



Whipple Consulting Engineers, Inc.

May 15, 2025

W.O. No. 2024-3776

Liberty Lake Planning, Engineering & Building Services
22710 E. Country Vista Drive
Liberty Lake, WA 99019
Attn: Lisa Key, Director/Planner

**Re: Legacy Ridge West – A Residential Subdivision (2014.PL0003)
Reasonable Use Exception – Response to Comments**

Dear Ms. Key:

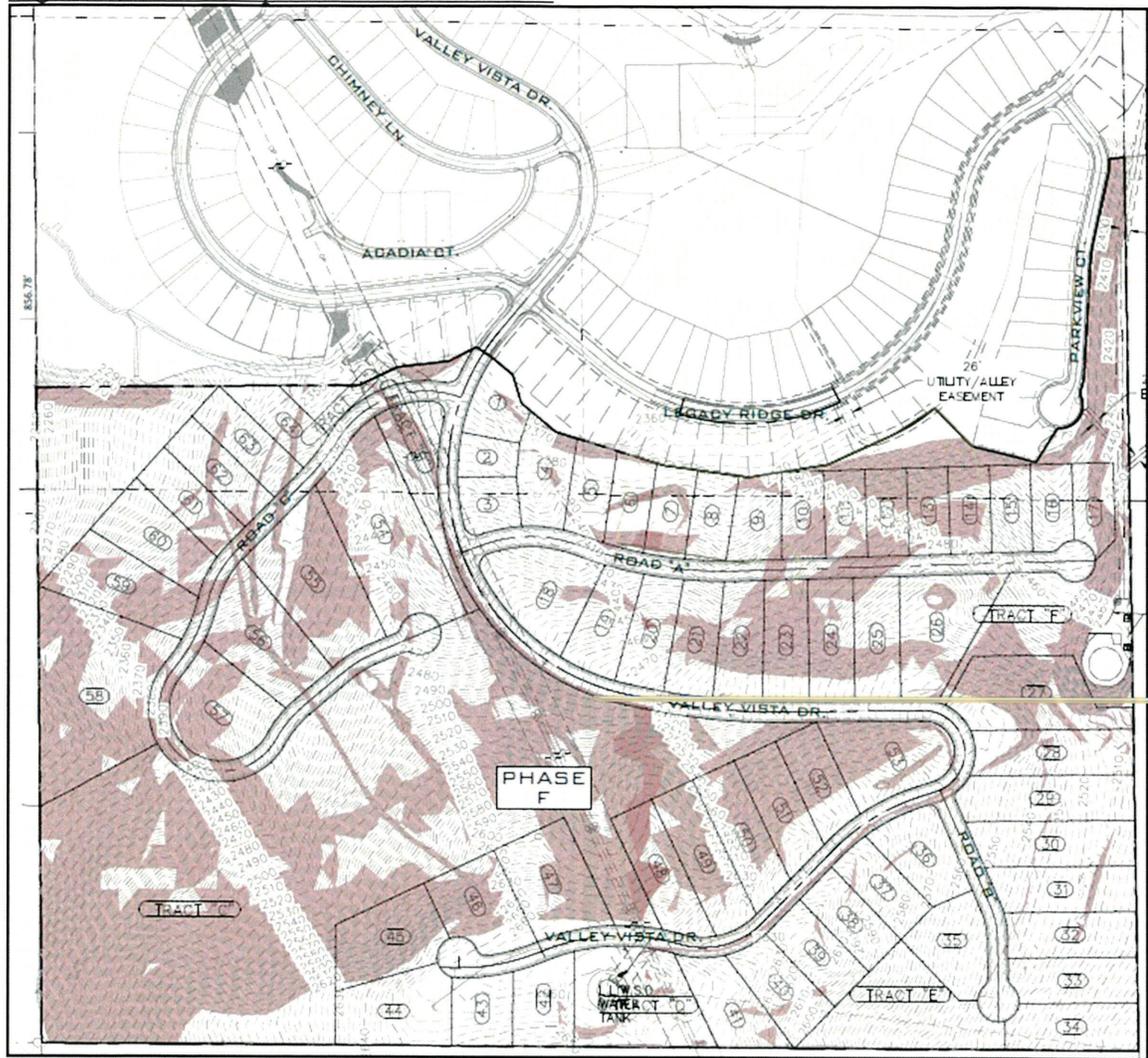
This letter is our response to your comments from the original submittal for the Reasonable Use Exception. The email of the comments is attached and is dated March 24, 2025. The preparation time for this submittal was two-fold, preparing documentation to answer the RUE comments, but also to catch the plat up by preparing a Minor Map Modification along with open space calculations as well as client input.

The City's comments are in "Calibri" type font and our responses are underlined in Times New Roman.

- The reasonable use request should encompass all new lots and new roadways proposed, not just those west of Valley Vista. Notably, the newly proposed lots east of Valley Vista were either proposed as common open space or "private common area", not to be developed (see graphic, below).

Attached to this submittal is the updated lot layout for a Minor Map Amendment along with area calculations. By making the proposed changes we were able to limit the impact area west of the main road. The previous concerns were presented with the changes shown, unfortunately, the Minor Map Modification, was not submitted at that time. An exhibit showing the affected areas from the Taylor Engineering Preliminary Plat and the Minor Map Modification is shown in Figure 2.

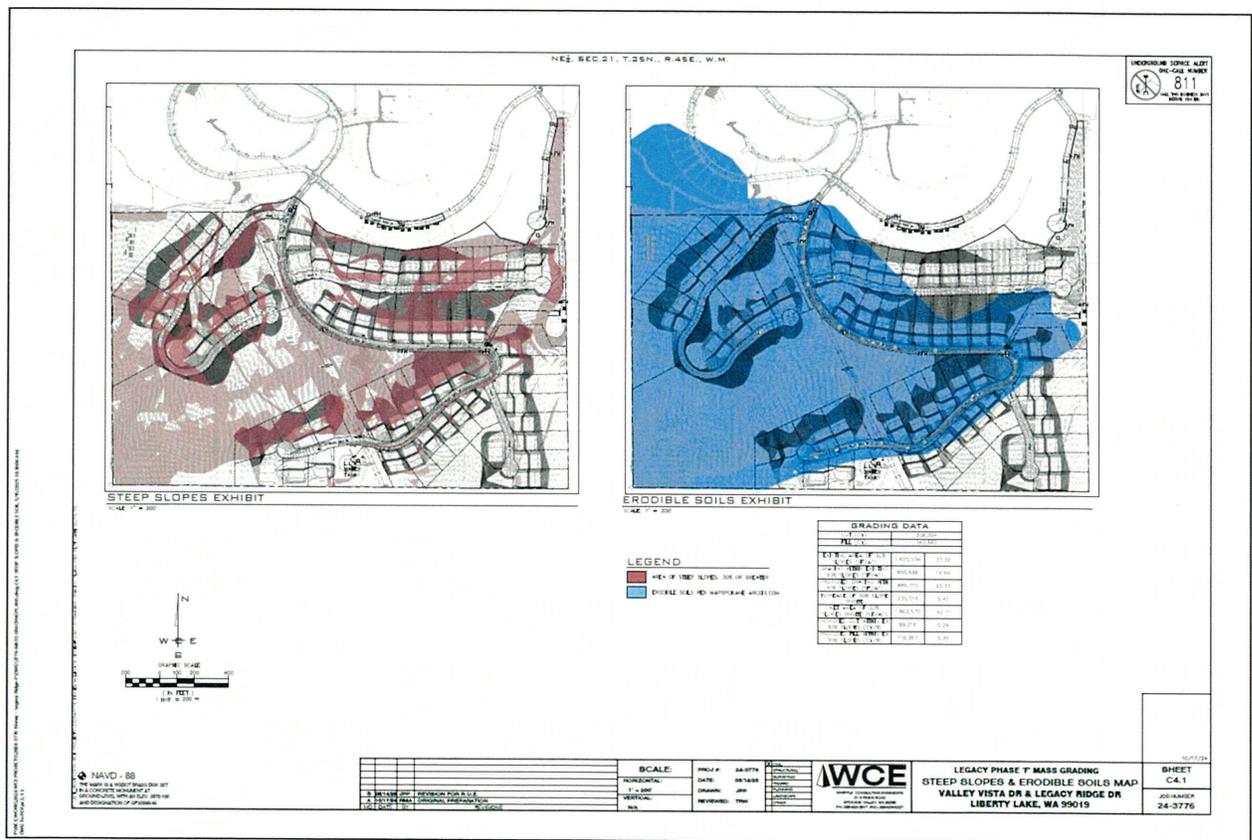
Figure 1, Minor Map Modification Exhibit



- Please provide an updated Grading Plan Sheet (see attached), with an overlay of the existing 30% slopes indicated in red, and the identified erodible soils in blue.

This has been prepared and is included as an attachments, snippets are shown here for reference.

Figure 2, Slope and Erodible Soil exhibit.



- Please provide data on the % of the 392,000 CY of proposed cut that will be removed from existing areas of 30% slope.
- Please provide data on the % of the 360,000 CY of fill that will be placed in areas of existing 30% slope.

Both of the above inquiries are shown below in Figure 3, the Grading Data, with cut in “red” and fill noted in “yellow”.

Figure 3, Grading Data

GRADING DATA		
CUT (CY):	308,304	
FILL (CY):	342,882	
EXISTING AREA OF 30% SLOPES (SF/AC)	1,625,556	37.32
GRADING WITHIN EXISTING 30% SLOPES (SF/AC)	650,696	14.94
PROPOSED GRADING WITH 30% SLOPES (SF/AC)	885,710	20.33
INCREASE OF 30% SLOPE ONSITE	235,014	5.40
NET AREA OF 30% SLOPES ONSITE (SF/AC)	1,860,570	42.71
PROPOSED CUT WITHIN EX. 30% SLOPES (CY/%)	89,016	0.29
PROPOSED FILL WITHIN EX. 30% SLOPES (CY/%)	118,363	0.35

- While you make a reasonable argument for financial considerations regarding the difficulty of the site as a basis for increasing the number of lots in order to make the development of the site economically viable as a justification for a reasonable use determination, you provide no data/cost information to support the claim.

For this project the RUE is necessary to allow for full development much like the rest of Legacy Ridge was developed considering the amount of steep slopes that existed prior to development, wherein grading was allowed to grade for economy and presentation to minimize development costs and ensure a reasonable rate of return. In order to develop this property, from the original 43 lots to the proposed 64 lots, a minor map modification was prepared and approved by the City to increase the number of lots from 43 to 64. This modification was approved.

As we moved through the potential development of this property, it became evident that in addition to more lots some additional grading and lot preparation needed to be provided to allow for the financial viability of the project. Hence the updated Minor Map modification and now the RUE. As originally proposed by the previous owner DR Horton, using the existing road and grading the lots resulted in a higher per lot cost than a national builder could develop with. This was even true with the “Emerald” type high-end homes. DR Horton then sold the property with the below attached bid from a Contractor, the buyer asked WCE if we could get more lots to bring the price per lot to develop down, hence the first Modification.

Figure 4- Construction Bid for 43 lots

Summary	
General Conditions	\$ [REDACTED]
Earthwork Public Onsite	\$ [REDACTED]
Erosion Control	\$ [REDACTED]
Sewer System Onsite	\$ [REDACTED]
Storm System Public Onsite	\$ [REDACTED]
Water System Onsite	\$ [REDACTED]
JUT Onsite	\$ [REDACTED]
Onsite Surface Imp. Public	\$ [REDACTED]
Miscellaneous	\$ [REDACTED]
Total	\$ [REDACTED]
WSST 8.9%	\$ [REDACTED]
Total	\$ [REDACTED]

The math for the 43 lots and a cost of [REDACTED] results in a per lot cost of [REDACTED]. By increasing this to 64 lots the value per lot is reduced to [REDACTED] per lot. Since the original bid, the proposal as a part of the RUE exception has reduced the Earthwork to about [REDACTED], thereby reducing the overall cost to develop from [REDACTED] per lot to [REDACTED] per lot from a new total cost to develop of [REDACTED]. This value of [REDACTED] 6 does not include land nor soft costs. Regardless, for this project to be successful, the cost to construct the lots cannot be more nor fall

above [REDACTED] The reason is the resulting home prices then wind up in the mid to high [REDACTED] which is a price point that results in slow absorption that then results in more cost to carry.

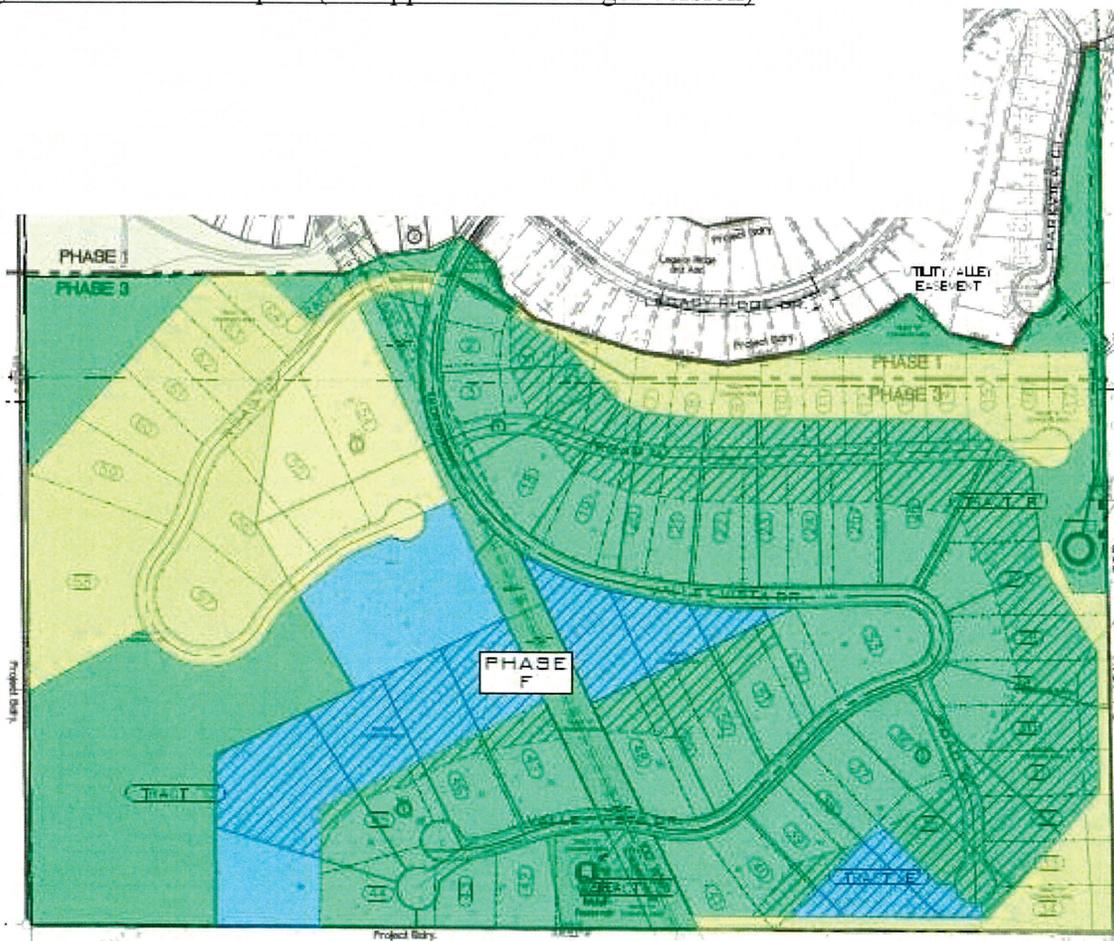
Succinctly, denial of the RUE would result in this parcel not being able to be developed that could then not be brought to market and developed, in the near future and maybe never.

While this is a public document, I would appreciate you mask the actual values prior to making public, thank you.

- Because it is unclear how much impact the excavation/fill will have on areas of 30% and identified erodible soils, how can it be determined that this alteration to the geo-hazardous areas is the minimum necessary to allow reasonable use?

The figure below demonstrates how little impact is required when you compare the blue to light green. The dark green represents no change from what was proposed as a part of the original preliminary plat.

Figure 5 – Areas of Impact (see appendix for a larger version)



Our response to the inquiry and in relation to the values provided, my personal and professional experience having worked on developing over 15,000 single family residential lots in subdivisions over the last 30 years tells me what is necessary and reasonable for development. Because of the Urban Growth Boundary, there are very few if any project or developable lands that are available that do not have 30-percent slopes, erodible soils, wetland, streams, or other critical areas. And that experience has brought us to the conclusion that without the RUE, this land most likely will not be developed. As shown in Figure 5, hopefully, you will come to the same conclusion that we as a design team came to, which is while there is impact it is reasonable when considering the option of not developing the site.

Please also note that that the following will be required as a condition of any reasonable use exception:

- Before any construction permits are given, the geotechnical reports should be updated to address the newest proposed cut/fill, lot layout, and road layout plans.
- All cuts/fills will need to be monitored during construction by the geotechnical engineer to make sure the construction aligns with the geotechnical recommendations. Rock cuts will need to be observed by the geotechnical engineer for any problematic rock discontinuities, or other slope stability issues that may be observed in the field, and the geotechnical engineer will need to certify the construction prior to final plat.
- A geotechnical report/ letter will be required for each home site, to include slope setbacks for each structure.
- Building envelopes for each lot shall be depicted on the final plat.

We recognize and understand the conditions that would be placed, and should this RUE be approved would accept these as reasonable conditions for the question being asked.

Lastly, and to reiterate, without the additional lots as noted above and the approval of this Reasonable Use Exception, this project most likely will not be viable in the foreseeable future and remain undeveloped for years to come.

We therefore request that this Reasonable Use Exception be approved as outlined above.

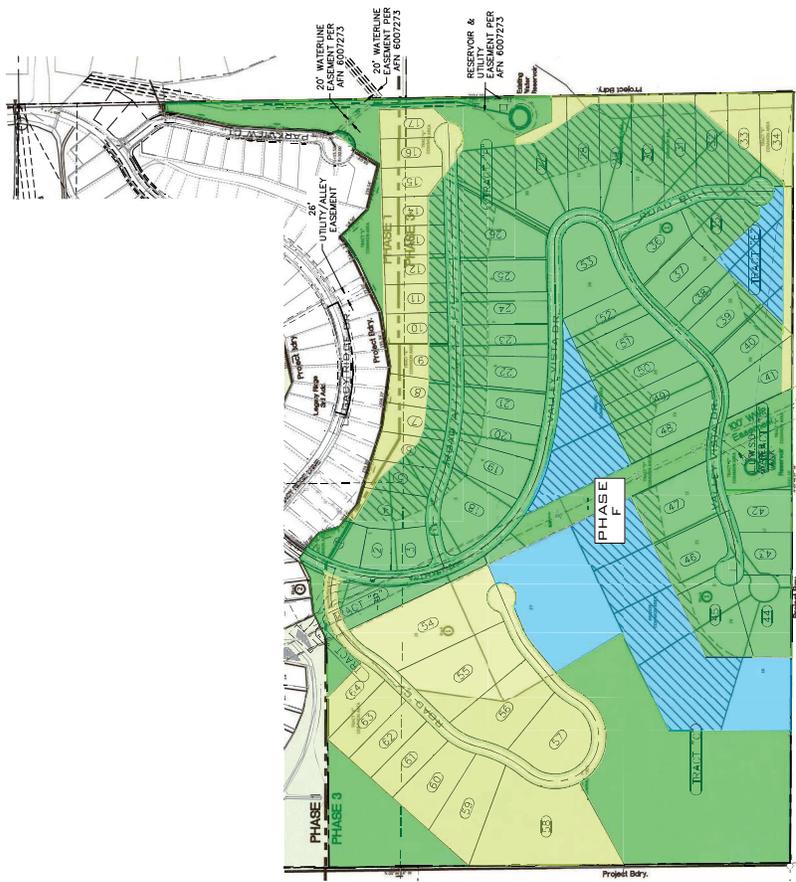
If you have any questions or comments regarding this letter, please feel free to contact us at (509) 893-2617.

Respectfully,

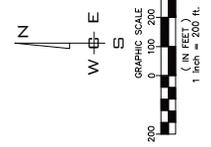
A handwritten signature in blue ink, appearing to read "Todd R. Whipple". The signature is stylized and includes a large, sweeping flourish at the end.

Todd R. Whipple, P.E.
Whipple Consulting Engineers, Inc.
TRW/trw/jpp

CC: File
Sponsor



REASONABLE USE EXCEPTION IMPACTED AREA	
HATCH	DESCRIPTION AREA (sq)
	FINAL MODIFICATION 5/15/25 22.66
	PRELIMINARY FLAT 7/16/14 11.74
	NO CHANGE 59.06



SHEET 1 OF 1
JOB NUMBER: **24-3776**

LEGACY RIDGE WEST 3RD ADDITION
R.U.E. REVISION EXHIBIT
VALLEY VISTA DR AND LEGACY RIDGE DR
LIBERTY LAKE, WA



DATE:	08/18/25
DRAWN:	JPP
REVIEWED:	TRW

PROJ #: 24-3776
DATE: 08/18/25
DRAWN: JPP
REVIEWED: TRW

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

NAVD - 88
THE MARK IS A WSDOT BRASS MONUMENT AT GROUND LEVEL WITH AN ELEV. 2070.160

NE 1/4 SEC. 21, T. 25 N., R. 45 E., W.M.

MASS GRADING PLANS

LEGACY PHASE "F"

VALLEY VISTA DRIVE

LIBERTY LAKE, WASHINGTON

NE 1/4 OF SEC. 21, T. 25 N., R. 45 E., W.M.



VICINITY MAP



COVER PLAN
SCALE: 1" = 200'

INDEX TO PLAN SHEETS

CO.0	COVER SHEET
CO.1	GENERAL NOTES
CO.1.0	TOPOGRAPHIC SURVEY
CO.2.0	SWPPP CONTROL PLAN
CO.2.1	SWPPP NOTES
CO.2.2	SWPPP BMP'S
CO.2.3	SWPPP BMP'S
CO.4.0	GRADING PLAN
CO.4.1	STEEP SLOPES & ERODIBLE SOILS MAP
CO.4.2	VALLEY VISTA DRIVE PROFILE
CO.4.3	ROAD A PROFILE
CO.4.4	ROAD B PROFILE
CO.4.5	ROAD C PROFILE

HAUL NOTE:
ALL EXCESS MATERIAL TO REMAIN ON-SITE. NO HAUL OFF OF MATERIAL IS PROPOSED.



- SEWER/WATER**
LIBERTY LAKE SEWER/WATER DIST. 1
LIBERTY LAKE, WA 99019
PHONE: 822-5443
CONTACT: BUAY ADAMS
- HEALTH**
SPOKANE REGIONAL HEALTH DEPARTMENT
SPOKANE, WA 99206
PHONE: 838-1578
CONTACT: PAUL SAVAGE
- SOLID WASTE**
SPOKANE WASTE MANAGEMENT
SPOKANE, WA 99206
PHONE: 480-9080-4458
- FIRE DEPARTMENT**
SPOKANE VALLEY FIRE DEPT.
SPOKANE VALLEY, WA 99206
PHONE: 935-1700
CONTACT: TRAC HARVEY
- POWER/GAS**
AMSTA UTILITIES
SPOKANE, WASHINGTON 99220
PHONE: 495-8200
CONTACT: BEN SABLESON
- LANDSCAPE**
WHOLE CONSULTING ENGINEERS
SPOKANE, WA 99206
PHONE: 465-8200
CONTACT: SUSAN MOSS, P.L.A.
- STREETS**
CITY OF LIBERTY LAKE
LIBERTY LAKE, WA 99019
PHONE: 755-6730
CONTACT: LURE MICHELS
- TELEPHONE**
CENTURY LINK
SPOKANE, WASHINGTON 99202
PHONE: 465-8200
CONTACT: DEBORAH CEIST
- BLDG. & PLANNING**
CITY OF LIBERTY LAKE
LIBERTY LAKE, WA 99019
PHONE: 755-6730
CONTACT: USA KEY
- OWNER**
M.K. MANAGEMENT, LLC ET AL
DUE O'NEALS, WA 99027
PHONE: 509-599-8333
CONTACT: CASEY MASON
- CONCRETE BROADCAST**
SPOKANE, WASHINGTON 99207
PHONE: 465-8200
CONTACT: BRYAN RICHARDSON
- ENGINEERING**
WHOLE CONSULTING ENGINEERS
SPOKANE, WA 99206
PHONE: 465-8200
CONTACT: TODD WHIPPLE, P.E.

EXISTING	DESCRIPTION	PROPOSED
---	ROADWAY CENTER LINE	---
---	PROPERTY LINE	---
---	FASSETT LINE	---
---	CURB	---
---	GRAVEL	---
---	CONCRETE & STRUCTURES	---
---	MONUMENT	---
---	SEWER	---
---	SANITARY SEWER	---
---	CLEANOUT	---
---	WATER SERVICE	---
---	WATER LINE	---
---	VALVE	---
---	SERVICE TRENCH	---
---	WATER METER	---
---	AIR VACUUM RELIEF STATION	---
---	DRAINAGE	---
---	DRAINAGE LINE	---
---	DRYWELL	---
---	DITCH	---
---	GAS	---
---	GAS LINE	---
---	METER	---
---	TELE-POWER	---
---	BURIED TELEPHONE POLE	---
---	BURIED POWER	---
---	TRANSFORMER PAD	---
---	TELEPHONE WALK	---
---	TELEPHONE CARRIER	---
---	OUT ANCHOR	---
---	LIGHT POLE	---

ABBREVIATIONS

ACT. LEN.	ACTUAL LENGTH	MANHOLE
BCR	BEGINNING OF CURVE RADIUS	MCR
CDT	CHISELED SURFACE	MIDLE OF CURVE RADIUS
CSTC	CURVED SURFACE	PET.
CT	COURT HOUSE	PIC
EOR	END OF ROAD	PT
EXIST.	EXISTING	RD EL.
GR	GRADE BREAK	ROAD ELEVATION
FLY/T.	FEED PER FOOT	RT
LE	LEFT INVERT ELEVATION	RIGHT INTERSECTION
LI	LEFT	SS
		STA. LEN.
		STATION LENGTH
		TO
		TOP OF CURB

PROJECT #:	24-3776
DATE:	09/19/23
DRAWN:	RMA
REVIEWED:	TRW
SCALE:	HORIZONTAL: 1" = 200'
	VERTICAL: N/A



DATE:	09/19/23
DRAWN:	RMA
REVIEWED:	TRW
SCALE:	HORIZONTAL: 1" = 200'
	VERTICAL: N/A

PROJECT #:	24-3776
DATE:	09/19/23
DRAWN:	RMA
REVIEWED:	TRW
SCALE:	HORIZONTAL: 1" = 200'
	VERTICAL: N/A

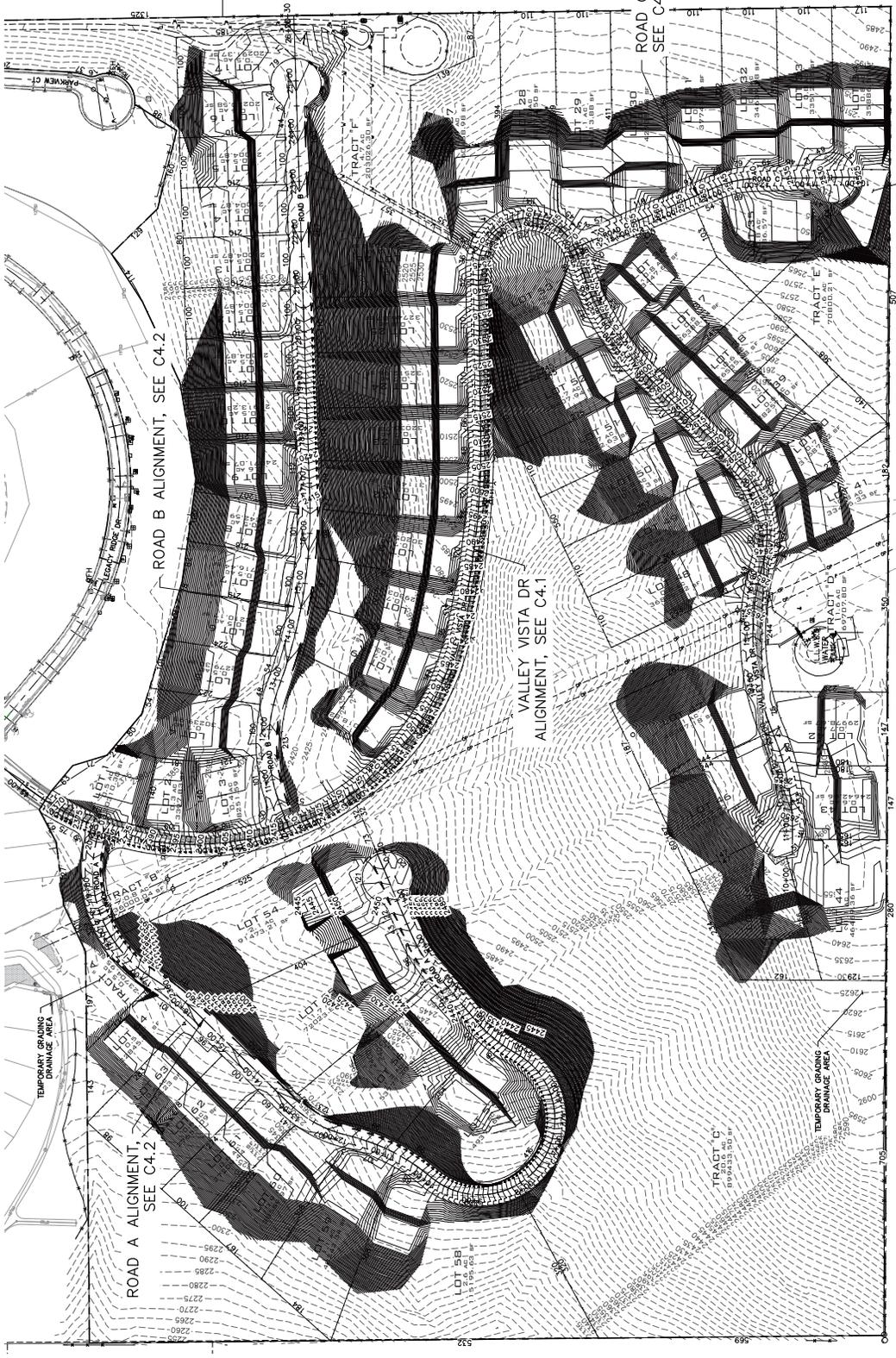
PROJECT #:	24-3776
DATE:	09/19/23
DRAWN:	RMA
REVIEWED:	TRW
SCALE:	HORIZONTAL: 1" = 200'
	VERTICAL: N/A

PROJECT #:	24-3776
DATE:	09/19/23
DRAWN:	RMA
REVIEWED:	TRW
SCALE:	HORIZONTAL: 1" = 200'
	VERTICAL: N/A

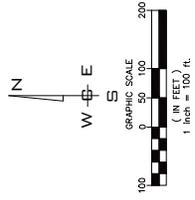
NAVD - 88
THE WORKS BY WHOLE CONSULTING ENGINEERS, INC.
GROUND LEVEL WITH AN ELEV. OF 2070.00
AND REDUCTION OF 0.00000000

LEGACY PHASE "F" MASS GRADING
COVER SHEET
VALLEY VISTA DR & LEGACY RIDGE DR
LIBERTY LAKE, WA 99019

UNDERGROUND SERVICE ALERT
 ONE-CALL NUMBER
811
 CALL BEFORE YOU DIG



GRADING QUANTITIES
 CUT: 208,204 CY
 FILL: 342,882 CY
 NET: 134,678 CY (FILL)
 NOTE: QUANTITIES DOES NOT INCLUDE SHRINK/SWELL
 OF IMPORTED MATERIAL.



NE 1/4, SEC. 21, T. 25N., R. 45E., W.M.



SHEET
 C4.0
JOB NUMBER
 24-3776

**LEGACY PHASE F MASS GRADING
 GRADING PLAN
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019**



DATE	24-3776
DATE	09/19/25
DRAWN	RMA
REVIEWED	TRW

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

NO.	DATE	BY	REVISIONS
1	09/19/25	JSP	REVISION FOR BLUE
2	10/17/24	RMA	ORIGINAL PREPARATION

HAUL NOTE:
 ALL EXCESS MATERIAL TO
 REMAIN ONSITE. NO HAUL OFF
 OF MATERIAL IS PROPOSED.

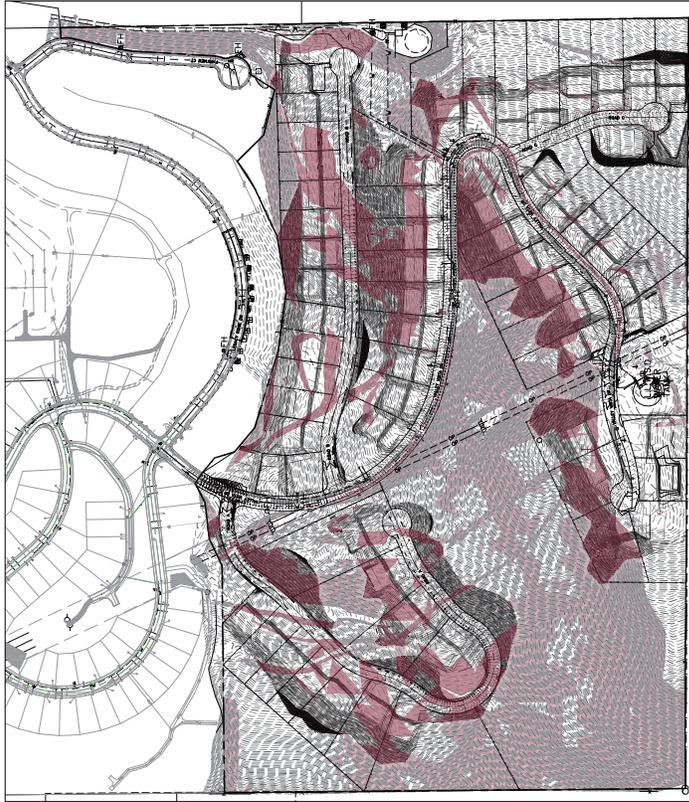
GRADING PLAN
 SCALE: 1" = 100'

NAVD - 88

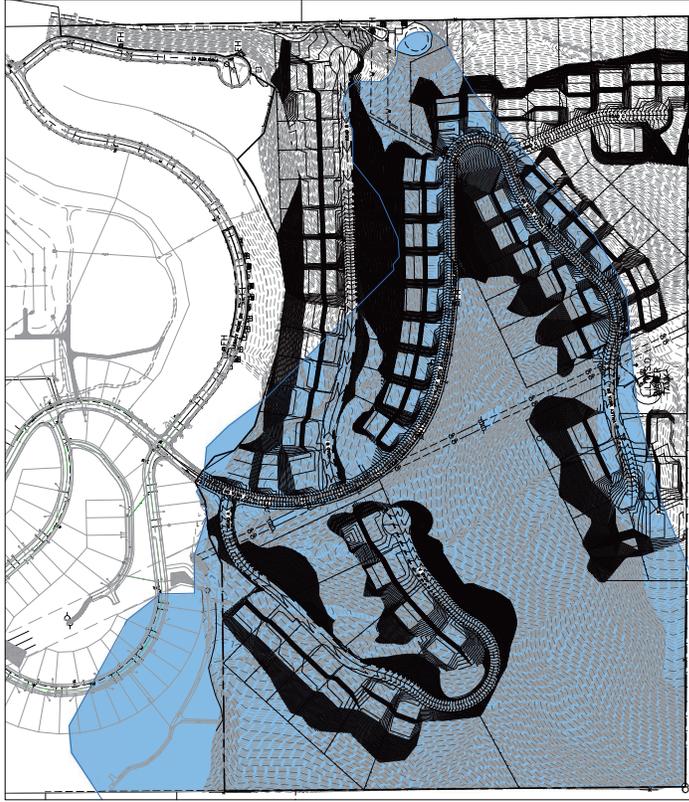
THE ENGINEER HAS VISITED THE PROJECT SITE AND HAS FOUND THE INFORMATION TO BE ACCURATE AND SUFFICIENT FOR THE PURPOSES OF THIS PLAN. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE INFORMATION PROVIDED AND DOES NOT EXTEND TO THE ACCURACY OF THE SURVEY DATA OR THE DESIGN OF THE PROJECT.

NE¼, SEC.21, T.25N., R.45E., W.M.

UNDERGROUND SERVICE ALERT
 ONE-CALL NUMBER
811
 CALL BEFORE YOU DIG



STEEP SLOPES EXHIBIT
 SCALE: 1" = 200'

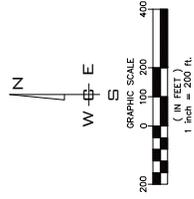


ERODIBLE SOILS EXHIBIT
 SCALE: 1" = 200'

LEGEND

- AREA OF STEEP SLOPES, 30% OR GREATER
- ERODIBLE SOILS PER MAPSPOKANE.ARCGIS.COM

GRADING DATA	
CUT (CY)	305,304
FILL (CY)	342,862
EXISTING AREA OF 30% SLOPES (SF/AC)	1,625,556
PROPOSED GRADING WITH 30% SLOPES (SF/AC)	606,686
INCREASE OF 30% SLOPE	885,710
ON-SITE	235,014
OFF-SITE	1,860,570
PROPOSED CUT WITHIN EX. 30% SLOPES (CY)	89,016
PROPOSED FILL WITHIN EX. 30% SLOPES (CY)	118,363
NET ON-SITE	0.35



NAVD - 88
 THE WORKS BY WACOT SURVEYING SET
 THE WORKS BY WACOT SURVEYING SET
 GROUND LINES WITH AN ELEV. 2019.980
 7. AND REVISIONS OF 02/20/19

NO.	DATE	BY	REVISIONS
1	05/19/25	JPP	REVISION FOR BLUE
2	05/22/24	JPP	ORIGINAL PREPARATION

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

DATE	PROJECT
05/19/25	24-3776
JPP	JPP
TRW	TRW

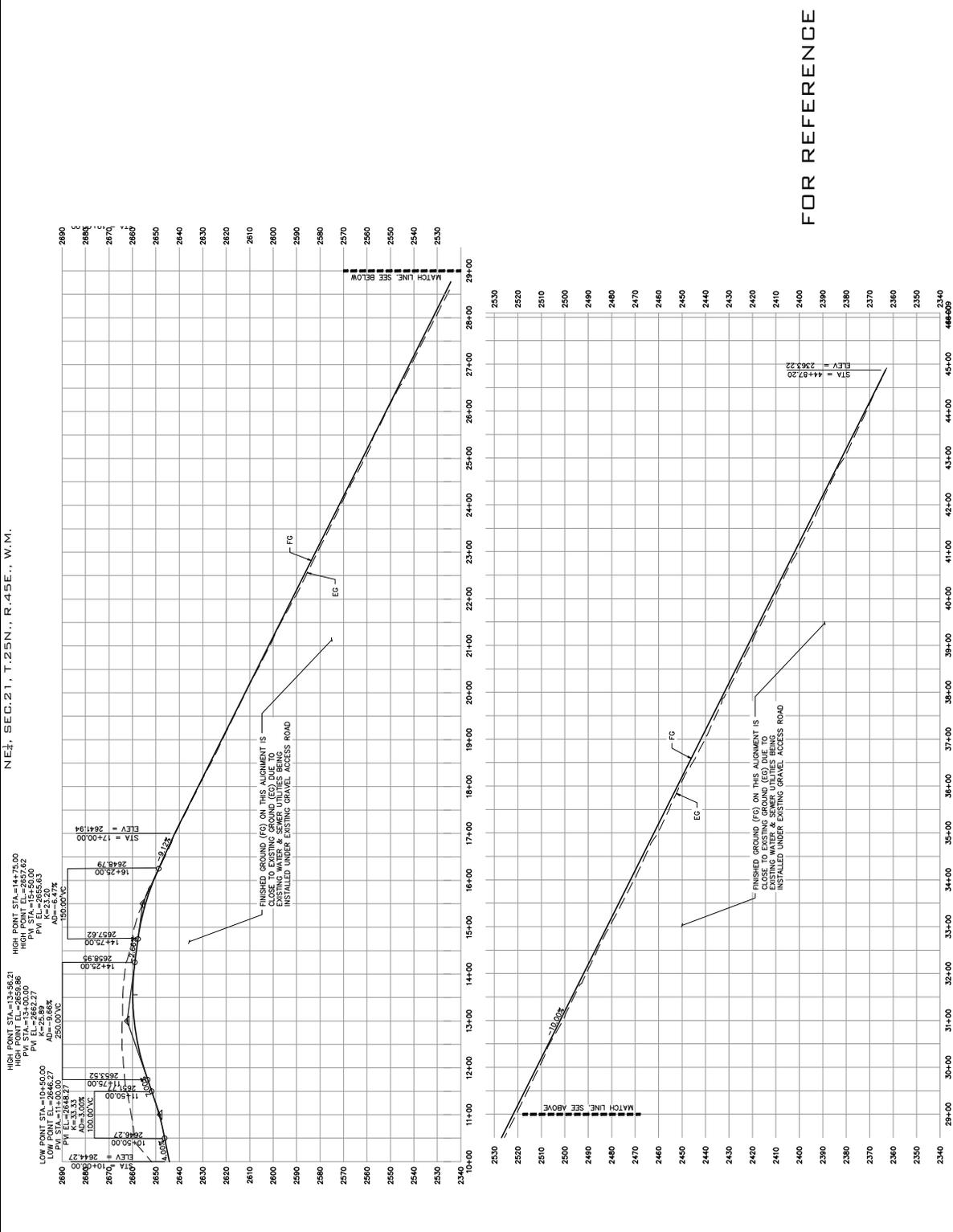
WACE
 WACOT CONSULTING ENGINEERS
 1000 W. VALLEY AVENUE
 SPokane Valley, WA 99039
 PH: 509-835-1744 FAX: 509-835-8287

**LEGACY PHASE F MASS GRADING
 STEEP SLOPES & ERODIBLE SOILS MAP
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019**

SHEET
 CH.1
JOB NUMBER
 24-3776



NE 1/4, SEC. 21, T. 25N., R. 45E., W.M.



FOR REFERENCE ONLY



SHEET
 CH. 2
 JOB NUMBER
 24-3776

LEGACY PHASE F MASS GRADING
 VALLEY VISTA DRIVE PROFILE
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019



NO.	DATE	BY	REVISIONS
1	05/19/25	TRW	ORIGINAL PREPARATION
2	05/19/25	TRW	REVISION FOR STYLE
3	05/19/25	TRW	REVISION FOR DATE

SCALE:
 HORIZONTAL:
 1" = 100'
 VERTICAL:
 1" = 20'

NO.	DATE	BY	REVISIONS
1	05/19/25	TRW	ORIGINAL PREPARATION
2	05/19/25	TRW	REVISION FOR STYLE
3	05/19/25	TRW	REVISION FOR DATE

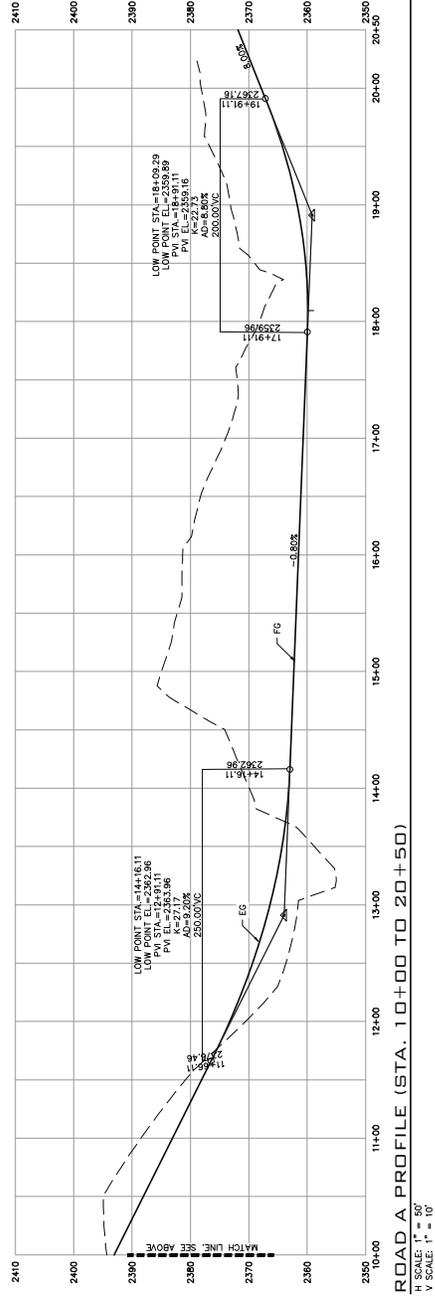
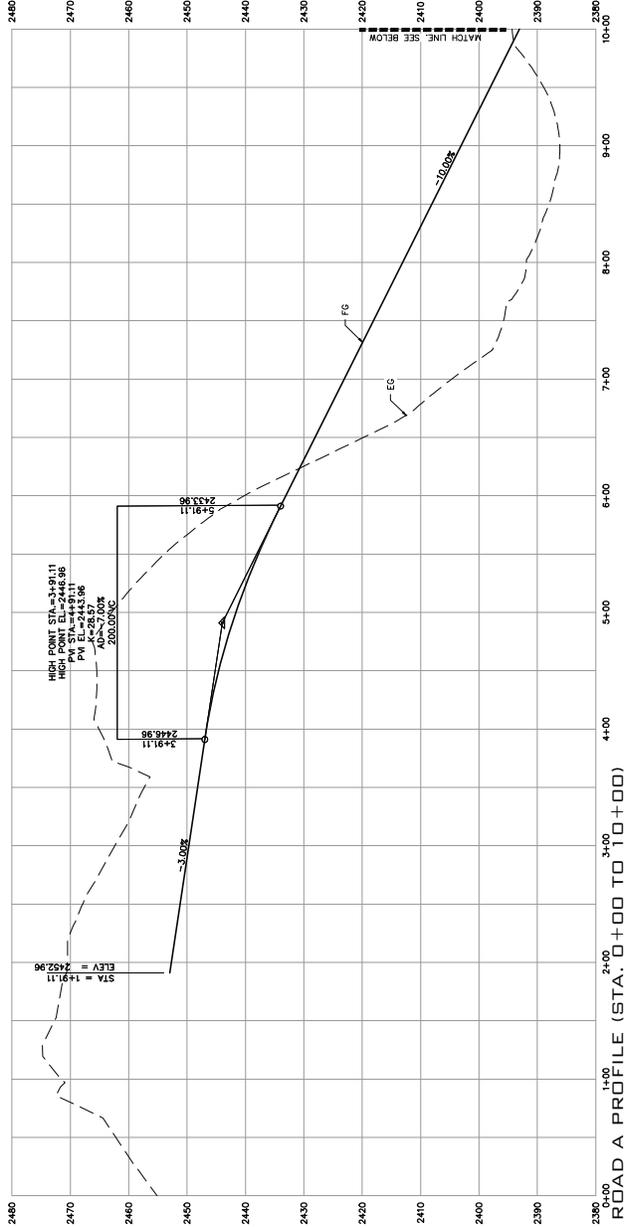
PROJ # : 24-3776
 DATE : 05/19/25
 DRAWN : RMA
 REVIEWED : TRW

NAVD - 88
 THE WORKS BY W. J. WINKLER, P.E.
 5000 THE VALLEY, WA 99009
 GROUND LEVEL WITH AN ELEV. OF 2070.180
 2' REDUPLICATION OF 02508649

PROJECT NO. 24-3776-02
 LEGACY PHASE F MASS GRADING PLANS AND PROFILE DATAS/05/19/25



NE 1/4, SEC. 21, T. 25N., R. 45E., W.M.



FOR REFERENCE ONLY



SHEET
 CH-3
 JOB NUMBER
 24-3776

LEGACY PHASE F MASS GRADING
 ROAD A PROFILE
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019



DATE	09/19/25
DRAWN	RMA
REVIEWED	TRW

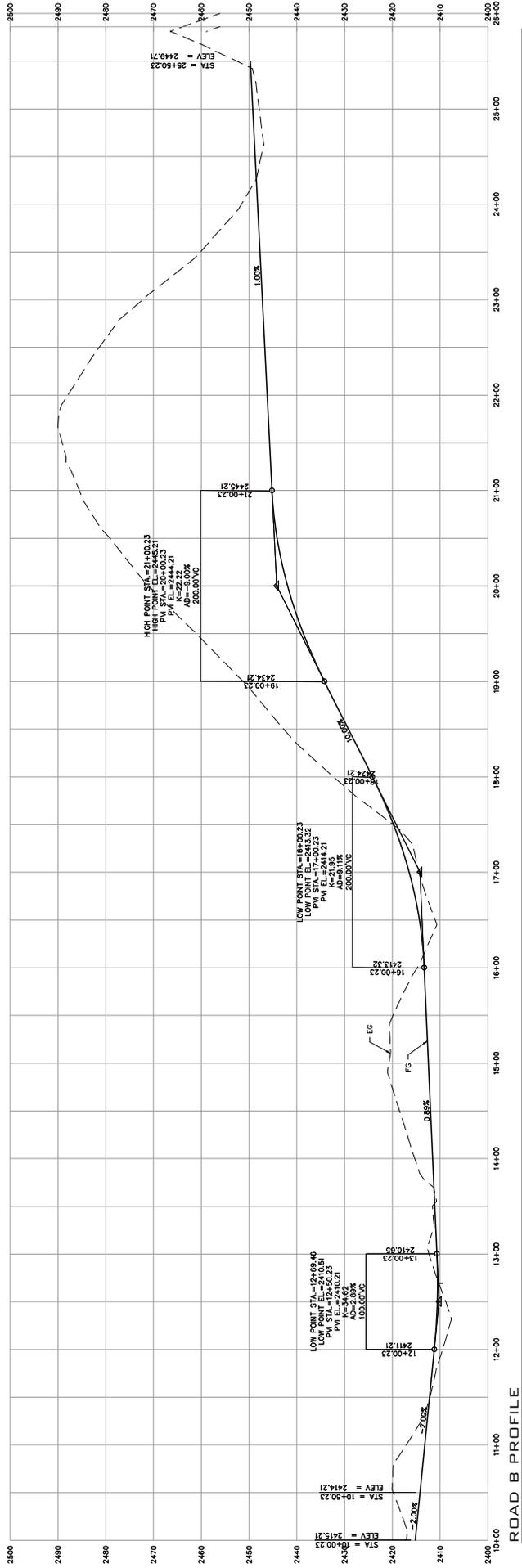
SCALE:
 HORIZONTAL:
 1" = 80'
 VERTICAL:
 1" = 10'

NO.	DATE	BY	REVISIONS
1	05/22/25	JSP	PRELIMINARY E.U.L.E.
2	07/22/25	RMA	ORIGINAL PREPARATION

NAVD - 88
 THE WORK IS ACCORDING TO THE DESIGN AND PLANS PROVIDED BY THE CLIENT. THE ENGINEER HAS CONDUCTED VISUAL INSPECTION OF THE SITE AND FOUND IT TO BE IN ACCORDANCE WITH THE PLANS. THE ENGINEER HAS NOT CONDUCTED ANY OTHER INVESTIGATION OR SURVEYING.

UNDERGROUND SERVICE ALERT
 ONE-CALL NUMBER
811
 CALL BEFORE YOU DIG
 1-800-4-A-SHIELD

NE 1/4, SEC. 21, T. 25N., R. 45E., W.M.



ROAD B PROFILE
 V SCALE: 1" = 10'

FOR REFERENCE ONLY



SHEET
 CH-4
 JOB NUMBER
 24-3776

LEGACY PHASE F MASS GRADING
 ROAD B PROFILE
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019



DATE	24-3776
DATE	09/19/25
DRAWN	RMA
REVIEWED	TRW

SCALE:
 HORIZONTAL:
 1" = 80'
 VERTICAL:
 1" = 10'

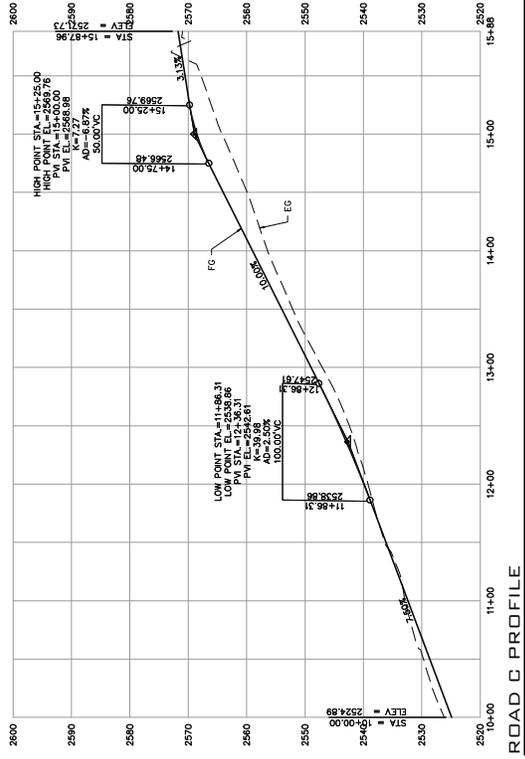
NO.	DATE	BY	REVISIONS
1	09/19/25	JSP	PRELIMINARY
2	10/17/24	RMA	ORIGINAL PREPARATION

NAVD - 88

THE WORK IS ACCORDING TO THE
 STANDARD SPECIFICATIONS FOR
 ROADWORK WITH AN ELEVATION OF 2010.00
 AND REDUCTION OF 0.000000

NE 1/4, SEC. 21, T. 25N., R. 45E., W.M.

UNDERGROUND SERVICE ALERT
 ONE-CALL NUMBER
811
 CALL BEFORE YOU DIG



ROAD C PROFILE

PROJECT: 24-3776
 HORIZONTAL: 1" = 80'
 VERTICAL: 1" = 10'

FOR REFERENCE ONLY



SHEET
 C4.5
 JOB NUMBER
 24-3776

LEGACY PHASE F MASS GRADING
 ROAD C PROFILES
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019



NO.	DATE	BY	DESCRIPTION

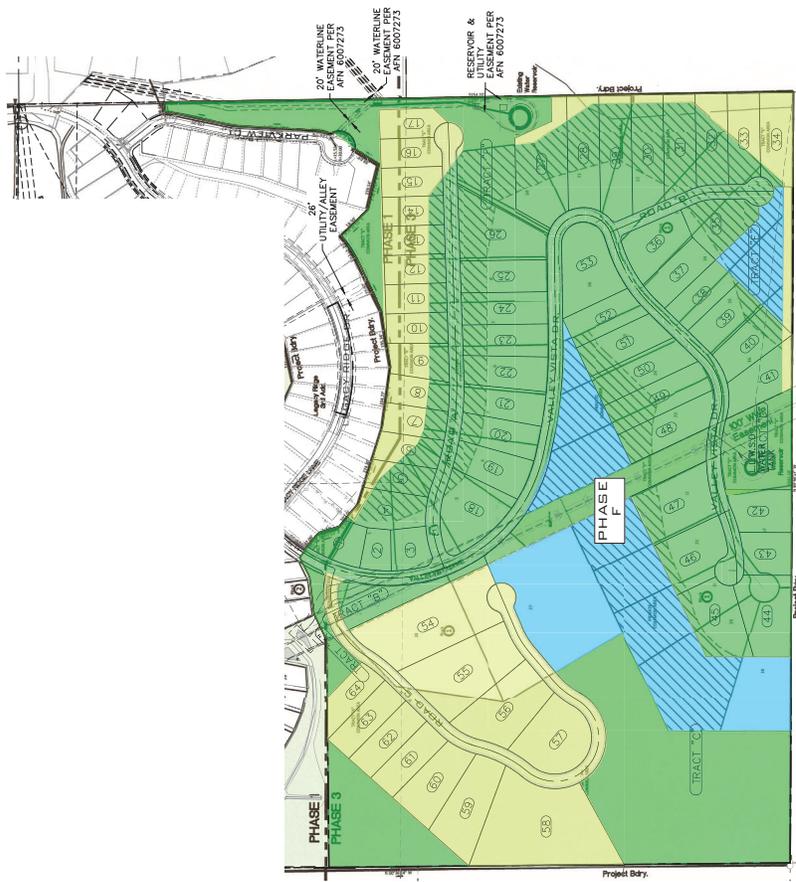
PROJ #: 24-3776
 DATE: 09/19/25
 DRAWN: RMA
 REVIEWED: TRW

SCALE:
 HORIZONTAL:
 1" = 80'
 VERTICAL:
 1" = 10'

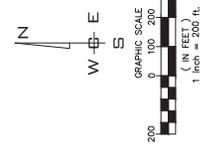
NO.	DATE	BY	REVISIONS

NAVD - 88

THE WORK IS ACCORDING TO THE
 RECORDS OF THE LIBERTY LAKE
 GROUNDWATER WITH AN ELEVATION OF 2070.80
 AND A REVISION OF 02/20/04



REASONABLE USE EXCEPTION IMPACTED AREA	
HATCH	DESCRIPTION AREA (sq)
	22.66
	11.74
	59.06



SCALE: HORIZONTAL: 1"=200' VERTICAL: N/A	PROJ #: 24-3776	DATE: 09/18/25	DRAWN: JPP	REVIEWED: TRW
	CHECKED: <input type="checkbox"/>	DESIGNED: <input type="checkbox"/>	SURVEYED: <input checked="" type="checkbox"/>	DATE: 09/18/25
LEGACY RIDGE WEST 3RD ADDITION R.U.E. REVISION EXHIBIT VALLEY VISTA DR AND LEGACY RIDGE DR LIBERTY LAKE, WA				
AWCE WHIPPLE CONSULTING ENGINEERS 8700 VALLEY VISTA DR SPokane Valley, WA 99039 PH: 509-881-8111 FAX: 509-881-8221				
SHEET 1 OF 1 JOB NUMBER 24-3776				

NAVD - 88
 THE MARK IS A WSDOT BRASS
 MONUMENT AT GROUND LEVEL
 WITH AN ELEV. 2070.160

NE 1/4, SEC. 21, T. 25 N., R. 45 E., W.M.

MASS GRADING PLANS

LEGACY PHASE "F"

VALLEY VISTA DRIVE

LIBERTY LAKE, WASHINGTON

NE 1/4 OF SEC. 21, T. 25 N., R. 45 E., W.M.



VICINITY MAP

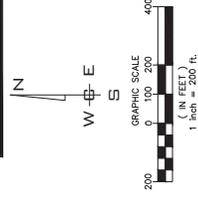


COVER PLAN
SCALE: 1" = 200'

INDEX TO PLAN SHEETS

CO.0	COVER SHEET
CO.1	GENERAL NOTES
CO.1.0	TOPOGRAPHIC SURVEY
CO.2.0	SWPPP CONTROL PLAN
CO.2.1	SWPPP NOTES
CO.2.2	SWPPP BMP'S
CO.2.3	SWPPP BMP'S
CO.4.0	GRADING PLAN
CO.4.1	STEEP SLOPES & ERODIBLE SOILS MAP
CO.4.2	VALLEY VISTA DRIVE PROFILE
CO.4.3	ROAD A PROFILE
CO.4.4	ROAD B PROFILE
CO.4.5	ROAD C PROFILE

HAUL NOTE:
ALL EXCESS MATERIAL TO REMAIN ON SITE. NO HAUL OFF OF MATERIAL IS PROPOSED.



SHEET
CO.0
JOB NUMBER
24-3776

LEGACY PHASE 'F' MASS GRADING
COVER SHEET
VALLEY VISTA DR & LEGACY RIDGE DR
LIBERTY LAKE, WA 99019



DATE	09/19/25
DRAWN BY	RMA
REVIEWED BY	TRW

PROJ #:	24-3776
DATE:	09/19/25
DRAWN:	RMA
REVIEWED:	TRW

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

NO.	DATE	BY	REVISION
1			ORIGINAL PREPARATION
2			REVISION FOR BLUE
3			REVISION FOR RMA
4			REVISION FOR BLUE

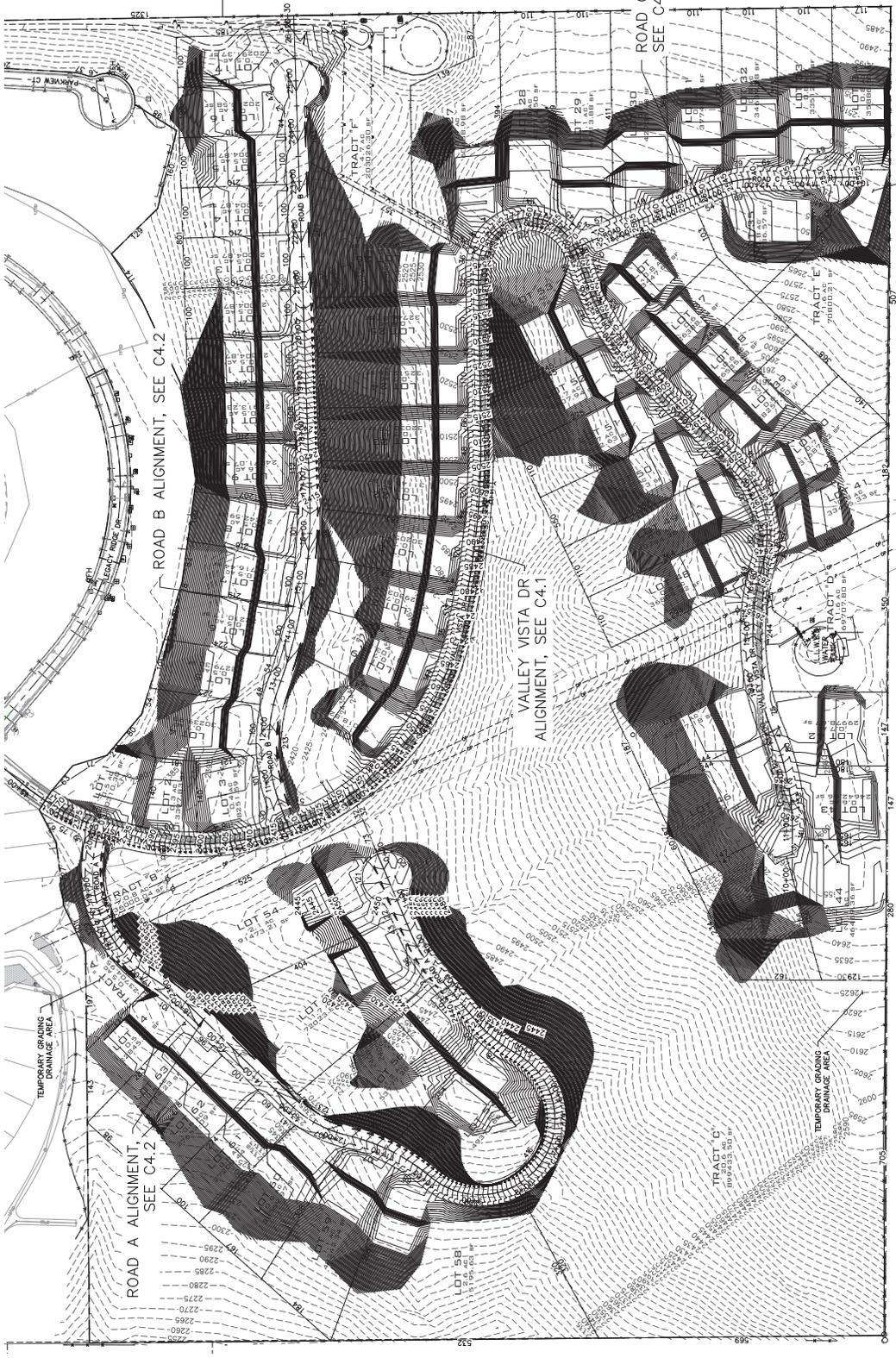
EXISTING	PROPOSED
ROADWAY CENTER LINE	ROADWAY CENTER LINE
PROPERTY LINE	PROPERTY LINE
ENCASEMENT LINE	ENCASEMENT LINE
CURB	CURB
GRAVEL	GRAVEL
CONCRETE & STRUCTURES	CONCRETE & STRUCTURES
MONUMENT	MONUMENT
SEWER	SEWER
SANITARY SEWER	SANITARY SEWER
WATER SERVICE	WATER SERVICE
WATER	WATER
VALVE	VALVE
SERVICE TANK	SERVICE TANK
WATER METER	WATER METER
AIR VACUUM RELIEF STATION	AIR VACUUM RELIEF STATION
DRAINAGE	DRAINAGE
DRAINAGE LINE	DRAINAGE LINE
DRYWELL	DRYWELL
DITCH	DITCH
GAS	GAS
GAS LINE	GAS LINE
METER	METER
TELE-POWER	TELE-POWER
BURIED TELEPHONE POLE	BURIED TELEPHONE POLE
BURIED POWER	BURIED POWER
TRANSFORMER PAD	TRANSFORMER PAD
TELEPHONE WALT	TELEPHONE WALT
TELEPHONE COWER	TELEPHONE COWER
OUT ANCHOR	OUT ANCHOR
PORT POLE	PORT POLE

ABBREVIATIONS

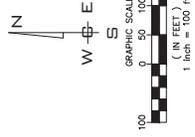
ACT LEN.	ACTUAL LENGTH	MANHOLE	
BCR	BEGINNING OF CURVE RADIUS	MCR	MIDDLE OF CURVE RADIUS
CDT	CURB DITCH	PET	PETROLEUM
CSTC	CURVED SURFACE	PI	POINT OF INTERSECTION
CT	COURT YARD	PT	POINT OF TANGENCY
EOR	END OF ROAD	RD EL.	ROAD ELEVATION
EXIST.	EXISTING	RT	RIGHT INTERSECTION
GB	GRADE BREAK	SS	SANITARY SEWER
FLY/TT	FEET PER FOOT	STA. LEN.	STATION LENGTH
LE	LEFT	TO	TO
LI	LEFT	TOP OF CURB	TOP OF CURB

NAVD - 88
THE BANKS & WOOD GROUP, INC.
REGISTERED PROFESSIONAL ENGINEER
NO. 101724 RMA
AND RESIGNATION OF 02/20/04

UNDERGROUND SERVICE ALERT
 ONE-CALL NUMBER
811
 CALL BEFORE YOU DIG
 CALL 1-800-4-A-WASH



GRADING QUANTITIES
 CUT: 308,304 CY
 FILL: 342,882 CY
 NET: 34,578 CY (FILL)
 NOTE: QUANTITIES DOES NOT INCLUDE SHRINK/SWELL,
 OR IMPORTED MATERIAL.



SHEET
 C4.0
JOB NUMBER
 24-3776

NE 1/4, SEC. 21, T. 25N., R. 45E., W.M.

**LEGACY PHASE F MASS GRADING
 GRADING PLAN
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019**



DATE	24-3776
DATE	09/19/25
DRAWN	RMA
REVIEWED	TRW

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

NO.	DATE	BY	REVISIONS
1	09/19/25	JSP	REVISION FOR BLUE
2	10/17/24	RMA	ORIGINAL PREPARATION

HAUL NOTE:
 ALL EXCESS MATERIAL TO
 REMAIN ON-SITE. NO HAUL OFF
 OF MATERIAL IS PROPOSED.

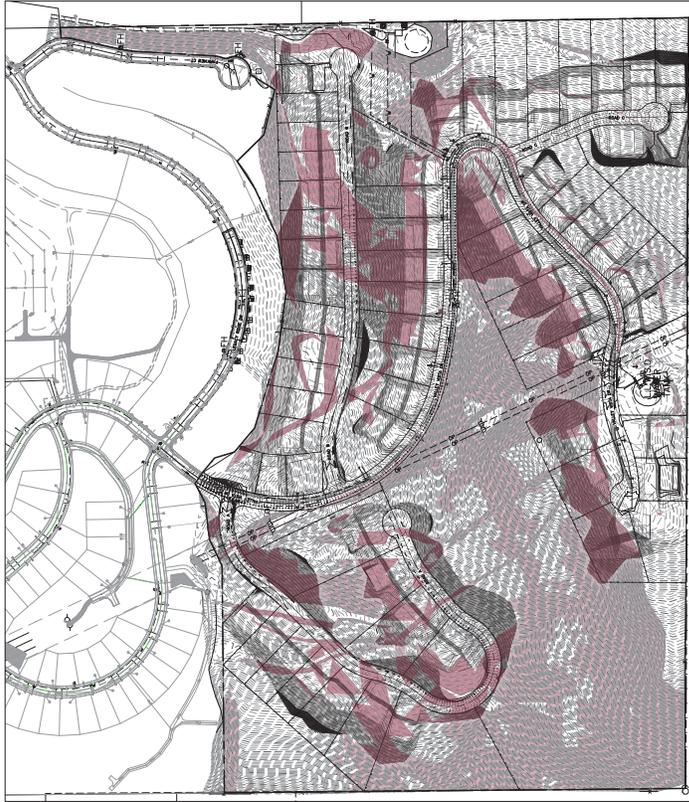
GRADING PLAN
 SCALE: 1" = 100'

NAVD - 88

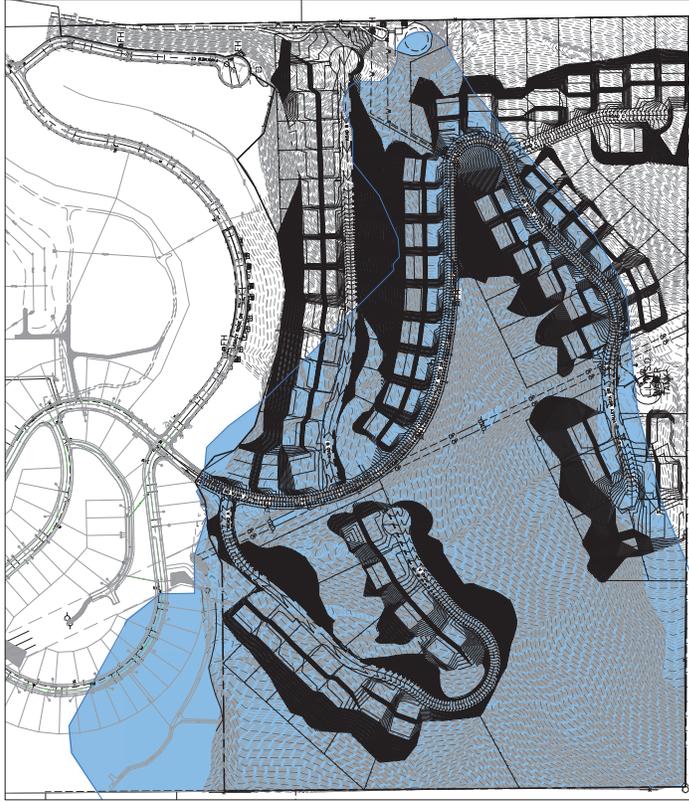
THE BANKS & WOOD GROUP, INC.
 2000 180
 AND RESIGNATION OF 02/08/49

NE 1/4, SEC. 21, T. 25N., R. 45E., W.M.

UNDERGROUND SERVICE ALERT
 ONE-CALL NUMBER
811
 CALL BEFORE YOU DIG

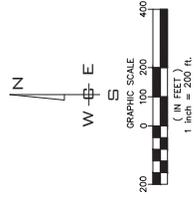


STEP SLOPES EXHIBIT
 SCALE: 1" = 200'



ERODIBLE SOILS EXHIBIT
 SCALE: 1" = 200'

LEGEND
 AREA OF STEEP SLOPES, 30% OR GREATER
 ERODIBLE SOILS PER MAPSPOKANE.ARCGIS.COM



GRADING DATA	
CUT (CY)	305,304
FILL (CY)	342,862
EXISTING AREA OF 30% SLOPES (SF/AC)	1,625,556
PROPOSED GRADING WITH 30% SLOPES (SF/AC)	855,710
INCREASE OF 30% SLOPE	235,014
EXISTING AREA OF 30% SLOPES ON-SITE	1,860,570
PROPOSED CUT WITHIN EX. 30% SLOPES (SF/AC)	89,016
PROPOSED FILL WITHIN EX. 30% SLOPES (CY/AC)	115,363
INCREASE OF 30% SLOPE	0.35



SHEET
 CA.1
 JOB NUMBER
 24-3776

LEGACY PHASE F MASS GRADING
 STEEP SLOPES & ERODIBLE SOILS MAP
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019

AWCE
 WAPLE CONSULTING ENGINEERS
 3904 74TH AVE. SE
 SUITE 200
 BELLEVUE, WA 98006
 PH: 206-835-1144 FAX: 206-835-8227

DATE	BY	REVISION
09/19/25	JPP	ISSUE FOR BIDDING
09/19/25	JPP	ISSUE FOR PERMITS
09/19/25	JPP	ISSUE FOR CONSTRUCTION
09/19/25	JPP	ISSUE FOR RECORDS

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

NO.	DATE	BY	REVISIONS
1	09/19/25	JPP	ISSUE FOR BIDDING
2	09/19/25	JPP	ISSUE FOR PERMITS
3	09/19/25	JPP	ISSUE FOR CONSTRUCTION
4	09/19/25	JPP	ISSUE FOR RECORDS

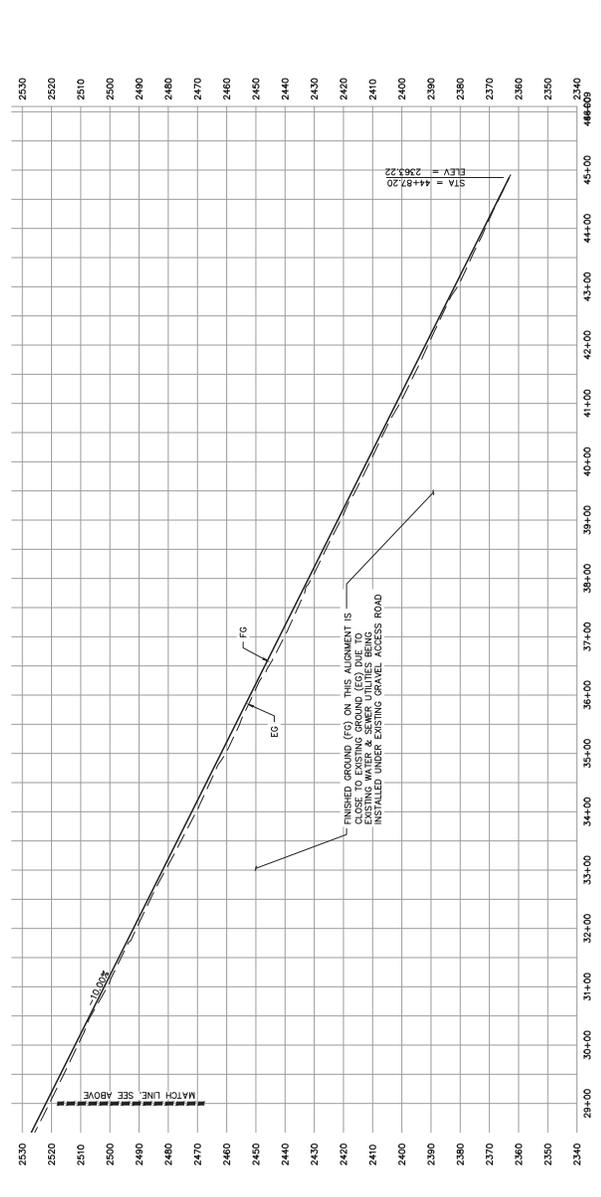
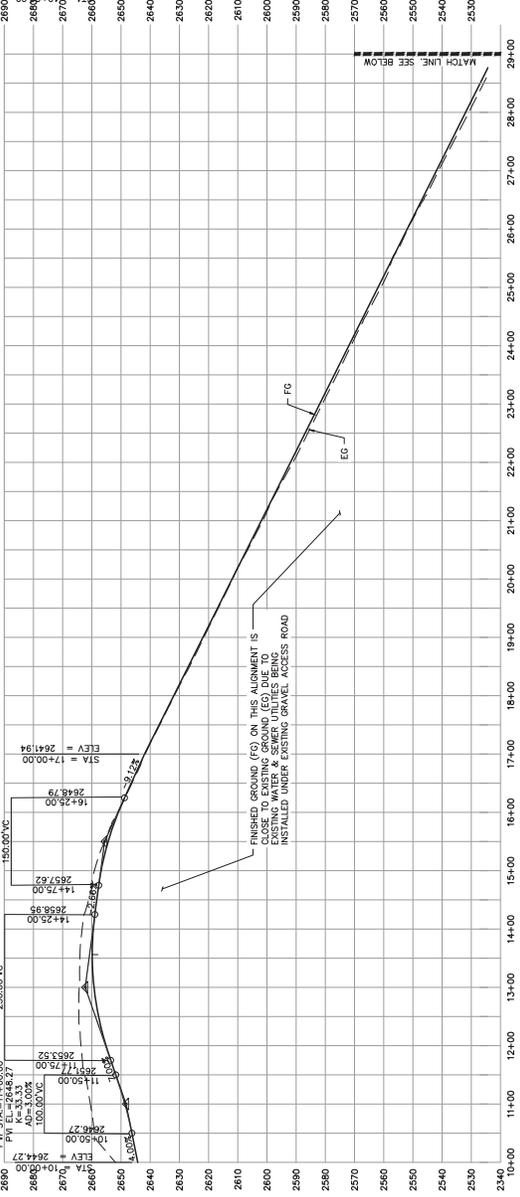
NAVD - 88
 THE BANKSIA WISCONSIN BENCHMARK SET
 IS USED TO ESTABLISH THE ELEVATION OF THE
 GROUND LEVEL WITH AN ELEV. OF 200.180
 AND DESIGNATION OF 02500.49



NE 1/4, SEC. 21, T. 25N., R. 45E., W.M.

LOW POINT STA=10+50.00 HIGH POINT STA=13+56.31
 HIGH POINT EL.=2652.86
 PVI STA=15+50.00
 PVI EL.=2662.27
 K=-25.89
 L=230.53
 AD=6.47%

LOW POINT STA=11+00.00 HIGH POINT STA=14+75.00
 HIGH POINT EL.=2641.94
 PVI STA=15+50.00
 PVI EL.=2652.86
 K=-25.89
 L=230.53
 AD=6.47%



FOR REFERENCE ONLY



SHEET
 CR-2
 JOB NUMBER
 24-3776

LEGACY PHASE F MASS GRADING
 VALLEY VISTA DRIVE PROFILE
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019



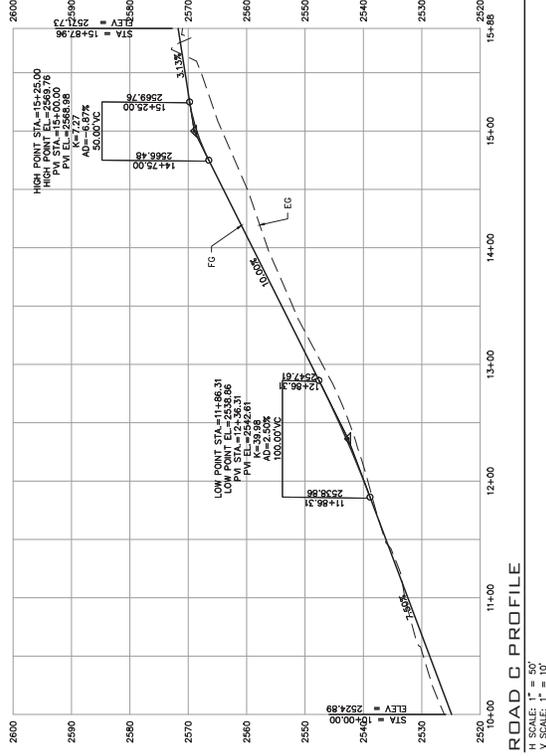
DATE	24-3776
DATE	09/19/25
DRAWN	RMA
REVIEWED	TRW

SCALE:	HORIZONTAL: 1" = 100'
	VERTICAL: 1" = 20'

NO.	DATE	BY	REVISIONS
1	10/17/24	RMA	ORIGINAL PREPARATION

NAVD - 88
 THE LIBERTY VISTA DRIVE PROFILE
 GROUND LEVEL WITH AN ELEV. 2020 180
 AND DESIGNATION OF 0250049

NE 1/4, SEC. 21, T. 25N., R. 45E., W.M.



ROAD C PROFILE

HORIZONTAL SCALE: 1" = 10'
 VERTICAL SCALE: 1" = 10'

FOR REFERENCE ONLY



SHEET
 C4.5
 JOB NUMBER
 24-3776

LEGACY PHASE F MASS GRADING
 ROAD C PROFILES
 VALLEY VISTA DR & LEGACY RIDGE DR
 LIBERTY LAKE, WA 99019



DATE	24-3776
DATE	09/19/25
DRAWN	RMA
REVIEWED	TRW

SCALE:
 HORIZONTAL:
 1" = 80'
 VERTICAL:
 1" = 10'

NO.	DATE	BY	REVISIONS
1	10/17/24	RMA	ORIGINAL PREPARATION
2	10/17/24	TRW	REVISION FOR TITLE
3	10/17/24	TRW	REVISION FOR DATE

PROJECT NO.	24-3776
DATE	09/19/25
DRAWN	RMA
REVIEWED	TRW

NAVD - 88
 THE BANKSIA WOOD BRIDGE/MSK SET
 IS A PRELIMINARY DESIGN AND IS NOT TO BE USED FOR
 CONSTRUCTION WITHOUT THE APPLICABLE PERMITS AND
 GROUND LEVELS WITH AN ELEV. 2020 180
 AND DESIGNATION OF 0250049