PAINTED HILLS DEVELOPMENT
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

SPOKANE VALLEY, WASHINGTON

May 2019

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SECTION 1. INTRODUCTION

1.1 INTRODUCTION

The subject site of this Draft Environmental Impact Statement (DEIS) is an approximately 99.3-acre former golf course located in the City of Spokane Valley, referred to herein as the "Painted Hills site." The Painted Hills site can be generally described as within the southeast (SE) quadrant of Section 33, Township 25 North. Range 44 East, Willamette Meridian. (See Figure 1-1: Vicinity Map). The site is primarily vacant. Although no longer in operation and no longer maintained, the former golf course use is evident by the presence of former fairways, greens and other golf course features. Table 1-1 identifies the tax lots that compose the subject site, along with the ownership and current zoning designation of the site. The golf course use terminated in 2013; at the time that the site was purchased by the current owner.

Table 1-1: Painted Hills Site Tax Lots

Tax Lot	Owner	Zoning	Size (Acres)
45334.0109	Black Realty, Inc.	R3	0.87
45334.0108	Black Realty, Inc.	R3	0.87
45334.0113	Northwest Renovators Inc.	R3	0.27
45334.0110	Black Realty, Inc.	R3	0.87
44041.9144	Black Realty, Inc.	R3	8.24
45334.9135	Northwest Renovators Inc.	R3	1.68
45334.0114	Northwest Renovators Inc.	R3	0.60
45336.9191	Black Realty, Inc.	R3	85.07
45334.0106	Northwest Renovators Inc.	R3	0.87
TOTAL			99.34

1.2 BACKGROUND

On July 24, 2015, NAI Black, herein identified as the "applicant" submitted a Planned Residential Development (PRD) application request to the City of Spokane Valley to construct a new mixed-use development that would include single family residential estate lots, standard single-family lots, cottage or townhome units, multi-family units, commercial development, and open space on the 99.3-acre former golf course site. In its review of the application, the City determined that probable significant adverse impacts could result from stormwater and floodwater improvements and traffic generated by the project.

1.3 PUBLIC SCOPING PROCESS

On September 8, 2017, the City issued a determination of significance (DS) for the proposed action that identified that an Environmental Impact Statement (EIS) should be prepared to evaluate the natural environment (ground and surface water), built environment (land use, including relationship to land use plans regarding flood hazard areas) and transportation.

Legend

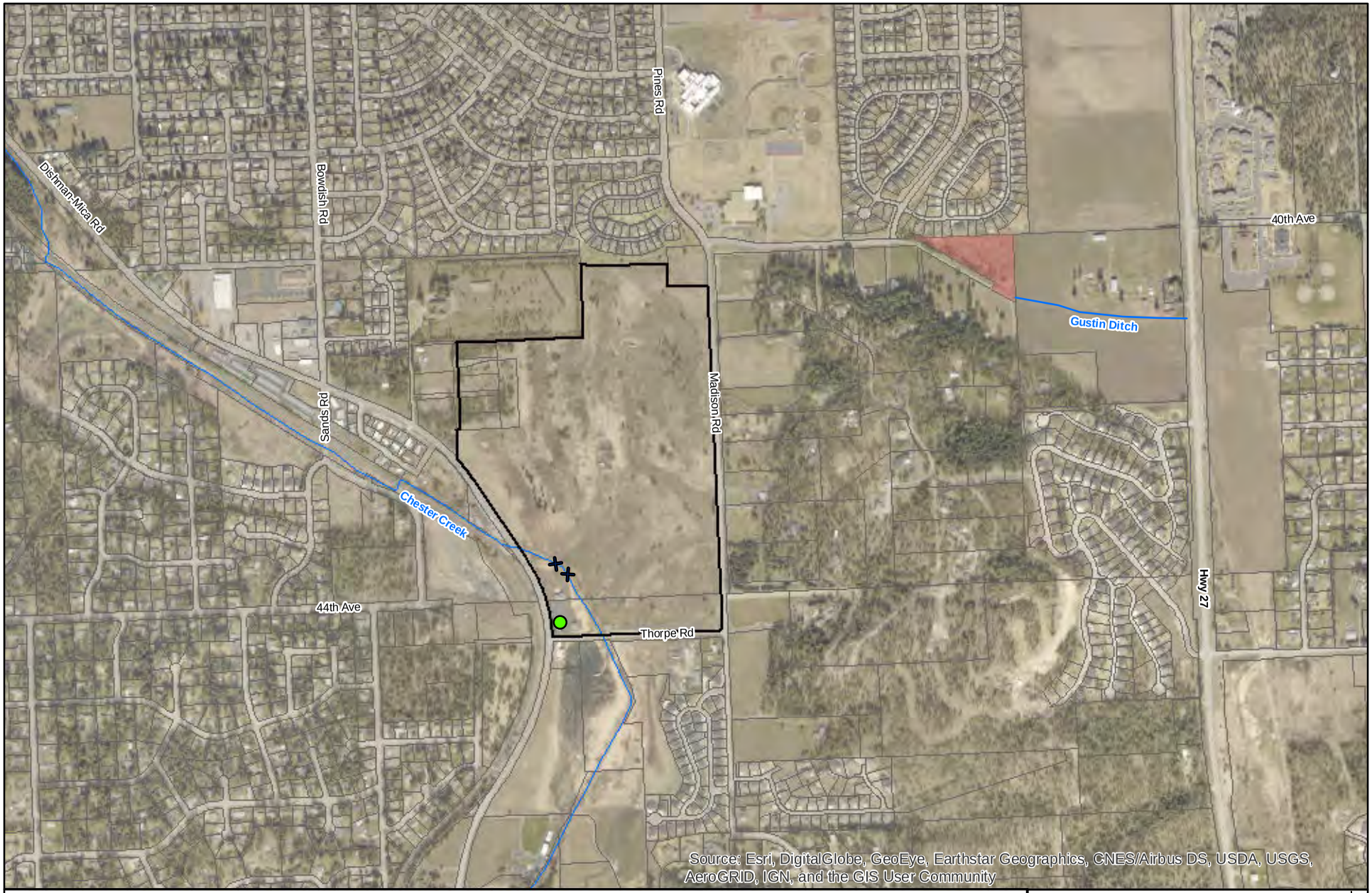
- Residential Development Boundary
- Spokane Valley Boundary

Source: GIS data provided by the City of Spokane Valley and Spokane County.

Figure 1-1
Vicinity Map

Painted Hills Residential Development DEIS

0 0.2 0.4 Miles



Existing Conditions

Triangle Pond Property

Residential Development Boundary

Footbridge

Restaurant

Source: GIS data provided by Whipple Consulting, the City of Spokane Valley, and Spokane County.

Figure 1-2
Existing Conditions

Painted Hills Residential Development DEIS

0 1,000 2,000 Feet

N

Following the September 8, 2017 issuance of the DS, a public scoping period was held including a public scoping meeting on September 25, 2017. From this public scoping comment period, 251 comments were received. In the weeks following this meeting it was determined that certain project modifications could be made that would improve the design of floodwater improvements on the site and simplify the long-term management responsibility for these improvements. Between the Fall of 2017 and July 2018, the applicant refined the design of the Planned Residential Development alternative (Alternative 2 in this DEIS document) and, on August 20, 2018 submitted a supplemental State Environmental Policy Act (SEPA) Checklist that described the refined project design and included additional environmental documentation regarding the environmental effects of the applicant's proposed action. After review of this supplemental SEPA Checklist, the City issued a revised DS, dated October 26, 2018. 124 public comments were received in response to the reissued DS. Comments issued in response to the 2017 and 2018 DS documents are summarized in a table included in Appendix A Public Comment Index.

1.4 SCOPE OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

The DS stated that an EIS should be prepared for the revised project that addresses the natural environment (ground and surface water); built environment (land use, including relationship to land use plans regarding flood hazard areas); and transportation, including importation of fill. The DS further stated that the alternatives to be analyzed in the EIS should include:

Alternative 1 (No Action Alternative): This alternative assumes no development of the site.

Alternative 2 (Planned Residential Development): This alternative represents the PRD project as proposed.

Alternative 3 (Standard Subdivision Alternative): This alternative assumes development under the City's standard subdivision regulations (rather than PRD) for property zoned Single Family Residential Urban (R-3).

After receiving additional public comments in response to the second DS issuance, the City determined that additional environmental elements would be addressed in the document but to a lesser degree than the primary environmental elements listed in the DS. Those additional elements are included in this document and include:

- Air Quality
- Aesthetics
- Biological Resources
- Environmental Health
- Geology
- Historic, Cultural and Archaeological Resources
- Noise
- Public Services
- Recreation

SECTION 2. DRAFT ENVIRONMENTAL IMPACT STATEMENT

FACT SHEET

Proposal/Title:	Painted Hills Development Draft Environmental Impact Statement
Description of Proposal:	Planned development of the former Painted Hills golf course site to include a mix of residential and commercial uses integrated with open space areas.
Description of Alternatives:	Three alternatives are analyzed: the No Action Alternative (Alternative 1), the Planned Residential Development (PRD) Alternative (Alternative 2) and Standard Subdivision Alternative (Alternative 3).
Location:	99.3 acres located at Section 33, Township 25 North. Range 44 East, West Meridian
Project Proponent:	City of Spokane Valley
Tentative Date of Implementation:	July 2019
Name and Address of Lead Agency and Contact:	City of Spokane Valley, Contact: Lori Barlow
Responsible Official:	Lori Barlow
Required Local Approvals:	1. Preliminary Plat/ Planned Residential Development (PRD) 2. Transportation Concurrency Certificate 3. Street Plan Approval, ROW Permits (COSV) 4. Sanitary Sewer Plan Approval (Spokane County) 5. Water Plan Approval (Water District 3) 6. Building Permits (COSV) 7. Landscape Plans (COSV) 8. Grading and Erosion Control Permit (COSV) 9. Spokane Regional Clean Air Agency (SRCAA) & Washington Department of Ecology (WDOE) Air Quality Permits (as applicable) 10. City Floodplain Development Permit & Land Disturbance Permit (COSV) 11. Floodplain Development Permit & Land Disturbance Permit (Spokane County)

Project Manager and Principal Contributors to Final EIS:

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Portland, OR 97205
(EIS Preparation)

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3102 N. Girard Road
Spokane Valley, WA 99212-1529
(Biological Resources)

Whipple Consulting Engineers, Inc.
Contact: Ben Goodmansen
21 S. Pines
Spokane Valley, 99206
(Civil Engineering and Stormwater Hydrology)

Date of Issuance of Final EIS: TBD
Scheduled Date of Final Action:

Location of Copies of Final EIS for Public Review:

PENDING CONFIRMATION FROM CITY

Location of Copies of Final EIS for Purchase and Cost of Copy to Public:

PENDING CONFIRMATION FROM CITY

2.1 PURPOSE AND NEED

The purpose of the proposed action is to relieve the under-supply of housing in the Spokane Valley area and to implement the goals and policies of the City of Spokane Valley Comprehensive Plan. According to the Spokane Association of Realtors Home Sales Report, Spokane County has limited housing inventory; current inventory as of September 2018 is 1,451 single family residential properties, which is about a two-month supply. As evidenced in a Spring 2018 report from the Spokane-Kootenai Real Estate Research Committee, new housing starts in Spokane County in 2017 outpaced the supply of newly platted lots in that same year, with 1,500 single family building permits issued compared to 1,128 newly created lots.

The City of Spokane Valley has long recognized the site of the proposed action as being subject to more intense development. The site is currently designated as Single Family Residential and zoned as R-3. Consistent with the planning goals of the Growth Management Act (GMA) codified in Revised Code of Washington (RCW) 36.70A.020, development should be encouraged "in urban areas where adequate public facilities and services exist or can be provided in an efficient manner." Local plans and policies implement the GMA and limit new urban development to areas within the Urban Growth Area (UGA) and constrain the supply of available land. Further, Spokane County is subject to explicit limitations on UGA expansions as stipulated in Section 10 of a 2016 Settlement Agreement with parties who appealed the county's 2013 UGA expansion. Given the limited ability of Spokane County to expand UGAs and the fact that the proposed development site is one of the largest contiguously owned buildable tracts of residential land in Spokane Valley, the Painted Hills site represents a unique opportunity to provide needed housing supply.

This DEIS has been prepared in accordance with the Washington State Environmental Policy Act (SEPA, RCW 43.21C). This DEIS is not a decision document. The primary purpose of this DEIS is to disclose the potential environmental impacts of implementing the proposed action.

2.2 LAND DEVELOPMENT ALTERNATIVES CONSIDERED

This section describes and compares alternatives considered for this project. This DEIS analyzes two action alternatives and a no-action alternative. It presents a discussion of the potential impacts of Alternative 1: No-Action Alternative, Alternative 2: the Planned Residential Development and Alternative 3: Standard Subdivision Alternative. Only those environmental impact categories where the project impacts were identified as an issue of potential concern in the DS are described in detail. The elements discussed in detail in this chapter are natural environment (ground and surface water); built environment (land use, including relationship to land use plans regarding flood hazard areas); and transportation. Brief summaries of the affected environment, environmental consequences, potential impacts, and mitigation are provided for secondary environmental elements which include air quality, aesthetics, biological resources, environmental health, geology, historic, cultural and archaeological resources, noise, public services and recreation.

2.2.1 Alternative 1: No Action

The No Action Alternative provides a baseline for comparing the effects of the action alternatives. The No Action Alternative assumes that no on-site or off-site improvements occur in conjunction with or as a result of a project on the Painted Hills site.

2.2.2 Alternative 2: Planned Residential Development

Alternative 2 involves the redevelopment of a 99.3-acre former golf course into a Planned Residential Development within the City of Spokane Valley. The site will consist of approximately 42 estate single family residential lots, 206 standard single-family residential lots, 52 cottage-style single family residential lots, 228 multi-family residential units, 52 mixed use multi-family residential units integrated with approximately 13,400 square feet of retail/commercial use, 9,000 square feet of future stand-alone retail commercial use and the preservation of the club house and associated parking as a commercial area. Additionally, the

site will have 30% greenspace totaling approximately 30 acres with trails that include a 10-acre park and wildlife travel corridor. The project will include the construction of streets and sidewalks to access the lots as well as water, sanitary sewer and dry utility facilities to serve each lot. Off-site and on-site storm drainage and channel improvements will be made that will result in the removal of approximately 48 acres of the site from the Federal Emergency Management Agency (FEMA) 1% annual-chance-floodplain (100-year floodplain). Stormwater improvements occurring on the site and on the site frontages will include the replacement of existing culverts under Thorpe Road with a box culvert structure, installation of a concrete lined channel to a pipe system leading to a treatment and disposal bed, and routing and disposal of flood and seasonal flows that cross Madison Rd into a new Painted Hills floodwater management system.

In addition to the on-site and frontage improvements to be completed, Alternative 2 includes replacing the Gustin Ditch located off-site to the northeast of the project site with a 36-inch pipe. This improvement will remove the possibility of the ditch flooding in the future. Additionally, the proposal would deepen the triangle pond detention basin and install 18 drywells in the pond bottom to increase the infiltration capacity of the pond and to further protect against potential flooding of this area west of State Route (SR) 27 and east of the project site. Further details regarding the design and impacts of Alternative 2 are provided in the individual environmental element sections of this EIS.

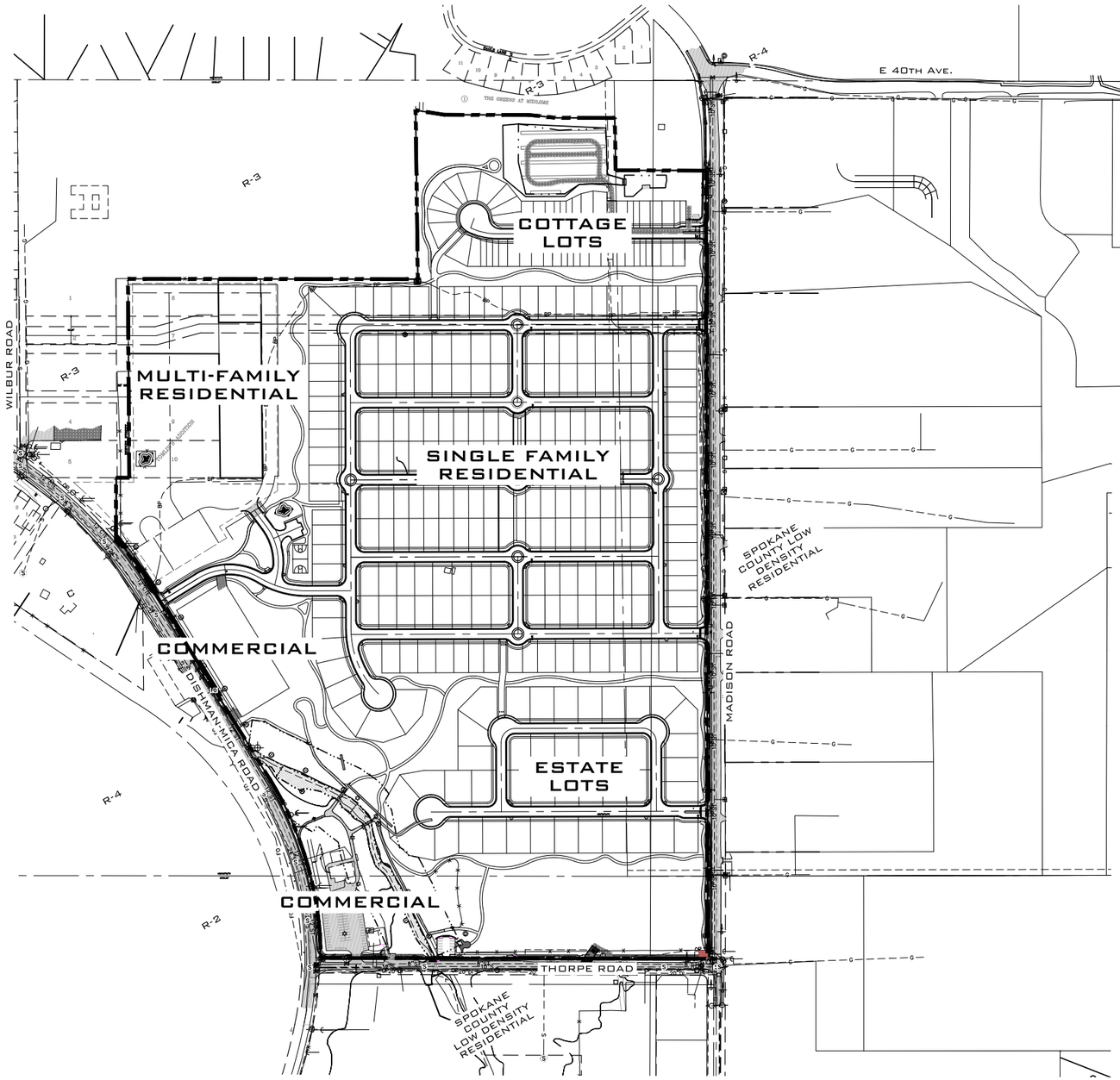
Fronting street improvements along Dishman-Mica Rd, Thorpe Rd and Madison Rd will include curb, gutter, planting strips and/or swales, sidewalks and/or trails. It is expected that, upon the completion of site grading activities that a FEMA Letter of Map Revision (LOMR) will be completed that would also result in the removal of approximately 44-acres of off-site properties from the FEMA 100-year floodplain. Upon completion of the project, approximately 92 acres will be removed from the FEMA 100-year floodplain.

2.2.3 Alternative 3: Standard Subdivision

Alternative 3 represents development of the site as a standard subdivision. As a standard subdivision, Alternative 3 would not include any new non-residential uses and would not apply the 30% open space requirement that is required of Alternative 2 as a PRD. Under Alternative 3, the Painted Hills site would be subdivided into a 543-lot subdivision. The golf course clubhouse would remain in use as a restaurant. Alternative 3 proposes to include six (6) internal east-west public streets (Roads A — F), and eight (8) internal north-south public streets (Roads G — N). The public streets in the development are proposed to connect into the surrounding existing streets with one (1) connection to Dishman-Mica Road, two (2) connections to Thorpe Road, and five (5) connections to Madison Road. Off-site stormwater infrastructure improvements completed under Alternative 2 would also be constructed under Alternative 3. Further details regarding the design and impacts of Alternative 3 are provided in the individual environmental element sections of this EIS.

SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG



LEGEND

PLAT BOUNDARY

2310 EXISTING GROUND CONTOUR (CONTOURS SHOWN AT 1 FOOT INTERVALS)

ZONING

R-2 = SINGLE-FAMILY RESIDENTIAL SUBURBAN DISTRICT

R-3 = SINGLE-FAMILY RESIDENTIAL DISTRICT

R-4 = SINGLE-FAMILY URBAN DISTRICT

N
W E
S

GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1 inch = 200 ft.

VICINITY MAP Figure 2-1 Alternative 2 Site Plan Including Gustin Ditch Improvements

SCALE: 1"=200'

DATUM: NAVD - 88

TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29) – 2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

NO	DATE	BY	REVISIONS
1	3/05/19		COMPLETE UPDATE WITH REVISED FLOOD CONTROL PLAN

SCALE:
HORIZONTAL: 1"= 200'
VERTICAL: N/A

PROJ #: 13-1166
DATE: 3/05/19
DRAWN: BNG
REVIEWED: TRW

- CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- X PLANNING
- LANDSCAPE
- OTHER

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TODD R. WHIPPLE STATE OF WASHINGTON 25462 REGISTERED PROFESSIONAL ENGINEER

PRD PAINTED HILLS
VICINITY MAP
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET P0.1

JOB NUMBER 13-1166

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SE¼, SEC.33, T.25N., R.44E., W.M.
SW½, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

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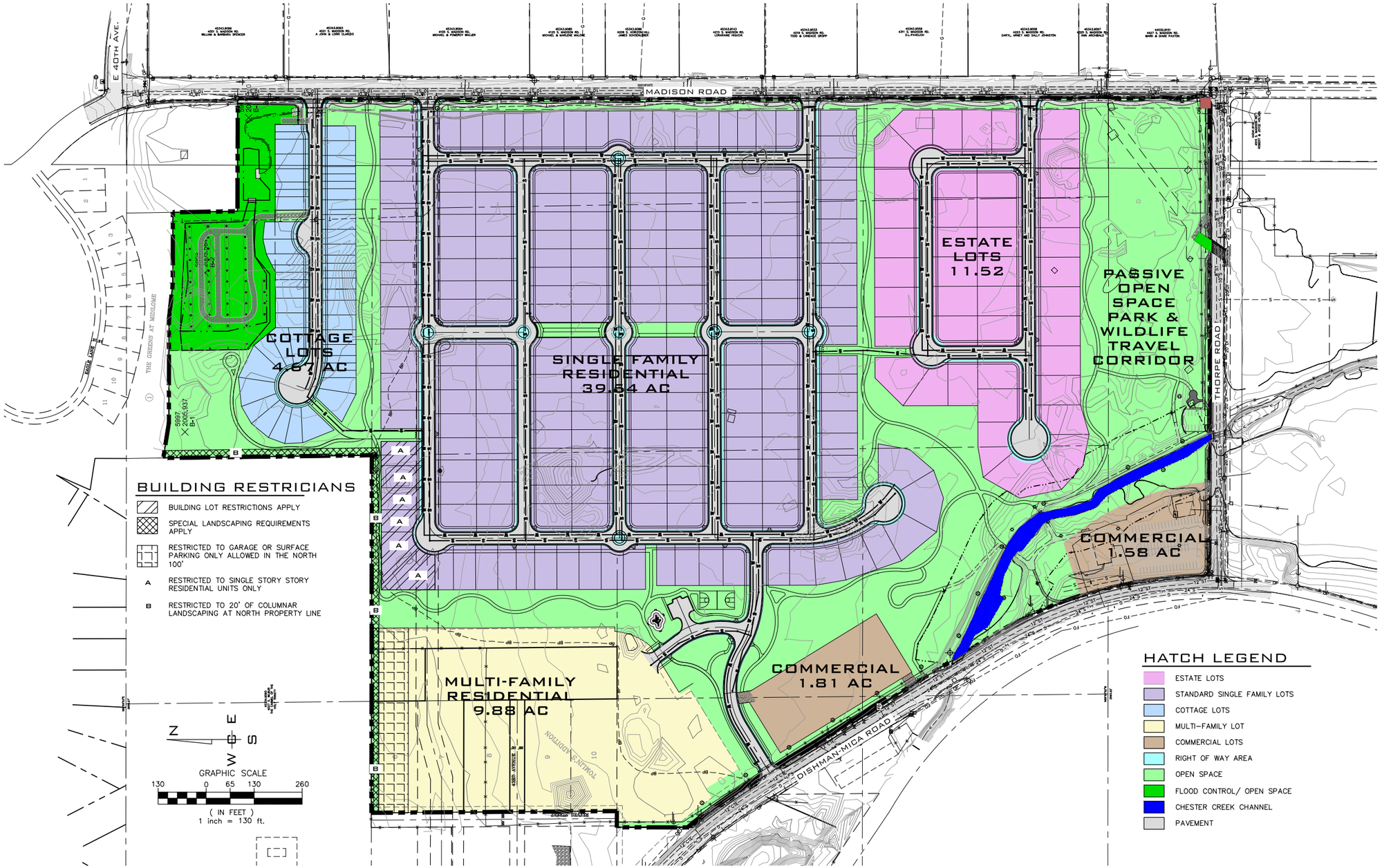
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG



BUILDING RESTRICIANS

- BUILDING LOT RESTRICTIONS APPLY
- SPECIAL LANDSCAPING REQUIREMENTS APPLY
- RESTRICTED TO GARAGE OR SURFACE PARKING ONLY ALLOWED IN THE NORTH 100'
- A — RESTRICTED TO SINGLE STORY STORY RESIDENTIAL UNITS ONLY
- B — RESTRICTED TO 20' OF COLUMNAR LANDSCAPING AT NORTH PROPERTY LINE

N W E S

GRAPHIC SCALE
130 0 65 130 260
(IN FEET)
1 inch = 130 ft.

HATCH LEGEND

- ESTATE LOTS
- STANDARD SINGLE FAMILY LOTS
- COTTAGE LOTS
- MULTI-FAMILY LOT
- COMMERCIAL LOTS
- RIGHT OF WAY AREA
- OPEN SPACE
- FLOOD CONTROL/ OPEN SPACE
- CHESTER CREEK CHANNEL
- PAVEMENT

DEVELOPMENT FEATURES AND RESTRICTIONS Figure 2-2 Alternative 2 Site Plan

SCALE: 1"=130'

DATUM: NAVD - 88

TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

NO.	DATE	BY	REVISIONS
1	3/05/19		COMPLETE UPDATE WITH REVISED FLOOD CONTROL PLAN

SCALE:
HORIZONTAL: 1"= 200'
VERTICAL: N/A

PROJ #: 13-1166
DATE: 3/05/19
DRAWN: BNG
REVIEWED: TRW

- CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- X PLANNING
- LANDSCAPE
- OTHER

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PRD PAINTED HILLS
FEATURES AND RESTRICTIONS
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET P0.11

JOB NUMBER 13-1166

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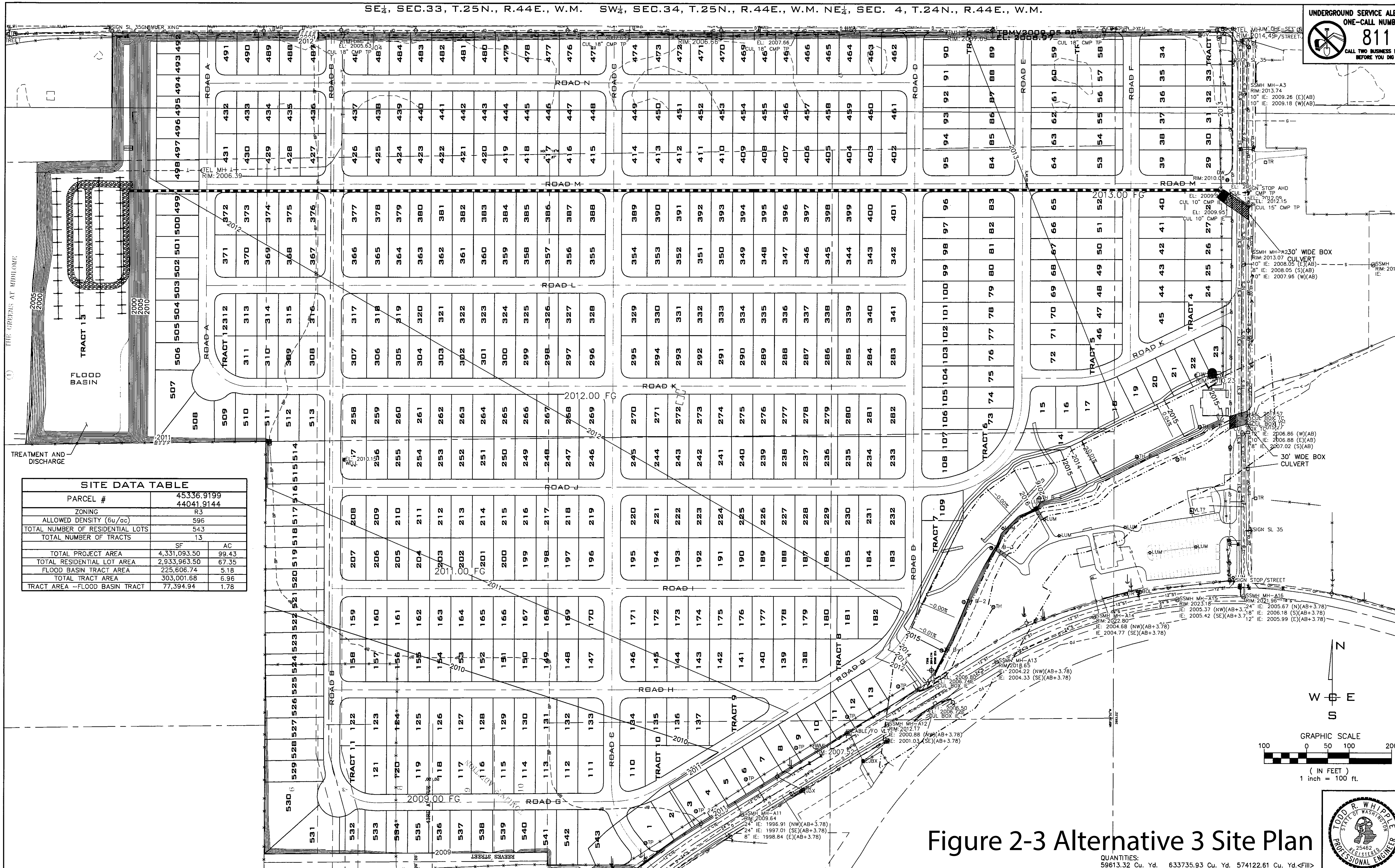

Figure 2-3 Alternative 3 Site Plan

SITE DATA TABLE		
PARCEL #	45336.9199 44041.9144	
ZONING	R3	
ALLOWED DENSITY (6u/ac)	596	
TOTAL NUMBER OF RESIDENTIAL LOTS	543	
TOTAL NUMBER OF TRACTS	13	
	SF	AC
TOTAL PROJECT AREA	4,331,093.50	99.43
TOTAL RESIDENTIAL LOT AREA	2,933,963.50	67.35
FLOOD BASIN TRACT AREA	225,606.74	5.18
TOTAL TRACT AREA	303,001.68	6.96
TRACT AREA -FLOOD BASIN TRACT	77,394.94	1.78

QUANTITIES:
59613.32 Cu. Yd. 633735.93 Cu. Yd. 574122.61 Cu. Yd.<Fill>

DATUM: NAVD - 88

TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

NO.	DATE	BY	REVISIONS

SCALE:
HORIZONTAL: 1"=100'
VERTICAL: N/A

PROJ #: 13-1166
DATE: 12/05/18
DRAWN: SLS
REVIEWED: TRW

CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
X PLANNING
LANDSCAPE
OTHER

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WHIPPLE CONSULTING ENGINEERS
2528 NORTH SULLIVAN ROAD
SPOKANE VALLEY, WA 99216
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PAINTED HILLS
ALTERNATIVE 3 MASS GRADING EXHIBIT
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET 1 OF 2

JOB NUMBER 13-1166

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2.2.4 Mitigation Measures

Mitigation is intended to avoid or to minimize the potential environmental impacts related to the action alternatives that are proposed. For purposes of this analysis the definition of mitigation under SEPA can be found in WAC 197-11-768 where:

> *"Mitigation" means:*
>
> *(1) Avoiding the impact altogether by not taking a certain action or parts of an action;*
>
> *(2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;*
>
> *(3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;*
>
> *(4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;*
>
> *(5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or*
>
> *(6) Monitoring the impact and taking appropriate corrective measures.*

Mitigation measures are addressed in the individual chapter sections devoted to the environmental elements considered in this document.

2.2.5 Permits and Approvals Required for Implementation

It is anticipated that the following local, state and federal permits will be required to implement the development contemplated under Alternative 2.

Local Permits/Authorizations

- Preliminary Plat/ Planned Residential Development (PRD)
- Transportation Concurrency Certificate (Complete dated 2-23-17)
- Street Plan Approval, ROW Permits (COSV)
- Sanitary Sewer Plan Approval (Spokane County)
- Water Plan Approval (Water District 3)
- Building Permits (COSV)
- Landscape Plans (COSV)
- Grading and Erosion Control Permit (COSV)
- Spokane Regional Clean Air Agency (SRCAA) & Washington Department of Ecology (WDOE) Air Quality Permits (as applicable)
- City Floodplain Development Permit & Land Disturbance Permit (COSV)
- Floodplain Development Permit & Land Disturbance Permit (Spokane County)

State Permits/Authorizations

- Construction Stormwater General Permit (CSWGP)

Federal Permits/Authorizations

- FEMA CLOMR and LOMR

SECTION 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 NATURAL ENVIRONMENT (GROUND AND SURFACE WATER)

The following section provides a description of the existing conditions of ground and surface waters within the study area and the potential for the project alternatives to affect ground and surface water quality. The ecological features of Chester Creek including habitat functions of the creek and the associated riparian buffer are described in Section 3.4.3.1 Biological Resources.

3.1.1 Affected Environment

Existing Hydrologic Conditions

The project site is in the Chester Creek basin in the southeastern portion of Water Resource Inventory Area (WRIA) 57. Chester Creek originates south of the project site in an area dominated by agricultural lands and rural home sites. The creek flows generally northward, crosses through the southwest corner of the project site through a concrete box culvert and terminates in an infiltration basin located approximately 4 miles south of the Spokane River and northwest of the project site adjacent to Dishman Mica Road. Peak flooding in the Chester Creek basin typically occurs in winter, unlike the Spokane River system where flooding typically occurs in early spring. Warm winds and rain can melt snow rapidly, leading to short-duration runoff flooding during winter storms (Michael Baker Inc. 1990). During flood events, Chester Creek has been noted to overtop its banks south of the project site and floodwaters collect in topographically low areas east of the main channel (See Figure 3-1, Chester Creek 1997 Flood Event - Aerial Photo). These floodwaters from south of Thorpe Road eventually reach the project site through three 15-inch culverts located under Thorpe Road approximately 500 feet east of where the main channel of Chester Creek crosses Thorpe Road. Under higher flow conditions water also flows over the road and onto the project site at this same location as shown in Figure 3-2.

Figure 3-1: Chester Creek 1997 Flood Event – Aerial Photo[1]

Figure 3-2: Flooding West of Chester Main Channel (Viewing Eastward on Thorpe)[2]

[1] Photo source: WEST Consultants, Inc.; Originally provided by Spokane County. Photo date and flood event type unknown.
[2] Photo taken by Whipple Engineering on March 14, 2017.

Figure 3-3: Flooding East of Chester Main Channel (Viewing Westward on Thorpe)[3]

Spokane Rathdrum Prairie Aquifer

The Spokane Rathdrum Prairie Aquifer, which is the primary water source for over 700,000 people in the Spokane region, underlies the project site. The aquifer is a large underground formation consisting of gravels, cobbles, and boulders and is reported to store 10 trillion gallons of water (Spokane Valley-Rathdrum Prairie Aquifer Atlas, 2009). The aquifer extends from western Idaho to the eastern area of Washington State. This underground formation extends south from near the Bonner County-Kootenai County line in Idaho west of Lake Pend Oreille. From there is extends south toward Coeur d'Alene Lake and then west into Washington through the Spokane River Valley as shown in Figure 3-5. The aquifer follows the valley and terminates near the confluence of the Spokane and Little Spokane Rivers west of the City of Spokane. Water is contributed to the aquifer by adjacent lakes, streams, the Spokane River, and precipitation. This highly permeable area of deposits is covered in many locations by a relatively thin topsoil layer and is therefore susceptible to pollution. The Spokane Rathdrum Prairie Aquifer was designated a Sole Source Aquifer in 1978.

[3] Photo taken by Whipple Engineering on February 17, 2017.

On the project site the aquifer is overlain by a relatively slow-draining topsoil layer. Groundwater depths vary on the site. Multiple geotechnical borings have been conducted on the site by Inland Pacific Engineering Company (IPEC). Field investigations and borings have been taken in different locations and at different times of the year. Geotechnical borings were taken at multiple times between April and October 2014 at locations immediately adjacent to Chester Creek along the site. These borings found groundwater depths ranging from 7.5 to 18 feet, with shallower depths closer to Thorpe Road. (IPEC, Feb 12, 2015 / Revised Aug 29, 2016) Borings taken up to a depth of 25-feet near the Chester Creek crossing of Dishman-Mica failed to reach the water table. Geotechnical borings taken in January 2015 further found groundwater depths ranging from 11 to 47 feet throughout the south-central portion of the site. (IPEC, July 23, 2016) Additional borings taken in March 2016 at the north end near the planned stormwater infiltration facility found depths of 71-feet and deeper. Therefore, the composite of investigations completed for the site indicate a moderately deep to very deep groundwater table profile across the site, with the deepest locations at the north end of the site near the location of the planned stormwater infiltration facility.

Current Drainage Features

- Triangle Pond
- Painted Hills Site
- Culvert
- Stream/ Stormwater Flow
- Direction of Flow

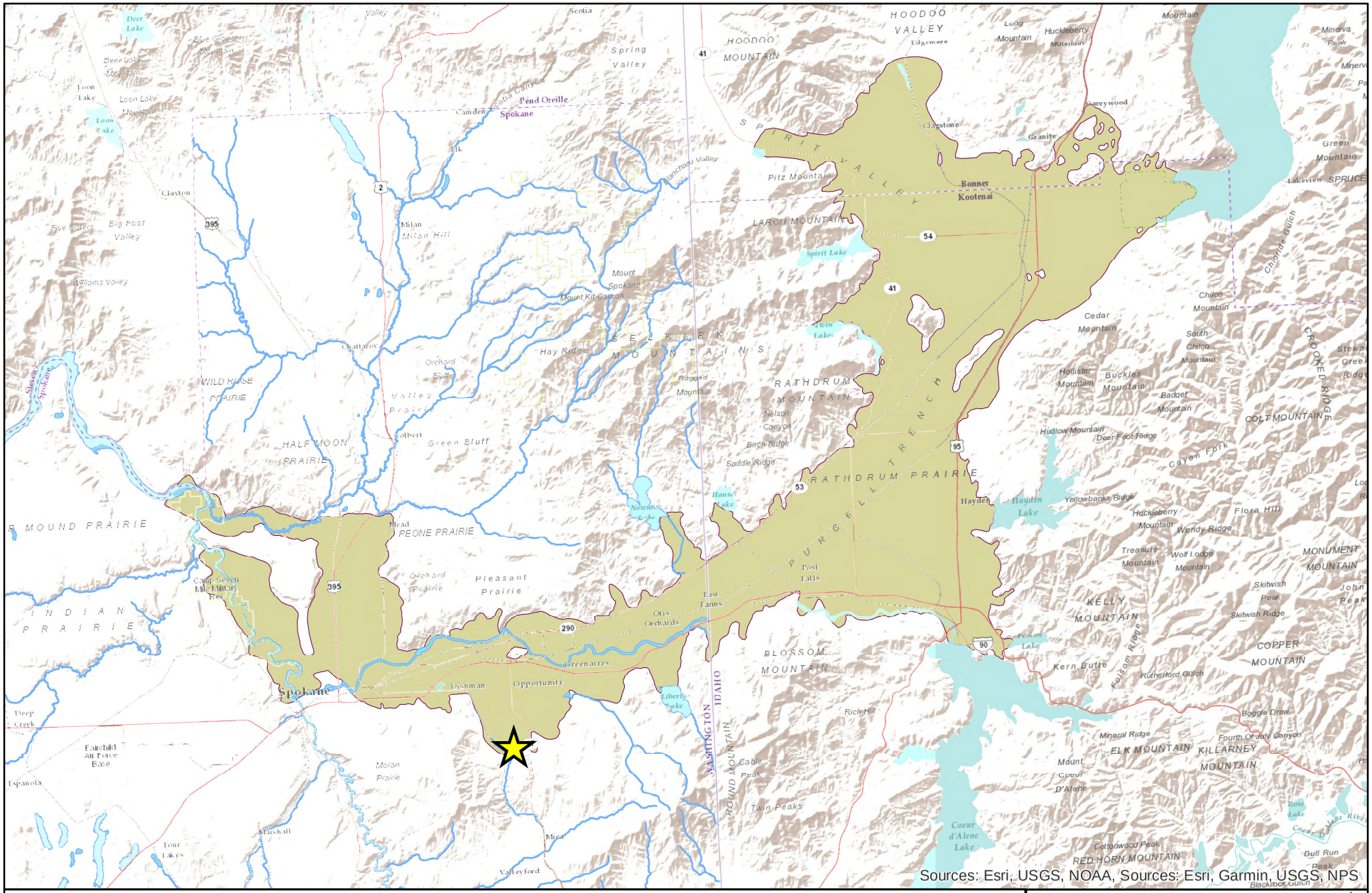
Source: GIS data provided by Whipple Consulting, the City of Spokane Valley, and Spokane County.

Figure 3-4
Existing Drainage Features- Site & Off-site

Painted Hills Residential Development DEIS

0 1,000 2,000 Feet

N



Legend

- Water Bodies
- Aquifer Boundary
- Painted Hills Site

Source: GIS data provided by Spokane County and USGS, NOAA, ESRI, and NPS.

Figure 3-5
Spokane Valley - Rathdrum Prairie Aquifer

Painted Hills Residential Development DEIS

0 5 10 Miles

3.1.2 Environmental Consequences

3.1.2.1 Alternative 1 – No Action

Under Alternative 1 there will be no physical improvements on-site or off-site that would affect stormwater flows or change ground conditions. Floodwaters that currently reach the project site will continue to reach the site and will remain on site until they are able to infiltrate to the aquifer.

Under Alternative 1 there will be no impacts to the channel of Chester Creek. Floodwaters will continue to reach the site as they currently do and will remain onsite until they are able to infiltrate naturally to the underlying Spokane Rathdrum Prairie Aquifer. Because no change to ground conditions would occur, Alternative 1 would not result in any effects on the Spokane Rathdrum Prairie Aquifer.

3.1.2.2 Alternative 2 – Planned Residential Development

Under Alternative 2 the widening of Thorpe Road to meet City road standards will require a 15-foot extension of the Chester Creek bridge. Additionally, a new box culvert will be installed at Thorpe Road in the location where three 15-inch pipes convey stormwaters onto the Painted Hills site from the property to the south. Floodwater that enters the project site under this alternative will be collected in a series of pipes and swales and will infiltrate into the Spokane Rathdrum Prairie aquifer via an engineered infiltration basin. No change in volumes of water that reach the aquifer via the project site are anticipated to occur under Alternative 2.

Under Alternative 2 there would be no direct impact to the channel of Chester Creek from the widening of Thorpe Road.

Under Alternative 2 there would be no impact to the volume of the Spokane Rathdrum Prairie aquifer. Water that currently recharges the aquifer would continue to recharge the aquifer through permeable areas within the project site and through the infiltration pond that will be installed in the northern limits of the site.

3.1.2.3 Alternative 3 – Standard Subdivision

Under Alternative 3, as with Alternative 2, the widening of Thorpe Road to meet City road standards will result in an additional 15 feet of the main channel of Chester Creek to be bridged by the new roadway surface.

As described for Alternative 2, under Alternative 3 floodwater that enters the project site will be collected in a series of pipes and swales and will infiltrate into the Spokane Rathdrum Prairie aquifer via an engineered infiltration basin. No change in volumes of water that reach the aquifer via the project site are anticipated to change under Alternative 3.

As described for Alternative 2, under Alternative 3 there would be no direct impact to the channel of Chester Creek from the widening of Thorpe Road.

Under Alternative 3 there would be no impact to the Spokane Rathdrum Prairie aquifer. Water that currently recharges the aquifer would continue to recharge through permeable areas and through the infiltration pond installed at the northern limits of the site.

3.1.3 Mitigation Measures

Alternative 1

No mitigation measures would be employed with Alternative 1 as no impacts would result

Alternative 2

Stormwater quality and quantity management methods will be employed consistent with the Spokane Regional Stormwater Manual (SRSM). These may include the installation of grassed percolation areas, evaporation ponds, drywells and gravel galleries depending upon soil types at the locations of the proposed facilities. Stormwater management methods from the Eastern Washington Low Impact Design (LID) manual or LID ponds may be employed to minimize the extent of runoff from new on-site impervious surfaces created with the on-site development.

Alternative 3

Stormwater quality and quantity management methods consistent with those identified for Alternative 2 shall be employed.

3.1.4 Cumulative Effects

Because on-site and regional development will be required to employ stormwater quality and quantity management measures consistent with the SRSM, no cumulative effects are anticipated.

3.2 BUILT ENVIRONMENT (LAND USE AND FLOOD HAZARD AREAS)

3.2.1 Affected Environment

Land Use/Zoning

The current land uses on and adjacent to the site include a mix of dense residential development on former agricultural land, remaining undeveloped small tracts of agricultural land, and forested land with varying densities of residential development. The site is currently a non-operating golf course, and the former club house has been repurposed as a commercial restaurant.

The current zoning classification is R-3, Single Family Residential, and the current Comprehensive Plan designation of the Painted Hills site is LDR, Low Density Residential.

From the north property line, dense residential development extends northward into the City. A church and residential development border the Painted Hills site at the NW corner. A Central Valley School district campus including University High school, Chester Elementary School and Horizon Middle School is located northeast of the site. From the east property line (S. Madison Rd) hay fields and pasture extend 250-500 feet toward the toe of the surrounding forested slopes. Low density rural residential development extends east up the forested hillsides. Commercial and single-family residential development extends south from Thorpe Road except for the Chester Creek drainage and associated flood plain areas which are mainly forested and small tract agriculture. Undeveloped forested hillsides extend about 1,200 feet east to the densely developed Ponderosa neighborhood. A mixture of commercial and residential land uses extends NW along Dishman-Mica Road.

Sources of Flooding

Floodwaters have been known to enter the project site from two separate locations: 1) from a split flow path originating from the main channel of Chester Creek south of the project site (known as the Golf Course Overflow Reach), and 2) from the hills to the east of Madison Road which borders the eastern boundary of the subject property. The effective FEMA Flood Insurance Study (FIS), as shown on Figure 3-6, indicates that floodwater could enter the site from a third location during the 1% annual-chance-flood event (100-year flood). Based on the FIS, floodwaters originating from an unnamed tributary to Chester Creek near SR 27 could potentially reach the project site from the northeast.

Floodwater enters the project site from the south when the main channel of Chester Creek over flows its banks approximately 3,000 feet upstream (south) of Thorpe Road. This floodwater flows north along a topographically low area east of the main channel of the creek and reaches the project site through three 15-inch culverts located under Thorpe road approximately 500 feet east of where the main channel of Chester Creek crosses Thorpe Road. Under higher flow conditions water also flows over the road and onto the project site at this same location.

The floodwater originating from south of the project site does not rejoin the mainstem of Chester Creek due to topography and the presence of a small on-site levee system located along the right bank of the main channel, as well as the Dishman-Mica Road embankment located north of the levee. Instead, the floodwater remains on the site until it infiltrates (WEST 2016).

Existing Floodplain

- Floodway
- 1% Annual Chance Flood Hazard (100-year Floodplain)
- 0.2% Annual Chance Flood Hazard (500-year Floodplain)

Source: GIS data provided by West Consultants, Inc., the City of Spokane Valley, and Spokane County.

Figure 3-6
Existing FEMA Mapped Floodplain Areas

Painted Hills Residential Development DEIS

0 1,000 2,000 Feet

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Runoff also reaches the project site from the east. Water from the hillside above and east of Madison Road flows to a flat area adjacent to the east side of Madison Road and is conveyed onto the project site through four 15inch culverts (a fifth culvert exists but does not convey water onto the site as the outlet is buried), (Personal Communication with Ken Puhn, WEST Consultants 2018). The area east of Madison Road is included in the mapped FEMA 100-year floodplain as shown on Figure 3-6.

There are no natural outlets for flood water once it reaches the project site. Once the site is inundated, water remains until it can infiltrate to the aquifer below. Depending upon the amount of floodwater present, the southern portion of the project site can remain flooded for up to 40 days. (Dawes 2019)

An unnamed tributary to Chester Creek near Highway 27 east of the site currently conveys stormwater flows towards the site via a 36" culvert (which currently limits flow volume capacity) and this culvert empties into a ditch that flows west across the Gustin property (Parcel No. 45344.9108). The floodwater flows through the ditch and into the old borrow pit within the triangular parcel located northeast of E 40th Avenue (Parcel No. 45343.9052). The existing ditch has been maintained over the years by the property owner (Gustin) to ensure that whatever floodwater that comes out of the culvert under Highway 27 will be conveyed to the existing triangle detention pond. This off-site area is included in the mapped FEMA 100-year floodplain. The south embankment of the perched ditch is considered by FEMA to be a levee that is not certified to contain the 100-year flood, therefore the FEMA FIS also includes mapping that represents a failure of the south bank during in which floodwaters move south to a lower elevation and then flow west to the project site, bypassing the triangle parcel pit.

FEMA Floodplain Designation

FEMA's 100-year floodplain designation has both regulatory and financial implications that affect development. From a regulatory perspective, any development within the 100-year floodplain in Spokane Valley triggers review under Spokane Valley Municipal Code (SVMC) Section 21.30 (Floodplain Regulations). For properties within unincorporated Spokane County, floodplain development triggers review under Spokane County Code (SCC) Section 3.20 (Flood Damage Protection). These regulations stipulate measures that must be taken to change site grades within a floodplain including compensatory measures to mitigate potential off-site flooding if fill is proposed within a floodplain. The regulations also include floodproofing measures for new structures in the floodplain and other development standards. Adoption of these local standards is necessary for a community to participate in FEMA's National Flood Insurance Program (NFIP) which enables a community to have access to flood insurance. If a property can successfully be removed from FEMA's mapped 100-year floodplain through FEMA's Letter of Map Revision (LOMR) process, it can be relieved of both the regulatory burden of compliance with the local floodplain ordinance and also of the financial burden of the requirement to obtain flood insurance, which is a requirement of any Federal Housing Authority (FHA)-insured mortgage.

Due to the lack of an outlet, and the potential for floodwaters to enter the site from two separate locations, the project site is designated by FEMA as a compensatory storage area in the 2010 Flood Insurance Study (FEMA 2010). Additionally, much of the project site is included in the

mapped FEMA 100-year floodplain. See Figure 3-6, Existing Mapped FEMA Floodplain Areas.

The overall purpose of the "compensatory" requirement is to ensure that development activities do not cause an adverse impact on flood elevations within the designated compensatory storage area, or upstream or downstream of the development. The designation is intended to ensure that there is no increase in the volume of water reaching the downstream sites due to reduced infiltration capacity or due to fill within the area that could cause an increase to flood elevations on neighboring properties.

Under the compensatory storage area designation, any loss of flood storage capacity on the site due to placement of fill must be mitigated with an equivalent compensatory volume of storage or through a reduction in flows such that the net condition causes no adverse impact to the base flood or floodway elevations within the storage area. In addition, loss of infiltration capacity due to placement of fill or impervious surfaces must be mitigated in such a way that the decrease in infiltration capacity will cause no adverse impact to the base flood or floodway elevations within or upstream or downstream of the storage area. In summary, development activities within a compensatory storage area must be compensated or mitigated to ensure no adverse impacts to flood levels.

3.2.2 Environmental Consequences

3.2.2.1 Alternative 1 – No Action

Under Alternative 1 there will be no modifications to the existing system of culverts and ditches that convey floodwater onto the project site. There will be no change in the mapping of the 100-year flood plain on-site or off-site and the project site will maintain its FEMA compensatory storage area designation. Under this alternative when Chester Creek overtops its banks south of the project site, floodwaters will potentially inundate the property south of Thorpe Road and flow under, and potentially over Thorpe Road to reach the project site. Floodwaters that reach the site from the south will reside on the project site and on the property to the south, and naturally infiltrate to the Spokane Valley-Rathdrum Prairie aquifer.

No impacts to land use or the extent of the 100-year floodplain are anticipated under Alternative 1 because no alterations will be implemented on or adjacent to the project site. Therefore, all properties that are currently subject to the floodplain regulations and the National Flood Insurance Program (NFIP) will remain as currently mapped by FEMA.

3.2.2.2 Alternative 2 – Planned Residential Development

3.2.2.2.1 Proposed Action

Under Alternative 2 floodwaters will be controlled and managed, and compensatory storage requirements will be addressed on-site through a combination of enhanced conveyance facilities (culverts and pipes), infiltration galleries, and imported fill.

Under Alternative 2 overflows from the Chester Creek channel on the south side of Thorpe Road will be conveyed north under the road through a new 30-foot by 3-foot deep box culvert with capacity to pass 500-year flood flows along the Golf Course Overflow Path without overtopping Thorpe Road. This new box culvert will replace the existing set of three, undersized 15-inch culverts. On the north side of the new box culvert floodwater will enter an open channel that connects to a sloped headwall holding two 48" concrete

pipes. These pipes will have capacity to convey flood volumes up to the 500-year flood. The two 48" pipes will extend north for approximately 2,100 feet along Madison Road, and connect to each of the existing 18" culverts in Madison Road. These connections will allow the design flow rate of 15 cfs from the Madison hills to be added to the 91 cfs, for a total design flow rate of 106 cfs. The two 48" pipes will end at a vertical headwall where the floodwater will release onto a concrete pad and flow across a level spreader into a sloped, 269 cfs capacity biofiltration swale. Suspended solids in the floodwater will be filtered out by tall grasses planted in the biofiltration swale. At the end of the biofiltration swale the water will enter a settling pond where additional sediments will drop out. Water will be retained in the settling pond until the pond depth exceeds one foot, at which point the water will flow over a 20-foot-wide rock weir into an infiltration pond that is 2 feet below the elevation of the rock weir.

Floodwater will begin to infiltrate as soon as it reaches the highly permeable infiltration basin floor. Once the water level in the infiltration pond rises 1 foot in elevation, the water will crest over the rims of 48 drywells and fall into the infiltration trench where the floodwater will then infiltrate into the native soils and enter the Spokane-Rathdrum aquifer. The infiltration trenches have a design capacity of 162 cfs. The flood control system has the capacity to handle the peak 100-yr event without-levee flood design flow rate of 106 cfs with a Factor of Safety of 1.53+/- (WCE 2018). Floodwater will not be controlled through the use of a levee.

In addition to managing the floodwater from off-site that enters the project site, Alternative 2 includes modifying the Gustin Ditch located off-site to the northeast of the project site, from an open ditch to a 36-inch pipe. This change will remove the future possibility of the ditch flooding the lowlands to the south if the south embankment were to fail as depicted in the FEMA FIS. The project would also deepen the triangle pond detention basin and install 18 new drywells in the pond bottom to increase the infiltration capacity of the pond and to further protect against potential flooding of this area west of SR 27 and east of the project site.

The flood management improvements will be constructed in phases. The initial phase will include all improvements for managing floodwaters that enter the site from off-site pathways. Specifically, it is expected that the following improvements would occur in Phase 1:

- Excavate the park area and north pond area and use the excavated material to fill against the existing levee adjacent to the Chester Creek channel. Fill will be placed by special inspection to the compaction requirements of the geotechnical engineer.
- Excavate gravel gallery and place fabric, rock and drywells at design depth.
- Form final contours of the park area, north pond, settling pond, and bioswale. Seed and establish proposed grasses on the bottom of these features and on sloped surfaces.
- Install a 30-foot by 45-foot by 3-foot depth box culvert in Thorpe Road.
- Form concrete open channel and headwall.
- Install two (2) 48-inch pipes along the west side of Madison Road with manholes at connection points to 18-inch culverts that will receive stormwater flows coming from and the east side of Madison Road.

In addition to these improvements, it is anticipated that Phase 1 will include the clearing and grubbing of future development areas, including the removal of the existing organic soil layer

to expose the more-permeable gravel layer located immediately below it. The cleared soil will be stockpiled on site. Once the site has been cleared, the southern open space area will be excavated, creating a depression that will serve as a temporary repository to capture any floodwater that enters the project site during this initial construction phase. Following the excavation of the southern open space depression, excavation of the infiltration basin on the north end of the project site will be completed. The capacity of these two basins will be designed to capture and infiltrate a 100-year storm event, should such an event occur during the construction phase. The material excavated to create the two basins will be evaluated for its suitability as a short-term fill material and if it is deemed suitable, will be placed along the existing on-site levee east of the main channel of Chester Creek to bolster the flood protection capacity of this existing non-certified levee and begin the overall filling of the site.

3.2.2.2.2 Project Impacts

Sources of floodwater

Under Alternative 2 sources of floodwater that have been known to enter the project site in the past will remain unchanged. The potential source of floodwater described in the FEMA FIS from the unnamed tributary to Chester Creek northeast of the project site will be eliminated under Alternative 2 due to the placement of the existing Gustin Ditch into a pipe that connects directly to the triangle pond detention basin.

Extent of floodwater

Under Alternative 2, floodwaters that leave the Chester Creek channel south of the site will no longer flow over Thorpe Road or flood the southern portion of the project site.

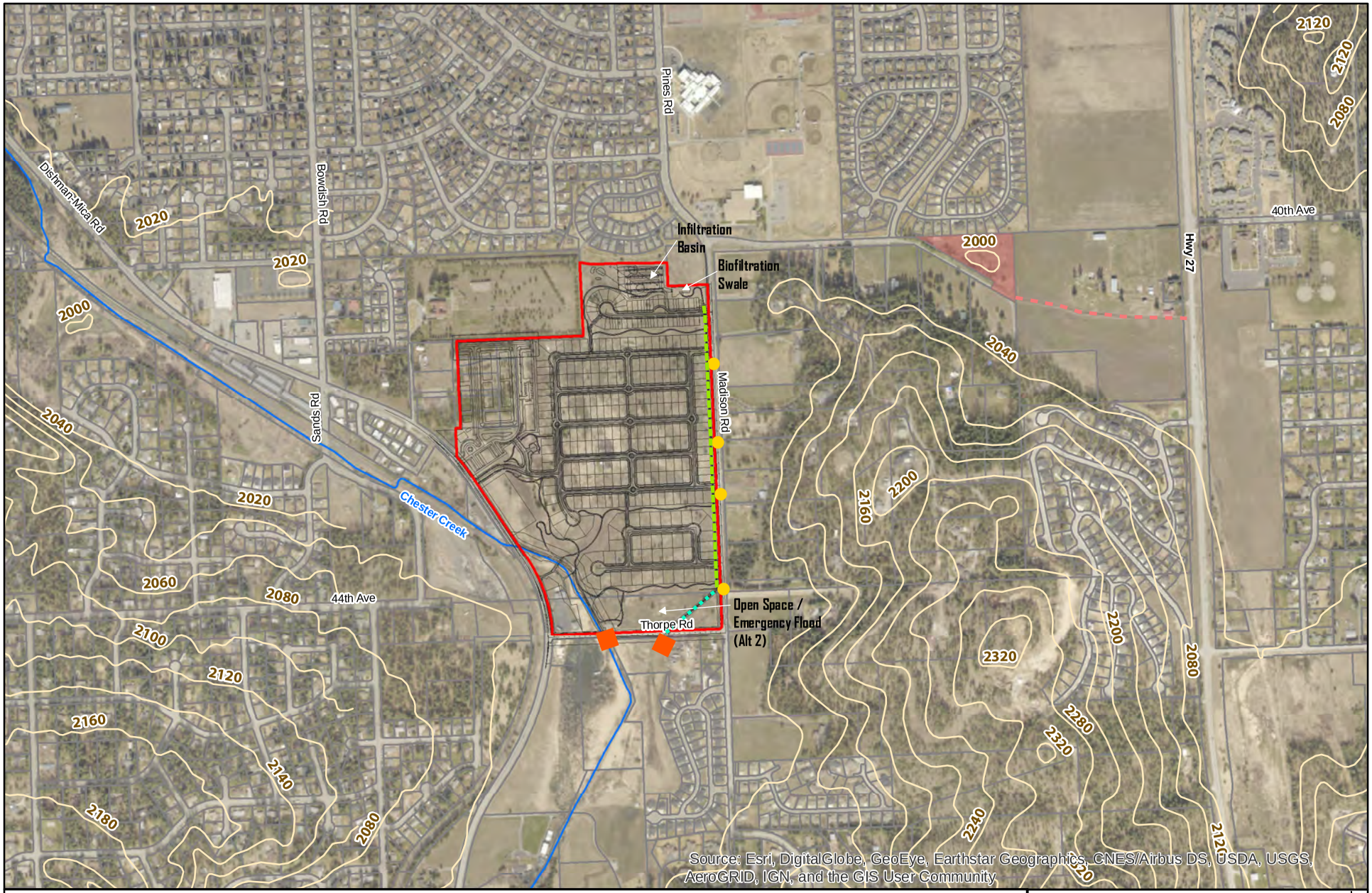
Floodplain designation

Under Alternative 2 the project proposes to address the FEMA requirements associated with the compensatory storage area designation through obtaining a Conditional Letter of Map Revision (CLOMR) which will seek to remove most of the floodplain from the project site based on the proposed flood control facilities and fill. The CLOMR process involves FEMA's evaluation of the hydrologic or hydraulic characteristics of a flooding source on a site or sites and the result of modifications of the existing regulatory floodway, the effective Base Flood Elevations (BFEs), or the Special Flood Hazard Area (SFHA). The letter is a conditional authorization to amend the National Flood Insurance Program (NFIP) map. The CLOMR allows FEMA to recognize specific areas as above the 100-year base flood elevation through applicant-completed fill and grading activities. Once land modifications are completed, the applicant must request a letter of map revision (LOMR) to the Flood Insurance Rate Map (FIRM) to finalize the removal of specific elevated areas from the 100-year floodplain designation. "As-built" certification and other data must be submitted to support the revision request.

Under Alternative 2 the floodplain map revision process would eventually result in the removal of approximately 48-acres of FEMA-designated 100-year floodplain from the Painted Hills site, and another 44-acres of 100-year floodplain from off-site properties. See Figure 3-8, Alternative 2 - Existing and Future Floodplain Areas. As noted on this figure, the entire off-site area immediately east of Madison Road currently designated as 100-year floodplain would lose its floodplain designation and the potential for ponding in that area from riverine flood flows would be effectively eliminated. Alterative 2 would also remove currently-designated

floodplain between the northeast corner of the project site and SR 27, including the Gustin property.

It is anticipated that the maintenance of the flood control system will be the responsibility of a homeowners association (HOA) formed for the Painted Hills project. The HOA's designated contractor would mow the pond, visually inspect for debris and the buildup of silts in the bottom of catch basins and manholes, and have the debris removed by a vactor truck to ensure that the system and its infiltration capacity is adequately maintained.



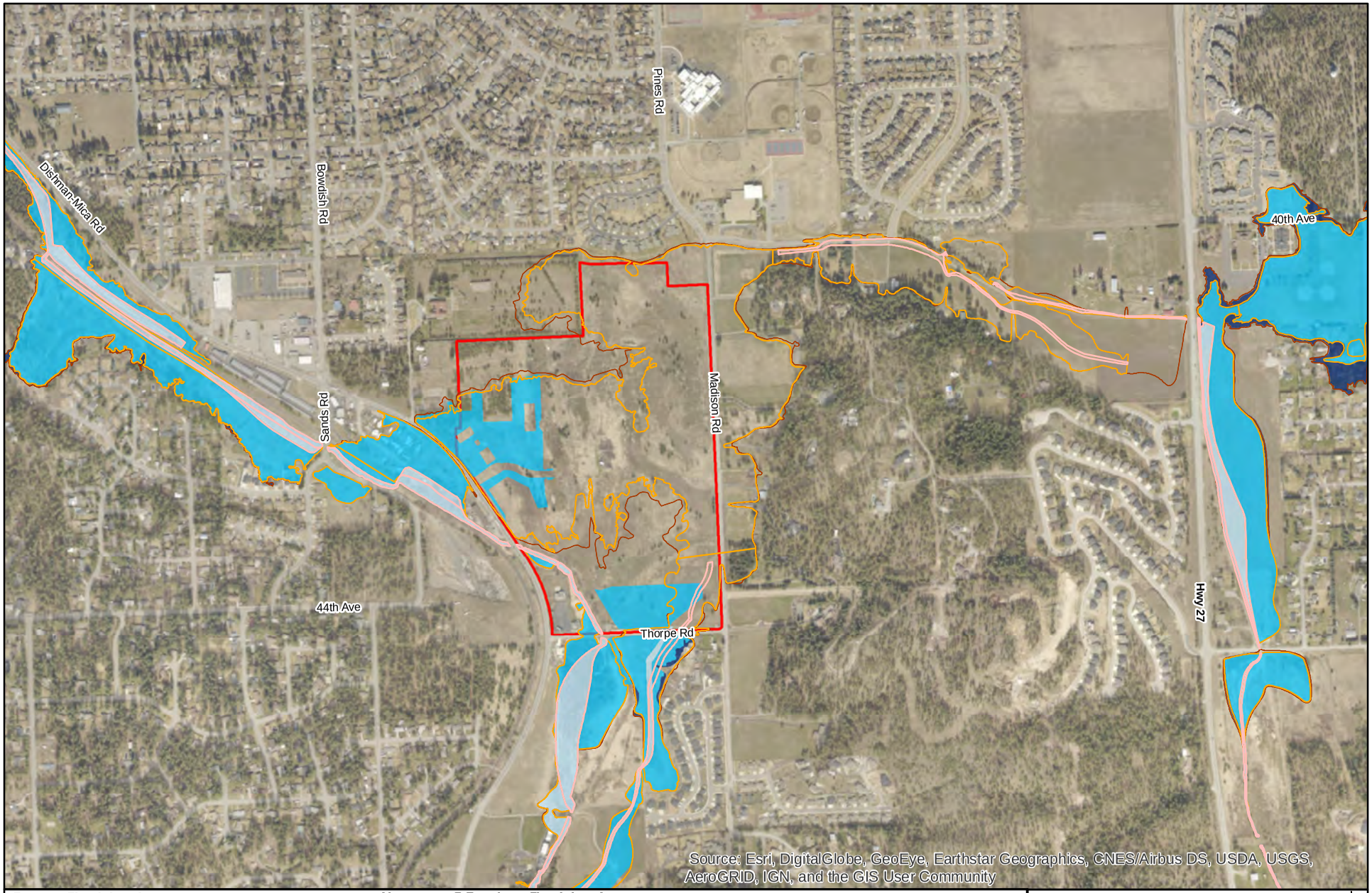
Proposed Drainage Features

- Triangle Pond Property
- Painted Hills Site
- Open Trench
- Replace 18" Culvert
- Box Culvert
- 2-48" Pipes
- Pipe Containing Gustin Ditch

Source: GIS data provided by Whipple Consulting, the City of Spokane Valley, and Spokane County.

Figure 3-7
Alternative 2 Proposed Drainage & Floodwater Management Features
Painted Hills Residential Development DEIS

0 1,000 2,000 Feet



Existing Floodplain Areas

- Floodway
- 1 % Annual Chance Flood Hazard (100-year Floodplain)
- 0.2 % Annual Chance Flood Hazard (500-year Floodplain)

Alternative 2 Resulting Floodplain Areas

- Floodway
- 1 % Annual Chance Flood Hazard (100-year Floodplain)
- 0.2 % Annual Chance Flood Hazard (500-year Floodplain)

Source: GIS data provided by West Consultants, Inc., the City of Spokane Valley, and Spokane County.

Figure 3-8
Alternative 2- Existing & Future Floodplain Areas

Painted Hills Residential Development DEIS

0 0.2 0.4 Miles

N

3.2.2.3 Alternative 3 – Standard Subdivision

Under Alternative 3, the approach to controlling and managing floodwaters, and meeting compensatory storage requirements will be the same as the approach proposed under Alternative 2. Management and control of floodwaters will be achieved on-site through a combination of enhanced conveyance facilities (culverts) and infiltration galleries. Development areas where future roads and buildings will be located will be elevated above the 100-year floodplain through the placement of imported fill.

As proposed under Alternative 2, Alternative 3 proposes to modify existing floodplain areas through a CLOMR, the preliminary FEMA remap authorization before a LOMR is finalized.

As described for Alternative 2, the sources of floodwater under Alternative 3 remain unchanged. The potential for floodwater to enter the site from the unnamed tributary to Chester Creek northeast of the project site will be eliminated due to the placement of the existing Gustin Ditch into a pipe that connects directly to the triangle pond which would serve as a detention basin.

Under Alternative 3, as under Alternative 2, floodwaters that leave the Chester Creek channel south of the site will no longer flow over Thorpe Road or inundate the southern portion of the project site.

Under this alternative, unlike under Alternative 2, the southern portion of the project site would be filled for residential lots and would not be available to receive floodwater because the park in this vicinity would be omitted from the design.

As described for Alternative 2, on-site and off-site flood conveyance and storage improvements completed under Alternative 3 would also remove off-site areas from the 100-year floodplain. The area east of Madison Road currently designated as 100-year floodplain would lose its floodplain designation and the potential for ponding in that area would be significantly reduced. Similarly, the potential for flooding on the property to the northeast of the project site from the unnamed tributary to Chester Creek near SR 27 due to replacement of the Gustin Ditch with a 36-inch pipe, and the deepening and addition of drywells to the bottom of the triangle pond. The 100-year floodplain designation would be removed from the currently-designated floodplain between the northeast corner of the project site and SR 27, including the Gustin property.

The changes in floodplain designation proposed under Alternative 3 would allow new development in areas, both on-site and off-site, that had been previously subject to development restrictions due to 100-year flood mapping.

Effective Floodplain

- Floodway
- 1% Annual Chance Flood Hazard (100-year Floodplain)
- 0.2 % Annual Chance Flood Hazard (500-year Floodplain)

Alternative 3 Resulting Floodplain Areas

- Floodway
- 1% Annual Chance Flood Hazard (100-year Floodplain)
- 0.2 % Annual Chance Flood Hazard (500-year Floodplain)

Source: GIS data provided by West Consultants, Inc., the City of Spokane Valley, and Spokane County.

Figure 3-9
Alternative 3- Existing & Future Floodplain Areas

Painted Hills Residential Development DEIS

0 0.2 0.4 Miles

3.2.3 Mitigation Measures

- A home-owners association (HOA) will be established for the purpose of maintaining open spaces and infrastructure throughout the project, including the on-site flood and stormwater infrastructure.
- An operation and maintenance (O&M) manual will be established for the HOA that will identify and ensure the proper operation and maintenance of all facilities associated with the stormwater system.

3.2.4 Indirect Effects

Potential indirect effects could result from the removal of the 100-year floodplain designation from approximately 44-acres of off-site properties. By reducing regulatory and financial barriers to development of these off-site properties, Alternatives 2 and 3 could indirectly enhance and facilitate the development of these off-site properties, which are predominantly zoned for low density residential use by the City and County. Environmental impacts of those off-site developments would be addressed through individual local regulatory and SEPA reviews.

3.2.4 Cumulative Effects

No cumulative effects are anticipated when considering the proposed action alternatives and other activities in the project vicinity.

3.3 TRANSPORTATION

In conjunction with the land use application that was submitted to the City for the Painted Hills PRD project (Alternative 2), a traffic impact analysis (TIA) was completed on September 14, 2016 by Whipple Consulting Engineers, Inc. (Whipple). The TIA is incorporated into this DEIS by reference and includes detailed information regarding existing (2015) and future (2025) traffic conditions surrounding the Painted Hills site. Future traffic conditions were reported both *with and without* implementation of the PRD project to determine the extent to which the PRD project might be responsible for any level-of-service deficiencies on the local transportation network. The TIA utilizes trip generation estimates for the project based on specific land use code categories from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition.* From those estimates, the TIA evaluates how study intersections perform under current and future conditions relative to city-adopted level-of-service (LOS) standards. The land uses designated for the project in the TIA and the corresponding ITE codes are provided below.

Table 3-1: Transportation Impact Analysis Land Use Types

Description	Number of Units / KSF	ITE Land Use Code
Cottage Style Single Family Lots	52 Units	Residential Townhouses — 230
Single Family Residential	206 Units	Single Family Residential — 210
Single Family Residential Estate Type	42 Units	Single Family Residential — 210
Apartments	228 Units	Apartments — 220
Apartments (mixed use) (North)	52 units	Apartments — 220
Commercial Development (North)	13.4 KSF	Shopping Center — 820
Commercial Development (South)	9.0 KSF	Shopping Center — 820
Existing Restaurant (South)	4.0 KSF	Quality Restaurant — 931

To supplement the 2016 TIA, Whipple prepared a letter, dated November 13, 2018, addressed to Ray Wright at the City of Spokane Valley, which concludes that the traffic volumes recorded for the Painted Hills PRD in the 2016 TIA remain reasonably accurate (with a variation of approximately one percent or less in volume) based on recent traffic counts collected. Therefore, the findings from the 2016 TIA continue to present a reasonable assessment of the expected impacts of the Painted Hills PRD on the surrounding road network. A summary of the 2016 TIA findings is described further below.

The standards below are established by the City consistent with Chapter 5 of the Spokane Valley Comprehensive Plan and Chapter 3 of the Spokane Valley Street Standards. Level-of-service designations provide a means for evaluating operational performance of intersections. As identified in Figure 29 of the Spokane Valley Comprehensive Plan, level of service designations are described as noted below.

Table 3-2: Level of Service Descriptions

Level of Service	Description
A	Free-flowing conditions
B	Stable operating conditions
C	Stable operating conditions, but individual motorists are affected by the interaction with other motorists
D	High density of motorists, but stable flow
E	Near-capacity operations with speeds reduced to a low but uniform speed
F	Over capacity with long delays

As noted on page 5-85 of the Spokane Valley Comprehensive Plan, the City requires the following minimum LOS within the City:

- A minimum of LOS D is required for major arterial corridors.
- A minimum of LOS D is required for signalized intersections not on major arterial corridors.
- A minimum of LOS E is required for unsignalized intersections (LOS F is acceptable if the peak hour traffic signal warrant is not met).

3.3.1 Affected Environment

3.3.1.1 Study Area

The overall transportation network in the vicinity of the Painted Hills site consists of a state route, urban principal arterials, collectors, and local access roads as described further below.

Dishman-Mica Road extends south and southeast from Sprague Avenue to State Route 27, for approximately 7.4 miles. Dishman-Mica Road is a northwest/southeast two-way, two-and five-lane minor-principal arterial. Dishman-Mica Road is an arterial that serves the residential neighborhoods extending from Sprague Avenue to Bowdish Road. Dishman-Mica Road intersects with 8th Avenue, 16th Avenue, 32nd Avenue, University/Schafer Road and Bowdish Road with small commercial uses located at or near the intersections of 16th Avenue, University Road and Bowdish Road. Dishman-Mica Road then winds through a rural area before intersecting with State Route 27. Within the study area the posted speed limit on Dishman-Mica Road is 45 MPH.

University Road is a north/south, two-way minor arterial, ranging from two to five lanes, that serves a large residential area south of Interstate 90. It runs south from Nora Avenue, and crosses several major arterials, until it intersects with Dishman-Mica Road. University Road, between Mission Avenue and Sprague Avenue, is a three-lane roadway. From Sprague Avenue to 4th Avenue, it transitions to a five-lane roadway. South of 4th Avenue to Dishman-Mica Road, it reduces to a four-lane roadway and continues to Dishman-Mica Road where the roadway transitions into Schafer Road. University Road is posted at a 35 MPH speed limit within the study area. The University Road section includes bike lanes from 16th Avenue to Mission Avenue, and sidewalks from Dishman-Mica Road to Mission Avenue.

Schafer Road is a north/south, two-way, two-lane, collector that serves a large residential area south of Dishman-Mica Road. Schafer Road runs south from Dishman-Mica Road to 44th Avenue. Schafer Road, between Dishman-Mica Road and 44th Avenue is a two-lane roadway with shoulders, but no sidewalk or bike lanes. Schafer Road is posted at 35 MPH within the study area.

Bowdish Road is a north/south, two-way, two-lane, minor arterial serving a large residential area south of Interstate 90. Bowdish Road runs south from Mission Avenue, and crosses several major arterials, until it intersects with Sands Road. Bowdish Road, between Mission Avenue and Dishman-Mica Road is a two-lane roadway. South of Dishman-Mica Road, Bowdish Road crosses the Union Pacific Railway and becomes a local access roadway. Sands Road branches off Bowdish Road and continues to 44th Avenue. Bowdish Road is posted at 25 MPH on the local access portion, and is posted on the minor arterial as 35 MPH.

State Route 27 is a north/south, two-way State Highway ranging from two to five lanes. State Route 27 extends south from Spokane Valley to Pullman, Washington and serves the many small farming communities of the Palouse. Within the City of Spokane Valley, State Route 27 follows the Pines Road alignment between Trent Avenue and 16th Avenue. South of 16th Avenue, State Route 27 shifts to the Blake Road alignment and serves the surrounding urban residential uses and a small cluster of commercial uses at the intersection of State Route 27 and 32nd Avenue. From Trent Avenue to 16th Avenue, the posted speed limit is 35 MPH. From 16th Avenue to the 41st Avenue alignment, the posted speed limit is 45 MPH. Beyond 41st Avenue, SR 27 generally has a speed limit of 55 MPH.

16th Avenue is an east/west, two-way, two- and three-lane minor arterial that extends east from Bluff Drive (west of Dishman-Mica Road) through the City of Spokane Valley to Shamrock Street (South of Shelley Lake). 16th Avenue generally serves residential land uses as well as commercial land uses located at the intersections of arterials. The posted speed limit on 16th Avenue is 35 MPH with the exception of the University Elementary, McDonald Elementary, and Evergreen Jr. High School zones where the posted speed limit is 20 MPH with beacons. The 16th Avenue Road section from Dishman-Mica Road to Sullivan Road includes sidewalks and bike lanes.

32nd Avenue is an east/west, two-way principle arterial ranging from two to four lanes. 32nd Avenue extends east from Dishman-Mica Road to Sullivan Road and serves mostly urban residential uses, but also provides access for commercial uses and University High School. The posted speed limit is 35 MPH with the exception of University High School zone where the speed limit is 20 MPH when children are present. The 32nd Avenue road section has sidewalks from Dishman-Mica Road to SR 27, and bike lanes from University Road to SR 27. Additional sidewalks and bike lanes are present from Evergreen Road to Best Road.

Pines Road is a north/south two-way, two-, three-, and five-lane state route and collector that extends south from Trent Avenue to 40th Avenue. From 16th Avenue to 32nd Avenue, Pines Road is a proposed collector. From 32nd Avenue, to 40th Avenue, Pines Road is a collector. Pines Road serves residential uses and a commercial land use located on the northwest corner of Pines Road & 32nd Avenue. The speed limit on Pines Road is 35 MPH, with the exception of the South Pines Elementary school zone, where the speed limit is 20 MPH with flashing beacons. The Pines Road roadway section includes sidewalks along its entire length and includes bike lanes from 22nd Avenue to 32nd Avenue.

Evergreen Road is a north/south, two-way urban principle arterial ranging from two to six lanes. Evergreen Road extends south from Indiana Avenue to 32nd Avenue and intersects with eight other minor and major arterials in the City of Spokane Valley. From Indiana Avenue to Interstate 90, Evergreen Road has six lanes. From Interstate 90 to 4th Avenue, Evergreen Road is a five-lane road. From 4th Avenue to 16th Avenue, Evergreen is a three-lane road. From 16th Avenue to 32nd Avenue, Evergreen Road is a two-lane roadway. The area surrounding Evergreen Road is generally single-family residential uses and small pockets of commercial uses located at or near the arterial intersections. The posted speed limit on Evergreen Road is 35 MPH. Evergreen Road includes sidewalk from 32nd Avenue to 24th Avenue and from 16th to Indiana. Evergreen Road has a bike lane from 32nd Avenue to Sprague Avenue.

Sullivan Road is a north/south, two-way, two-, three- and five-lane urban principal arterial that extends south from Wellesley Avenue to just beyond 32nd Avenue. Sullivan Road serves East Valley High School and Central Valley High School, residential, and commercial uses. The posted speed limit is 35 MPH. The Sullivan Road roadway section includes sidewalks and bike lanes from 16th Avenue to 32nd Avenue, and sidewalks from 16th Avenue to Wellesley Avenue.

Madison Road is a north/south, two-way, two-lane collector road that extends south from the intersection of Pines Road and 40th Avenue, which is northeast of the site, through Thorpe Road, until eventually changing into Mohawk Drive. Madison Road is posted at 35 MPH and provides access to residential roads on its east and west side. Madison Road has no sidewalks or bike lanes.

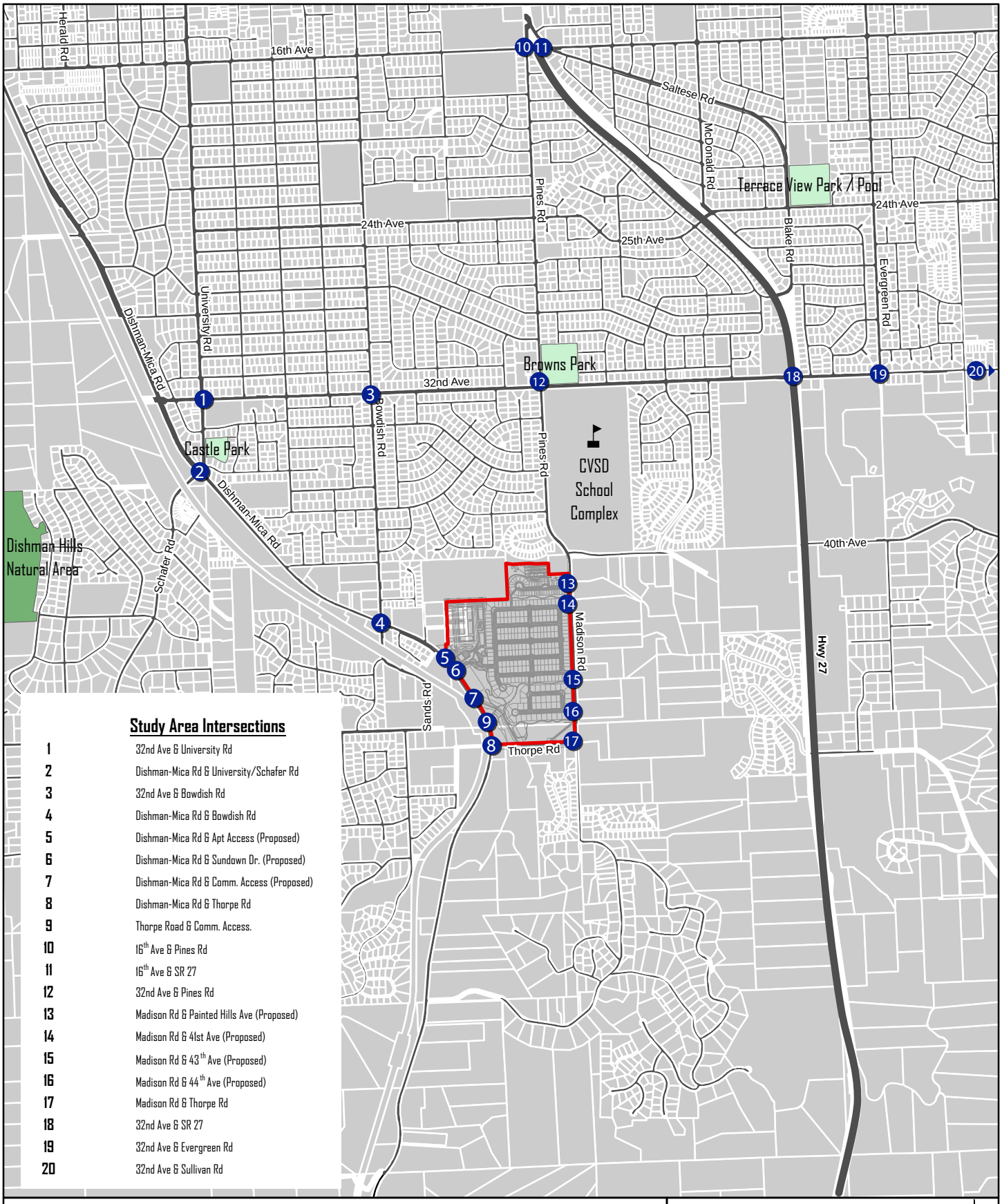
Thorpe Road is an east/west, two-way, two-lane collector that extends east from Dishman-Mica Road to Madison Road. Thorpe Road generally serves commercial land uses. The posted speed limit on Thorpe Road is 35 MPH.

3.3.1.2 Existing Conditions

Consistent with City procedures, the scope of the TIA was determined after meetings with Public Works staff, the Washington Department of Transportation (WSDOT), Spokane County transportation staff and the public. As determined through this scoping process, the applicant studied both AM and PM peak hour operations. The AM peak hour data was generally collected between 7:00 AM and 9:00 AM, and PM peak hour data was collected between 4:00 PM and 6:00 PM. For the TIA, the following intersections were studied. See also Figure 3-10 for a map illustrating the Traffic Study Intersections relative to the Painted Hills site.

- 32nd Ave & University Rd
- Dishman-Mica Rd & University/Schafer Rd
- 32nd Ave & Bowdish Rd
- Dishman-Mica Rd & Bowdish
- Dishman-Mica Rd & Apt. Access (Proposed)
- Dishman-Mica Rd & Sundown Dr. (Proposed)
- Dishman-Mica Rd & S. Comm. Access (Proposed)
- Dishman-Mica Rd & Thorpe Rd

- Thorpe Rd & Comm. Access (Proposed)
- 16th Ave & Pines Rd
- 16th Ave & SR 27
- 32nd Ave & Pines Rd
- Madison Rd & Painted Hills Ave (Proposed)
- Madison Rd & 41st Ave (Proposed)
- Madison Rd & 43rd Ave (Proposed)
- Madison Rd & 44th Ave (Proposed)
- Madison Rd & Thorpe Rd
- 32nd Ave & SR 27
- 32nd Ave & Evergreen Rd
- 32nd Ave & Sullivan Rd



Study Area Intersections

1	32nd Ave & University Rd
2	Dishman-Mica Rd & University/Schafer Rd
3	32nd Ave & Bowdish Rd
4	Dishman-Mica Rd & Bowdish Rd
5	Dishman-Mica Rd & Apt Access (Proposed)
6	Dishman-Mica Rd & Sundown Dr. (Proposed)
7	Dishman-Mica Rd & Comm. Access (Proposed)
8	Dishman-Mica Rd & Thorpe Rd
9	Thorpe Road & Comm. Access.
10	16th Ave & Pines Rd
11	16th Ave & SR 27
12	32nd Ave & Pines Rd
13	Madison Rd & Painted Hills Ave (Proposed)
14	Madison Rd & 41st Ave (Proposed)
15	Madison Rd & 43th Ave (Proposed)
16	Madison Rd & 44th Ave (Proposed)
17	Madison Rd & Thorpe Rd
18	32nd Ave & SR 27
19	32nd Ave & Evergreen Rd
20	32nd Ave & Sullivan Rd

Legend

Painted Hills Boundary

Source: GIS data provided by the City of Spokane Valley and Spokane County.

Figure 3-10
Study Area Intersections

Painted Hills Residential Development DEIS

0 2,000 4,000 Feet

Using methods from the *2010 Highway Capacity Manual* as implemented in Synchro, *version 9 – Build 902,* the TIA reported existing operational conditions as noted in Table 3-3 below. Because some of the study intersections do not yet exist and would be constructed as a part of the Painted Hills PRD project, those intersections are not included in the table below.

Table 3-3: Year 2015 Existing Intersections Levels of Service

INTERSECTION (S)ignalized (U)nsignalized		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
32nd Ave & University Rd	S	11.5	B	11.4	B
Dishman-Mica Rd &University/Schafer Rd	S	15.7	B	16.5	B
32nd Ave & Bowdish Rd	S	13.1	B	11.7	B
Dishman-Mica Rd & Bowdish Rd	S	12.0	B	11.1	B
Dishman-Mica Rd & Thorpe Rd	U	10.7	B	10.4	B
16th Ave & Pines Rd	U	20.2	C	32.4	D
16th Ave & SR 27	S	27.7	C	25.5	C
32nd Ave & Pines Rd	S	23.5	C	17.7	B
Madison Rd & Thorpe Rd	U	11.0	B	9.5	A
32nd Ave & SR 27	S	19.6	B	23.0	C
32nd Ave & Evergreen Rd	U	10.6	B	17.7	C
32nd Ave & Sullivan Rd	U	11.1	B	12.1	B

3.3.2 Environmental Consequences

3.3.2.1 Alternative 1 – No Action

As a part of the 2016 TIA, Whipple evaluated traffic operations at the study intersections in the year 2025 without implementation of the Painted Hills PRD project. This 2025 no-build scenario reflects the anticipated conditions that would occur under Alternative 1.

In order to approximate traffic volumes under this no-build scenario, Whipple assumed that regional traffic volumes would grow over the 10-year evaluation period (from 2015 to 2025) at a rate of 1.1 percent per year. In addition to this general 1.1 percent growth factor, the TIA also incorporated traffic volumes from other development projects that had not been built but had been approved by the City and Spokane County for development.

These approved and vested projects, and their associated traffic volumes are identified in Table 3-4 below.

Table 3-4: Background Projects and Vested AM & PM Trips

Background Project	Remaining Lots/ units	AM Peak. Hour Trips			PM Peak Hour Trips		
		Total	In	Out	Total	In	Out
Paxton Addition	13 lots	10	3	7	13	8	9
The Creek at Chester	44 lots	33	9	24	44	29	15
Pine Valley Ranch Apts.	132 units	69	14	55	90	59	31
Elk Ridge Heights	78 lots	59	15	44	79	51	28
Total Vested	**-**	**171**	**41**	**130**	**226**	**147**	**83**

As noted in Table 3-5 below, acceptable levels of service were projected for all study intersections in the year 2025 for Alternative 1, except the intersection of 16th Avenue and Pines Road. At this intersection, the southbound approach experienced delays that exceeded the City's level of service threshold for the PM peak hour. However, it is anticipated that paired signalized intersections will be installed at this location that will improve conditions to an LOS C in this location. No other system deficiencies were identified under Alternative 1.

Table 3-5: 2025 Levels of Service, without the Project, with the Background Projects

INTERSECTION (S)ignalized (U)nsignalized		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
32nd Ave & University Rd	S	12.2	B	11.9	B
Dishman-Mica Rd & University/Schafer Rd	S	16.4	B	17.2	B
32nd Ave & Bowdish Rd	S	15.2	B	13.5	B
Dishman-Mica Rd & Bowdish Rd	S	12.8	B	11.8	B
Dishman-Mica Rd & Thorpe Rd	U	11.3	B	10.9	B
16th Ave & Pines Rd • Paired Signalized Intersections	U (S)	26.2 (30.5)	D (C)	**66.4** (33.7)	**F** (C)
16th Ave & SR 27 • Paired Signalized Intersections	S	33.6 (42.3)	C (D)	30.3 (28.4)	C (C)
32nd Ave & Pines Rd	S	27.0	C	21.9	C
Madison Rd & Thorpe Rd	U	12.1	B	9.9	A
32nd Ave & SR 27	S	22.3	C	28.2	C
32nd Ave & Evergreen Rd	U	11.2	B	23.6	C
32nd Ave & Sullivan Rd	U	12.0	B	13.2	B

Construction-Related Project Impacts

As no construction would occur under Alternative 1, there would be no construction-related traffic impacts that could result from this alternative.

3.3.2.2 Alternative 2 – Planned Residential Development

The TIA analyzes the ability of the scoped intersections to meet adopted level of service standards in the year 2025 after incorporating the background growth rate, background projects, and the anticipated project trips, including the conversion of the clubhouse into a 4,000 SF restaurant facility.

It is anticipated that the Painted Hills PRD would generate new trip volumes as noted in Table 3-6 below. It should be noted that, while the 4,000 square foot restaurant trips were *forecasted* in the 2016 TIA, the restaurant use has now occupied the clubhouse structure and is in operation.

Table 3-6: Estimated Trip Generation – Alternative 2

	AM Peak Hour Trips			PM Peak Hour Trips		
Land Use Code (LUC)	Vol. per LUC	Directional Distribution		Vol. per LUC	Directional Distribution	
		In	Out		In	Out
LUC #230 Townhouses (Cottage Style) (Table 6)	23	4	19	28	19	9
LUC #210 Single Family Residential (Table 7)	155	39	116	201	127	74
LUC #210 SFR (Estate Lots) (Table 8)	32	8	24	42	26	16
LUC #220 Apartment (Table 9)	117	23	94	138	90	48
LUC #220 Apartment (mixed use) (Table 10)	27	5	22	32	20	12
LUC #820 Shopping Center (Table 11)	13	8	5	40	20	20
LUC #820 Shopping Center (Table 12)	9	6	3	34	16	18
LUC #931 Quality Restaurant (Table 13)	4	2	2	30	20	10
Total	380	95	285	545	338	207

Average Daily Trip Ends (ADT)	
Land Use Code (LUC)	**ADT**
LUC #230 Townhouses (Cottage Style) (Table 6)	303
LUC #210 Single Family Residential (Table 7)	1,962
LUC #210 SFR (Estate Lots) (Table 8)	400
LUC #220 Apartment (Table 9)	1,517
LUC #220 Apartment (mixed use) (Table 10)	346
LUC #820 Shopping Center (Table 11)	573
LUC #820 Shopping Center (Table 12)	385
LUC #931 Quality Restaurant (Table 13)	360
Total	5,846

It should also be noted that, because of the mixed-use nature of Alternative 2, a trip internalization factor is applied to the trip generation rates of the residential uses that would

occur under this alternative. That internalization factor applies a reduction or discount factor on the typical generation rate for the residential uses to address the fact that some of the retail and service needs of the residents of the PRD project will be satisfied by the 22,400 square feet of commercial space located within the project. This internalization factor varies by residential use type but ranges between approximately 2.4 and 3.0 percent of the PM peak hour trip generation for the residential uses. Based on these assumptions and application of the ITE manual, Alternative 2 is estimated to generate vehicular trips consistent with the figures represented in Table 3-6 above.

As shown above, Alternative 2 is anticipated to generate 380 new AM peak hour trips, with 95 new trips entering the site, and 285 new trips exiting the site via the eight access opportunities previously noted. In the PM peak hour, the project is anticipated to generate 545 new trips, with 338 new trips entering the site, and 207 new trips existing the site.

When adding the trips generated from Alternative 2 to the local road system, considering background traffic volumes and vested project trips, the TIA determined that all intersections can meet City-adopted LOS standards, except for the intersection of 16th Avenue and Pines Road, which also failed to meet LOS standards in the no-build scenario (Alternative 1).

Table 3-7: Year 2025 Levels of Service, with the Project, with the Background Projects

INTERSECTION (S)ignalized (U)nsignalized		AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
32nd Ave & University Rd	S	12.4	B	12.4	B
Dishman-Mica Rd & University/Schafer Rd	S	16.9	B	18.3	B
32nd Ave & Bowdish Rd	S	15.6	B	14.7	B
Dishman-Mica Rd & Bowdish Rd	S	15.7	B	13.3	B
Dishman-Mica Rd & Apt. Access	U	13.2	B	10.4	B
Dishman-Mica Rd & Sundown Drive	U	12.6	B	10.8	B
Dishman- Mica Rd & S. Comm. Access	U	11.5	B	11.3	B
Dishman-Mica Rd & Thorpe Rd	U	11.9	B	11.9	B
Thorpe Rd & Comm. Access	U	9.0	A	9.1	A
16th Ave & Pines Rd • Paired Signalized Intersections	U (S)	27.3 (31.1)	D (C)	**99.2** (34.8)	**F** (C)
16th Ave & SR 27 • Paired Signalized Intersections	S	35.9 (44.6)	D (D)	31.3 (28.6)	C (C)
32nd Ave & Pines Rd • NB Right Turn	S	32.3 (27.6)	C (C)	26.0 (24.7)	C (C)
Madison Rd & Painted Hills Ave.	U	11.1	B	10.8	B
Madison Rd & 41' Ave.	U	10.7	B	10.5	B
Madison Rd & 43rd Ave.	U	10.5	B	10.2	B
Madison Rd & 44th Ave.	U	9.7	A	9.6	A
Madison Rd & Thorpe Rd	U	12.4	B	10.4	B
32nd Ave & SR 27	S	23.2	C	29.8	C
32nd Ave & Evergreen Rd	U	11.6	B	26.1	D
32nd Ave & Sullivan Rd	U	12.3	B	13.5	B

Alternative 2 extends the delay experienced at this intersection from 66.4 seconds during the PM peak hour under background conditions to 99.2 seconds. These results are noted in Table 3-7 above. Therefore, the addition of trips from Alternative 2 does not create any new LOS failures, but does result in additional delays at the intersection of 16th Avenue and Pines Road.

In addition to the LOS failure at the intersection of 16th and Pines Road, the TIA found that there are three instances in the 2025 forecast in which the stacking queues at intersections

exceed allowable City standards. These are described in detail on Page 54 of the 2016 TIA and are as follows:

16th Avenue & State Route 27

- The eastbound through approach is expected to go from a queue length of 586 feet to 645 feet, an increase of 59 feet. This reported queue exceeds the available space by 526 feet.
- The westbound through approach is expected to go from a queue length of 310 feet to 319 feet, an increase of 9 feet. This reported queue exceeds the available space by 149 feet.

32nd Avenue & Pines Road

- The eastbound through approach is expected to go from a queue length of 562 feet to 708 feet, an increase of 146 feet. This reported queue exceeds the available space by 218 feet.

32nd Avenue & State Route 27

- The westbound through approach is expected to go from a queue length of 470 feet to 497 feet, an increase of 27 feet. This reported queue exceeds the available space by 305 feet.
- The westbound left turn approach is expected to go from a queue length of 246 feet to 238 feet, a decrease of 8 feet. This reported queue exceeds the available space by 88-feet.

As noted on Page 72 of the TIA, the study also considered traffic operations in the year 2030, which was considered "buildout plus 5 years" at the time of the study. The TIA included the following findings regarding traffic operations in 2030 resulting from the Painted Hills PRD project, including background growth and vested projects.

- There is a LOS deficiency identified at the intersection of 16th Avenue & Pines Road, as the southbound approach is estimated to have 133.7 seconds of average delay.
- The LOS deficiency identified at the intersection of 16th Avenue & Pines Road, originally caused by the background trips and worsened by this project, can be brought back to an acceptable LOS by signalizing the intersection and pairing the signal timing with the signal at the intersection of 16th Avenue & State Route 27
- There are five future queue deficiencies at three intersections with two of those intersections operating at acceptable levels of service. These deficiencies were the result of the background growth rate and the background projects as identified within this study and are only incrementally worsened or kept the same by this project. A review of the City of Spokane Valley Transportation Improvement Plan (TIP), shows that there are no public improvement projects identified to mitigate the discrepancies at the following intersections and movements:
    - 16th Avenue & State Route 27, EB Thru, WB Thru
    - 32nd Avenue & Pines Road, EB Thru
    - 32nd Avenue & State Route 27, WB Thru, WB Left Tum

Construction-Related Project Impacts

It is anticipated that the project will result in construction-related traffic associated with site grading and site development activities. These impacts are discussed in a November 13, 2018 memorandum prepared by Whipple. As noted in the memorandum, it is anticipated that mass grading activities will require the placement and compaction of 328,289 cubic yards (CY) of material. This material will need to be imported to the site as "loose" dirt which will require compaction on the site. Whipple estimates that, due to a 15 percent shrink/swell factor, the required loose fill import volume is approximately 377,532 CY.

It is assumed that site grading will occur over an approximately four-year period and that the material will be delivered via dump trucks that carry a volume of approximately 30 CY. Based on these assumptions, it is estimated that approximately 12,584 dump trucks will be required to fill the site over a four-year period. This equates to 25,168 truck trips to and from the site. It is estimated that these truck trips will occur during work days over the four-year period, with 280-work days per year. As a result, it is estimated that approximately 11.24 trucks per day would visit the site over a four-year period or approximately 22.47 truck trips per day. The haul route for these dump trucks will be via Dishman-Mica Road, a Principal and Minor Arterial, that experiences a total ADT of approximately 22,700 trips near Appleway Avenue and 4,800 ADT near Thorpe Road. Therefore, the dump truck-related trips are estimated to represent less than one percent of the ADT of this facility.

3.3.2.3 Alternative 3 – Standard Subdivision

Alternative 3 proposes the development of 543 residential lots and would not include any *new* commercial retail or multi-family uses within the project. The Alternative would, however, continue to include the operation of the former golf course clubhouse as a 4,000 SF restaurant.

Using the ITE Trip Generation Manual, 9th Edition designation (Land Use Code #210) for single family residential units, an average of 9.52 vehicular trips per day and one PM peak hour trip per unit is assumed. Therefore, a total of 5,169 ADT and 543 PM peak hour trips are assumed to occur from the residential use at Alternative 3.

Because the 2016 TIA included trips estimated from re-use of the golf course clubhouse, those trips have also been added to the estimated trip generation of the standard subdivision to ensure that the baseline assumptions of traffic impacts of Alternatives 2 and 3 are consistent. As noted in Table 3-8 below, Alternative 3 generates approximately 317 fewer average daily trips, but generates approximately 28 more PM peak hour trips. This is due to the higher PM peak hour trip generation of the single-family residential units and the fact that no internalization trip reduction factor is applied with Alternative 3 because no commercial uses would be included.

Table 3-8: ADT and PM Peak Hour Trip Comparison – Alternatives 2 and 3

Alternative	ADT	PM Peak Hour Trips
Alternative 2 – PRD (inc. 4,000 GSF restaurant)	5,846	545
Alternative 3 – Standard Subdivision (inc. 4,000 GSF restaurant)	5,529	573

**Trip counts include 360 ADT and 30 PM peak hour trips associated with the 4,000 square foot restaurant operating at the former golf clubhouse.*

Construction-related Impacts

Like Alternative 2, Alternative 3 would also require a substantial amount of fill material to bring development areas above the 100-year base flood elevation. Alternative 3 would require more fill than Alternative 2, primarily due to the filling of the open space area located just north East Thorpe Road. The total required fill volume with Alternative 3 is approximately 574,122 CY. Using the same 15 percent shrink/swell factor applied to determine the amount of "loose" material that would need to be imported to the site under Alternative 3, it is estimated that a total of approximately 660,240 CY of fill material would need to be imported under Alternative 3. Based on an average dump truck volume of approximately 30 CY, it is estimated that 22,008 dump truck deliveries would be required to bring this fill material to the site. Assuming this material is delivered to the site over a four-year period, with 280 work days per year, it is assumed that approximately 20 truck deliveries would occur per day or approximately 40 truck trips (one trip to the site and one return trip) would occur per day over the duration of the site grading activities. The haul route for these dump trucks will be via Dishman-Mica Road, a Principal and Minor Arterial, that experiences a total ADT of approximately 22,700 trips near Appleway Avenue and 4,800 ADT near Thorpe Road. Therefore, the dump truck-related trips are estimated to represent less than one percent of the ADT of this facility.

3.3.3 Mitigation Measures

Alternative 1

No mitigation would occur under Alternative 1, as no action would occur on the site. However, it is assumed that background conditions on the site would result in a level of service failure at 16th Avenue and Pines Road that would require the city or others to signalize the intersection and pair the signal timing with the signal at 16th Avenue & State Route 27.

Alternative 2

Based upon the conclusions within the TIA it is recommended that the following mitigation measures would be implemented in conjunction with the construction of Alternative 2.

- Frontage improvements to Dishman-Mica Road, Thorpe Road, and Madison Road shall be completed in conjunction with site development.
- A two-way left turn lane will be installed on Dishman-Mica Road north of the Chester Creek Bridge.
- Bicycle and pedestrian facilities per the City of Spokane Valley Bicycle and Pedestrian Master Plan will be completed along the site frontages.

- A northbound right turn lane should be considered at the intersection of 32nd Avenue & Pines Road. Coordination with the City of Spokane Valley and the Central Valley School District will be required.
- When warranted by the development conditions, the project should contribute its participating percentage in a project to signalize the intersection of 16th Avenue & Pines Road.
- A haul route plan will be developed and managed to ensure that truck trips to and from the site during construction utilize Dishman-Mica Road for site access over the duration of site construction.

Alternative 3

It is anticipated that the mitigation measures required with the implementation of Alternative 3 would be the same as those listed in Alternative 2 above.

3.3.4 Cumulative Effects

Vested and unbuilt projects were considered in the background traffic volumes that were incorporated into the TIA, thereby addressing the potential cumulative transportation effects of the action alternatives when concerned with other on-going developments. The other regional projects that were considered in the TIA, and their associated traffic volumes are noted in Table 3-9 below.

Table 3-9: Background Projects and Vested AM & PM Trips

Background Project	Remaining Lots/ units	AM Peak. Hour Trips			PM Peak Hour Trips		
		Total	In	Out	Total	In	Out
Paxton Addition	13 lots	10	3	7	13	8	9
The Creek at Chester	44 lots	33	9	24	44	29	15
Pine Valley Ranch Apts.	132 units	69	14	55	90	59	31
Elk Ridge Heights	78 lots	59	15	44	79	51	28
Total Vested	**-**	**171**	**41**	**130**	**226**	**147**	**83**

3.4 ENVIRONMENTAL ELEMENTS NOT ANALYZED IN DETAIL

3.4.1 Air Quality

3.4.1.1 Affected Environment

Air quality can directly affect human health with cardiovascular and other health complications resulting from exposure to air pollutants. These can include human-generated pollutants (carbon monoxide, carbon dioxide, and lead, from automobiles and industrial sources); naturally-generated pollutants (fine particulate matter in forest fire smoke), or a combination of both. Dust and non-toxic nuisance odors are also a component of air quality.

The U.S. Environmental Protection Agency (EPA) sets National Ambient Air Quality Standards (NAAQS) for six criteria pollutants known to impact human health. The six criteria pollutants include carbon monoxide (CO), particulate matter (PM), ozone (O3), sulfur dioxide (SO2), lead (Pb), and nitrogen oxide (NOx). In the past, Spokane has been in nonattainment for both carbon monoxide (CO) and Particulate Matter (PM10).

In the Spokane region currently there are two pollutants of primary concern, fine particulate matter (PM 2.5) and ground-level ozone4. While industry contributes about 20% of the PM 2.5 and ground-level ozone air pollution, most of the pollution in the Spokane area results from transportation (vehicle emissions) and home heating.

Ground-level ozone is not emitted directly into the air like other pollutants but is produced when nitrogen oxides (NOx) formed by combustion processes, and volatile organic compounds (VOCs) from many sources, combine. These ozone-producing pollutants come from local sources, such as cars, trucks, industrial boilers, power plants, paints, solvents, and other commercial and consumer products.

According to the Spokane Regional Clean Air Agency (Spokane Clean Air), during the winter months wood heating is the largest source of fine particle pollution. Stable weather patterns typical of the winter in Spokane Valley trap smoke near the ground, intensifying the problem. Spokane Clean Air may restrict outdoor burning during periods of poor air quality. In addition, local fire officials issue outdoor burn restrictions during fire safety season.

Air quality in the Spokane region generally becomes worse during the winter heating season due to the presence of fine particles from wood fires and during the hot, summer months in which ozone levels increase and (in recent years) regional forest fires occur. The Spokane area is not currently in non-attainment for ozone, PM 2.5 or PM10; however, over the past 10 years ozone concentrations have approached non-attainment levels5.

Spokane Clean Air began monitoring for PM2.5 in 1999, shortly after the PM2.5 health-based standard was established by EPA[6]. The health-based standard for PM2.5 has been exceeded during the winter months due to wood stove smoke in 9 of the past 19 years, including 2013,

[4] https://www.spokanecleanair.org/air-quality
[5] https://www.spokanecleanair.org/documents/our_air/Ozone%20Trends%20Chart%20Jun%202017.jpg
[6] The PM2.5 health-based standard is 35 micrograms per cubic meter of air (equivalent to 100 on the AQI) averaged over 24 hours, midnight to midnight. Prior to 1999, monitoring was done for smoke and dust particles combined (PM10- Particulate Matter 10 microns in diameter and smaller). Particulate matter (PM) has been measured by Spokane Clean Air since health-based air quality standards were established in 1971. The first standard was for Total Suspended Particulates, then revised in 1987 to Particulate Matter 10 microns and smaller (PM10). In 1997, EPA established an additional standard for Fine Particles (PM2.5).

2014, 2015, and 2017. The health-based standard for PM2.5 has been exceeded in July, August and/or September due to forest fire smoke in 2014, 2015, 2017 (16 days), and 2018 (13 days).

In recognition of the effect of wood heating on air quality, Washington State has several laws addressing wood stoves including:

- RCW 70.94.450, which establishes the policy of the state to control, reduce, and prevent air pollution caused by wood stove emissions; encourages Ecology to educate the public about the effects of wood stove emissions and other heating alternatives; and promotes the desirability of achieving better emission performance and heating efficiency from wood stoves.
- RCW 70.94.455, which establishes standards for solid fuel burning devices and provides for the state building code to require an adequate source of heat other than wood stoves in all new and substantially remodeled residential and commercial construction.
- RCW 70.94.473, which provides that, during an air pollution episode, alternatives to wood burning will be used in buildings with alternative sources of heat, and for those without alternatives, only certified wood stoves can be used.

The City of Spokane Valley Municipal Code (Section 7.05.040 Nuisances Prohibited) requires the control of dust that could potentially cause a nuisance to City residents.

Under the current vegetated, undeveloped conditions, minimal air pollutants are generated from the site.

3.4.1.2 Environmental Consequences

3.4.1.2.1 Alternative 1 – No Action

Under Alternative 1 no changes to current air quality conditions are anticipated. The existing on-site vegetation will continue to function as a carbon "sink" rather than a source of atmospheric carbon.

3.4.1.2.2 Alternative 2 – Planned Residential Development

Under Alternative 2, impacts to air quality will occur both during construction and during the operational lifetime of the project following construction.

During construction there will be tailpipe emissions from on-site construction equipment, and construction-related on-road vehicles including delivery trucks and the personal vehicles belonging to construction workers. These tailpipe emissions will add VOCs, NOx, CO, CO2, and ground-level ozone to the air.

During construction, some fugitive dust could be expected, although wind-erosion control prevention measures will be implemented to minimize these effects.

In addition, some construction elements, such as asphalt paving operations may cause odors detectible to some people away from the project site. The effect of such odors would be short-term.

Once the project has been constructed, the additional 300 single family residential units, 280 multi-family units and 22,400 square feet of commercial use will generate air emissions that could include carbon dioxide, carbon monoxide, NOx, and VOCs. Sources of these emissions could include natural gas and electricity-powered home appliances and space-heating systems, gasoline or electricity-powered yard maintenance equipment, gasoline or electricity-powered home owner and additional delivery/service vehicles generated by the project. Additionally, wood stoves, if used within the project site, could also be a source of fine particulate (PM2.5) emissions.

It is unlikely these emissions would cause ambient concentrations to exceed the National Ambient Air Quality Standards for NOx, CO, SO2, and Pb because historically these pollutants have not approached non-attainment levels in the Spokane area. Emissions associated with the project could potentially result in ozone and PM 2.5 concentrations that exceed NAAQS because the area has had concentrations of ozone that approach non-attainment concentrations for the past 10 years and has exceeded the health-based standard for PM 2.5 for 9 of the past 19 years, including 2017 and 2018. The emissions associated with a residential development would be consistent with the planned intent of the project site, which is designated for residential development by the City of Spokane Valley and for urban development within the Spokane County UGA.

3.4.1.2.3 Alternative 3 – Standard Subdivision

Impacts to air quality under Alternative 3 will be similar to those described for Alternative 2 with the following exceptions:

- Alternative 3 provides a greater number of single-family residences than Alternative 2, with 543 total single-family residences compared to 300 single family residences in Alternative 2. The additional single-family residences are more likely to be a source of fine particulates from wood burning stoves.
- Alternative 3 does not incorporate 30% of the gross site area to public open space, therefore providing less area that can serve as a "carbon sink."
- Construction-related impacts to air quality will likely be greater with Alternative 3 due to the greater degree of imported fill material required.

3.4.1.3 Mitigation Measures

Construction: During construction, the following best management practices will be followed to ensure that air quality effects are minimized to the extent possible:

- Well-maintained construction equipment and trucks will be used to reduce emissions; vehicles and equipment will be fitted with emission-controlling components such as air filters and catalytic convertors.
- Prolonged periods of idling vehicles and other engine-powered equipment will be avoided.

- During construction, areas of exposed soils will be regularly sprayed with water or other dust suppressants.
- Cleared area that will be exposed for prolonged periods will be paved, planted with a vegetation ground cover, or covered with gravel.
- Loads in trucks will be covered to ensure that dust and soil does not fly off and pollute the air.
- A program and schedule for road sweeping will be submitted concurrent with submittal of an application for the first phase or sub-phase of development.
- Woody vegetation cleared from the site will not be burned but will instead be ground or chipped on-site or hauled to an off-site location.

Operations: The following measures could reduce air quality effects associated with either Alternative 2 or 3:

- Implementation and enforcement of Spokane Clean Air burn bans/restrictions by the HOA to minimize the length and intensity of poor air quality conditions during the winter months.
- Incorporation of open spaces, such as in Alternative 2, and retention of vegetation and planting of trees within the project can help mitigate atmospheric carbon indirectly generated as a result of the project.
- Revegetation of open space areas, street trees, and other areas of the site disturbed by construction.

3.4.1.4 Cumulative Effects

Local air quality, which is already compromised at times during the winter months in most years due to current levels of wood smoke-generated pollution would likely be further diminished for potentially longer periods of time during the winter months due to the added emissions from the project. The incremental air quality impacts of the project are consistent with the anticipated implementation of the City's comprehensive plan, which designates the site for residential development.

3.4.2 Aesthetics

3.4.2.1 Affected Environment

The Painted Hills site is predominantly a vacant field as a result of the former golf course use. The former golf course clubhouse located at the southwest corner of the site remains and is currently operated as a restaurant with associated parking. Vegetation on the site is primarily field grasses with intermittent deciduous and evergreen trees that line the former fairway areas.

Uses surrounding the site include:

- Low density residences located to the east and on the east side of South Madison Road;
- A single-family residential subdivision located adjacent to the northern limits of the site;
- A convent, the "Carmel of the Holy Trinity", located adjacent to the northwest boundary of the property;

- A church, owned by the Chester Community Church, also adjacent to the northwest limits of the site; and
- Vacant land, zoned Corridor Mixed Use, located west of the site on the opposite side of South Dishman Mica Road.

In addition to the views from these surrounding properties, the site can be viewed by passing motorists from the surrounding roads: South Dishman Mica Road, East Thorpe Road, and South Madison Road. The site is not designated as a scenic resource and there are no scenic by-ways or other scenic areas designated on or adjacent to the site.

There are currently no sources of noise or light on the site, except for the commercial use of the former clubhouse and the parking lot area, which includes overhead parking lot lighting.

Figure 3-11: View of the Site from S. Madison Road

Figure 3-12: View of the Site from E. Thorpe Road

Figure 3-13: View of the Site from S. Dishman Mica Road

Figure 3-14: Former Clubhouse and Associated Parking

3.4.2.2 Environmental Consequences

3.4.2.2.1 Alternative 1 – No Action

Because Alternative 1 would not result in any changes to the site, no aesthetic impacts are expected to result from this alternative.

3.4.2.2.2 Alternative 2 – Planned Residential Development

Development of the site under Alternative 2 will convert most of the central, east and northwest areas of the site into a mixed-use community. Remaining areas of the property will be retained as community open space. Under the City's development standards for the R-3 zone, the maximum height of a residence is 35 feet. It is anticipated that new homes within the community will adhere to this maximum height standard. Open space areas will be landscaped and will include community amenities such as trails, benches, playground equipment and other features. Street lights conforming to the City's public works standards will be incorporated within the development along perimeter public routes and new local roads. Parking lot lighting in the commercial area at the southwest corner of the site may also be updated to meet City requirements.

No aesthetic impacts are anticipated from off-site stormwater infrastructure improvements because these improvements will be at or below the existing ground surface and are not anticipated to result in any significant change in the character of these affected areas.

During the initial public review of the PRD application, representatives of the Carmel of the Holy Trinity convent reviewed and commented on the application. As noted in their November 15, 2018 letter addressed to the City of Spokane Valley, convent representatives indicated a

concern regarding a potential "influx of noise, traffic and other disturbances that are likely to arise both during construction of the project and upon its completion." As noted in the November 15, 2018 letter, the project applicant has met with representatives of the convent to come to an agreement regarding specific measures that will be implemented to minimize and reduce aesthetic impacts of the project on this neighboring property.

3.4.2.2.3 Alternative 3 – Standard Subdivision

Under Alternative 3, most of the field and open space areas on the site would be converted to urban development. As a standard subdivision, the project would not be subject to the 30 percent open space requirement found in SVMC Section 19.50.060, and therefore resulting open spaces would primarily be limited to the riparian buffer along Chester Creek, landscape areas and the flood basin located on the north side of the site.

3.4.2.3 Mitigation Measures

Alternative 1

No mitigation measures are necessary under the no action alternative.

Alternatives 2 and 3

- Street lights and parking lot light fixtures will incorporate shields to ensure compliance with City foot-candle lighting requirements, mounting heights and wattage.
- Mitigation measures will be implemented consistent with those listed in the November 15, 2018 letter received from the Carmel of the Holy Trinity convent.

3.4.2.4 Cumulative Effects

City and County development standards governing screening, setbacks, landscaping, light, glare, building height and other provisions are expected to adequately address the aesthetic effects of individual development projects. Therefore, no significant cumulative aesthetic effects are expected to result when considering the action alternatives in conjunction with other potential development in the project vicinity.

3.4.3 Biological Resources

3.4.3.1 Affected Environment

The affected biological environment of the Painted Hills site is defined in the February 28, 2019 Biological Evaluation (BE), Critical Areas Report and Habitat Management Plan, prepared by Biology, Soil & Water, Inc. (Dawes, Larry. Painted Hills PRD Biological Evaluation 2019) The BE study area evaluated the biological resources within a half mile radius of the Painted Hills site and the potential impacts from Alternatives 2 and 3.

As identified in the BE, the subject property is located within the Chester Creek valley with forested foothills on the east and west sides of the valley. The BE describes the habitats within the study area as a "mosaic of urban developed, fragments of conifer forest, and small tract agriculture." As described in the BE, undeveloped forested hillsides extend about 1200 feet east of the densely developed Ponderosa neighborhood. The BE notes that "large mammals that are willing to cross highways and residential developments interspersed with open farm

land will find connectivity to a few hundred acres of wooded and sparsely populated foothills extending south and west from the Painted Hills site to Dishman Hills."

When the Painted Hills site operated as a golf course, the entire property was planted in non-native turf grasses with sparse conifer and deciduous trees lining some of the fairways. The turf grass was maintained by treatment with herbicides and regular mowing and maintenance of the golf course grounds. These practices virtually eliminated the native herbaceous plant community. Since the golf course operations and maintenance have ceased, noxious weeds have invaded the site.

Honey willows were planted inside the Ordinary High Water Mark (OHWM) of Chester Creek whose channel was historically dredged and maintained for flood control. The banks of the channel are covered with Reed canarygrass. Outside the OHWM of the stream channel where the vegetation was not mowed or maintained, the vegetative community is dominated by Canarygrass. Teasel, tansy, thistle, wormwood, and lettuce.

Threatened or Endangered Species

As identified in the BE, listed threatened and endangered species that occur in Spokane County include the Yellow-billed Cuckoo (*Coccyzus americanus*), Canada Lynx (*Lynx canadensis*), Bull trout (*Salvelinus confluentus*), Water Howelia (*Howellia auqatilis*) and Spalding's Silene (*Silene Spaldingii*). The BE made the following findings regarding the potential presence of these species on the site:

- **Yellow-billed Cuckoo (*Coccyzus americanus*)**: These birds nest in areas with at least 25 acres of contiguous riparian woodland. Because the largest area of this habitat type on the site is less than one tenth of the minimum size suitable for the Yellow-billed Cuckoo, the BE concluded that there is no suitable habitat for the yellow billed cuckoo existing on the site.
- **Bull Trout (*Salvelinus confluentus*)**: Waterfalls and dams prevent the upstream and downstream migration of bull trout into the Spokane River and its tributaries in the vicinity of the Painted Hills site. Therefore, there is no known population of bull trout in the project area, therefore no Bull Trout habitat exists**.**
- **Canada lynx (*Lynx canadensis*)**: Typical lynx habitat is dense coniferous forest areas with sapling/pole thickets, rock outcrops and wetlands at elevations of around 4000 to 4,500 feet. The Painted Hills site is at an elevation of approximately 2,015 feet. Lynx dens typically occur in mature old growth stands with substantial deadfall and in areas where they can predate on snowshoe hare. No lynx on the site were observed in the field visits to the site and the Painted Hills site does not provide lynx habitat conditions.
- **Spalding's catchfly (*Silene spaldingii*):** Spalding's catchfly is a plant species that is listed by the USFWS as threatened in Washington State. Field studies conducted in support of the BE for the project failed to identify the presence of this plant on the site and the BE notes that "previous years of cultivation, followed by the planting of turf grasses, years of mowing and herbicide applications" have likely impacted the ability of the plant to grow on the site.

- **Water Howelia (*Howelia aquatilis*)**: Howelia is an aquatic plant that is often found in seasonal wetlands, ponds and lakes. No evidence of this plant was observed through field visits conducted to support the preparation of the BE.

Species of Concern

The project BE also evaluated the presence USFWS-listed species of concern on the site and evaluated the site for the presence and/or habitat of the following species that are listed in Spokane County.

- **Bald Eagle (*Haliaeetus leucocephalus*)**: The BE found that bald eagles do not routinely forage in the Action Area and no nest sites were observed on the Painted Hills site.
- **Western Burrowing Owl (*Athene cunicularia*):** No historical observations have occurred in the project vicinity and no individuals, nests or other signs were observed during the site survey.
- **California Floater (*Anodonta californiensis*):** This is a freshwater mussel and there are no instances on the site.
- **Ferruginous Hawk (*Buteo regalis*):** This raptor nests on rocky ledges or high ground vantage points and would not occur on the site.
- **Giant Columbia Spire snail (*Fluminicola Columbiana*):** This species occurs in cold, unpolluted medium to large streams, which do not occur within the project area.
- **Loggerhead Shrike (*Lanius ludovicianus*):** This robin-sized gray, black and white bird prefers nesting in big sagebrush and antelope bitterbrush. The BE determined that development at the Painted Hills site would not have an effect on this species.
- **Longeared Myotis (*Myotis evotis*):** This species of vesper bat is sometimes found in crevices in small basalt rock formations. This species often roosts in Ponderosa pine trees over 30 centimeters (cm) in diameter and over 12 meters high. The BE identified that no significant effect would occur to this species.
- **Northern Goshawk (*Accipiter gentilis*):** Goshawks select relatively closed canopy coniferous/boreal forest habitat for nesting. Therefore, the Painted Hills site does not provide nesting goshawk habitat.
- **Olivesided Flycatcher (*Contopus cooperi*):** This species is found in boreal and western coniferous forests and the Painted Hill site does not provide this habitat.
- **Pallid Townsend's Bigeared Bat (*Corynorhinus townsendii pallescens*)**: This species is found in eastside mixed conifer forest, shrub-steppe areas and riparian-wetland areas. In Washington, old buildings, silos, concrete bunkers, barns, caves, and mines are common roost structures. The Painted Hills site does not provide this habitat.
- **Peregrine Falcon (*Falco peregrinus*):** Two subspecies of peregrine falcons occur in Washington state at present, *Falco peregrinus pealei* (Peale's peregrine falcon) and *Falco peregrinus anatum* (Continental peregrine falcon). Peale's peregrine falcon is a coastal subspecies and are not found in eastern Washington. Therefore, the BE

evaluated the potential presence of Continental peregrine falcon on the site. Historic use of Dichlorodiphenyltrichloroethane, more commonly known as "DDT", throughout eastern Washington eliminated this subspecies from former breeding sites in eastern Washington. Since the ban of the use of DDT in 1972, attempts have been made to re-establish the Continental peregrine falcon in eastern Washington and captive-reared young birds have been released at several sites in Spokane County. The process of re-introducing falcons into the wild is called "hacking". WDFW does not currently use any hack sites in the vicinity that could be impacted by the project. Further, because Peregrine falcons nest on cliffs or even man-made structures such as buildings or bridges, the Painted Hills site does not provide nesting habitat.

- **Redband Trout (*Oncorhynchus mykiss*):** There are no fish-bearing streams on the Painted Hills site or in the project action area and therefore, the project action area does not provide Redband trout habitat.
- **Sagebrush Lizard (*Sceloporus graciosus*):** As suggested by its name, the Sagebrush lizard occupies habitats where sagebrush is prevalent and the Painted Hills site does not provide such habitat.
- **Westslope Cutthroat trout (*Oncorhynchus clarki lewisi*):** There are no fish-bearing streams on the Painted Hills site or in the project action area and therefore, the project action area does not provide Redband trout habitat.
- **Palouse Goldenweed (*Haplopappus liatriformis*):** The Palouse goldenweed is a perennial grassland forb found in the Palouse bioregion of Idaho and southeastern Washington and does not occur on the Painted Hills site.

WDFW Priority Species

- **White-tailed deer (*Odocoileus virginianus*)**: As illustrated on Figure 3-15, the Painted Hills site is not mapped by WDFW as White-tailed deer habitat, which is mapped to occur on wooded lands to the east and south. However, deer utilize the site as they do with all undeveloped parcels in the area.
- **Elk (*Cervus canadensis*)**: The Painted Hill site falls within the northern extent of the mapped Elk Habitat polygon in the Spokane Valley. The site does not provide cover or refugia required by elk and is therefore not elk habitat, but elk moving through the general area between Mica Peak and Dishman Hills could potentially cross the Painted Hills site to travel between these habitats. However, there is no documented record of regular use of the site by elk.
- **Gray Wolf (*Canis lupus*)**: The Painted Hills site is mapped as Gray wolf habitat and it is possible that wolves could travel through the site in search of prey. Because of the presence of small domesticated mammals in the residential areas proximal to the site, the wolves could present a hazard to these neighboring residences. On May 5, 2011, wolves were delisted from the federally endangered species list in the eastern one-third of Washington state.

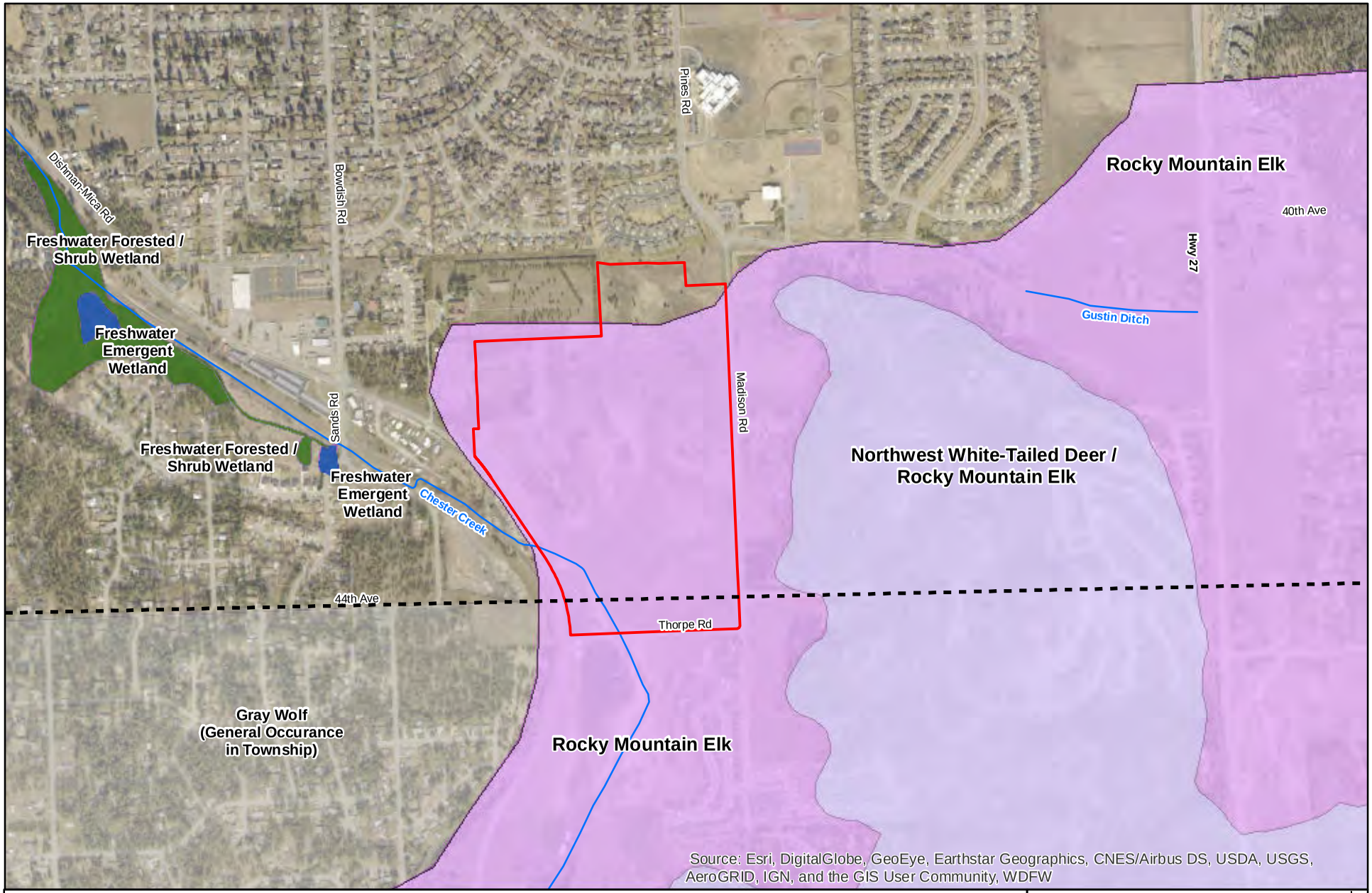
Wetlands

National Wetland Inventory (NWI) maps indicate the possible presence of two wetlands on the Painted Hills site. Field studies conducted in conjunction with the BE evaluated these sites and included seasonal hydrologic monitoring at test pits in these locations. The results of this evaluation were that, although seasonal high-water conditions occur in the winter when snow or frozen ground conditions occur, wetland hydrologic conditions do not occur during the growing season and these sites therefore did not meet the hydrologic conditions necessary to designate the sites wetland. This determination was verified by the Washington Department of Ecology (DOE), who conducted a field visit on June 8, 2016. Therefore, the BE determined that Chester Creek is not influenced by a high water table and that it loses water to underlying sands and gravels throughout the year. This prevents wetland conditions from occurring outside of the area of the channel where water flows.

Riparian Areas

The Washington Department of Natural Resources (DNR) Water Type Map defines Chester Creek as a Type F waterway, which means that the stream is used by fish or meets the physical criteria to be potentially used by fish. The Type F designation for Chester Creek is a result of fish presence at specific upstream locations. However, Chester Creek does not provide fish habitat on the site. (Dawes, Larry. Personal comms. April 10, 2019)

Chapter 21.40 of the City of Spokane Valley Municipal Code designates that Chester Creek, as a Type F stream with a width of greater than 15 feet at bankfull stage, requires a standard riparian buffer or "riparian management zone" of 100 feet. Biology, Soil & Water, Inc. delineated the Chester Creek OHWM in the field on March 31, 2015, to establish the starting point for this buffer. The OHWM flags were surveyed and plotted on the site plan map by Whipple Consulting Engineers.



Freshwater Emergent Wetland
Freshwater Forested / Shrub Wetland
Northwest White-Tailed Deer / Rocky Mountain Elk
Rocky Mountain Elk
Gray Wolf (General Occurance in Township)

Source: GIS data provided by the Washington Department of Fish and Wildlife, the City of Spokane Valley, and Spokane County.

Figure 3-15
Washington Department of Fish & Wildlife Priority Habitats & Species
Painted Hills Residential Development DEIS

0 1,000 2,000 Feet

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3.4.3.2 Environmental Consequences

3.4.3.2.1 Alternative 1 – No Action

Under Alternative 1, there would be no physical changes to the site. Vegetation established and maintained under the former golf course use would continue to exist on the site but would not receive the extent of grounds maintenance that occurred under golf course operation. Existing built features on the site would continue to encroach into the City's regulated riparian buffer of Chester Creek. Specifically, the restaurant, maintenance building, former cart paths and two cart path bridges will continue to encroach within the riparian buffer. It is estimated that these features currently occupy approximately 18,604 SF of the approximately 182,462 SF buffer on the site. No other impacts to biological resources are anticipated to occur under Alternative 1.

3.4.3.2.2 Alternative 2 – Planned Residential Development

Under Alternative 2 some of the existing cart path encroachments into the City's regulated riparian buffer would be demolished, removed from the buffer area and revegetated. New riparian buffer encroachments would occur as a result of a planned expansion of the restaurant parking area and for the required expansion of Thorpe Road. These improvements will result in approximately 3,665 SF and 1,383 SF of buffer impact, respectively.

A reduction in the City-regulated riparian buffer of 100-feet to 75-feet is permitted by the applicable City critical areas ordinance under the condition that buffer averaging occurs to replace impacted buffer with an equivalent or larger area. This replacement area must be contiguous with the existing buffer. Vegetative enhancement plantings are also required within the buffer replacement areas. Overall, Alternative 2 will impact approximately 10,545 SF of the standard riparian buffer. New impacts within the riparian buffer include those from three new trail segments designed for residents and visitors of the site.

Alternative 2 would also reduce the standard buffer by approximately 5,616 SF, up to a 25% area encroachment as permitted under the critical areas ordinance. This will occur adjacent to residential lots 7 and 8, located near the southernmost cart path bridge and east of the restaurant area. With this buffer reduction area, the combined buffer impacts equal approximately 15,619 SF. Buffer averaging and enhancement plantings are proposed to ensure that these impacts do not result in a reduction in the ecological function and values of the riparian area.

3.4.3.2.3 Alternative 3 – Standard Subdivision

Similar to Alternative 2, riparian buffer impacts would occur with Alternative 3. The riparian buffer adjacent to the restaurant parking lot will be reduced by up to 25% (for a minimum buffer of 75-feet) in the location of a proposed parking lot expansion. This would result in an approximately 3,665 SF buffer reduction/impact. Like Alternative 2, Alternative 3 also includes a 1,383 SF impact area resulting from the Thorpe Road expansion. These are the only two areas of permanent riparian buffer impacts under Alternative 3 and result in a total impact area of approximately 5,048 SF.

Alternative 3 would also involve temporary riparian impacts resulting from the placement of fill material on the east side of the streambank to bring land areas farther to the east above the

100-year base flood elevation and suitable for residential development. The buffer in this area is currently planted non-native golf course turf grass and is almost totally devoid of woody vegetation. No permanent loss of buffer would occur in this area. Existing cart paths would be removed and new trails of approximately the same width would be constructed as a replacement and for community use. Fill material placed on the east stream bank will cover an approximately 104,132 SF of area. This area will be replanted with native grasses, trees and shrubs, representing a significant enhancement over existing conditions.

3.4.3.3 Mitigation Measures

- Impacts to City-regulated riparian buffers shall be mitigated to ensure no net loss of overall buffer area consistent with the applicable City critical areas ordinance.
- Disturbed buffer areas and buffer replacement areas shall be mitigated with plantings installed at the industry standard rate of 350 stems per acre or 837 total plants. These will include a mixture of native grasses, trees and shrubs.

3.4.3.4 Cumulative Effects

No cumulative effects on biological resources are expected to result from the project.

3.4.4 Environmental Health

3.4.4.1 Affected Environment

Because the site has primarily been used as open space as a golf course, the site does not have a known history that would indicate the presence of environmental health hazards. Further, no evidence exists of environmental health risks on the site. Ecology's online "What's in My Neighborhood" mapping tool indicates that there are no designated clean-up sites on the site or in the immediate vicinity of the project.[7] The nearest site is approximately 1.5-miles to the north. Further, the Ecology Spills Map does not indicate any history of hazardous spills on the site.[8] Lastly, the US Dept of Health & Human Services TOXMAP Environmental Health Maps doesn't show any other toxic chemicals in the area and indicates that the nearest landfill to the site is approximately 2.25-miles to the southeast.

Site surveys have not revealed any past septic fields on the property. There is one known well on the site. Well logs from the Washington State Department of Conservation and Development indicate that this well was dug in 1950. It is expected that this well will be decommissioned and capped with future site development.

[7] https://fortress.wa.gov/ecy/neighborhood/
[8] https://fortress.wa.gov/ecy/coastalatlas/storymaps/spills/spills_sm.html

3.4.4.2 Environmental Consequences

3.4.4.2.1 Alternative 1 – No Action

The No Action alternative is not anticipated to have any environmental health impacts as no changes will occur.

3.4.4.2.2 Alternative 2 – Planned Residential Development

Alternative 2 has the potential to cause environmental health effects due to the following:

- Dust and construction equipment emissions during site construction
- Noise from construction equipment.

3.4.4.2.3 Alternative 3 – Standard Subdivision

Similar to Alternative 2, Alternative 3 has the potential to generate environmental health effects from dust and construction equipment emissions and from construction noise.

3.4.4.3 Mitigation Measures

It is anticipated that environmental health effects from Alternatives 2 and 3 would be mitigated through the following measures:

- Site construction will be conducted consistent with SVMC Section 7.05.040 (Nuisances Prohibited) which includes limits on smoke, soot, toxic substances, noise and other public health hazards.
- Site construction will abide by the maximum allowable levels for environmental noise related to site construction as governed by Washington Administrative Code (WAC) Section 173-60.

3.4.4.4 Cumulative Effects

No cumulative effects on environmental health are anticipated to result from the project.

3.4.5 Geology

3.4.5.1 Affected Environment

The Painted Hills site is generally flat, sloping less than 1% from south to north with some localized short, steeper slopes associated with remnant golf course features including tee boxes, greens, and road embankments.

The majority of the site is mapped by the Natural Resources Conservation Service (NRCS) as Narcisse silt loam, 0-3% slopes, prime farmland. The edges of the site are mapped as Hardesty ashy silt loam, 0 to 3% slopes, prime farmland; Urban land-Springdale, disturbed complex, 0 to 3 % slopes; Endoaquolis and Fluvaquents, 0 to 3 % slopes, prime farmland if drained; and Phoebe shay sandy loam, 0 to 3 % slopes, prime farmland if irrigated.

Across most of the project site beneath the topsoil there is a layer of somewhat poorly drained alluvial soils, and below this layer are glacially deposited sands and gravels.

There is no known history of unstable soils on the site or within the immediate vicinity.

3.4.5.2 Environmental Consequences

3.4.5.2.1 Alternative 1 – No Action

No impacts to surface soils are proposed under Alternative 1.

3.4.5.2.2 Alternative 2 – Planned Residential Development

Under Alternative 2 the native soils will be covered by imported fill and developed for residential or residential and commercial uses. The property will be graded to create the streets, drainage ponds/swales, building pads, parking lots and park features. Grading may require the movement of up to 450,000 cubic yards of material, with up to 330,000 cubic yards of imported material, from the nearest source approved per City and County standards and brought to the site following City guidelines.

Due to the placement of fill and site development features proposed under Alternative 2 the opportunity for surface water and precipitation to recharge the underlying aquifer will be limited to the proposed infiltration basin, roadside swales, and dry wells.

Some erosion from wind and minor erosion from rain could occur on-site during construction. Because of the flatness of the site, the potential for erosion caused by surface water is limited and would be localized to the area of work.

3.4.5.2.3 Alternative 3 – Standard Subdivision

As described for Alternative 2, site grading activities associated with Alternative 3 will cover most of the site with imported fill. The property will be graded to create the streets, drainage ponds/swales, and areas future residences. Alternative 3 is expected to require 574,122 CY of fill material, which will require the import of approximately 660,240 CY of “loose” fill material prior to compaction on the site.

Approximately 25% of the site would be covered with impervious surfaces after completion of the project.

As described for Alternative 2, due to the placement of fill and site development features under Alternative 3 the opportunity for surface water and precipitation to recharge the underlying aquifer will be limited to the proposed infiltration basin, roadside swales, and dry wells.

Some erosion from wind and minor erosion from rain could occur on-site during construction elements. Because of the flatness of the site, the potential for surface water erosion is limited and would be localized to the area of work.

3.4.5.3 Mitigation Measures

The following mitigation measures will be implemented to reduce or control erosion under the two action alternatives, Alternatives 2 and 3.

- Measures as required by the Spokane Regional Clean Air Agency (SRCAA) and Washington Department of Ecology (WDOE) permits will be followed.
- An erosion control plan that complies with the Eastern Washington Stormwater Management Manual (EWSWMM) and Spokane Regional Stormwater Manual (SRSM) will be developed for the project and will be implanted during construction.
- Erosion control measures to be implemented during construction may include using silt fences, wattles, sediment basins, inlet protection, watering and hydro-seeding as allowed/required by the SRSM and the EWSWMM.
- Following construction, soils will be stabilized by paving, building and landscaping/vegetation.

3.4.5.4 Cumulative Effects

Alternatives 2 and 3 are not expected to result in cumulative effects to surface geology, as there are no known on-going or concurrent projects that, when considered in conjunction with the action alternatives, could generate cumulate effects.

3.4.6 Historic, Cultural, and Archaeological Resources

3.4.6.1 Affected Environment

The affected environment of the Painted Hills site is described in detail in an April 2018 Cultural Resource Survey, prepared by Plateau Archaeological Investigations, LLC (PAI) and incorporated into this DEIS by reference. As described in the study, PAI conducted an intensive pedestrian survey over the Painted Hills site and supplemented that with desktop research. Upon completion of the study, PAI concluded that development of the Painted Hills PRD project (Alternative 2) "will result in No Historic Properties Affected, and no further archaeological investigations are recommended prior to, or during, execution of this project."

Although this survey revealed no indication that cultural or historic materials would be encountered during construction, PAI recommended that all ground-disturbing activities associated with the project be conducted under the guidance of an Inadvertent Discovery Plan (IDP) due to interest expressed in the project by the Spokane Tribe of Indians. The IDP is included with the cultural resources survey as Appendix A.

3.4.6.2 Environmental Consequences

3.4.6.2.1 Alternative 1 – No Action

No potential impacts to historic, cultural or archaeological resources would result from Alternative 1 as no site disturbance would occur.

3.4.1.2.2 Alternative 2 – Planned Residential Development

As noted in the cultural resource survey, subsurface probing on the Painted Hills site revealed irregular sediments that "generally did not fit those predicted by the NRCS model" due to the extensive landscaping and site grading that occurred with the construction of the Painted Hills Golf Course. Due to the site disturbance that has occurred on the site and the lack of evidence of any Native American or historic-era cultural materials or features, no impacts are anticipated to result from the construction activities associated with Alternative 2. However, site construction activities will occur under the guidance of an IDP as outlined in Appendix A of the Cultural Resources Survey to ensure that any potential inadvertent discovery is promptly addressed.

3.4.6.2.3 Alternative 3 – Standard Subdivision

Areas of site disturbance for Alternative 3 would occur within the same site limits as those evaluated in the cultural resources survey. As a consequence, no impacts to Native American or historic-era cultural materials are expected to result from Alternative 3. However, site construction activities will occur under the guidance of an IDP as outlined in Appendix A of the Cultural Resources Survey to ensure that any potential inadvertent discovery is promptly addressed.

3.4.6.3 Mitigation Measures

On-site and off-site ground disturbance activities will follow the inadvertent discovery plan included in the April 2018 Cultural Resource Survey document. This inadvertent discovery plan includes the following measures:

- If ground-disturbing activities reveal potential Native American or historic-era cultural materials or features, a professional archaeologist shall be contacted immediately. The archaeologist shall meet the Secretary of the Interior's standards for a professional archaeologist as defined at 36CFR61 Appendix A. Construction within 200 feet (60 meters) of the discovery will stop, and the area will be secured to protect the find from additional damage. The archaeologist will document the find, prepare a brief written statement, and take photographs of the find for submission to the lead agency and the State Historic Preservation Officer (SHPO) at the Department of Archaeology and Historic Preservation (DAHP). The find will also be reported to the Tribal Historic Preservation Officer (THPO) of the Spokane Tribe of Indians. It is the responsibility of the lead agency, Washington State Department of Archaeology and Historic Preservation, to contact the affected Tribes. This consultation process will take place even if the pre-contact or historic-era cultural materials appear to have lost their depositional integrity. Work within 200 feet (60 meters) of the find will not resume until a plan for management or preservation of the materials has been approved. Following the project, the archaeologist will provide a report detailing the procedures and results of the investigation.
- During the investigation, the archaeologist will observe rules of safety and will comply with any safety requirements of the excavation contractor and project engineers. Entry into

any excavation will only be done under the direct supervision and approval of the construction foreman (or his or her agent) and verification that entry and exit is safe.

- If a burial, human remains, suspected human remains, funerary objects, sacred objects, or items of cultural patrimony are encountered during any aspect of this project, operations will cease in accordance with the RCW Chapters 27.44, 68.50, and 68.60. All work within 200 feet (60 meters) of the find will cease, the area around the discovery will be secured, and any requirements of the lead agency shall be followed. Work within 200 feet (60 meters) of the find will not resume until a plan for management or preservation of the materials has been agreed upon by all parties.
    - If the lead agency does not explicitly state procedures, the Spokane Valley Police Department, the Spokane County Medical Examiner, and the SHPO at the DAHP will be notified in the most expeditious manner possible. The find will also be reported to the THPO of the Spokane Tribe of Indians. Reporting is to be done by the lead agency (DAHP), or a federal or state funding or permitting agency. The find will be treated with dignity. People who have contact with the find will not take photographs, contact the press, call 911, or discuss the find with the public in any manner. The find will be covered and the location kept secure.
    - The coroner and law enforcement agency with jurisdiction will evaluate the find to determine whether it is a crime scene or a burial. If human remains are determined to be associated with an archaeological site (burial), and if there is any question of the cultural affiliation of the burial, or whether the burial is prehistoric, the DAHP and any affected tribes will be notified to assist in the determination prior to beginning any extensive excavations.

3.4.6.4 Cumulative Effects

No on-going or future activities are expected to occur on-site that would result in cumulative effects when considered in conjunction with any of the project alternatives.

3.4.7 Noise

3.4.7.1 Affected Environment

Noise levels in the project area are relatively low, as would be expected in a low-density semi-rural setting. Noise in the area is typically generated by vehicular traffic on the surrounding roads, and residential equipment such as lawn mowers and chain saws. Noise from recreational vehicles and snowmobiles, in season, may also be present.

The proposed project is subject to State of Washington and City of Spokane Valley noise standards and regulations.

State of Washington noise regulations are found in WAC 173-60. Traffic traveling on public roadways is exempt from the State of Washington's maximum allowable noise levels, as is construction noise that occurs between the hours of 7:00 a.m. and 10:00 p.m.

Section 7.05.40 K. of the Spokane Valley Municipal Code provides thresholds and standards for controlling the nuisance impacts of noise within the community. This section includes

exemptions regardless of time of day for normal use of public rights-of-way, sounds created by motor vehicles when regulated by Chapter 173-62 WAC (noise emission standards for new motor vehicles and noise emission standards for the operation of motor vehicles on public highways), sounds created by surface carriers engaged in commerce or passenger travel by railroad, and sounds created by safety and protective devices where noise suppression would defeat the intent of the device or is not economically feasible. In addition, sounds originating from temporary construction sites as a result of construction activity are exempt from the provisions of SVMC 7.05.040(K)(1) between the hours of 7:00 a.m. and 10:00 p.m., or when conducted beyond 1,000 feet of any residence where human beings reside and sleep at any hour:

3.4.7.2 Environmental Consequences

3.4.7.2.1 Alternative 1 – No Action

Under Alternative 1 noise levels on and near the project site will remain at current low levels typical of rural residential areas.

3.4.7.2.2 Alternative 2 – Planned Residential Development

Under Alternative 2 noise levels will increase beyond current noise levels both during the construction phase and indefinitely once the project construction is completed.

During the construction phase noise from construction, land clearing, and fill delivery and placement equipment as well as structure construction will increase for the short term. Following completion of construction, noise will be generated by residential traffic and other residential sources including yard maintenance equipment, domestic pets, occupants, and park use for the long term.

The increase in population under Alternative 2 would likely lead to noise levels that are higher than current levels. It is unlikely that the increase would be measurable, but it may be perceived by residents in terms of the frequency to which they experience noise disturbance.

3.4.7.2.3 Alternative 3 – Standard Subdivision

As described for Alternative 2, under Alternative 3 noise levels will increase beyond current noise levels both during the construction phase and indefinitely once the project construction is completed.

During the construction phase noise from construction, land clearing, and fill delivery and placement equipment as well as structure construction will increase for the short term. Following completion of construction, noise will be generated by residential traffic and other residential sources including yard maintenance equipment, domestic pets, occupants, and park use for the long term.

The increase in population under Alternative 3 would likely lead to noise levels that are higher than current levels. It is unlikely that the increase would be measurable, but it may be perceived by residents in terms of the frequency to which they experience noise disturbance.

3.4.7.3 Mitigation Measures

Under either Alternative 2 or 3 construction will be limited to times prescribed in City code.

3.4.7.4 Cumulative Effects

There are no known off-site sources of noise that could present cumulative effects when considered in conjunction with the action alternatives.

3.4.8 Public Services

3.4.8.2.1 Alternative 1 – No Action

No impacts to public services are anticipated to result from the no-action alternative as no additional demand on services would occur.

3.4.8.2.2 Alternative 2 – Planned Residential Development

Alternative 2 would result in approximately 300 single-family residential units, 228 multi-family units and 52 mixed-use residential units. Approximately 13,400 square feet (SF) of commercial use will occur within the mixed-use buildings and approximately 9,000 SF of new retail use will occur within a newly created 92,865-SF lot located along Dishman Mica Road. The 4,000-SF former clubhouse building will be retained in restaurant use and, as a result, would not represent a change in impact on public services.

Based on current demographics, it is expected that approximately 1,377 people would reside in the project at full project buildout. Further, it is anticipated that approximately 45 employees would work in the 22,400 SF of new retail space that would result with Alternative 2.9 Similar to the projected schedule of residential development, it is anticipated that development of the commercial retail uses will be market-driven and would occur over the approximately 10-year buildout period of the project.

The following paragraphs summarize the anticipated effects of these uses and the new residents and employees on schools, parks, fire, public safety, water and sanitary sewer services.

Schools

Based on the U.S. Census Bureau American Community Survey (ACS) 5-year estimate data, approximately 15.2 percent of Spokane Valley's population is between the ages of 5 and 17 years old. Extrapolating this number to the Painted Hills project results in an estimated 209 students who would reside within the project upon completion of Alternative 2.

While the precise cohort of elementary school, middle school and high school students is not known, if general student population were proportionately distributed to the number of grades in elementary (six grades), middle school (three grades), and high school (four grades), it is

[9] Assumes approximately 1,000 square feet of retail space per employee and two shifts per day, or approximately 500 square feet of retail area per employee. (U.S. Energy Information Administration - https://www.eia.gov/consumption/commercial/data/2012/bc/cfm/b2.php)

assumed that the development of the Painted Hills project would result in the following increases in student population:

- *Elementary School* – Approximately 10 new students per year or 96 total students over the approximately 10-year buildout of the project.
- *Middle School* – Approximately 5 new students per year or 48 total students over the approximately 10-year buildout of the project.
- *High School* - Approximately 6 new students per year or 64 total students over the approximately 10-year buildout of the project.

It is expected that the retail uses included under Alternative 2 would represent a net benefit to the school system as new property taxes from the 22,400 square feet created would add revenue to the current tax base.

During the public comment period for the Painted Hills PRD project, the school district reviewed and commented on the application. In their comment letter, the district notes that, due to school capacity issues, it is likely that students from the Painted Hills site would likely not attend schools within the boundary area that includes the site. The comment letter also indicates that students from the area will likely not attend Chester Elementary. The school district has provided no objection to the project.

Fire

In response to the submittal of the Painted Hills PRD application, the Spokane Valley Fire District submitted a letter, dated August 31, 2015, that provides development-specific recommendations for ensuring adequate access provisions are made for the fire department to access the site.

Public Safety

It is expected that additional service calls will occur from future residences and businesses within the site, but these uses are not anticipated to create a significant increased demand for public safety services. Per communications with City of Spokane Valley staff, it is not anticipated that Alternative 2 would generate a significant impact to City services.[10] The City regularly reviews large development proposals and, in instances where a significant new user, such as a big-box retail project, creates enough demand to warrant special adjustments in service, the City will make those adjustments to its service contract with Spokane County. It is anticipated that the gradual increase in population, employment and business activity on the site can be commensurately addressed through adjusted service levels.

Water

In conjunction with the Painted Hills PRD submittal, a Certificate of Water Availability was filed with the Spokane Valley Planning Department on July 24, 2015. This certificate, signed by the site's water purveyor, Spokane County Water District #3, acknowledges that the proposed project is consistent with the district's department of health (DOH) approved water system plan.

[10] Pers comms with Morgan Koudelka, City of Spokane Valley, January 14, 2019.

Sanitary Sewer

Service to the site is provided by Spokane County Environmental Services. As noted in the July 24, 2015 certificate of sewer availability letter provided by the county, the district acknowledges that sanitary sewer service is available and can be provided to serve the project.

3.4.8.2.3 Alternative 3 – Standard Subdivision

Alternative 3 is anticipated to create 543 single-family residential units, which would result in approximately 1,358 new residents at full buildout of the community. This alternative would not include any new commercial uses and no change would occur at the clubhouse building, which is assumed to continue to operate as a restaurant. As the use of the clubhouse would not change, the use of the clubhouse is not expected to have a change in impact on public services.

The following paragraphs summarize the anticipated effects of Alternative 3 on schools, parks, fire, public safety, water and sanitary sewer services.

Schools

Based on the U.S. Census Bureau American Community Survey (ACS) 5-year estimate data, approximately 15.2% of Spokane Valley's population is between the ages of 5 and 17 years old. Extrapolating this number to Alternative 3, an estimated 206 students would reside within the project upon the completion of Alternative 3.

While the precise cohort of elementary school, middle school and high school students is not known, if general student population were proportionately distributed to the number of grades in elementary (six grades), middle school (three grades), and high school (four grades), it is assumed that the development of Alternative 3 would result in the following increases in student population:

- *Elementary School* – Approximately 9.5 new students per year or 95 total students over the approximately 10-year buildout of the project.
- *Middle School* – Approximately 4.7 new students per year or 47 total students over the approximately 10-year buildout of the project.
- *High School* - Approximately 6.4 new students per year or 64 total students over the approximately 10-year buildout of the project.

Fire

Because the demands for fire service would be similar to Alternative 2 and the fire district has provided specific development and design requirements for that alternative, there are no anticipated challenges with obtaining fire district service for Alternative 3.

Public Safety

It is expected that additional service calls will occur from future residences and businesses within the site, but these uses are not anticipated to create a significant increased demand for public safety services. Per communications with City of Spokane Valley staff, the level of additional activity created under Alternative 3 would not generate a significant impact to public

safety services.[11] The City regularly reviews large development proposals and, in instances where a significant new user, such as a big-box retail project, creates enough demand to warrant special adjustments in service, the City will make those adjustments to its service contract with Spokane County. However, similar to Alternative 2, the gradual increase in population resulting from Alternative 3 can be commensurately addressed through regular level-of-service adjustments occurring through the City's periodic review and adjustment of its public safety contract with the County.

Water

Due to the fact that Alternative 3 would have a water demand that is very similar to Alternative 2 and Spokane County Water District #3 has acknowledged their ability to serve the project, there are no anticipated impacts or unique challenges to provide water to the site under Alternative 3.

Sanitary Sewer

Because the water demand under Alternative 3 would be similar to Alternative 2 and Spokane County Environmental Services has acknowledged their ability to serve Alterative 2, there are no anticipated impacts or unique challenges to provide sewer service under Alternative 3.

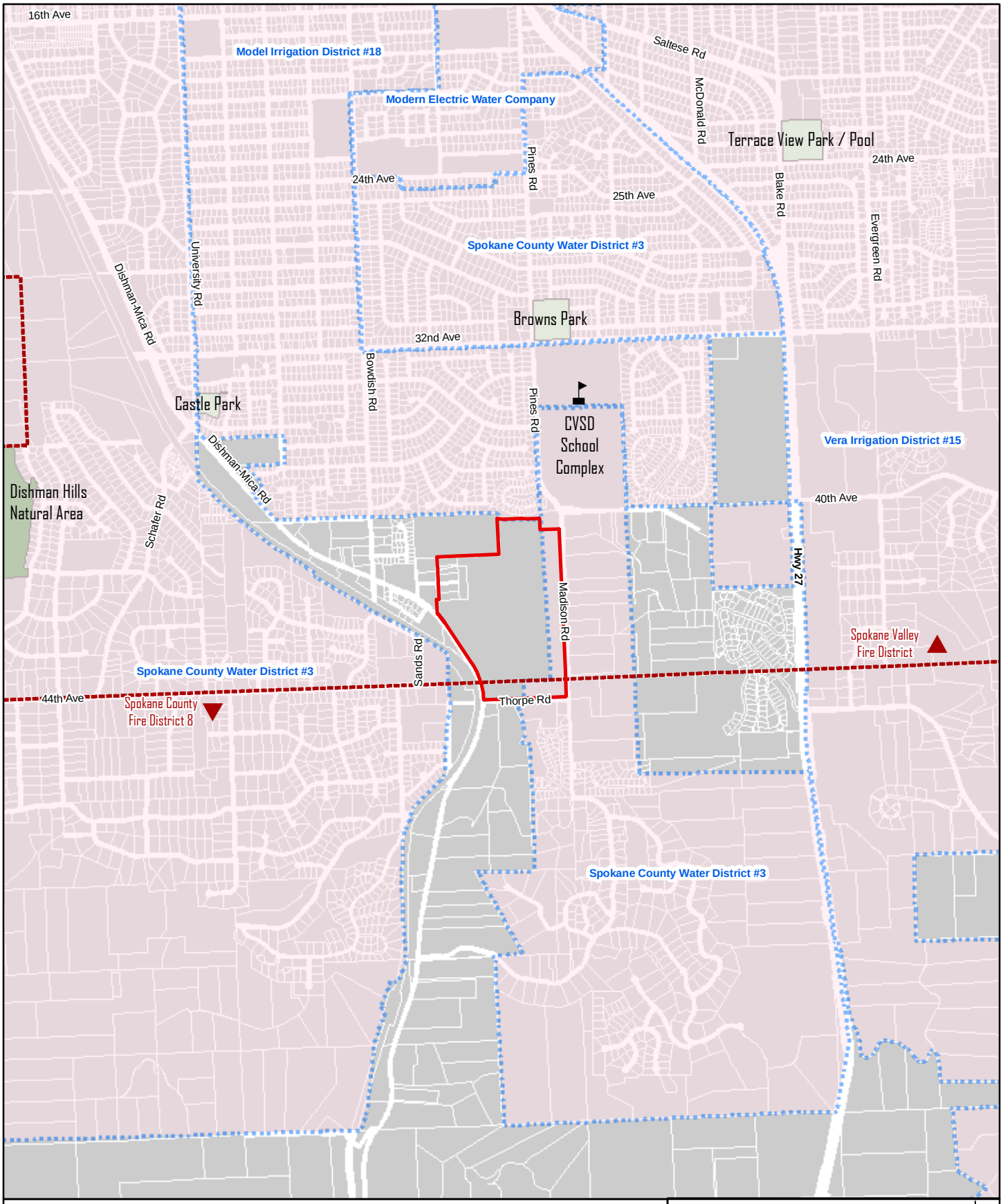
3.4.8.3 Mitigation Measures

No mitigation measures are proposed as no significant adverse effects are anticipated.

3.4.8.4 Cumulative Effects

There are no known cumulative effects from other on-going projects or activities that, when considered in conjunction with the action alternatives, could result in any discernible effects on public services.

[11] Pers comms with Morgan Koudelka, City of Spokane Valley, January 14, 2019.



Legend

- Painted Hills Boundary
- Fire Districts
- Water Districts

Notes: Central Valley School District #356, Spokane County Sherrif, Spokane County Environmental Services, and Spokane County Library District cover the entire extent of this map.
There is no park district in Spokane Valley.

Source: GIS data provided by the City of Spokane Valley and Spokane County.

Figure 3-16
Service District Boundaries

Painted Hills Residential Development DEIS

0 2,000 4,000 Feet

N

3.4.9 Recreation

3.4.9.1 Affected Environment

While the Painted Hills site is a former golf course, it has not been in operation since 2012 and the site is not designated for public recreation purposes. Public recreational opportunities near the Painted Hills site include two city parks, Browns Park (8.2 acres) and Castle Park (2.7 acres), both of which are within one mile of the site. Per the City of Spokane Valley Comprehensive Plan, these parks are categorized as neighborhood parks, which are intended to generally serve residents within a half-mile radius, provide ample recreational opportunities for children, and be accessible by walking and bicycling. As noted in Figure 50 of the City's comprehensive plan, Browns Park offers sports fields, sand volleyball courts, playgrounds, picnic areas, shelters, and restrooms, while Castle Park provides open space.

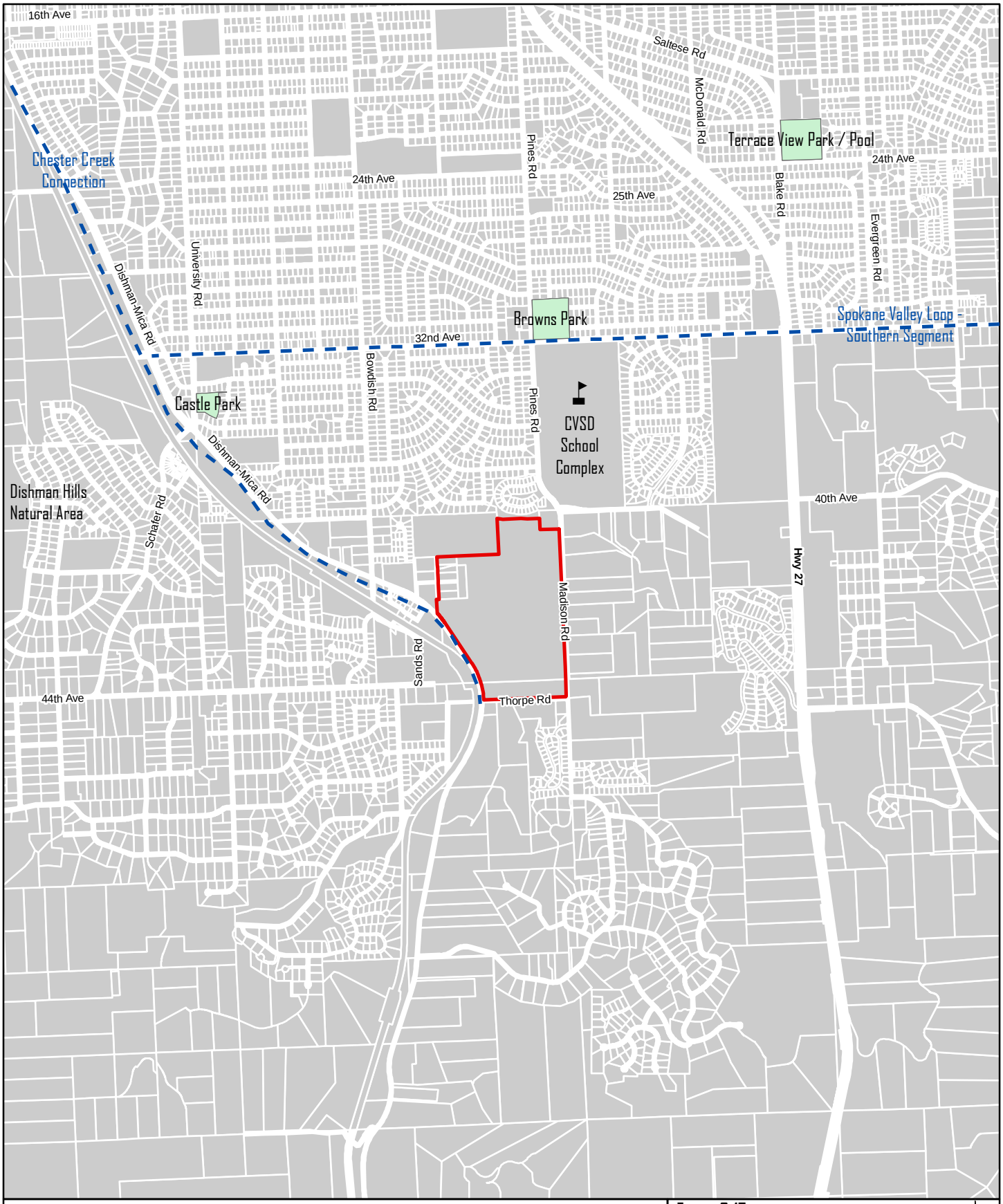
In addition to these city-managed neighborhood parks, additional recreational open space areas are located at the school complex immediately northeast of the Painted Hills site, where University High school, Chester Elementary School and Horizon Middle School are located. This complex occupies approximately 76.7 acres and includes a large outdoor recreation area with tennis courts, multiple baseball/softball fields, and soccer and football fields.

Per the Parks and Recreation Master Plan 2013 Update, Table 5-2, the City has adopted a level of service standard for public parks to achieve an equivalent of 1.92 acres of park land per 1,000 residents. According to the 2013-2017 American Community Survey 5-Year Estimates, the average household size in Spokane Valley is 2.50 people for owner-occupied households and 2.24 people for renter-occupied households[12] .

Proposed Trails

Per the City of Spokane Valley Parks and Recreation Master Plan 2013 Update, there are two trails proposed near the site. The Spokane Valley Loop – Southern Segment is a 3.5-mile segment that runs east-west from Sullivan Road to Dishman Road along 32nd Avenue. The Chester Creek Connection is a proposed one-mile segment connecting the Spokane Valley Loop at 32nd Avenue with Chester Creek.

[12] U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates



Legend

- Painted Hills Site
- City Parks
- County Parks
- Proposed Trail

Source: GIS data provided by the City of Spokane Valley and Spokane County.

Figure 3-17
Public Recreation Opportunities

Painted Hills Residential Development DEIS

0 2,000 4,000 Feet

N

3.4.9.2 Environmental Consequences

3.4.9.2.1 Alternative 1 – No Action

Under Alternative 1, no site development would occur that would generate new residents. Therefore, no additional demands would be placed on parks and recreation facilities in the community.

3.4.9.2.2 Alternative 2 – Planned Residential Development

Alternative 2 is anticipated to generate approximately 300 single-family residential units, 228 multi-family units and 52 mixed-use residential units. Based on the 2013-2017 American Community Survey 5-Year Estimates, it is anticipated that each single-family unit would be occupied by approximately 2.5 residents, and that each of the 280 multi-family units would be occupied by approximately 2.24 residents. This would result in a total population of approximately 1,377 residents upon completion of the project, which is anticipated to occur over a period of approximately 10 years or longer as the housing market dictates. Based on the City's comprehensive plan level-of-service target of 1.92-acres of park space per 1,000 residents, the project would create demand for approximately 2.64 acres of park space in the community. As noted in the site plan included on Figure 3-15 of this document, Alternative 2 incorporates approximately 30 acres of open space, including a 10-acre park which will fulfill the recreational demands of the new development.

3.4.9.2.3 Alternative 3 – Standard Subdivision

Alternative 3 is anticipated to create 543 single-family residential units, which would result in approximately 1,358 new residents at full buildout of the community. Based on the City's comprehensive plan target of 1.92-acres of parks area per 1,000 residents, Alternative 3 would generate the need for approximately 2.61 acres of park area.

3.4.9.3 Mitigation Measures

As a Planned Residential Development, Alternative 2 must comply with SVMC Section 19.50.060, which requires at least 30 percent of the gross land area be dedicated for "common space for the use of its residents."

3.4.9.4 Cumulative Effects

The City conducts periodic reviews of its parks and recreation needs for the broader community and last updated its Parks and Recreation Master Plan in 2013. Through regular review and update of the community plan, the City anticipates and plans for necessary recreational needs throughout the community. Therefore, any cumulative effects of population growth within the broader community have been considered and integrated with the City's parks and recreation system planning efforts.

ACRONYMS AND ABBREVIATIONS

ACS	American Community Survey
ADT	Average daily traffic
BE	Biological evaluation
BFE	Base flood elevation
cfs	Cubic feet per second
CLOMR	Conditional Letter of Map Revision
CM	Centimeter
CO	Carbon monoxide
COSV	City of Spokane Valley
CSWGP	Construction Stormwater General Permit
CY	Cubic yards
DAHP	Department of Archaeology and Historic Preservation
DDT	Dichlorodiphenyltrichloroethane
DEIS	Draft Environmental Impact Statement
DNR	Washington Department of Natural Resources
DOH	Department of Health
DS	Determination of significance
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EWSWMM	Eastern Washington Stormwater Management Manual
FEMA	Federal Emergency Management Agency
FHA	Federal Housing Authority
FIRM	Flood Insurance Rate Map
FIS	FEMA Flood Insurance Study
GMA	Growth Management Act
GSF	Gross square feet
HOA	Homeowners' association
IDP	Inadvertent Discovery Plan
ITE	Institute of Transportation Engineers
kWh	Kilowatt hours
LDR	Low Density Residential

LID	Low Impact Design
LOMR	FEMA Letter of Map Revision
LOS	Level of service
LUC	Land use code
MPH	Miles per hour
NAAQS	National Ambient Air Quality Standards
NFIP	National Flood Insurance Program
NOx	Nitrogen oxide
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
O3	Ozone
OHWM	Ordinary high water mark
O&M	Operation and maintenance (manual)
Pb	Lead
PM2.5	Particulate matter, generally 2.5 micrometers in diameter (fine)
PM10	Particulate matter, generally 10 micrometers in diameter
PM	Particulate matter
PRD	Planned Residential Development
RCW	Revised Code of Washington
ROW	Right-of-way
SCC	Spokane County Code
SEPA	Washington State Environmental Policy Act
SF	Square feet
SFHA	Special Flood Hazard Area
SFR	Single-family residential
SHPO	State Historic Preservation Officer
SO2	Sulfur dioxide
SR	State Route
SRCAA	Spokane Regional Clean Air Agency
SRSM	Spokane Regional Stormwater Manual
SVMC	Spokane Valley Municipal Code
THPO	Tribal Historic Preservation Officer
TIA	Traffic impact analysis

TIP	Transportation Improvement Plan
UGA	Urban Growth Area
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile organic compounds
Vol.	Volume
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Ecology
WRIA	Water Resource Inventory Area
WSDOT	Washington Department of Transportation

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APPENDIX A
Public Comment Index

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APPENDIX B
SEPA Checklist

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APPENDIX C
Traffic Impact Analysis

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APPENDIX D
Painted Hills PRD Biological Evaluation

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