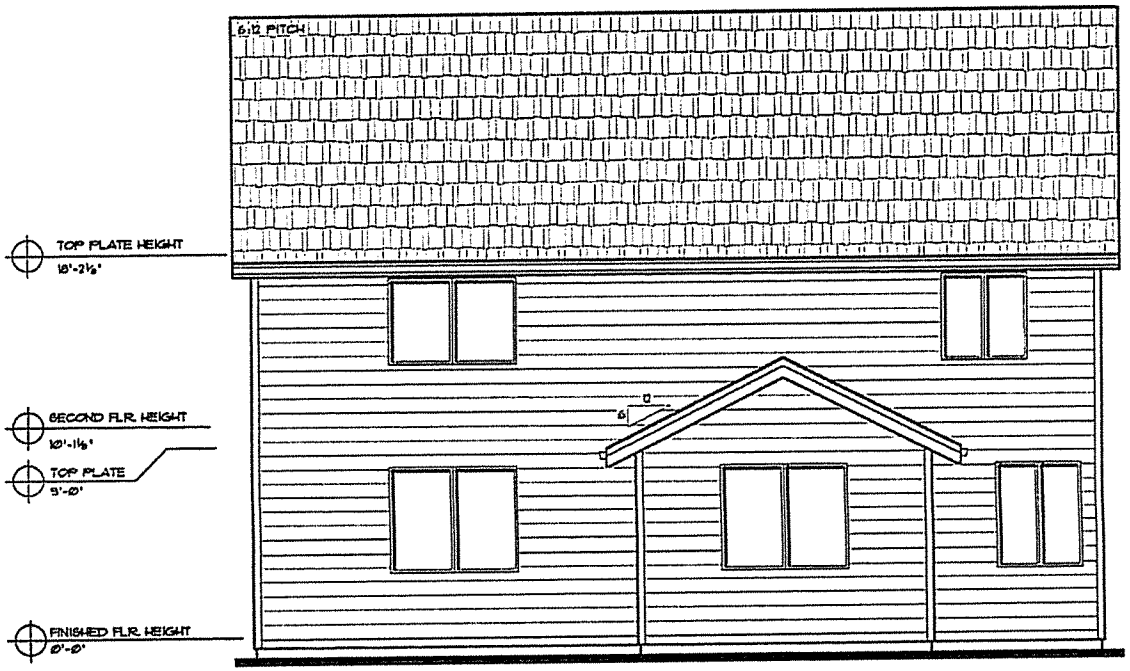
SHEET No.

1

ARE ESTIMATES,
ARTY.
ARE DESIGNED FOR
LOTS. IF MASONRY IS
LUDED IN PLAN, THERE
IS AN ADDITIONAL CHARGE IF
HOME SITE IS NOT FLAT.
*ARCHITECURAL DRAWINGS
ARE ESTIMATES OF HOW
HOME WILL LOOK.



FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 198A
OPTION 11
2,650 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	198A-OPTION-11
DRAWN BY:	G.F./D.BRITT
DATE:	R-9/3/13
SCALE:	1/4"=1'-0"
FILE:	198A-OPT11-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-11

SHEET No.

1

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FRONT ELEVATION
1/4"=1'-0"

PLAN 199
OPTION 12
3,400 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	199-OPT12
DRAWN BY:	GF/DBRITT
DATE:	R:9/3/13
SCALE:	1/4"=1'-0"
FILE:	199-OPT12-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-12

SHEET No.

1

FRONT ELEVATION

1/4"=1'-0"

PLAN 206
OPTION 11
4,185 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	206-OP11
DRAWN BY:	KK/DBRITT
DATE:	R:9/3/13
SCALE:	1/4"=1'-0"
FILE:	206-OP11-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-11

SHEET No.

1

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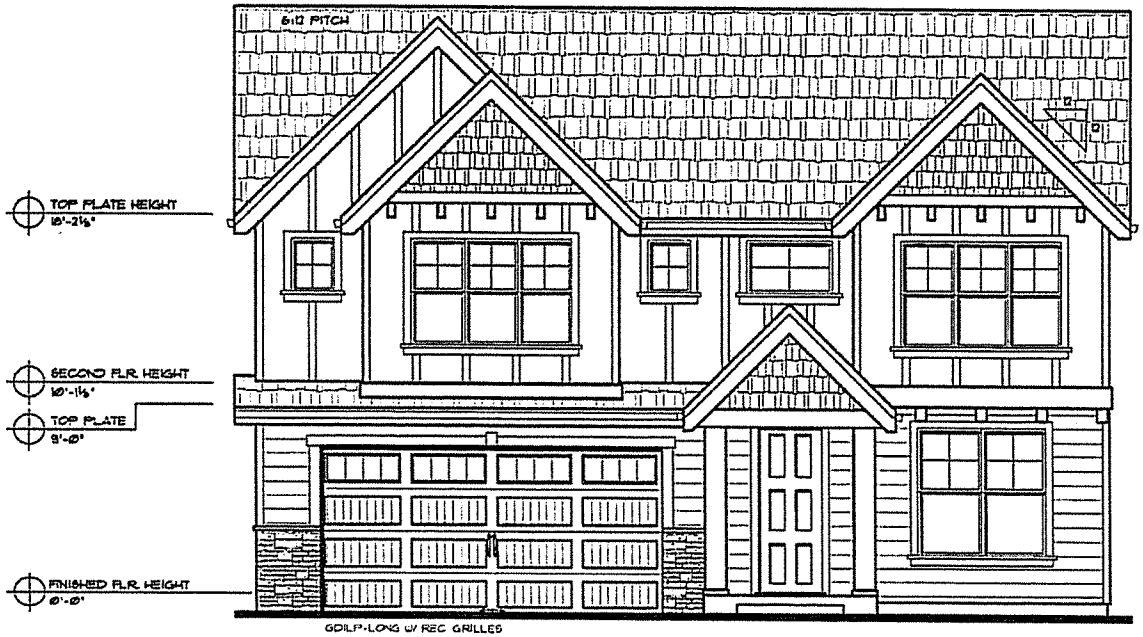


FRONT ELEVATION

1/4"=1'-0"

PLAN 225
OPTION 11
2,594 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	225-OPTION-11
DRAWN BY:	GF/D.BRITT
DATE:	R-9/3/13
SCALE:	1/4"=1'-0"
FILE:	225-OPT11-1

DRAWINGS:

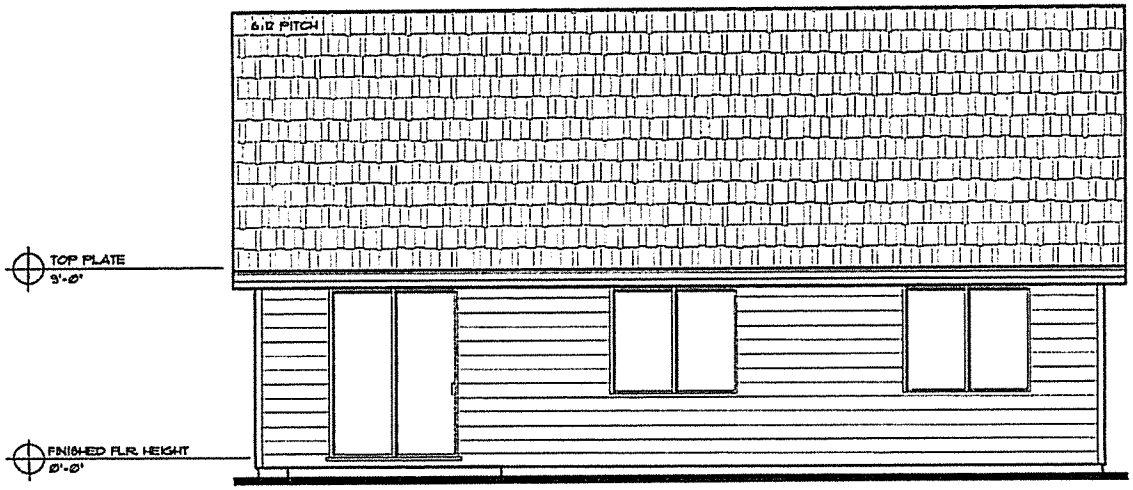
EXTERIOR ELEVATION OPTION-11

SHEET No.

1

FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

239 PC
OPTION 11
1,803 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	239-PC
DRAWN BY:	GF/D.BRITT
DATE:	R:9/4/13
SCALE:	1/4"=1'-0"
FILE:	239-PC-OPTII-1

DRAWINGS:

EXTERIOR ELEVATION OPTION.11

SHEET No.

1

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FRONT ELEVATION
1/4"=1'-0"

239 PC
OPTION 12
1,803 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	239-PC
DRAWN BY:	GF/D.BRITT
DATE:	R:7/11/13
SCALE:	1/4"=1'-0"
FILE:	239PC-OPT12-1

DRAWINGS:

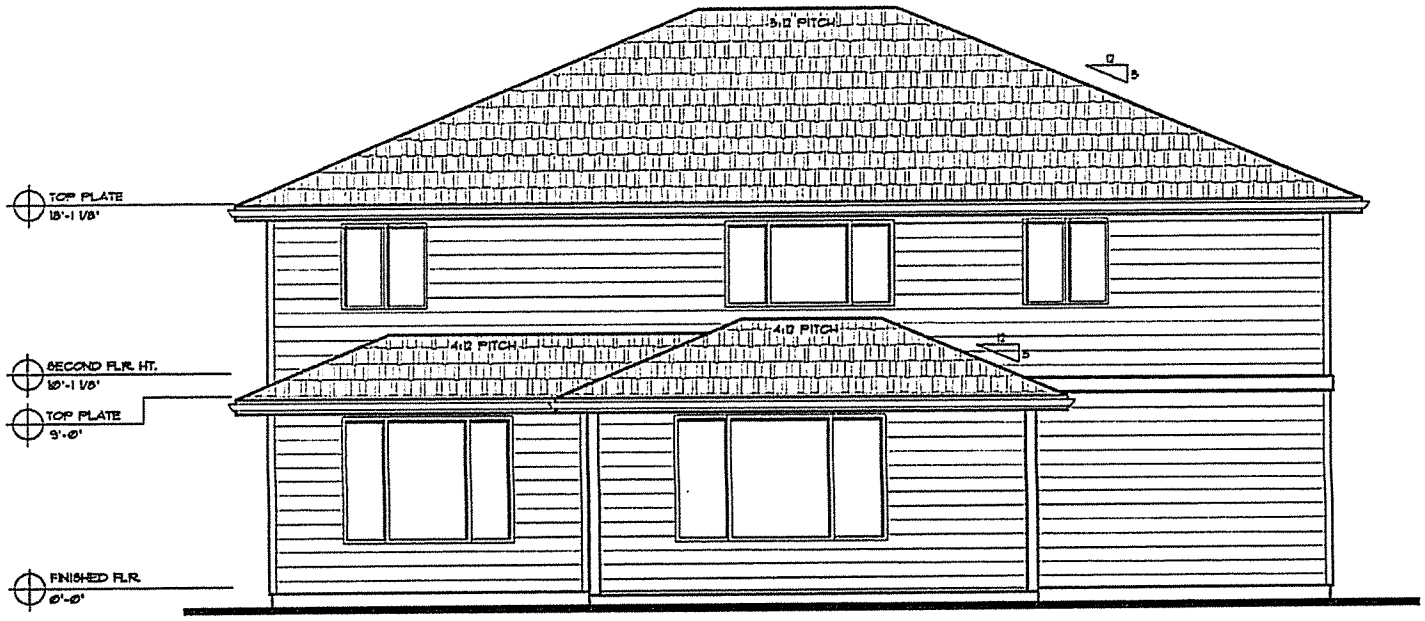
EXTERIOR ELEVATION OPTION.12

SHEET No.

1

FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

287

STONE BRIDGE HOMES NW

PLAN No.	287
DRAWN BY:	GF
DATE:	4/19/13
SCALE:	1/4"=1'-0"
FILE:	1655-287-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

OPTION 3
3,544 SQ. FT.

*SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
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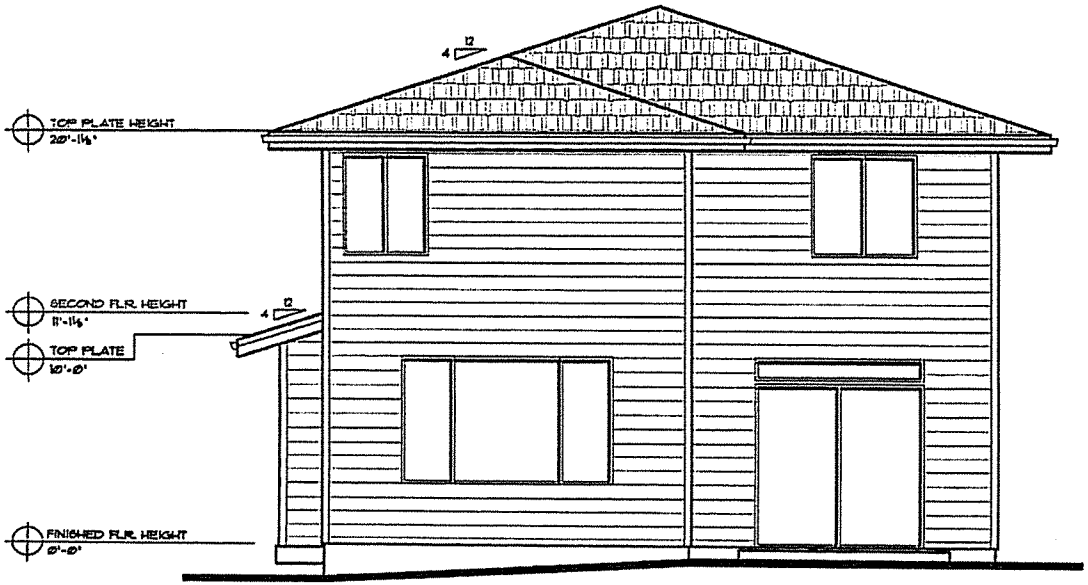
9'-0" HEADER HT.
10'-0" CEILINGS THROUGHOUT MAIN FLOOR

9'-0" CEILINGS THROUGHOUT UPPER FLOOR

FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 714
2,680 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	714
DRAWN BY:	GF
DATE:	2/28/13
SCALE:	1/4"=1'-0"
FILE:	1449-714-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

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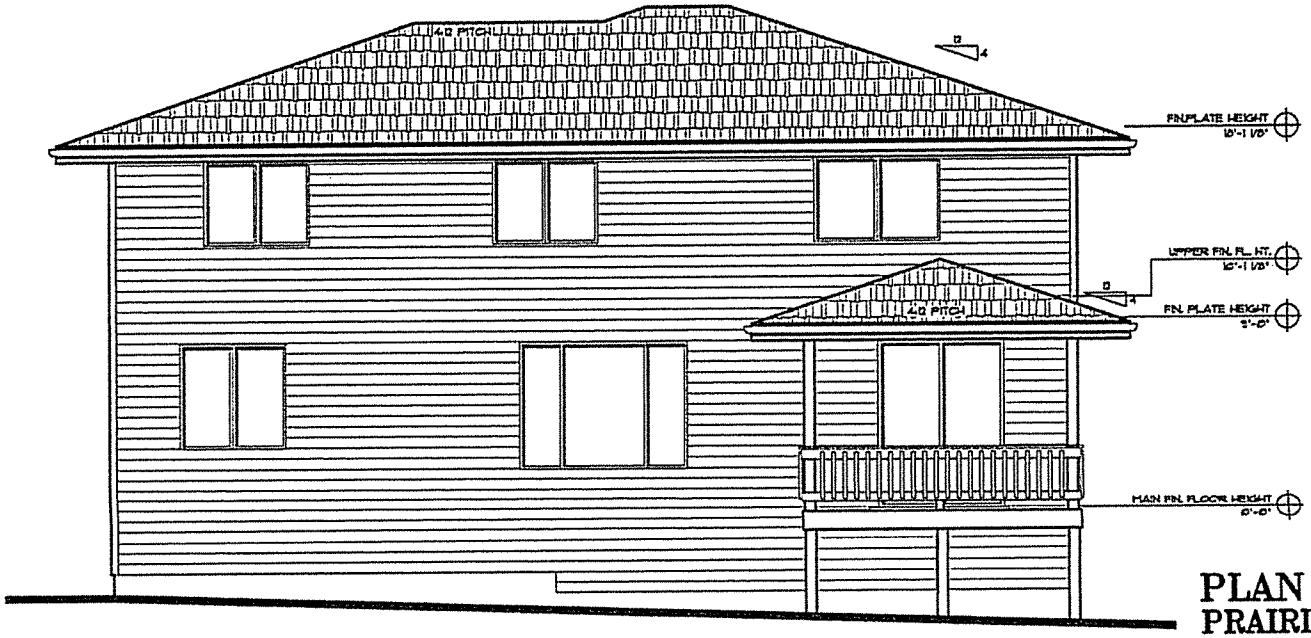
FRONT ELEVATION
1/4"=1'0"



REAR ELEVATION
1/4"=1'0"

PLAN 238
PRAIRIE
OPTION 1
3,248 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	238-OPTION-1
DRAWN BY:	GF
DATE:	12/4/12
SCALE:	1/4"=1'-0"
FILE:	1621-238OP1-1

DRAWINGS:

EXTERIOR ELEVATIONS OPTION-1

SHEET No.

1

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8'-0" HEADER HT. THROUGHOUT MAIN FLOOR

NOTE:
WINDOWS AND SLIDING GLASS DOORS SHALL HAVE U VALUES OF 0.35 OR LESS.

FRONT ELEVATION
1/4"=1'-0"

STONE BRIDGE HOMES NW

PLAN No.	244
DRAWN BY:	GF/D.BRITT
DATE:	5/22/13
SCALE:	1/4"=1'-0"
FILE:	1491-244-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

PLAN 244
3,[illegible] SQ. FT.

FRONT ELEVATION
1/4"=1'-0"

PLAN 170
OPTION 11
3,190 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	170-OPTION-11
DRAWN BY:	GF/D.BRITT
DATE:	R-8/1/13
SCALE:	1/4"=1'-0"
FILE:	170-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-11

SHEET No.

1

- SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
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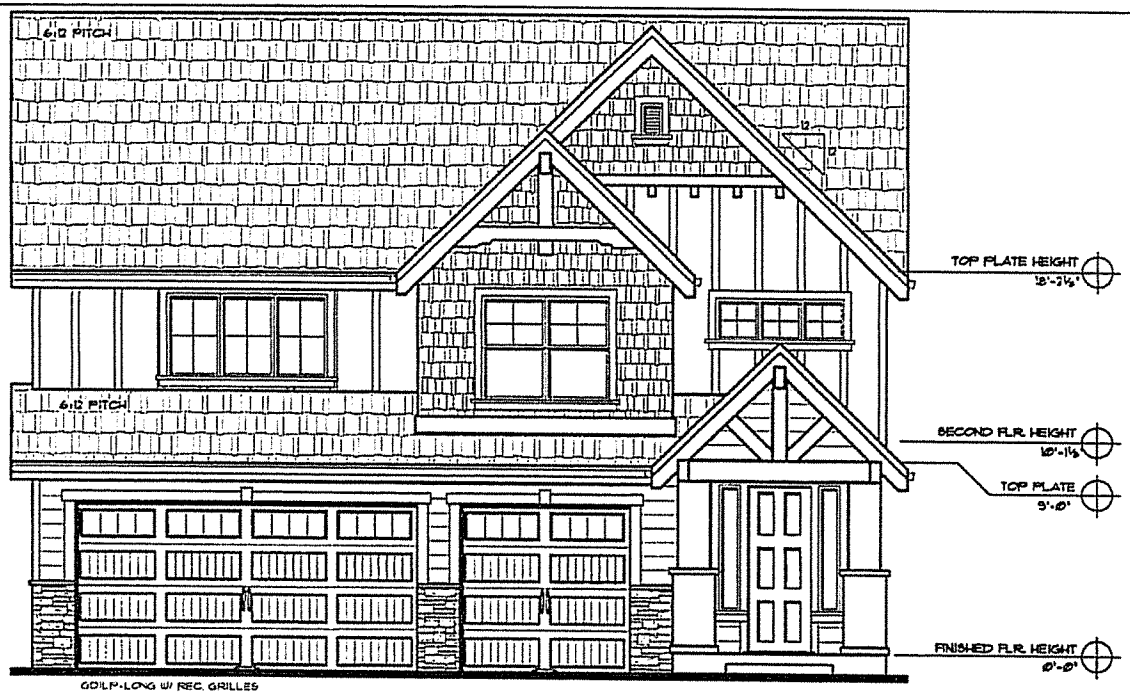
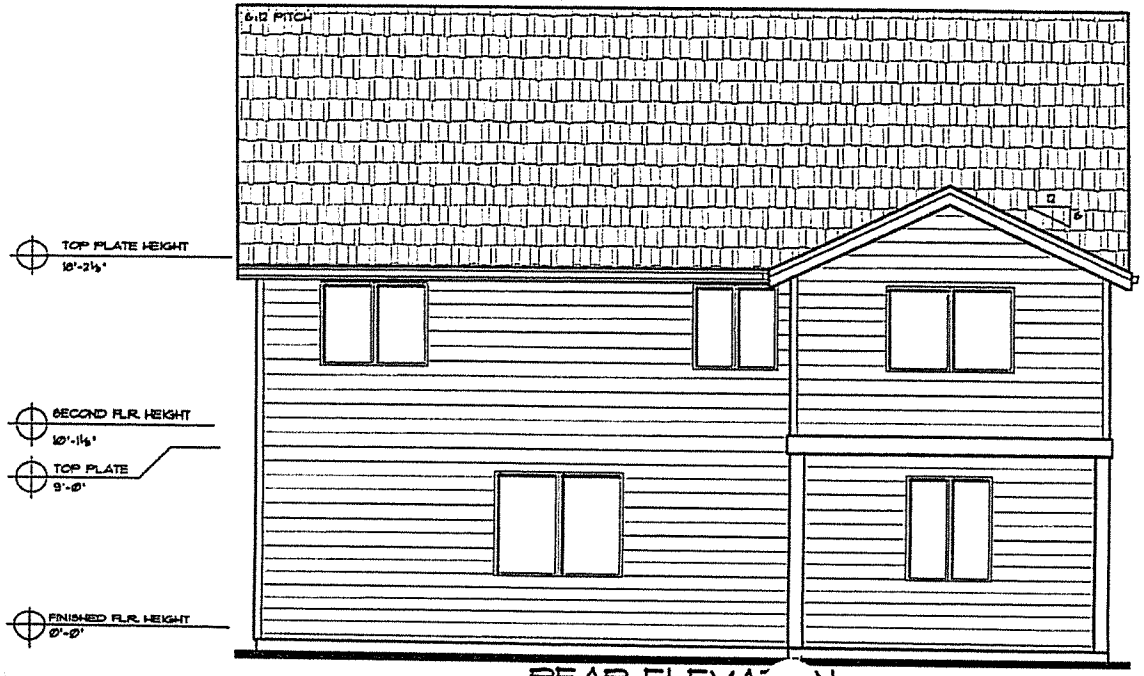
- ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.



FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 181C
OPTION 11
3,480 SQ. FT.

STONE BRIDGE HOMES NW

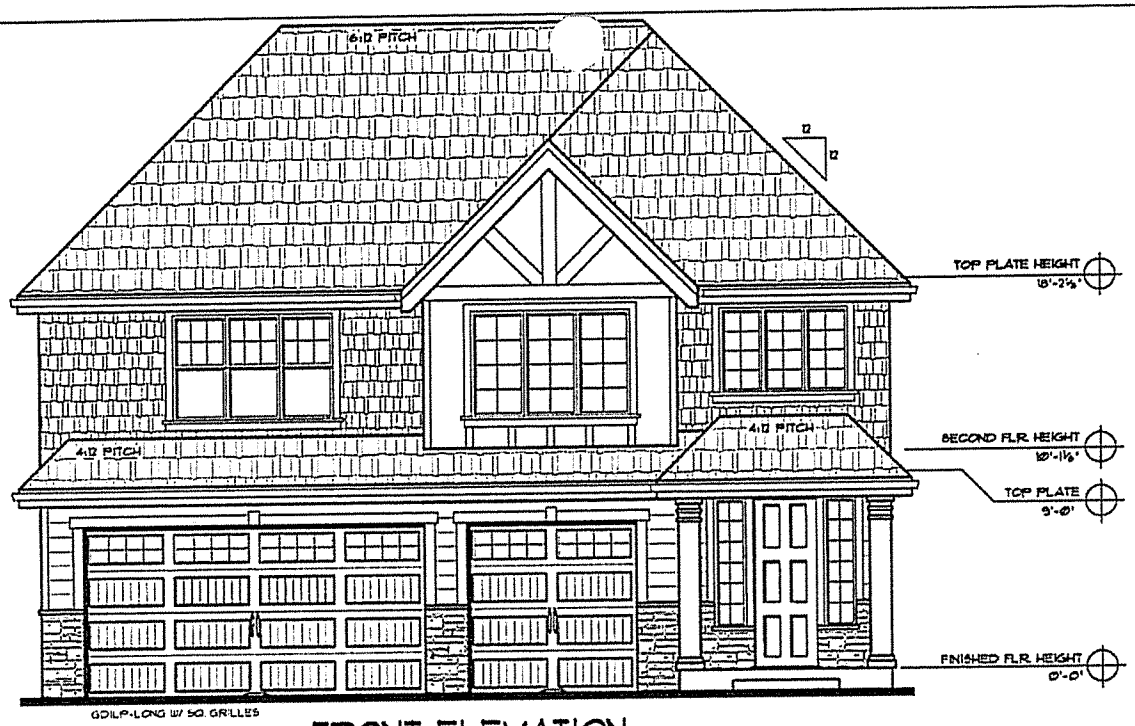
PLAN No.	181C-OPTION-11
DRAWN BY:	GF/D.BRITT
DATE:	R:8/30/13
SCALE:	1/4"=1'-0"
FILE:	181COPT11-1
DRAWINGS:	

EXTERIOR ELEVATION OPTION-11

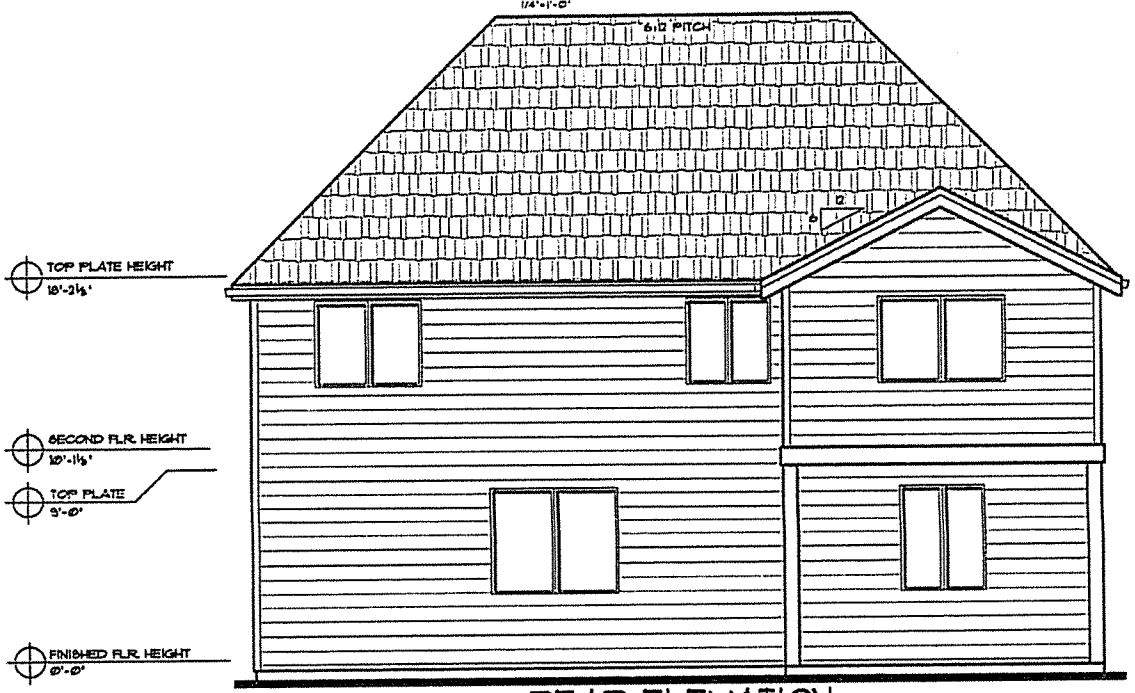
SHEET No.

1

...ED
...ART.
...DIMENSIONS ARE ESTIMATES, ...E THAT VARY.
...PLANS ARE DESIGNED FOR FLAT LOTS. IF MASONRY IS INCLUDED IN PLAN, THERE IS AN ADDITIONAL CHARGE IF HOME SITE IS NOT FLAT.
*ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.



FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 181C
OPTION 12
3,480 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	181C-OPTION-12
DRAWN BY:	GF/DBRITT
DATE:	R:8/30/13
SCALE:	1/4"=1'-0"
FILE:	181COPT12-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-12

SHEET No.

1

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FRONT ELEVATION
1/4"=1'-0"

STONE BRIDGE HOMES NW

PLAN No.	288A-OPT.3
DRAWN BY:	GF/D.BRITT
DATE:	R:8/27/13
SCALE:	1/4"=1'-0"
FILE:	1140-1

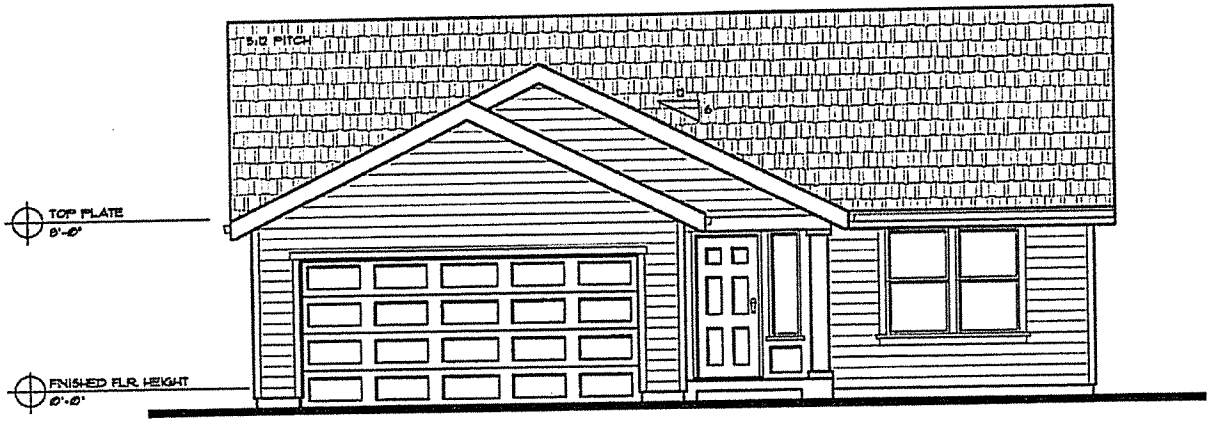
DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

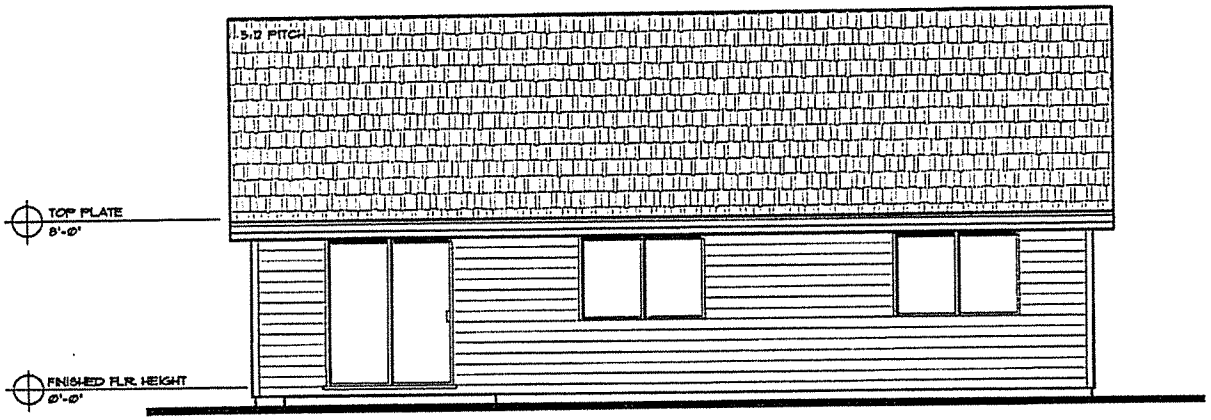
1

288A
OPTION 3
2,[illegible] SQ.FT.



FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

266S
1,472 SQ.FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	266S
DRAWN BY:	G.F.
DATE:	12/28/08
SCALE:	1/4"=1'-0"
FILE:	266S-1

DRAWINGS:

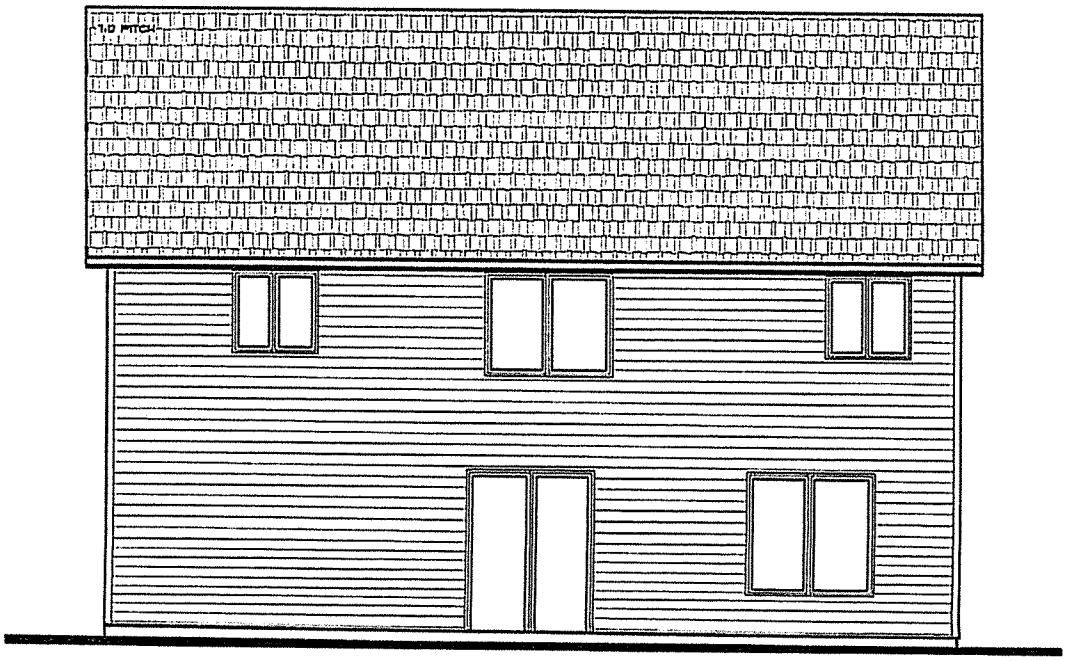
EXTERIOR ELEVATION

SHEET No.

1

*SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
*ALL DIMENSIONS ARE ESTIMATED, SOME MAY VARY.
*PLANS ARE DESIGNED FOR FLAT LOTS. IF MASONRY IS INCLUDED IN PLAN, THERE IS AN ADDITIONAL CHARGE IF HOME SITE IS NOT FLAT.
*ARCHITECTURAL DRAWINGS ARE ESTIMATED OF HOW HOME WILL LOOK.

FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 247
2,829 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	247
DRAWN BY:	GF
DATE:	9/14/12
SCALE:	1/4"=1'-0"
FILE:	247-1

DRAWINGS:

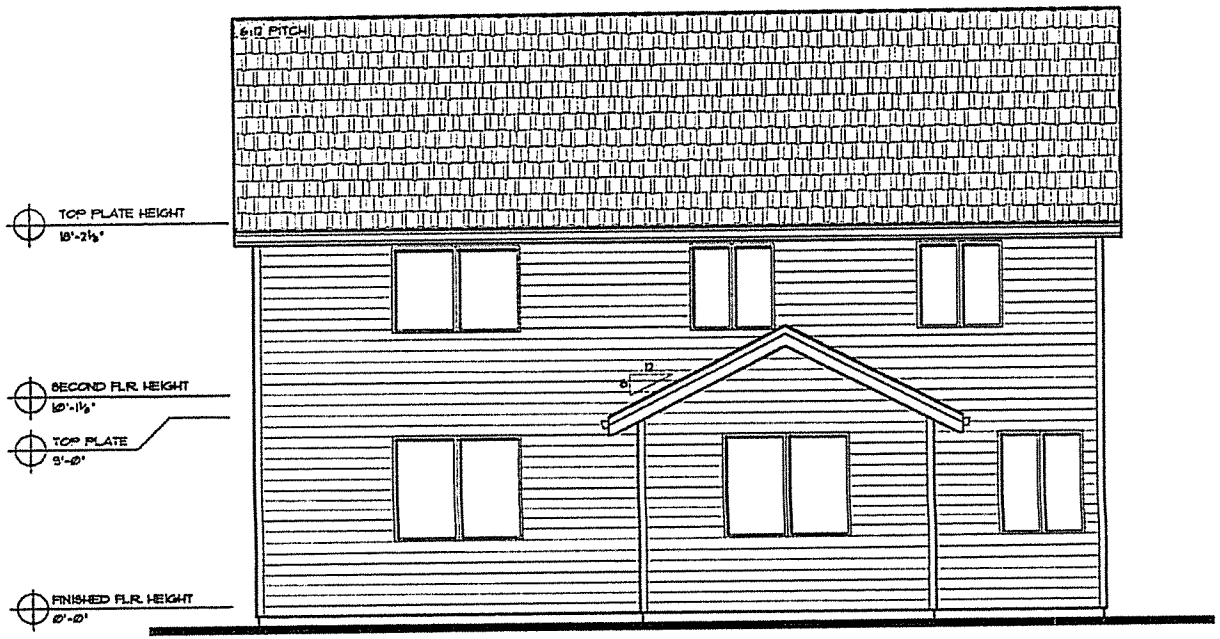
EXTERIOR ELEVATION

SHEET No.

1

...IES,
...FOR
...ART IS
...LAN, THERE
...TIONAL CHARGE IF
...TE IS NOT FLAT.
...ITECTURAL DRAWINGS
...ARE ESTIMATES OF HOW
...HOME WILL LOOK.

FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

170
3,190 SQ. FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	110
DRAWN BY:	GF
DATE:	3/12/11
SCALE:	1/4"=1'-0"
FILE:	110-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

*SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
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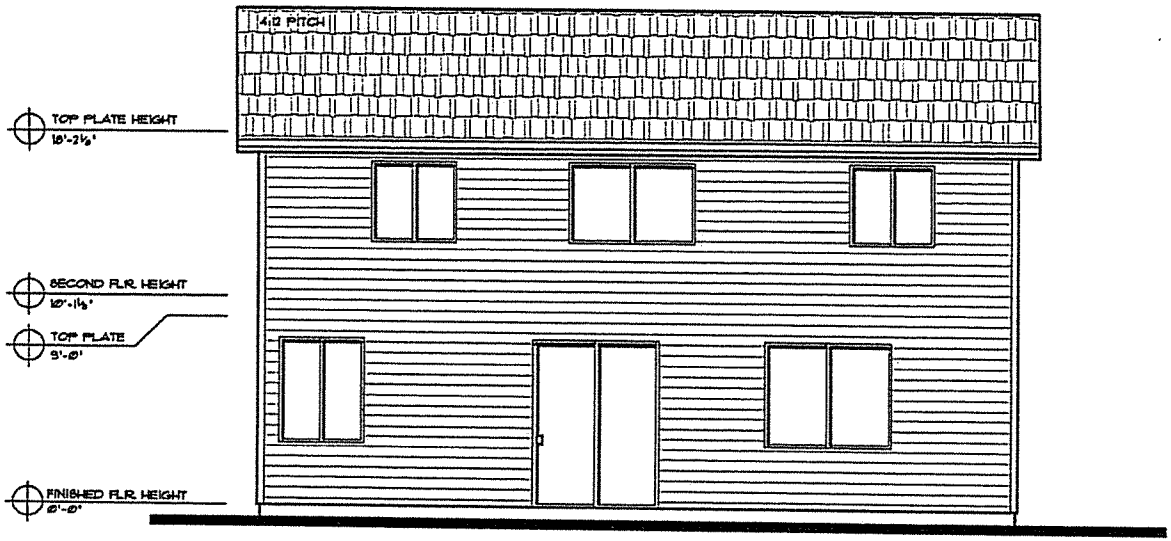
*ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.

FRONT ELEVATION
1/4"=1'-0"
2,245 SQ. FT.



REAR ELEVATION
1/4"=1'-0"

PLAN 222V
2,245 SQ. FT.

STONE BRIDGE HOMES NW

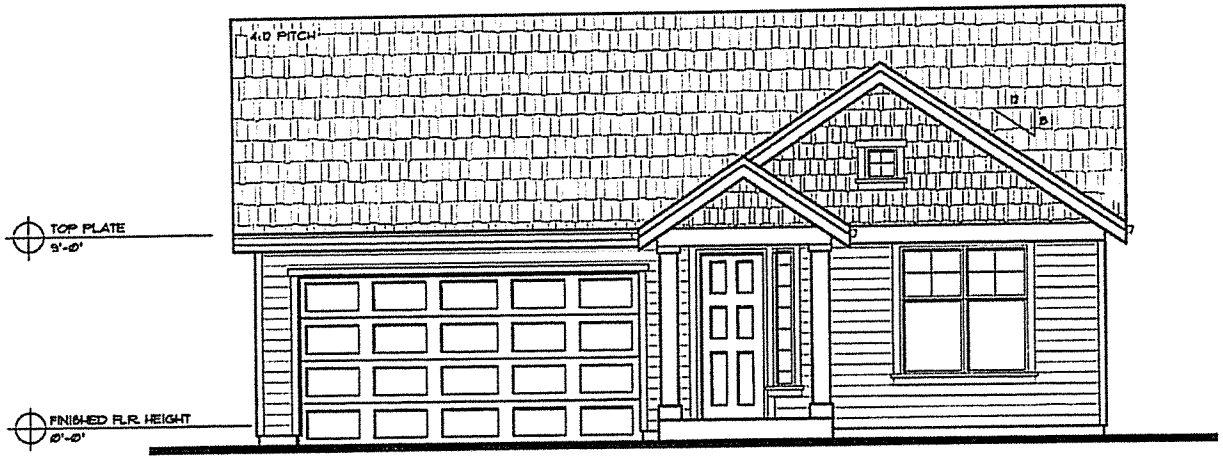
PLAN No.	222V
DRAWN BY:	KK
DATE:	10-1-13
SCALE:	1/4"=1'-0"
FILE:	222V-1

DRAWINGS:

EXTERIOR ELEVATION

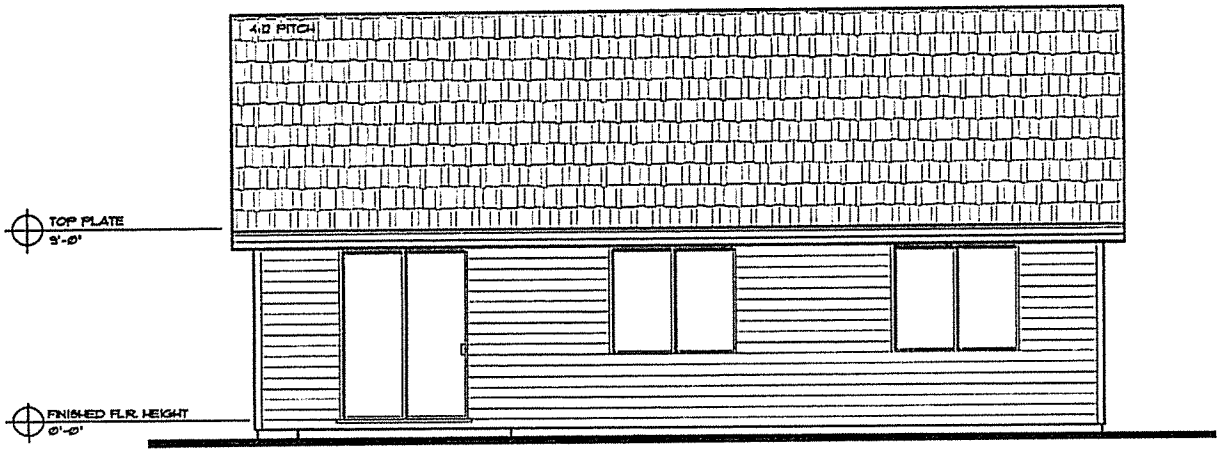
SHEET No.

1



FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

PLAN 239V

1,808 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	239V
DRAWN BY:	GF
DATE:	10/1/13
SCALE:	1/4"=1'-0"
FILE:	239V-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

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FRONT ELEVATION
1/4"=1'-0"

STONE BRIDGE HOMES NW

PLAN No.	A456
DRAWN BY:	D.BRITT
DATE:	6/11/13
SCALE:	1/4"=1'-0"
FILE:	1427-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

CONTEMP.
[illegible] SQ. FT.

FRONT ELEVATION

1/4"=1'-0"

*SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
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*PLANS ARE DRAWNEN FOR FLAT LOTS. IF HILLSIDE IS INCLUDED IN PLAN, THERE IS AN ADDITIONAL CHARGE IF HOME SITE IS NOT FLAT.
*ARCHITECTURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.

FRONT ELEVATION
1/4"=1'-0"

REAR ELEVATION
1/4"=1'-0"

PLAN 241
OPTION 11
2,385 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	241-OPT-11
DRAWN BY:	GF/D.BRITT
DATE:	R:9/4/13
SCALE:	1/4"=1'-0"
FILE:	241opt-11

DRAWINGS:

EXTERIOR ELEVATION OPTION-11

SHEET No.

1

Square footage is
All dimensions are to EST

FRONT ELEVATION

1/4"=1'-0"

PLAN 245
OPTION 11
2,875 SQ. FT.

STONE BRIDGE HOMES NW

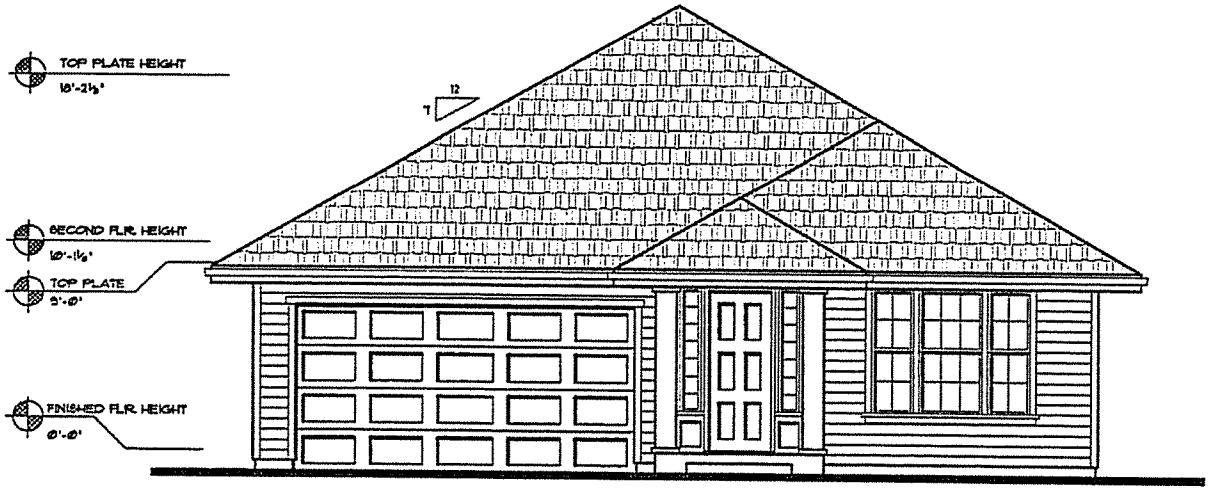
PLAN No.	245-OPTION-11
DRAWN BY:	GF/D.BRITT
DATE:	R:9/4/13
SCALE:	1/4"=1'-0"
FILE:	245OPTII-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-11

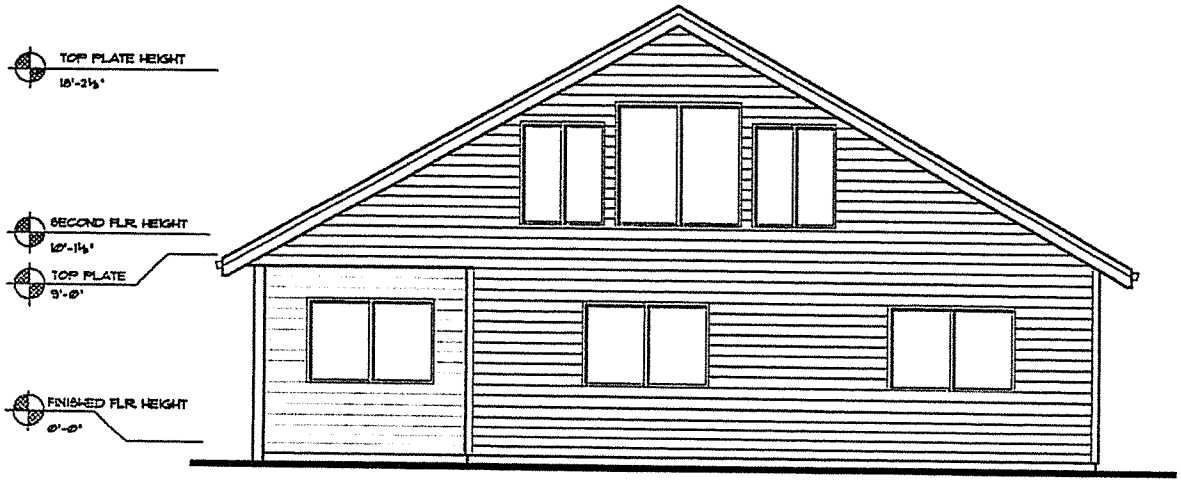
SHEET No.

1



AMERICANA ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

...ted figure. It may vary.
...ximates. They may be subject to change.

197
AMERICANA
2,594 SQ. FT.

PLAN No.	197
DRAWN BY:	G.F.
DATE:	10/10/02
SCALE:	1/4"=1'-0"
FILE:	197-1

DRAWINGS:

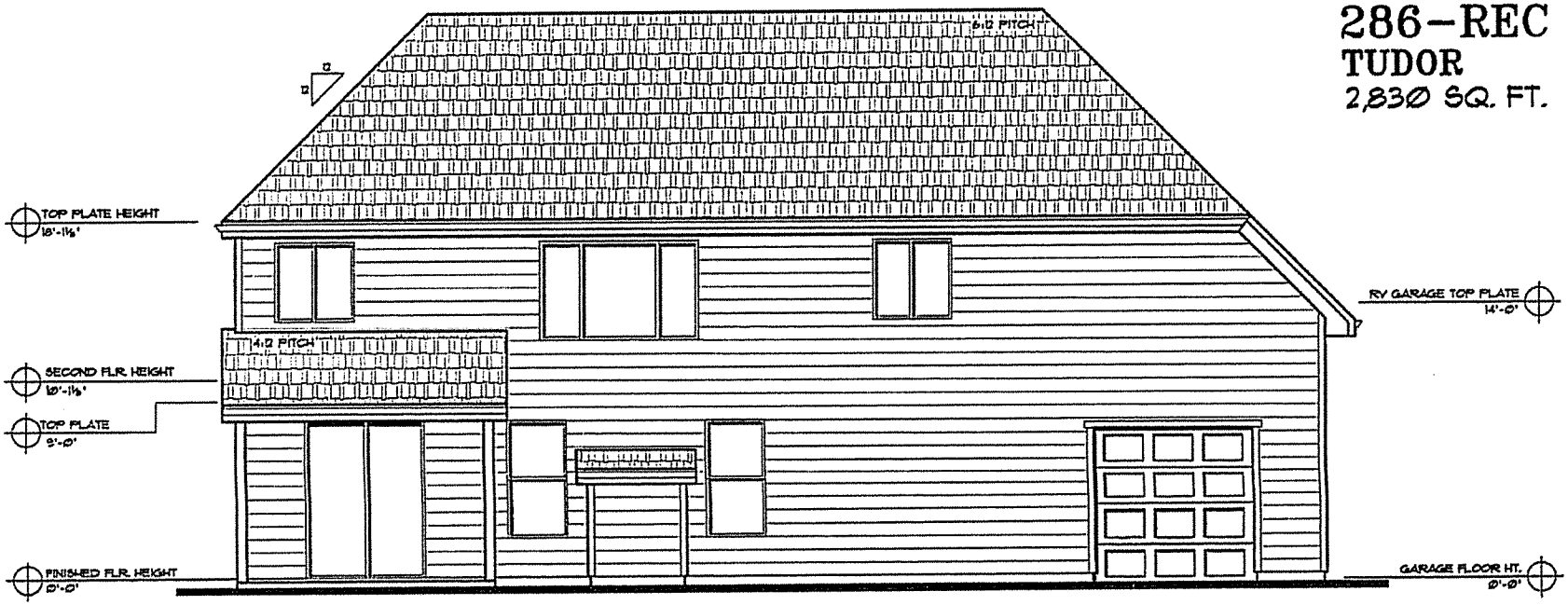
EXTERIOR ELEVATION STANDARD

SHEET No.

1

FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

286-REC
TUDOR
2,830 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	286REC-TUDOR
DRAWN BY:	GF
DATE:	2/4/13
SCALE:	1/4"=1'-0"
FILE:	1114-286-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

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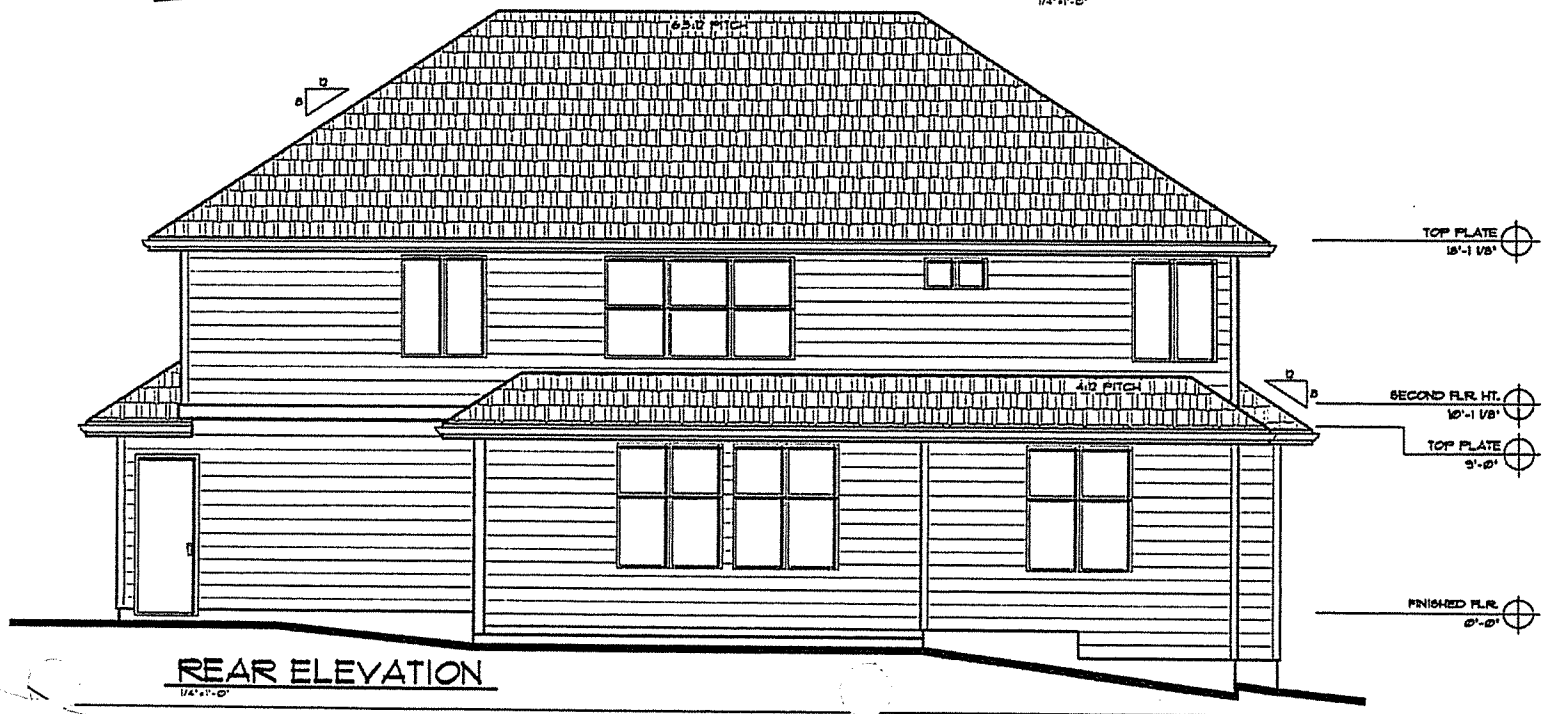
FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

STONE BRIDGE HOMES NW

PLAN No.	SV-54
DRAWN BY:	GF
DATE:	1/28/12
SCALE:	1/4"=1'-0"
FILE:	1690-SV54-1

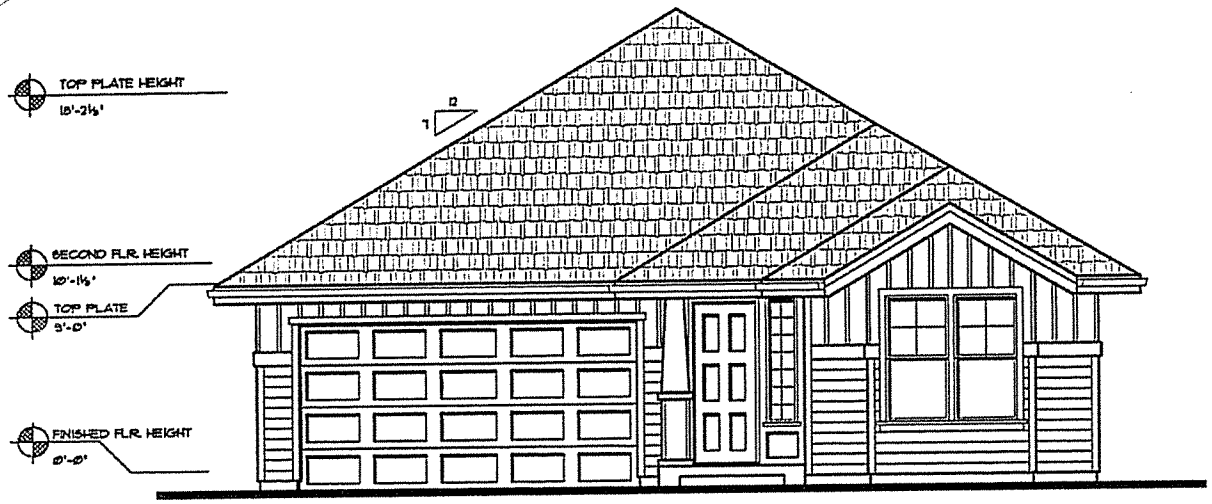
DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

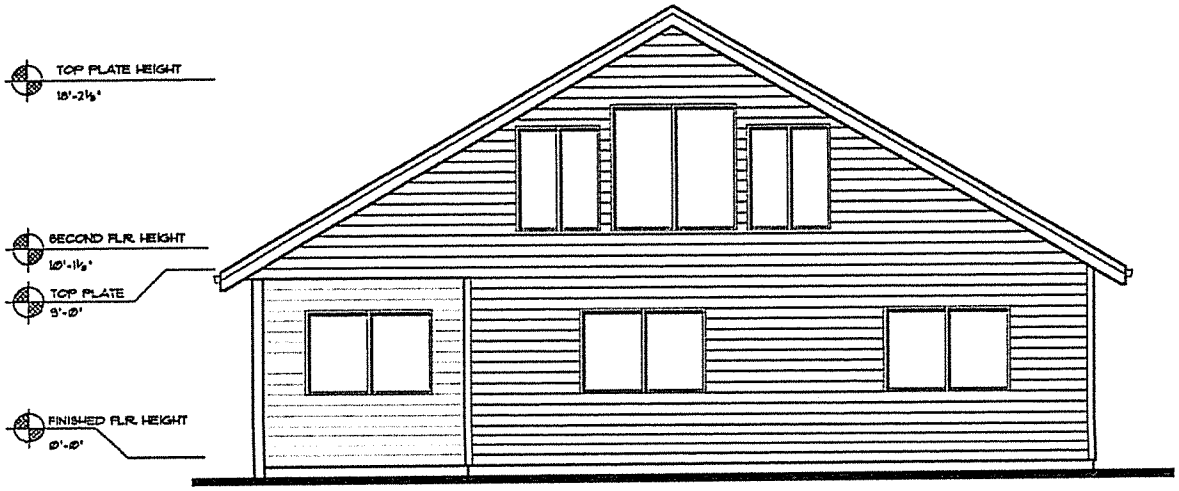
1

SV54
OPTION 12+
3,[illegible] SQ. FT.



COTTAGE ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

Square footage is an estimated figure. It may vary.
All dimensions are approximate estimates. They may be subject to change.

197
COTTAGE
2,594 SQ. FT.

PLAN No.	197-OPTION-1
DRAWN BY:	G.F.
DATE:	10/10/02
SCALE:	1/4"=1'-0"
FILE:	197OP1-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-1

SHEET No.

1

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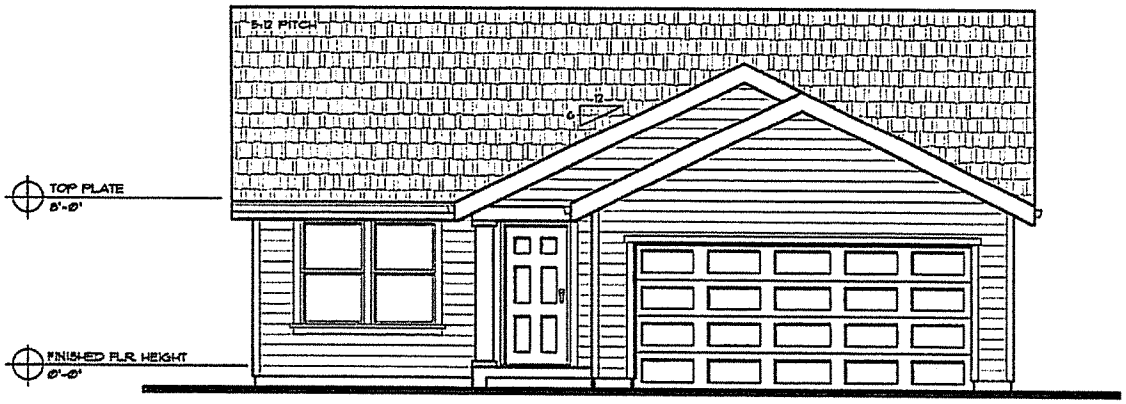
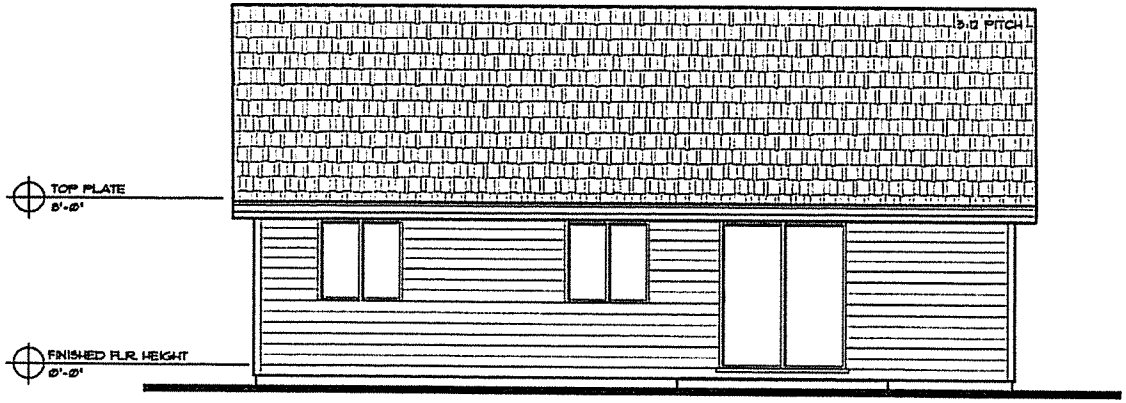
FOR INTERNAL USE ONLY. SUBJECT TO CHANGE.



FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

263S
1,074 SQ.FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	263S
DRAWN BY:	G.F.
DATE:	9/28/11
SCALE:	1/4"=1'-0"
FILE:	263S-1
DRAWINGS:	EXTERIOR ELEVATION
SHEET No.	1

•SQUARE FOOTAGE IS AN ESTIMATED FIGURE, IT MAY VARY.
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•ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.

FRONT ELEVATION
1/4"=1'-0"

PLAN 238
PRAIRIE
OPTION 1
3,248 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	238-OPTION-1
DRAWN BY:	GF
DATE:	12/4/12
SCALE:	1/4"=1'-0"
FILE:	1621-238OP1-1

DRAWINGS:

EXTERIOR ELEVATIONS OPTION-1

SHEET No.

1

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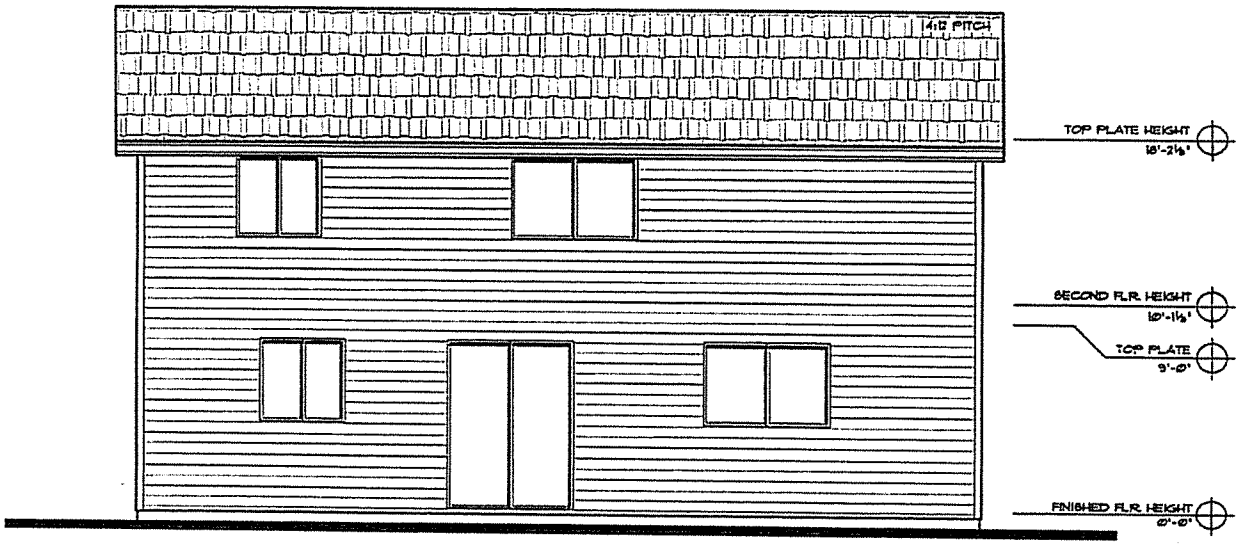
FRONT ELEVATION
1/4"=1'-0" 2,620 SQ. FT.



REAR ELEVATION
1/4"=1'-0"

PLAN 133V
2,575 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	133V
DRAWN BY:	KK
DATE:	10-1-13
SCALE:	1/4"=1'-0"
FILE:	133V-STANDARD-1

DRAWINGS:

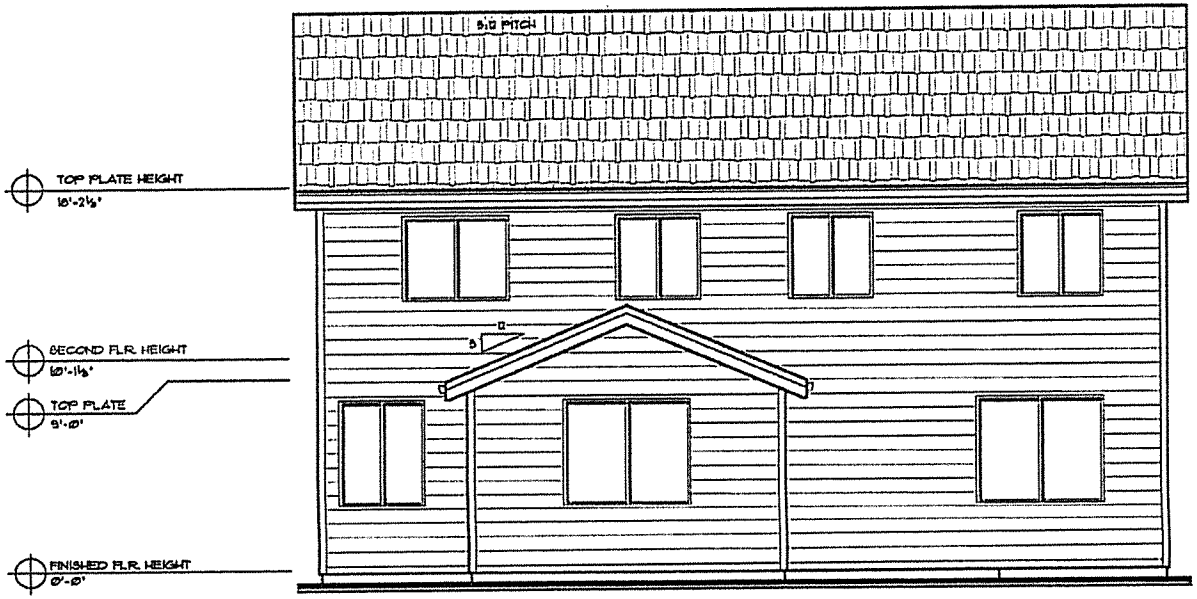
EXTERIOR ELEVATION

SHEET No.

1

FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

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PLAN 17C
OPTION 11
2,975 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	17C
DRAWN BY:	GF/D.BRITT
DATE:	R:8/1/13
SCALE:	1/4"=1'-0"
FILE:	17C-OPT11-1
DRAWINGS:	

EXTERIOR ELEVATION OPTION-11

SHEET No.

1

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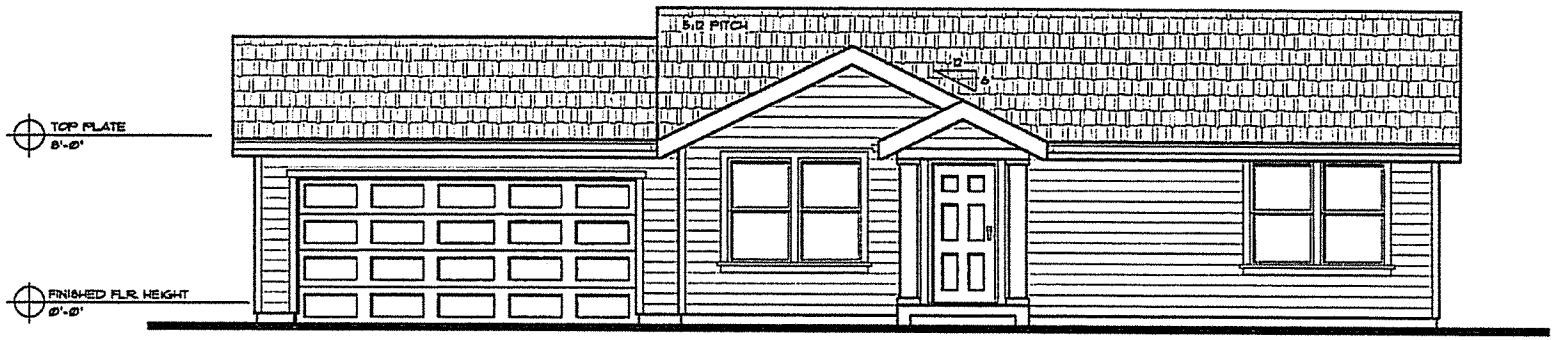
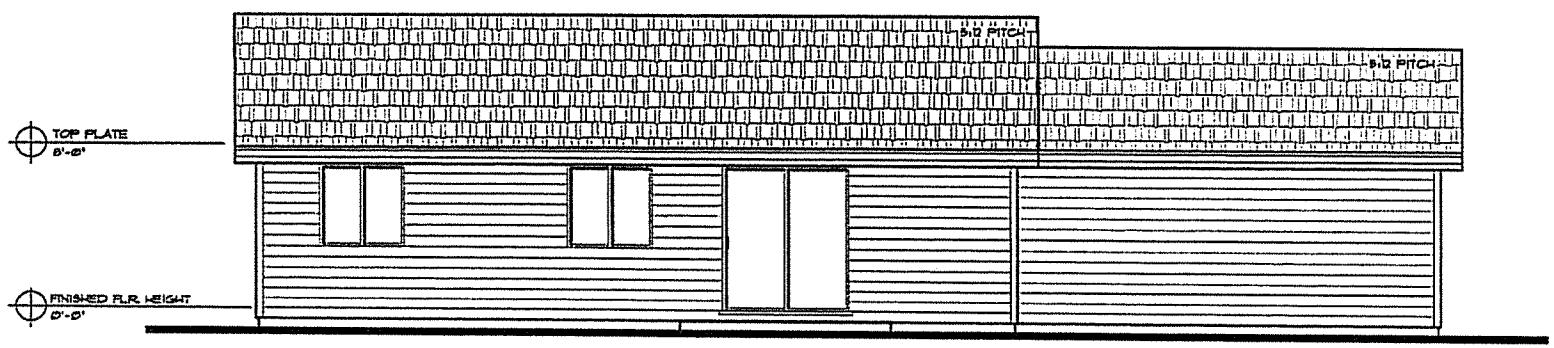


FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

263.SW
1,077 SQ.FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	263.SW
DRAWN BY:	G.F.
DATE:	9/28/11
SCALE:	1/4"=1'-0"
FILE:	263.SW-1

DRAWINGS:

EXTERIOR ELEVATION

SHEET No.

1

FRONT ELEVATION
1/4"=1'-0"

PLAN 272
STANDARD
2,244 SQ. FT.

STONEBRIDGE HOMES NW LLC

PLAN No.	272
DRAWN BY:	G.F.
DATE:	3/16/12
SCALE:	1/4"=1'-0"
FILE:	272-1

DRAWINGS:

EXTERIOR ELEVATION STANDARD

SHEET No.

1

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*ARCHITECURAL DRAWINGS ARE ESTIMATES OF HOW HOME WILL LOOK.

FRONT ELEVATION
1/4"=1'-0"

PLAN 245
OPTION 12
2,875 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	245-OPTION-12
DRAWN BY:	GF/D.BRITT
DATE:	R-9/4/13
SCALE:	1/4"=1'-0"
FILE:	245OPT12-1

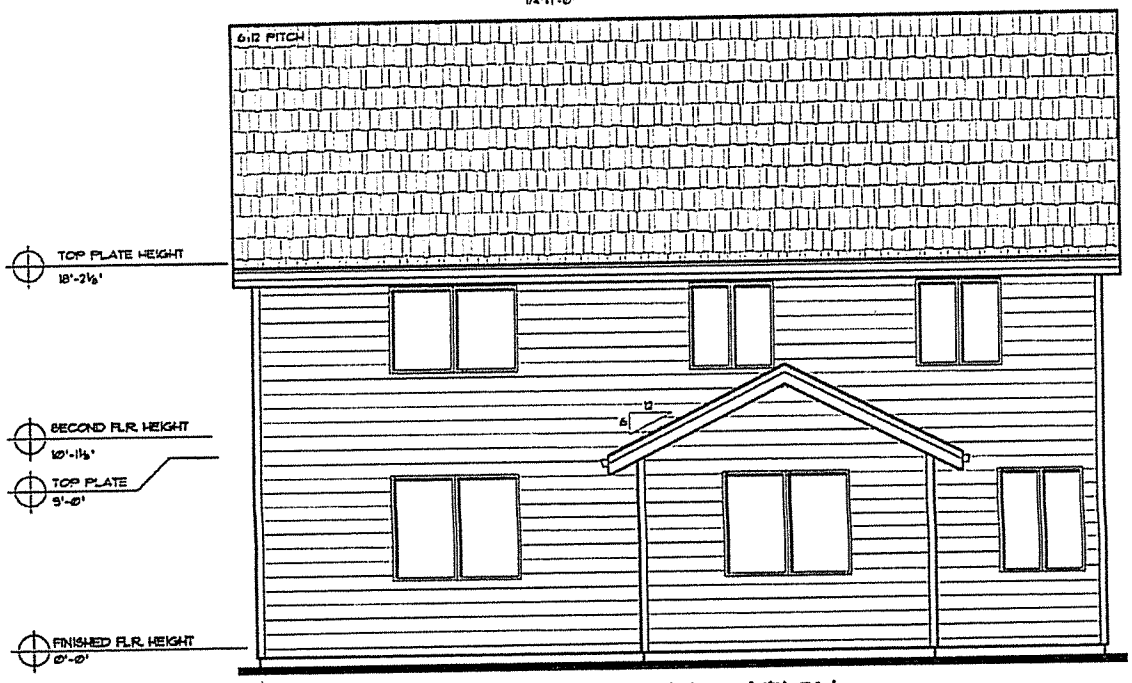
DRAWINGS:

EXTERIOR ELEVATION OPTION-12

SHEET No.

1

FRONT ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"

PLAN 186
OPTION 11
3,475 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	186-OPTION-11
DRAWN BY:	GF/D.BRITT
DATE:	R:8/30/13
SCALE:	1/4"=1'-0"
FILE:	186OPTII-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-11

SHEET No.

1

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FRONT ELEVATION
1/4"=1'-0"

PLAN 246
OPTION 11
2,525 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	246-OPTION-11
DRAWN BY:	GF/D.BRITT
DATE:	R-7/11/13
SCALE:	1/4"=1'-0"
FILE:	246OPT11-1

DRAWINGS:

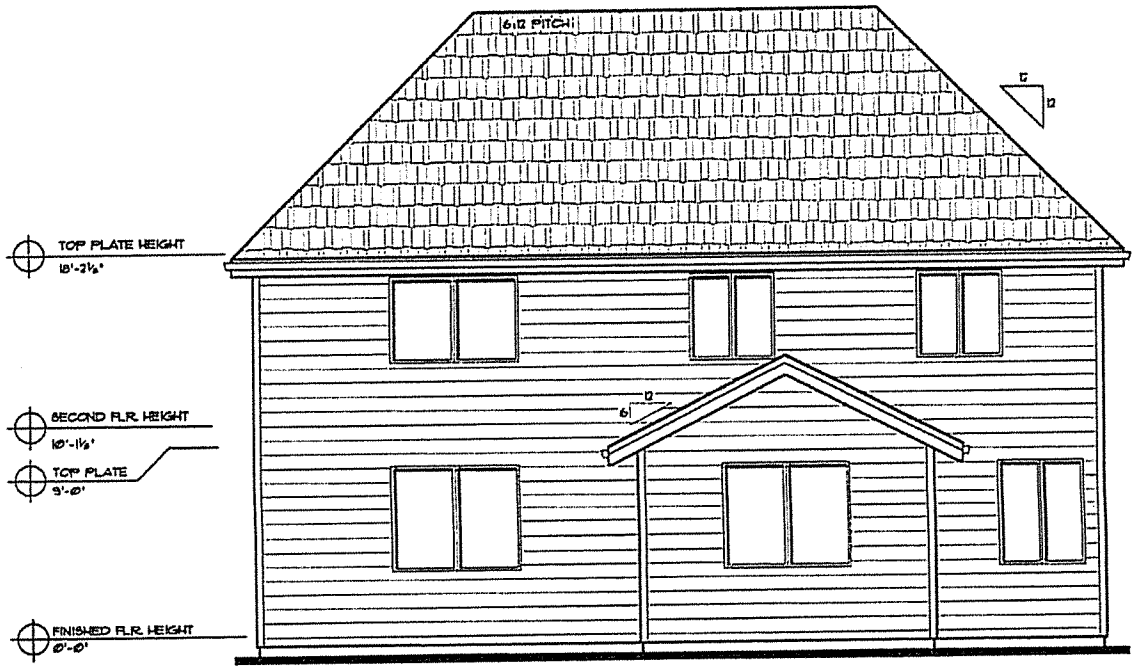
EXTERIOR ELEVATION OPTION-11

SHEET No.

1

FRONT ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

PLAN 186
OPTION 12
3,475 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	186-OPTION-11
DRAWN BY:	GF/DBRITT
DATE:	R:8/30/13
SCALE:	1/4"=1'-0"
FILE:	186OPT12-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-12

SHEET No.

1

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FRONT ELEVATION

1/4"=1'-0"

PLAN 196
OPTION 11
1,900 SQ. FT.

STONE BRIDGE HOMES NW

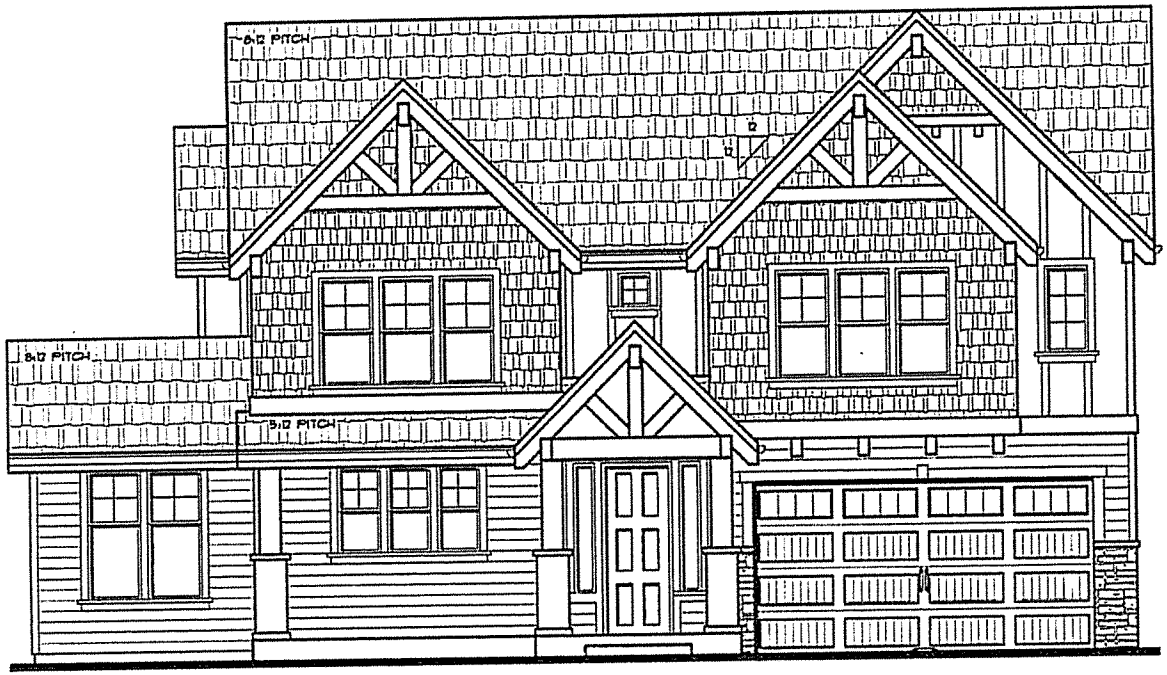
PLAN No.	196-OPTION-11
DRAWN BY:	GF/D.BRITT
DATE:	R:9/3/13
SCALE:	1/4"=1'-0"
FILE:	196OPT11-1

DRAWINGS:

EXTERIOR ELEVATION OPTION-11

SHEET No.

1



FRONT ELEVATION

1/4"=1'-0" 2,786 SQ FT

PLAN 279
OPTION 11
2,786 SQ. FT.

STONE BRIDGE HOMES NW

PLAN No.	PLAN-279
DRAWN BY:	GF/D.BRITT
DATE:	R:7/16/13
SCALE:	1/4"=1'-0"
FILE:	279-OPT.11-1

DRAWINGS:

EXTERIOR ELEVATION OPTION.11

SHEET No.

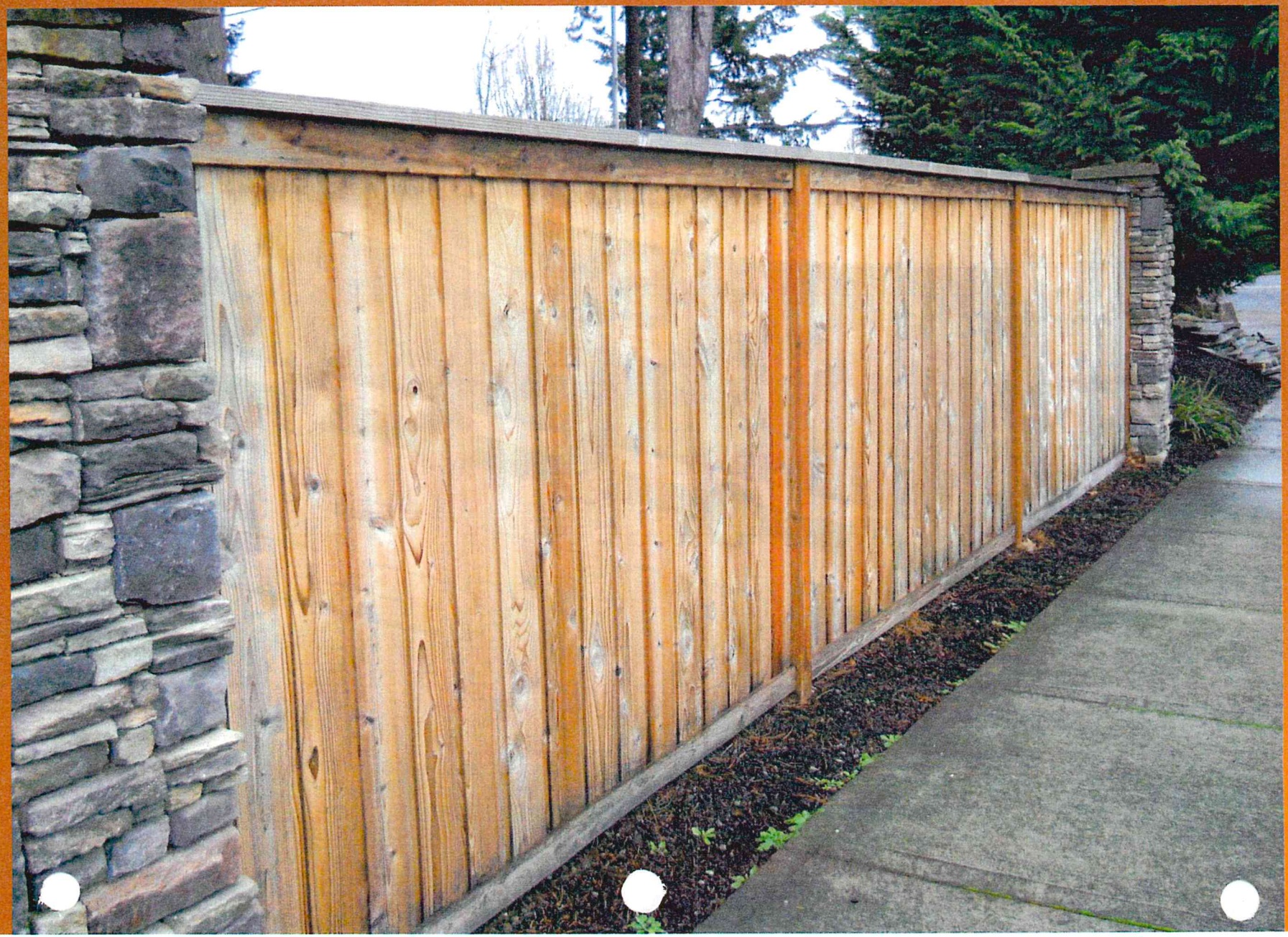
1

SILVERSTONE SUBDIVISION TOT-LOT SCHEMATIC PLAN

AKS ENGINEERING & FORESTRY

05/13/2014

Fencing Detail



ATTACHMENT B

Oregon
John A. Kitzhaber, MD, Governor

Department of Transportation
Region 1 Headquarters
123 NE Flanders Street
Portland, Oregon 97209
(503) 731.8200
FAX (503) 731.8259

9/4/14

ODOT #6198

ODOT Response to Local Land Use Notification

Project Name: Silverstone Subdivision 2014	**Applicant:** AKS
Jurisdiction: City of Forest Grove	**Jurisdiction Case #:** PRD-14-00141
Site Address:	**Legal Description:** 01N 03W 30 **Tax Lot(s):** 01200
State Highway: OR 47	**Mileposts:** 88.51

The site of this proposed land use action is adjacent to OR 47. ODOT has permitting authority for this facility and an interest in ensuring that this proposed land use is compatible with its safe and efficient operation. **Please direct the applicant to the District Contact indicated below to determine permit requirements and obtain application information.**

ODOT RECOMMENDED LOCAL CONDITIONS OF APPROVAL

☒ Concurrent with the construction of Phase IV of the proposed subdivision, pedestrian and bicycle facilities shall be constructed on OR 47 as necessary to be consistent with the local Transportation System Plan and ODOT/ADA standards if they have not been constructed by that time.

☒ An ODOT Miscellaneous Permit must be obtained for all work in the highway right of way. When the total value of improvements within the ODOT right of way is estimated to be $100,000 or more, an agreement with ODOT is required to address the transfer of ownership of the improvement to ODOT. An intergovernmental agreement (IGA) is required for agreements involving local governments and a cooperative improvement agreement (CIA) is required for private sector agreements. The agreement shall address the work standards that must be followed, maintenance responsibilities, and compliance with ORS 276.071, which includes State of Oregon prevailing wage requirements.

☒ An ODOT Drainage Permit is required for connection to state highway drainage facilities. Connection will only be considered if the site's drainage naturally enters ODOT right of way. The applicant must provide ODOT District with a preliminary drainage plan showing impacts to the highway right of way.

A drainage study prepared by an Oregon Registered Professional Engineer is usually required by ODOT if:

1. Total peak runoff entering the highway right of way is greater than 1.77 cubic feet per second; or
2. The improvements create an increase of the impervious surface area greater than 10,758 square feet.

Noise Advisory:

☒ The applicant is advised that a residential development on the proposed site may be exposed to traffic noise levels that exceed federal noise guidelines. Builders should take

appropriate measures to mitigate this impact. It is generally not the State's responsibility to provide mitigation for receptors that are built after the noise source is in place.

Comments:

Washington County is currently developing a project to install a roundabout at the OR 47/David Hill Rd intersection. The City and applicant should continue to coordinate with the project team to limit potential conflicts between the project and the proposed subdivision.

Please send a copy of the Notice of Decision including conditions of approval to:

ODOT Region 1 Planning
Development Review
123 NW Flanders St
Portland, OR 97209

Development Review Planner: Seth Brumley	Phone: 503.731.8234
Traffic Contact: Doug Baumgartner, P.E.	Phone: 503.731.8225
District Contact: Matt Caswell	Phone: 503-986-2849