Richland

CITY OF RICHLAND
NOTICE OF APPLICATION, PUBLIC HEARING, AND OPTIONAL DNS
(PLN-T3-2025-00004, PLN-T3A-2025-00002, & PLN-T1-2025-00282)

Notice is hereby given that PBS Engineering has filed rezone and preliminary plat applications to: 1) rezone the site from AG to R-2S (Medium Density Residential) and C-2 (Retail Business) reflecting the City's Comprehensive Plan Land Uses, and 2) subdivide an approximately 58+ acre site into 242 new residential lots and four (4) commercial tracts (Preliminary Plat of Peach Tree Estates Phase III, Phases 1 – 6). Please visit https://www.ci.richland.wa.us/departments/development-services/planning/land-use for more information.

Project Site: The project site is located at 1251 Bermuda Road and is generally located west of Queensgate Drive, west of Bermuda Road, West of Legacy Lane, north of Snowking Street, and north of Waterhill Avenue (Parcel Numbers: 134982010595005, 134982000005007, and 134982000008000). The proposed preliminary plat will have an average residential lot size of 7,175 square feet and an average commercial lot size of 49,638 square feet.

Public Hearing: The City of Richland Hearing Examiner will conduct a public hearing and review of the application on Monday, September 08, 2025 at 6:00pm in City Hall, 625 Swift Boulevard. All interested parties are invited to participate in the public hearing.

Environmental Review: The proposal is subject to environmental review. The City of Richland serving as the lead agency under the State Environmental Policy Act (SEPA), has reviewed and evaluated the proposed project for probable adverse environmental impacts. The City anticipates issuing a Determination of Non-Significance (DNS) under WAC 197-11-355. This may be your only opportunity to comment on the environmental impacts of the proposed development**.** The environmental checklist and related file information are available to the public and can be viewed at www.ci.richland.wa.us.

Public Comment: Any person desiring to express their views or to be notified of any decisions pertaining to this application should notify Ryan Nelson, Planner, 625 Swift Boulevard, MS-35, Richland, WA 99352. Comments may be emailed to planning@ci.richland.wa.us.

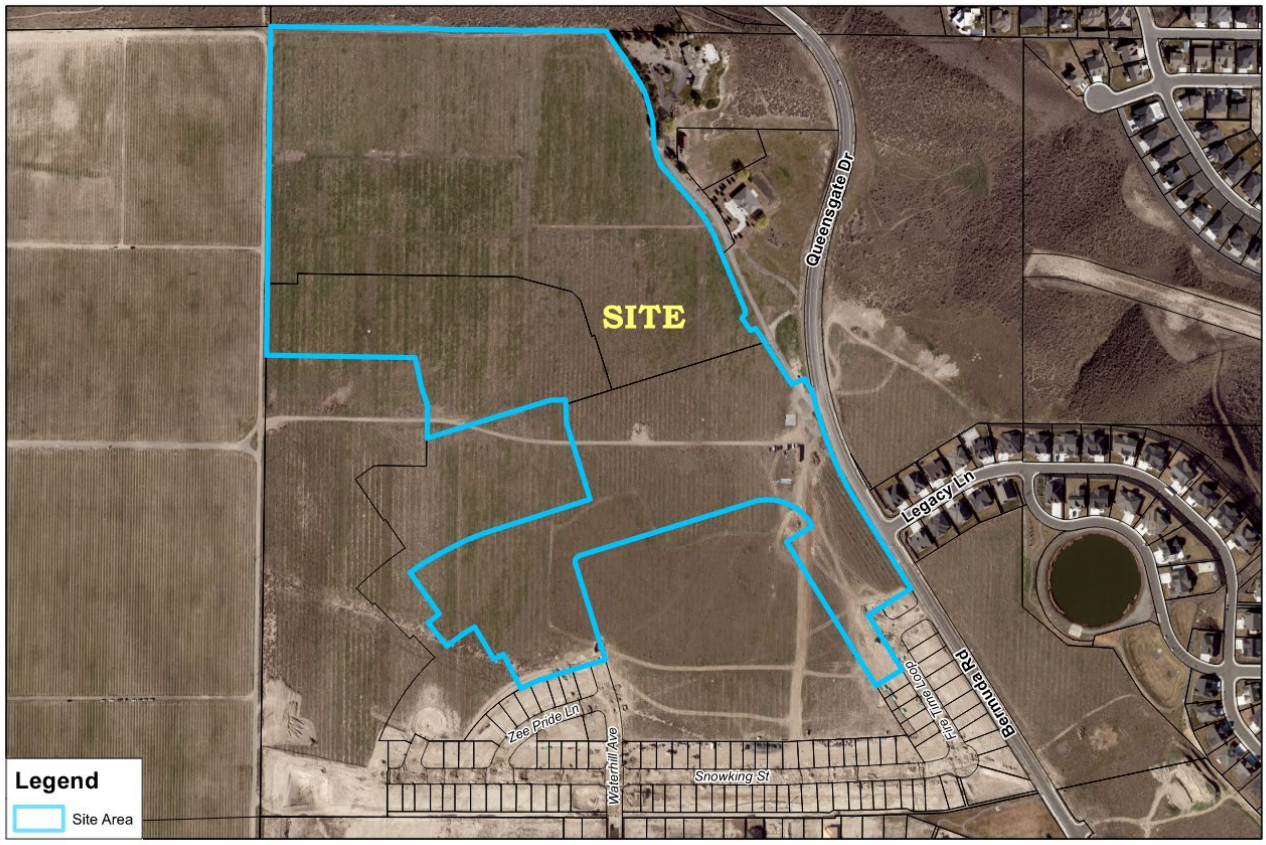
Comment Period Starts: August 10, 2025
Comment Period Ends: September 08, 2025 at 6:00 PM

However, written comments must be received no later than 5:00 p.m. on Friday, August 29, 2025, to be incorporated into the staff report. Comments received after that time will be entered into the record during the hearing.

Appeal: The application will be reviewed in accordance with the regulations in RMC Title 23 Zoning and Title 19 Development Regulations Administration. Appeal procedures of decisions related to the above referenced applications are set forth in RMC Chapter 19.70. Contact the Richland Planning Division at the above referenced address with questions related to the available appeal process.

Vicinity Map

Item: Peach Tree Estates III - Phases 1 - 6 Prelim Plat
Applicant: PBS Engineering
File #: PLN-T3-2025-00004 & PLN-T1-2025-00282



City of Richland
625 Swift Blvd
Richland WA 99352
(509) 942-7794

Plan Snapshot Report

Plan Type:	Type 3	**Plan #:**	PLN-T3-2025-00004	**App Date:**	06/25/2025
Work Class:	T3 - Preliminary Plat	**District:**	City of Richland	**Exp Date:**	10/23/2025
Status:	In Review			**Completed:**	NOT COMPLETED
Description:	Peach Tree Estates III - Phases 1-6			**Approval Expire Date:**	

Parcel:	134982010595005		**Address:**	1209 Bermuda Rd Richland, WA 99352	**Zone:**
	134982000005007				
	134982000008000	Main		1251 Bermuda Rd Richland, WA 99338 Main	

Contractor
Eric Culverhouse
Home: (509) 539-5073

Surveyor
PBS Engineering & Environmental
400 Bradley BLVD Ste 106
Richland, WA 99352
Business: (509) 942-1600

Property Owner
MD&D INVESTMENTS LLC
63615 E Jacobs RD NE Ste 120
Benton City, WA 99320
Business: (509) 778-2373

Engineer
PBS Engineering & Environmental
400 Bradley BLVD Ste 106
Richland, WA 99352
Business: (509) 942-1600

Applicant
PBS Richland
400 Bradley Blvd Suite 106
Suite 106
Richland, WA 99352
Business: (509) 942-1600

Plan Custom Fields

PreAppQuestionBox	Yes	PreAppMeetingDate	Dec 31 2024 12:00AM	Proposed Subdivision Name	Peach Tree Estates III - Phases 1-6
Is a deviation being requested per RMC 24.100.380	No	Parcel Number	134982000008000, 134982010595005, 134982000005007	Zoning	R2S and C2
Gross Plat Acreage	58.39	Number of Lots	242	Smallest Lot Size	4725
Largest Lot Size	16861	Net Lot Area Acreage	46.27	Average Lot Size	7175
Domestic Water Supply	City Supplied Water	Sewage Disposal	Sewer	Irrigation Source	Badger Mountain Irrigation District

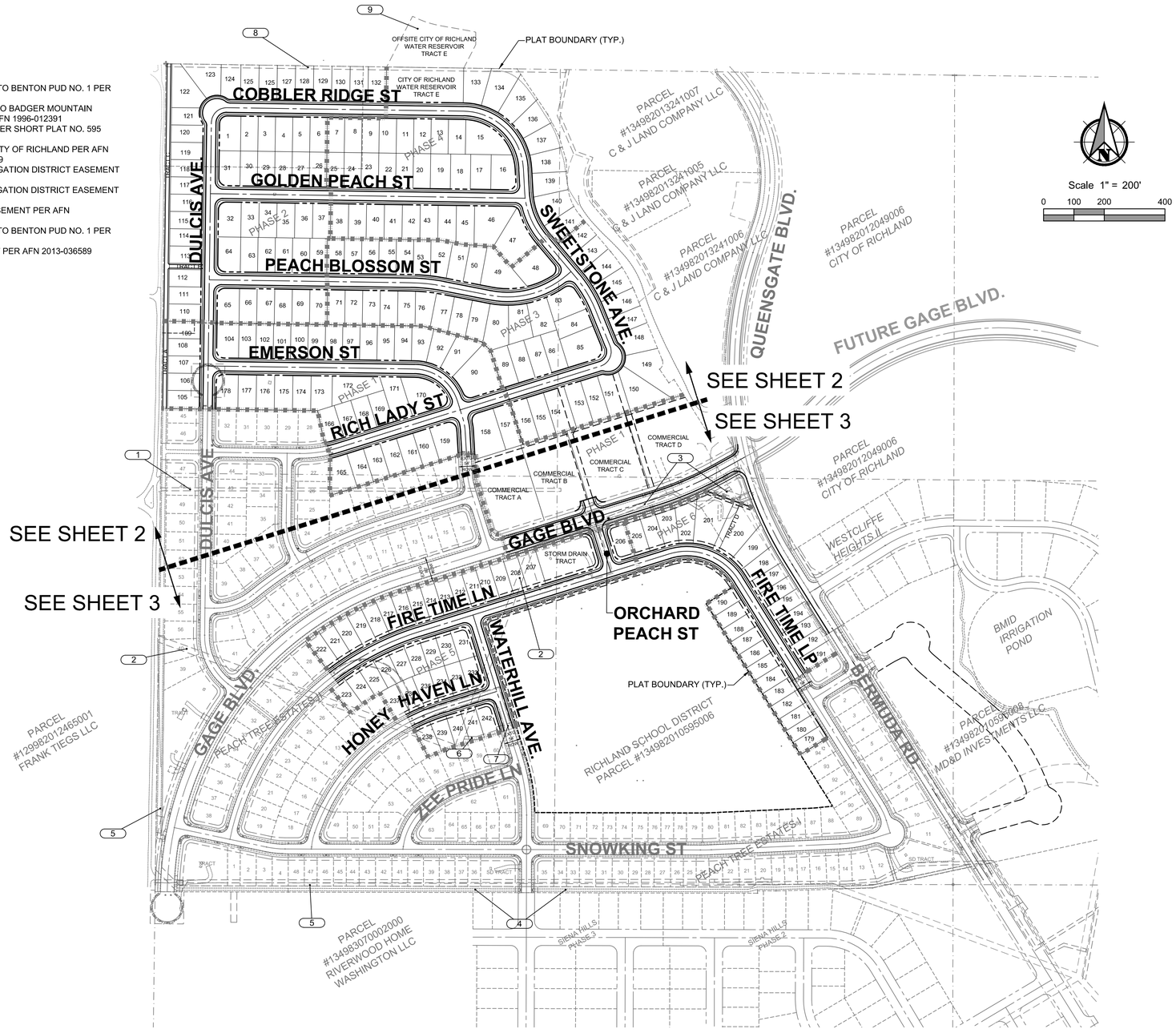
PEACHTREE ESTATES III PHASE 1-6

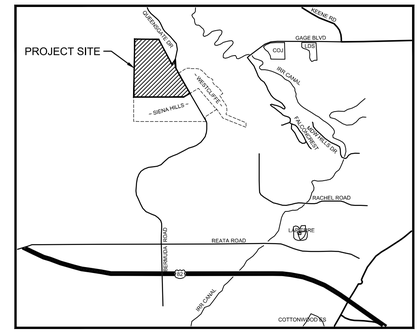
PRELIMINARY PLAT

LOCATED IN SECTION 34 TOWNSHIP 9 NORTH, RANGE 28 EAST, W.M.
CITY OF RICHLAND, BENTON COUNTY, WASHINGTON

EASEMENT KEY: (XX)

1. 10' ELECTRICAL EASEMENT TO BENTON PUD NO. 1 PER AFN 85-4566
2. 20' IRRIGATION EASEMENT TO BADGER MOUNTAIN IRRIGATION DISTRICT PER AFN 1996-012391
3. 10' IRRIGATION EASEMENT PER SHORT PLAT NO. 595 (AFN 771566)
4. 10' UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2014-006658 AND 2016-004839
5. 20' BADGER MOUNTAIN IRRIGATION DISTRICT EASEMENT PER AFN 2024-015095
6. 10' BADGER MOUNTAIN IRRIGATION DISTRICT EASEMENT PER AFN 2024-015094
7. 20' TEMPORARY UTILITY EASEMENT PER AFN 2024-015503
8. 10' ELECTRICAL EASEMENT TO BENTON PUD NO. 1 PER AFN 93-34114
9. RESERVOIR SITE EASEMENT PER AFN 2013-036589





VICINITY MAP
NOT TO SCALE

SHEET INDEX	
1.	PRELIMINARY PLAT PLAN
2.	PRELIMINARY PLAT NORTH SECTION
3.	PRELIMINARY PLAT SOUTH SECTION
4.	OVERALL SITE PLAN
5.	OVERALL UTILITY PLAN

SURVEY BENCHMARK:

BRASS CAP AT THE INTERSECTION OF GALA WAY AND SICILY LANE, CITY OF RICHLAND
NAVD88 ELEVATION FOR THIS MONUMENT IS 699.05
ALTERNATE BENCHMARK IS A 5/8" IRON ROD IN PIPE AT THE NORTHWEST CORNER OF SECTION 34, ELEVATION FOR THIS MONUMENT IS 1072.36.

BASIS OF BEARINGS:

NAD83 WASHINGTON STATE SOUTH ZONE GRID BEARING OF S89°09'47"E ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST WILLAMETE MERIDIAN, AS MEASURED BETWEEN EXISTING MONUMENTS.

NOTES:

1. ALL LOTS SHALL HAVE A 10' UTILITY EASEMENT ABUTTING STREET RIGHT-OF-WAYS.

OWNER / DEVELOPER:
MD&D INVESTMENTS LLC.
63615 E. JACOBS ROAD NE
BENTON CITY, WA. 99320

ENGINEER:
PBS ENGINEERING AND ENVIRONMENTAL
CONTACT: JASON MATTOX, PE
400 BRADLEY BLVD, SUITE 106
RICHLAND, WA 99352
(509) 942-1600

SURVEYOR:
PBS ENGINEERING AND ENVIRONMENTAL
CONTACT: CHRIS D'ORAZIO, PLS
400 BRADLEY BLVD, SUITE 106
RICHLAND, WA 99352
(509) 942-1600

ZONING CLASSIFICATION:
MEDIUM DENSITY RESIDENTIAL SMALL (R-2S)
COMMERCIAL (C2)

LAND USE TABLE	
PRE-PLATTED SITE AREA:	58.39 ACRES
R-2S RESIDENTIAL ZONED AREA:	41.70 ACRES
COMMERCIAL ZONED C2 AREA:	4.56 ACRES
RIGHT OF WAY DEDICATION:	12.12 ACRES
SINGLE FAMILY RESIDENTIAL LOT COUNT (PHASE 1):	42 LOTS
COMMERCIAL TRACT (PHASE 1)	4 TRACT
SINGLE FAMILY RESIDENTIAL LOT COUNT (PHASE 2):	53 LOTS
SINGLE FAMILY RESIDENTIAL LOT COUNT (PHASE 3):	45 LOTS
SINGLE FAMILY RESIDENTIAL LOT COUNT (PHASE 4):	38 LOTS
SINGLE FAMILY RESIDENTIAL LOT COUNT (PHASE 5):	37 LOTS
SINGLE FAMILY RESIDENTIAL LOT COUNT (PHASE 6):	27 LOTS
RESIDENTIAL MINIMUM LOT AREA:	4,725 SF
RESIDENTIAL MAXIMUM LOT AREA:	16,861 SF
RESIDENTIAL AVERAGE LOT AREA:	7,175.5 SF
COMMERCIAL MINIMUM LOT AREA:	40361.4 SF
COMMERCIAL MAXIMUM LOT AREA:	61445.2 SF
COMMERCIAL AVERAGE LOT AREA:	49638 SF

Total Residential Lot Count = 242 Lots
Total Commercial Tracts = 4 Tracts

Apex Companies, LLC
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
apexcos.com

OVERALL PRELIMINARY PLAT FOR:
PEACH TREE ESTATES III
A RESIDENTIAL DEVELOPMENT IN RICHLAND, WASHINGTON

Know what's below. Call before you dig.

DIGITALLY SIGNED
JASON L. MATTOX
STATE OF WASHINGTON
PRELIMINARY
14707
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED:	ELG/MCR
CHECKED:	JLM
JUNE 2025	24012988
SHEET ID	

SHEET 1 OF 5

Filename: L:\Projects_DV\PMMDD0020240129888\Civil\CAD\Working\Exhibits\24012988_PrePlat.dwg Layout Tab: C01 User: Elisabeth Giever CAD Plot Date/Time: 6/24/2025 4:10:33 PM

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

Apex Companies, LLC
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
apexcos.com

APEX

PRELIMINARY PLAT NORTH SECTION FOR:

PEACH TREE ESTATES III

A RESIDENTIAL SUBDIVISION IN THE CITY OF RICHLAND, WASHINGTON

811 Know what's below. Call before you dig.

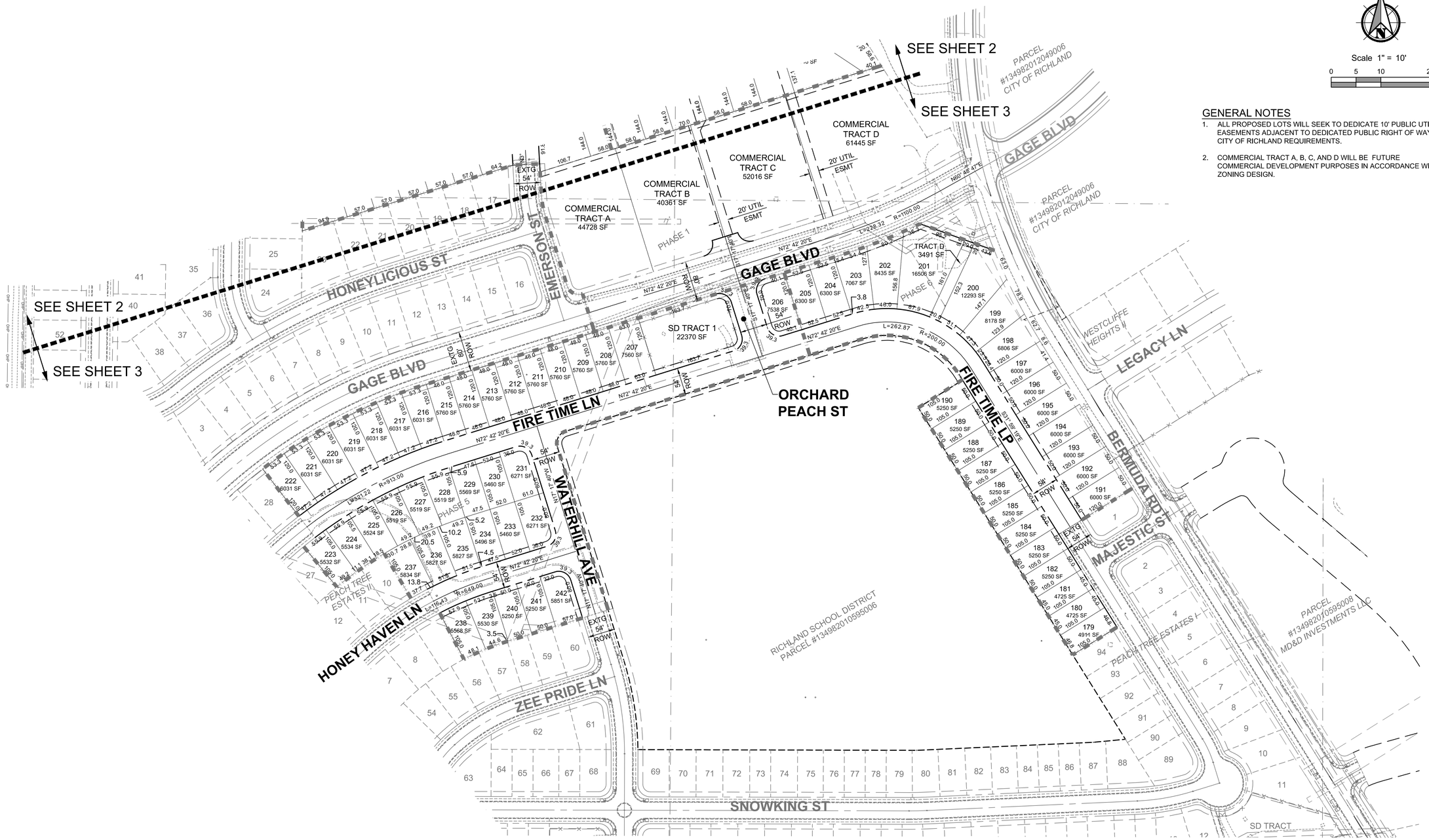
DIGITALLY SIGNED
JASON L. MATTOX
STATE OF WASHINGTON
PRELIMINARY
14703
REGISTERED PROFESSIONAL ENGINEER

DESIGNED:	ELG/MCR
CHECKED:	JLM
JUNE 2025	24012988
SHEET ID	

SHEET 2 OF 5

Filename: L:\Projects_DVP\MMDD0024012988\Civil\CAD\Working\Exhibits\24012988_PrePlat.dwg Layout Tab: C02 User: Elisabeth Glever CAD Plot Date/Time: 6/24/2025 3:53:30 PM

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.



Scale 1" = 10'

0 5 10 20

GENERAL NOTES

1. ALL PROPOSED LOTS WILL SEEK TO DEDICATE 10' PUBLIC UTILITY EASEMENTS ADJACENT TO DEDICATED PUBLIC RIGHT OF WAY PER CITY OF RICHLAND REQUIREMENTS.
2. COMMERCIAL TRACT A, B, C, AND D WILL BE FUTURE COMMERCIAL DEVELOPMENT PURPOSES IN ACCORDANCE WITH C2 ZONING DESIGN.

Apex Companies, LLC
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
apexcos.com

APEX

PRELIMINARY PLAT SOUTH PORTION FOR:

PEACH TREE ESTATES III

A RESIDENTIAL DEVELOPMENT IN RICHLAND, WASHINGTON

811 Know what's below. Call before you dig.

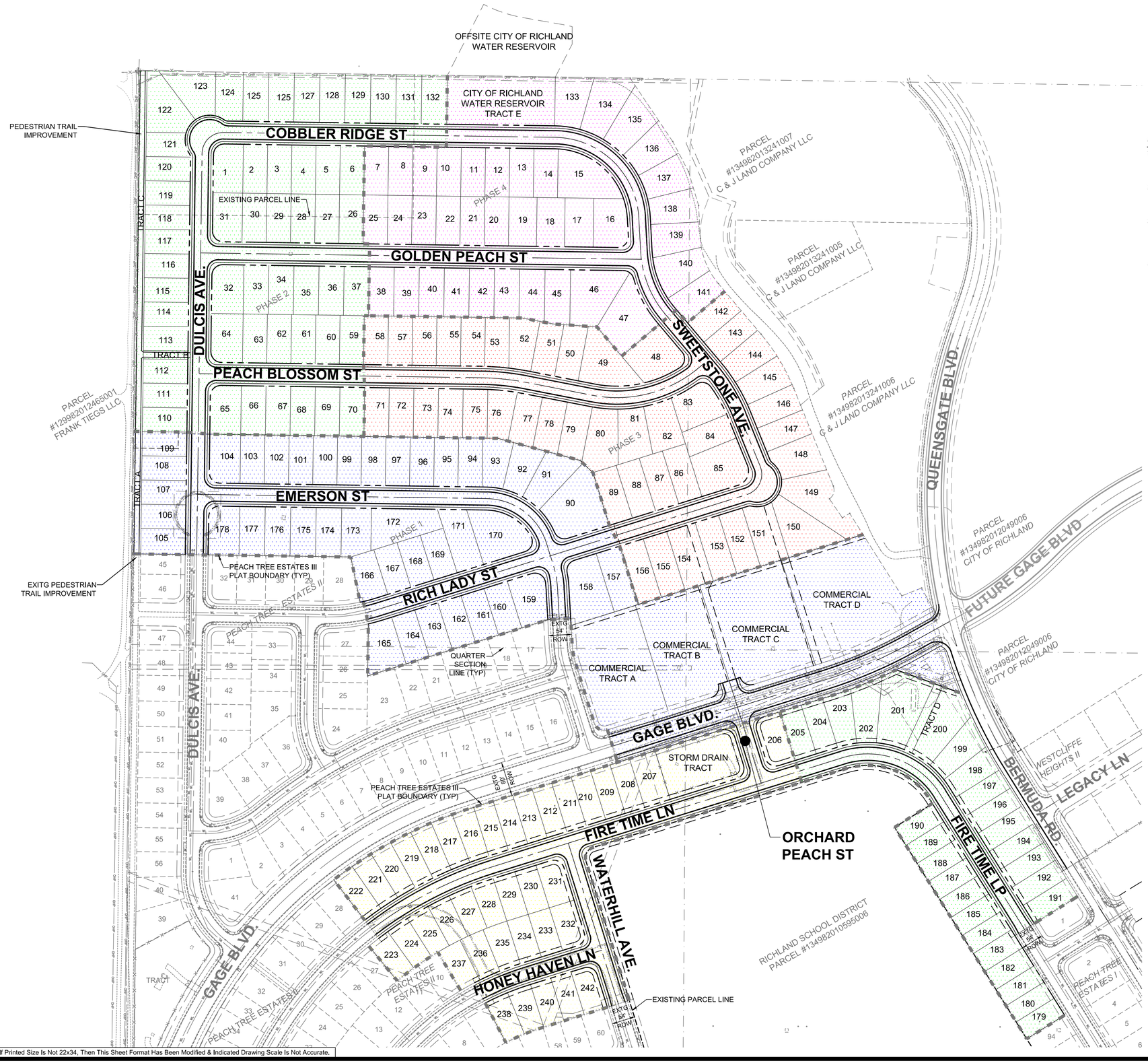
DIGITALLY SIGNED

JASON L. MATTON — STATE OF WASHINGTON — 14707 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

DESIGNED:	ELG/MCR
CHECKED:	JLM
	JUNE 2025
	24012988
SHEET ID	
SHEET	3 OF 5

Filename: L:\Projects_DVP\MMD\0002\24012988\Civil\CADI\Working\Exhibits\24012988_PrePlat.dwg Layout Tab: C03 User: Elisabeth Giever CAD Plot Date/Time: 6/24/2025 3:54:38 PM

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.



Scale 1" = 120'

0 60 120 240

GENERAL NOTES

1. ALL PROPOSED LOTS WILL SEEK TO DEDICATE 10' PUBLIC UTILITY EASEMENTS ADJACENT TO DEDICATED PUBLIC RIGHT OF WAY PER CITY OF RICHLAND REQUIREMENTS.
2. COMMERCIAL TRACT A, B, C, AND D WILL BE FUTURE COMMERCIAL DEVELOPMENT PURPOSES IN ACCORDANCE WITH C2 ZONING DESIGN.
3. TRACT "E" IS FOR FUTURE CITY OF RICHLAND CAPITAL IMPROVEMENTS FOR A WATER RESERVOIR, THE BALANCE OF THE PROPERTY NEEDED HAS AN EASEMENT ON THE ADJACENT PARCEL TO THE NORTH.
4. TRACT "A", "B", AND "C" AT THE WESTERN BORDER OF THE PROJECT IS INTENDED FOR A PEDESTRIAN WALKING TRAIL. IT WILL BE GRANTED TO THE HOA AT THE TIME OF FINAL PLATTING. ALL MAINTENANCE AND SURFACE IMPROVEMENTS WILL BE RESPONSIBILITY OF HOA.

LEGEND	
PHASE 1	
PHASE 2	
PHASE 3	
PHASE 4	
PHASE 5	
PHASE 6	

Apex Companies, LLC
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
apexcos.com

APEX

OVERALL SITE PLAN FOR: PEACH TREE ESTATES III

A RESIDENTIAL DEVELOPMENT IN RICHLAND, WASHINGTON

811 Know what's below. Call before you dig.

DIGITALLY SIGNED
JASON L. MATTOX
STATE OF WASHINGTON
14707
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

DESIGNED:	ELG/MCR
CHECKED:	JLM
	JUNE 2025
	24012988
SHEET ID	

SHEET 4 OF 5

Filename: L:\Projects_DVP\MMD\00024012988\Civil\CAD\Working\Exhibits\24012988_PrePlat.dwg Layout Tab: C04 User: Elisabeth Giever CAD Plot Date/Time: 6/24/2025 4:09:04 PM

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

Scale 1" = 120'

0 60 120 240

GENERAL NOTES

1. ALL PROPOSED LOTS WILL SEEK TO DEDICATE 10' PUBLIC UTILITY EASEMENTS ADJACENT TO DEDICATED PUBLIC RIGHT OF WAY PER CITY OF RICHLAND REQUIREMENTS.
2. COMMERCIAL TRACT A, B, C, AND D WILL BE FUTURE COMMERCIAL DEVELOPMENT PURPOSES IN ACCORDANCE WITH C2 ZONING DESIGN.
3. TRACT "E" IS FOR FUTURE CITY OF RICHLAND CAPITAL IMPROVEMENTS FOR A WATER RESERVOIR, THE BALANCE OF THE PROPERTY NEEDED HAS AN EASEMENT ON THE ADJACENT PARCEL TO THE NORTH.
4. TRACT "A", "B", AND "C" AT THE WESTERN BORDER OF THE PROJECT IS INTENDED FOR A PEDESTRIAN WALKING TRAIL. IT WILL BE GRANTED TO THE HOA AT THE TIME OF FINAL PLATTING. ALL MAINTENANCE AND SURFACE IMPROVEMENTS WILL BE RESPONSIBILITY OF HOA.

UTILITY LINETYPE LEGEND

- PROPOSED SANITARY SEWER MAIN LINE
- PROPOSED SANITARY SEWER SERVICE LINE
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE LINE
- PROPOSED STORM DRAIN MAIN LINE
- PROPOSED IRRIGATION MAIN LINE
- PROPOSED IRRIGATION SERVICE LINE
- PROPOSED ELECTRICAL UTILITY TRENCH
- PROPOSED STREET LIGHT CONDUIT
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING STORM DRAIN MAIN LINE
- EXISTING IRR MAIN LINE
- EXISTING ELECTRICAL CONDUIT
- EXISTING GAS LINE
- EXISTING UTILITY LINE TO BE REMOVED/RELOCATED
- FUTURE IRR MAIN LINE

Apex Companies, LLC
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
apexcos.com

APEX

OVERALL UTILITY PLAN FOR: PEACH TREE ESTATES III

A RESIDENTIAL DEVELOPMENT IN RICHLAND, WASHINGTON

811 Know what's below. Call before you dig.

DIGITALLY SIGNED
JASON L. MATTOX
STATE OF WASHINGTON
PRELIMINARY
24707
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED:	ELG/MCR
CHECKED:	JLM
JUNE 2025	24012988
SHEET ID	

SHEET 5 OF 5

Filename: L:\Projects_DVP\MMD\00024012988\Civil\CAD\Working\Exhibits\24012988_PrePlat.dwg Layout Tab: C05 User: Elisabeth Giever CAD Plot Date/Time: 6/24/2025 4:08:01 PM

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

SEPA Environmental Checklist

Apex Project Number: 24012988
Client: MD&D Investments LLC

Purpose of Checklist

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization, or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for Applicants

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. *You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown.* You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the State Environmental Policy Act (SEPA) process as well as later in the decision making process.

The checklist questions apply to *all parts of your proposal*, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of Checklist for Nonproject Proposals

For nonproject proposals (such as ordinances, regulations, plans, and programs), complete the applicable parts of sections A and B plus the Supplemental Sheet for Nonproject Actions (Part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for nonprojects) questions in Part B—Environmental Elements—that do not contribute meaningfully to the analysis of the proposal.

BACKGROUND

a. Name of proposed project, if applicable:
Peach Tree Estates III – Phases 1-6

b. Name of applicant:
MD&D Investments, LLC

c. Address and phone number of applicant and contact person:
63615 E Jacobs Road NE
Benton City, Washington 99320
509-778-2373

d. Date checklist prepared:
June 19, 2025

e. Agency requesting checklist:
City of Richland

f. Proposed timing or schedule (including phasing, if applicable*):*
To be in construction of summer/fall of 2026 – 2029 (approximate).

g. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
Future additions to the proposal would include development of the future commercial lots identified on the preliminary map north of Gage Boulevard, these would be subject to separate development review for commercial development by City of Richland and construction on these pads would be independent from the future residential construction of the single-family portion of the project. .

h. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
A Phase I Environmental Site Assessment, soil testing, and a geotechnical engineering report, topographic and boundary survey, cultural resource study, sanitary sewer analysis and modeling, irrigation system analysis and modeling. All listed studies have been submitted with the application package.

i. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
There are no other governmental approvals currently pending review. The application is seeking to rezone the property and gain preliminary plat approval concurrent with each other.

j. List any government approvals or permits that will be needed for your proposal, if known.
Property Rezone, Preliminary Plat, Grading permit, final site and engineering plans for public infrastructure, final plats.

k. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)
The project proposed subdivision a 58.26-acre lot into 242 single family lots and 4 commercial tracts with public roadway and utilities. The project will have provisions for open space along the eastern edge of the property that will provide pedestrian connectivity to Gage Blvd. The project will also seek to rezone the

subject property from AG to R2S and C2 commercial in accordance with City of Richland zoning ordinances. The residential portion of the property is proposing to be developed in 6 separate phases of construction.

l. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. The project is in Section 34 Township 9 North, Range 28 East, W.M. City of Richland, Benton County, WA. The project lies east and northeast of the existing Peach Tree Estates I & II. The nearest existing roadway intersection is Queensgate and Legacy Lane, the project is west of the existing Queensgate alignment. Benton County lists the site as portions of tax parcels: 134982000008000, 134982000005007, 134982010595005. (See attached preliminary plat maps).

ENVIRONMENTAL ELEMENTS

Earth

a. General description of the site:

(Circle one): flat, rolling, **hilly**, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?
The steepest approximate slope within the project limits is 8%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.
See attached Geotechnical report for the site prepared by PBS dated August 20th 2021. In summary the soils found on the project site are Sand (SP), Sandy Silt (ML) and Silt with Sand (ML).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. any filling, excavation, and grading proposed.
The site has no immediate indications of unstable soils and has been primarily under agricultural production for several years until recently when the trees were removed from the project site. The properties to the south have been under construction for the past 2 years outside of the plat boundary and have not encountered any unstable soils. Please see Geotechnical report listed above for soil logs of the site.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.
The site will be graded to create residential lots and graded to build infrastructure that will serve those lots. All fill will be from material excavated on site, import of materials for grading is not anticipated at this time.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Potential erosion both windblown and runoff, are possible as a result of construction and will be managed with a temporary erosion control plan approved by the City of Richland.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? Approximately 40-45% of the site will be covered with impervious surfaces after the project's completion and full build out of homes and commercial sites identified on the property.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
~~**This is a non-project application.**~~ **COR**: This is a project application.
During construction, erosion control measures will be implemented such as person-operated watering devices and silt fencing. After construction, most of the disturbed surfaces on the site will be grass and landscaping consistent with single family homes and commercial development.

Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.
During construction there will be exhaust emissions from construction equipment as well as dust. After project completion there would be normal air emissions resulting from a residential/commercial development.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
No offsite sources of emissions will affect this proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:
During construction, emissions will be limited to working hours and dust will be controlled by person-operated watering devices. The project will continue to implement a general construction water storm permit through Dept. of Ecology which will require monitoring and reporting of activities.

Water

Surface Water

a. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
There is a seasonal irrigation pond operated by Badger Mountain Irrigation District located approximately 500 feet northeast of the property, this is not on the property and is operated by BMID as a seasonal facility.

b. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.
No.

c. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
None.

d. Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.
None.

e. Does the proposal lie within a 100-year floodplain? If so, note location on the site plan

No.

COR: Verified. This area is located on FIRM Panel #530237-0600B (dated July 1982) and has been determined to be within Flood Zone C (Areas of minimal flooding).

f. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No waste materials will be discharged to surface waters.

Ground Water

a. Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No groundwater will be withdrawn for drinking water purposes. The source of water for the site will be from City of Richland municipal water. Water will not be discharged to groundwater with this proposal.

b. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals: agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None, sanitary sewer will be discharged to the City of Richland municipal system.

Water Runoff (Including Stormwater):

a. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water runoff will be collected within the roadway prism and disposed of via surface/subsurface methods consistent with the City of Richland standards for storm water disposal and Washington State Dept. of Ecology guidance. Previous residential projects in the region have provided municipal storm water pipe extensions in which to connect any overflow volumes from the development to existing ponds located south of the site.

b. Could waste materials enter ground or surface waters? If so, generally describe.

Waste materials are not allowed to be discharged to City owned and maintained storm systems.

c. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The proposed project would seek to alter the existing ground surface which would change current existing ground runoff that is currently impacting properties to the south of the site. The proposed project would seek to detain storm water runoff on-site in excess of the pre-developed rate. There are no seasonal streams or waterbodies located on the site.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

The storm water disposal methods will be in compliance with City of Richland standards as well as the Washington State Department of Ecology Eastern Washington Stormwater Manual. At the time of

infrastructure improvements an engineered stormwater plan will be submitted and reviewed by the City of Richland.

Plants

a. Check the types of vegetation found on the site:
The orchard that was previously on the site. It has since been removed and is currently vacant.

☐ deciduous tree: alder, maple, aspen, other
☐ evergreen tree: fir, cedar, pine, other
☒ **shrubs**
☒ **grass**
☐ pasture
☐ crop or grain
☐ Orchards, vineyards or other permanent crops.
☐ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
☐ water plants: water lily, eelgrass, milfoil, other
☐ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?
The remaining grass and brush will be removed where grading takes place.

c. List threatened and endangered species known to be on or near the site.
There are no threatened or endangered species known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
The single-family residential lots will be landscaped with grass and trees. Any commercial development will be required to adhere to City of Richland landscaping requirements.

e. List all noxious weeds and invasive species known to be on or near the site.
No known noxious weeds or invasive species on site.

Animals

a. **List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include**:
Ground squirrel, hawk, songbirds

birds: **hawk**, heron, eagle, **songbirds**, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Wildlife is limited to common passerine songbirds and small rodents.

b. List any threatened and endangered species known to be on or near the site.
The Washington State Dept. of Fish and Wildlife identifies this area as within the home range of the Ferruginous Hawk. This species has not been observed on the site.

c. Is the site part of a migration route? If so, explain.
The site and greater Columbia Basin area is part of the Pacific Flyway for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:
No measures are proposed at this time.

e. List any invasive animal species known to be on or near the site.
No invasive animal species are known to occur on or near the site.

Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
The project will require electricity to serve the proposed homes energy needs.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
The project has no impact on adjacent properties potential solar needs.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
The proposed homes and commercial buildings developed in the future will be constructed in accordance with all applicable building codes and energy codes as recognized by the City of Richland.

Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.
The Washington Department of Ecology Database shows no known spills or potential contaminants within the project area. See attached environmental Phase 1 ESA completed for the property.

1. **Describe any known or possible contamination at the site from present or past uses.**
The Washington Department of Ecology Database shows no known spills or potential contaminants within the project area. See attached environmental Phase 1 ESA completed for the property.

2. **Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**
There are no existing hazardous conditions or pipelines on the project site.

3. **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**
None.

4. **Describe special emergency services that might be required.**

Emergency services would be consistent with those required in a residential neighborhood and commercial developments to include, fire department, police department, ambulance/medical services.

5. **Proposed measures to reduce or control environmental health hazards, if any:**
   None.

Noise

a. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

There are no known sources of noise in the area that will directly affect this proposal. The project is near existing agricultural uses and will experience seasonal noises due to the maintenance and production of agricultural products. These uses are primarily to the west of the project area. All other surrounding areas are existing residential development.

b. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

On a short-term basis there will be noise associated with the construction of infrastructure, hours of operation will be limited to those allowed by the City of Richland RMC 9.16. The proposed project will increase the traffic in the area consistent with single family residential neighborhoods and commercial development on a long-term basis.

c. **Proposed measures to reduce or control noise impacts, if any**:

Construction hours will be limited to working hours defined by the City of Richland Section 9.16(b); 7AM – 9PM.

COR: Applicable Code Sections are RMC Chapter 9.16.045 and Chapter 9.16.050.

Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Currently the site is vacant. Land uses to the south are single family residential (Peachtree Estates, Peach Tree Estates II, Siena Hills & Hidden Hills), to the north is vacant. To the east is single family residential (Westcliffe Heights). Property to the west is under agricultural use.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

The project site was previously used as an orchard but has already been taken out of production and is vacant.

c. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

There will be no impacts to surrounding farm operations.

d. Describe any structures on the site.

There are no structures on the project site.

e. Will any structures be demolished? If so, what?
No.

f. What is the current zoning classification of the site?
AG - Agricultural

g. What is the current comprehensive plan designation of the site?
Badger Mountain Subarea plan – Medium Density Residential, Commercial.

h. If applicable, what is the current shoreline master program designation of the site?
Not applicable.

i. Has any part of the site been classified as a critical area by the city or county? If so, specify.
No.

COR: The northern to northeastern portion of Parcel #134982000008000 is within an identified Geologically Hazardous area.

j. Approximately how many people would reside or work in the completed project?
The preliminary plat would allow for the development of 242 single family housing units with approximately 605 residents. The preliminary plat would allow for the development of 4 commercial units with an unknown at this time number of employees.

k. Approximately how many people would the completed project displace?
None.

l. Proposed measures to avoid or reduce displacement impacts, if any:
None proposed.

m. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
The site is to be built in accordance with City of Richland residential and commercial zoning and comprehensive plan requirements.

n. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:
None.

Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
242 single family homes are being proposed (Middle income housing)

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
No housing units will be eliminated.

c. Proposed measures to reduce or control housing impacts, if any:
Housing impacts will be controlled by the City of Richland zoning code for a R-2S designation.

Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
The tallest height of any building would be limited by the C-2 or R-2S zoning code at 30 feet. The principal exterior building materials could vary but would most likely be either wood/composite siding or stucco. Commercial building exterior finishes are unknown at this time.

b. What views in the immediate vicinity would be altered or obstructed?
None.

c. Proposed measures to reduce or control aesthetic impacts, if any:
Aesthetics would be controlled by the City of Richland zoning code for R-2S and C-2.

Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
Light may be produced by residential traffic to and from the finished site as well as from individual dwelling units at evening and nighttime hours. Impacts will be minimal. Glare may be produced by traffic to and from the site but will remain minimal. City streetlights installed with municipal infrastructure will also produce light in the evening hours.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
No significant light or glare impacts are anticipated.

c. What existing off-site sources of light or glare may affect your proposal?
None.

d. Proposed measures to reduce or control light and glare impacts, if any:
The project does not anticipate any significant light or glare impacts. Any installed streetlights will be faced downwards to limit light pollution into neighboring environments.

Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
The site is located approximately 1.2 miles from Badger Mountain Trailhead Park which connects to multiple miles of trails in the Badger Mountain Centennial Preserve.

b. Would the proposed project displace any existing recreational uses? If so, describe.
The site will not displace any existing recreational use.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
Trail opportunities would be provided along the western edge of the site along with improved connecting trail along Queensgate/Bermuda. These trails are intended to connect into the large trail network established by Friends of Badger Mountain and provide access to the Badger Mountain preserve.

Historic and Cultural Preservation

a. **Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically desc**ribe.
According to the Washington Department of Archaeology & Historic Preservation WISAARD Maps, the project site does not contain any buildings, structures or sites located on or near the site that are over 45 years old listed in or eligible for listing in preservation registers.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.
A full archeological assessment of the site has been conducted for the project and the findings have been attached to this submittal. Project prepared by GRAM NW for Peach Tree Estates II-V dated, DAHP Project #2023-10-064560. A concurrence letter was issued by DAHP under project tracking Code 2023-03-01547 (attached).

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.
A cultural resources investigation was performed for the project area, inclusive of Peachtree Estates III. The investigation included a pedestrian survey and shovel test probes performed by an archaeologist. Results were documented in a cultural resources report (see reference above).

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.
An Inadvertent Discover Plan (IDP) will be put in place during construction.

Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.
See attached preliminary plat map. The site would seek to develop new city streets within the project limits

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?
The site is currently not serviced by public transit. The nearest transit stop is 2.1 miles to the north at the intersection of Keene Rd and Shockley Rd.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?
The project will have the ability to provide on-street parking as well as a driveway at each individual home.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

The project will develop new city streets within the project limits. There are no state transportation facilities within the project limits.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
No.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non passenger vehicles). What data or transportation models were used to make these estimates?

Peachtree Estates III will likely generate 2,420 trips on a typical weekday, including 182 trips during the AM peak hour and 240 trips during PM peak hour. ITE Trip Generation Manual was used for estimation of traffic generated by single family residential development.

g. Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.
No.

h. Proposed measures to reduce or control transportation impacts, if any:
Project will be responsible to construct new City streets within the development and improve adjacent existing roadways.

Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.
The project will result in the need for fire protection, police protection, schools, and other public services associated with housing and commercial development.

b. Proposed measures to reduce or control direct impacts on public services, if any.
The plat will be subject to impact fees implemented by the City and school district. Properties created by the project would be subject to local taxes and levies imparted by the local jurisdiction.

Utilities

a. Circle utilities currently available at the site:

electricity, **natural gas, water**, **refuse service**, **telephone**, **sanitary sewer**, septic system, other _____

b. Describe the utilities that are proposed for the project, the utility providing the service and the general construction activities on the site or in the immediate vicinity which might be needed.
Utilities to include water, sewer, refuse service, and electricity will be provided by the City of Richland. Irrigation will be provided by Badger Mountain Irrigation District, natural gas will be provided by Cascade Natural Gas, and telephone is provided by Lumen and Charter Communications. New sanitary sewer, water and irrigation mains, as well as dry utilities will need to be extended into the project to service the lots.

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

_____

Date

Name: Jason Mattox, PE
Position: Civil Engineer / Apex Companies
Date: June 19th, 2025

SUBDIVISION

Guarantee/Certificate Number:

Issued By: COMMONWEALTH LAND TITLE INSURANCE COMPANY
by its agent:

TICOR TITLE COMPANY

472531425

COMMONWEALTH LAND TITLE INSURANCE COMPANY, a corporation, herein called the Company,

GUARANTEES

Apex Companies, LLC

herein called the Assured, against actual loss not exceeding the liability amount stated in Schedule A which the Assured shall sustain by reason of any incorrectness in the assurances set forth in Schedule A.

LIABILITY EXCLUSIONS AND LIMITATIONS

1. No guarantee is given nor liability assumed with respect to the identity of any party named or referred to in Schedule A or with respect to the validity, legal effect or priority of any matter shown therein.
2. The Company's liability hereunder shall be limited to the amount of actual loss sustained by the Assured because of reliance upon the assurance herein set forth, but in no event shall the Company's liability exceed the liability amount set forth in Schedule A.

Please note carefully the liability exclusions and limitations and the specific assurances afforded by this guarantee. If you wish additional liability, or assurances other than as contained herein, please contact the Company for further information as to the availability and cost.

Commonwealth Land Title Insurance Company

By:

Michael J. Nolan, President

Attest:

Marjorie Nemzura, Secretary

Ticor Title Company
8101 W Grandridge Blvd., Suite 110
Kennewick, WA 99336

Countersigned By:

Dylan Strait
Authorized Officer or Agent

COMMONWEALTH LAND TITLE INSURANCE COMPANY CORPORATE SEAL

ISSUING OFFICE:
Title Officer: Adam Dyer Ticor Title Company 8101 W Grandridge Blvd., Suite 110 Kennewick, WA 99336 Phone: 509-579-7037 Fax: 844-894-6828 Main Phone: (509)579-7020 Email: Adam.Dyer@ticortitle.com

SCHEDULE A

Liability	Premium	Tax
$1,000.00	$700.00	$61.60

Effective Date: June 9, 2025 at 12:00 AM

The assurances referred to on the face page are:

That, according to those public records which, under the recording laws, impart constructive notice of matter relative to the following described property:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

Title to said real property is vested in:

MD&D Investments LLC, a Washington limited liability company

subject to the matters shown below under Exceptions, which Exceptions are not necessarily shown in the order of their priority.

END OF SCHEDULE A

EXHIBIT "A"

Legal Description

For APN/Parcel ID(s): 134982010595005, 134982000005007 and 134982000008000

Parcel A 134982000008000

REAL PROPERTY LOCATED IN THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP; THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SAID SECTION 34 A DISTANCE OF 887.49 FEET;
THENCE SOUTH 89°14'43" EAST LEAVING SAID WEST LINE A DISTANCE OF 104.98 FEET;
THENCE NORTH 00°48'16" EAST A DISTANCE OF 35.17 FEET;
THENCE SOUTH 89°14'43" EAST A DISTANCE OF 54.01 FEET;

THENCE SOUTH 89°09'47" EAST A DISTANCE OF 698.33 FEET;
THENCE SOUTH 74°58'55" EAST A DISTANCE OF 199.70 FEET;
THENCE SOUTH 46°50’00" EAST A DISTANCE OF 42.12 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 130.01 FEET;
THENCE NORTH 72°42'20" EAST A DISTANCE OF 10.82 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 198.02 FEET;
THENCE NORTH 72°42'20" EAST A DISTANCE OF 552.96 FEET TO THE EASTERLY BOUNDARY OF NEW PARCEL IV OF SURVEY NO. 5521 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5521 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021-030634;
THENCE ALONG SAID EASTERLY BOUNDARY THE FOLLOWING COURSES:
THENCE NORTH 32°20'10" WEST A DISTANCE OF 58.63 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 173.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 27°39'19" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 20.16 FEET, WITH A DELTA ANGLE OF 06°40'38", A CHORD BEARING OF SOUTH 59°00'22" WEST, AND A CHORD LENGTH OF 20.15 FEET;
THENCE NORTH 34°16'51" WEST A DISTANCE OF 54.02 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 25.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 34°21’45" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 33.94 FEET, WITH A DELTA ANGLE OF 77°47'46", A CHORD BEARING OF NORTH 16°44'23" EAST, AND A CHORD LENGTH OF 31.40 FEET;
THENCE NORTH 22°02'34" WEST A DISTANCE OF 205.67 FEET;
THENCE NORTH 21°59'37" WEST A DISTANCE OF 42.39 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 471.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 67°55'51" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 149.38 FEET, WITH A DELTA ANGLE OF 18°10'17", A CHORD BEARING OF NORTH 31°09'18" WEST, AND A CHORD LENGTH OF 148.75 FEET;
THENCE NORTH 40°10'17" WEST A DISTANCE OF 156.06 FEET; TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 179.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 49°40'40" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 116.02 FEET, WITH A DELTA ANGLE OF 37°08’14", A CHORD BEARING OF NORTH 21°45’13" WEST, AND A CHORD LENGTH OF 114.00 FEET;
THENCE NORTH 03°04'35" WEST A DISTANCE OF 77.62 FEET;
THENCE NORTH 16°32'19" WEST A DISTANCE OF 83.41 FEET;
THENCE NORTH 27°38'46" WEST A DISTANCE OF 79.89 FEET;
THENCE NORTH 33°55’58” WEST A DISTANCE OF 179.99 FEET TO THE NORTH LINE OF SAID SECTION 34;
THENCE NORTH 89°09'47" WEST ALONG SAID NORTH LINE A DISTANCE OF 1,157.16 FEET TO THE POINT OF BEGINNING.

EXHIBIT "A"

Legal Description

Parcel B 134982010595005

REAL PROPERTY LOCATED IN THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34. MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP; THENCE SOUTH 00°45’17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 2699.45 FEET TO THE WEST QUARTER CORNER OF SAID SECTION 34 MARKED BY A 1/2 INCH REBAR WITH NO CAP; THENCE SOUTH 00°45’21" WEST ALONG THE WEST UNE OF THE SOUTHWEST QUARTER OF SAID SECTION 34 A DISTANCE OF 30.02 FEET TO THE NORTHWEST CORNER OF PARCEL 4 OF SURVEY NO. 5494 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5494 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021-021122; THENCE SOUTH 89°51’29" EAST ALONG THE NORTHERLY BOUNDARY OF SAID PARCEL 4 A DISTANCE OF 438.49 FEET;

THENCE NORTH 00°03°8’31" EAST LEAVING SAID NORTH BOUNDARY A DISTANCE OF 159.02 FEET;

THENCE SOUTH 89°51’29" EAST A DISTANCE OF 2.51 FEET;

THENCE NORTH 00°08’31" EAST A DISTANCE OF 105.01 FEET TO THE TRUE POINT OF BEGINNING;

THENCE SOUTH 89°51’29" EAST A DISTANCE OF 60.21 FEET;

THENCE SOUTH 66°27’51" EAST A DISTANCE OF 20.00 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 676.07 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 66°27’51" EAST;

THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 35.21 FEET, WITH A DELTA ANGLE OF 02°59’02", A CHORD BEARING OF NORTH 25°01’40" EAST, AND A CHORD LENGTH OF 35.20 FEET;

THENCE SOUTH 63°28’49" EAST A DISTANCE OF 54.01 FEET;

THENCE SOUTH 89°51’29" EAST A DISTANCE OF 120.31 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 517.06 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 57°32’48" EAST;

THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 363.25 FEET, WITH A DELTA ANGLE OF 40°15’08", A CHORD BEARING OF NORTH 52°34’46" EAST, AND A CHORD LENGTH OF 355.83 FEET;

THENCE NORTH 72°42’20" EAST A DISTANCE OF 214.55 FEET;

THENCE NORTH 17°17’40" WEST A DISTANCE OF 344.04 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 25.00 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 39.27 FEET, WITH A DELTA ANGLE OF 90°00’00", A CHORD BEARING OF NORTH 27°42’20" EAST, AND A CHORD LENGTH OF 35.36 FEET;

THENCE NORTH 72°42’20" EAST A DISTANCE OF 624.07 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 173.02 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 227.40 FEET, WITH A DELTA ANGLE OF 75°18’21", A CHORD BEARING OF SOUTH 69°38’29" EAST, AND A CHORD LENGTH OF 211.39 FEET;

THENCE SOUTH 31°59’19" EAST A DISTANCE OF 10.42 FEET;

EXHIBIT "A"

Legal Description

THENCE SOUTH 58°00’41" WEST A DISTANCE OF 105.01 FEET;

THENCE SOUTH 31°59’19" EAST A DISTANCE OF 450.05 FEET;

THENCE SOUTH 31°58’33" EAST A DISTANCE OF 136.78 FEET;

THENCE NORTH 58°01’27" EAST A DISTANCE OF 105.01 FEET;

THENCE NORTH 31°58’33" WEST A DISTANCE OF 136.79 FEET;

THENCE NORTH 31°59’19" WEST A DISTANCE OF 84.05 FEET;

THENCE NORTH 58°00’41" EAST A DISTANCE OF 174.02 FEET;

THENCE NORTH 31°59’17" WEST A DISTANCE OF 69.05 FEET;

THENCE NORTH 31°59’19" WEST A DISTANCE OF 272.34 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,230.00 FEET; THENCE ALONG SAID CURVE. HAVING AN ARC LENGTH OF 417.94 FEET, WITH A DELTA ANGLE OF 19°28’07", A CHORD BEARING OF NORTH 22°15’16" WEST, AND A CHORD LENGTH OF 415.93 FEET TO THE SOUTHERLY MOST CORNER OF NEW PARCEL II OF SURVEY NO. 5521 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5521 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021-030634 BEING A POINT ON A CURVATURE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,268.96 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 59°19’17" EAST; THENCE ALONG SAID CURVE AND SAID SOUTHERLY BOUNDARY. HAVING AN ARC LENGTH OF 58.78 FEET, WITH A DELTA ANGLE OF 02°39'15", A CHORD BEARING OF NORTH 29°21’06" WEST, AND A CHORD LENGTH OF 58.78 FEET; THENCE SOUTH 68°24’08" WEST A DISTANCE OF 50.01 FEET;

THENCE NORTH 32°20’10" WEST ALONG THE WESTERLY BOUNDARY OF SAID NEW PARCEL il A DISTANCE OF 170.68 FEET;

THENCE SOUTH 72°42’20" WEST LEAVING SAID WESTERLY BOUNDARY A DISTANCE OF 719.81 FEET;

THENCE NORTH 03°11’32" WEST A DISTANCE OF 16.34 FEET;

THENCE SOUTH 86°48’28" WEST A DISTANCE OF 54.01 FEET;

THENCE SOUTH 72°42’20" WEST A DISTANCE OF 444.07 FEET;

THENCE SOUTH 00°45’17" WEST A DISTANCE OF 94.91 FEET;

THENCE NORTH 89°14’43" WEST A DISTANCE OF 169.00 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 227.03 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 89°58’43" EAST;

THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 1.62 FEET, WITH A DELTA ANGLE OF 00°24’34", A CHORD BEARING OF SOUTH 00°13’34" EAST, AND A CHORD LENGTH OF 1.62 FEET;

THENCE SOUTH 89°34’09" WEST A DISTANCE OF 14.86 FEET;

THENCE SOUTH 53°36’29" WEST A DISTANCE OF 76.46 FEET;

THENCE SOUTH 34°29’01" EAST A DISTANCE OF 172.90 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,260.14 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 34°29’01" EAST;

THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 7.00 FEET, WITH A DELTA ANGLE OF 00°19'05", A CHORD BEARING OF NORTH 55°40’32" EAST, AND A CHORD LENGTH OF 7.00 FEET;

THENCE SOUTH 34°09’56" EAST A DISTANCE OF 120.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 1,140.13 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 34°09’56" EAST;

THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 217.81 FEET, WITH A DELTA ANGLE OF 10°56’46", A CHORD BEARING OF SOUTH 50°21’42" WEST, AND A CHORD LENGTH OF 217.48 FEET;

THENCE SOUTH 45°06’41" EAST A DISTANCE OF 80.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,060.12 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 45°06’41" EAST;

THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 7.63 FEET, WITH A DELTA ANGLE OF 00°24’45", A CHORD BEARING OF NORTH 45°05’41" EAST, AND A CHORD LENGTH OF 7.63 FEET;

THENCE SOUTH 44°41’56" EAST A DISTANCE OF 174.02 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 886.10 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 44°41’56" EAST;

THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 18.24 FEET. WITH A DELTA ANGLE OF 01°10’47", A CHORD BEARING OF NORTH 45°53’27" EAST, AND A CHORD LENGTH OF 18.24 FEET;

THENCE SOUTH 43°31’09" EAST A DISTANCE OF 105.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 781.09 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 43°31’09" EAST;

THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 349.22 FEET, WITH A DELTA ANGLE OF 25°37’00", A CHORD BEARING OF SOUTH 33°40’21" WEST, AND A CHORD LENGTH OF 346.32 FEET;

THENCE SOUTH 89°51’29" EAST A DISTANCE OF 31.49 FEET TO THE TRUE POINT OF BEGINNING. TOGETHER WITH;

REAL PROPERTY LOCATED IN THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON. MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP; THENCE SOUTH 89°09’47" EAST ALONG THE NORTH LINE OF SAID SECTION 34 A DISTANCE OF 2599.03 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 34 MARKED BY A 3" BRASS CAP; THENCE SOUTH 00°06’46" WEST A DISTANCE OF 1,333.89 FEET TO THE NORTHEAST CORNER OF LOT 6 OF THE PLAT OF WESTCUFFE HEIGHTS II RECORDED IN VOLUME 15 OF PLATS AT PAGE 608 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2018-015773;

THENCE NORTH 89°30’45" WEST ALONG THE NORTHERLY BOUNDARY OF SAID PLAT OF WESTCUFFE HEIGHTS II A DISTANCE OF 155.72 FEET;

THENCE SOUTH 58°00’41" WEST A DISTANCE OF 427.93 FEET TO THE TRUE POINT OF BEGINNING;

THENCE NORTH 31°59’19" WEST A DISTANCE OF 130.96 FEET TO THE EASTERLY RIGHT OF WAY MARGIN OF QUEENSGATE DRIVE ESTABUSHED PER QUIT CLAIM DEED RECORDED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2018-01826 BEING A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 1,170.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 65°30’31" EAST; THENCE

ALONG SAID CURVE AND RIGHT OF WAY MARGIN, HAVING AN ARC LENGTH OF 131.40 FEET, WITH A DELTA ANGLE OF 06°26’05", A CHORD BEARING OF SOUTH 27°42’32" EAST, AND A CHORD LENGTH OF 131.33 FEET TO THE NORTHWEST CORNER OF ADJUSTED LOT 1 OF SURVEY NO. 5036 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5036 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2018-019538; THENCE NORTH 58°00’41" EAST ALONG THE NORTHERLY BOUNDARY OF SAID ADJUSTED LOT 1 A DISTANCE OF 9.80 FEET TO THE TRUE POINT OF BEGINNING.

Parcel C 134982000005007

REAL PROPERTY LOCATED IN THE WEST HALF OF THE NORTHWEST QUARTER AND THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP;
THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 887.49 FEET TO THE TRUE POINT OF BEGINNING.
THENCE SOUTH 89°14'43" EAST LEAVING SAID WEST LINE A DISTANCE OF 104.98 FEET;
THENCE NORTH 00°48'16" EAST A DISTANCE OF 35.17 FEET;
THENCE SOUTH 89°14'43" EAST A DISTANCE OF 54.01 FEET;
THENCE SOUTH 89°09'47" EAST A DISTANCE OF 698.33 FEET;
THENCE SOUTH 74°58'55" EAST A DISTANCE OF 199.70 FEET;
THENCE SOUTH 46°50'00" EAST A DISTANCE OF 42.12 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 130.01 FEET;
THENCE NORTH 72°42’20" EAST A DISTANCE OF 10.82 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 198.02 FEET;
THENCE SOUTH 72°42'20" WEST A DISTANCE OF 166.85 FEET;
THENCE NORTH 03°11'32" WEST A DISTANCE OF 16.34 FEET;
THENCE SOUTH 86°48'28" WEST A DISTANCE OF 54.01 FEET;
THENCE SOUTH 72°42'20" WEST A DISTANCE OF 444.07 FEET;
THENCE SOUTH 00°45'17" WEST A DISTANCE OF 94.91 FEET;
THENCE NORTH 89°14'43" WEST A DISTANCE OF 169.00 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 227.03 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 89°58'43” EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 1.62 FEET, WITH A DELTA ANGLE OF 00°24'34", A CHORD BEARING OF SOUTH 00°13'34" EAST, AND A CHORD LENGTH OF 1.62 FEET;

THENCE SOUTH 89°34’09" WEST A DISTANCE OF 14.86 FEET;
THENCE SOUTH 53°36’29" WEST A DISTANCE OF 76.46 FEET;
THENCE SOUTH 34°29’01" EAST A DISTANCE OF 172.90 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,260.14 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 34°29'01" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 7.00 FEET, WITH A DELTA ANGLE OF 00°19'05", A CHORD BEARING OF NORTH 55°40’32" EAST, AND A CHORD LENGTH OF 7.00 FEET;

THENCE SOUTH 34°09’56" EAST A DISTANCE OF 120.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 1,140.13 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 34°09°56" EAST;
THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 217.81 FEET, WITH A DELTA ANGLE OF 10°56'46", A CHORD BEARING OF SOUTH 50°21’42" WEST, AND A CHORD LENGTH OF 217.48 FEET;
THENCE SOUTH 45°06'41" EAST A DISTANCE OF 80.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,060.12 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 45°06'41" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 7.63 FEET, WITH A DELTA ANGLE OF 00°24’45", A CHORD BEARING OF NORTH 45°05’41” EAST, AND A CHORD LENGTH OF 7.63 FEET;

THENCE SOUTH 44°41'56" EAST A DISTANCE OF 174.02 FEET TO A POINT ON THE ARC OF A NON TANGENT

EXHIBIT "A"

Legal Description

CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 886.10 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 44°41'56" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 18.24 FEET, WITH A DELTA ANGLE OF 01°10'47", A CHORD BEARING OF NORTH 45°53’27" EAST, AND A CHORD LENGTH OF 18.24 FEET; THENCE SOUTH 43°31'09" EAST A DISTANCE OF 105.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 781.09 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 43°31’09" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 349.22 FEET, WITH A DELTA ANGLE OF 25°37’00", A CHORD BEARING OF SOUTH 33°40’21" WEST, AND A CHORD LENGTH OF 346.32 FEET;

THENCE SOUTH 89°51’29" EAST A DISTANCE OF 31.49 FEET;
THENCE SOUTH 00°08’31" WEST A DISTANCE OF 105.01 FEET;
THENCE NORTH 89°51’29" WEST A DISTANCE OF 2.51 FEET;
THENCE SOUTH 00°08°31" WEST A DISTANCE OF 159.02 FEET TO THE NORTHERLY BOUNDARY OF PARCEL 4 OF SURVEY NO. 5494 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5494 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021-021122;
THENCE NORTH 89°51’29" WEST ALONG SAID NORTHERLY BOUNDARY A DISTANCE OF 438.49 FEET TO THE NORTHWEST CORNER OF SAID PARCEL 4 BEING ALSO A POINT ON THE WEST LINE OF THE SOUTHWEST QUARTER SAID SECTION 34;
THENCE NORTH 00°45’21" EAST ALONG SAID WEST LINE A DISTANCE OF 30.02 FEET TO THE WEST QUARTER CORNER OF SECTION 34, MARKED BY A 1/2 INCH REBAR WITH NO CAP;
THENCE NORTH 00°45’17" EAST ALONG SAID WEST LINE OF THE NORTHWEST QUARTER A DISTANCE OF 1,811.96 FEET TO THE POINT OF BEGINNING.

SCHEDULE B

SPECIAL EXCEPTIONS

1. General and special taxes and charges, payable February 15, delinquent if first half unpaid on May 1, second half delinquent if unpaid on November 1 of the tax year (amounts do not include interest and penalties):

Year:	2025
Tax Account No.:	134982010595005
Levy Code:	R3
Assessed Value-Land:	$642,000.00
Assessed Value-Improvements:	$0.00
General and Special Taxes:	
Billed:	$5,915.49
Paid:	$2,957.77
Unpaid:	$2,957.72

2. General and special taxes and charges, payable February 15, delinquent if first half unpaid on May 1, second half delinquent if unpaid on November 1 of the tax year (amounts do not include interest and penalties):

Year:	2025
Tax Account No.:	134982000005007
Levy Code:	R3
Assessed Value-Land:	$633,250.00
Assessed Value-Improvements:	$0.00
General and Special Taxes:	
Billed:	$5,840.06
Paid:	$2,920.08
Unpaid:	$2,919.98

3. General and special taxes and charges, payable February 15, delinquent if first half unpaid on May 1, second half delinquent if unpaid on November 1 of the tax year (amounts do not include interest and penalties):

Year:	2025
Tax Account No.:	134982000008000
Levy Code:	R3
Assessed Value-Land:	$655,650.00
Assessed Value-Improvements:	$0.00
General and Special Taxes:	
Billed:	$6,046.32
Paid:	$3,023.20
Unpaid:	$3,023.12

4. Any assessments levied by Badger Mountain Irrigation District for the year 2025, amounts of which are unavailable at this time.

SCHEDULE B
(continued)

5. A mortgage to secure an indebtedness as shown below

Amount:	$7,082,839.00
Dated:	October 18, 2021
Mortgagor:	MD&D Investments LLC, a Washington limited liability company
Mortgagee:	Community First Bank
Recording Date:	October 29, 2021
Recording No.:	2021-049836

6. A deed of trust to secure an indebtedness in the amount shown below,

Amount:	$1,965,000.00
Dated:	December 1, 2022
Trustor/Grantor:	MD&D Investments LLC, a Washington limited liability company
Trustee:	Cascade Title Company
Beneficiary:	Donald F Douglas, an individual
Recording Date:	April 20, 2023
Recording No.:	2023-007371
Affects:	Said premises and includes other property

Subordination Agreement recorded at 2023-026939, referencing the Trust Deed recorded at 2023-007371 and the Trust Deed recorded at 2023-026936.

7. A mortgage to secure an indebtedness as shown below

Amount:	$6,531,225.00
Dated:	December 18, 2023
Mortgagor:	MD&D Investments LLC
Mortgagee:	Community First Bank
Recording Date:	December 27, 2023
Recording No.:	2023-026936
Affects:	Said premises and other property

Subordination Agreement recorded at 2023-026939, referencing the Trust Deed recorded at 2023-007371 and the Trust Deed recorded at 2023-026936.

8. Any unpaid assessments or charges and liability to further assessments or charges, for which a lien may have arisen (or may arise), as provided for under Washington law and in instrument set forth below:

Imposed by: Peach Tree Estates Homeowners Association

9. Any unrecorded leaseholds, right of vendors and holders of security interests on personal property installed upon the Land and rights of tenants to remove trade fixtures at the expiration of the terms.

10. Amounts as may be due to City of Richland for document:
For: Sewer Latecomer Agreement
Recorded: September 5, 2018
Recording No.: 2018-026345

SCHEDULE B
(continued)

11. The Land is within or near designated agricultural lands or farm operations upon which a variety of commercial activities may occur that are not compatible with residential development for certain periods of limited duration. You may be subject to inconveniences or discomforts arising from such operations, including but not limited to noise, odors, flies, fumes, dust, smoke, the operation of machinery of any kind during any 24 hour period (including aircraft) the storage and disposal of manure, and the application of spraying or storage and disposal of manure, and the application by spraying or otherwise or chemical fertilizers, soil amendments, herbicides and pesticides. Benton County has determined that the use of real property for agricultural operations is a high priority and favored use and will not consider those inconveniences or discomforts arising from legally permitted farm operations to be a nuisance if such practices are consistent with commonly accepted best management practices and otherwise comply with local, state and federal laws.

12. Rights-of-way for pipelines, ditches, canals, flumes, if any cross said premises, together with the right to enter thereon for the purpose of repair and maintenance thereof.

13. Right(s) of way for the purpose(s) stated below as set forth in the patent to said Land

    Purpose(s): Ditches, Canals and Electric Power Transmission
    Recording Date: September 17, 1973
    Recording No.: 654855

14. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

    Granted to: Badger Mountain Irrigation District
    Purpose: Construct, repair, replace, operate and maintain pipelines and appurtenant structures
    Recording Date: January 13, 1977
    Recording No.: 718936

15. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

    Granted to: Public Utility District No. 1 of Benton County
    Purpose: Electric transmission and distribution line and appurtenances thereto
    Recording Date: May 26, 1977
    Recording No.: 728681

16. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

    Granted to: Public Utility District No. 1 of Benton County
    Purpose: Electric transmission and distribution line and appurtenances thereto
    Recording Date: September 15, 1977
    Recording No.: 737310 and 737311

17. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

    Granted to: Public Utility District No. 1 of Benton County
    Purpose: Electric transmission and distribution line and appurtenances thereto
    Recording Date: February 8, 1978
    Recording No.: 749794

SCHEDULE B
(continued)

18. Terms, covenants, conditions and provisions contained in Agreement entered into ;
Between: City of Richland, Washington
AND: Milo Bauder, his successors and assignees
Recorded: July 24, 1978
Recording No.: 765214
Providing: Domestic Water and/or Sewer Services

19. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Purpose: Ingress and Egress
Recording Date: July 28, 1978
Recording No.: 765776

Release of easement agreeement recorded July 19, 2024 under Auditor's File No. 2024-015093.

20. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Purpose: Access
Recording Date: June 15, 1982
Recording No.: 862635

21. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Purpose: Ingress-egress, utility and irrigation
Recording Date: July 17, 1984
Recording No.: 898901
Affects: 60 foot strip over a portion of said premises and other property

22. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Badger Mountain Irrigation Easement
Purpose: Utilities
Recording Date: October 9, 1984
Recording No.: 84-3561

23. Right of way Easement, including the terms, covenants and provisions thereof, for electric transmission and/or distribution line, together with necessary appurtenances, as granted by instrument;

Recorded: April 12, 1985
Recording No.: 85-4566
In favor of: Public Utility District No. 1 of Benton County

24. Terms, covenants, conditions and provisions set forth in Agreement entered into;
Between: Public Utility District No. 1 of Benton County
AND: Badger Mountain Irrigation District
Recorded: April 24, 1985
Recording No.: 85-5124

SCHEDULE B
(continued)

25. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Purpose: Ingress and egress
Recording Date: October 8, 1987
Recording No.: 87-16073

26. Right of way Easement, including the terms, covenants and provisions thereof, for electric transmission and/or distribution line, together with necessary appurtenances, as granted by instrument;

Recorded: November 5, 1993
Recording No.: 93-34114
In favor of: Public Utility District No. 1 of Benton County

27. Terms, covenants, conditions and provisions Interlocal Agreement between Benton County and the City of Richland regarding City of Richland Urban Growth Area Expansion Request - File CPA 03-2

Recorded: February 1, 2005
Recording No.: 2005-003324

28. Amended and restated interlocal agreement between Benton County and the City of Richland recorded December 12, 2006 under Auditor's File No. 2006-040708.

29. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Richland
Purpose: Secondary Emergency Access Easement
Recording Date: November 2, 2012
Recording No.: 2012-034461

30. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: The City of Richland
Purpose: Utility Easement
Recording Date: March 24, 2014
Recording No.: 2014-006658
Affects: A Portion of said premises

31. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Richland
Purpose: Utility easement
Recording Date: February 23, 2016
Recording No.: 2016-004839

Parial Relinquishment of Easement as recorded under Recording No. 2022-004850, and Relinquishment of easement recorded under Recording No. 2024-026861 and 2024-026863

SCHEDULE B
(continued)

32. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Badger Mountain Irrigation District
Purpose: Irrigation
Recording Date: September 3, 2020
Recording No.: 2020-033644

Partial release of Easement Agreement recorded under Auditor's File No. 2025-000531.

33. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Richland
Purpose: Waterline Easement
Recording Date: January 17, 2018
Recording No.: 2018-001482 and 2018-001483

34. Exceptions, covenants, conditions, and reservations as contained in Deed and including terms thereof:

From: C & J Land Company LLC
To: MD&D Investments LLC
Recorded: October 29, 2021
Recording No.: 2021-049835

As Follows: Regarding future development by MD&D Investments LLC, mobile and manufactured homes, and modular homes are specifically not permitted.

35. Terms and Conditions of Ordinance No. 41-10 recorded January 5, 2011 under Auditor's File No. 2011-000610.

36. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Richland
Purpose: Access and Utility
Recording Date: July 13, 2017
Recording No.: 2017-019386

37. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Richland
Purpose: Access and Utility
Recording Date: July 13, 2017
Recording No.: 2017-019388

38. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Richland
Purpose: Waterline
Recording Date: January 17, 2018
Recording No.: 2018-001484

SCHEDULE B
(continued)

39. Sewer Latecomers Ageement and the Terms and Conditions thereof between the City of Richland and Pahlisch Homes at Westcliffe Heights LLC recorded September 5, 2018 under Auditor's File No. 2018-026345 and First Amendment recorded June 3, 2019 under Auditor's File No. 2019-014443.

40. Terms and Conditions of Ordinance No. 2023-12 recorded June 23, 2023 under Auditor's File No. 2023-012671.

41. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Survey No. 5521:

    Recording No: 2021-030634

42. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Survey No. 5031:

    Recording No: 2018-018513

43. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Short Plat No. 2049:

    Recording No: 94-17574

44. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Survey 2164:

    Recording No: 96-12391

SCHEDULE B
(continued)

45. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Survey 4140
:

    Recording No: 2010-026670

46. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Survey 4925:

    Recording No: 2017-026905

47. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Survey 5036
:

    Recording No: 2018-019538

48. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Short Plat 595:

    Recording No: 771566

49. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, encroachments, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on Survey 5724:

    Recording No: 2022-033094

50. Terms, conditions and provisions contained in City of Richland Ordinance No. 2024-21, recorded June 26, 2024 under Auditor's File No. 2024-013072.

SCHEDULE B
(continued)

51. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Badger Mountain Irrigation District
Purpose:	Underground utilities
Recording Date:	July 19, 2024
Recording No.:	2024-015094

52. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Badger Mountain Irrigation District
Purpose:	Utility Easement
Recording Date:	July 19, 2024
Recording No.:	2024-015095

53. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Richland
Purpose:	Temporary Drainage Easement
Recording Date:	July 25, 2024
Recording No.:	2024-015501

54. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Richland
Purpose:	Temporary Utility Easement
Recording Date:	July 25, 2024
Recording No.:	2024-015502

55. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Richland
Purpose:	Temporary Utility Easement
Recording Date:	July 25, 2024
Recording No.:	2024-015503

56. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Richland
Purpose:	Temporary utility easement
Recording Date:	July 25, 2024
Recording No.:	2024-015504

57. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Richland
Purpose:	Temporary Turnaround and Utility Easement
Recording Date:	July 25, 2024
Recording No.:	2024-015505

SCHEDULE B
(continued)

58. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Richland
Purpose:	Utility Easement
Recording Date:	July 29, 2024
Recording No.:	2024-015864

59. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Badger Mountain Irrigation District
Purpose:	Underground Utilities
Recording Date:	July 19, 2024
Recording No.:	2024-015095

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

Recording Date:	August 12, 2024
Recording No.:	2024-016967

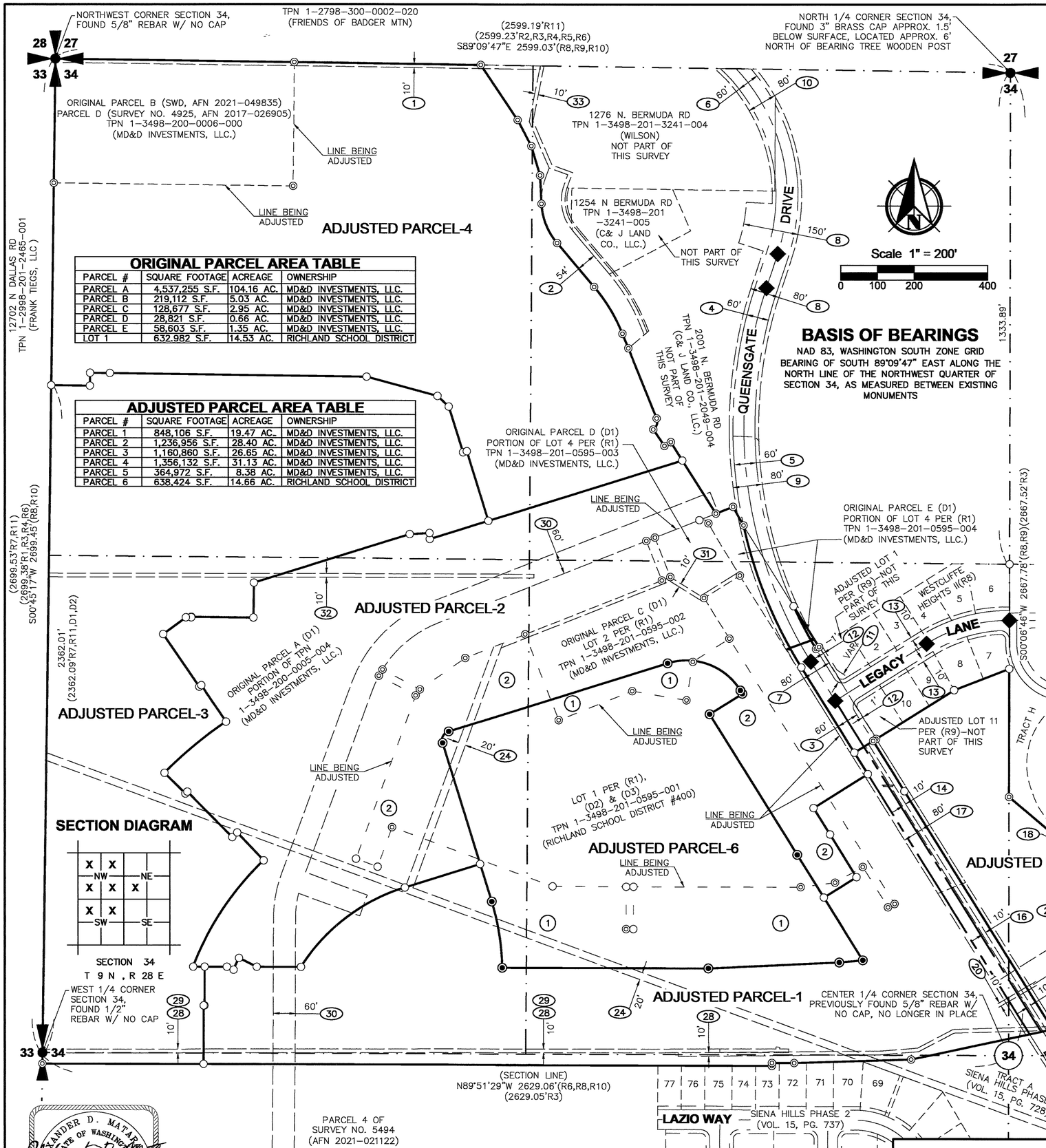
END OF SCHEDULE B

Survey #5724 Pg 1 of 9

RECORD OF SURVEY

FOR BOUNDARY LINE ADJUSTMENT

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON.



ORIGINAL PARCEL AREA TABLE

PARCEL #	SQUARE FOOTAGE	ACREAGE	OWNERSHIP
PARCEL A	4,537,255 S.F.	104.16 AC.	MD&D INVESTMENTS, LLC.
PARCEL B	219,112 S.F.	5.03 AC.	MD&D INVESTMENTS, LLC.
PARCEL C	128,677 S.F.	2.95 AC.	MD&D INVESTMENTS, LLC.
PARCEL D	28,821 S.F.	0.66 AC.	MD&D INVESTMENTS, LLC.
PARCEL E	58,603 S.F.	1.35 AC.	MD&D INVESTMENTS, LLC.
LOT 1	632,982 S.F.	14.53 AC.	RICHLAND SCHOOL DISTRICT

ADJUSTED PARCEL AREA TABLE

PARCEL #	SQUARE FOOTAGE	ACREAGE	OWNERSHIP
PARCEL 1	848,106 S.F.	19.47 AC.	MD&D INVESTMENTS, LLC.
PARCEL 2	1,236,956 S.F.	28.40 AC.	MD&D INVESTMENTS, LLC.
PARCEL 3	1,160,860 S.F.	26.65 AC.	MD&D INVESTMENTS, LLC.
PARCEL 4	1,356,132 S.F.	31.13 AC.	MD&D INVESTMENTS, LLC.
PARCEL 5	364,972 S.F.	8.38 AC.	MD&D INVESTMENTS, LLC.
PARCEL 6	638,424 S.F.	14.66 AC.	RICHLAND SCHOOL DISTRICT

SECTION DIAGRAM

LEGEND

⊕	FOUND SURVEY MONUMENT AS NOTED
◎	FOUND SURVEY PIN – SEE FOUND SURVEY PIN KEY, SHEET 5
◆	FOUND BRASS CAP IN MONUMENT CASE, STAMPED "2018 PLS 46318" PER (R8) OR AS NOTED
◉	SET 5/8" x 30" IRON REBAR WITH YPC STAMPED: "MATARAZZO 46318" WITH THIS SURVEY
○	CALCULATED POINT, NOT FOUND OR SET
(R#)/(D#)	DENOTES SURVEY REFERENCE/DEED REFERENCE, SEE LIST, ALSO DENOTES MEASURED DIMENSION MATCHES RECORD DIMENSION UNLESS NOTED OTHERWISE
AFN	AUDITOR FILE NUMBER
ESMT	EASEMENT
OPC	ORANGE PLASTIC CAP
S.F. / AC.	SQUARE FEET / ACRES
(VOL. , PG.)	VOLUME, PAGE
YPC	YELLOW PLASTIC CAP
— · — · — · —	SECTION OR SECTION SUB-DIVISION LINE
——— — — ———	RIGHT-OF-WAY
——— — ———	RIGHT-OF-WAY CENTERLINE
— — — — — —	EXISTING PROPERTY LINE
— — — — — —	EASEMENT BOUNDARY
———	ADJUSTED PARCEL BOUNDARY
—·—·—·—·—	TRANSFER PORTION BOUNDARY – SEE TRANSFER PORTION KEY

TRANSFER PORTION KEY

(1) TRANSFER PORTION FROM MD&D INVESTMENTS, LLC TO RICHLAND SCHOOL DISTRICT – SEE SHEET 7 FOR LEGAL DESCRIPTION

(2) TRANSFER PORTION FROM RICHLAND SCHOOL DISTRICT TO MD&D INVESTMENTS, LLC – SEE SHEET 7 FOR LEGAL DESCRIPTION

NOTES:

1. SEE SHEETS 2 THRU 4 FOR ADJUSTED PARCELS 1 THROUGH 6 DETAILS.
2. SEE SHEET 5 FOR FOUND SURVEY PIN KEY– (X), EXISTING EASEMENT KEY– (X) & COMPLETE LINE AND CURVE TABLES.

SURVEY / DEED REFERENCES

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R2) SURVEY NO. 848 AMENDING SURVEY NO. 822 (AFN 887321) BY WEBBER
(R3) SHORT PLAT NO. 2049 (AFN 1994-017574) BY BAALMAN
(R4) SURVEY NO. 2164 FOR BMID (AFN 1996-12391) BY ROGERS
(R5) SHORT PLAT NO. 3241 (AFN 2010-007065) BY YAMASHITA
(R6) SURVEY NO. 4140 (AFN 2010-026670) BY MATARAZZO
(R7) SURVEY NO. 5031 (AFN 2018-018513) BY BAALMAN
(R8) FINAL PLAT OF WESTCLIFFE HEIGHTS II (AFN 2018-015773) BY MATARAZZO
(R9) SURVEY NO. 5036 (AFN 2018-019538) BY MATARAZZO
(R10) SURVEY NO. 5494 (AFN 2021-021122) BY MATARAZZO
(R11) SURVEY NO. 5521 (AFN 2021-030634) BY BAALMAN

(D1) STATUTORY WARRANTY DEED (AFN 2021-049835)
(D2) STATUTORY WARRANTY DEED (AFN 2021-022771)
(D3) STATUTORY WARRANTY DEED (AFN 774082)
(D4) STATUTORY WARRANTY DEED (AFN 781372)

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF MONSON DEVELOPMENT WASHINGTON, LLC IN 2022.

Alexander D. Matarazzo

10/12/2022
ALEXANDER D. MATARAZZO, PLS 46318

10/12/2022
DATE

ALEXANDER D. MATARAZZO STATE OF WASHINGTON 46318 REGISTERED PROFESSIONAL LAND SURVEYOR

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 14th DAY OF October, 2022 AT 2:45 P M. IN VOLUME 01 OF SURVEYS AT PAGE 5724 AT THE REQUEST OF PBS ENGINEERING & ENVIRONMENTAL INC.

Brenda Chilton, by Merry Boatright, deputy

COUNTY AUDITOR

2022-033094 B: 01 P: 5724 SUR
10/14/2022 02:45 PM Pages: 9 Fee
Plat Filing Fee and Surcharge Total $327.50
Benton County, Benton County Auditor's Office

PBS

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

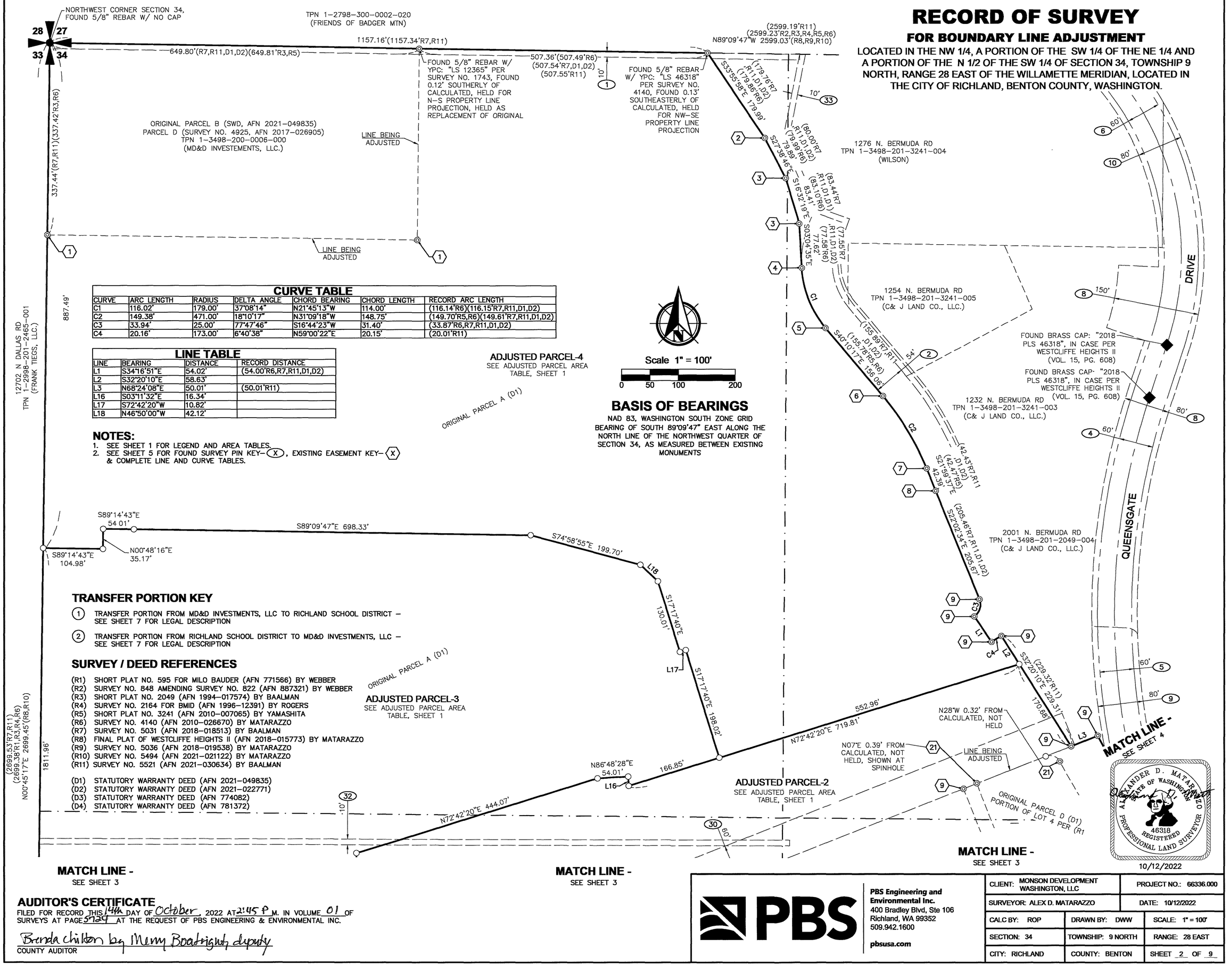
CLIENT: MONSON DEVELOPMENT WASHINGTON, LLC		PROJECT NO.: 66336.000
SURVEYOR: ALEX D. MATARAZZO		DATE: 10/12/2022
CALC BY: ROP	DRAWN BY: DWW	SCALE: 1" = 200'
SECTION: 34	TOWNSHIP: 9 NORTH	RANGE: 28 EAST
CITY: RICHLAND	COUNTY: BENTON	SHEET 1 OF 9

Survey# 5724 Pg 2of9

RECORD OF SURVEY

FOR BOUNDARY LINE ADJUSTMENT

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON.



CURVE TABLE						
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH	RECORD ARC LENGTH
C1	116.02'	179.00'	37°08'14"	N21°45'13"W	114.00'	(116.14'R6)(116.15'R7,R11,D1,D2)
C2	149.38'	471.00'	18°10'17"	N31°09'18"W	148.75'	(149.70'R5,R6)(149.61'R7,R11,D1,D2)
C3	33.94'	25.00'	77°47'46"	S16°44'23"W	31.40'	(33.87'R6,R7,R11,D1,D2)
C4	20.16'	173.00'	6°40'38"	N59°00'22"E	20.15'	(20.01'R11)

LINE TABLE			
LINE	BEARING	DISTANCE	RECORD DISTANCE
L1	S34°16'51"E	54.02'	(54.00'R6,R7,R11,D1,D2)
L2	S32°20'10"E	58.63'	
L3	N68°24'08"E	50.01'	(50.01'R11)
L16	S03°11'32"E	16.34'	
L17	S72°42'20"W	10.82'	
L18	N46°50'00"W	42.12'	

BASIS OF BEARINGS

NAD 83, WASHINGTON SOUTH ZONE GRID BEARING OF SOUTH 89°09'47" EAST ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 34, AS MEASURED BETWEEN EXISTING MONUMENTS

NOTES:

1. SEE SHEET 1 FOR LEGEND AND AREA TABLES.
2. SEE SHEET 5 FOR FOUND SURVEY PIN KEY- (X), EXISTING EASEMENT KEY- (X) & COMPLETE LINE AND CURVE TABLES.

TRANSFER PORTION KEY

(1) TRANSFER PORTION FROM MD&D INVESTMENTS, LLC TO RICHLAND SCHOOL DISTRICT – SEE SHEET 7 FOR LEGAL DESCRIPTION

(2) TRANSFER PORTION FROM RICHLAND SCHOOL DISTRICT TO MD&D INVESTMENTS, LLC – SEE SHEET 7 FOR LEGAL DESCRIPTION

SURVEY / DEED REFERENCES

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R2) SURVEY NO. 848 AMENDING SURVEY NO. 822 (AFN 887321) BY WEBBER
(R3) SHORT PLAT NO. 2049 (AFN 1994-017574) BY BAALMAN
(R4) SURVEY NO. 2164 FOR BMID (AFN 1996-12391) BY ROGERS
(R5) SHORT PLAT NO. 3241 (AFN 2010-007065) BY YAMASHITA
(R6) SURVEY NO. 4140 (AFN 2010-026670) BY MATARAZZO
(R7) SURVEY NO. 5031 (AFN 2018-018513) BY BAALMAN
(R8) FINAL PLAT OF WESTCLIFFE HEIGHTS II (AFN 2018-015773) BY MATARAZZO
(R9) SURVEY NO. 5036 (AFN 2018-019538) BY MATARAZZO
(R10) SURVEY NO. 5494 (AFN 2021-021122) BY MATARAZZO
(R11) SURVEY NO. 5521 (AFN 2021-030634) BY BAALMAN

(D1) STATUTORY WARRANTY DEED (AFN 2021-049835)
(D2) STATUTORY WARRANTY DEED (AFN 2021-022771)
(D3) STATUTORY WARRANTY DEED (AFN 774082)
(D4) STATUTORY WARRANTY DEED (AFN 781372)

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 14th DAY OF October, 2022 AT 2:45 P M. IN VOLUME 01 OF SURVEYS AT PAGE 5724 AT THE REQUEST OF PBS ENGINEERING & ENVIRONMENTAL INC.

Brenda Chilton by Merry Boatright, deputy
COUNTY AUDITOR

ALEXANDER D. MATARAZZO STATE OF WASHINGTON 46318 REGISTERED PROFESSIONAL LAND SURVEYOR

10/12/2022

PBS

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: MONSON DEVELOPMENT WASHINGTON, LLC		PROJECT NO.: 66336.000
SURVEYOR: ALEX D. MATARAZZO		DATE: 10/12/2022
CALC BY: ROP	DRAWN BY: DWW	SCALE: 1" = 100'
SECTION: 34	TOWNSHIP: 9 NORTH	RANGE: 28 EAST
CITY: RICHLAND	COUNTY: BENTON	SHEET 2 OF 9

Survey #5724 Pg 3 of 9

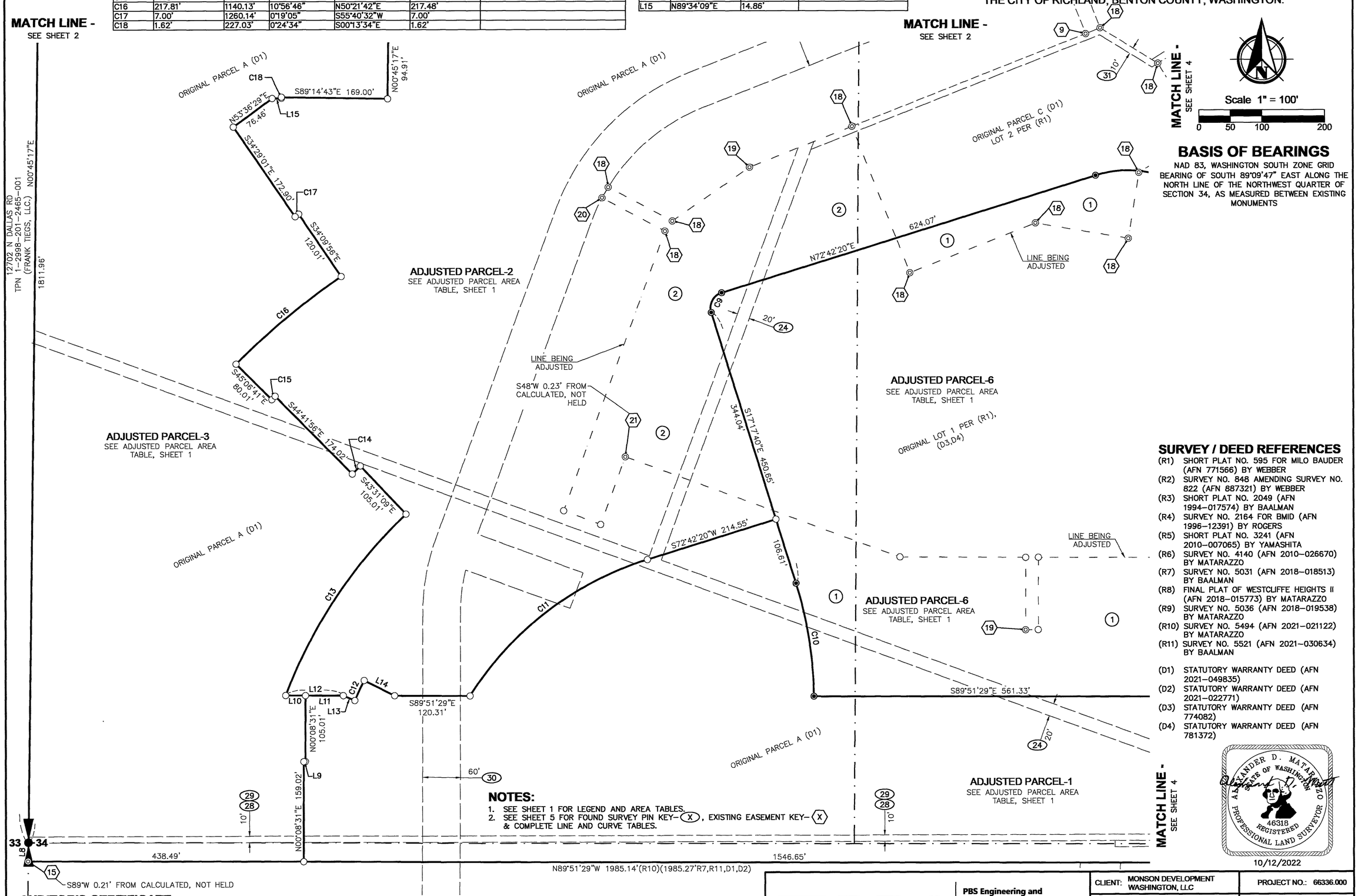
RECORD OF SURVEY

FOR BOUNDARY LINE ADJUSTMENT

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON.

CURVE TABLE						
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH	RECORD ARC LENGTH
C9	39.27'	25.00'	90°00'00"	S27°42'20"W	35.36'	
C10	182.43'	627.07'	16°40'08"	S08°57'36"E	181.79'	
C11	363.25'	517.06'	40°15'08"	S52°34'46"W	355.83'	
C12	35.21'	676.07'	2°59'02"	S25°01'40"W	35.20'	
C13	349.22'	781.09'	25°37'00"	S33°40'21"W	346.32'	
C14	18.24'	886.10'	1°10'47"	S45°53'27"W	18.24'	
C15	7.63'	1060.12'	0°24'45"	S45°05'41"W	7.63'	
C16	217.81'	1140.13'	10°56'46"	N50°21'42"E	217.48'	
C17	7.00'	1260.14'	0°19'05"	S55°40'32"W	7.00'	
C18	1.62'	227.03'	0°24'34"	S00°13'34"E	1.62'	

LINE TABLE			
LINE	BEARING	DISTANCE	RECORD DISTANCE
L8	N00°45'21"E	30.02'	(R10)(29.94'R7,R11,D1,D2)
L9	S89°51'29"E	2.51'	
L10	N89°51'29"W	31.49'	
L11	S89°51'29"E	60.21'	
L12	S89°51'29"E	91.70'	
L13	S66°27'51"E	20.00'	
L14	S63°28'49"E	54.01'	
L15	N89°34'09"E	14.86'	



BASIS OF BEARINGS

NAD 83, WASHINGTON SOUTH ZONE GRID BEARING OF SOUTH 89°09'47" EAST ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 34, AS MEASURED BETWEEN EXISTING MONUMENTS

SURVEY / DEED REFERENCES

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R2) SURVEY NO. 848 AMENDING SURVEY NO. 822 (AFN 887321) BY WEBBER
(R3) SHORT PLAT NO. 2049 (AFN 1994-017574) BY BAALMAN
(R4) SURVEY NO. 2164 FOR BMID (AFN 1996-12391) BY ROGERS
(R5) SHORT PLAT NO. 3241 (AFN 2010-007065) BY YAMASHITA
(R6) SURVEY NO. 4140 (AFN 2010-026670) BY MATARAZZO
(R7) SURVEY NO. 5031 (AFN 2018-018513) BY BAALMAN
(R8) FINAL PLAT OF WESTCLIFFE HEIGHTS II (AFN 2018-015773) BY MATARAZZO
(R9) SURVEY NO. 5036 (AFN 2018-019538) BY MATARAZZO
(R10) SURVEY NO. 5494 (AFN 2021-021122) BY MATARAZZO
(R11) SURVEY NO. 5521 (AFN 2021-030634) BY BAALMAN

(D1) STATUTORY WARRANTY DEED (AFN 2021-049835)
(D2) STATUTORY WARRANTY DEED (AFN 2021-022771)
(D3) STATUTORY WARRANTY DEED (AFN 774082)
(D4) STATUTORY WARRANTY DEED (AFN 781372)

NOTES:

1. SEE SHEET 1 FOR LEGEND AND AREA TABLES.
2. SEE SHEET 5 FOR FOUND SURVEY PIN KEY- (X), EXISTING EASEMENT KEY- (X) & COMPLETE LINE AND CURVE TABLES.

TRANSFER PORTION KEY

(1) TRANSFER PORTION FROM MD&D INVESTMENTS, LLC TO RICHLAND SCHOOL DISTRICT – SEE SHEET 7 FOR LEGAL DESCRIPTION

(2) TRANSFER PORTION FROM RICHLAND SCHOOL DISTRICT TO MD&D INVESTMENTS, LLC – SEE SHEET 7 FOR LEGAL DESCRIPTION

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 14th DAY OF October, 2022 AT 2:45 P M. IN VOLUME 01 OF SURVEYS AT PAGE 5724 AT THE REQUEST OF PBS ENGINEERING & ENVIRONMENTAL INC.

Brenda Chilton by Sherry Boatright deputy
COUNTY AUDITOR

ALEXANDER D. MATARAZZO — STATE OF WASHINGTON — 46318 — REGISTERED PROFESSIONAL LAND SURVEYOR
10/12/2022

PBS

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: MONSON DEVELOPMENT WASHINGTON, LLC		PROJECT NO.: 66336.000
SURVEYOR: ALEX D. MATARAZZO		DATE: 10/12/2022
CALC BY: ROP	DRAWN BY: DWW	SCALE: 1" = 100'
SECTION: 34	TOWNSHIP: 9 NORTH	RANGE: 28 EAST
CITY: RICHLAND	COUNTY: BENTON	SHEET 3 OF 9

Survey #5724 Pg 4 of 9

RECORD OF SURVEY

FOR BOUNDARY LINE ADJUSTMENT

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON.

Scale 1" = 100'

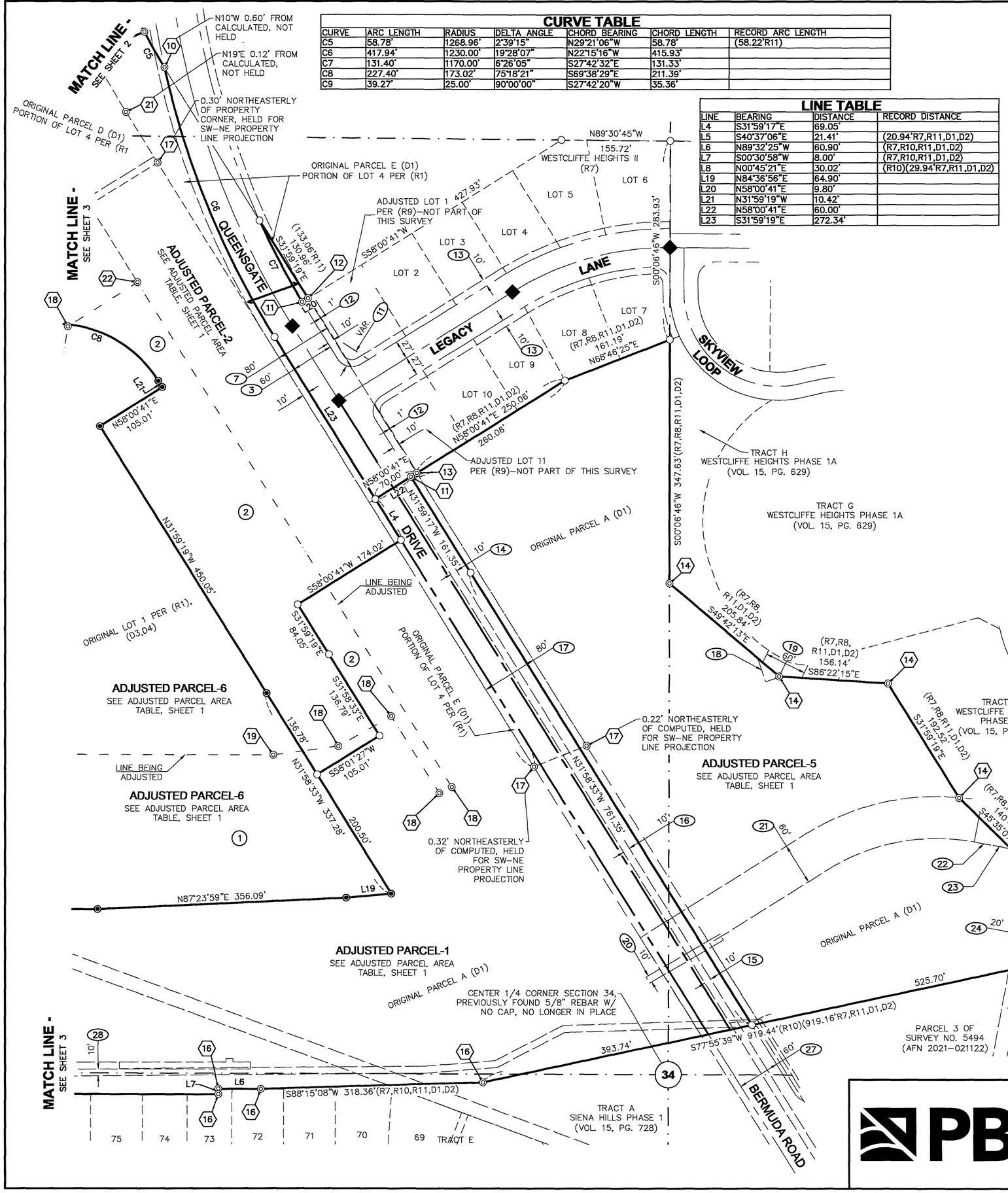
0 50 100 200

BASIS OF BEARINGS

NAD 83, WASHINGTON SOUTH ZONE GRID BEARING OF SOUTH 89°09'47" EAST ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 34, AS MEASURED BETWEEN EXISTING MONUMENTS

CURVE TABLE						
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH	RECORD ARC LENGTH
C5	58.78'	1268.96'	2°39'15"	N29°21'06"W	58.78'	(58.22'R11)
C6	417.94'	1230.00'	19°28'07"	N22°15'16"W	415.93'	
C7	131.40'	1170.00'	6°26'05"	S27°42'32"E	131.33'	
C8	227.40'	173.02'	75°18'21"	S69°38'29"E	211.39'	
C9	39.27'	25.00'	90°00'00"	S27°42'20"W	35.36'	

LINE TABLE			
LINE	BEARING	DISTANCE	RECORD DISTANCE
L4	S31°59'17"E	69.05'	
L5	S40°37'06"E	21.41'	(20.94'R7,R11,D1,D2)
L6	N89°32'25"W	60.90'	(R7,R10,R11,D1,D2)
L7	S00°30'58"W	8.00'	(R7,R10,R11,D1,D2)
L8	N00°45'21"E	30.02'	(R10)(29.94'R7,R11,D1,D2)
L19	N84°36'56"E	64.90'	
L20	N58°00'41"E	9.80'	
L21	N31°59'19"W	10.42'	
L22	N58°00'41"E	60.00'	
L23	S31°59'19"E	272.34'	



TRANSFER PORTION KEY

(1) TRANSFER PORTION FROM MD&D INVESTMENTS, LLC TO RICHLAND SCHOOL DISTRICT – SEE SHEET 7 FOR LEGAL DESCRIPTION

(2) TRANSFER PORTION FROM RICHLAND SCHOOL DISTRICT TO MD&D INVESTMENTS, LLC – SEE SHEET 7 FOR LEGAL DESCRIPTION

NOTES:

1. SEE SHEET 1 FOR LEGEND AND AREA TABLES.
2. SEE SHEET 5 FOR FOUND SURVEY PIN KEY– (X), EXISTING EASEMENT KEY– (X) & COMPLETE LINE AND CURVE TABLES.

SURVEY / DEED REFERENCES

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R2) SURVEY NO. 848 AMENDING SURVEY NO. 822 (AFN 887321) BY WEBBER
(R3) SHORT PLAT NO. 2049 (AFN 1994–017574) BY BAALMAN
(R4) SURVEY NO. 2164 FOR BMID (AFN 1996–12391) BY ROGERS
(R5) SHORT PLAT NO. 3241 (AFN 2010–007065) BY YAMASHITA
(R6) SURVEY NO. 4140 (AFN 2010–026670) BY MATARAZZO
(R7) SURVEY NO. 5031 (AFN 2018–018513) BY BAALMAN
(R8) FINAL PLAT OF WESTCLIFFE HEIGHTS II (AFN 2018–015773) BY MATARAZZO
(R9) SURVEY NO. 5036 (AFN 2018–019538) BY MATARAZZO
(R10) SURVEY NO. 5494 (AFN 2021–021122) BY MATARAZZO
(R11) SURVEY NO. 5521 (AFN 2021–030634) BY BAALMAN

(D1) STATUTORY WARRANTY DEED (AFN 2021–049835)
(D2) STATUTORY WARRANTY DEED (AFN 2021–022771)
(D3) STATUTORY WARRANTY DEED (AFN 774082)
(D4) STATUTORY WARRANTY DEED (AFN 781372)

ALEXANDER D. MATARAZZO
STATE OF WASHINGTON
46318
REGISTERED PROFESSIONAL LAND SURVEYOR

10/12/2022

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 14th DAY OF October 2022 AT 2:45 P.M. IN VOLUME 01 OF SURVEYS AT PAGE 5724 AT THE REQUEST OF PBS ENGINEERING & ENVIRONMENTAL INC.

Brenda Chilton by Merry Boatright, deputy
COUNTY AUDITOR

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: MONSON DEVELOPMENT WASHINGTON, LLC		PROJECT NO.: 66336.000
SURVEYOR: ALEX D. MATARAZZO		DATE: 10/12/2022
CALC BY: ROP	DRAWN BY: DWW	SCALE: 1" = 100'
SECTION: 34	TOWNSHIP: 9 NORTH	RANGE: 28 EAST
CITY: RICHLAND	COUNTY: BENTON	SHEET 4 OF 9

RECORD OF SURVEY

FOR BOUNDARY LINE ADJUSTMENT

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON.

EASEMENT KEY

(1) 10' BENTON PUBLIC UTILITY DISTRICT NO. 1 EASEMENT PER AFN 1993-34114
(2) 54' PRIVATE ROAD EASEMENT FOR USE OF 3 LOTS PER SHORT PLAT 3241 AFN 2010-007065
(3) 60' RIGHT OF WAY PER AFN 2018-017826
(4) 60' RIGHT OF WAY PER AFN 2018-017827
(5) 60' RIGHT OF WAY PER AFN 2018-017828
(6) 60' RIGHT OF WAY PER AFN 2018-017829
(7) 80' ACCESS AND UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2017-019386
(8) 80'/150' ACCESS AND UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2017-019387
(9) 80' ACCESS AND UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2017-019388
(10) 80' ACCESS AND UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2017-019389
(11) VARIABLE WIDTH LANDSCAPE & ENTRY MONUMENT EASEMENT PER AFN 2018-037686
(12) 1' NO ACCESS/SCREENING EASEMENT PER (R7)
(13) 10' PUBLIC UTILITY EASEMENT PER (R7)
(14) 10' WATERLINE EASEMENT TO CITY OF RICHLAND PER AFN 2018-001484
(15) 10' WATERLINE EASEMENT TO CITY OF RICHLAND PER AFN 2018-001483
(16) 10' WATERLINE EASEMENT TO CITY OF RICHLAND PER AFN 2018-001482
(17) 80' ACCESS & UTILITY EASEMENT PER AFN 2019-001554
(18) VARIABLE WIDTH EASEMENTS TO BADGER MOUNTAIN IRRIGATION DISTRICT PER AFN 718936 PARTIALLY TERMINATED PER AFN 2019-005050
(19) 60' SPILLWAY EASEMENT TO BADGER MOUNTAIN IRRIGATION DISTRICT PER AFN 2018-037403
(20) 10' IRRIGATION EASEMENT TO BADGER MOUNTAIN IRRIGATION DISTRICT PER AFN 2020-033644
(21) 60' ACCESS EASEMENT PER AFN 862635, BENEFITING ALL LANDS IN SECTION 34, EXCEPT THE N 1/2 OF THE NE 1/4 THAT PORTION OF SECTION 35 LYING SOUTHERLY AND WESTERLY OF THE K.I.D. EAST LATERAL CANAL RIGHT-OF-WAY
(22) 60' INGRESS-EGRESS, UTILITY & IRRIGATION EASEMENT PER AFN 898901 IN FAVOR OF LAND NOW BEING SHORT PLAT NO. 1452 (ADJACENT PORTION IN TRACT A OF WESTCLIFFE HEIGHTS II TERMINATED BY 2019-002642)
(23) 60' INGRESS-EGRESS EASEMENT PER AFN 87-16073, BENEFITING ALL LANDS IN SECTION 34, EXCEPT THE N 1/2 OF THE NE 1/4 & THAT PORTION OF SECTION 35 LYING SOUTHERLY AND WESTERLY OF THE K.I.D. EAST LATERAL CANAL RIGHT-OF-WAY (ADJACENT PORTION IN TRACT A OF WESTCLIFFE HEIGHTS II TERMINATED BY AFN 2019-000678)
(24) 20' BADGER MOUNTAIN IRRIGATION DISTRICT EASEMENT AS DEPICTED ON (R4)
(25) 10' RIGHT-OF-WAY EASEMENT TO BENTON PUBLIC UTILITY DISTRICT NO. 1 PER AFN 728681
(26) 10' UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2016-004839
(27) 60' RIGHT-OF-WAY PER SIENA HILLS PHASE 1 AFN 2021-051239
(28) 10' UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2016-004839 (PORTION TO SOUTH TERMINATED BY AFN 2022-004850)
(29) 10' UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2014-006658
(30) 60' INGRESS & EGRESS EASEMENT PER AFN 765776, IN FAVOR OF LAND LABELED AS "PROPERTY" (AKA LOTS 1-4 OF (R1))
(31) 10' IRRIGATION EASEMENT PER (R1)
(32) 10' BENTON PUBLIC UTILITY DISTRICT NO. 1 ELECTRICAL EASEMENT PER AFN 85-4566
(33) 10' UTILITY EASEMENT PER SHORT PLAT NO. 3241 AFN 2010-007065

FOUND PIN AND MONUMENT KEY

(1) 5/8" REBAR WITH YELLOW PLASTIC CAP (YPC) MARKED "LS 12365" PER SURVEY NO. 1743 - HELD AS REPLACEMENT OF ORIGINAL
(2) 5/8" REBAR WITH YELLOW PLASTIC CAP (YPC) MARKED "LS 46318" PER SURVEY NO. 4140
(3) 5/8" REBAR WITH YELLOW PLASTIC CAP (YPC) "ILLEGIBLE" PER SURVEY NO. 4140
(4) 5/8" REBAR WITH ORANGE PLASTIC CAP (OPC) MARKED "LS 41028" PER SURVEY NO. 4140 - HELD AS REPLACEMENT OF ORIGINAL
(5) 5/8" REBAR WITH ORANGE PLASTIC CAP (OPC) MARKED "LS 41028" PER SHORT PLAT NO. 3241 - HELD AS REPLACEMENT OF ORIGINAL
(6) 5/8" REBAR WITH YELLOW PLASTIC CAP (YPC) MARKED "LS 36814" PER SHORT PLAT NO. 3241
(7) 5/8" REBAR NO CAP PER SHORT PLAT NO. 3241
(8) 5/8" REBAR NO CAP PER SHORT PLAT NO. 3241 - BENT, SHOT AT SPIN HOLE
(9) 5/8" REBAR WITH ORANGE PLASTIC CAP (OPC) MARKED "LS 41028" PER SURVEY NO. 5521
(10) 5/8" REBAR WITH ORANGE PLASTIC CAP (OPC) MARKED "LS 41028" PER SURVEY NO. 5521 - OVER 0.10' FROM COMPUTED POSITION AS NOTED - NOT HELD
(11) 5/8" REBAR WITH YELLOW PLASTIC CAP (YPC) MARKED "LS 46318" PER SURVEY NO. 5036
(12) 5/8" REBAR WITH YELLOW PLASTIC CAP (YPC) MARKED "LS 46318" PER PLAT OF WESTCLIFFE HEIGHTS AUDITORS FILE NUMBER 2018-015773
(13) 5/8" REBAR WITH ORANGE PLASTIC CAP (OPC) MARKED "LS 41028" PER SURVEY NO. 4925
(14) 5/8" REBAR WITH ORANGE PLASTIC CAP (OPC) MARKED "LS 41028" PER SURVEY NO. 4925
(15) 5/8" REBAR WITH ORANGE PLASTIC CAP (OPC) MARKED "LS 41028" PER SURVEY NO. 5031
(16) 5/8" REBAR WITH ORANGE PLASTIC CAP (OPC) MARKED "LS 41028" PER SURVEY NO. 5031
(17) 5/8" REBAR WITH ORANGE PLASTIC CAP (OPC) MARKED "LS 41028" PER SURVEY NO. 5521 - OVER 0.10' FROM COMPUTED POSITION AS NOTED - HELD AS NOTED
(18) 5/8" REBAR W/ NO CAP PER SHORT PLAT NO. 595, BENT - SHOWN AT SPINHOLE
(19) 5/8" REBAR W/ NO CAP PER SHORT PLAT NO. 595
(20) 5/8" REBAR WITH YELLOW PLASTIC CAP (YPC) MARKED "LS 14120" PER SHORT PLAT NO. 595
(21) 5/8" REBAR WITH YELLOW PLASTIC CAP (YPC) MARKED "LS 14120" PER SHORT PLAT NO. 595 - OVER 0.10' FROM COMPUTED POSITION AS NOTED - NOT HELD
(22) 5/8" REBAR WITH YELLOW PLASTIC CAP (YPC) "ILLEGIBLE" PER SHORT PLAT NO. 595 - HELD AS REPLACEMENT OF ORIGINAL

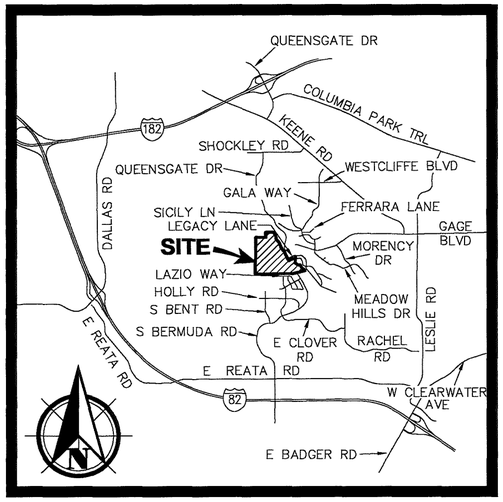
NARRATIVE

THIS SURVEY WAS PERFORMED AT THE REQUEST OF MD&D INVESTMENT, LLC AND RICHLAND SCHOOL DISTRICT, TO PERFORM A BOUNDARY LINE ADJUSTMENTS BETWEEN LOT 1 OF SHORT PLAT NO. 595, RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595 UNDER AUDITOR'S FILE NO. 771566, PARCEL A PER STATUTORY WARRANTY DEED FILED UNDER AUDITOR'S FILE NUMBER 2021-049835, PARCEL B PER STATUTORY WARRANTY DEED FILED UNDER AUDITOR'S FILE NUMBER 2021-049835, FORMERLY PARCEL D OF SURVEY NO. 4925, FILED UNDER AUDITOR'S FILE NUMBER 2017-026905, PARCEL C PER STATUTORY WARRANTY DEED FILED UNDER AUDITOR'S FILE NUMBER 2021-049835, FORMERLY LOT 2 OF SHORT PLAT NO. 595, RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595 UNDER AUDITOR'S FILE NO. 771566, PARCEL D PER STATUTORY WARRANTY DEED FILED UNDER AUDITOR'S FILE NUMBER 2021-049835, FORMERLY A PORTION OF LOT 4 OF SHORT PLAT NO. 595, RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595 UNDER AUDITOR'S FILE NO. 771566, AND PARCEL E PER STATUTORY WARRANTY DEED FILED UNDER AUDITOR'S FILE NUMBER 2021-049835, FORMERLY A PORTION OF LOT 4 OF SHORT PLAT NO. 595, RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595 UNDER AUDITOR'S FILE NO. 771566.

THIS PROJECT IS BOUND ON THE NORTH BY TAX PARCEL 1-2798-300-0002-020, ON THE EAST BY TAX PARCELS 1-3498-201-3241-004, 1-3498-201-3241-005, 1-3498-201-2049-004, LOTS 1 AND 11 OF SURVEY NO. 5036 RECORDED UNDER AFN 2018-019538, LOTS 7 THROUGH 10 OF THE FINAL PLAT OF WESTCLIFFE HEIGHTS II RECORDED UNDER AFN 2018-015773, TRACTS F, G & H OF THE FINAL PLAT OF WESTCLIFFE HEIGHTS PHASE 1A RECORDED UNDER AFN 2019-001945 AND LOTS 57 THROUGH 59 OF THE FINAL PLAT OF WESTCLIFFE HEIGHTS PHASE 1B RECORDED UNDER AFN 2019-001949, ON THE SOUTH BY PARCEL 3 OF SURVEY NO. 5494 RECORDED UNDER AFN 2021-021122, TRACT A OF THE PLAT OF SIENA HILLS PHASE 1 RECORDED UNDER AFN 2021-051239, LOTS 69 THROUGH 77 OF THE PLAT OF SIENA HILLS PHASE 2 RECORDED UNDER AFN 2022-015989 AND PARCEL 4 OF SURVEY NO. 5494 RECORDED UNDER AFN 2021-021122, ON THE WEST BY TAX PARCEL 1-2998-201-2465-001, ALL RECORDS BEING OF BENTON COUNTY, WASHINGTON.

ALL FOUND MONUMENTS AND PROPERTY CORNERS SHOWN ON THIS SURVEY WERE VISITED BETWEEN APRIL OF 2016 & JANUARY OF 2022. INDICATED PROPERTY CORNERS WERE SET IN OCTOBER OF 2022.

THIS SURVEY WAS PERFORMED USING TRIMBLE R8 GNSS GPS RECEIVERS IN RTK MODE, HAVING A STANDARD ERROR OF 1CM+2PPM TIMES MEASURED LENGTH.



VICINITY MAP

NOT TO SCALE

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH	RECORD ARC LENGTH
C1	116.02'	179.00'	37°08'14"	N21°45'13"W	114.00'	(116.14'R6)(116.15'R7,R11,D1,D2)
C2	149.38'	471.00'	18°10'17"	N31°09'18"W	148.75'	(149.70'R5,R6)(149.61'R7,R11,D1,D2)
C3	33.94'	25.00'	77°47'46"	S16°44'23"W	31.40'	(33.87'R6,R7,R11,D1,D2)
C4	20.16'	173.00'	6°40'38"	N59°00'22"E	20.15'	(20.01'R11)
C5	58.78'	1268.96'	2°39'15"	N29°21'06"W	58.78'	(58.22'R11)
C6	417.94'	1230.00'	19°28'07"	N22°15'16"W	415.93'	
C7	131.40'	1170.00'	6°26'05"	S27°42'32"E	131.33'	
C8	227.40'	173.02'	75°18'21"	S69°38'29"E	211.39'	
C9	39.27'	25.00'	90°00'00"	S27°42'20"W	35.36'	
C10	182.43'	627.07'	16°40'08"	S08°57'36"E	181.79'	
C11	363.25'	517.06'	40°15'08"	S52°34'46"W	355.83'	
C12	35.21'	676.07'	2°59'02"	S25°01'40"W	35.20'	
C13	349.22'	781.09'	25°37'00"	S33°40'21"W	346.32'	
C14	18.24'	886.10'	1°10'47"	S45°53'27"W	18.24'	
C15	7.63'	1060.12'	0°24'45"	S45°05'41"W	7.63'	
C16	217.81'	1140.13'	10°56'46"	N50°21'42"E	217.48'	
C17	7.00'	1260.14'	0°19'05"	S55°40'32"W	7.00'	
C18	1.62'	227.03'	0°24'34"	S00°13'34"E	1.62'	

LINE TABLE

LINE	BEARING	DISTANCE	RECORD DISTANCE
L1	S34°16'51"E	54.02'	(54.00'R6,R7,R11,D1,D2)
L2	S32°20'10"E	58.63'	
L3	N68°24'08"E	50.01'	(50.01'R11)
L4	S31°59'17"E	69.05'	
L5	S40°37'06"E	21.41'	(20.94'R7,R11,D1,D2)
L6	N89°32'25"W	60.90'	(R7,R10,R11,D1,D2)
L7	S00°30'58"W	8.00'	(R7,R10,R11,D1,D2)
L8	N00°45'21"E	30.02'	(R10)(29.94'R7,R11,D1,D2)
L9	S89°51'29"E	2.51'	
L10	N89°51'29"W	31.49'	
L11	S89°51'29"E	60.21'	
L12	S89°51'29"E	91.70'	
L13	S66°27'51"E	20.00'	
L14	S63°28'49"E	54.01'	
L15	N89°34'09"E	14.86'	
L16	S03°11'32"E	16.34'	
L17	S72°42'20"W	10.82'	
L18	N46°50'00"W	42.12'	
L19	N84°36'56"E	64.90'	
L20	N58°00'41"E	9.80'	
L21	N31°59'19"W	10.42'	
L22	N58°00'41"E	60.00'	
L23	S31°59'19"E	272.34'	

SURVEY / DEED REFERENCES

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R2) SURVEY NO. 848 AMENDING SURVEY NO. 822 (AFN 887321) BY WEBBER
(R3) SHORT PLAT NO. 2049 (AFN 1994-017574) BY BAALMAN
(R4) SURVEY NO. 2164 FOR BMID (AFN 1996-12391) BY ROGERS
(R5) SHORT PLAT NO. 3241 (AFN 2010-007065) BY YAMASHITA
(R6) SURVEY NO. 4140 (AFN 2010-026670) BY MATARAZZO
(R7) SURVEY NO. 5031 (AFN 2018-018513) BY BAALMAN
(R8) FINAL PLAT OF WESTCLIFFE HEIGHTS II (AFN 2018-015773) BY MATARAZZO
(R9) SURVEY NO. 5036 (AFN 2018-019538) BY MATARAZZO
(R10) SURVEY NO. 5494 (AFN 2021-021122) BY MATARAZZO
(R11) SURVEY NO. 5521 (AFN 2021-030634) BY BAALMAN

(D1) STATUTORY WARRANTY DEED (AFN 2021-049835)
(D2) STATUTORY WARRANTY DEED (AFN 2021-022771)
(D3) STATUTORY WARRANTY DEED (AFN 774082)
(D4) STATUTORY WARRANTY DEED (AFN 781372)

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 14th DAY OF October, 2022 AT 2:45P M. IN VOLUME 01 OF SURVEYS AT PAGE 5724 AT THE REQUEST OF PBS ENGINEERING & ENVIRONMENTAL INC.

Brenda Chilton by Merry Boatright, deputy
COUNTY AUDITOR

ALEXANDER D. MATARAZZO
STATE OF WASHINGTON
46318
REGISTERED
PROFESSIONAL LAND SURVEYOR

10/12/2022

PBS

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: MONSON DEVELOPMENT WASHINGTON, LLC		PROJECT NO.: 66336.000
SURVEYOR: ALEX D. MATARAZZO		DATE: 10/12/2022
CALC BY: ROP	DRAWN BY: DWW	SCALE: NA
SECTION: 34	TOWNSHIP: 9 NORTH	RANGE: 28 EAST
CITY: RICHLAND	COUNTY: BENTON	SHEET 5 OF 9

ORIGINAL PARCEL LEGAL DESCRIPTIONS

RICHLAND SCHOOL DISTRICT PROPERTY:

LOT 1, SHORT PLAT NO. 595, ACCORDING TO THE SURVEY THEREOF RECORDED UNDER RECORDING NO. 771566, RECORDS OF BENTON COUNTY, WASHINGTON.

MD&D INVESTMENTS, LLC. PROPERTY:

PARCEL A:

THAT PORTION OF SECTION 34 TOWNSHIP 9 NORTH, RANGE 28 EAST WILLAMETTE MERIDIAN, BENTON COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTHWEST CORNER OF SAID SECTION 34; THENCE SOUTH 89°09'22" EAST ALONG THE NORTH LINE OF SAID SECTION 34 649.80 FEET TO THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER, AND THE TRUE POINT OF BEGINNING;

THENCE CONTINUING SOUTH 89°09'22" EAST 507.54 FEET TO A POINT ON THE EAST LINE OF THAT PARCEL DESCRIBED IN QUIT CLAIM DEED RECORDED UNDER AUDITOR'S FILE NUMBER 2017–023127, RECORDS OF BENTON COUNTY; THENCE THE FOLLOWING 31 COURSES ALONG THE EAST LINE OF SAID PARCEL;

THENCE SOUTH 33°54'20" EAST 179.76 FEET;
THENCE SOUTH 27°38'19" EAST 80.00 FEET;
THENCE SOUTH 16°29'23" EAST 83.44 FEET;
THENCE SOUTH 03°07'43" EAST 77.55 FEET TO THE BEGINNING OF A CURVE, CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 179.00 FEET;
THENCE SOUTHEASTERLY 116.15 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 37°10'37";
THENCE SOUTH 40°17'50" EAST 155.89 FEET TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 471.00 FEET;
THENCE SOUTHEASTERLY 149.61 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 18°12'00" (THE LONG CHORD OF SAID CURVE BEARS SOUTH 31°06'39" EAST 148.99 FEET);
THENCE SOUTH 21°55'36" EAST 42.43 FEET;
THENCE SOUTH 22°01'50" EAST 205.46 FEET TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 25.00 FEET;
THENCE SOUTHWESTERLY 33.87 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 77°37'55" (THE LONG CHORD OF SAID CURVE BEARS SOUTH 16°48'11" WEST 31.34 FEET);
THENCE SOUTH 34°23'11" EAST 54.00 FEET TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE SOUTH HAVING A RADIUS OF 173.00 FEET;
THENCE NORTHEASTERLY 111.15 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 36°48'43" (THE LONG CHORD OF SAID CURVE BEARS NORTH 74°01'11" EAST 109.25 FEET);
THENCE SOUTH 87°34'27" EAST 132.44 FEET TO THE BEGINNING OF A CURVE, CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 25.00 FEET;
THENCE SOUTHEASTERLY 39.29 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 90°03'27";
THENCE SOUTH 62°06'35" EAST 89.64 FEET;
THENCE SOUTH 76°13'31" EAST 248.55 FEET TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE SOUTHEAST HAVING A RADIUS OF 55.00 FEET;
THENCE NORTHEASTERLY 95.47 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 99°27'15" (THE LONG CHORD OF SAID CURVE BEARS NORTH 63°30'07" EAST 83.93 FEET);
THENCE NORTH 01°54'19" EAST 139.23 FEET; THENCE SOUTH 80°20'29" EAST 151.61 FEET; THENCE SOUTH 62°10'48" EAST 145.70 FEET; THENCE SOUTH 00°06'53" WEST 300.90 FEET; THENCE NORTH 89°30'45" WEST 155.72 FEET; THENCE SOUTH 58°00'41" WEST 427.93 FEET; THENCE SOUTH 31°59'17" EAST 294.04 FEET; THENCE NORTH 58°00'41" EAST 250.06 FEET; THENCE NORTH 68°56'25" EAST 161.19 FEET; THENCE SOUTH 00°06'46" WEST 347.63 FEET; THENCE SOUTH 49°42'13" EAST 205.84 FEET; THENCE SOUTH 86°22'15" EAST 156.14 FEET; THENCE SOUTH 31°59'19" EAST 192.52 FEET; THENCE SOUTH 45°35'07" EAST 140.43 FEET; THENCE SOUTH 45°52'40" EAST 144.22 FEET;
THENCE SOUTH 40°37'06" EAST 20.94 FEET;
THENCE LEAVING SAID EAST BOUNDARY SOUTH 77°55'41" WEST 919.16 FEET;
THENCE SOUTH 88°15'10" WEST 318.36 FEET;
THENCE NORTH 89°32'23" WEST 60.90 FEET TO A POINT ON THE NORTH LINE OF THAT PARCEL DESCRIBED AS PARCEL #134983000001004 IN QUIT CLAIM DEED RECORDED UNDER AUDITOR'S FILE NUMBER 2012–016993, RECORDS OF BENTON COUNTY;
THENCE SOUTH 00°31'00" WEST 8.00 FEET ALONG SAID NORTH LINE;
THENCE NORTH 89°51'27" WEST 1985.27 FEET ALONG SAID NORTH LINE TO THE WEST LINE OF SAID SECTION 34;
THENCE NORTH 00°45'17" EAST 29.94 FEET ALONG SAID WEST LINE TO THE WEST QUARTER CORNER OF SAID SECTION 34;
THENCE NORTH 00°45'17" EAST 2362.09 FEET TO THE SOUTHWEST CORNER OF THE NORTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 34; THENCE SOUTH 89°14'50" EAST 650.73 FEET TO THE SOUTHEAST CORNER OF SAID NORTH HALF;
THENCE NORTH 00°35'46" EAST 336.41 FEET ALONG THE EAST LINE OF SAID NORTH HALF TO THE TRUE POINT OF BEGINNING.

EXCEPT LOTS 1, 2, 3, & 4 OF SHORT PLAT 595, ACCORDING TO THE SURVEY THEREOF RECORDED IN VOLUME 1 OF SHORT PLATS, PAGE 595, RECORDS OF BENTON COUNTY
AND EXCEPT THAT PORTION THEREOF LYING EASTERLY OF THE EASTERLY OF QUEENSGATE DRIVE AS DESCRIBED IN DEED RECORDED UNDER AUDITOR'S FILE NUMBER 2018–017828, AND LYING NORTHERLY OF THE NORTH BOUNDARY OF THE PLAT OF WESTCLIFFE HEIGHTS II, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 15 OF PLATS, PAGE 608, RECORDS OF BENTON COUNTY, WASHINGTON.

AND EXCEPT THAT PORTION THEREOF LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE;

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 34; THENCE SOUTH 89°09'22" EAST 1157.34 FEET ALONG THE NORTH LINE OF SAID SECTION 34 TO THE NORTHWEST CORNER OF PARCEL A OF RECORD SURVEY 4140, ACCORDING TO THE SURVEY THEREOF RECORDED UNDER AUDITOR'S FILE NUMBER 2010–026670, RECORDS OF BENTON COUNTY, WASHINGTON;
THENCE THE FOLLOWING 8 COURSES ALONG THE WEST BOUNDARY OF SAID PARCEL A; THENCE SOUTH 33°54'20" EAST 179.76 FEET;
THENCE SOUTH 27°38'19" EAST 80.00 FEET;
THENCE SOUTH 16°29'23" EAST 83.44 FEET;
THENCE SOUTH 03°07'43" EAST 77.55 FEET TO THE BEGINNING OF A CURVE, CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 179.00 FEET;
THENCE SOUTHEASTERLY 116.15 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 37°10'37";
THENCE SOUTH 40°17'50" EAST 155.89 FEET TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE SOUTHWEST, HAVING A RADIUS OF 471.00 FEET;
THENCE SOUTHEASTERLY 149.61 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 18°12'00" (THE LONG CHORD OF SAID CURVE BEARS SOUTH 31°06'39" EAST 148.99 FEET)
THENCE SOUTH 21°55'36" EAST 42.43 FEET;
THENCE THE FOLLOWING FOUR COURSES ALONG THE EAST BOUNDARY OF PARCEL 2, RECORD SURVEY 5031, ACCORDING TO THE SURVEY THEREOF RECORDED UNDER AUDITOR'S FILE NUMBER 2018–018513, RECORDS OF BENTON COUNTY, WASHINGTON;
(CONT.)

MD&D INVESTMENTS, LLC. PROPERTY: (CONT.)

THENCE SOUTH 22°01'50" EAST 205.46 FEET TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 25.00 FEET;
THENCE SOUTHWESTERLY 33.87 FEET ALONG THE ARC OF SAID CURVE AND ALONG THE EAST LINE OF SAID NEW PARCEL 2 THROUGH A CENTRAL ANGLE OF 77°37'55" (THE LONG CHORD OF SAID CURVE BEARS SOUTH 16°48'12" WEST 31.34 FEET),
THENCE SOUTH 34°23'11" EAST 54.00 FEET TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 173.00 FEET;
THENCE NORTHEASTERLY 20.01 FEET ALONG THE ARC OF SAID CURVE AND ALONG THE EAST LINE OF SAID NEW PARCEL 2 THROUGH A CENTRAL ANGLE OF 06°37'39" (THE LONG CHORD OF SAID CURVE BEARS NORTH 58°55'39" EAST 20.00 FEET),
THENCE LEAVING THE BOUNDARY OF SAID NEW PARCEL 2 SOUTH 32°20'23" EAST 229.32 FEET TO THE NORTH LINE OF LOT 4 OF SHORT PLAT 595, ACCORDING TO THE SURVEY THEREOF RECORDED IN VOLUME 1 OF SHORT PLATS, PAGE 595, RECORDS OF BENTON COUNTY, WASHINGTON; THENCE NORTH 68°29'19" EAST 50.00 FEET ALONG THE NORTH LINE OF SAID LOT 4 TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 1268.96 FEET; THENCE SOUTHEASTERLY 58.22 FEET ALONG THE ARC OF SAID CURVE AND ALONG THE EAST LINE OF SAID LOT 4 THROUGH A CENTRAL ANGLE OF 02°37'43" (THE LONG CHORD OF SAID CURVE BEARS SOUTH 29°32'11" EAST 58.21 FEET) TO THE WESTERLY RIGHT OF WAY MARGIN OF QUEENSGATE DRIVE, AS DESCRIBED IN DEED RECORDED UNDER AUDITOR'S FILE NUMBER 2018–017828, RECORDS OF BENTON COUNTY, AND THE TERMINUS OF SAID DESCRIBED LINE.

PARCEL B:

REAL PROPERTY SITUATED IN BENTON COUNTY, WASHINGTON BEING THE NORTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER, OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE W.M.

PARCEL C:

LOT 2, SHORT PLAT NO. 595, ACCORDING TO THE SURVEY THEREOF RECORDED UNDER RECORDING NO. 771566, RECORDS OF BENTON COUNTY, WASHINGTON.

PARCEL D:

LOT 3, SHORT PLAT NO. 595, ACCORDING TO THE SURVEY THEREOF RECORDED UNDER RECORDING NO. 771566, RECORDS OF BENTON COUNTY, WASHINGTON.

PARCEL E:

LOT 4, SHORT PLAT NO. 595, ACCORDING TO THE SURVEY THEREOF RECORDED UNDER RECORDING NO. 771566, RECORDS OF BENTON COUNTY, WASHINGTON, EXCEPT THAT PORTION CONVEYED TO CITY OF RICHLAND BY QUIT CLAIM DEED, RECORDED JUNE 20, 2018, UNDER RECORDING NO. 2018–017826, DESCRIBED AS FOLLOWS:

REAL PROPERTY LOCATED IN EAST HALF OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, STATE OF WASHINGTON, BEING A PORTION OF LOT 4 OF SHORT PLAT 595 AS RECORDED WITH THE BENTON COUNTY, UNDER AUDITOR'S FILE NUMBER 771566, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 34; THENCE SOUTH 89°09'47" EAST ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 34, A DISTANCE OF 1,852.34 FEET TO A POINT ON THE ARC OF A NON–TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 500.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 46°20'40" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 541.43 FEET, WITH A DELTA ANGLE OF 62°002'35", A CHORD BEARING OF SOUTH 12°38'03" EAST, AND A CHORD LENGTH OF 515.36 FEET; THENCE SOUTH 18°23'15" WEST A DISTANCE OF 97.63 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 1200.00 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 744.36 FEET, WITH A DELTA ANGLE OF 35°32'26", A CHORD BEARING OF SOUTH 00°37'02" WEST, AND A CHORD LENGTH OF 732.48 FEET TO THE NORTHEASTERLY MARGIN OF SAID LOT 4 AND THE TRUE POINT OF BEGINNING; THENCE NORTH 31°59'19" WEST ALONG THE NORTHEASTERLY MARGIN OF SAID LOT 4 A DISTANCE OF 78.30 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,268.81 FEET; THENCE ALONG SAID CURVE AND NORTHEASTERLY MARGIN OF SAID LOT 4, HAVING AN ARC LENGTH OF 24.12 FEET, WITH A DELTA ANGLE OF 01°05'22", A CHORD BEARING OF NORTH 31°26'38" WEST, AND A CHORD LENGTH OF 24.12 FEET TO A POINT OF NON–TANGENT REVERSE CURVATURE TURNING TO THE LEFT, HAVING A RADIUS OF 1,230.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 77°28'00" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 417.66 FEET, WITH A DELTA ANGLE OF 19°27'19", A CHORD BEARING OF SOUTH 22°15'39" EAST, AND A CHORD LENGTH OF 415.65 FEET TO A POINT ON A LINE BEING A 10.00 FOOT OFFSET TO THE NORTHEAST OF THE SOUTHWESTERLY MARGIN OF SAID LOT 4; THENCE SOUTH 31°59'19" EAST ALONG SAID OFFSET LINE A DISTANCE OF 272.34 FEET; THENCE NORTH 58°00'41" EAST A DISTANCE OF 60.00 FEET TO A POINT ON A LINE BEING A 10.00 FOOT OFFSET TO THE SOUTHWEST OF THE NORTHEASTERLY MARGIN OF SAID LOT 4; THENCE NORTH 31°59'19" WEST ALONG SAID OFFSET LINE A DISTANCE OF 95.01 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 25.00 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 23.119 FEET, WITH A DELTA ANGLE OF 53°07'55", A CHORD BEARING OF NORTH 05°25'21" WEST, AND A CHORD LENGTH OF 22.36 FEET TO THE NORTHEASTERLY MARGIN OF SAID LOT 4; THENCE NORTH 31°59'19" WEST A DISTANCE OF 64.01 FEET ALONG THE NORTHEASTERLY MARGIN OF SAID LOT 4 TO A POINT ON THE ARC OF A NON–TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 25.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH
04°52'46" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 23.19 FEET, WITH A DELTA ANGLE OF 53°07'55", A CHORD BEARING OF NORTH 58°33'17" WEST, AND A CHORD LENGTH OF 22.36 FEET TO A POINT ON A LINE BEING A 10.00 FOOT OFFSET TO THE SOUTHWEST OF THE NORTHEASTERLY MARGIN OF SAID LOT 4; THENCE ALONG SAID OFFSET LINE THE FOLLOWING COURSES;

THENCE NORTH 31°59'19" WEST A DISTANCE OF 73.32 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,170.00 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 153.09 FEET, WITH A DELTA ANGLE OF 07°29'50", A CHORD BEARING OF NORTH 28°14'24" WEST, AND A CHORD LENGTH OF 152.98 FEET TO THE NORTHEASTERLY MARGIN OF SAID LOT 4;
THENCE NORTH 31°59'19" WEST ALONG THE NORTHEASTERLY MARGIN OF SAID LOT 4 A DISTANCE OF 154.60 FEET TO THE SAID TRUE POINT OF BEGINNING.

ALSO EXCEPT THAT PORTION CONVEYED BY QUIT CLAIM DEED RECORDED JULY 12, 2018, UNDER RECORDING NO. 2018–020341, DESCRIBED AS FOLLOWS:

REAL PROPERTY LOCATED IN SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:
(CONT.)

RECORD OF SURVEY

FOR BOUNDARY LINE ADJUSTMENT

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON.

MD&D INVESTMENTS, LLC. PROPERTY: (CONT.)

REAL PROPERTY LOCATED IN SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE NORTHEASTERLY LINE OF LOT 4 OF THAT SHORT PLAT RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595 UNDER AUDITOR'S FILE NO. 771566, RECORDS OF BENTON COUNTY, WASHINGTON, BEING NORTH 31°59'19" WEST ALONG SAID NORTHEASTERLY LIEN A DISTANCE OF 458.72 FEET FROM THE SOUTHEAST CORNER OF SAID LOT 4, SAID COMMENCEMENT POINT IS ALSO MARKED BY A 5/8 INCH REBAR WITH ORANGE PLASTIC CAP STAMPED: "LS 41028" IN TURN MARKING THE SOUTHWEST CORNER OF LOT 11 OF WESTCLIFFE HEIGHTS II, RECORDED IN VOLUME 15 OF PLATS AT PAGE 608 UNDER AUDITOR'S FILE NO. 2018–015773, BEING SOUTH 11°25'32" WEST A DISTANCE OF 1845.21 FEET FROM A WASHINGTON STATE RECLAMATION SERVICE 3" BRASS CAP MARKING THE NORTH QUARTER CORNER OF SAID SECTION 34, AND BEING THE TRUE POINT OF BEGINNING;
THENCE SOUTH 58°00'41" WEST A DISTANCE OF 10.00 FEET TO A LINE BEING A 10.00 FOOT SOUTHWESTERLY OFFSET OF THE LINE COMMON TO SAID LOT 4AND SAID LOT 11 AND ALSO BEING THE NORTHEASTERLY MARGIN OF THE PROPOSED 60.00 FOOT RIGHT OF WAY FOR QUEENSGATE DRIVE/BERMUDA ROAD; THENCE NORTH 31°59'19" WEST ALONG SAID OFFSET LINE AND NORTHEASTERLY RIGHT OF WAY MARGIN A DISTANCE OF 95.01 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 25.00 FEET; THENCE ALONG SAID CURVE, LEAVING SAID OFFSET LINE AND CONTINUING ALONG SAID NORTHEASTERLY RIGHT OF WAY MARGIN, HAVING AN ARC LENGTH OF 23.19 FEET, WITH A DELTA ANGLE OF 53°07'55", A CHORD BEARING OF NORTH 05°25'21" WEST, AND A CHORD LENGTH OF 22.36 FEET TO THE NORTHEASTERLY LINE OF SAID LOT 4 AND THE NORTHWEST CORNER OF SAID LOT 11;
THENCE SOUTH 31°59'19" EAST ALONG SAID COMMON LINE BETWEEN LOT 4 AND LOT 11 A DISTANCE OF 115.01 FEET TO THE TRUE POINT OF BEGINNING.

ALSO EXCEPT THAT PORTION CONVEYED BY QUIT CLAIM DEED RECORDED JULY 12, 2018, UNDER RECORDING NO. 2018–020342, DESCRIBED AS FOLLOWS:

REAL PROPERTY LOCATED IN SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE NORTHEASTERLY LINE OF LOT 4 OF THAT SHORT PLAT RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595 UNDER AUDITOR'S FILE NO. 771566, RECORDS OF BENTON COUNTY, WASHINGTON, BEING SOUTH 31°59'19" EAST ALONG SAID NORTHEASTERLY LINE A DISTANCE OF 363.86 FEET FROM THE END POINT OF THE CURVE ALSO DELINEATING SAID LOT 4, SAID COMMENCEMENT POINT IS ALSO MARKED BY A 5/8 INCH REBAR WITH YELLOW PLASTIC CAP STAMPED: "MATARAZZO 46318" IN TURN MARKING THE NORTHWEST CORNER OF LOT 1 OF WESTCLIFFE HEIGHTS II, RECORDED IN VOLUME 15 OF PLATS AT PAGE 608 UNDER AUDITOR'S FILE NO. 2018–015773, BEING SOUTH 18°29'09" WEST A DISTANCE OF 1644.09 FEET FROM A WASHINGTON STATE RECLAMATION SERVICE 3" BRASS CAP MARKING THE NORTH QUARTER CORNER OF SAID SECTION 34, AND BEING THE TRUE POINT OF BEGINNING;
THENCE CONTINUING SOUTH 31°59'19" EAST ALONG THE LINE COMMON BETWEEN SAID LOT 4 AND SAID LOT 1 A DISTANCE OF 115.01 FEET THE SOUTHWEST CORNER OF SAID LOT 1 AND THE NORTHEASTERLY MARGIN OF THE PROPOSED 60.00 FOOT RIGHT OF WAY FOR QUEENSGATE DRIVE/BERMUDA ROAD AND ALSO BEING A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 25.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 04°52'46" EAST; THENCE ALONG SAID CURVE COINCIDING WITH THE NORTHEASTERLY MARGIN OF SAID RIGHT OF WAY, HAVING AN ARC LENGTH OF 23.19 FEET, WITH A DELTA ANGLE OF 53° 07'55", A CHORD BEARING OF NORTH 58° 33'17" WEST, AND A CHORD LENGTH OF 22.36 FEET TO A LINE BEING A 10.00 FOOT SOUTHWESTERLY OFFSET OF SAID COMMON LINE BETWEEN LOT 4AND LOT 1; THENCE NORTH 31° 59'19" WEST ALONG SAID OFFSET LINE AND CONTINUING ALONG SAID NORTHEASTERLY RIGHT OF WAY MARGIN A DISTANCE OF 73.32 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,170.00 FEET;
THENCE ALONG SAID CURVE, LEAVING SAID OFFSET LINE AND CONTINUING ALONG SAID NORTHEASTERLY RIGHT OF WAY MARGIN, HAVING AN ARC LENGTH OF 21.70 FEET, WITH A DELTA ANGLE OF 01°03'45", A CHORD BEARING OF NORTH 31° 27'27" WEST, AND A CHORD LENGTH OF 21.69 FEET; THENCE LEAVING SAID NORTHEASTERLY RIGHT OF WAY MARGIN NORTH 58° 00'41" EAST A DISTANCE OF 9.80 FEET TO THE TRUE POINT OF BEGINNING.

SURVEY / DEED REFERENCES

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R2) SURVEY NO. 848 AMENDING SURVEY NO. 822 (AFN 887321) BY WEBBER
(R3) SHORT PLAT NO. 2049 (AFN 1994–017574) BY BAALMAN
(R4) SURVEY NO. 2164 FOR BMID (AFN 1996–12391) BY ROGERS
(R5) SHORT PLAT NO. 3241 (AFN 2010–007065) BY YAMASHITA
(R6) SURVEY NO. 4140 (AFN 2010–026670) BY MATARAZZO
(R7) SURVEY NO. 5031 (AFN 2018–018513) BY BAALMAN
(R8) FINAL PLAT OF WESTCLIFFE HEIGHTS II (AFN 2018–015773) BY MATARAZZO
(R9) SURVEY NO. 5036 (AFN 2018–019538) BY MATARAZZO
(R10) SURVEY NO. 5494 (AFN 2021–021122) BY MATARAZZO
(R11) SURVEY NO. 5521 (AFN 2021–030634) BY BAALMAN

(D1) STATUTORY WARRANTY DEED (AFN 2021–049835)
(D2) STATUTORY WARRANTY DEED (AFN 2021–022771)
(D3) STATUTORY WARRANTY DEED (AFN 774082)
(D4) STATUTORY WARRANTY DEED (AFN 781372)

ALEXANDER D. MATARAZZO — STATE OF WASHINGTON — 46318 — REGISTERED PROFESSIONAL LAND SURVEYOR

10/12/2022

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 14th DAY OF October, 2022 AT 2:45 P M. IN VOLUME 01 OF SURVEYS AT PAGE 5724 AT THE REQUEST OF PBS ENGINEERING & ENVIRONMENTAL INC.

Brenda Chilton by Mary Boatright, Deputy
COUNTY AUDITOR

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: MONSON DEVELOPMENT WASHINGTON, LLC		PROJECT NO.: 66336.000
SURVEYOR: ALEX D. MATARAZZO		DATE: 10/12/2022
CALC BY: ROP	DRAWN BY: DWW	SCALE: NA
SECTION: 34	TOWNSHIP: 9 NORTH	RANGE: 28 EAST
CITY: RICHLAND	COUNTY: BENTON	SHEET 6 OF 9

RECORD OF SURVEY

FOR BOUNDARY LINE ADJUSTMENT

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON.

LEGAL DESCRIPTION FOR TRANSFER PORTIONS FROM MD&D INVESTMENTS, LLC TO RICHLAND SCHOOL DISTRICT

REAL PROPERTY LOCATED IN THE SOUTH HALF OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP; THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 2158.03 FEET; THENCE SOUTH 89°14'43" EAST LEAVING SAID WEST LINE A DISTANCE OF 1179.51 FEET TO THE SOUTHERLY BOUNDARY OF LOT 1 OF SHORT PLAT FOR MILO BAUDER RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595, FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 771566, RECORDS OF BENTON COUNTY, STATE OF WASHINGTON AND THE TRUE POINT OF BEGINNING;

THENCE ALONG THE BOUNDARY OF SAID LOT 1 THE FOLLOWING COURSES:
THENCE SOUTH 69°51'52" EAST A DISTANCE OF 214.55 FEET;
THENCE SOUTH 89°44'14" EAST A DISTANCE OF 200.23 FEET;
THENCE SOUTH 00°04'46" WEST A DISTANCE OF 114.94 FEET;
THENCE SOUTH 89°52'50" EAST A DISTANCE OF 19.90 FEET;
THENCE NORTH 00°08'24" EAST A DISTANCE OF 114.90 FEET;
THENCE SOUTH 89°52'00" EAST A DISTANCE OF 455.20 FEET;
THENCE NORTH 82°21'13" EAST A DISTANCE OF 42.18 FEET;
THENCE SOUTH 31°58'33" EAST LEAVING SAID BOUNDARY A DISTANCE OF 240.23 FEET;
THENCE SOUTH 84°36'56" WEST A DISTANCE OF 64.90 FEET;
THENCE SOUTH 87°23'59" WEST A DISTANCE OF 356.09 FEET;
THENCE NORTH 89°51'29" WEST A DISTANCE OF 561.33 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 627.07 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 89°22'28" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 182.43 FEET, WITH A DELTA ANGLE OF 16°40'08", A CHORD BEARING OF NORTH 08°57'36" WEST, AND A CHORD LENGTH OF 181.79 FEET;
THENCE NORTH 17°17'40" WEST A DISTANCE OF 120.83 FEET TO THE POINT OF BEGINNING.

HAVING AN AREA OF 208,078 SQUARE FEET, 4.78 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

TOGETHER WITH THE FOLLOWING:

REAL PROPERTY LOCATED IN THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP; THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 1612.05 FEET; THENCE SOUTH 89°14'43" EAST LEAVING SAID WEST LINE A DISTANCE OF 1758.96 FEET TO THE SOUTHERLY BOUNDARY OF LOT 2 OF SHORT PLAT FOR MILO BAUDER RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 771566, RECORDS OF BENTON COUNTY, STATE OF WASHINGTON AND THE TRUE POINT OF BEGINNING;

THENCE ALONG THE BOUNDARY OF SAID LOT 2 THE FOLLOWING COURSES:
THENCE SOUTH 57°34'37" WEST A DISTANCE OF 4.22 FEET;
THENCE SOUTH 09°16'14" WEST A DISTANCE OF 105.78 FEET;
THENCE NORTH 80°30'44" WEST A DISTANCE OF 150.04 FEET;
THENCE SOUTH 68°28'26" WEST A DISTANCE OF 214.80 FEET;
THENCE NORTH 21°27'30" WEST A DISTANCE OF 59.37 FEET;
THENCE NORTH 72°42'20" EAST LEAVING SAID BOUNDARY A DISTANCE OF 332.83 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 173.02 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 73.19 FEET, WITH A DELTA ANGLE OF 24°14'09", A CHORD BEARING OF NORTH 84°49'25" EAST, AND A CHORD LENGTH OF 72.64 FEET TO THE POINT OF BEGINNING.

HAVING AN AREA OF 24,170 SQUARE FEET, 0.55 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

LEGAL DESCRIPTION FOR TRANSFER PORTIONS FROM RICHLAND SCHOOL DISTRICT TO MD&D INVESTMENTS, LLC

A PORTION OF LOT 1 OF THE SHORT PLAT FOR MILO BAUDER RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 771566, LOCATED IN THE SOUTH HALF OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP; THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 1612.05 FEET; THENCE SOUTH 89°14'43" EAST LEAVING SAID WEST LINE A DISTANCE OF 1758.96 FEET TO THE NORTHERLY BOUNDARY OF SAID LOT 1 AND THE TRUE POINT OF BEGINNING;

THENCE ALONG THE BOUNDARY OF SAID LOT 1 THE FOLLOWING COURSES:
THENCE NORTH 57°34'37" EAST A DISTANCE OF 113.44 FEET;
THENCE SOUTH 31°59'03" EAST A DISTANCE OF 849.63 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 540.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 25°35'44" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 20.08 FEET, WITH A DELTA ANGLE OF 02°07'50", A CHORD BEARING OF SOUTH 63°20'21" WEST, AND A CHORD LENGTH OF 20.08 FEET;
THENCE NORTH 32°00'28" WEST A DISTANCE OF 129.62 FEET;
THENCE SOUTH 60°32'16" WEST A DISTANCE OF 86.98 FEET;
THENCE SOUTH 82°21'13" WEST A DISTANCE OF 51.77 FEET;
THENCE NORTH 31°58'33" WEST LEAVING SAID BOUNDARY A DISTANCE OF 97.05 FEET;
THENCE NORTH 31°59'19" WEST A DISTANCE OF 450.05 FEET;
THENCE NORTH 58°00'41" EAST A DISTANCE OF 105.01 FEET;
THENCE NORTH 31°59'19" WEST A DISTANCE OF 10.42 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 173.02 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 154.22 FEET, WITH A DELTA ANGLE OF 51°04'12", A CHORD BEARING OF NORTH 57°31'25" WEST, AND A CHORD LENGTH OF 149.16 FEET TO THE POINT OF BEGINNING.

HAVING AN AREA OF 99,760 SQUARE FEET, 2.29 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

TOGETHER WITH THE FOLLOWING:

A PORTION OF LOT 1 OF THE SHORT PLAT FOR MILO BAUDER RECORDED IN VOLUME 1 OF SHORT PLATS AT PAGE 595 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 771566, LOCATED IN THE SOUTH HALF OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP; THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 2158.03 FEET; THENCE SOUTH 89°14'43" EAST LEAVING SAID WEST LINE OF SECTION 34 A DISTANCE OF 1179.51 FEET TO THE SOUTHERLY BOUNDARY OF SAID LOT 1 AND THE TRUE POINT OF BEGINNING;

THENCE ALONG THE BOUNDARY OF SAID LOT 1 THE FOLLOWING COURSES:
THENCE NORTH 69°51'52" WEST A DISTANCE OF 250.66 FEET;
THENCE SOUTH 20°04'32" WEST A DISTANCE OF 114.90 FEET;
THENCE NORTH 69°30'12" WEST A DISTANCE OF 62.75 FEET;
THENCE NORTH 20°03'15" EAST A DISTANCE OF 472.64 FEET;
THENCE NORTH 62°08'09" WEST A DISTANCE OF 113.26 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 310.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 61°20'09" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 19.77 FEET, WITH A DELTA ANGLE OF 03°39'17", A CHORD BEARING OF NORTH 30°29'30" EAST, AND A CHORD LENGTH OF 19.77 FEET;
THENCE SOUTH 62°02'39" EAST A DISTANCE OF 115.13 FEET;
THENCE NORTH 55°16'50" EAST A DISTANCE OF 149.96 FEET;
THENCE NORTH 68°23'03" EAST A DISTANCE OF 175.62 FEET;
THENCE SOUTH 21°27'30" EAST A DISTANCE OF 190.87 FEET;
THENCE SOUTH 72°42'20" WEST LEAVING SAID BOUNDARY A DISTANCE OF 291.24 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 25.00 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 39.27 FEET, WITH A DELTA ANGLE OF 90°00'00", A CHORD BEARING OF SOUTH 27°42'20" WEST, AND A CHORD LENGTH OF 35.36 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 329.82 FEET TO THE POINT OF BEGINNING.

HAVING AN AREA OF 127,047 SQUARE FEET, 2.92 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

SURVEY / DEED REFERENCES

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R2) SURVEY NO. 848 AMENDING SURVEY NO. 822 (AFN 887321) BY WEBBER
(R3) SHORT PLAT NO. 2049 (AFN 1994-017574) BY BAALMAN
(R4) SURVEY NO. 2164 FOR BMID (AFN 1996-12391) BY ROGERS
(R5) SHORT PLAT NO. 3241 (AFN 2010-007065) BY YAMASHITA
(R6) SURVEY NO. 4140 (AFN 2010-026670) BY MATARAZZO
(R7) SURVEY NO. 5031 (AFN 2018-018513) BY BAALMAN
(R8) FINAL PLAT OF WESTCLIFFE HEIGHTS II (AFN 2018-015773) BY MATARAZZO
(R9) SURVEY NO. 5036 (AFN 2018-019538) BY MATARAZZO
(R10) SURVEY NO. 5494 (AFN 2021-021122) BY MATARAZZO
(R11) SURVEY NO. 5521 (AFN 2021-030634) BY BAALMAN

(D1) STATUTORY WARRANTY DEED (AFN 2021-049835)
(D2) STATUTORY WARRANTY DEED (AFN 2021-022771)
(D3) STATUTORY WARRANTY DEED (AFN 774082)
(D4) STATUTORY WARRANTY DEED (AFN 781372)

ALEXANDER D. MATARAZZO
STATE OF WASHINGTON
46318
REGISTERED
PROFESSIONAL LAND SURVEYOR

10/12/2022

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 14th DAY OF October, 2022 AT 2:45 P M. IN VOLUME 01 OF SURVEYS AT PAGE 5724 AT THE REQUEST OF PBS ENGINEERING & ENVIRONMENTAL INC.

Brenda Chilton by Merry Boatright, deputy
COUNTY AUDITOR

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: MONSON DEVELOPMENT WASHINGTON, LLC		PROJECT NO.: 66336.000
SURVEYOR: ALEX D. MATARAZZO		DATE: 10/12/2022
CALC BY: ROP	DRAWN BY: DWW	SCALE: NA
SECTION: 34	TOWNSHIP: 9 NORTH	RANGE: 28 EAST
CITY: RICHLAND	COUNTY: BENTON	SHEET 7 OF 9

Survey #5724 Pg 8 of 9

RECORD OF SURVEY

FOR BOUNDARY LINE ADJUSTMENT

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON.

ADJUSTED LEGAL DESCRIPTIONS

MD&D INVESTMENTS, LLC. PROPERTIES:

ADJUSTED PARCEL 1:

REAL PROPERTY LOCATED IN THE SOUTH HALF OF THE NORTHWEST QUARTER, THE NORTH HALF OF THE SOUTHWEST QUARTER AND THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP;
THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 2699.45 FEET TO THE WEST QUARTER CORNER OF SAID SECTION 34 MARKED BY A 1/2 INCH REBAR WITH NO CAP; THENCE SOUTH 00°45'21" WEST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 34 A DISTANCE OF 30.02 FEET TO THE NORTHWEST CORNER OF PARCEL 4 OF SURVEY NO. 5494 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5494 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021-021122; THENCE SOUTH 89°51'29" EAST ALONG THE NORTHERLY BOUNDARY OF SAID PARCEL 4 A DISTANCE OF 438.49 FEET TO THE TRUE POINT OF BEGINNING;

THENCE CONTINUING ALONG SAID NORTH BOUNDARY THE FOLLOWING COURSES:

THENCE SOUTH 89°51'29" EAST A DISTANCE OF 1,546.65 FEET;
THENCE NORTH 00°30'58" EAST A DISTANCE OF 8.00 FEET;
THENCE SOUTH 89°32'25" EAST A DISTANCE OF 60.90 FEET;
THENCE NORTH 88°15'08" EAST A DISTANCE OF 318.36 FEET;
THENCE NORTH 77°55'39" EAST A DISTANCE OF 393.74 FEET;
THENCE NORTH 31°58'33" WEST LEAVING SAID NORTH BOUNDARY A DISTANCE OF 761.35 FEET;
THENCE NORTH 31°59'17" WEST A DISTANCE OF 161.35 FEET TO THE SOUTHEASTERLY CORNER OF A 60 FOOT RIGHT OF WAY FOR QUEENSGATE DRIVE ESTABLISHED PER QUIT CLAIM DEED RECORDED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2018-017826;
THENCE SOUTH 58°00'41" WEST ALONG THE SOUTH LINE OF SAID RIGHT OF WAY A DISTANCE OF 60.00 FEET TO THE SOUTHWESTERLY CORNER OF SAID RIGHT OF WAY;
THENCE SOUTH 31°59'17" EAST LEAVING SAID RIGHT OF WAY A DISTANCE OF 69.05 FEET;
THENCE SOUTH 58°00'41" WEST A DISTANCE OF 174.02 FEET;
THENCE SOUTH 31°59'19" EAST A DISTANCE OF 84.05 FEET;
THENCE SOUTH 31°58'33" EAST A DISTANCE OF 136.79 FEET;
THENCE SOUTH 58°01'27" WEST A DISTANCE OF 105.01 FEET;
THENCE SOUTH 31°58'33" EAST A DISTANCE OF 200.50 FEET;
THENCE SOUTH 84°36'56" WEST A DISTANCE OF 64.90 FEET;
THENCE SOUTH 87°23'59" WEST A DISTANCE OF 356.09 FEET;
THENCE NORTH 89°51'29" WEST A DISTANCE OF 561.33 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 627.07 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 89°22'28" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 182.43 FEET, WITH A DELTA ANGLE OF 16°40'08", A CHORD BEARING OF NORTH 08°57'36" WEST, AND A CHORD LENGTH OF 181.79 FEET;
THENCE NORTH 17°17'40" WEST A DISTANCE OF 106.61 FEET;
THENCE SOUTH 72°42'20" WEST A DISTANCE OF 214.55 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 517.06 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 363.25 FEET, WITH A DELTA ANGLE OF 40°15'08", A CHORD BEARING OF SOUTH 52°34'46" WEST, AND A CHORD LENGTH OF 355.83 FEET;
THENCE NORTH 89°51'29" WEST A DISTANCE OF 120.31 FEET;
THENCE NORTH 63°28'49" WEST A DISTANCE OF 54.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 676.07 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 63°28'49" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 35.21 FEET, WITH A DELTA ANGLE OF 02°59'02", A CHORD BEARING OF SOUTH 25°01'40" WEST, AND A CHORD LENGTH OF 35.20 FEET;
THENCE NORTH 66°27'51" WEST A DISTANCE OF 20.00 FEET;
THENCE NORTH 89°51'29" WEST A DISTANCE OF 60.21 FEET;
THENCE SOUTH 00°08'31" WEST A DISTANCE OF 105.01 FEET;
THENCE NORTH 89°51'29" WEST A DISTANCE OF 2.51 FEET;
THENCE SOUTH 00°08'31" WEST A DISTANCE OF 159.02 FEET TO THE NORTH BOUNDARY OF SAID PARCEL 4 AND THE TRUE POINT OF BEGINNING.

HAVING AN AREA OF 848,106 SQUARE FEET, 19.47 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

ADJUSTED PARCEL 2:

REAL PROPERTY LOCATED IN THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP;
THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 2699.45 FEET TO THE WEST QUARTER CORNER OF SAID SECTION 34 MARKED BY A 1/2 INCH REBAR WITH NO CAP; THENCE SOUTH 00°45'21" WEST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 34 A DISTANCE OF 30.02 FEET TO THE NORTHWEST CORNER OF PARCEL 4 OF SURVEY NO. 5494 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5494 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021-021122; THENCE SOUTH 89°51'29" EAST ALONG THE NORTHERLY BOUNDARY OF SAID PARCEL 4 A DISTANCE OF 438.49 FEET;
THENCE NORTH 00°08'31" EAST LEAVING SAID NORTH BOUNDARY A DISTANCE OF 159.02 FEET;
THENCE SOUTH 89°51'29" EAST A DISTANCE OF 2.51 FEET;
THENCE NORTH 00°08'31" EAST A DISTANCE OF 105.01 FEET TO THE TRUE POINT OF BEGINNING;

THENCE SOUTH 89°51'29" EAST A DISTANCE OF 60.21 FEET;
THENCE SOUTH 66°27'51" EAST A DISTANCE OF 20.00 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 676.07 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 66°27'51" EAST;
THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 35.21 FEET, WITH A DELTA ANGLE OF 02°59'02", A CHORD BEARING OF NORTH 25°01'40" EAST, AND A CHORD LENGTH OF 35.20 FEET;
THENCE SOUTH 63°28'49" EAST A DISTANCE OF 54.01 FEET;
THENCE SOUTH 89°51'29" EAST A DISTANCE OF 120.31 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 517.06 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 57°32'48" EAST;
THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 363.25 FEET, WITH A DELTA ANGLE OF 40°15'08", A CHORD BEARING OF NORTH 52°34'46" EAST, AND A CHORD LENGTH OF 355.83 FEET;
THENCE NORTH 72°42'20" EAST A DISTANCE OF 214.55 FEET;
THENCE NORTH 17°17'40" WEST A DISTANCE OF 344.04 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 25.00 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 39.27 FEET, WITH A DELTA ANGLE OF 90°00'00", A CHORD BEARING OF NORTH 27°42'20" EAST, AND A CHORD LENGTH OF 35.36 FEET;
THENCE NORTH 72°42'20" EAST A DISTANCE OF 624.07 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 173.02 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 227.40 FEET, WITH A DELTA ANGLE OF 75°18'21", A CHORD BEARING OF SOUTH 69°38'29" EAST, AND A CHORD LENGTH OF 211.39 FEET;
THENCE SOUTH 31°59'19" EAST A DISTANCE OF 10.42 FEET;
THENCE SOUTH 58°00'41" WEST A DISTANCE OF 105.01 FEET;
THENCE SOUTH 31°59'19" EAST A DISTANCE OF 450.05 FEET;
THENCE SOUTH 31°58'33" EAST A DISTANCE OF 136.78 FEET;
THENCE NORTH 58°01'27" EAST A DISTANCE OF 105.01 FEET;
THENCE NORTH 31°58'33" WEST A DISTANCE OF 136.79 FEET;
THENCE NORTH 31°59'19" WEST A DISTANCE OF 84.05 FEET;
THENCE NORTH 58°00'41" EAST A DISTANCE OF 174.02 FEET;
THENCE NORTH 31°59'17" WEST A DISTANCE OF 69.05 FEET;
THENCE NORTH 31°59'19" WEST A DISTANCE OF 272.34 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,230.00 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 417.94 FEET, WITH A DELTA ANGLE OF 19°28'07", A CHORD BEARING OF NORTH 22°15'16" WEST, AND A CHORD LENGTH OF 415.93 FEET TO THE SOUTHERLY MOST CORNER OF NEW PARCEL II OF SURVEY NO. 5521 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5521 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021-030634 BEING A POINT ON A CURVATURE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,268.96 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 59°19'17" EAST; THENCE ALONG SAID CURVE AND SAID SOUTHERLY BOUNDARY, HAVING AN ARC LENGTH OF 58.78 FEET, WITH A DELTA ANGLE OF 02°39'15", A CHORD BEARING OF NORTH 29°21'06" WEST, AND A CHORD LENGTH OF 58.78 FEET;
THENCE SOUTH 68°24'08" WEST A DISTANCE OF 50.01 FEET;
THENCE NORTH 32°20'10" WEST ALONG THE WESTERLY BOUNDARY OF SAID NEW PARCEL II A DISTANCE OF 170.68 FEET;
THENCE SOUTH 72°42'20" WEST LEAVING SAID WESTERLY BOUNDARY A DISTANCE OF 719.81 FEET;
THENCE NORTH 03°11'32" WEST A DISTANCE OF 16.34 FEET;
THENCE SOUTH 86°48'28" WEST A DISTANCE OF 54.01 FEET;
THENCE SOUTH 72°42'20" WEST A DISTANCE OF 444.07 FEET;
THENCE SOUTH 00°45'17" WEST A DISTANCE OF 94.91 FEET;
THENCE NORTH 89°14'43" WEST A DISTANCE OF 169.00 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 227.03 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 89°58'43" EAST;
THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 1.62 FEET, WITH A DELTA ANGLE OF 00°24'34", A CHORD BEARING OF SOUTH 00°13'34" EAST, AND A CHORD LENGTH OF 1.62 FEET;
THENCE SOUTH 89°34'09" WEST A DISTANCE OF 14.86 FEET;
THENCE SOUTH 53°36'29" WEST A DISTANCE OF 76.46 FEET;
THENCE SOUTH 34°29'01" EAST A DISTANCE OF 172.90 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,260.14 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 34°29'01" EAST;
THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 7.00 FEET, WITH A DELTA ANGLE OF 00°19'05", A CHORD BEARING OF NORTH 55°40'32" EAST, AND A CHORD LENGTH OF 7.00 FEET;
THENCE SOUTH 34°09'56" EAST A DISTANCE OF 120.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 1,140.13 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 34°09'56" EAST;
THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 217.81 FEET, WITH A DELTA ANGLE OF 10°56'46", A CHORD BEARING OF SOUTH 50°21'42" WEST, AND A CHORD LENGTH OF 217.48 FEET;
THENCE SOUTH 45°06'41" EAST A DISTANCE OF 80.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,060.12 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 45°06'41" EAST;
THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 7.63 FEET, WITH A DELTA ANGLE OF 00°24'45", A CHORD BEARING OF NORTH 45°05'41" EAST, AND A CHORD LENGTH OF 7.63 FEET;
THENCE SOUTH 44°41'56" EAST A DISTANCE OF 174.02 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 886.10 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 44°41'56" EAST;
THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 18.24 FEET, WITH A DELTA ANGLE OF 01°10'47", A CHORD BEARING OF NORTH 45°53'27" EAST, AND A CHORD LENGTH OF 18.24 FEET;
THENCE SOUTH 43°31'09" EAST A DISTANCE OF 105.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 781.09 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 43°31'09" EAST;
THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 349.22 FEET, WITH A DELTA ANGLE OF 25°37'00", A CHORD BEARING OF SOUTH 33°40'21" WEST, AND A CHORD LENGTH OF 346.32 FEET;
THENCE SOUTH 89°51'29" EAST A DISTANCE OF 31.49 FEET TO THE TRUE POINT OF BEGINNING.

HAVING AN AREA OF 1,236,153 SQUARE FEET, 28.38 ACRES MORE OR LESS.

(SEE CONTINUED)

ADJUSTED PARCEL 2:

(CONTINUED)

TOGETHER WITH;

REAL PROPERTY LOCATED IN THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP; THENCE SOUTH 89°09'47" EAST ALONG THE NORTH LINE OF SAID SECTION 34 A DISTANCE OF 2599.03 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 34 MARKED BY A 3" BRASS CAP; THENCE SOUTH 00°06'46" WEST A DISTANCE OF 1,333.89 FEET TO THE NORTHEAST CORNER OF LOT 6 OF THE PLAT OF WESTCLIFFE HEIGHTS II RECORDED IN VOLUME 15 OF PLATS AT PAGE 608 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2018-015773;
THENCE NORTH 89°30'45" WEST ALONG THE NORTHERLY BOUNDARY OF SAID PLAT OF WESTCLIFFE HEIGHTS II A DISTANCE OF 155.72 FEET;
THENCE SOUTH 58°00'41" WEST A DISTANCE OF 427.93 FEET TO THE TRUE POINT OF BEGINNING;

THENCE NORTH 31°59'19" WEST A DISTANCE OF 130.96 FEET TO THE EASTERLY RIGHT OF WAY MARGIN OF QUEENSGATE DRIVE ESTABLISHED PER QUIT CLAIM DEED RECORDED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2018-01826 BEING A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 1,170.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 65°30'31" EAST; THENCE ALONG SAID CURVE AND RIGHT OF WAY MARGIN, HAVING AN ARC LENGTH OF 131.40 FEET, WITH A DELTA ANGLE OF 06°26'05", A CHORD BEARING OF SOUTH 27°42'32" EAST, AND A CHORD LENGTH OF 131.33 FEET TO THE NORTHWEST CORNER OF ADJUSTED LOT 1 OF SURVEY NO. 5036 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5036 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2018-019538;
THENCE NORTH 58°00'41" EAST ALONG THE NORTHERLY BOUNDARY OF SAID ADJUSTED LOT 1 A DISTANCE OF 9.80 FEET TO THE TRUE POINT OF BEGINNING.

HAVING AN AREA OF 803 SQUARE FEET, 0.02 ACRES, MORE OR LESS.

WITH A COMBINED TOTAL AREA OF 1,236,956 SQUARE FEET, 28.40 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

SURVEY / DEED REFERENCES

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R2) SURVEY NO. 848 AMENDING SURVEY NO. 822 (AFN 887321) BY WEBBER
(R3) SHORT PLAT NO. 2049 (AFN 1994-017574) BY BAALMAN
(R4) SURVEY NO. 2164 FOR BMID (AFN 1996-12391) BY ROGERS
(R5) SHORT PLAT NO. 3241 (AFN 2010-007065) BY YAMASHITA
(R6) SURVEY NO. 4140 (AFN 2010-026670) BY MATARAZZO
(R7) SURVEY NO. 5031 (AFN 2018-018513) BY BAALMAN
(R8) FINAL PLAT OF WESTCLIFFE HEIGHTS II (AFN 2018-015773) BY MATARAZZO
(R9) SURVEY NO. 5036 (AFN 2018-019538) BY MATARAZZO
(R10) SURVEY NO. 5494 (AFN 2021-021122) BY MATARAZZO
(R11) SURVEY NO. 5521 (AFN 2021-030634) BY BAALMAN

(D1) STATUTORY WARRANTY DEED (AFN 2021-049835)
(D2) STATUTORY WARRANTY DEED (AFN 2021-022771)
(D3) STATUTORY WARRANTY DEED (AFN 774082)
(D4) STATUTORY WARRANTY DEED (AFN 781372)

ALEXANDER D. MATARAZZO
STATE OF WASHINGTON
46318
REGISTERED
PROFESSIONAL LAND SURVEYOR

10/12/2022

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 14th DAY OF October 2022 AT 2:45 P M. IN VOLUME 01 OF SURVEYS AT PAGE 5724 AT THE REQUEST OF PBS ENGINEERING & ENVIRONMENTAL INC.

Brenda Chilton by Merry Boatright, deputy
COUNTY AUDITOR

PBS
PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

CLIENT: MONSON DEVELOPMENT WASHINGTON, LLC		PROJECT NO.: 66336.000
SURVEYOR: ALEX D. MATARAZZO		DATE: 10/12/2022
CALC BY: ROP	DRAWN BY: DWW	SCALE: NA
SECTION: 34	TOWNSHIP: 9 NORTH	RANGE: 28 EAST
CITY: RICHLAND	COUNTY: BENTON	SHEET 8 OF 9

RECORD OF SURVEY

FOR BOUNDARY LINE ADJUSTMENT

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON.

ADJUSTED LEGAL DESCRIPTIONS

MD&D INVESTMENTS, LLC. PROPERTIES:

ADJUSTED PARCEL 3:

REAL PROPERTY LOCATED IN THE WEST HALF OF THE NORTHWEST QUARTER AND THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP;
THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 887.49 FEET TO THE TRUE POINT OF BEGINNING.

THENCE SOUTH 89°14'43" EAST LEAVING SAID WEST LINE A DISTANCE OF 104.98 FEET;
THENCE NORTH 00°48'16" EAST A DISTANCE OF 35.17 FEET;
THENCE SOUTH 89°14'43" EAST A DISTANCE OF 54.01 FEET;
THENCE SOUTH 89°09'47" EAST A DISTANCE OF 698.33 FEET;
THENCE SOUTH 74°58'55" EAST A DISTANCE OF 199.70 FEET;
THENCE SOUTH 46°50'00" EAST A DISTANCE OF 42.12 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 130.01 FEET;
THENCE NORTH 72°42'20" EAST A DISTANCE OF 10.82 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 198.02 FEET;
THENCE SOUTH 72°42'20" WEST A DISTANCE OF 166.85 FEET;
THENCE NORTH 03°11'32" WEST A DISTANCE OF 16.34 FEET;
THENCE SOUTH 86°48'28" WEST A DISTANCE OF 54.01 FEET;
THENCE SOUTH 72°42'20" WEST A DISTANCE OF 444.07 FEET;
THENCE SOUTH 00°45'17" WEST A DISTANCE OF 94.91 FEET;
THENCE NORTH 89°14'43" WEST A DISTANCE OF 169.00 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 227.03 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 89°58'43" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 1.62 FEET, WITH A DELTA ANGLE OF 00°24'34", A CHORD BEARING OF SOUTH 00°13'34" EAST, AND A CHORD LENGTH OF 1.62 FEET;
THENCE SOUTH 89°34'09" WEST A DISTANCE OF 14.86 FEET;
THENCE SOUTH 53°36'29" WEST A DISTANCE OF 76.46 FEET;
THENCE SOUTH 34°29'01" EAST A DISTANCE OF 172.90 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,260.14 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 34°29'01" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 7.00 FEET, WITH A DELTA ANGLE OF 00°19'05", A CHORD BEARING OF NORTH 55°40'32" EAST, AND A CHORD LENGTH OF 7.00 FEET;
THENCE SOUTH 34°09'56" EAST A DISTANCE OF 120.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 1,140.13 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 34°09'56" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 217.81 FEET, WITH A DELTA ANGLE OF 10°56'46", A CHORD BEARING OF SOUTH 50°21'42" WEST, AND A CHORD LENGTH OF 217.48 FEET;
THENCE SOUTH 45°06'41" EAST A DISTANCE OF 80.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,060.12 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 45°06'41" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 7.63 FEET, WITH A DELTA ANGLE OF 00°24'45", A CHORD BEARING OF NORTH 45°05'41" EAST, AND A CHORD LENGTH OF 7.63 FEET;
THENCE SOUTH 44°41'56" EAST A DISTANCE OF 174.02 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 886.10 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 44°41'56" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 18.24 FEET, WITH A DELTA ANGLE OF 01°10'47", A CHORD BEARING OF NORTH 45°53'27" EAST, AND A CHORD LENGTH OF 18.24 FEET;
THENCE SOUTH 43°31'09" EAST A DISTANCE OF 105.01 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 781.09 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 43°31'09" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 349.22 FEET, WITH A DELTA ANGLE OF 25°37'00", A CHORD BEARING OF SOUTH 33°40'21" WEST, AND A CHORD LENGTH OF 346.32 FEET;
THENCE SOUTH 89°51'29" EAST A DISTANCE OF 31.49 FEET;
THENCE SOUTH 00°08'31" WEST A DISTANCE OF 105.01 FEET;
THENCE NORTH 89°51'29" WEST A DISTANCE OF 2.51 FEET;
THENCE SOUTH 00°08'31" WEST A DISTANCE OF 159.02 FEET TO THE NORTHERLY BOUNDARY OF PARCEL 4 OF SURVEY NO. 5494 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5494 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021–021122;
THENCE NORTH 89°51'29" WEST ALONG SAID NORTHERLY BOUNDARY A DISTANCE OF 438.49 FEET TO THE NORTHWEST CORNER OF SAID PARCEL 4 BEING ALSO A POINT ON THE WEST LINE OF THE SOUTHWEST QUARTER SAID SECTION 34;
THENCE NORTH 00°45'21" EAST ALONG SAID WEST LINE A DISTANCE OF 30.02 FEET TO THE WEST QUARTER CORNER OF SECTION 34, MARKED BY A 1/2 INCH REBAR WITH NO CAP;
THENCE NORTH 00°45'17" EAST ALONG SAID WEST LINE OF THE NORTHWEST QUARTER A DISTANCE OF 1,811.96 FEET TO THE POINT OF BEGINNING.

HAVING AN AREA OF 1,160,860 SQUARE FEET, 26.65 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

ADJUSTED PARCEL 4:

REAL PROPERTY LOCATED IN THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP;
THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SAID SECTION 34 A DISTANCE OF 887.49 FEET;
THENCE SOUTH 89°14'43" EAST LEAVING SAID WEST LINE A DISTANCE OF 104.98 FEET;
THENCE NORTH 00°48'16" EAST A DISTANCE OF 35.17 FEET;
THENCE SOUTH 89°14'43" EAST A DISTANCE OF 54.01 FEET;
THENCE SOUTH 89°09'47" EAST A DISTANCE OF 698.33 FEET;
THENCE SOUTH 74°58'55" EAST A DISTANCE OF 199.70 FEET;
THENCE SOUTH 46°50'00" EAST A DISTANCE OF 42.12 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 130.01 FEET;
THENCE NORTH 72°42'20" EAST A DISTANCE OF 10.82 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 198.02 FEET;
THENCE NORTH 72°42'20" EAST A DISTANCE OF 552.96 FEET TO THE EASTERLY BOUNDARY OF NEW PARCEL IV OF SURVEY NO. 5521 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5521 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021–030634;

THENCE ALONG SAID EASTERLY BOUNDARY THE FOLLOWING COURSES:

THENCE NORTH 32°20'10" WEST A DISTANCE OF 58.63 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 173.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 27°39'19" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 20.16 FEET, WITH A DELTA ANGLE OF 06°40'38", A CHORD BEARING OF SOUTH 59°00'22" WEST, AND A CHORD LENGTH OF 20.15 FEET;
THENCE NORTH 34°16'51" WEST A DISTANCE OF 54.02 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 25.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 34°21'45" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 33.94 FEET, WITH A DELTA ANGLE OF 77°47'46", A CHORD BEARING OF NORTH 16°44'23" EAST, AND A CHORD LENGTH OF 31.40 FEET;
THENCE NORTH 22°02'34" WEST A DISTANCE OF 205.67 FEET;
THENCE NORTH 21°59'37" WEST A DISTANCE OF 42.39 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 471.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 67°55'51" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 149.38 FEET, WITH A DELTA ANGLE OF 18°10'17", A CHORD BEARING OF NORTH 31°09'18" WEST, AND A CHORD LENGTH OF 148.75 FEET;
THENCE NORTH 40°10'17" WEST A DISTANCE OF 156.06 FEET;
TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 179.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 49°40'40" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 116.02 FEET, WITH A DELTA ANGLE OF 37°08'14", A CHORD BEARING OF NORTH 21°45'13" WEST, AND A CHORD LENGTH OF 114.00 FEET;
THENCE NORTH 03°04'35" WEST A DISTANCE OF 77.62 FEET;
THENCE NORTH 16°32'19" WEST A DISTANCE OF 83.41 FEET;
THENCE NORTH 27°38'46" WEST A DISTANCE OF 79.89 FEET;
THENCE NORTH 33°55'58" WEST A DISTANCE OF 179.99 FEET TO THE NORTH LINE OF SAID SECTION 34;
THENCE NORTH 89°09'47" WEST ALONG SAID NORTH LINE A DISTANCE OF 1,157.16 FEET TO THE POINT OF BEGINNING.

HAVING AN AREA OF 1,356,132 SQUARE FEET, 31.13 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

ADJUSTED PARCEL 5:

REAL PROPERTY LOCATED IN THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP; THENCE SOUTH 89°09'47" EAST ALONG THE NORTH LINE OF SAID SECTION 34 A DISTANCE OF 2599.03 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 34 MARKED BY A 3" BRASS CAP; THENCE SOUTH 00°06'46" WEST ALONG THE EAST LINE OF SAID NORTHWEST QUARTER A DISTANCE OF 1617.82 FEET TO THE SOUTHERLY BOUNDARY OF LOT 7 OF THE PLAT OF WESTCLIFFE HEIGHTS II RECORDED IN VOLUME 15 OF PLATS AT PAGE 608 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2018–015773 AND THE TRUE POINT OF BEGINNING;

THENCE ALONG THE SOUTHWESTERLY PLAT BOUNDARY OF SAID WESTCLIFFE HEIGHTS II THE FOLLOWING COURSES:

THENCE SOUTH 00°06'46" WEST A DISTANCE OF 347.63 FEET;
THENCE SOUTH 49°42'13" EAST A DISTANCE OF 205.84 FEET;
THENCE SOUTH 86°22'15" EAST A DISTANCE OF 156.14 FEET;
THENCE SOUTH 31°59'19" EAST A DISTANCE OF 192.52 FEET;
THENCE SOUTH 45°35'07" EAST A DISTANCE OF 140.43 FEET;
THENCE SOUTH 45°52'40" EAST A DISTANCE OF 144.22 FEET;
THENCE SOUTH 40°37'06" EAST A DISTANCE OF 21.41 FEET TO THE NORTHEAST CORNER OF PARCEL 3 OF SURVEY NO. 5494 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5494 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021–021122;
THENCE SOUTH 77°55'39" WEST ALONG THE NORTHERLY BOUNDARY OF SAID PARCEL 3 A DISTANCE OF 525.70 FEET;
THENCE NORTH 31°58'33" WEST LEAVING SAID NORTHERLY BOUNDARY A DISTANCE OF 761.35 FEET;
THENCE NORTH 31°59'17" WEST A DISTANCE OF 161.35 FEET TO THE SOUTHERLY BOUNDARY OF ADJUSTED LOT 11 OF SURVEY NO. 5036 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5036 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2018–019538; THENCE NORTH 58°00'41" EAST ALONG SAID SOUTHERLY BOUNDARY AND CONTINUING ALONG THE SOUTHERLY BOUNDARY OF SAID WESTCLIFFE HEIGHTS II A DISTANCE OF 260.06 FEET;
THENCE NORTH 68°46'25" EAST CONTINUING ALONG SAID SOUTHERLY BOUNDARY OF WESTCLIFFE HEIGHTS II A DISTANCE OF 161.19 FEET TO THE POINT OF BEGINNING.

HAVING AN AREA OF 364,972 SQUARE FEET, 8.38 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

RICHLAND SCHOOL DISTRICT PROPERTY:

ADJUSTED PARCEL 6:

REAL PROPERTY LOCATED IN THE SOUTH HALF OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 34, MARKED BY A 5/8 INCH IRON REBAR WITH NO CAP;
THENCE SOUTH 00°45'17" WEST ALONG THE WEST LINE OF SECTION 34 A DISTANCE OF 2699.45 FEET TO THE WEST QUARTER CORNER OF SAID SECTION 34 MARKED BY A 1/2 INCH REBAR WITH NO CAP; THENCE SOUTH 00°45'21" WEST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 34 A DISTANCE OF 30.02 FEET TO THE NORTHWEST CORNER OF PARCEL 4 OF SURVEY NO. 5494 RECORDED IN VOLUME 1 OF SURVEYS AT PAGE 5494 FILED UNDER BENTON COUNTY AUDITOR'S FILE NUMBER 2021–021122; THENCE SOUTH 89°51'29" EAST ALONG THE NORTHERLY BOUNDARY OF SAID PARCEL 4 A DISTANCE OF 438.49 FEET;
THENCE NORTH 00°08'31" EAST LEAVING SAID NORTH BOUNDARY A DISTANCE OF 159.02 FEET;
THENCE SOUTH 89°51'29" EAST A DISTANCE OF 2.51 FEET;
THENCE NORTH 00°08'31" EAST A DISTANCE OF 105.01 FEET;
THENCE SOUTH 89°51'29" EAST A DISTANCE OF 60.21 FEET;
THENCE SOUTH 66°27'51" EAST A DISTANCE OF 20.00 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 676.07 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 66°27'51" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 35.21 FEET, WITH A DELTA ANGLE OF 02°59'02", A CHORD BEARING OF NORTH 25°01'40" EAST, AND A CHORD LENGTH OF 35.20 FEET;
THENCE SOUTH 63°28'49" EAST A DISTANCE OF 54.01 FEET;
THENCE SOUTH 89°51'29" EAST A DISTANCE OF 120.31 FEET TO A POINT ON THE ARC OF A NON TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 517.06 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 57°32'48" EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 363.25 FEET, WITH A DELTA ANGLE OF 40°15'08", A CHORD BEARING OF NORTH 52°34'46" EAST, AND A CHORD LENGTH OF 355.83 FEET;
THENCE NORTH 72°42'20" EAST A DISTANCE OF 214.55 FEET TO THE TRUE POINT OF BEGINNING;

THENCE SOUTH 17°17'40" EAST A DISTANCE OF 106.61 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 627.07 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 182.43 FEET, WITH A DELTA ANGLE OF 16°40'08", A CHORD BEARING OF SOUTH 08°57'36" EAST, AND A CHORD LENGTH OF 181.79 FEET;
THENCE SOUTH 89°51'29" EAST A DISTANCE OF 561.33 FEET;
THENCE NORTH 87°23'59" EAST A DISTANCE OF 356.09 FEET;
THENCE NORTH 84°36'56" EAST A DISTANCE OF 64.90 FEET;
THENCE NORTH 31°58'33" WEST A DISTANCE OF 337.28 FEET;
THENCE NORTH 31°59'19" WEST A DISTANCE OF 450.05 FEET;
THENCE NORTH 58°00'41" EAST A DISTANCE OF 105.01 FEET;
THENCE NORTH 31°59'19" WEST A DISTANCE OF 10.42 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 173.02 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 227.40 FEET, WITH A DELTA ANGLE OF 75°18'21", A CHORD BEARING OF NORTH 69°38'29" WEST, AND A CHORD LENGTH OF 211.39 FEET;
THENCE SOUTH 72°42'20" WEST A DISTANCE OF 624.07 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 25.00 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 39.27 FEET, WITH A DELTA ANGLE OF 90°00'00", A CHORD BEARING OF SOUTH 27°42'20" WEST, AND A CHORD LENGTH OF 35.36 FEET;
THENCE SOUTH 17°17'40" EAST A DISTANCE OF 344.04 FEET TO THE TRUE POINT OF BEGINNING.

HAVING AN AREA OF 638,424 SQUARE FEET, 14.66 ACRES, MORE OR LESS.

SUBJECT TO EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.

SURVEY / DEED REFERENCES

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R2) SURVEY NO. 848 AMENDING SURVEY NO. 822 (AFN 887321) BY WEBBER
(R3) SHORT PLAT NO. 2049 (AFN 1994–017574) BY BAALMAN
(R4) SURVEY NO. 2164 FOR BMID (AFN 1996–12391) BY ROGERS
(R5) SHORT PLAT NO. 3241 (AFN 2010–007065) BY YAMASHITA
(R6) SURVEY NO. 4140 (AFN 2010–026670) BY MATARAZZO
(R7) SURVEY NO. 5031 (AFN 2018–018513) BY BAALMAN
(R8) FINAL PLAT OF WESTCLIFFE HEIGHTS II (AFN 2018–015773) BY MATARAZZO
(R9) SURVEY NO. 5036 (AFN 2018–019538) BY MATARAZZO
(R10) SURVEY NO. 5494 (AFN 2021–021122) BY MATARAZZO
(R11) SURVEY NO. 5521 (AFN 2021–030634) BY BAALMAN

(D1) STATUTORY WARRANTY DEED (AFN 2021–049835)
(D2) STATUTORY WARRANTY DEED (AFN 2021–022771)
(D3) STATUTORY WARRANTY DEED (AFN 774082)
(D4) STATUTORY WARRANTY DEED (AFN 781372)

ALEXANDER D. MATARAZZO
STATE OF WASHINGTON
46318
REGISTERED
PROFESSIONAL LAND SURVEYOR

10/12/2022

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 14th DAY OF October, 2022 AT 2:45 P M. IN VOLUME 01 OF SURVEYS AT PAGE 5724 AT THE REQUEST OF PBS ENGINEERING & ENVIRONMENTAL INC.

Brenda Chilton by Merry Boatright, deputy
COUNTY AUDITOR

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600

pbsusa.com

CLIENT: MONSON DEVELOPMENT WASHINGTON, LLC		PROJECT NO.: 66336.000
SURVEYOR: ALEX D. MATARAZZO		DATE: 10/12/2022
CALC BY: ROP	DRAWN BY: DWW	SCALE: NA
SECTION: 34	TOWNSHIP: 9 NORTH	RANGE: 28 EAST
CITY: RICHLAND	COUNTY: BENTON	SHEET 9 OF 9

July 30, 2021

Monson Development Washington, LLC
63615 E Jacobs Rd NE
Benton City, Washington 99320

Regarding: Soil Sampling and Analysis Assessment
1276 N Bermuda Road Way
Richland, Washington 99352
PBS Project 66336.000

PBS Engineering and Environmental Inc. (PBS) has completed the Soil Testing and Analysis Assessment at 1276 N Bermuda Road Way of the Monson Development in Richland, Washington (Site *or* subject property; see Figure 1). This report summarizes the project background, field sampling activities, and test results.

PROJECT BACKGROUND

PBS completed a Phase I ESA for the subject property in July 2021. The subject property was found to have been in agricultural use as part of a large orchard since 1982. Historically, orchard pesticides often contained heavy metals such as arsenic and lead, as well as other organochlorine pesticides. This investigation was conducted to address the concern that pesticide residues in soil could pose a risk for potential future residential usage.

SAMPLE COLLECTION

On July 8, 2021, PBS completed twenty shallow soil test locations using hand tools to 12 inches below ground surface (bgs) on the subject property (Figure 1). Samples were collected at approximately 6 to 12 inches interval bgs at every location. The samples were submitted to the laboratory for analysis. The sampling equipment was decontaminated using an Aclonox wash and water rinse between discrete sample locations. Soil lithology consisted of light brown organic-rich soil at all locations sampled. The soil was field screened by visual/olfactory observation. No evidence of contamination was identified.

The sampled areas were made to match the surrounding landscaping following the collection of soil samples. Disposable sampling supplies were bagged and disposed of as solid waste. Groundwater was not encountered within the depths of this investigation.

The samples were stored on ice immediately after sample collection and provided to Pace Analytical Laboratory, a state-accredited laboratory in Mount Juliet, Tennessee.

ANALYTICAL PROGRAM AND RESULTS

The following section presents the sample analysis, results, and findings.

Laboratory Analysis

The following analyses were completed on each of the twenty soil samples:

- Total Solids by EPA Method 2540 G-2011

- Total Metals (Arsenic and Lead) by EPA Method 6020B
- Organochlorine pesticides by Environmental Protection Agency (EPA) Methods 8081B.

Laboratory results were compared to Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Cleanup levels for unrestricted land use (adopted criteria). The laboratory data and screening levels are summarized below and in Table 1.

Pesticides such as dieldrin, 4,4′-DDE, 4,4′-DDD, and 4,4′-DDT and other compounds included in the analysis method 8081B were not detected in the collected samples.

Arsenic and Lead were detected in all twenty soil samples. Arsenic and lead were not detected above the Method A Cleanup Level (20 and 250 mg/kg) in any of the samples. Across the twenty samples, the average detected concentration of arsenic was approximately 5.82 mg/kg, and the average detected concentration of lead was approximately 8.11 mg/kg. These levels are indicative of natural background concentrations for arsenic and lead in soil.

CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results, the average concentration of arsenic and lead in surficial soils across the subject property do not exceed MTCA Method A Cleanup Levels for unrestricted land use. The organochlorine pesticides were not detected above laboratory reporting limits (i.e., non-detect).

Based on the soil's analysis results, the soils meet unrestricted use conditions per the MTCA criteria.

LIMITATIONS

PBS has prepared this report for the exclusive use by Monson Development, and is not to be relied upon by other parties. It is not to be photographed, photocopied, or similarly reproduced in total or in part without the express written consent of the client and PBS.

This study was limited to the tests, locations, and depths as indicated to determine the absence or presence of certain contaminants. The site may have other contamination that was not characterized by this study. The findings and conclusions of this report are not scientific certainties, but probabilities based on professional judgment concerning the significance of the data gathered during this investigation. PBS is not able to represent that the site or adjoining land contain no hazardous waste, oil, or other latent conditions beyond that detected or observed by PBS.

Please feel free to contact Wesley Garcia at 509.375.7842 or wesley.garcia@pbsusa.com with any questions or comments.

Sincerely,

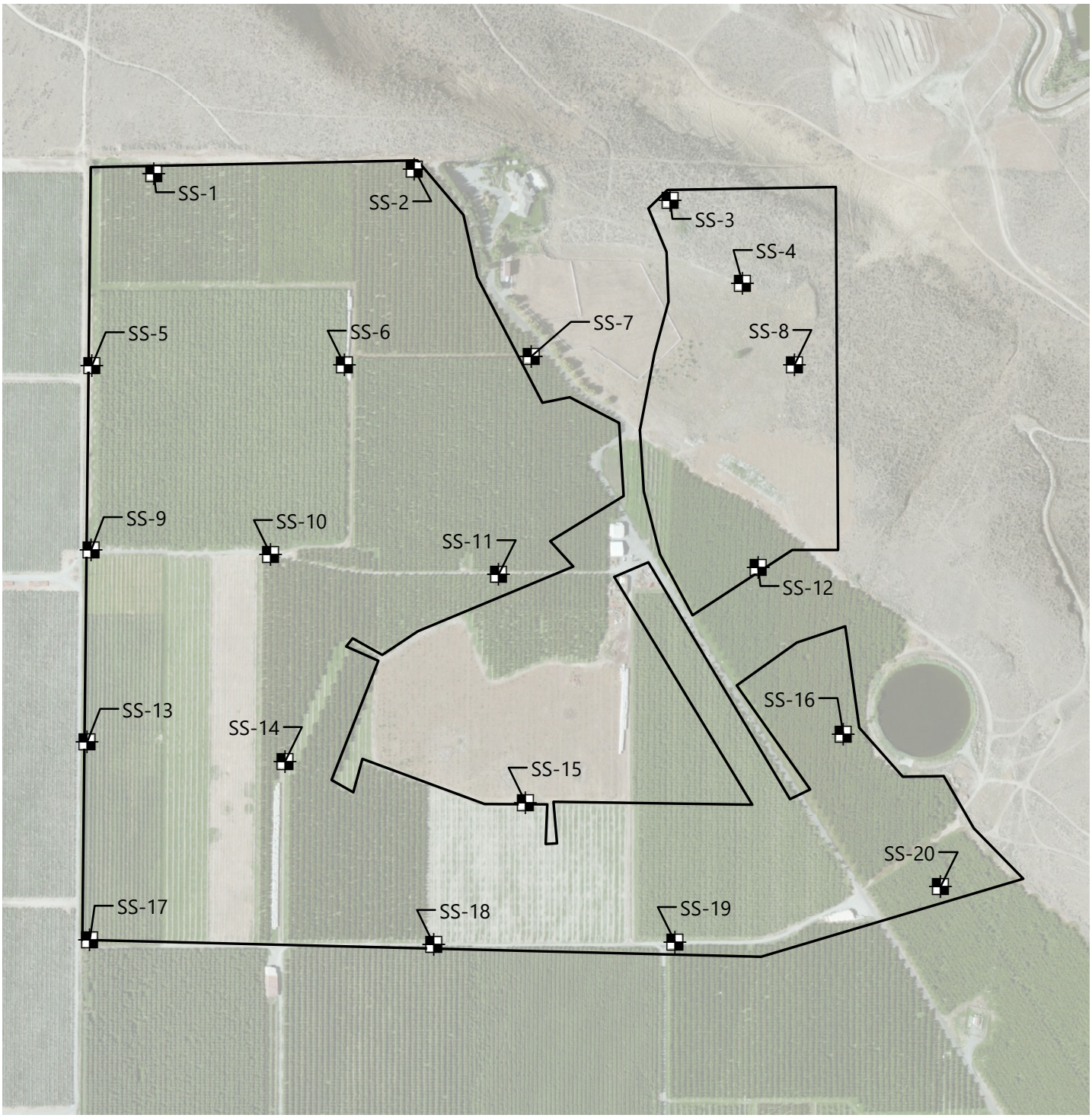
Wesley Garcia Date
PBS Staff Geologist

Thomas Mergy, LHG Date
Principal - Hydrogeologist

Attachments: Figure 1. Soil Sample Locations
Table 1. Analytical Results
Appendix A. Laboratory Report

Figures

Figure 1. Soil Sample Locations



SOURCES: ESRI WORLD IMAGERY, DATED AUGUST 2020
PROJECTION: NAD 2011 WA STATE PLANE NORTH LAMBERT INTL FT

LEGEND

- Soil Sample Location
- Approximate Boundary of Proposed Development

N

SCALE: 1 " = 500 feet

0 250 500 1,000 Feet

PREPARED FOR: MONSON DEVELOPMENT

L:\Projects\66000\66336\66336-000_GIS\Fig2_SitePlan.mxd

PBS

SITE PLAN

MONSON DEVELOPMENT
1276 N BERMUDA WAY
RICHLAND, WASHINGTON

JUL 2021
66336.000

FIGURE
2

Tables

Table 1. Analytical Results

TABLE 1
ANALYTICAL RESULTS
Monson Development
Richland, Washington
PBS Project No. 66336.000

Location	Depth (Inches)	Result mg/kg					
		Metals[a]		Organochlorine Pesticides[b]			
		Arsenic	Lead	4,4'-DDE	4,4'-DDD	4,4'-DDT	Others
Soil Sampling Coleected on July 7, 2021							
SS-1	6 to 12	5.16	8.31	ND	ND	ND	ND
SS-2	6 to 12	4.16	7.05	ND	ND	ND	ND
SS-3	6 to 12	5.58	7.13	ND	ND	ND	ND
SS-4	6 to 12	3.38	5.79	ND	ND	ND	ND
SS-5	6 to 12	5.08	8.65	ND	ND	ND	ND
SS-6	6 to 12	6.38	8.00	ND	ND	ND	ND
SS-7	6 to 12	4.56	7.73	ND	ND	ND	ND
SS-8	6 to 12	3.50	5.75	ND	ND	ND	ND
SS-9	6 to 12	4.31	6.08	ND	ND	ND	ND
SS-10	6 to 12	6.01	8.50	ND	ND	ND	ND
SS-11	6 to 12	4.70	7.85	ND	ND	ND	ND
SS-12	6 to 12	6.9	10.9	ND	ND	ND	ND
SS-13	6 to 12	10.1	10.2	ND	ND	ND	ND
SS-14	6 to 12	7.43	8.74	ND	ND	ND	ND
SS-15	6 to 12	6.86	9.73	ND	ND	ND	ND
SS-16	6 to 12	7.51	9.52	ND	ND	ND	ND
SS-17	6 to 12	7.88	8.39	ND	ND	ND	ND
SS-18	6 to 12	5.86	8.24	ND	ND	ND	ND
SS-19	6 to 12	5.91	7.66	ND	ND	ND	ND
SS-20	6 to 12	5.05	8.03	ND	ND	ND	ND
Adopted Criteria[c]		**20**	**250**	**2.9**	**2.4**	**3**	**Variable**

Notes:
ND indicates analyte not detected at or above laboratory reporting limit

Abbreviations & Acronyms
mg/kg - milligrams per kilogram

Footnotes:
[a] Analyzed by Environmental Protection Agency Method 6020B
[b] Analyzed by Environmental Protection Agency Method 8081B

[c] Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900

Appendix A
Laboratory Report

ANALYTICAL REPORT

July 21, 2021

PBS Engineering & Env.- WA

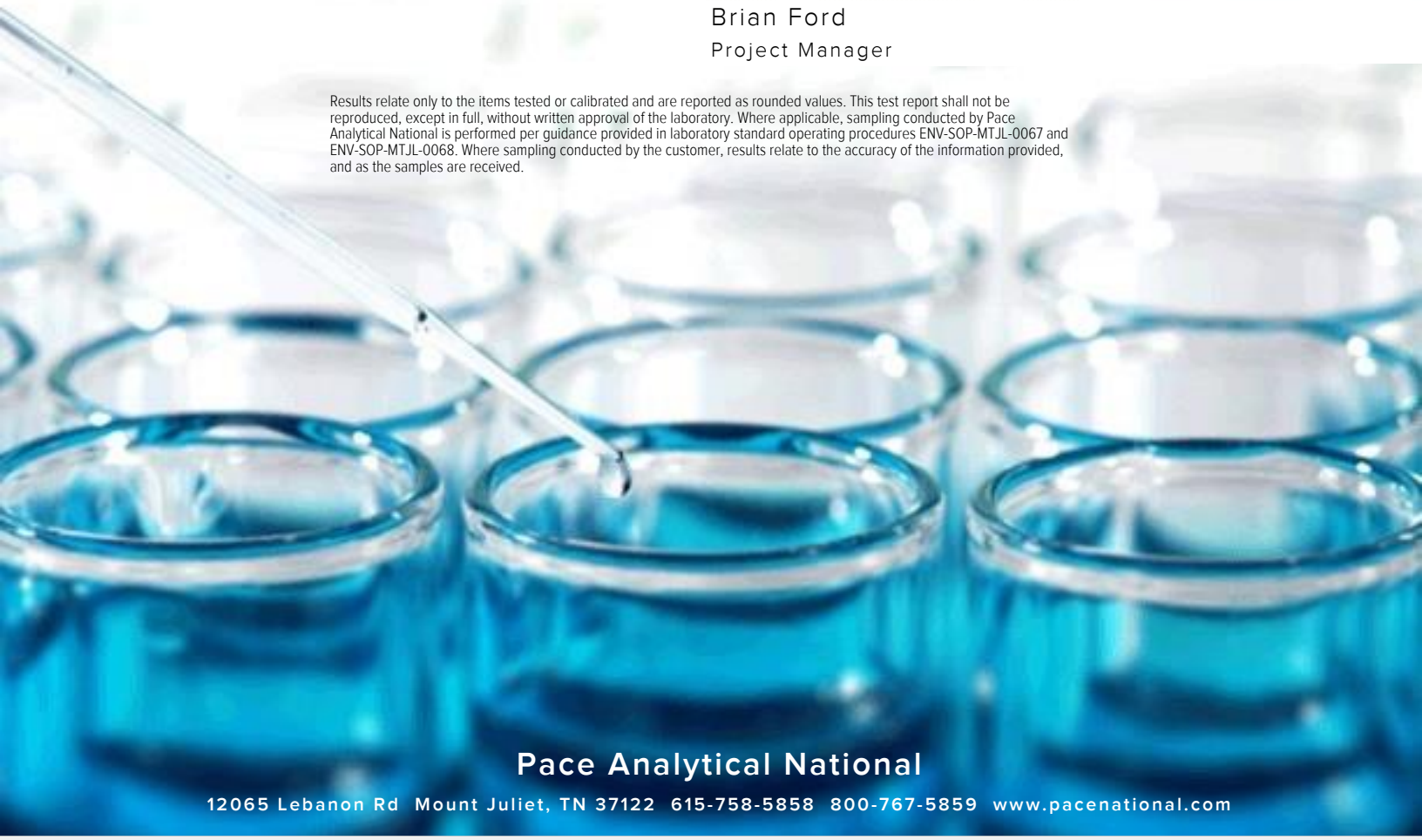
Sample Delivery Group:	L1376445
Samples Received:	07/09/2021
Project Number:	66336.000/0003/002
Description:	Menson

Report To: Kanani Patricio-Young
400 Bradley Blvd.
Ste. 106
Richland, WA 99352

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 3

Cn: Case Narrative 7

Sr: Sample Results 8

SS-1 L1376445-01 8

SS-2 L1376445-02 9

SS-3 L1376445-03 10

SS-4 L1376445-04 11

SS-5 L1376445-05 12

SS-6 L1376445-06 13

SS-7 L1376445-07 14

SS-8 L1376445-08 15

SS-9 L1376445-09 16

SS-10 L1376445-10 17

SS-11 L1376445-11 18

SS-12 L1376445-12 19

SS-13 L1376445-13 20

SS-14 L1376445-14 21

SS-15 L1376445-15 22

SS-16 L1376445-16 23

SS-17 L1376445-17 24

SS-18 L1376445-18 25

SS-19 L1376445-19 26

SS-20 L1376445-20 27

Qc: Quality Control Summary 28

Total Solids by Method 2540 G-2011 28

Metals (ICPMS) by Method 6020B 31

Pesticides (GC) by Method 8081B 32

Gl: Glossary of Terms 37

Al: Accreditations & Locations 38

Sc: Sample Chain of Custody 39

SS-1 L1376445-01 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 08:00 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703826	1	07/13/21 09:25	07/13/21 09:33	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:21	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/14/21 19:10	AO	Mt. Juliet, TN

SS-2 L1376445-02 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 08:30 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703826	1	07/13/21 09:25	07/13/21 09:33	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:24	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/14/21 19:17	AO	Mt. Juliet, TN

SS-3 L1376445-03 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 11:30 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703826	1	07/13/21 09:25	07/13/21 09:33	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:28	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/20/21 17:07	JMB	Mt. Juliet, TN

SS-4 L1376445-04 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 14:45 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703826	1	07/13/21 09:25	07/13/21 09:33	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:38	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/20/21 17:14	JMB	Mt. Juliet, TN

SS-5 L1376445-05 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 09:45 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703826	1	07/13/21 09:25	07/13/21 09:33	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:41	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/20/21 17:21	JMB	Mt. Juliet, TN

SS-6 L1376445-06 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 09:00 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703826	1	07/13/21 09:25	07/13/21 09:33	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:44	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/20/21 17:28	JMB	Mt. Juliet, TN

SS-7 L1376445-07 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 08:45 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703826	1	07/13/21 09:25	07/13/21 09:33	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:47	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/20/21 17:36	JMB	Mt. Juliet, TN

SS-8 L1376445-08 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 14:15 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703826	1	07/13/21 09:25	07/13/21 09:33	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:51	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/20/21 17:43	JMB	Mt. Juliet, TN

SS-9 L1376445-09 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 10:00 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703826	1	07/13/21 09:25	07/13/21 09:33	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:54	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/20/21 17:49	JMB	Mt. Juliet, TN

SS-10 L1376445-10 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 10:30 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:05	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/20/21 17:56	JMB	Mt. Juliet, TN

SS-11 L1376445-11 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 11:00 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 00:57	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/20/21 18:03	JMB	Mt. Juliet, TN

SS-12 L1376445-12 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 14:00 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 01:00	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/15/21 14:22	AO	Mt. Juliet, TN

SS-13 L1376445-13 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 12:00 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 01:04	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/15/21 14:29	AO	Mt. Juliet, TN

SS-14 L1376445-14 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 12:15 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 01:07	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/15/21 14:36	AO	Mt. Juliet, TN

SS-15 L1376445-15 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 13:00 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 01:17	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/15/21 14:58	AO	Mt. Juliet, TN

SS-16 L1376445-16 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 13:45 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 01:20	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1703895	1	07/14/21 09:30	07/15/21 15:05	AO	Mt. Juliet, TN

SS-17 L1376445-17 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 12:30 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 01:23	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1705260	1	07/14/21 15:09	07/15/21 21:47	JMB	Mt. Juliet, TN

SS-18 L1376445-18 Solid

Collected by: Wesley Garcia | Collected date/time: 07/08/21 12:45 | Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 01:26	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1705260	1	07/14/21 15:09	07/15/21 21:59	JMB	Mt. Juliet, TN

SS-19 L1376445-19 Solid

Collected by: Wesley Garcia
Collected date/time: 07/08/21 13:15
Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703827	1	07/13/21 11:51	07/13/21 11:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 01:30	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1705260	1	07/14/21 15:09	07/15/21 22:12	JMB	Mt. Juliet, TN

SS-20 L1376445-20 Solid

Collected by: Wesley Garcia
Collected date/time: 07/08/21 13:30
Received date/time: 07/09/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1703829	1	07/13/21 11:41	07/13/21 11:48	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1703985	5	07/16/21 15:35	07/17/21 01:33	JPD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1705260	1	07/14/21 15:09	07/15/21 22:24	JMB	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.0		1	07/13/2021 09:33	WG1703826

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	5.16		1.21	5	07/17/2021 00:21	WG1703985
Lead	8.31		2.41	5	07/17/2021 00:21	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0241	1	07/14/2021 19:10	WG1703895
Alpha BHC	ND		0.0241	1	07/14/2021 19:10	WG1703895
Beta BHC	ND		0.0241	1	07/14/2021 19:10	WG1703895
Delta BHC	ND		0.0241	1	07/14/2021 19:10	WG1703895
Gamma BHC	ND		0.0241	1	07/14/2021 19:10	WG1703895
Chlordane	ND		0.362	1	07/14/2021 19:10	WG1703895
4,4-DDD	ND		0.0241	1	07/14/2021 19:10	WG1703895
4,4-DDE	ND		0.0241	1	07/14/2021 19:10	WG1703895
4,4-DDT	ND		0.0241	1	07/14/2021 19:10	WG1703895
Dieldrin	ND		0.0241	1	07/14/2021 19:10	WG1703895
Endosulfan I	ND		0.0241	1	07/14/2021 19:10	WG1703895
Endosulfan II	ND		0.0241	1	07/14/2021 19:10	WG1703895
Endosulfan sulfate	ND		0.0241	1	07/14/2021 19:10	WG1703895
Endrin	ND		0.0241	1	07/14/2021 19:10	WG1703895
Endrin aldehyde	ND		0.0241	1	07/14/2021 19:10	WG1703895
Endrin ketone	ND		0.0241	1	07/14/2021 19:10	WG1703895
Hexachlorobenzene	ND		0.0241	1	07/14/2021 19:10	WG1703895
Heptachlor	ND		0.0241	1	07/14/2021 19:10	WG1703895
Heptachlor epoxide	ND		0.0241	1	07/14/2021 19:10	WG1703895
Methoxychlor	ND		0.0241	1	07/14/2021 19:10	WG1703895
Toxaphene	ND		0.482	1	07/14/2021 19:10	WG1703895
(S) Decachlorobiphenyl	*61.0*		*10.0-135*		*07/14/2021 19:10*	WG1703895
(S) Tetrachloro-m-xylene	*57.2*		*10.0-139*		*07/14/2021 19:10*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.2		1	07/13/2021 09:33	WG1703826

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	4.16		1.13	5	07/17/2021 00:24	WG1703985
Lead	7.05		2.27	5	07/17/2021 00:24	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0227	1	07/14/2021 19:17	WG1703895
Alpha BHC	ND		0.0227	1	07/14/2021 19:17	WG1703895
Beta BHC	ND		0.0227	1	07/14/2021 19:17	WG1703895
Delta BHC	ND		0.0227	1	07/14/2021 19:17	WG1703895
Gamma BHC	ND		0.0227	1	07/14/2021 19:17	WG1703895
Chlordane	ND		0.340	1	07/14/2021 19:17	WG1703895
4,4-DDD	ND		0.0227	1	07/14/2021 19:17	WG1703895
4,4-DDE	ND		0.0227	1	07/14/2021 19:17	WG1703895
4,4-DDT	ND		0.0227	1	07/14/2021 19:17	WG1703895
Dieldrin	ND		0.0227	1	07/14/2021 19:17	WG1703895
Endosulfan I	ND		0.0227	1	07/14/2021 19:17	WG1703895
Endosulfan II	ND		0.0227	1	07/14/2021 19:17	WG1703895
Endosulfan sulfate	ND		0.0227	1	07/14/2021 19:17	WG1703895
Endrin	ND		0.0227	1	07/14/2021 19:17	WG1703895
Endrin aldehyde	ND		0.0227	1	07/14/2021 19:17	WG1703895
Endrin ketone	ND		0.0227	1	07/14/2021 19:17	WG1703895
Hexachlorobenzene	ND		0.0227	1	07/14/2021 19:17	WG1703895
Heptachlor	ND		0.0227	1	07/14/2021 19:17	WG1703895
Heptachlor epoxide	ND		0.0227	1	07/14/2021 19:17	WG1703895
Methoxychlor	ND		0.0227	1	07/14/2021 19:17	WG1703895
Toxaphene	ND		0.453	1	07/14/2021 19:17	WG1703895
(S) Decachlorobiphenyl	*66.2*		*10.0-135*		*07/14/2021 19:17*	WG1703895
(S) Tetrachloro-m-xylene	*60.5*		*10.0-139*		*07/14/2021 19:17*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.1		1	07/13/2021 09:33	WG1703826

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	5.58		1.01	5	07/17/2021 00:28	WG1703985
Lead	7.13		2.02	5	07/17/2021 00:28	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0202	1	07/20/2021 17:07	WG1703895
Alpha BHC	ND		0.0202	1	07/20/2021 17:07	WG1703895
Beta BHC	ND		0.0202	1	07/20/2021 17:07	WG1703895
Delta BHC	ND		0.0202	1	07/20/2021 17:07	WG1703895
Gamma BHC	ND		0.0202	1	07/20/2021 17:07	WG1703895
Chlordane	ND		0.303	1	07/20/2021 17:07	WG1703895
4,4-DDD	ND		0.0202	1	07/20/2021 17:07	WG1703895
4,4-DDE	ND		0.0202	1	07/20/2021 17:07	WG1703895
4,4-DDT	ND		0.0202	1	07/20/2021 17:07	WG1703895
Dieldrin	ND		0.0202	1	07/20/2021 17:07	WG1703895
Endosulfan I	ND		0.0202	1	07/20/2021 17:07	WG1703895
Endosulfan II	ND		0.0202	1	07/20/2021 17:07	WG1703895
Endosulfan sulfate	ND		0.0202	1	07/20/2021 17:07	WG1703895
Endrin	ND		0.0202	1	07/20/2021 17:07	WG1703895
Endrin aldehyde	ND		0.0202	1	07/20/2021 17:07	WG1703895
Endrin ketone	ND		0.0202	1	07/20/2021 17:07	WG1703895
Hexachlorobenzene	ND		0.0202	1	07/20/2021 17:07	WG1703895
Heptachlor	ND		0.0202	1	07/20/2021 17:07	WG1703895
Heptachlor epoxide	ND		0.0202	1	07/20/2021 17:07	WG1703895
Methoxychlor	ND		0.0202	1	07/20/2021 17:07	WG1703895
Toxaphene	ND		0.404	1	07/20/2021 17:07	WG1703895
(S) Decachlorobiphenyl	*45.5*		*10.0-135*		*07/20/2021 17:07*	WG1703895
(S) Tetrachloro-m-xylene	*45.1*		*10.0-139*		*07/20/2021 17:07*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.4		1	07/13/2021 09:33	WG1703826

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.38		1.01	5	07/17/2021 00:38	WG1703985
Lead	5.79		2.01	5	07/17/2021 00:38	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0201	1	07/20/2021 17:14	WG1703895
Alpha BHC	ND		0.0201	1	07/20/2021 17:14	WG1703895
Beta BHC	ND		0.0201	1	07/20/2021 17:14	WG1703895
Delta BHC	ND		0.0201	1	07/20/2021 17:14	WG1703895
Gamma BHC	ND		0.0201	1	07/20/2021 17:14	WG1703895
Chlordane	ND		0.302	1	07/20/2021 17:14	WG1703895
4,4-DDD	ND		0.0201	1	07/20/2021 17:14	WG1703895
4,4-DDE	ND		0.0201	1	07/20/2021 17:14	WG1703895
4,4-DDT	ND		0.0201	1	07/20/2021 17:14	WG1703895
Dieldrin	ND		0.0201	1	07/20/2021 17:14	WG1703895
Endosulfan I	ND		0.0201	1	07/20/2021 17:14	WG1703895
Endosulfan II	ND		0.0201	1	07/20/2021 17:14	WG1703895
Endosulfan sulfate	ND		0.0201	1	07/20/2021 17:14	WG1703895
Endrin	ND		0.0201	1	07/20/2021 17:14	WG1703895
Endrin aldehyde	ND		0.0201	1	07/20/2021 17:14	WG1703895
Endrin ketone	ND		0.0201	1	07/20/2021 17:14	WG1703895
Hexachlorobenzene	ND		0.0201	1	07/20/2021 17:14	WG1703895
Heptachlor	ND		0.0201	1	07/20/2021 17:14	WG1703895
Heptachlor epoxide	ND		0.0201	1	07/20/2021 17:14	WG1703895
Methoxychlor	ND		0.0201	1	07/20/2021 17:14	WG1703895
Toxaphene	ND		0.402	1	07/20/2021 17:14	WG1703895
(S) Decachlorobiphenyl	*55.5*		*10.0-135*		*07/20/2021 17:14*	WG1703895
(S) Tetrachloro-m-xylene	*54.0*		*10.0-139*		*07/20/2021 17:14*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.5		1	07/13/2021 09:33	WG1703826

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	5.08		1.04	5	07/17/2021 00:41	WG1703985
Lead	8.65		2.07	5	07/17/2021 00:41	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0207	1	07/20/2021 17:21	WG1703895
Alpha BHC	ND		0.0207	1	07/20/2021 17:21	WG1703895
Beta BHC	ND		0.0207	1	07/20/2021 17:21	WG1703895
Delta BHC	ND		0.0207	1	07/20/2021 17:21	WG1703895
Gamma BHC	ND		0.0207	1	07/20/2021 17:21	WG1703895
Chlordane	ND		0.311	1	07/20/2021 17:21	WG1703895
4,4-DDD	ND		0.0207	1	07/20/2021 17:21	WG1703895
4,4-DDE	ND		0.0207	1	07/20/2021 17:21	WG1703895
4,4-DDT	ND		0.0207	1	07/20/2021 17:21	WG1703895
Dieldrin	ND		0.0207	1	07/20/2021 17:21	WG1703895
Endosulfan I	ND		0.0207	1	07/20/2021 17:21	WG1703895
Endosulfan II	ND		0.0207	1	07/20/2021 17:21	WG1703895
Endosulfan sulfate	ND		0.0207	1	07/20/2021 17:21	WG1703895
Endrin	ND		0.0207	1	07/20/2021 17:21	WG1703895
Endrin aldehyde	ND		0.0207	1	07/20/2021 17:21	WG1703895
Endrin ketone	ND		0.0207	1	07/20/2021 17:21	WG1703895
Hexachlorobenzene	ND		0.0207	1	07/20/2021 17:21	WG1703895
Heptachlor	ND		0.0207	1	07/20/2021 17:21	WG1703895
Heptachlor epoxide	ND		0.0207	1	07/20/2021 17:21	WG1703895
Methoxychlor	ND		0.0207	1	07/20/2021 17:21	WG1703895
Toxaphene	ND		0.415	1	07/20/2021 17:21	WG1703895
(S) Decachlorobiphenyl	*62.4*		*10.0-135*		*07/20/2021 17:21*	WG1703895
(S) Tetrachloro-m-xylene	*61.3*		*10.0-139*		*07/20/2021 17:21*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.5		1	07/13/2021 09:33	WG1703826

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	6.38		1.23	5	07/17/2021 00:44	WG1703985
Lead	8.00		2.45	5	07/17/2021 00:44	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0245	1	07/20/2021 17:28	WG1703895
Alpha BHC	ND		0.0245	1	07/20/2021 17:28	WG1703895
Beta BHC	ND		0.0245	1	07/20/2021 17:28	WG1703895
Delta BHC	ND		0.0245	1	07/20/2021 17:28	WG1703895
Gamma BHC	ND		0.0245	1	07/20/2021 17:28	WG1703895
Chlordane	ND		0.368	1	07/20/2021 17:28	WG1703895
4,4-DDD	ND		0.0245	1	07/20/2021 17:28	WG1703895
4,4-DDE	ND		0.0245	1	07/20/2021 17:28	WG1703895
4,4-DDT	ND		0.0245	1	07/20/2021 17:28	WG1703895
Dieldrin	ND		0.0245	1	07/20/2021 17:28	WG1703895
Endosulfan I	ND		0.0245	1	07/20/2021 17:28	WG1703895
Endosulfan II	ND		0.0245	1	07/20/2021 17:28	WG1703895
Endosulfan sulfate	ND		0.0245	1	07/20/2021 17:28	WG1703895
Endrin	ND		0.0245	1	07/20/2021 17:28	WG1703895
Endrin aldehyde	ND		0.0245	1	07/20/2021 17:28	WG1703895
Endrin ketone	ND		0.0245	1	07/20/2021 17:28	WG1703895
Hexachlorobenzene	ND		0.0245	1	07/20/2021 17:28	WG1703895
Heptachlor	ND		0.0245	1	07/20/2021 17:28	WG1703895
Heptachlor epoxide	ND		0.0245	1	07/20/2021 17:28	WG1703895
Methoxychlor	ND		0.0245	1	07/20/2021 17:28	WG1703895
Toxaphene	ND		0.491	1	07/20/2021 17:28	WG1703895
(S) Decachlorobiphenyl	*69.7*		*10.0-135*		*07/20/2021 17:28*	WG1703895
(S) Tetrachloro-m-xylene	*74.7*		*10.0-139*		*07/20/2021 17:28*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.5		1	07/13/2021 09:33	WG1703826

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	4.56		1.10	5	07/17/2021 00:47	WG1703985
Lead	7.73		2.21	5	07/17/2021 00:47	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0221	1	07/20/2021 17:36	WG1703895
Alpha BHC	ND		0.0221	1	07/20/2021 17:36	WG1703895
Beta BHC	ND		0.0221	1	07/20/2021 17:36	WG1703895
Delta BHC	ND		0.0221	1	07/20/2021 17:36	WG1703895
Gamma BHC	ND		0.0221	1	07/20/2021 17:36	WG1703895
Chlordane	ND		0.331	1	07/20/2021 17:36	WG1703895
4,4-DDD	ND		0.0221	1	07/20/2021 17:36	WG1703895
4,4-DDE	ND		0.0221	1	07/20/2021 17:36	WG1703895
4,4-DDT	ND		0.0221	1	07/20/2021 17:36	WG1703895
Dieldrin	ND		0.0221	1	07/20/2021 17:36	WG1703895
Endosulfan I	ND		0.0221	1	07/20/2021 17:36	WG1703895
Endosulfan II	ND		0.0221	1	07/20/2021 17:36	WG1703895
Endosulfan sulfate	ND		0.0221	1	07/20/2021 17:36	WG1703895
Endrin	ND		0.0221	1	07/20/2021 17:36	WG1703895
Endrin aldehyde	ND		0.0221	1	07/20/2021 17:36	WG1703895
Endrin ketone	ND		0.0221	1	07/20/2021 17:36	WG1703895
Hexachlorobenzene	ND		0.0221	1	07/20/2021 17:36	WG1703895
Heptachlor	ND		0.0221	1	07/20/2021 17:36	WG1703895
Heptachlor epoxide	ND		0.0221	1	07/20/2021 17:36	WG1703895
Methoxychlor	ND		0.0221	1	07/20/2021 17:36	WG1703895
Toxaphene	ND		0.442	1	07/20/2021 17:36	WG1703895
(S) Decachlorobiphenyl	*73.5*		*10.0-135*		*07/20/2021 17:36*	WG1703895
(S) Tetrachloro-m-xylene	*69.2*		*10.0-139*		*07/20/2021 17:36*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.4		1	07/13/2021 09:33	WG1703826

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.50		1.01	5	07/17/2021 00:51	WG1703985
Lead	5.75		2.01	5	07/17/2021 00:51	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0201	1	07/20/2021 17:43	WG1703895
Alpha BHC	ND		0.0201	1	07/20/2021 17:43	WG1703895
Beta BHC	ND		0.0201	1	07/20/2021 17:43	WG1703895
Delta BHC	ND		0.0201	1	07/20/2021 17:43	WG1703895
Gamma BHC	ND		0.0201	1	07/20/2021 17:43	WG1703895
Chlordane	ND		0.302	1	07/20/2021 17:43	WG1703895
4,4-DDD	ND		0.0201	1	07/20/2021 17:43	WG1703895
4,4-DDE	ND		0.0201	1	07/20/2021 17:43	WG1703895
4,4-DDT	ND		0.0201	1	07/20/2021 17:43	WG1703895
Dieldrin	ND		0.0201	1	07/20/2021 17:43	WG1703895
Endosulfan I	ND		0.0201	1	07/20/2021 17:43	WG1703895
Endosulfan II	ND		0.0201	1	07/20/2021 17:43	WG1703895
Endosulfan sulfate	ND		0.0201	1	07/20/2021 17:43	WG1703895
Endrin	ND		0.0201	1	07/20/2021 17:43	WG1703895
Endrin aldehyde	ND		0.0201	1	07/20/2021 17:43	WG1703895
Endrin ketone	ND		0.0201	1	07/20/2021 17:43	WG1703895
Hexachlorobenzene	ND		0.0201	1	07/20/2021 17:43	WG1703895
Heptachlor	ND		0.0201	1	07/20/2021 17:43	WG1703895
Heptachlor epoxide	ND		0.0201	1	07/20/2021 17:43	WG1703895
Methoxychlor	ND		0.0201	1	07/20/2021 17:43	WG1703895
Toxaphene	ND		0.403	1	07/20/2021 17:43	WG1703895
(S) Decachlorobiphenyl	*59.5*		*10.0-135*		*07/20/2021 17:43*	WG1703895
(S) Tetrachloro-m-xylene	*56.2*		*10.0-139*		*07/20/2021 17:43*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.6		1	07/13/2021 09:33	WG1703826

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	4.31		1.23	5	07/17/2021 00:54	WG1703985
Lead	6.08		2.45	5	07/17/2021 00:54	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0245	1	07/20/2021 17:49	WG1703895
Alpha BHC	ND		0.0245	1	07/20/2021 17:49	WG1703895
Beta BHC	ND		0.0245	1	07/20/2021 17:49	WG1703895
Delta BHC	ND		0.0245	1	07/20/2021 17:49	WG1703895
Gamma BHC	ND		0.0245	1	07/20/2021 17:49	WG1703895
Chlordane	ND		0.368	1	07/20/2021 17:49	WG1703895
4,4-DDD	ND		0.0245	1	07/20/2021 17:49	WG1703895
4,4-DDE	ND		0.0245	1	07/20/2021 17:49	WG1703895
4,4-DDT	ND		0.0245	1	07/20/2021 17:49	WG1703895
Dieldrin	ND		0.0245	1	07/20/2021 17:49	WG1703895
Endosulfan I	ND		0.0245	1	07/20/2021 17:49	WG1703895
Endosulfan II	ND		0.0245	1	07/20/2021 17:49	WG1703895
Endosulfan sulfate	ND		0.0245	1	07/20/2021 17:49	WG1703895
Endrin	ND		0.0245	1	07/20/2021 17:49	WG1703895
Endrin aldehyde	ND		0.0245	1	07/20/2021 17:49	WG1703895
Endrin ketone	ND		0.0245	1	07/20/2021 17:49	WG1703895
Hexachlorobenzene	ND		0.0245	1	07/20/2021 17:49	WG1703895
Heptachlor	ND		0.0245	1	07/20/2021 17:49	WG1703895
Heptachlor epoxide	ND		0.0245	1	07/20/2021 17:49	WG1703895
Methoxychlor	ND		0.0245	1	07/20/2021 17:49	WG1703895
Toxaphene	ND		0.490	1	07/20/2021 17:49	WG1703895
(S) Decachlorobiphenyl	*50.5*		*10.0-135*		*07/20/2021 17:49*	WG1703895
(S) Tetrachloro-m-xylene	*60.4*		*10.0-139*		*07/20/2021 17:49*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.2		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	6.01		1.06	5	07/17/2021 00:05	WG1703985
Lead	8.50		2.12	5	07/17/2021 00:05	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0212	1	07/20/2021 17:56	WG1703895
Alpha BHC	ND		0.0212	1	07/20/2021 17:56	WG1703895
Beta BHC	ND		0.0212	1	07/20/2021 17:56	WG1703895
Delta BHC	ND		0.0212	1	07/20/2021 17:56	WG1703895
Gamma BHC	ND		0.0212	1	07/20/2021 17:56	WG1703895
Chlordane	ND		0.319	1	07/20/2021 17:56	WG1703895
4,4-DDD	ND		0.0212	1	07/20/2021 17:56	WG1703895
4,4-DDE	ND		0.0212	1	07/20/2021 17:56	WG1703895
4,4-DDT	ND		0.0212	1	07/20/2021 17:56	WG1703895
Dieldrin	ND		0.0212	1	07/20/2021 17:56	WG1703895
Endosulfan I	ND		0.0212	1	07/20/2021 17:56	WG1703895
Endosulfan II	ND		0.0212	1	07/20/2021 17:56	WG1703895
Endosulfan sulfate	ND		0.0212	1	07/20/2021 17:56	WG1703895
Endrin	ND		0.0212	1	07/20/2021 17:56	WG1703895
Endrin aldehyde	ND		0.0212	1	07/20/2021 17:56	WG1703895
Endrin ketone	ND		0.0212	1	07/20/2021 17:56	WG1703895
Hexachlorobenzene	ND		0.0212	1	07/20/2021 17:56	WG1703895
Heptachlor	ND		0.0212	1	07/20/2021 17:56	WG1703895
Heptachlor epoxide	ND		0.0212	1	07/20/2021 17:56	WG1703895
Methoxychlor	ND		0.0212	1	07/20/2021 17:56	WG1703895
Toxaphene	ND		0.425	1	07/20/2021 17:56	WG1703895
(S) Decachlorobiphenyl	*55.4*		*10.0-135*		*07/20/2021 17:56*	WG1703895
(S) Tetrachloro-m-xylene	*54.2*		*10.0-139*		*07/20/2021 17:56*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.7		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	4.70		1.15	5	07/17/2021 00:57	WG1703985
Lead	7.85		2.31	5	07/17/2021 00:57	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0231	1	07/20/2021 18:03	WG1703895
Alpha BHC	ND		0.0231	1	07/20/2021 18:03	WG1703895
Beta BHC	ND		0.0231	1	07/20/2021 18:03	WG1703895
Delta BHC	ND		0.0231	1	07/20/2021 18:03	WG1703895
Gamma BHC	ND		0.0231	1	07/20/2021 18:03	WG1703895
Chlordane	ND		0.346	1	07/20/2021 18:03	WG1703895
4,4-DDD	ND		0.0231	1	07/20/2021 18:03	WG1703895
4,4-DDE	ND		0.0231	1	07/20/2021 18:03	WG1703895
4,4-DDT	ND		0.0231	1	07/20/2021 18:03	WG1703895
Dieldrin	ND		0.0231	1	07/20/2021 18:03	WG1703895
Endosulfan I	ND		0.0231	1	07/20/2021 18:03	WG1703895
Endosulfan II	ND		0.0231	1	07/20/2021 18:03	WG1703895
Endosulfan sulfate	ND		0.0231	1	07/20/2021 18:03	WG1703895
Endrin	ND		0.0231	1	07/20/2021 18:03	WG1703895
Endrin aldehyde	ND		0.0231	1	07/20/2021 18:03	WG1703895
Endrin ketone	ND		0.0231	1	07/20/2021 18:03	WG1703895
Hexachlorobenzene	ND		0.0231	1	07/20/2021 18:03	WG1703895
Heptachlor	ND		0.0231	1	07/20/2021 18:03	WG1703895
Heptachlor epoxide	ND		0.0231	1	07/20/2021 18:03	WG1703895
Methoxychlor	ND		0.0231	1	07/20/2021 18:03	WG1703895
Toxaphene	ND		0.462	1	07/20/2021 18:03	WG1703895
(S) Decachlorobiphenyl	*57.6*		*10.0-135*		*07/20/2021 18:03*	WG1703895
(S) Tetrachloro-m-xylene	*57.9*		*10.0-139*		*07/20/2021 18:03*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.7		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	6.90		1.15	5	07/17/2021 01:00	WG1703985
Lead	10.9		2.31	5	07/17/2021 01:00	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0231	1	07/15/2021 14:22	WG1703895
Alpha BHC	ND		0.0231	1	07/15/2021 14:22	WG1703895
Beta BHC	ND		0.0231	1	07/15/2021 14:22	WG1703895
Delta BHC	ND		0.0231	1	07/15/2021 14:22	WG1703895
Gamma BHC	ND		0.0231	1	07/15/2021 14:22	WG1703895
Chlordane	ND		0.346	1	07/15/2021 14:22	WG1703895
4,4-DDD	ND		0.0231	1	07/15/2021 14:22	WG1703895
4,4-DDE	ND		0.0231	1	07/15/2021 14:22	WG1703895
4,4-DDT	ND		0.0231	1	07/15/2021 14:22	WG1703895
Dieldrin	ND		0.0231	1	07/15/2021 14:22	WG1703895
Endosulfan I	ND		0.0231	1	07/15/2021 14:22	WG1703895
Endosulfan II	ND		0.0231	1	07/15/2021 14:22	WG1703895
Endosulfan sulfate	ND		0.0231	1	07/15/2021 14:22	WG1703895
Endrin	ND		0.0231	1	07/15/2021 14:22	WG1703895
Endrin aldehyde	ND		0.0231	1	07/15/2021 14:22	WG1703895
Endrin ketone	ND		0.0231	1	07/15/2021 14:22	WG1703895
Hexachlorobenzene	ND		0.0231	1	07/15/2021 14:22	WG1703895
Heptachlor	ND		0.0231	1	07/15/2021 14:22	WG1703895
Heptachlor epoxide	ND		0.0231	1	07/15/2021 14:22	WG1703895
Methoxychlor	ND		0.0231	1	07/15/2021 14:22	WG1703895
Toxaphene	ND		0.461	1	07/15/2021 14:22	WG1703895
(S) Decachlorobiphenyl	*43.5*		*10.0-135*		*07/15/2021 14:22*	WG1703895
(S) Tetrachloro-m-xylene	*43.5*		*10.0-139*		*07/15/2021 14:22*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.9		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	10.1		1.19	5	07/17/2021 01:04	WG1703985
Lead	10.2		2.38	5	07/17/2021 01:04	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0238	1	07/15/2021 14:29	WG1703895
Alpha BHC	ND		0.0238	1	07/15/2021 14:29	WG1703895
Beta BHC	ND		0.0238	1	07/15/2021 14:29	WG1703895
Delta BHC	ND		0.0238	1	07/15/2021 14:29	WG1703895
Gamma BHC	ND		0.0238	1	07/15/2021 14:29	WG1703895
Chlordane	ND		0.358	1	07/15/2021 14:29	WG1703895
4,4-DDD	ND		0.0238	1	07/15/2021 14:29	WG1703895
4,4-DDE	ND		0.0238	1	07/15/2021 14:29	WG1703895
4,4-DDT	ND		0.0238	1	07/15/2021 14:29	WG1703895
Dieldrin	ND		0.0238	1	07/15/2021 14:29	WG1703895
Endosulfan I	ND		0.0238	1	07/15/2021 14:29	WG1703895
Endosulfan II	ND		0.0238	1	07/15/2021 14:29	WG1703895
Endosulfan sulfate	ND		0.0238	1	07/15/2021 14:29	WG1703895
Endrin	ND		0.0238	1	07/15/2021 14:29	WG1703895
Endrin aldehyde	ND		0.0238	1	07/15/2021 14:29	WG1703895
Endrin ketone	ND		0.0238	1	07/15/2021 14:29	WG1703895
Hexachlorobenzene	ND		0.0238	1	07/15/2021 14:29	WG1703895
Heptachlor	ND		0.0238	1	07/15/2021 14:29	WG1703895
Heptachlor epoxide	ND		0.0238	1	07/15/2021 14:29	WG1703895
Methoxychlor	ND		0.0238	1	07/15/2021 14:29	WG1703895
Toxaphene	ND		0.477	1	07/15/2021 14:29	WG1703895
(S) Decachlorobiphenyl	*51.8*		*10.0-135*		*07/15/2021 14:29*	WG1703895
(S) Tetrachloro-m-xylene	*56.1*		*10.0-139*		*07/15/2021 14:29*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.2		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	7.43		1.17	5	07/17/2021 01:07	WG1703985
Lead	8.74		2.35	5	07/17/2021 01:07	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0235	1	07/15/2021 14:36	WG1703895
Alpha BHC	ND		0.0235	1	07/15/2021 14:36	WG1703895
Beta BHC	ND		0.0235	1	07/15/2021 14:36	WG1703895
Delta BHC	ND		0.0235	1	07/15/2021 14:36	WG1703895
Gamma BHC	ND		0.0235	1	07/15/2021 14:36	WG1703895
Chlordane	ND		0.352	1	07/15/2021 14:36	WG1703895
4,4-DDD	ND		0.0235	1	07/15/2021 14:36	WG1703895
4,4-DDE	ND		0.0235	1	07/15/2021 14:36	WG1703895
4,4-DDT	ND		0.0235	1	07/15/2021 14:36	WG1703895
Dieldrin	ND		0.0235	1	07/15/2021 14:36	WG1703895
Endosulfan I	ND		0.0235	1	07/15/2021 14:36	WG1703895
Endosulfan II	ND		0.0235	1	07/15/2021 14:36	WG1703895
Endosulfan sulfate	ND		0.0235	1	07/15/2021 14:36	WG1703895
Endrin	ND		0.0235	1	07/15/2021 14:36	WG1703895
Endrin aldehyde	ND		0.0235	1	07/15/2021 14:36	WG1703895
Endrin ketone	ND		0.0235	1	07/15/2021 14:36	WG1703895
Hexachlorobenzene	ND		0.0235	1	07/15/2021 14:36	WG1703895
Heptachlor	ND		0.0235	1	07/15/2021 14:36	WG1703895
Heptachlor epoxide	ND		0.0235	1	07/15/2021 14:36	WG1703895
Methoxychlor	ND		0.0235	1	07/15/2021 14:36	WG1703895
Toxaphene	ND		0.469	1	07/15/2021 14:36	WG1703895
(S) Decachlorobiphenyl	*45.7*		*10.0-135*		*07/15/2021 14:36*	WG1703895
(S) Tetrachloro-m-xylene	*45.4*		*10.0-139*		*07/15/2021 14:36*	WG1703895

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.7		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	6.86		1.09	5	07/17/2021 01:17	WG1703985
Lead	9.73		2.18	5	07/17/2021 01:17	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0218	1	07/15/2021 14:58	WG1703895
Alpha BHC	ND		0.0218	1	07/15/2021 14:58	WG1703895
Beta BHC	ND		0.0218	1	07/15/2021 14:58	WG1703895
Delta BHC	ND		0.0218	1	07/15/2021 14:58	WG1703895
Gamma BHC	ND		0.0218	1	07/15/2021 14:58	WG1703895
Chlordane	ND		0.327	1	07/15/2021 14:58	WG1703895
4,4-DDD	ND		0.0218	1	07/15/2021 14:58	WG1703895
4,4-DDE	ND		0.0218	1	07/15/2021 14:58	WG1703895
4,4-DDT	ND		0.0218	1	07/15/2021 14:58	WG1703895
Dieldrin	ND		0.0218	1	07/15/2021 14:58	WG1703895
Endosulfan I	ND		0.0218	1	07/15/2021 14:58	WG1703895
Endosulfan II	ND		0.0218	1	07/15/2021 14:58	WG1703895
Endosulfan sulfate	ND		0.0218	1	07/15/2021 14:58	WG1703895
Endrin	ND		0.0218	1	07/15/2021 14:58	WG1703895
Endrin aldehyde	ND		0.0218	1	07/15/2021 14:58	WG1703895
Endrin ketone	ND		0.0218	1	07/15/2021 14:58	WG1703895
Hexachlorobenzene	ND		0.0218	1	07/15/2021 14:58	WG1703895
Heptachlor	ND		0.0218	1	07/15/2021 14:58	WG1703895
Heptachlor epoxide	ND		0.0218	1	07/15/2021 14:58	WG1703895
Methoxychlor	ND		0.0218	1	07/15/2021 14:58	WG1703895
Toxaphene	ND		0.436	1	07/15/2021 14:58	WG1703895
(S) Decachlorobiphenyl	*58.1*		*10.0-135*		*07/15/2021 14:58*	WG1703895
(S) Tetrachloro-m-xylene	*62.3*		*10.0-139*		*07/15/2021 14:58*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.8		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	7.51		1.09	5	07/17/2021 01:20	WG1703985
Lead	9.52		2.18	5	07/17/2021 01:20	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND		0.0218	1	07/15/2021 15:05	WG1703895
Alpha BHC	ND		0.0218	1	07/15/2021 15:05	WG1703895
Beta BHC	ND		0.0218	1	07/15/2021 15:05	WG1703895
Delta BHC	ND		0.0218	1	07/15/2021 15:05	WG1703895
Gamma BHC	ND		0.0218	1	07/15/2021 15:05	WG1703895
Chlordane	ND		0.327	1	07/15/2021 15:05	WG1703895
4,4-DDD	ND		0.0218	1	07/15/2021 15:05	WG1703895
4,4-DDE	ND		0.0218	1	07/15/2021 15:05	WG1703895
4,4-DDT	ND		0.0218	1	07/15/2021 15:05	WG1703895
Dieldrin	ND		0.0218	1	07/15/2021 15:05	WG1703895
Endosulfan I	ND		0.0218	1	07/15/2021 15:05	WG1703895
Endosulfan II	ND		0.0218	1	07/15/2021 15:05	WG1703895
Endosulfan sulfate	ND		0.0218	1	07/15/2021 15:05	WG1703895
Endrin	ND		0.0218	1	07/15/2021 15:05	WG1703895
Endrin aldehyde	ND		0.0218	1	07/15/2021 15:05	WG1703895
Endrin ketone	ND		0.0218	1	07/15/2021 15:05	WG1703895
Hexachlorobenzene	ND		0.0218	1	07/15/2021 15:05	WG1703895
Heptachlor	ND		0.0218	1	07/15/2021 15:05	WG1703895
Heptachlor epoxide	ND		0.0218	1	07/15/2021 15:05	WG1703895
Methoxychlor	ND		0.0218	1	07/15/2021 15:05	WG1703895
Toxaphene	ND		0.436	1	07/15/2021 15:05	WG1703895
(S) Decachlorobiphenyl	*46.0*		*10.0-135*		*07/15/2021 15:05*	WG1703895
(S) Tetrachloro-m-xylene	*46.8*		*10.0-139*		*07/15/2021 15:05*	WG1703895

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.2		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	7.88		1.07	5	07/17/2021 01:23	WG1703985
Lead	8.39		2.15	5	07/17/2021 01:23	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Alpha BHC	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Beta BHC	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Delta BHC	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Gamma BHC	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Chlordane	ND		0.322	1	07/15/2021 21:47	WG1705260
4,4-DDD	ND		0.0215	1	07/15/2021 21:47	WG1705260
4,4-DDE	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
4,4-DDT	ND		0.0215	1	07/15/2021 21:47	WG1705260
Dieldrin	ND		0.0215	1	07/15/2021 21:47	WG1705260
Endosulfan I	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Endosulfan II	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Endosulfan sulfate	ND		0.0215	1	07/15/2021 21:47	WG1705260
Endrin	ND		0.0215	1	07/15/2021 21:47	WG1705260
Endrin aldehyde	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Endrin ketone	ND		0.0215	1	07/15/2021 21:47	WG1705260
Hexachlorobenzene	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Heptachlor	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Heptachlor epoxide	ND	J4	0.0215	1	07/15/2021 21:47	WG1705260
Methoxychlor	ND		0.0215	1	07/15/2021 21:47	WG1705260
Toxaphene	ND		0.429	1	07/15/2021 21:47	WG1705260
(S) Decachlorobiphenyl	*102*		*10.0-135*		*07/15/2021 21:47*	WG1705260
(S) Tetrachloro-m-xylene	*132*		*10.0-139*		*07/15/2021 21:47*	WG1705260

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.4		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	5.86		1.11	5	07/17/2021 01:26	WG1703985
Lead	8.24		2.21	5	07/17/2021 01:26	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Alpha BHC	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Beta BHC	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Delta BHC	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Gamma BHC	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Chlordane	ND		0.332	1	07/15/2021 21:59	WG1705260
4,4-DDD	ND		0.0221	1	07/15/2021 21:59	WG1705260
4,4-DDE	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
4,4-DDT	ND		0.0221	1	07/15/2021 21:59	WG1705260
Dieldrin	ND		0.0221	1	07/15/2021 21:59	WG1705260
Endosulfan I	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Endosulfan II	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Endosulfan sulfate	ND		0.0221	1	07/15/2021 21:59	WG1705260
Endrin	ND		0.0221	1	07/15/2021 21:59	WG1705260
Endrin aldehyde	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Endrin ketone	ND		0.0221	1	07/15/2021 21:59	WG1705260
Hexachlorobenzene	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Heptachlor	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Heptachlor epoxide	ND	J4	0.0221	1	07/15/2021 21:59	WG1705260
Methoxychlor	ND		0.0221	1	07/15/2021 21:59	WG1705260
Toxaphene	ND		0.443	1	07/15/2021 21:59	WG1705260
(S) Decachlorobiphenyl	*88.3*		*10.0-135*		*07/15/2021 21:59*	WG1705260
(S) Tetrachloro-m-xylene	*114*		*10.0-139*		*07/15/2021 21:59*	WG1705260

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.9		1	07/13/2021 11:58	WG1703827

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	5.91		1.09	5	07/17/2021 01:30	WG1703985
Lead	7.66		2.18	5	07/17/2021 01:30	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Alpha BHC	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Beta BHC	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Delta BHC	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Gamma BHC	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Chlordane	ND		0.326	1	07/15/2021 22:12	WG1705260
4,4-DDD	ND		0.0218	1	07/15/2021 22:12	WG1705260
4,4-DDE	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
4,4-DDT	ND		0.0218	1	07/15/2021 22:12	WG1705260
Dieldrin	ND		0.0218	1	07/15/2021 22:12	WG1705260
Endosulfan I	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Endosulfan II	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Endosulfan sulfate	ND		0.0218	1	07/15/2021 22:12	WG1705260
Endrin	ND		0.0218	1	07/15/2021 22:12	WG1705260
Endrin aldehyde	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Endrin ketone	ND		0.0218	1	07/15/2021 22:12	WG1705260
Hexachlorobenzene	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Heptachlor	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Heptachlor epoxide	ND	J4	0.0218	1	07/15/2021 22:12	WG1705260
Methoxychlor	ND		0.0218	1	07/15/2021 22:12	WG1705260
Toxaphene	ND		0.435	1	07/15/2021 22:12	WG1705260
(S) Decachlorobiphenyl	*93.9*		*10.0-135*		*07/15/2021 22:12*	WG1705260
(S) Tetrachloro-m-xylene	*121*		*10.0-139*		*07/15/2021 22:12*	WG1705260

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.8		1	07/13/2021 11:48	WG1703829

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	5.05		1.02	5	07/17/2021 01:33	WG1703985
Lead	8.03		2.05	5	07/17/2021 01:33	WG1703985

Pesticides (GC) by Method 8081B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Aldrin	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Alpha BHC	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Beta BHC	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Delta BHC	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Gamma BHC	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Chlordane	ND		0.307	1	07/15/2021 22:24	WG1705260
4,4-DDD	ND		0.0205	1	07/15/2021 22:24	WG1705260
4,4-DDE	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
4,4-DDT	ND		0.0205	1	07/15/2021 22:24	WG1705260
Dieldrin	ND		0.0205	1	07/15/2021 22:24	WG1705260
Endosulfan I	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Endosulfan II	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Endosulfan sulfate	ND		0.0205	1	07/15/2021 22:24	WG1705260
Endrin	ND		0.0205	1	07/15/2021 22:24	WG1705260
Endrin aldehyde	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Endrin ketone	ND		0.0205	1	07/15/2021 22:24	WG1705260
Hexachlorobenzene	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Heptachlor	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Heptachlor epoxide	ND	J4	0.0205	1	07/15/2021 22:24	WG1705260
Methoxychlor	ND		0.0205	1	07/15/2021 22:24	WG1705260
Toxaphene	ND		0.409	1	07/15/2021 22:24	WG1705260
(S) Decachlorobiphenyl	*92.8*		*10.0-135*		*07/15/2021 22:24*	WG1705260
(S) Tetrachloro-m-xylene	*116*		*10.0-139*		*07/15/2021 22:24*	WG1705260

Method Blank (MB)

(MB) R3679106-1 07/13/21 09:33

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1376445-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1376445-01 07/13/21 09:33 • (DUP) R3679106-3 07/13/21 09:33

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.0	83.9	1	1.17		10

Laboratory Control Sample (LCS)

(LCS) R3679106-2 07/13/21 09:33

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3679105-1 07/13/21 11:58

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1376445-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1376445-11 07/13/21 11:58 • (DUP) R3679105-3 07/13/21 11:58

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.7	86.1	1	0.671		10

Laboratory Control Sample (LCS)

(LCS) R3679105-2 07/13/21 11:58

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3679103-1 07/13/21 11:48

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1376446-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1376446-01 07/13/21 11:48 • (DUP) R3679103-3 07/13/21 11:48

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	72.8	72.7	1	0.201		10

Laboratory Control Sample (LCS)

(LCS) R3679103-2 07/13/21 11:48

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	49.7	99.5	85.0-115	

Method Blank (MB)

(MB) R3680571-1 07/16/21 23:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Lead	U		0.0990	2.00

Laboratory Control Sample (LCS)

(LCS) R3680571-2 07/17/21 00:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	90.2	90.2	80.0-120	
Lead	100	90.9	90.9	80.0-120	

L1376445-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1376445-10 07/17/21 00:05 • (MS) R3680571-5 07/17/21 00:15 • (MSD) R3680571-6 07/17/21 00:18

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	106	6.01	89.7	95.6	78.8	84.4	5	75.0-125			6.38	20
Lead	106	8.50	99.0	103	85.2	89.3	5	75.0-125			4.28	20

Method Blank (MB)

(MB) R3680165-1 07/14/21 18:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00376	0.0200
Alpha BHC	U		0.00368	0.0200
Beta BHC	U		0.00379	0.0200
Delta BHC	U		0.00346	0.0200
Gamma BHC	U		0.00344	0.0200
4,4-DDD	U		0.00370	0.0200
4,4-DDE	U		0.00366	0.0200
4,4-DDT	U		0.00627	0.0200
Dieldrin	U		0.00344	0.0200
Endosulfan I	U		0.00363	0.0200
Endosulfan II	U		0.00335	0.0200
Endosulfan sulfate	U		0.00364	0.0200
Endrin	U		0.00350	0.0200
Endrin aldehyde	U		0.00339	0.0200
Endrin ketone	U		0.00711	0.0200
Heptachlor	U		0.00428	0.0200
Heptachlor epoxide	U		0.00339	0.0200
Hexachlorobenzene	U		0.00346	0.0200
Methoxychlor	U		0.00484	0.0200
Chlordane	U		0.103	0.300
Toxaphene	U		0.124	0.400
(S) Decachlorobiphenyl	*45.6*			*10.0-135*
(S) Tetrachloro-m-xylene	*51.4*			*10.0-139*

Laboratory Control Sample (LCS)

(LCS) R3680165-2 07/14/21 18:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0371	55.7	34.0-136	
Alpha BHC	0.0666	0.0404	60.7	34.0-139	
Beta BHC	0.0666	0.0395	59.3	34.0-133	
Delta BHC	0.0666	0.0409	61.4	34.0-135	
Gamma BHC	0.0666	0.0438	65.8	34.0-136	
4,4-DDD	0.0666	0.0411	61.7	33.0-141	P
4,4-DDE	0.0666	0.0350	52.6	34.0-134	
4,4-DDT	0.0666	0.0425	63.8	30.0-143	P
Dieldrin	0.0666	0.0404	60.7	35.0-137	
Endosulfan I	0.0666	0.0394	59.2	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R3680165-2 07/14/21 18:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Endosulfan II	0.0666	0.0390	58.6	35.0-132	P
Endosulfan sulfate	0.0666	0.0382	57.4	35.0-132	P
Endrin	0.0666	0.0424	63.7	34.0-137	
Endrin aldehyde	0.0666	0.0383	57.5	23.0-121	
Endrin ketone	0.0666	0.0414	62.2	35.0-144	P
Heptachlor	0.0666	0.0439	65.9	36.0-141	
Heptachlor epoxide	0.0666	0.0425	63.8	36.0-134	
Hexachlorobenzene	0.0666	0.0393	59.0	33.0-129	
Methoxychlor	0.0666	0.0445	66.8	28.0-150	P
(S) Decachlorobiphenyl			*52.3*	*10.0-135*	
(S) Tetrachloro-m-xylene			*56.0*	*10.0-139*	

L1376445-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1376445-14 07/15/21 14:36 • (MS) R3680052-1 07/15/21 14:43 • (MSD) R3680052-2 07/15/21 14:51

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aldrin	0.0782	ND	0.0460	0.0401	58.9	51.4	1	20.0-135			13.6	37
Alpha BHC	0.0782	ND	0.0512	0.0433	65.5	55.4	1	27.0-140			16.6	35
Beta BHC	0.0782	ND	0.0504	0.0441	64.4	56.5	1	23.0-141			13.2	37
Delta BHC	0.0782	ND	0.0512	0.0444	65.5	56.8	1	21.0-138			14.3	35
Gamma BHC	0.0782	ND	0.0540	0.0464	69.1	59.3	1	27.0-137			15.2	36
4,4-DDD	0.0782	ND	0.0512	0.0458	65.5	58.6	1	15.0-152		P	11.1	39
4,4-DDE	0.0782	ND	0.0451	0.0394	57.7	50.5	1	10.0-152			13.3	40
4,4-DDT	0.0782	ND	0.0492	0.0438	62.9	56.0	1	10.0-151		P	11.6	40
Dieldrin	0.0782	ND	0.0509	0.0446	65.2	57.1	1	17.0-145		P	13.3	37
Endosulfan I	0.0782	ND	0.0506	0.0438	64.7	56.0	1	20.0-137			14.4	36
Endosulfan II	0.0782	ND	0.0491	0.0426	62.8	54.5	1	15.0-141		P	14.1	37
Endosulfan sulfate	0.0782	ND	0.0478	0.0435	61.1	55.7	1	15.0-143		P	9.25	38
Endrin	0.0782	ND	0.0494	0.0432	63.2	55.3	1	19.0-143		P	13.4	37
Endrin aldehyde	0.0782	ND	0.0499	0.0448	63.8	57.4	1	10.0-139			10.7	40
Endrin ketone	0.0782	ND	0.0519	0.0460	66.4	58.9	1	17.0-149		P	12.0	38
Heptachlor	0.0782	ND	0.0529	0.0462	67.7	59.2	1	22.0-138			13.5	37
Heptachlor epoxide	0.0782	ND	0.0529	0.0455	67.7	58.3	1	22.0-138		P	15.0	36
Hexachlorobenzene	0.0782	ND	0.0501	0.0445	64.1	56.9	1	25.0-126			11.9	35
Methoxychlor	0.0782	ND	0.0505	0.0447	64.6	57.2	1	10.0-159		P	12.1	40
(S) Decachlorobiphenyl					*54.5*	*43.5*		*10.0-135*				
(S) Tetrachloro-m-xylene					*57.2*	*53.0*		*10.0-139*				

Method Blank (MB)

(MB) R3680368-1 07/15/21 14:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00376	0.0200
Alpha BHC	U		0.00368	0.0200
Beta BHC	U		0.00379	0.0200
Delta BHC	U		0.00346	0.0200
Gamma BHC	U		0.00344	0.0200
4,4-DDD	U		0.00370	0.0200
4,4-DDE	U		0.00366	0.0200
4,4-DDT	U		0.00627	0.0200
Dieldrin	U		0.00344	0.0200
Endosulfan I	U		0.00363	0.0200
Endosulfan II	U		0.00335	0.0200
Endosulfan sulfate	U		0.00364	0.0200
Endrin	U		0.00350	0.0200
Endrin aldehyde	U		0.00339	0.0200
Endrin ketone	U		0.00711	0.0200
Heptachlor	U		0.00428	0.0200
Heptachlor epoxide	U		0.00339	0.0200
Hexachlorobenzene	U		0.00346	0.0200
Methoxychlor	U		0.00484	0.0200
Chlordane	U		0.103	0.300
Toxaphene	U		0.124	0.400
(S) Decachlorobiphenyl	*103*			*10.0-135*
(S) Tetrachloro-m-xylene	*109*			*10.0-139*

Laboratory Control Sample (LCS)

(LCS) R3680368-2 07/15/21 14:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0932	140	34.0-136	J4
Alpha BHC	0.0666	0.0967	145	34.0-139	J4
Beta BHC	0.0666	0.0927	139	34.0-133	J4
Delta BHC	0.0666	0.0951	143	34.0-135	J4
Gamma BHC	0.0666	0.0986	148	34.0-136	J4
4,4-DDD	0.0666	0.0917	138	33.0-141	
4,4-DDE	0.0666	0.0924	139	34.0-134	J4
4,4-DDT	0.0666	0.0944	142	30.0-143	
Dieldrin	0.0666	0.0906	136	35.0-137	
Endosulfan I	0.0666	0.0928	139	34.0-134	J4

Laboratory Control Sample (LCS)

(LCS) R3680368-2 07/15/21 14:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Endosulfan II	0.0666	0.0904	136	35.0-132	J4
Endosulfan sulfate	0.0666	0.0882	132	35.0-132	
Endrin	0.0666	0.0892	134	34.0-137	
Endrin aldehyde	0.0666	0.0834	125	23.0-121	J4
Endrin ketone	0.0666	0.0904	136	35.0-144	
Heptachlor	0.0666	0.113	170	36.0-141	J4
Heptachlor epoxide	0.0666	0.0929	139	36.0-134	J4
Hexachlorobenzene	0.0666	0.102	153	33.0-129	J4
Methoxychlor	0.0666	0.0875	131	28.0-150	
(S) Decachlorobiphenyl			*127*	*10.0-135*	
(S) Tetrachloro-m-xylene			*136*	*10.0-139*	

L1376454-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1376454-03 07/16/21 17:46 • (MS) R3680482-1 07/16/21 17:53 • (MSD) R3680482-2 07/16/21 18:00

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aldrin	0.0707	ND	ND	ND	138	165	10	20.0-135	J5	J5	17.9	37
Alpha BHC	0.0707	0.306	0.442	0.565	192	366	10	27.0-140	V	V	24.5	35
Beta BHC	0.0707	ND	0.294	0.483	416	683	10	23.0-141	J5	J3 J5 P	48.6	37
Delta BHC	0.0707	ND	ND	ND	74.9	92.3	10	21.0-138			20.8	35
Gamma BHC	0.0707	ND	ND	ND	25.8	113	10	27.0-137	J6	J3	43.9	36
4,4-DDD	0.0707	ND	ND	0.543	0.000	698	10	15.0-152	J6	J3 J5 P	200	39
4,4-DDE	0.0707	ND	ND	0.517	82.9	731	10	10.0-152		J3 J5 P	159	40
4,4-DDT	0.0707	ND	ND	0.435	216	616	10	10.0-151	J5	J3 J5	96.0	40
Dieldrin	0.0707	ND	ND	0.352	163	441	10	17.0-145	J5	J3 J5 P	77.6	37
Endosulfan I	0.0707	ND	ND	ND	73.0	174	10	20.0-137		J3 J5	81.9	36
Endosulfan II	0.0707	ND	ND	ND	85.1	121	10	15.0-141			35.2	37
Endosulfan sulfate	0.0707	ND	ND	0.330	54.4	408	10	15.0-143		J3 J5 P	122	38
Endrin	0.0707	ND	ND	0.293	76.6	414	10	19.0-143		J3 J5 P	138	37
Endrin aldehyde	0.0707	ND	ND	1.75	0.000	2420	10	10.0-139	J6	J3 J5	200	40
Endrin ketone	0.0707	ND	0.563	0.659	796	932	10	17.0-149	J5 P	J5 P	15.8	38
Heptachlor	0.0707	ND	ND	ND	177	206	10	22.0-138	J5	J5	14.9	37
Heptachlor epoxide	0.0707	ND	ND	ND	108	134	10	22.0-138			21.5	36
Hexachlorobenzene	0.0707	ND	ND	ND	57.2	92.6	10	25.0-126			23.3	35
Methoxychlor	0.0707	ND	ND	ND	0.000	0.000	10	10.0-159	J6	J6	0.000	40
(S) Decachlorobiphenyl					*1640*	*1760*		*10.0-135*	J1	J1		
(S) Tetrachloro-m-xylene					*138*	*192*		*10.0-139*		J1		

L1376454-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1376454-03 07/16/21 17:46 • (MS) R3680482-1 07/16/21 17:53 • (MSD) R3680482-2 07/16/21 18:00

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%

Sample Narrative:

OS: IS/SURR failed on lower dilution.

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P	RPD between the primary and confirmatory analysis exceeded 40%.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
PBS Engineering & Env.- WA

400 Bradley Blvd.
Ste. 106
Richland. WA 99352

Billing Information:
Accounts Payable- Stephanie Price
400 Bradley Blvd.
Ste. 106
Richland. WA 99352

Pres Chk

Report to:
Kanani Patricio-Young

Email To: **Kanani.Young@pbsusa.com**

Project Description: Manson

City/State Collected: Kennewick WA

Please Circle: PT MT CT ET

Phone: **509-942-1600**

Client Project #: **66336.000/0003/002**

Lab Project #: **PBSENGRWA-66336000**

Collected by (print): Wesley Gavica

Site/Facility ID #:

P.O. #:

Collected by (signature): Wesley Gavica

Immediately Packed on Ice N___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #:

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	As 6020 4ozClr-NoPres	Herbicides 8151 8ozClr-NoPres	OCPs 8081 8ozClr-NoPres	PAHs 8270ESIM 8ozClr-NoPres	Pb 6020 4ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	Pesticides by EPA Method 8081	Pb & Arsenic EPA 200.8/6010			Remarks	Sample # (lab only)
SS-1	G	SS	~~6~~	7/4/21	800	2							X	X				-01
SS-2		SS			830								X	X				-02
SS-3		SS			1130								X	X				-03
SS-4		SS			1445								X	X				-04
SS-5		SS			945								X	X				-05
SS-6		SS			900								X	X				-06
SS-7		SS			845								X	X				-07
SS-8		SS			1415								X	X				-08
SS-9		SS			1000								X	X				-09
SS-10		SS			1030								X	X				-10

Chain of Custody Page ___ of ___

Pace Analytical®

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 137645
G250

Acctnum: **PBSENGRWA**
Template: **T190734**
Prelogin: **P858978**
PM: **110 - Brian Ford**
PB:
Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4483 0087 2480

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Wesley Gavica	7/8/21		Fedex	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				4.4+0=4.4 40
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				7/9/21 0945

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Company Name/Address:
PBS Engineering & Env.- WA

400 Bradley Blvd.
Ste. 106
Richland, WA 99352

Billing Information:
Accounts Payable- Stephanie Price
400 Bradley Blvd.
Ste. 106
Richland, WA 99352

Report to: **Kanani Patricio-Young**

Email To: **Kanani.Young@pbsusa.com**

Project Description: Monson

City/State Collected:

Please Circle: PT MT CT ET

Phone: **509-942-1600**

Client Project # **66336.000/0003/002**

Lab Project # **PBSENGRWA-66336000**

Collected by (print): Wesley Garcia

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: See Contract

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	As 6020 4ozClr-NoPres	Herbicides 8151 8ozClr-NoPres	OCPs 8081 8ozClr-NoPres	PAHs 8270ESIM 8ozClr-NoPres	Pb 6020 4ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	pesticides by EPA methods 8081	lead + Arsenic EPA 200.8/6010			Remarks	Sample # (lab only)
SS-11	G	SS		7/8/21	1100								X	X				-11
SS-12		SS			1400								X	X				-12
SS-13		SS			1200								X	X				-13
SS-14		SS			1245								X	X				-14
SS-15		SS			1300								X	X				-15
SS-16		SS			1345								X	X				-16
SS-17		SS			1230								X	X				-17
SS-18		SS			1245								X	X				-18
SS-19		SS			1315								X	X				-19
SS-20		SS			1330								X	X				-20

Chain of Custody Page ___ of ___

Pace Analytical®

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 1376445

Table #

Acctnum: **PBSENGRWA**

Template: **T190734**

Prelogin: **P858978**

PM: **110 - Brian Ford**

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 9983 0087 2480

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	7/8/21		Fedex	NA	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 4.4+1.0=4.4 40	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7/9/21 Time: 0945	Hold: / Condition: NCF / OK

Phase I
Environmental Site Assessment

1276 N Bermuda Rd Way
Richland, Washington 99352

Prepared for:
Monson Development Washington, LLC
63615 E Jacobs Rd NE
Benton City, Washington 99320

July 2021
PBS Project 66336.000

PBS
400 BRADLEY BLVD, SUITE 106
RICHLAND, WA 99352
509.942.1600 MAIN
866.727.0140 FAX
PBSUSA.COM

Table of Contents

EXECUTIVE SUMMARY **1**

1 PROJECT AND REPORT INFORMATION **3**
1.1 PBS Client Information 3
1.2 Report Purpose 3
1.3 Scope of Work 3
1.4 Conformance with ASTM E1527-13 4
1.5 Non-ASTM Method Scope of Work 4
1.6 Special Terms and Conditions 4
1.7 Client-Imposed Limitations 4

2 PROPERTY INFORMATION AND PHYSICAL SETTING **5**
2.1 Site Description 5
2.2 Owner and Occupant(s) 5
2.3 Topography and Surface Features 5
2.4 Groundwater Well/Borehole Records 5

3 GOVERNMENTAL AND REGULATORY RECORDS REVIEW **6**
3.1 Government Record Sources 6
3.2 Standard Environmental Record Sources 6

4 HISTORICAL RECORDS REVIEW **8**
4.1 Standard Historical Sources 8
4.2 City Directories 9
4.3 Previous Environmental Assessments 9
4.4 Activity and Use Limitations 9
4.5 Data Failure 9

5 SITE RECONNAISSANCE **11**
5.1 Methodology and Limiting Conditions 11
5.2 Site and Vicinity General Characteristics 11
5.3 Site Conditions and Observations 11
5.4 Observed Current Use of Adjoining Properties 12

6 INTERVIEWS **13**
6.1 Interview with Client/User 13
6.2 Interview with Owner 13
6.3 Interview with Previous Owner(s) 13
6.4 Interviews with Site Manager, Occupants, or Employees 13
6.5 Interviews with Local Government Officials 13
6.6 Interviews with Others 13

7 NON-SCOPE CONSIDERATIONS **14**

8 EVALUATION **15**
8.1 Findings and Opinion 15
8.2 Conclusions 15

9 SIGNATURES **16**

10 ASSUMPTIONS AND LIMITATIONS 17
10.1 Significant Assumptions 17
10.2 Limitations and Exceptions 17
10.3 Data Gaps 18
10.4 Client Reliance 18
11 RESOURCES 19
11.1 References 19
11.2 Glossary 20
11.3 Cross Reference for ASTM E1527-13 Requirements 24

Supporting Data

FIGURES

Figure 1. Site Vicinity Map
Figure 2. Site Plan

APPENDICES

Appendix A: Contract and Resumes
PBS Proposal to Provide a Phase I Environmental Site Assessment/Contract

Appendix B: Property Information and Physical Setting Records
Well Logs
Tax Map

Appendix C: Regulatory Databases and Government Records
Regulatory Database Report

Appendix D: Historical Research Records
Historical Aerial Photographs
Historical Topographic Maps
Building Department Records
Local Street Directories
Title Records

Appendix E: Site Reconnaissance Records
Site Photographs
Field Checklist

Appendix F: Questionnaires
Property Owner/Representative Questionnaire
Client/User Questionnaire

©2021 PBS Engineering and Environmental Inc.

Abbreviations

The following are commonly used abbreviations in PBS Phase I Environmental Site Assessment reports. Abbreviations are defined upon first use within the text.

AAI	all appropriate inquiry
ACBM	asbestos-containing building material
ACM	asbestos-containing material
AST	aboveground storage tank
ASTM	ASTM International (formerly American Society for Testing and Materials)
AUL	activity and use limitation
bgs	below ground surface (depth below the ground surface)
CEG	conditionally exempt generator (of hazardous waste)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CREC	controlled recognized environmental condition
Ecology	Washington State Department of Ecology
EDR	Environmental Data Resources (a regulatory database report provider)
EPA	Environmental Protection Agency
ESA	environmental site assessment
HOT	heating oil tank
HREC	historical recognized environmental condition
LCP	lead-containing paint
LQG	large-quantity generator (of hazardous waste)
LUST	leaking underground storage tank
mg/kg	milligrams per kilogram (equivalent to ppm)
MTCA	Model Toxics Control Act (Washington State)
NFA	No Further Action determination (Ecology)
NLR	no longer reporting
NonGen	non-generator of hazardous waste
PBS	PBS Engineering and Environmental Inc.
PCB	polychlorinated biphenyls
ppm	parts per million (equivalent to mg/kg)
RCRA	Resource Conservation and Recovery Act (EPA)
REC	recognized environmental condition
SQG	small-quantity generator (of hazardous waste)
USGS	United States Geological Survey
UST	underground storage tank

Executive Summary

A Phase I Environmental Site Assessment was conducted by PBS Engineering and Environmental Inc. (PBS) for the property (Site or subject property) located at 1276 N Bermuda Rd Way in Richland, Washington. The assessment was conducted for Monson Development Washington, LLC (Client). This assessment was performed in general compliance with the ASTM International E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, approved by the Environmental Protection Agency (EPA) in November 2013, for conducting all appropriate inquiries (AAI).

This report should be read in its entirety (text and attachments) before decisions are made based on the findings provided in the Executive Summary. PBS is not responsible for utilization of less than the complete report.

Site Description and History

The Site consists of six parcels totaling 120.55-acres occupied by a single-story barn, storage container, and office trailer. Its current use is a fruit orchard that produces apples and peaches. No manufacturing occurs on the subject property. The office trailer is heated and cooled with an electric heat pump all other buildings do not have heating and cooling. Exterior areas include landscaping and gravel parking.

Historically, the Site was vacant prior to approximately 1982, when it was developed for its existing use as commercial orchard. The subject property was enhanced with what appears to be the current barn structure by 2006. No evidence of other uses was identified during this study.

Regulatory Review

EPA and state environmental databases were reviewed to identify sites that pose a potential environmental concern to the subject property. The subject property does not appear on any database. Based on a review of the listed sites, none appear to pose a significant environmental concern to the subject property.

Findings and Opinions

This Phase I ESA identified the following:

1. The property has been in orchard / agricultural use since its development in 1982. The use of regulated agricultural chemicals (e.g., organochlorine pesticides and arsenical herbicides) is considered an acceptable practice. Spillage, mixing, or handling of these chemicals in bulk quantities or intense usage can result in hazardous soil conditions requiring remedial action in accordance with state or federal agencies. There is a concern that pesticides may exist at the subject property, posing a risk for potential future residential usage. This poses a high environmental concern.

2. An irrigation pond/reservoir is located adjoining the eastern side of the property. Water is used to irrigate the orchard areas of the subject property. The irrigation pond is downslope and is not considered an environmental concern to the subject property.

Recognized Environmental Conditions (RECs), Including Controlled RECs (CRECs)

PBS has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E-1527-13 of 1276 N Bermuda Rd Way in Richland, Washington, the subject property. Any exemptions to, or deletions from, this practice are described in section 1 of this report. This assessment has revealed evidence of RECs in connection with the property.

The subject property is used for fruit orchard purposes. Use of agricultural fertilizers and chemicals (especially orchard use) constitutes an environmental REC.

Data Gaps

Several time periods exist for which data could not be gathered every five years (see source tables above). Section 8.3.2.1 of ASTM E1527-13 indicates that if the specific use of the property appears unchanged over a period longer than five years, then research of its use during that period is not required. Due to the subject property being undeveloped over the researched timeline PBS does not see this as an issue.

Additional Investigation

Based on the known orchard use, the Client engaged PBS to conduct limited soil sampling in conjunction with this Phase I assessment to provide a screening-level assessment for the presence of residual organochlorine pesticides, lead and arsenic in shallow soil. The samples were collected on July 8, 2021, with laboratory results expected by July 23, 2021.

Non-ASTM Scope Considerations

Non-ASTM International (ASTM) scope issues were not addressed as requested by the Client and User of this report.

1 PROJECT AND REPORT INFORMATION

1.1 PBS Client Information

PBS Engineering and Environmental Inc. (PBS) conducted this assessment for Monson Development Washington, LLC (Client). The Client is considered the User, as defined by ASTM International Standard E1527-13.

This Phase I Environmental Site Assessment has been requested by Monson Development Washington, LLC to qualify for the innocent landowner defense to CERCLA liability. This assessment was performed in general compliance with ASTM International's E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, approved by the Environmental Protection Agency (EPA) in November 2013, for conducting all appropriate inquiries (AAI).

1.2 Report Purpose

A Phase I Environmental Site Assessment (ESA) was conducted by PBS for the property located at 1276 N Bermuda Rd Way in Richland, Washington (Site or subject property). The purpose of the Phase I ESA was to identify recognized environmental conditions associated with the subject property, and to assess the likelihood that contamination from hazardous substances or petroleum products may exist on the Site either from past or present use of the subject property or nearby properties. This study is intended to reduce, not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with the subject property, within reasonable limits of time and cost.

The purpose of this study is to conduct an all-appropriate inquiry into the current and previous ownership and uses of the subject property consistent with good commercial or customary practice. In so doing, the Client may qualify for one of three Landowner Liability Protections (LLP) that limit Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability. The Client must fulfill associated continuing obligations to maintain LLP status.

1.3 Scope of Work

The assessment was performed in general compliance with the ASTM International (ASTM) E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, approved by the EPA in November 2013. Unless noted in section 1.6 Special Terms and Conditions, the scope of work for the project included the following:

1. Identifying and visually surveying the subject property for the presence of hazardous substances and petroleum products.
2. Obtaining information from the Client through a completed disclosure questionnaire and a review of a title report, if provided by the Client.
3. Reviewing federal, state, tribal, and local agency listings using a commercial database search provider, including activity and use limitations.
4. Reviewing historical maps, historical occupant records, and the nature of past property usage.
5. Reviewing readily available soils, geology, or environmental reports for the subject property or subject property vicinity.
6. Interviewing persons knowledgeable about the subject property, including current and previous owners.
7. Preparing the report summarizing any observations, sources used, findings, conclusions, and opinions relating to the presence or likely presence of hazardous substances or petroleum products on the

subject property, including the potential for contaminants migrating to the subject property from an off-site location.

This assessment considers business environmental risks (see section 11.2 Glossary) that are not recognized environmental conditions unless the Client specifically requests otherwise. Please refer to the PBS Proposal to Provide a Phase I Environmental Site Assessment/Contract, Appendix A, for a detailed description of our scope of work.

PBS has prepared this report using information that is reasonably ascertainable; that is, information that is practically reviewable, publicly available, and obtainable from its source within reasonable time and cost constraints.

1.4 Conformance with ASTM E1527-13

This report has been formatted to maximize reader usability and comprehension. This report conforms to the requirements of ASTM E1527-13, and items indicated in Appendix 4 of the standard are included. Section 11 provides a cross-reference table that allows the reader to confirm conformance.

1.5 Non-ASTM Method Scope of Work

Non-ASTM method issues such as asbestos, lead-containing paint, wetlands, indoor air quality were not addressed during this study.

1.6 Special Terms and Conditions

The standard PBS Terms and Conditions are included in the PBS Proposal to Provide a Phase I Environmental Site Assessment/Contract in Appendix A; there are no special terms and conditions.

1.7 Client-Imposed Limitations

The Client did not impose limitations on PBS while completing this report.

2 PROPERTY INFORMATION AND PHYSICAL SETTING

2.1 Site Description

Site Address:	1276 N Bermuda Rd Way, Richland, Washington 99352
Tax Lots:	Benton County Assessor ID's: 134982000005004, 134982000006000, 134982010595002, 134982010595004, 134982000005005, 134982010595003
Township, Range, Section:	Township 09N Range 28E, NW ¼ of NE ¼ of Section NW, Willamette Base and Meridian
Size:	Approximately 120.55 acres.
Current Use:	Fruit Farm

Tax lot information was obtained from the Benton County Assessor online maps resource[1] on July 5, 2021.

A Site Vicinity Map and Site Plan are included with this report under Figures. A copy of the county assessor's tax map is included in Appendix B.

2.2 Owner and Occupant(s)

Current Owner:	Bill Wilson
Previous Owner:	N/A
Property Manager:	Current owner
Current Occupant(s):	Orchard/Farm

2.3 Topography and Surface Features

The US Geological Survey 7.5-minute topographic map (Badger Mountain Quadrangle, 2020; see Figure 1) for the Site indicates mountainous terrain in the surrounding area with a moderate slope going north. The subject property elevation is approximately 900 feet above mean sea level.

The topographic map indicated that the nearest surface water is what appears to be a manmade pond, located approximately 50 feet east from the subject property and an unnamed creek approximately 0.25 miles west.

2.4 Groundwater Well/Borehole Records

The Washington State Department of Ecology's (Ecology) well log database[2] provides logs for water wells, monitoring wells, and geotechnical borings along with decommissioned well reports and other records. This database was reviewed by PBS on July 2, 2021. The following representative onsite well was identified ACE618. The following representative nearby well logs were identified: 146749, AGM118, and G425674. Records for the nearby wells indicate static water was recorded at 124 feet bgs as there are no wells on-site. Copies of the reviewed logs are included in Appendix B.

Based on topography, the direction of shallow unconfined groundwater flow is expected to be toward the south; therefore, properties to the north are considered upgradient to the subject property.

[1] http://www.co.franklin.wa.us/assessor/
[2] https://appswr.ecology.wa.gov/wellconstruction/map/WCLSWebMap/default.aspx

3 GOVERNMENTAL AND REGULATORY RECORDS REVIEW

3.1 Government Record Sources

Washington State Department of Ecology (Ecology) Online Facility Profiler

Ecology maintains an online database[3] of state cleanup and federal Superfund sites, hazardous waste generators, underground storage tanks (USTs), solid waste facilities, and other environmental concerns. This website was reviewed by PBS on July 2, 2021. The subject property was not listed. No adjoining or nearby properties were listed.

Local Fire Department

PBS requested information on July 2, 2021, from the City of Richland Fire Department, regarding the subject property. No records for the property were available from this source.

Underground Injection Controls (UICs)

Ecology maintains an online database for registered underground injection controls (UICs).[4] This database was reviewed by PBS on July 2, 2021. No records of UICs were on file for the subject property or adjacent properties.

Other Government Records

No other local government records were reviewed for this assessment.

3.2 Standard Environmental Record Sources

A search of EPA, state, and tribal environmental database listings was performed by a commercial database search provider (a copy of the database search report is included in Appendix C). The purpose of this search was to identify potential, suspected, or known sources of contamination on or in the area of the subject property. Various agency listings were searched for different approximate minimum search distances from the subject property as established in the ASTM method. Listings included publicly available databases of environmental liens, activity and use limitations, and easements and equitable servitudes, if recorded or filed.

If the Site and/or adjacent properties are identified in the regulatory database report, the information is summarized below. Regulatory data for surrounding properties that may pose a potential risk to the subject property are also included. Other properties listed in the database report are not considered to be of environmental concern to the Site based on presumed groundwater flow direction, distance from the subject property, regulatory status (for example, the agency file is closed), or other physical factors.

The commercial database report may also include proprietary data derived from historical city directories. These can include historical dry cleaners/laundries and automobile stations (gas stations, automobile repair shops, auto body shops). These are non-regulatory listings and are included as historical information.

Subject Property

The subject property does not appear on the regulatory database report.

[3] https://apps.ecology.wa.gov/neighborhood/
[4] https://apps.ecology.wa.gov/uicsearch/

Adjoining Properties

Address:	N/A	Program #:	ALLSITES
*Located east (upgradient) of subject property			
Badger Mountain Irrigation District Reservoir Expansion Dam. No instances of environmental releases or hazards noted.			
Address:	N/A	Program #:	ALLSITES
*Located east (upgradient) of subject property			
Westcliffe Heights residential neighborhood construction of stormwater drainage. No instances of environmental releases or hazards noted.			

Surrounding Properties

Address:	N/A	Program #:	ALLSITES
*Located north (downgradient) of subject property			
Westcliffe Heights residential neighborhood construction of stormwater drainage during phases 14 and 15 of development. No instances of environmental releases or hazards noted.			
Address:	N/A	Program #:	ALLSITES
*Located northeast (downgradient) of subject property			
The Reserve at Summerview Terrace facility ID creation. No instances of environmental releases or hazards noted.			
Address:	N/A	Program #:	ALLSITES
*Located east (downgradient) of subject property			
Westcliffe Heights residential neighborhood construction of stormwater drainage during phases 14 and 15 of development. No instances of environmental releases or hazards noted.			
Address:	N/A	Program #:	ALLSITES
*Located east (upgradient) of subject property			
Badger Mountain. INC. winery facility registration. No instances of environmental releases or hazards noted.			

Unmappable Sites

No unmappable sites were listed in the database report.

4 HISTORICAL RECORDS REVIEW

4.1 Standard Historical Sources

ASTM E1527-13 indicates that review of standard historical sources at less than approximately five-year intervals is not required by this practice. If the specific use of the property appears unchanged over a period longer than five years, then it is not required by this practice to research the use during that period.

The following standard sources were reviewed:

- Aerial photographs were obtained from EDR aerial photograph collection.
- Building department records were obtained from EDR Building Permit Report.
- Title Records were obtained from Benton County eRecording database on July 2, 2021.
- Topographic maps were obtained from EDR Topographic Maps

No other historical records were reviewed for this assessment.

The table below summarizes the information gathered from the sources listed above. Data obtained from other sources reviewed for this Phase I ESA may also be included in the following tables in order to identify potential historical data failures.

Copies of the reviewed records are included in Appendix D.

Year	Source	Description
1917-1952	Historical topo map and aerial photos	Subject Property: Appears to be undeveloped. Adjoining Properties: The surrounding properties appear to be undeveloped.
1963-1978	Historical topo map and aerial photos	Subject Property: Appears to have dirt pathways throughout. Adjoining Properties: Appears to have dirt pathways throughout.
1982	Aerial photograph	Subject Property: Appears to have extensive dirt pathways throughout and natural vegetation. Adjoining Properties: Appears to be developed farmland west, south, and southwest adjacent to the subject property. East adjacent to the subject property there appears to be a manmade reservoir.
1988-1991	Aerial photograph	Subject Property: Appears to be developed into row/orchard crops. Adjoining Properties: No significant changes to the adjacent properties are apparent.
1996	Aerial photograph	Subject Property: No significant changes to the subject property are apparent. Adjoining Properties: A residential house appears to have been developed north adjacent.

Year	Source	Description
2006	Aerial photograph	Subject Property: Appears to have a barn structure near the center of the subject property. The larger portions of the property show orchard use. Adjoining Properties: Appears to have further development of farmland adjacent to the subject property. As well as the beginnings of residential construction south of the subject property.
2009	Aerial photograph	Subject Property: No significant changes to the subject property are apparent. Expanded orchard areas are present o the property. Adjoining Properties: Further development of residential housing south of the subject property.
2013	Historical topo map and aerial photos	Subject Property: No significant changes to the subject property are apparent. Adjoining Properties: Appears to have developed an additional residential structure east adjacent.
2017	Aerial photograph	Subject Property: No significant changes to the subject property are apparent. Adjoining Properties: Appears to have the beginnings of Queensgate drive being developed.

Summary of Property Use from Historical Sources

The subject property appears to be undeveloped land up to 1988 where in the subject property appears to be developed as an orchard and related buildings. Improvements to the subject property appear in 2006 with a barn structure resembling what is on site today.

Adjoining properties appear to be undeveloped through 1976. Farmland development is prevalent from 1982 onward with a manmade reservoir developed by 1988 and residential development starting in 1996.

4.2 City Directories

City directories were searched using EDR. A listing of the directory listings is included in Appendix D. A summary of the findings is presented below.

The historical directories did not identify listings of potential concern at the subject property and adjacent properties.

4.3 Previous Environmental Assessments

No previous environmental assessments were identified by PBS for the subject property.

4.4 Activity and Use Limitations

PBS did not identify environmental liens, activity and use limitations (AULs), or easements and equitable servitudes on the subject property during this study.

4.5 Data Failure

Data failure was encountered while conducting the historical research for this Phase I ESA report. Data failure occurs when the standard historical sources reasonably ascertainable and likely to be useful have been reviewed, but the objectives in ASTM E1527-13 Sections 8.3.1 through 8.3.2.2 have not been met. If the data

failure represents a significant data gap, the impact of this data gap shall be discussed in section 8.1 of this Phase I ESA report.

The following data failure occurred:

- Several time periods exist for which data could not be gathered every five years (see source tables above). Section 8.3.2.1 of ASTM E1527-13 indicates that if the specific use of the property appears unchanged over a period longer than five years, then research of its use during that period is not required. Due to the subject property being undeveloped over the researched timeline PBS does not see this as an issue.

5 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

The site reconnaissance was conducted by Wesley Garcia, Staff Geologist II, with oversight by Tom Mergy, Principial Hydrogeologist, a PBS environmental professional (EP), on July 2, 2021, *to* observe and document site conditions and visible indications of existing environmental conditions.

A work trailer and storage container were not accessible during the reconnaissance. However, the work trailer windows were used to look inside.

Photographs of the Site are included in Appendix E.

5.2 Site and Vicinity General Characteristics

The subject property is a 120.55-acre orchard located in a residential developing area in southern Richland. There are three buildings on site. An equipment storage barn, storage container, and office trailer. The subject property lies on a ridge between two peaks on Badger Mountain with moderate sloping towards the south.

Site Operations/Processes

The subject property's primary use is as a commercial orchard farm. Hazardous materials used on site include a liquid Lime-Sulfur Solution and petroleum products. Produce/fruit collection is facilitated by farming machinery and manual labor. This machinery is stored outside in a gravel lot along with other equipment. Portable tanks ferry fuel throughout the subject property along with water and pest mitigation chemicals.

Exterior Improvements

The subject property contains dirt roads throughout with a gravel parking lot at the entrance. Bermuda road/Queensgate drive splits the subject property into two sections from north to south on the east side.

Utilities

Water Supply:	Badger Mountain Irrigation District
Sewage System:	None
Stormwater:	Overland flow.
Heating Source:	Electric

5.3 Site Conditions and Observations

Note: The PBS Field Checklist, Appendix E, may detail additional field observations not described below.

Aboveground and Underground Storage Tanks

No indications of underground storage tanks or USTs, such as vent pipes or fill pipes, were observed on the subject property's grounds during the site reconnaissance.

Portable and nonportable ASTs were observed onsite. These AST's carry petroleum, water, and irrigation chemicals.

Drywells, Injection Wells, Septic Systems

None of these features were observed and/or known to be present on the subject property.

Floor Drains, Catch Basins, Sumps, Oil/Water Separators

None of these structures were observed on the subject property.

Hazardous Substances, Petroleum Products, Unidentified Containers
The following were observed during the site visit (see Site Photographs in Appendix E):

- Containers of lubrications, cleaning agents, bug repellants, and aerosols.
- Empty unlabeled drums of what appear to have contained liquid fertilizers.
- Empty buckets used to store hardware.

Improper Dumping/Solid Waste Disposal
No indications of improper solid waste disposal were observed during the site reconnaissance.

Pits, Ponds, Lagoons, Surface Impoundments
None of these features were observed on the subject property.

Polychlorinated Biphenyls (PCBs)
PCBs were once used in the manufacture of electrical equipment (transformers) and hydraulic fluids. Now considered hazardous substances under CERCLA rules, the manufacture of PCBs was banned in 1979. Examination or sampling of individual building components or fixtures for PCBs is not within the scope of the Phase I ESA; however, the following was observed:

- A pad-mounted transformer was observed on the edge of the subject property located on the side of Bermuda Road in the southern portion of the subject property in new condition.

Stains, Sheens, Odors
None of these conditions were observed on the subject property.

Wells
Water supply wells and monitoring wells were not observed on the subject property. Irrigation water piping was observed to run throughout the orchard areas.

Other Conditions of Concern
No other conditions of concern were observed on the subject property during the site reconnaissance.

5.4 Observed Current Use of Adjoining Properties

North:	Undeveloped land with what appears to be trails.
South:	Developing land that appears to be residential.
East:	Residential neighborhood.
West:	Continuation of the farm.

These properties were viewed from the subject property or the nearest public right-of-way. No conditions of environmental concern were observed other than the continuation of the farm.

6 INTERVIEWS

The section below summarizes information obtained from interviews and questionnaires completed by the Client/User, property owner, and/or other key personnel.

6.1 Interview with Client/User

In addition to completing a written questionnaire regarding the subject property, Bill Wilson was interviewed. Information obtained from the interview/questionnaire is summarized below. A copy of the questionnaire is provided in Appendix F. The interview and questionnaire are summarized as follows:

- Mr. Wilson is not aware of environmental liens against the subject property or activity and use limitations related to environmental conditions.
- Mr. Wilson does not have specialized knowledge or experience that may be material to the identification of recognized environmental conditions on the subject property.
- Did not indicate that the property purchase price been devalued based on environmental conditions at the subject property or surrounding properties.

6.2 Interview with Owner

The PBS standard Property Owner/Representative Questionnaire was completed by Bill Wilson (property owner), and is included in Appendix F. The interview and questionnaire are summarized as follows:

- Mr. Wilson indicated no knowledge of environmental liens against the subject property, or limitations of use related to environmental conditions.

6.3 Interview with Previous Owner(s)

An interview with the previous owner was not completed due to unavailable contact information. Based on available historical and regulatory information for the subject property, this does not impact the ability of PBS to identify recognized environmental conditions (RECs).

6.4 Interviews with Site Manager, Occupants, or Employees

The subject property is managed by Mr. Wilson.

6.5 Interviews with Local Government Officials

Interviews with local government officials were previously summarized in section 3.1, and are not repeated here.

6.6 Interviews with Others

No other interviews were conducted for this report.

7 NON-SCOPE CONSIDERATIONS

Non-scope considerations are issues or conditions at the subject property that could pose a business risk to an owner or prospective purchaser but are not included in a standard Phase I ESA. PBS assesses non-scope considerations only when requested to do so by the Client.

There were no non-scope considerations requested by the Client.

8 EVALUATION

The sections below present the findings, opinion, and conclusions of this Phase I ESA.

8.1 Findings and Opinion

This Phase I ESA identified the following:

1. The property has been in agricultural (orchard) use since its development in 1982. The use of regulated agricultural chemicals (e.g., organochlorine pesticides and arsenical herbicides) is considered an acceptable practice. Spillage, mixing, or handling of these chemicals in bulk quantities or intense usage can result in hazardous soil conditions requiring remedial action in accordance with state or federal agencies. There is a concern that pesticides may exist at the subject property, posing a risk for potential future residential usage. This poses a high environmental concern.

2. An irrigation pond/reservoir is located adjoining the eastern side of the property. Water is used to irrigate the orchard areas of the subject property. The irrigation pond is downslope and is not considered an environmental concern to the subject property.

8.2 Conclusions

PBS has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E-1527-13 of 1276 N Bermuda Rd Way in Richland, Washington, the subject property. Any exemptions to, or deletions from, this practice are described in section 1 of this report. This assessment has revealed the following RECs in connection with the property:

- The subject property is used for agricultural-orchard purposes. Use of agricultural fertilizers and chemicals (especially orchard use) constitutes an environmental REC.

Data Gaps

The following data gaps were identified during this study:

- Several time periods exist for which data could not be gathered every five years (see source tables above). Section 8.3.2.1 of ASTM E1527-13 indicates that if the specific use of the property appears unchanged over a period longer than five years, then research of its use during that period is not required. Due to the subject property being undeveloped over the researched timeline PBS does not see this as an issue.

Additional Investigation

Based on the known orchard use, the Client engaged PBS to conduct limited soil sampling in conjunction with this Phase I assessment to provide a screening-level assessment for the presence of residual organochlorine pesticides, lead and arsenic in shallow soil. The samples were collected on July 8, 2021, with laboratory results expected by July 23, 2021.

Non-ASTM Scope Considerations

Non-ASTM International (ASTM) scope issues were not addressed as requested by the Client and User of this report.

9 SIGNATURES

PBS respectfully submits the results of our Phase I Environmental Site Assessment. We appreciate the opportunity to provide our recommendations for your project. If you have additional concerns, please do not hesitate to contact us at 509.942.1600.

Sincerely,
PBS Engineering and Environmental Inc.

Wesley Garcia 7/15/2021
PBS Staff Geologist II

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the All-Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Thomas Mergy, LHG 7/15/2021
PBS Principal Hydrogeologist

10 ASSUMPTIONS AND LIMITATIONS

10.1 Significant Assumptions

Client's Responsibilities

It is assumed that the User has provided PBS with title and lien records, actual knowledge of environmental liens or activity and use limitations encumbering the property, any specialized knowledge or experience material to recognized environmental conditions in connection with the property, any commonly known or reasonably ascertainable information material to recognized environmental conditions on the property, and the reason why the property may have a significantly lower purchase price than comparable properties, if applicable (User Responsibilities, ASTM E1527-13, Section 6.0).

It is further assumed that the Client will read this report in its entirety (text and attachments) before making decisions based on the findings of the report.

Groundwater Flow

Groundwater flow direction has been determined based on topography in the area of the subject property; the assumption is that shallow groundwater flow will follow topography. No site-specific field measurements of groundwater flow direction (such as installation of groundwater monitoring wells) have been performed.

Based on this interpretation, PBS has reviewed regulatory agency information for sites located in a presumed upgradient direction that, based on proximity and knowledge of potential contaminant fate and transport, may potentially impact the subject property.

Accuracy and Completeness

The public records search is performed by PBS with the understanding that such records may be inaccurate or incomplete, and that the ability of public agencies to retrieve records may be variable or inconsistent over time. Similarly, PBS interviews of knowledgeable persons are performed in good faith that information provided is reasonably accurate and truthful. It may not always be feasible or appropriate for PBS to determine the accuracy of conflicting information, and this determination is pursued at the environmental professional's discretion.

10.2 Limitations and Exceptions

Unless noted elsewhere in this proposal, the scope of work for the project does not address a number of potentially significant environmental issues including, but not limited to, hazardous materials audit, environmental compliance, vapor encroachment assessment per ASTM standard E2600-10, formaldehyde, radon, asbestos-containing building materials, PCBs, lead-containing paint, mold, wetlands and other land use issues, drinking water quality, geotechnical or geologic hazards, nor does it include subsurface exploration or chemical screening of soil and groundwater beneath the subject property.

Recognized environmental conditions are defined in paragraph 3.2.78 of ASTM E1527-13 and the complete text is included in the glossary of this document. The vague and ambiguous nature of recognized environmental conditions as defined by the ASTM standard may result in reasonable minds differing as to whether any observed condition at a site is a recognized environmental condition. There may be other conditions noted in this report that could be considered recognized environmental conditions by other persons. Accordingly, the Client is advised that no warranty is given that other experts may agree that site conditions noted herein are recognized environmental conditions. Users of this report are encouraged to review the report in its entirety and specifically to consider all site conditions described and not merely those classified herein as recognized environmental conditions.

When an assessment is completed without surface exploration or chemical screening of soil and groundwater beneath the subject property, as in this study, no statement of scientific certainty can be made regarding latent subsurface conditions that may be the result of on-site or off-site sources. PBS is not able to represent that the Site or adjoining land contains no hazardous substances including petroleum, or other latent conditions beyond that identified by PBS during the study. The possibility always exists for contaminants to migrate undetected through surface water, air, soil, soil gas, or groundwater. The ability to accurately address the environmental risk associated with transport in these media is beyond the scope of this study.

The findings and conclusions of this report are not scientific certainties but are based on professional judgment concerning the significance of the data gathered during the course of the Phase I ESA. The conclusions in this report are not to be considered a legal opinion or advice as to the Client's duty concerning due diligence and all appropriate inquiry relating to potential liabilities in leasing, owning, or purchasing real estate.

The ASTM method does not require a search interval of fewer than five years; this search interval is not guaranteed to identify all prior tenants or occupants of the subject property (please refer to the table in section 4.1 Standard Historical Resources for search intervals achieved for this report.) The PBS investigator reviewed sources that are publicly available, available within a reasonable time and cost, and reasonably ascertainable and considered practically reviewable, as defined under the ASTM standard. In addition, these criteria are applied keeping in mind sources that are likely to provide information concerning possible recognized environmental conditions at the subject property. PBS has reviewed sources of information that we consider meeting these criteria. In cases where the history of the subject property is not traced prior to its first-developed use, this condition is considered a data failure and not an exception to the required scope of work. If the data failure represents a significant data gap, this will be discussed in the report.

10.3 Data Gaps

A data gap results from a lack of, or inability to, obtain information required by the ASTM method, despite good faith efforts to gather such information. Our report identifies and comments on significant data gaps that have affected our ability to identify recognized environmental conditions.

10.4 Client Reliance

PBS acknowledges that only the Client (User of the report) may rely upon the information, findings, opinions, and conclusions set forth in this report, subject to the conditions and limitations contained in this report, and as set forth in our contract. This report is for the exclusive use of the User and is not to be relied upon by other parties unless specifically indicated. Reliance on this report by other parties will require a fee from those parties, and a written agreement from PBS, and will be subject to the same conditions and limitations contained in the contract between PBS and the User. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

This report was prepared with the standard of care and skill ordinarily recognized under similar circumstances by members of its profession in the state and region at the time the services are performed. No warranties, expressed or implied, are made.

This report provides information on the subject property only as specified in the scope of work based on conditions at the time of the study. Additional information may become available that differs significantly from our understanding of conditions presented in this report. If this occurs, we request that this information be brought to our attention so that we may reassess the conclusions provided herein.

11 RESOURCES

11.1 References

Many references, primarily internet-based and governmental resources, are cited within the text of this report and are not repeated on this page.

11.2 Glossary

Note: Definitions without a specific citation are derived from PBS project and industry experience.

Abandoned Property. A property that can be presumed to be deserted, or an intent to relinquish possession or control can be inferred from the general disrepair or lack of activity thereon such that a reasonable person could believe that there was an intent on the part of the current owner to surrender rights to the property. (ASTM E1527-13, Section 3.2.1)

Activity and Use Limitations (AULs). Legal (institutional) or physical (engineering) restrictions or limitations on the use of, or access to, a site or facility, to reduce or eliminate potential exposure to hazardous substances or petroleum products in soil or groundwater, or to prevent activities that could interfere with the effectiveness of a response action in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil or ground water on the property. (ASTM E1527-13, Section 3.2.2)

Adjoining Properties. Any real property or properties the border of which is contiguous or partially contiguous with that of the property, or that would be contiguous or partially contiguous with the property but for a street, road, or other public thoroughfare separating them. (ASTM E1527-13, Section 3.2.4)

All Appropriate Inquiry (AAI). That inquiry constituting "All Appropriate Inquiry" into the previous ownership and uses of the property consistent with good commercial or customary practice, as defined in CERCLA, 42 U.S.C. §9601(35)(B), that will qualify a party to a commercial real estate transaction for one of the threshold criteria for satisfying the LLPs to the CERCLA liability (42 U.S.C. §9601(35)(A)&(B), §9607 (b)(3), §9607(q); and §9607(r)), assuming compliance with other elements of the defense. (ASTM E1527-13, Section 3.2.6)

Approximate Minimum Search Distance. The area for which records must be obtained and reviewed pursuant to Section 8 of ASTM Standard Practice E1527-13 subject to the limitations provided in that section. This may include areas outside the property and shall be measured from the nearest property boundary. This term is used in lieu of radius to include irregularly shaped properties. (ASTM E1527-13, Section 3.2.7)

Business Environmental Risk. A risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations some of which are identified in the report (ASTM E1527-13, Section 3.2.11)

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), 42 USC 9601 et seq. (ASTM E1527-13, Section 3.3.2)

Contaminated Aquifer Policy: Oregon and Washington environmental agencies will not hold a property owner liable for groundwater contamination that has migrated from an upgradient property. This indemnity is granted under the assumption that the property owner is not responsible for the release of the contamination, is not financially associated with the property from which the contamination originated and did nothing to exacerbate the problem. Certain restrictions might be placed on the use of groundwater on the site (such as an irrigation or drinking water well could not be installed on the property). The property owner should ensure that the contamination does not present a health risk to on-site occupants. (5/20/04 DEQ Contaminated Aquifer policy, Washington RCW 70.105D.020(17)(iii)F(iv))

Continuing Obligations. After completion of an AAI-compliant Phase I ESA, there are continuing obligations of the User required under 2002 Brownfields Amendment to maintain landowner liability protections. These include:

1. Complying with land use restrictions and not impeding the effectiveness or integrity of institutional controls.
2. Taking "reasonable steps" with respect to hazardous substances affecting a landowner's property to stop continuing releases, prevent threatened future releases, and prevent exposure to earlier releases.
3. Providing cooperation, assistance, and access to the EPA, a state, or other party conducing response actions or natural resource restoration at the property.
4. Complying with CERCLA information requests and administrative subpoenas.
5. Providing legally required notices relating to the discovery or release of hazardous substances on the property (40 CFR Par 312, Section II – Background, Item D).

Controlled Recognized Environmental Condition (CREC). A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). (See ASTM Note 2.) A condition considered by the environmental professional to be a controlled recognized environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment report. (See ASTM Note 3.) (ASTM E1527-13, Section 3.2.18)

ASTM Note 2: For example, if a leaking underground storage tank has been cleaned up to a commercial use standard, but does not meet unrestricted residential cleanup criteria, this would be considered a controlled recognized environmental condition. The "control" is represented by the restriction that the property use remains commercial.

ASTM Note 3: A condition identified as a controlled recognized environmental condition does not imply that the environmental professional has evaluated or confirmed the adequacy, implementation, or continued effectiveness of the required control that has been, or is intended to be, implemented.

Data Failure. A failure to achieve the historical research objectives in Section 8.3.1 through 8.3.2.2 of ASTM E1527-13 even after reviewing standard historical sources in 8.3.4.1 through 8.3.4.8 of ASTM E1527-13 that are reasonably ascertainable and likely to be useful. Data failure is a type of data gap. (ASTM E1527-13, Section 3.2.20)

Data Gap. A lack of, or inability to obtain required information by ASTM E1527-13 despite good faith efforts to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc). The report will identify and comment on significant data gaps that affect the ability of the EP to identify recognized environmental conditions. (ASTM E1527-13, Section 3.2.21)

***De minimis* Condition.** Condition that generally does not present a material risk of harm to public health or the environment or that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions.

Environmental Professional. A person meeting the education, training, and experience requirements set forth in 40 CFR §312.10(b). That person may be an independent contractor or an employee of the User. (ASTM E1527-13, Section 3.2.32)

Hazardous Substance. A substance defined as a hazardous substance pursuant to CERCLA 42 USC §9601 (14), as interpreted by EPA regulations and the courts: "(A) any substance designated pursuant to Section 1321 (b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to Section 9602 of this title, (C) any hazardous waste having the characteristics identified under or pursuant to Section 3001 of the Solid Waste Disposal Act (42 USC 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act (42 USC §9601 et seq.) has been suspended by act of Congress), (D) any toxic pollutant listed under Section 1317(a) of Title 33, (E) any hazardous air pollutant listed under Section 112 of the Clean Air Act (42 §USC 7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the administrator (of EPA) has taken action pursuant to Section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)." (ASTM E1527-13, Section 3.2.39)

PBS Note: The term hazardous substances, as it is used in this report, describes both hazardous substances and petroleum products. It does not include hazardous building materials.

Historical Recognized Environmental Condition (HREC). A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition. (ASTM E1527-13, Section 3.2.42)

Landowner Liability Protections (LLPs). Landowner liability protections provided under CERCLA; these protections include the bona fide prospective purchaser liability protection, contiguous property owner liability projection, and innocent landowner defense from CERCLA liability. See 42 U.S.C. §§ 9601(35)(A), 9601(40), 9607(b), 9607(q), 9607(r). (ASTM E1527-13, Section 3.2.49)

Other Issues of Concern. Issues that could potentially result in adverse environmental impacts to the subject property. They are not included as recognized environmental conditions because insufficient evidence was collected during the course of this study to come to the conclusion that the condition(s) has resulted in the "presence or likely presence" of contamination to soil and/or groundwater on the subject property.

Petroleum Products. Those substances included within the meaning of the petroleum exclusion to CERCLA, 42 U.S.C. §9601(14), as interpreted by the courts and EPA; that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of 42 U.S.C. § 9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). (The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil, pursuant to Standard Definitions of Petroleum Statistics.) (ASTM E1527-13, Section 3.2.65)

Practically Reviewable. Information that is practically reviewable means that the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data. The form of the information shall be such that the User can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the property or a geographic area in which the property is located are not generally practically reviewable. Most databases of public records are practically reviewable if they can be obtained from the source agency by the county, city, zip code, or other geographic area of the facilities listed in the record system. Records that are sorted, filed, organized, or maintained by the source agency only chronologically are not generally practically reviewable. Listings in publicly available records which do not have adequate address information to be located geographically are not generally considered practically reviewable. For large databases with numerous records (such as RCRA hazardous waste generators and registered underground storage tanks), the records are not practically reviewable unless they can be obtained from the source agency in the smaller geographic area of zip codes. Even when information is provided by zip code for some large databases, it is common for an unmanageable number of sites to be identified within a given zip code. In these cases, it is not necessary to review the impact of all of the sites that are likely to be listed in any given zip code because that information would not be practically reviewable. In other words, when so much data is generated that it cannot be feasibly reviewed for its impact on the property, it is not practically reviewable. (ASTM E1527-13, Section 3.2.69)

Publicly Available. Information that is publicly available means that the source of the information allows access to the information by anyone upon request. (ASTM E1527-13, Section 3.2.72)

Reasonably Ascertainable. Information that is (1) publicly available, (2) obtainable from its source within reasonable time and cost constraints, and (3) practically reviewable. (ASTM E1527-13, Section 3.2.77)

Recognized Environmental Condition (REC). The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions. (ASTM E1527-13, Section 3.2.78)

Subject Property (ASTM standard uses the term Property). The real property that is the subject of this Environmental Site Assessment. Real property includes buildings and other fixtures and improvements located on the property and affixed to the land. (ASTM E1527-13, Section 3.2.70)

User. The party seeking to use ASTM Practice E1527 to complete an Environmental Site Assessment of the property. A User may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The User has specific obligations for completing a successful application of this practice as outlined in Section 6 of Practice E1527. (ASTM E1527-13, Section 3.2.98)

11.3 Cross Reference for ASTM E1527-13 Requirements

This table provides an easy cross reference for ensuring that the PBS Phase I ESA report complies with ASTM E1527-13. The ASTM recommended format is found in Appendix X4 of the standard.

ASTM Recommended Format	Provided in PBS Report Page/Section Number
X4.1 Summary	Executive Summary
X4.2 Introduction	Sections 1 and 2
X4.3 User Provided Information	Sections 1, 4 and 6, Appendix F
X4.4 Records Review	Sections 3 and 4, Appendices B, C, and D
X4.5 Site Reconnaissance	Section 5, Appendix E
X4.6 Interviews	Section 6
X4.7 Evaluation	Section 8
X4.8 Non-Scope Services	7
X4.9 Appendices	Appendices A, B, C, D, E, and F

Figures

Figure 1. Site Vicinity Map
Figure 2. Site Plan

SOURCE: © 2018 GOOGLE EARTH PRO.

SCALE: 1" = 750'

0 375' 750' 1500'

PREPARED FOR: ASHMORE MINISTORAGE

Layout Tab: FIG 2

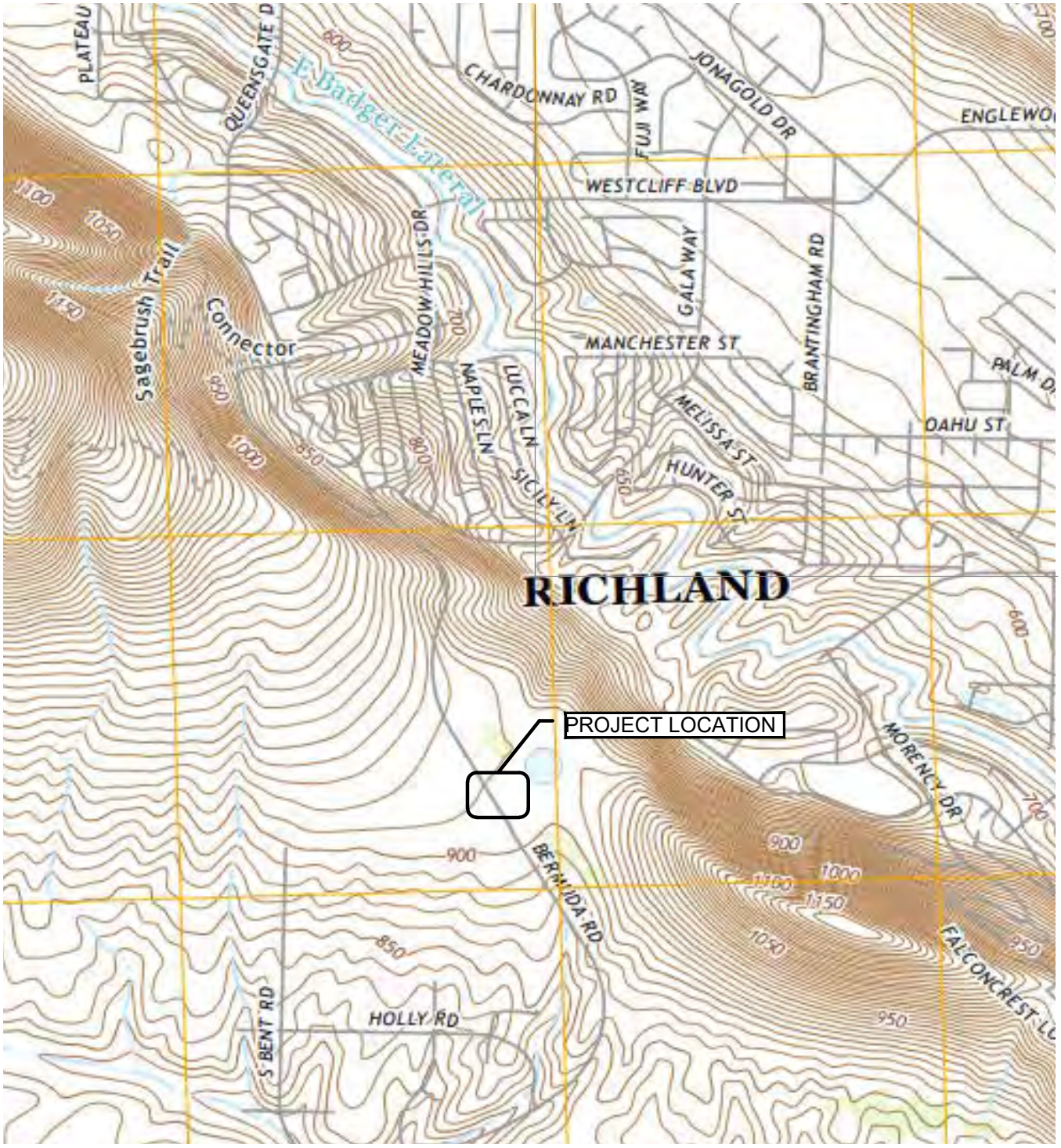
PBS

SITE PLAN

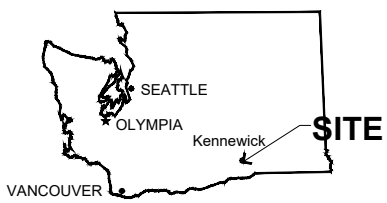
1276 N BERMUDA RD WAY
RICHLAND, WASHINGTON

JULY 2021
99336.000

FIGURE
2



SOURCE: USGS BADGER MOUNTAIN, WA, QUADRANGLE 2020.



WASHINGTON

SCALE: 1" = 2,000'

0 1,000' 2,000' 4,000'

PREPARED FOR: Monson Development

PBS

VICINITY MAP

1276 N Bermuda Road Way
RICHLAND, WASHINGTON

JULY 2021
66336.000

FIGURE
1

Filename: L:\Projects\67000\67475\67475-001\Geotech\GeoDwg\67475.001_FIG-1.dwg Layout Tab: FIG 1 User: Wesley Garcia

Appendix A

Contract and Resumes

PBS Proposal to Provide a Phase I Environmental Site Assessment/Contract

STANDARD FORM OF AGREEMENT
BETWEEN
Monson Development Washington, LLC
AND
PBS ENGINEERING AND ENVIRONMENTAL INC.
FOR
PROFESSIONAL SERVICES

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by

and modified by

Miller Nash LLP, attorneys at law (May 2007)

ACEC

National Society of Professional Engineers®

ASCE American Society of Civil Engineers

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

AGREEMENT
BETWEEN CLIENT AND PBS ENGINEERING AND ENVIRONMENTAL INC.
FOR
PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of April 23, 2021 ("Effective Date") between

Monson Development Washington, LLC ("Client")
c/o Bill Monson
63615 E. Jacobs Rd NE
Benton City, WA 99320

(If not signed by Client within 30 days of the "Effective Date" then this Agreement will be void)

and

("PBS").

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509-942-1600 Phone
360-695-8767 Fax
http://www.PBSengineers.com
http://www.pbsenv.com

PBS agrees to provide the services described below to Client for Monson Work Plan ("Project")

Description of Property: Tax Parcels 134982000005004, 134982000006000, 134982010595002
134982010595004, 134982000005005, 134982010595003

Total Acreage = 120.55 per exhibit map.

Client and PBS agree as follows:

ARTICLE 1 - SERVICES OF PBS

1.01 *Scope*

A. PBS shall provide, or cause to be provided, the services set forth in this Agreement and in Exhibit A ("Scope of Services").

B. Any services provided outside of the Scope of Services will be considered an "extra" and billed directly to the Client, outside of the contract amount, on a "Time and Materials" basis in accordance with PBS' currently established billing rates.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

ARTICLE 2 –

ARTICLE 2 - CLIENT'S RESPONSIBILITIES

2.01 *General*

A. Client shall have the responsibilities set forth in this Agreement and in Exhibit B.

B. Client shall pay PBS as set forth in Exhibit C. This Agreement will not take effect, and PBS shall have no obligation to provide services set forth in the Scope of Work, until Client returns a signed copy of this Agreement and pays an initial retainer. The retainer for this matter will be $ -0-. It will be held in PBS' bank account and used to pay the final billing for the services to be provided by PBS. The retainer is generally only a portion of the amount of fees and costs that will be charged for the work to be done. Client shall be responsible for paying the monthly invoices as set forth in Paragraph 4.01.

C. Client shall be responsible for, and PBS may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by Client to PBS pursuant to this Agreement. PBS may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement.

D. Client has read and fully understands this Agreement and has had the opportunity to obtain the advice of legal counsel.

E. Client, also the legal owner of the real property for which services are being provided by PBS, hereby acknowledges receipt of a Notice to Owner as provided by RCW 60.04.031. The Notice to Owner has not been sent separate but has been provided together with this Agreement.

F. If the Client is not the legal owner of the real property for which services are being provided, the Client hereby acknowledges that PBS has sent a Notice to Owner to the real property owner as provided by RCW 60.04.031. A copy of the Notice to Owner has been attached to this Agreement for the Client's file.

ARTICLE 3 –

ARTICLE 3 - SCHEDULE FOR RENDERING SERVICES

3.01 *Commencement*

A. PBS shall begin rendering services as of the Effective Date of the Agreement.

3.02 *Time for Completion*

A. Unless otherwise provided in this Agreement, PBS shall complete its obligations within a reasonable time. Specific periods of time by which services are to be completed may be provided in Exhibit A, and are agreed to be reasonable.

B. If, through no fault of PBS, such periods of time or dates are changed, or the orderly and continuous progress of PBS' services is impaired, or PBS' services are delayed or suspended, then the time for completion of PBS' services, and the rates and amounts of PBS' compensation, shall be adjusted equitably through an amendment to this Agreement. PBS shall not be responsible for delays in completing its services that cannot be reasonably foreseen at the time of entering into this agreement, or for delays which are caused by factors beyond PBS' control, including but not limited to acts of God, acts or omissions on the part of Client, labor disputes or disturbances, natural disasters, utility failures, wars, actions, restrictions, regulations

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

or orders of any government agency or subdivision thereof, and the action or inaction of any government agency or subdivision thereof.

C. If Client authorizes changes in the scope, extent, or character of the Project, then the time for completion of PBS' services, and the rates and amounts of PBS' compensation, shall be adjusted equitably through an amendment to this Agreement.

D. Client shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the PBS' performance of its services.

ARTICLE 4 –

ARTICLE 4 - INVOICES AND PAYMENTS

4.01 *Invoices*

A. *Preparation and Submittal of Invoices.* PBS shall prepare invoices in accordance with its standard invoicing practices. PBS will bill Client on a monthly basis. Client shall pay PBS within 30 days after the invoice date.

B. *Reimbursable Expenses and Sub-Consultants.* Reimbursable expenses in Exhibit C have been provided as an estimate only. The actual cost for Reimbursable Expenses will be billed at the actual cost plus 10%. Travel and related expenses, if incurred, will be charged in accordance with PBS' "Travel and Reimbursement" policy, a copy of which is available upon request. In addition, the Client agrees to pay all costs and expenses incurred by PBS on Client's behalf, including any such moneys that PBS may advance on Client's account for any purpose whatsoever. Client shall be solely responsible for paying for all applicable sales tax, permits, licenses, and official inspections, and the cost thereof shall not be deducted from the payment due PBS.

4.02 *Payments*

A. *Application to Interest and Principal.* Payment may be credited first to any interest owed to PBS and then to principal.

B. *Failure to Pay.* If Client fails to make any payment due PBS for services and expenses within 45 days after the invoice date, then:

1. amounts due PBS may be increased at the rate of 1.5% per month (or the maximum rate of interest permitted by law, if less) from said forty-fifth day; and

2. PBS may, after giving seven days written notice to Client, suspend services under this Agreement until Client has paid in full all amounts due for services, expenses, and other related charges. Client waives any and all claims against PBS for any such suspension.

C. *Disputed Invoices.* If Client contests an invoice, Client may withhold only that portion so contested, and must pay the undisputed portion.

D. *Legislative Actions.* If after the Effective Date of the Agreement any governmental entity takes a legislative action that imposes taxes, fees, or charges on PBS' services or compensation under this Agreement, then the PBS may include such new taxes, fees, or charges on an invoice as a Reimbursable Expense. Client shall pay such invoiced new taxes, fees, and charges; such payment shall be in addition to the compensation to which PBS is entitled under the terms of this Agreement.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

ARTICLE 5 –

ARTICLE 5 - GENERAL CONSIDERATIONS

5.01 *Standards of Performance*

A. The standard of care for all professional Engineering, Landscape Architecture and related services performed or furnished by PBS under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. PBS makes **NO WARRANTY, EXPRESS OR IMPLIED**, as to findings, recommendations, plans, specifications or professional advice except that such will be made and prepared in accordance with generally accepted Engineering and Landscape Architecture practices. It is further agreed that PBS' liability for any error in the work performed by PBS shall not be greater, in total, than the limit of PBS' Errors and Omission's insurance policy. In no event shall either party have any liability under this Agreement, whether based on contract, tort (including negligence), warranty or any other legal or equitable ground, for any loss of use, profit or revenue by the other party or for any consequential, indirect, incidental, special, punitive, or exemplary damages or environmental impairment incurred by the other party, arising from or related to this Agreement.

B. Client shall not be responsible for discovering deficiencies in the technical accuracy of PBS' services. PBS shall correct any such deficiencies in technical accuracy without additional compensation except to the extent such corrective action is directly attributable to deficiencies in any information furnished by Client or a third party.

C. PBS may employ such sub-consultants as PBS deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Client. When technical or professional services are furnished by an outside source, upon approval of Client, an additional ten percent (10%) shall be added to the cost of these services under this Agreement for PBS' administration costs.

D. Subject to the standard of care set forth in Paragraph 5.01.A, PBS and its sub-consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.

E. PBS and Client shall comply with applicable laws and regulations and Client-mandated standards that Client has provided to PBS in writing. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after the Effective Date of this Agreement may be the basis for modifications to Client's responsibilities or to PBS' scope of services, times of performance, and compensation.

F. PBS shall not be required to sign any documents, no matter by whom requested, that would result in the PBS having to certify, guarantee, or warrant the existence of conditions whose existence the PBS cannot ascertain. Client agrees not to make resolution of any dispute with the PBS or payment of any amount due to the PBS in any way contingent upon the PBS signing any such documents.

G. PBS shall not at any time supervise, direct, or have control over any contractor's work, nor shall PBS have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, for security or safety at the Project site, for safety precautions and programs incident to a contractor's work in progress, nor for any failure of a contractor to comply with the laws and regulations applicable to a contractor's furnishing and performing work on the Project.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

H. PBS neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform the work on the Project in accordance with the contract documents.

I. PBS shall not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any of their agents or employees or of any other persons (except PBS' own employees and its sub-consultants) at the Project site or otherwise furnishing or performing any work on the Project; or for any decision made on interpretations or clarifications of contract documents given by Client without consultation and advice of PBS.

5.02 *Design Without Construction Phase Services*

A. If PBS' basic services under this Agreement do not include Project observation, or review of a contractor's performance, or any other construction phase services, then (1) PBS' services under this Agreement shall be deemed complete on the date the design is completed or, if applicable, the date when the approving authority approves the design; (2) PBS shall have no design or shop drawing review obligations during construction; (3) Client assumes all responsibility for the application and interpretation of its contract documents, contract administration, construction observation and review, and all other necessary construction phase engineering and professional services; and (4) Client waives any claims against the PBS that may be connected in any way thereto.

5.03 *Use of Documents*

A. All documents created or used by PBS in respect to this Project ("documents") are instruments of service, and PBS shall retain an ownership and property interest therein (including the copyright and the right of reuse at the discretion of the PBS) whether or not the Project is completed. Client shall not rely in any way on any document unless it is in printed form, signed or sealed by the PBS or one of its consultants.

B. A party may rely on the fact that data or information set forth on paper (also known as hard copies) that the party receives from the other party by mail, hand delivery, or facsimile, are the items that the other party intended to send. Files in electronic media format of text, data, graphics, or other types that are furnished by one party to the other are furnished only for convenience, not reliance by the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

C. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any transmittal errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files.

D. When transferring documents in electronic media format, the transferring party makes no representations as to long-term compatibility, usability, or readability of such documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the document's creator.

E. Client may make and retain copies of documents for information and reference in connection with use on the Project by Client. PBS grants Client a license to use the documents on the Project, extensions of the Project, and other projects of Client, subject to the following limitations: (1) Client acknowledges that such documents are not intended or represented to be suitable for use on the Project unless completed by PBS, or for use or reuse by Client or others on extensions of the Project or on any other project without written verification or adaptation by PBS; (2) any such use or reuse, or any modification of the documents, without

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

written verification, completion, or adaptation by PBS, as appropriate for the specific purpose intended, will be at Client's sole risk and without liability or legal exposure to PBS or to PBS' consultants; (3) Client shall indemnify and hold harmless PBS and PBS' consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification without written verification, completion, or adaptation by PBS; (4) such limited license to Client shall not create any rights in third parties.

F. If PBS at Client's request verifies or adapts the documents for extensions of the Project or for any other project, then Client shall compensate PBS at rates or in an amount to be agreed upon by Client and PBS.

G. Client acknowledges that PBS has the right to destroy the documents after a certain period of time pursuant to PBS' Document Retention Policy and that PBS is not obligated to provide copies of the documents to Client or seek further approval from Client prior to destruction.

5.04 *Insurance*

A. PBS shall procure and maintain insurance as set forth below.

1.) General Liability-	
Each Occurrence (Bodily Injury and Property Damage	$2,000,000.
General Aggregate	$4,000,000.
2.) Professional Liability-	
Each Claim Made	$1,000,000.
Annual Aggregate	$2,000.000.
3.) Workers Compensation-	Statutory

B. At any time, Client may request that PBS or its consultants, at Client's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified. If so requested by Client, and if commercially available, PBS shall obtain and shall require its consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Client.

5.05 *Suspension and Termination*

A. *Suspension.*

By Client: Client may suspend the Project upon seven days written notice to PBS.

By PBS: If PBS' services are substantially delayed through no fault of PBS, PBS may, after giving seven days written notice to Client, suspend services under this Agreement.

B. *Termination.* The obligation to provide further services under this Agreement may be terminated:

1. For cause,

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

b. By PBS:

1) upon seven days written notice if Client demands that PBS furnish or perform services contrary to PBS' responsibilities as a licensed professional; or

2) upon seven days written notice if the PBS' services for the Project are delayed or suspended for more than 90 days for reasons beyond PBS' control.

3) PBS shall have no liability to Client on account of such termination.

c. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 5.05.B.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience,

a. By Client effective upon PBS' receipt of notice from Client.

C. *Effective Date of Termination*. The terminating party under Paragraph 5.05.B may set the effective date of termination at a time up to 30 days later than otherwise provided to allow PBS to demobilize personnel and equipment from the Project site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

D. *Payments Upon Termination*.

1. In the event of any termination under Paragraph 5.05.B, PBS will be entitled to invoice Client and to receive full payment for all services performed or furnished and all Reimbursable Expenses incurred through the effective date of termination. Upon making such payment, Client shall have the limited right to the use of documents, at Client's sole risk, subject to the provisions of Paragraph 5.03.E.

2. In the event of termination by Client for convenience or by PBS for cause, PBS shall be entitled, in addition to invoicing for those items identified in Paragraph 5.05.D.1, to invoice Client and to payment of a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with PBS' Consultants, and other related close-out costs.

5.06 *Controlling Law*

A. This Agreement is to be governed by the law of the state in which the Project is located.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

5.07 *Successors, Assigns, and Beneficiaries*

A. Client and PBS are hereby bound and the partners, successors, executors, administrators and legal representatives of Client and PBS (and to the extent permitted by Paragraph 5.07.B the assigns of Client and PBS) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

B. Neither Client nor PBS may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

5.08 *Dispute Resolution*

A. Client and PBS agree to negotiate all disputes between them in good faith for a period of 30 days from the date of written notice prior to invoking the procedures of Paragraph 5.08.B.

B. If the parties fail to resolve a dispute through negotiation under Paragraph 5.08.A, then all disputes between Client and PBS shall be settled by arbitration in accordance with the rules of JAMS Mediators and Arbitrators effective at the Effective Date of the Agreement, subject to the conditions stated below. This agreement to arbitrate and any other agreement or consent to arbitrate entered into in accordance with this Paragraph 5.08.B will be specifically enforceable under prevailing law of any court having jurisdiction.

C. Notice of the demand for arbitration must be filed in writing with the other party to the Agreement and with JAMS. The demand must be made within a reasonable time after the dispute has arisen. In no event may the demand for arbitration be made after the date when institution of legal or equitable proceedings based on such dispute would be barred by the applicable statute of limitations.

D. The award rendered by the arbitrators shall be in writing, and shall include: (i) a precise breakdown of the award; and (ii) a written explanation of the award specifically citing the Agreement provisions deemed applicable and relied on in making the award.

E. The award rendered by the arbitrators will be consistent with the Agreement of the parties and final, and judgment may be entered upon it in any court having jurisdiction thereof, and will not be subject to appeal or modification.

F. Paragraphs 5.08A-E shall not apply to PBS' right to file a notice of professional services and/or a right to file a lien as provided for by law. Client agrees to be responsible for the filing of any subsequent lien release upon satisfaction of lien.

5.09 *Environmental Condition of Project Site*

A. Client represents to PBS that to the best of its knowledge no Hazardous Substances, other than those disclosed in writing to PBS, exist at the Project site. Hazardous Substances means any substance, product, waste, or other material of any nature whatsoever (including, but not limited to, Asbestos, Petroleum, Radioactive Material, and PCBs) which is or becomes listed, regulated, or addressed pursuant to [a] the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); [b] the Hazardous Materials Transportation Act, 49 U.S.C. §§1801 et seq.; [c] the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); [d] the Toxic Substances Control

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

Act, 15 U.S.C. §§2601 et seq.; [e] the Clean Water Act, 33 U.S.C. §§1251 et seq.; [f] the Clean Air Act, 42 U.S.C. §§7401 et seq.; and [g] any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

B. If the presence at the Project site of undisclosed Hazardous Substances adversely affects the performance of PBS' services under this Agreement, then the PBS shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on 30 days notice.

5.10 *Indemnification and Mutual Waiver*

A. *Indemnification by PBS.* To the fullest extent permitted by law, PBS shall indemnify and hold harmless Client, and Client's officers, directors, partners, agents, consultants, and employees from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of PBSs, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission or willful misconduct of PBS or PBS' officers, directors, partners, employees, or sub-consultants.

B. *Indemnification by Client.* To the fullest extent permitted by law, Client shall indemnify and hold harmless PBS, PBS' officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of PBSs, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property, including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission or willful misconduct of Client or Client's officers, directors, partners, agents, consultants, or employees, or others retained by or under contract to the Client with respect to this Agreement or to the Project.

C. *Environmental Indemnification.* In addition to the indemnity provided under Paragraph 5.10.B of this Agreement, and to the fullest extent permitted by law, Client shall indemnify and hold harmless PBS and its officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of PBSs, architects, attorneys and other professionals, and all court, arbitration, or other dispute resolution costs) caused by, arising out of, relating to, or resulting from Hazardous Substances at, on, or under the Project site, provided that (i) any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom, and (ii) nothing in this paragraph shall obligate Client to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.

D. *Mutual Waiver.* To the fullest extent permitted by law, Client and PBS waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

5.11 *Miscellaneous Provisions*

A. *Notices*. Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by facsimile, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

B. *Survival*. All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.

C. *Severability*. Any provision or part of the Agreement held to be void or unenforceable under any laws or regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Client and PBS, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

D. *Waiver*. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

E. *Accrual of Claims*. To the fullest extent permitted by law, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than (1) the date of substantial completion of the Project, or (2) by the deadline established by the statutes of repose and limitation, whichever is earlier.

F. *Attorney's Fees*. If either (1) a suit, proceeding, arbitration or action of any nature whatsoever is instituted, including without limitation any proceedings under the U.S. Bankruptcy Code, to interpret or enforce any term, condition, or covenant of this Agreement or (2) the services of any attorney are retained to enforce any term, condition, or covenant of this Agreement, then the prevailing party shall be entitled to recover from the other party all reasonable attorney's fees and expenses, including paralegal's, accountant's, and other expert's fees, and all other fees, costs, and expenses actually incurred and reasonably necessary in connection with enforcing the terms of this Agreement, including fees, costs and expenses incurred in an action on appeal or bankruptcy proceeding, if any, the recovery of which shall be in addition to all other remedies provided by law.

ARTICLE 6 –

ARTICLE 6 - EXHIBITS AND SPECIAL PROVISIONS

6.01 *Exhibits Included*

A. Exhibit A, Scope of Services.

B. Exhibit B, Client Responsibilities.

C. Exhibit C, Payment for Services, Reimbursable Expenses and Sub-consultants.

6.02 *Total Agreement*

A. This Agreement constitutes the entire agreement between Client and PBS and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

6.03 *Designated Representatives*

A. With the execution of this Agreement, PBS and Client shall designate specific individuals to act as PBS' and Client's representatives with respect to the services to be performed or furnished by PBS and responsibilities of Client under this Agreement. Such individuals shall have authority to transmit instructions, receive information, and render decisions relative to the Project on behalf of each respective party.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

Client:
Monson Development Washington, LLC

By: Bill Monson

Title: President

Date Signed: 5/20/2021

PBS Engineering and Environmental Inc.

Digitally signed by Jason Mattox
Date: 2021.05.19 13:43:42-07'00'

By: Jason Mattox, PE

Title: Operations Manager / Senior Civil Engineer

Date Signed: 5/19/2021

Address for giving notices:

63615 E Jacobs Rd NE

Benton City, WA 99320

Designated Representative (see Paragraph 6.03.A):

Bill Monson

Title: President

Phone Number: 509-840-0083

Facsimile Number:

E-Mail Address: billmonson@monsonranches.com

Address for giving notices:

400 Bradley Blvd, Ste 106

Richland, WA 99352

Designated Representative (see Paragraph 6.03.A):

Jason Mattox, PE

Title: Operations Manager / Senior Civil Engineer

Phone Number: 509.942.1600

Facsimile Number: 866.727.0140

E-Mail Address: jason.mattox@pbsusa.com

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

EXHIBIT "A"
SCOPE OF SERVICES

EXHIBIT "A", consisting of 9 pages, referred to in and part of the **Agreement between Client and PBS for Professional Services** effective date April 23rd, 2021.

PROJECT UNDERSTANDING AND APPROACH

PBS proposes the following work plan to assist in developing 120.55 acres of property in Richland, WA. The property is currently identified under 6 separate tax parcel designations and is subject to a short plat being conducted by the seller. The property is currently in agricultural use and has not received any land use entitlements through the City of Richland (City).

The Client desires to develop the property to the highest and best use, and in order to do this, the project would be evaluated in accordance with the work plan below.

120-Acre Site Identified Zoning Characteristics

Current Zoning Designation by City of Richland

- AG - Agricultural

Current Comprehensive Plan Designation by City of Richland

- Badger Mountain South Sub Area Plan
  - Medium Density Residential
  - Commercial
  - Civic/Open Space

PROJECT WORK PLAN

The following work plan would guide the process that needs to be taken in order to develop the residential portions of the 120-acre site.

Task 001 Land Surveying

A topographic and boundary survey of the property needs to be completed to resolve the boundary and gain topographic ground shots and utility locates across the entire purchase area of 120+ acres. This information would be the starting point for all future engineering and legal platting documents used to create lots and develop infrastructure on the property. This document would also identify any other entities that have status to use the land for utility purposes, as well as where the points of ingress and egress are to the property from adjoining right of ways and legal lots.

Most of this property is currently encumbered with orchard trees. Data will be collected to indicate the end of tree rows; however, individual trees will not be located. Observable above-ground features of utilities will be located; this does not include the orchard irrigation system. It is known that BMID has transmission lines located on the property; they will be contacted, and any locates of these lines by BMID staff will be tied in the field and shown on the survey. Topography limits will be to the external boundary of the property as identified on the purchase and sale map. Our deliverables for this site will consist of an AutoCAD base map with text and symbols plotted to a standard Engineering scale, a coordinate file, and an XML file with the surface data. If requested, we can provide a printed 24"x36" map of the site showing the parcel boundary and contour information on a single sheet. Our base map will also include all plottable easements of record, as indicated in a client provided Title Report.

PBS is available to begin work on this project immediately upon receipt of a signed copy of this Agreement. The scope of work will be completed approximately 6-8 weeks after authorization to proceed.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

Task 002 Geotechnical Evaluation and Reports

PBS' geotechnical services will be to explore subsurface conditions at the site and develop geotechnical recommendations for the feasibility and construction of the proposed 120-acre development.
PBS proposes the following geotechnical scope of work.

Geologic Map Review

Geologic maps of the site area will be reviewed for information regarding geologic conditions and hazards at or near the site.

Subsurface Exploration

Subsurface explorations will consist of excavating 25 to 30 test pits throughout the proposed development area. The test pits will be excavated to depths of up to 12 feet bgs or practical refusal, whichever occurs first. A member of the PBS geotechnical engineering staff will log the explorations and collect disturbed samples at selected depths for classification and laboratory testing.

In the event that test pits terminate in liquefiable soils, it may be necessary to advance borings to depths of up to 30 feet bgs to better understand subsurface conditions. Mobilization of a drill rig and associated PBS labor is not part of this scope and fee.

Field Infiltration Testing

PBS will conduct 3 to 4 infiltration tests at depths between 4 to 6 feet bgs in general accordance with Ecology test procedures. A soil sample will be collected at each test pit immediately below the infiltration test depth for laboratory testing.

Soils Testing

Selected samples will be returned to our laboratory and classified by the Unified Soil Classification System (ASTM D2487) and/or the Visual-Manual Procedure (ASTM D2488). Laboratory tests may include natural moisture contents, Atterberg limits, and grain-size analyses, as appropriate.

Geotechnical Engineering Analyses

The data collected during the subsurface exploration, literature research, and testing will be analyzed to develop geotechnical recommendations for design and construction.

Deliverable

A geotechnical engineering report will be prepared containing the results of our work, including the following information:

- Field exploration logs and site plan showing approximate exploration locations
- Laboratory test results
- Infiltration test results
- Groundwater considerations
- Liquefaction potential
- Shallow foundation design recommendations:
    - Minimum embedment
    - Allowable bearing pressure
    - Estimated settlement (total and differential)
    - Sliding coefficient
- Earthwork and grading, cut, and fill recommendations:
    - Structural fill materials and preparation, and reuse of on-site soils
    - Wet weather considerations
    - Utility trench excavation and backfill requirements
    - Temporary and permanent slope inclinations

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

- Seismic design criteria in accordance with the current International Building Code (IBC) with state of Washington amendments
- Slab and pavement subgrade preparation recommendations
- Recommended asphalt concrete (AC) pavement sections

PBS' fee structure is inclusive of hiring the necessary contractors and equipment to conduct the field exploration and infiltration testing. The owner will be responsible to coordinate access to the property. Any damage to private irrigation systems due to the exploration efforts are excluded from the contract, and costs to repair these systems will be handled on a time and materials basis.

Task 003 Phase 1 and Limited Phase 2 Environmental Site Assessment

Sub Task 1: Phase I ESA
PBS' scope of work follows ASTM International's E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, approved by the Environmental Protection Agency (EPA) in November 2013, for conducting all appropriate inquiries (AAI) to protect innocent landowners, bona fide prospective purchasers, and contiguous property owners from CERCLA liability.

PBS investigators meet the environmental professional (EP) criteria, and bring many years of diverse experience to this project. The following scope of work and compensation are based on PBS' understanding of current structures, site conditions, and usage.

A more detailed scope of work for Phase I Environmental Site Assessments is attached to this proposal and contains important assumptions related to the completion of this work. Please review this section carefully.

Sub Task 2: Limited Soil Investigation
PBS will perform limited soil sampling to provide a screening-level assessment for the presence of residual organochlorine pesticides, lead and arsenic in shallow soil. Groundwater will not be assessed in this investigation. No utility locate is planned, as hand tools will be used for sampling and present a low risk of interfering with buried utilities.

1. PBS will plan the field work and will mobilize to the site with sampling equipment and sample containers and anticipates the work can be completed in two separate business days.

2. PBS proposes to collect samples on systematic grid within the entire former orchard area. Overall site grid sampling will be conducted on a pattern set up by the use of a handheld GPS unit or tape in the field. Additional samples may be collected from areas such as stained soil or areas with potential of past or present use for pesticide storage or mixing/loading. All sampled locations will be recorded by a handheld GPS unit.

3. The soil samples will be collected using hand tools, from the surface to a depth of 6 to 12-inches below ground surface. Approximately 20 systematic samples will be collected within the gridded area during two ten-hour field days.

4. PBS anticipates collecting up to five additional samples at any locations of visible staining or as follow-up samples at depths between 12 and 24 inches, based on results of grid sampling analysis. PBS anticipates follow-up sampling will be completed in one business day, to be scheduled after receiving and analyzing the initial grid samples. This will result in 25 total samples for the entire site sampling effort.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

5. Each sample will be individually labeled and placed into laboratory-provided containers by PBS field personnel wearing new disposable nitrile gloves at each location.

6. The samples will be placed on ice in a cooler until transported to the lab under chain of custody documentation. Samples will be submitted to a Washington-accredited laboratory and analyzed for Pesticides by EPA Method 8081 and Total Lead and Arsenic by EPA Method 200.8/6010.

7. PBS will prepare a written report that details the sampling and results and evaluation of the findings with respect to Washington State Department of Ecology cleanup rules and/or EPA human health screening levels. All field activities will be described, a site plan will show the sampling locations, results of detections will be tabulated, and will include copies of laboratory reports and chain of custody documentation.

No wastes requiring special disposal are expected to be generated. The sample locations will be abandoned by placing remaining soil back in the holes. All fieldwork will follow PBS's standard Health and Safety Policies and Procedures.

LIMITATIONS OF SCOPE

The study will be limited to the tests, locations, and depths as indicated to determine the absence or presence of certain contaminants. The site as a whole may have other contamination that will not be characterized by this study. Further study may be recommended. The findings and conclusions of this work are not scientific certainties, but probabilities based on professional judgment concerning the significance of the data gathered during the course of this investigation. PBS is not able to represent that the site or adjoining land contains no hazardous waste, oil, or other latent conditions beyond that detected or observed by PBS. Unforeseen conditions, such as unsafe worker access or inclement weather, may occur. In this event, the work will stop and the client will be notified immediately.

Deliverable

- An electronic copy of a final Phase I report will be provided.
- Preliminary laboratory results from soil sampling will be screened against applicable Department of Ecology Model Toxic Control Act (MTCA) concentrations and verbally communicated to the client. Upon receiving final laboratory analytical testing reports, PBS will prepare an electronic copy of its report that will include a description of field activities, a table of analytical results, figures, laboratory reports, and recommendations (if any).

ASSUMPTIONS

PBS' compensation estimate includes the following assumptions:

- Review of an existing title report if supplied by the Client.
- PBS provides recommendations in the Phase I ESA report, unless otherwise instructed.
- Following issuance of the final reports, if information is subsequently provided to PBS that warrants report revisions or amendments, the additional work will be charged on a time and materials basis.
- Other services provided on a time and materials fee scale include draft reports, additional report hard copies, Client-requested in-person meetings, and conference calls to discuss findings. These services will be communicated to the Client before extra charges are incurred.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

- A standard PBS reliance letter to third parties for the Phase I Environmental Site Assessment will be provided at no additional cost within 60 days of report completion. Letters provided after 60 days may be requested for an additional fee. Client- or lender-specific reliance letters will be reviewed by PBS and may be associated with a higher fee.
- All soil sampling can be completed by PBS personnel within two field days (equal to or less than twenty total staff-hours).
- The sampling is intended to provide a preliminary assessment of the potential for agricultural chemicals to be present at the site. It is not considered to be a comprehensive delineation of potentially contaminated soil.
- Work will be performed during normal business hours, Monday through Friday.
- Access to the investigation areas will not be impaired.
- All soil samples can be collected by hand tools.

General Background on Pesticides

Organochlorines contain carbon, hydrogen, and chlorine. They were developed in the mid-1940s through the 1950s and tend to persist in the environment for decades. Key organochlorines include dichloro-diphenyl-trichloroethane (DDT), chlordanes, toxaphene, aldrin, dieldrin, and endrin, all of which were banned for sale in the United States by the late 1980s.

Historically, orchard pesticides also contained heavy metals such as arsenic and lead. Lead arsenate was the most extensively used of the arsenical insecticides and its use was effectively terminated in 1948 when DDT became widely available to the public (Benson et al., 1968). All insecticidal uses of lead arsenate in the United States were officially banned on August 1, 1988 (USEPA, 1988). Lead arsenate and organochlorine pesticides have been found to persist in soil at levels that may present health risks, despite subsequent redevelopment of the property.

Task 004 Development of Preliminary Site Master Plan

The project site currently carries multiple comprehensive plan designations with much of the property being identified for single-family residential use. The other use that is currently planned for under the City's comprehensive plan is for commercial, which would allow for the development of multi-family units. It is recommended that a series of master plan layouts (2-3) be developed for the property that identifies the lot configuration and product density. Once a master plan can be developed for the site, then this document can be used to have conversations with the major project stakeholders and help drive key decisions that need to be made on the development of the property.

Upon completion of the preliminary site plans, it is proposed that a formal Pre-Application meeting be scheduled with the City of Richland and one of the site plans developed presented to open discussions about preliminary platting and necessary studies needed to support the project application.

Task 005 Stakeholder Outreach and Planning Efforts

Determination of Land Stakeholders

There are multiple stakeholders in the area that would have regional interests in providing services to the area that are complimentary to residential land development. These stakeholders would potentially include:

- City of Richland (transportation and utility provider, Lead Agency)
- Richland School District (owns property adjacent to site)
- City of Richland Fire Department (service boundary and response times)

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

- City of Richland Parks Department (trail system & park requirements)
- Dry Utility Providers (Richland Energy Services, Benton PUD, Cascade Natural Gas, Charter Communications)
- Badger Mountain Irrigation District (irrigation provider)

Transportation Planning
A major planning effort that can be accomplished under the master plan process is to determine what the major transportation routes are going to be through the site as they relate to the City's comprehensive transportation plan. It is known at this time that Queensgate Boulevard will bisect the property and connect directly into Bermuda Drive that terminates in the southeast corner of the property, it is anticipated that this will be developed to a core road section with the Siena Hills development. The other major transportation route in the area that is on the City's plan is the extension of Gage Boulevard. At this time, Gage Boulevard has not been fully planned or identified by plat and is a theoretical route drawn on a map.

Queensgate Boulevard and Gage are in the City's Transportation Impact Fee (TIF) service area, and are subject to reimbursement under the TIF program. The project will need to identify those potential costs upfront and identify reimbursement with the preliminary platting process so that it is adopted under the plat resolution.

It is anticipated that the project could require a Traffic Impact Analysis to be submitted with the preliminary plat. This TIA would be scoped and budgeted with Benton County Public Works, key intersections in the region will need to be studied to determine potential impacts of this development. At this time it cannot be determined what the study would need to include or the full depth of the analysis required.

Sewer System Analysis
Based on prior conversations with the City's Public Works Department, one of the key items to determine will be the capacity available in the downstream sewer system north of the project area. The gravity sewer that is in the immediate vicinity of the site is located in Queensgate Boulevard near the entrance to Legacy Lane. This will be the primary discharge point for the project site. A portion of the site will be fed by gravity back to this point, and a portion of the site will need to contribute to the sewer lift station being constructed in the Siena Hills development south of the project area. Gravity sewer would need to be constructed to the sewer pump station located south of the site.

Itemized Objectives of Sewer Analysis

- Determine with the City what the contribution will be from this development toward the newly constructed sewer pump station located in Siena Hills.
- Determine downstream capacity of the existing sewer mainlines north of the project area. PBS would work with the City's sewer consultant to finalize and document if any sewer lines would require upsizing in order to develop the property. Recent development of the Westcliffe Heights and Siena Hills subdivision identified that there were capacity issues downstream, but those would not have to be addressed until a certain flow and lot count were exceeded.

Water System Analysis
The City currently has multiple municipal trunk lines servicing the area with water. At this time, it is understood that majority of the property lies in the Zone 4 boundary. It is understood that the Zone 4 line will need to be looped from the current extension that exists on the project's east boundary. It needs to be determined if this project would need to contribute to any additional planned reservoirs in the project area near the north end of the site. It also needs to be determined if the project will require service of the Zone 5 waterline. Both pressure zones are available in Queensgate Boulevard near Legacy Lane.

Storm System Analysis

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

Preliminary discussions with the City have indicated that prior to preliminary plat submittal, a stormwater master plan will need to be developed for the project that identifies the potential for upstream and downstream impacts associated with the development. It has been widely accepted that the majority of the water will be required to be managed on-site through stormwater ponds, but the City is currently deficient in having a stormwater master plan for this area of Richland. There has to be a baseline understanding established as to what the emergency overflow routes are going to be for properties leading into this property, as well as what the emergency overflow route would be from any facilities that would discharge downstream of this project.

Irrigation System
The project site is currently under agricultural use and is serviced by Badger Mountain Irrigation District (District). The District currently has a major pump station located south and east of the subject property within the Siena Hills development. This pump station has a large penstock line serving it and has multiple trunk lines leading away from the pump station. It will need to be determined what development plan is going to be around this station, in addition to what impacts the stations trunck lines are going to have on the development potential of the property. It is anticipated that lines may need to be relocated in order to fit into the overall development plan of the property. These lines are seasonal, but during certain times of the year, must remain active. Timing of relocation of certain lines may become a critical path item in the development process.

It is also anticipated that the District will be the primary irrigation provider for the residential development of the project. It will have to be determined, with coordination with the District, what the piping infrastructure requirements are going to be in order to serve the property and if additional pump stations will be needed to serve the development.

Task 006 Property Rezone and Preliminary Plat

Property Rezone
Once a development plan has been vetted then the property will require a rezone from agricultural to the current comprehensive plan designations identified under the Badger South sub area plan. If the zoning is not consistent with the comprehensive plan, then there would be a need to do a comprehensive plan amendment on portions of the property to make it consistent with the desired development scheme. It is agreed at this time that the majority of the property is planned correctly, though there is some interest around how to develop the commercial aspects of the project. It is recommended that a stepped approach may be desired to keep the project moving forward, in which only a portion of the property would be rezoned immediately and then the remaining areas may seek a comprehensive plan amendment.

Preliminary Plat
Preparation of a preliminary plat will need to be completed for the property and submitted to the City for processing as the SEPA lead agency. The preliminary plat would conform to the master plan development that was developed in earlier stages of the project and has received buy-in from the project's major stakeholders. The preliminary plat would develop either a portion of the property or the entire property, depending on how closely the comprehensive plan is adhered to with the master plan for the project. There are definite advantages to entitling the entire project under one preliminary plat, with the primary ones being vesting rights and not having to go through multiple public hearing processes that would be required with each preliminary plat submittal.

Preliminary platting services would include the following:

- Preliminary Plat Map preparation
- Preliminary plat application preparation
- SEPA Checklist
- Public hearings attendance and presentation

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

Desired Outcome: Adoption of Preliminary Plat by City Council Resolution (5 year entitlement) for the residential portions of the project site.

*** Cultural Resource Survey – It is anticipated that the City of Richland will require a Cultural Resource Survey based on comments received in the SEPA process from the local tribes and DAHP. PBS does not provide this service in house but does contract with local archeologists to complete the work in accordance with required procedures. The anticipated cost of this study would be about $16,000.

Task 007 Preparation of Construction Documents

A major work item will be to prepare the necessary infrastructure improvement documents to support the development of the property. Construction plans would be reviewed primarily by the City, who would then be the permitting agency for the inspection and acceptance of the improvements. All plans would be done in accordance with the City of Richland Standards and Specifications. Items in the construction plans would include:

- Roadway Plans- For both major and minor roadways associated with the residential development.
- Sewer Plans – Would provide mainline extensions to the property, as well as localized infrastructure with services to individual lots. Extension of offsite sewer to gain access to the existing sewer pump station located south of the project site.
- Water Plans – Would provide mainline extensions to the property as well as internal feeder lines with services to individual lots and hydrant placement in accordance with fire department requirements.
- Stormwater Plans – Based on the geotechnical findings for the project, a stormwater plan would have to be implemented for the region and would most likely consist of multiple localized ponds for storage and dissipation.
- Irrigation Plans – Would provide for a regional network of pipes to distribute water to the residential lots contained solely within the development area.
- Preparation of Project Record Drawings – Upon completion of the project, the engineer of record will have to prepare a record of the infrastructure installed with the project. This will require updating the construction documents with information of record collected by the project surveyor. Prior to final plat acceptance, the record drawing will need to be received by the City.

PBS can provide project oversight and contract administration services on behalf of the Client to administer and bid infrastructure work to the contractors looking to complete improvements on the property, in accordance with the plans and specifications prepared by PBS.

Task 008 – Notice of Intent and SWPPP Preparation

PBS will prepare a stormwater pollution prevention plan (SWPPP) for the project site in accordance with City and Department of Ecology (Ecology) guidelines, and will submit a Notice of Intent (NOI) to Ecology to obtain coverage under Ecology's construction stormwater NPDES general permit. The timing of filing of the NOI would be upon closing of the SEPA application and DNS from the City of Richland. From the time the NOI is filed with the state to the point at which a stormwater permit is issued is approximately 45 days. No grading of the site can commence until a permit is issued.

Task 009 – Construction Surveying

PBS Surveyors have provided a budgetary estimate for staking for road, curb, and utility construction, and provide temporary property corners as necessary for water meter and other utility placement. Upon completion of the utilities, PBS will provide the necessary field survey to as-built the newly installed utilities and will provide that information to the engineer for incorporation into the record drawings. It is assumed that most contractors that are qualified to grade the site would be running GPS machine control. PBS would provide the necessary staking control points in order to establish control for the contractor.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

Task 010 – Final Plat Survey

Upon completion and approval of the construction of the improvements, or upon the Client's posting of a bond for the improvements, the Survey Manager will submit the Final Plat to the City for review. This Final Plat shall meet all requirements of the City of Richland Municipal Code. PBS Surveyors will set all lot corners and street monuments at such time that the site is sufficiently graded that the property pins will not be immediately destroyed. Upon the City's approval and acceptance of the Final Plat, PBS will record the Plat with the County auditor.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

EXHIBIT "B"
CLIENT RESPONSIBILITIES

EXHIBIT "B", consisting of 1 page, referred to in and part of the **Agreement between Client and PBS for Professional Services** effective date April 23rd, 2021.

In addition to other responsibilities of Client as set forth in this Agreement, Article 2 – Client Responsibilities, Client shall at its expense:

A. Provide PBS with all criteria and full information as to Client's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which Client will require to be included in the drawings and specifications.

B. Furnish to PBS any other available information pertinent to the Project including reports and data relative to previous designs, or investigation at or adjacent to the Project site.

C. Give prompt written notice to PBS whenever Client observes or otherwise becomes aware of the presence at the Project site of any condition that affects the scope or time of performance of PBS' services, or any defect or nonconformance in PBS' services.

D. Pay all agency plan review, inspection and permit fees.

E. Provide PBS with all title reports necessary for survey mapping efforts.

F. Arrange for safe access to and make all provisions for PBS to enter upon public and private property as required for PBS to perform services under the Agreement.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

EXHIBIT "C"
PAYMENT FOR SERVICES, REIMBURSABLE EXPENSES AND SUB-CONSULTANTS

EXHIBIT "C", consisting of 2 pages, referred to in and part of the **Agreement between Client and PBS for Professional Services** effective date April 23rd, 2021.

PBS will perform the above scope of services for an estimated time and materials price of:

Task 001 – Land Surveying (Topographic and Boundary): TBD, Based on prior surveys available to buyer.

Task 002 – Geotechnical Evaluation and Reports: $13,500

- On-site field study only with excavation contractor: $9,500

Task 003 – Phase 1 ESA and Limited Phase 2 Soil Assessment

- Sub Task 1 – Phase 1 ESA - $3,500
- Sub Task 2 – Phase 2 Soil Analysis - $10,500

Task 004 – Development of Preliminary Site Master Plan: $6,000

Task 005 – Stakeholder Outreach and Planning Efforts: $19,500

Task 006 – Property Rezone and Preliminary Plat: $TBD

Task 007 – Construction Documents: $TBD

Task 008 – Notice of Intent and SWPPP Preparation: $TBD

Task 009 – Construction Surveying: $TBD

Task 010 – Final Plat Survey: $TBD

All services not specifically outlined in the scope of work above shall be considered additional services, and shall be subject to a commensurate adjustment to the agreed compensation, which shall be determined by way of a written addendum, signed by the parties, prior to proceeding with the additional work. All tasks authorized after December 31, 2021 will be subject to PBS 2022 Hourly rate schedules.

Copyright ©2002 National Society of Professional Engineers for EJCDC. All rights reserved.

Appendix B

Property Information and Physical Setting Records

Well Logs
Tax Map

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W-24735

Water Right Permit No. INVALID NOI

(1) OWNER: Name WILSON Address

(2) LOCATION OF WELL: County Benton NW¼ SW¼ Sec 34 T. 9 N., R. 28 E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 950 feet. Depth of completed well 950 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 703 ft.
Welded ☒ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.
Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.
Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.
Surface seal: Yes ☒ No ☐ To what depth? 700 ft.
Material used in seal Bentonite cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Neme
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 502 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 70 gal./min. with stem set at 940 ft. for 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Ash with Boulders	0	24
Hard Gray Basalt	24	75
Broken Black Basalt	75	93
Hard Black Basalt	93	110
Brown Sand + clay	110	130
Black Basalt	130	305
Broken Basalt Brown clay	305	346
Hard Black Basalt	346	541
Broken Basalt Brown Gray clay	541	580
Broken Basalt with Blue shale	580	610
Blue shale	610	645
Broken Basalt + Blue shale	645	660
Broken Basalt	660	682
Hard Black Basalt	682	890
Broken Basalt with Blue shale Bearing water	890	950

Work started 8-23-94 19. Completed 19

WELL CONSTRUCTOR CERTIFICATION: MAY 5 1995

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME St. George Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 7015 45 AVE W. Richland
(Signed) Robert E. Dwyer (WELL DRILLER) License No. 04483
Contractor's Registration No. 601-048-715 Date 8-23-94, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- ® 18

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

5637

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W-085173
UNIQUE WELL I.D. # ACE-618
Water Right Permit No. _____

(1) OWNER: Name Dave Herring Address 276 VanBeek

(2) LOCATION OF WELL: County Benton NW 1/4 NW 1/4 Sec 34 T. 9 N., R. 28 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (If more than one) _____
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 60 feet. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 60 ft.
Welded ☒ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used Holt
SIZE of perforations 3/8 in. by 1 1/2 in.
350 perforations from 40 ft. to 60 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 8 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 40 gal./min. with stem set at 55 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand	0	2
Sand Gravel	2	19
Sand Gravel Bearing Water	19	60

RECEIVED
JAN 22 1997
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 6/17/96 19. Completed _____ 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME St. George Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 201 S 64th Ave W. Richland
(Signed) Peter E. Hansen (WELL DRILLER) License No. 0353
Contractor's Registration No. 601-048-765 Date 6/17/96 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy 106859

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent W 148967
UNIQUE WELL I D # AGU 118
Water Right Permit No

(1) OWNER: Name John Cudwell Address 2001 Brantingham Rd Richland

(2) LOCATION OF WELL: County Benton NE 1/4 NE 1/4 Sec 34 T 9 N R 28E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 2001 Brantingham Rd Richland WA 99353 A

TAX PARCEL NO.

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
☒ New Well Method ☐ Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☒ Rotary ☐ Jetted ☐ Decommission

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 426' 6" feet Depth of completed well 428' 6" ft

(6) CONSTRUCTION DETAILS
Casing Installed:
☒ Welded 6 " Diam from +1 ft to 426' 6" ft
☒ Liner installed 4½ " Diam from -128' ft to 428' 6" ft
☐ Threaded

Perforations: ☒ Yes ☐ No
Type of perforator used SAW
SIZE of perforations 1/8 in by 6 in
240 perforations from 300 ft to 425 ft

Screens: ☐ Yes ☒ No ☐ K-Pac Location
Manufacturer's Name
Type Model No
Diam Slot Size from ft to ft
Diam Slot Size from ft to ft

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand
Material placed from ft to ft

Surface seal: ☒ Yes ☐ No To what depth? 25 ft
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☐ No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H P

(8) WATER LEVELS: Land surface elevation above mean sea level ft
Static level 124 ft below top of well Date 12-21-01
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom?
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal/min with ft drawdown after hrs
Airtest 50 gal/min with 80 ft drawdown after 2 hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Sand Tan	0	5
Sand Tan wet	5	11
Gravel, sand Tan	11	12
Silt Tan	12	21
Basalt Gravel, silt Tan	21	43
Clay Tan	43	145
Basalt Black	145	179
Basalt Brechia	179	192
Basalt Black	192	269
Basalt Black Vesicular	269	270
Clay Blue	270	298
Basalt Black Vesicular	298	
Water Bearing		312
Basalt Black Jointed	312	411
Basalt Black Vesicular	411	
Water Bearing		419
Basalt Black	419	426' 6"

DEPT OF ECOLOGY Received DEC 24 2001 CENTRAL REGION OFFICE

Work Started 12-18-01 Completed 12-21-01

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name Jim Nelson License No 361
(Licensed Driller/Engineer)

Trainee Name License No
Drilling Company NELSON Well Drilling
(Signed) Jim Nelson License No 361
(Licensed Driller/Engineer)
Address 8200 W Argent Pasco
Contractor's Registration No. NELSOWD198CQ Date 12-21-01

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-

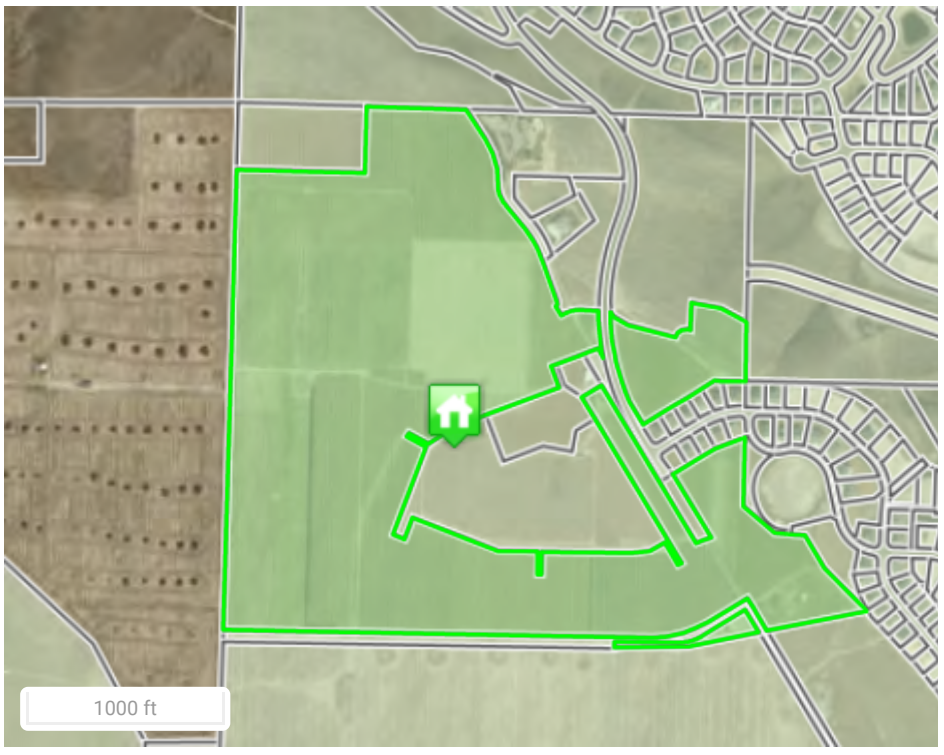
ECY 050-1-20 (11/98)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

309911
2100 N BERMUDA RD

C & J LAND COMPANY LLC
1276 N BERMUDA RD
RICHLAND, WA 99352

Total Market Value
$656,620



KEY INFORMATION

Parcel # / Geo ID	**134982000005004**	Use Code	**83 Cur - Use - Ag**
Township	**09**	Section	**34**
Range	**28**	Legal Acres	**107**
Neighborhood	**530000**	Subdivision / Section	**-**
Land Size Acres	**107.1039**	Land Size Sq Foot	**4665445.88**
Legal Description	**THAT PORTION OF THE FOLLOWING IN OPEN SPACE: THAT PORTION OF SECTION 34 TOWNSHIP 9 NORTH, RANGE 28 EAST WILLAMETTE MERIDIAN, BENTON COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID SECTION 34; THENCE SOUTH 89°09'22" EAST ALONG THE NORTH LINE OF SAID SECTION 34 649.80 FEET TO THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER AND THE TRUE POINT OF BEGINNING; THENCE CONTINUING SOUTH 89°09'22" EAST 507.54 FEET TO A POINT ON THE EAST LINE OF THAT PARCEL DESCRIBED IN QUIT CLAIM DEED RECORDED UNDER AUDITOR'S FILE NUMBER 2017-023127, RECORDS OF BENTON COUNTY; THENCE THE FOLLOWING 31 COURSES ALONG THE EAST LINE OF SAID PARCEL; THENCE SOUTH 33°54'20" EAST 179.76 FEET; THENCE SOUTH 27°38'19" EAST 80.00 FEET; THENCE SOUTH 16°29'23" EAST 83.44 FEET; THENCE SOUTH 03°07'43" EAST 77.55 FEET TO THE BEGINNING OF A CURVE, CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 179.00 FEET; THENCE SOUTHEASTERLY 116.15 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 37°10'37", THENCE SOUTH 40°17'50" EAST 155.89 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 471.00 FEET, THENCE SOUTHEASTERLY 149.61 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 18°12'00" (THE LONG CHORD OF SAID CURVE BEARS SOUTH 31°06'39" EAST 148.99 FEET); THENCE SOUTH 21°55'36" EAST 42.43 FEET; THENCE SOUTH 22°01'50" EAST 205.46 FEET TO THE BEGINNING OF A NON-TANGENT CURVE TO THE NORTHWEST HAVING A RADIUS OF 25.00 FEET, THENCE SOUTHWESTERLY 33.87 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 77°37'55" (THE LONG CHORD OF SAID CURVE BEARS SOUTH 16°48'11" WEST 31.34 FEET); THENCE SOUTH 34°23'11" EAST 54.00 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE SOUTH HAVING A RADIUS OF 173.00 FEET, THENCE NORTHEASTERLY 111.15 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 36°48'43" (THE LONG CHORD OF SAID CURVE BEARS NORTH 74°01'11" EAST 109.25 FEET); THENCE SOUTH 87°34'27" EAST 132.44 FEET TO THE BEGINNING OF A CURVE, CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 25.00 FEET; THENCE SOUTHEASTERLY 39.29 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 90°03'27"; THENCE SOUTH 62°06'35" EAST 89.64 FEET; THENCE SOUTH 76°13'31" EAST 248.55 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE SOUTHEAST HAVING A RADIUS OF 55.00 FEET, THENCE NORTHEASTERLY 95.47 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 99°27'15" (THE LONG CHORD OF SAID CURVE BEARS NORTH 63°30'07" EAST 83.93 FEET); THENCE NORTH 01°54'19" EAST 139.23 FEET; THENCE SOUTH 80°20'29" EAST 151.61 FEET; THENCE SOUTH 62°10'48" EAST 145.70 FEET; THENCE SOUTH 00°06'53" WEST 300.90 FEET; THENCE NORTH 89°30'45" WEST 155.72 FEET; THENCE SOUTH 58°00'41" WEST 427.93 FEET; THENCE SOUTH 31°59'17" EAST 294.04 FEET; THENCE NORTH 58°00'41" EAST 250.06 FEET; THENCE NORTH 68°56'25" EAST 161.19 FEET; THENCE SOUTH 00°06'46" WEST 347.63 FEET; THENCE SOUTH 49°42'13" EAST 205.84 FEET; THENCE SOUTH 86°22'15" EAST 156.14 FEET; THENCE SOUTH 31°59'19" EAST 192.52 FEET; THENCE SOUTH 45°35'07" EAST 140.43 FEET; THENCE SOUTH 45°52'40" EAST 144.22 FEET; THENCE SOUTH 40°37'06" EAST 20.94 FEET; THENCE LEAVING SAID EAST BOUNDARY SOUTH 77°55'41" WEST 919.16 FEET; THENCE SOUTH 88°15'10" WEST 318.36 FEET; THENCE NORTH 89°32'23" WEST 60.90 FEET TO A POINT ON THE NORTH LINE OF THAT PARCEL DESCRIBED AS PARCEL #134983000001004 IN QUIT CLAIM DEED RECORDED UNDER AUDITOR'S FILE NUMBER 2012-016993, RECORDS OF BENTON COUNTY; THENCE SOUTH 00°31'00" WEST 8.00 FEET ALONG SAID NORTH LINE; THENCE NORTH 89°51'27" WEST 1985.27 FEET ALONG SAID NORTH LINE TO THE WEST LINE OF SAID SECTION 34; THENCE NORTH 00°45'17" EAST 29.94 FEET ALONG SAID WEST LINE TO THE WEST QUARTER CORNER OF SAID SECTION 34; THENCE NORTH 00°45'17" EAST 2362.09 FEET TO THE SOUTHWEST CORNER OF THE NORTH HALF OF THE NORTHWEST QUARTER OF THE OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 34; THENCE SOUTH 89'14'50" EAST 650.73 FEET TO THE SOUTHEAST CORNER OF SAID NORTH HALF; THENCE NORTH 00°35'46" EAST 336.41 FEET ALONG THE EAST LINE OF SAID NORTH HALF TO THE TRUE POINT OF BEGINNING. EXCEPT LOTS 1, 2, 3, & 4 OF SHORT PLAT 595, ACCORDING TO THE SURVEY THEREOF RECORDED IN VOLUME 1 OF SHORT PLATS, PAGE 595, RECORDS OF BENTON COUNTY. (BOUNDARY LINE ADJUSTMENT PER AF#2018-017566) [LINKED WITH SALES RESTRICTION TO PARCEL 1-3498-200-0005-005, THE PORTION OF PARCEL THAT IS NOT IN OPEN SPACE.] EXCEPT REAL PROPERTY LOCATED IN EAST HALF OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, CITY OF RICHLAND, BENTON COUNTY, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 34; THENCE SOUTH 89°09'47" EAST A DISTANCE OF 1,852.34 FEET TO A POINT ON THE ARC OF A NON-TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 500.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 46°20'40" WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 541.43 FEET, WITH A DELTA ANGLE OF 62°02'35", A CHORD BEARING OF SOUTH 12°38'03" EAST, AND A CHORD LENGTH OF 515.36 FEET; THENCE SOUTH 18°23'15" WEST A DISTANCE OF 97.63 FEET TO A POINT OF CURVATURE WITH A TANGENT CURVE TURNING TO THE LEFT. HAVING A RADIUS**

	OF 1200.00 FEET; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 409.89 FEET, WITH A DELTA ANGLE OF 19°34’15”, A CHORD BEARING OF SOUTH 08°36’07” WEST, AND A CHORD LENGTH OF 407.90 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 87°34’02” WEST A DISTANCE OF 30.06 FEET TO A POINT ON THE ARC OF A NON-TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 1,230.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 88°54’17” EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 245.55 FEET, WITH A DELTA ANGLE OF 11°26’17”, A CHORD BEARING OF SOUTH 06°48’51” EAST, AND A CHORD LENGTH OF 2445.14 FEET TO A POINT OF NON-TANGENT TO THE LEFT, HAVING A RADIUS OF 1,268.81 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 59°06’03” EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 24.12 FEET, WITH A DELTA ANGLE OF 01°05’22”, A CHORD BEARING OF SOUTH 31°26’38” EAST, AND A CHORD LENGTH OF 24.12 FEET; THENCE SOUTH 31°59’19” EAST A DISTANCE OF 232.90 FEET TO A POINT ON THE ARC OF A NON-TANGENT CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 1,170.00 FEET; THE RADIUS POINT OF WHICH BEARS NORTH 65°30’31” EAST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 472.30 FEET, WITH A DELTA ANGLE OF 23°07’45”, A CHORD BEARING OF NORTH 12°55’37” WEST, AND A CHORD LENGTH OF 469.10 FEET TO A POINT OF A NON-TANGENT CURVE TURNING TO THE LEFT, HAVING A RADIUS OF 25.00 FEET; THE RADIUS POINT OF WHICH BEARS SOUTH 24°01’26” WEST; THENCE ALONG SAID CURVE, HAVING AN ARC LENGTH OF 9.42 FEET, WITH A DELTA ANGLE OF 21°35’28”, A CHORD BEARING OF NORTH 76°46’18” WEST, AND A CHORD LENGTH OF 9.37 FEET; THENCE NORTH 87°34’02” WEST A DISTANCE OF 20.98 FEET TO THE SAID TRUE POINT OF BEGINNING. (DESCRIPTION CHANGE FOR ROW PER AF#2018-017828, 6/20/2018)		
Taxing District	**R3**	Exemption	**None**

ASSESSMENT DETAILS

Improvement Homesite Value	**$0**
Improvement Non-Homesite Value	**$370,650**
Land Homesite Value	**$0**
Land Non-Homesite Value	**$0**
Market Value	**$1,977,210**
Assessed Value	**$656,620**
Taxable Value	**$656,620**

BUILDINGS DETAILS

No data to display

IMPROVEMENTS

TYPE	DESCRIPTION	CLASS	YEAR BUILT	AREA
O89-Honeyc	-	PC-G	2014	0.0
O04-Peache	-	PC-AV	1995	0.0
T09-SingPo	-	PC-AV	2013	0.0
I02-Solid	-	PC-AV	2013	0.0
O39-Pink L	-	PC-AV	2000	0.0
O05-Nectar	-	PC-AV	2002	0.0
I01-Solid	-	PC-AV	2000	0.0
O04-Peache	-	PC-AV	2002	0.0
O06-Aprico	-	PC-AV	2012	0.0
O89-Honeyc	-	PC-G	2013	0.0

LAND

LAND TYPE	SOIL TYPE	AG USE	PRIMARY USE	LAND SIZE ACRES	LAND SIZE SQ FOOT
4	Badger Mountain Irrigated Agland #1	AG	83	107.1039	4665445.88

SALES

SALE DATE	SALE PRICE	DEED BOOK AND PAGE	DEED BOOK ID	DEED TYPE	GRANTOR	GRANTEE	EXCISE #
06/18/2018	$0	-	2018-017566	QCD	-	C & J LAND COMPANY LLC	135773
06/07/2018	$0	-	2018-017828	QCD	-	CITY OF RICHLAND	135820

TAXING JURISDICTION

PID: 309911

Owner: C & J LAND COMPANY LLC

% Ownership: 100.0000000000

Total Value: $2,004,310

Total Levy: $8,062

LEVY CODE	DESCRIPTION	LEVY RATE	APPRAISED VALUE	TAXABLE VALUE	ESTIMATED TAX
RICH	RICHLAND	2.2532013248	$705,140	$705,140	$1588.82
RICHLIB	RICHLAND LIBRARY DEBT SERVICE	0.1845239202	$705,140	$705,140	$130.12
CNYHMNSVCS	COUNTY HUMAN SERVICES	0.0250000001	$705,140	$705,140	$17.63
CNYVET	COUNTY VETERANS	0.0112500002	$705,140	$705,140	$7.93
COUNTY	COUNTY	1.0227793891	$705,140	$705,140	$721.20
KENNHOSP	KENNEWICK HOSPITAL	0.1114429683	$705,140	$705,140	$78.58
PTKEN	PORT OF KENNEWICK	0.2786261049	$705,140	$705,140	$196.47
SD400	SCHOOL DIST 400 DEBT SERVICE	1.9992083382	$705,140	$705,140	$1409.72
SD400CP	SCHOOL DIST 400 CAPITAL PROJECTS	0.4110709221	$705,140	$705,140	$289.86
SD400MO	SCHOOL DIST 400 ENRICHMENT	2.4577028081	$705,140	$705,140	$1733.02
STATE	STATE SCHOOL	1.7414586980	$705,140	$705,140	$1227.97
STATE2	STATE SCHOOL PART 2	0.9368595849	$705,140	$705,140	$660.62
	Total	11.4331240589		Total	$8,062

ROLL VALUE HISTORY

YEAR	IMPROVEMENTS	LAND MARKET	CURRENT USE	TOTAL APPRAISED	TAXABLE VALUE
2020	$397,750	$1,606,560	$307,390	$705,140	$705,140
2019	$422,750	$1,606,560	$334,160	$756,910	$756,910

LINKED OWNERS

OWNER NAME	DESCRIPTION
No items to display	

PERMITS

ISSUE DATE	STATUS	DESCRIPTION	COMMENT	COMPLETE DATE
No items to display				

NEARBY SALES

2001 GAGE BLVD RICHLAND, WA 99352

Sale Price **$208,000**
Sale Date **2020-02-18**
Distance **0.00ft**
Use **91 Undeveloped**

2114 LEGACY LN RICHLAND, WA 99352

Sale Price **$549,900**
Sale Date **2020-11-25**
Distance **0.00ft**
Use **11 Single Unit**

2138 LEGACY LN RICHLAND, WA 99352

Sale Price **$849,900**
Sale Date **2020-07-01**
Distance **0.00ft**
Use **11 Single Unit**

UNKNOWN WEST RICHLAND, WA 99353

Sale Price **$20,812,118**
Sale Date **2020-03-13**
Distance **0.00ft**
Use **83 Cur - Use - Ag**

MEDIAN RESIDENTIAL HOUSE PRICE

RESIDENTIAL ASSESSED VALUES

Low

$200,000

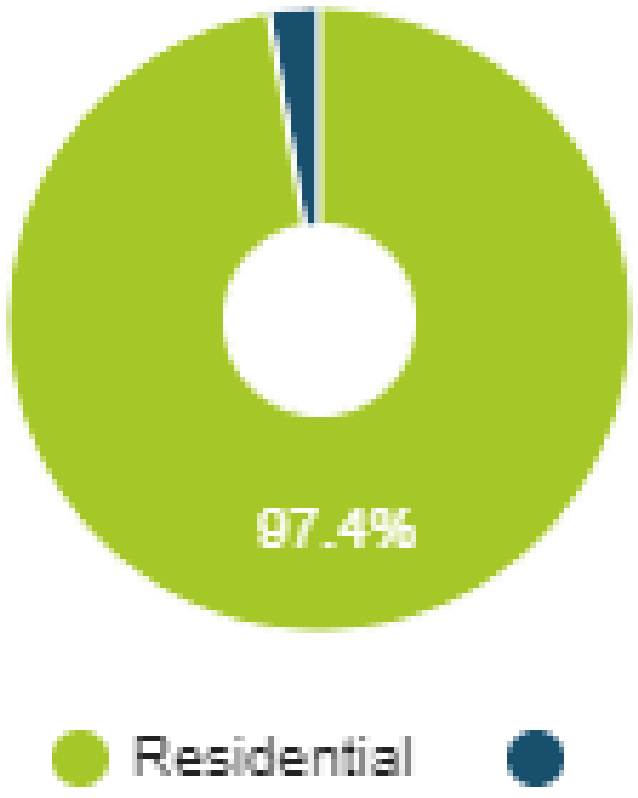
Median

$537,190

High

$1,292,550

RES. SALES BY TYPE



RESIDENTIAL SALE PRICES

Biggest Sale

$1,400,000

Average Home Price

$549,900

Lowest Sale

$145,000

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. G 425674
Permit No. ....

(1) OWNER: Name Milo Bauder Address 1986 Greenbrook Blvd. Richland, Wa.

(2) LOCATION OF WELL: County Benton — S.E. ¼ NE ¼ Sec. 34 T. 9 N., R. 28E W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☒ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 16 inches.
Drilled 244 ft. Depth of completed well 905 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 16" Diam. from 0 ft. to 244 ft.
Threaded ☐ 12" Diam. from 230 ft. to 370 ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ....
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ....
Type ... Model No ....
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? ... ft.
Material used in seal cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ... Depth of strata ....
Method of sealing strata off ....

(7) PUMP: Manufacturer's Name ....
Type: ... H.P. ....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 266 ft. below top of well Date 5/9/78
Artesian pressure ... lbs. per square inch Date ....
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Layne Pumps
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ....
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Sandy Overburden	0	244
Brown Basalt	244	249
Black Basalt	249	256
Gray Basalt	256	289
Black Basalt	289	307
Gray Basalt	307	323
Brown Basalt	323	325
Green Clay-Silica Sand	325	366
Brown Basalt	366	372
Balck Basalt	372	457
Hard Gray Basalt	457	510
Black, Brown Basalt	510	581
Black Basalt	581	825
Black porous Basalt	825	855
Black Broken Basalt	855	875
Black Porous Basalt	875	883
Gray Basalt	883	905

RECEIVED
MAY 30 1978

Work started 11/22/ 19 77 Completed 12/24/77 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Adcock Air Drilling
(Person, firm, or corporation) (Type or print)
Address 2033 3rd Ave. No. Lewiston, Idaho 83501
[Signed] ... (Well Driller)
License No. 001 Date 5/25/78 19 78

(USE ADDITIONAL SHEETS IF NECESSARY) OK

ECY 050-1-20

Appendix C

Regulatory Databases and Government Records

Regulatory Database Report

1900 N BERMUDA RD
1900 N BERMUDA RD
Kennewick, WA 99338

Inquiry Number: 6560399.2s
June 30, 2021

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Summary	4
Map Findings	8
Orphan Summary	11
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-12
Physical Setting Source Map Findings	A-14
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1900 N BERMUDA RD
KENNEWICK, WA 99338

COORDINATES

Latitude (North):	46.2274400 - 46° 13' 38.78''
Longitude (West):	119.3053680 - 119° 18' 19.32''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	322219.4
UTM Y (Meters):	5121683.5

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	6003885 BADGER MOUNTAIN, WA
Version Date:	2013

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20150625
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1900 N BERMUDA RD
KENNEWICK, WA 99338

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	BADGER MOUNTAIN IRR		ALLSITES	Same	65, 0.012, SE
2	WESTCLIFFE HEIGHTS		ALLSITES	Same	305, 0.058, SE
3	WESTCLIFFE PHASES 14		ALLSITES	Same	1128, 0.214, NE
4	THE RESERVE AT SUMME		ALLSITES	Same	1285, 0.243, East
5	WESTCLIFFE PHASE 9	MEADOW HILLS DR AND	ALLSITES	Same	2193, 0.415, NE
6	BADGER MOUNTAIN, INC	1106 N JURUPA ST	ALLSITES, NPDES	Same	2532, 0.480, SE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROLS..... Institutional Controls Sites List

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

HSL..... Hazardous Sites List

State- and tribal - equivalent CERCLIS

CSCSL..... Confirmed and Suspected Contaminated Sites List

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Facility Database

State and tribal leaking storage tank lists

LUST..... Leaking Underground Storage Tanks Site List
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing
UST..... Underground Storage Tank Database
AST..... Aboveground Storage Tank Locations
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL..... Institutional Control Site List

State and tribal voluntary cleanup sites

ICR..... Independent Cleanup Reports
VCP..... Voluntary Cleanup Program Sites
INDIAN VCP..... Voluntary Cleanup Priority Listing
PTAP..... PTAP Site Listing

State and tribal Brownfields sites

BROWNFIELDS..... Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY..... Recycling Facility List

SWTIRE ---- Solid Waste Tire Facilities
INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
ODI ---- Open Dump Inventory
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
CDL ---- Clandestine Drug Lab Contaminated Site List
HIST CDL ---- List of Sites Contaminated by Clandestine Drug Labs
CSCSL NFA ---- Confirmed & Contaminated Sites - No Further Action
US CDL ---- National Clandestine Laboratory Register
PFAS ---- PFAS Contamination Site Location Listing
AQUEOUS FOAM ---- Firefighting Foam Incidents

Local Land Records

LIENS 2 ---- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
SPILLS ---- Reported Spills
SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ---- RCRA - Non Generators / No Longer Regulated
FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations

FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
ABANDONED MINES ---- Abandoned Mines
FINDS ---- Facility Index System/Facility Registry System
UXO ---- Unexploded Ordnance Sites
ECHO ---- Enforcement & Compliance History Information
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
AIRS ---- Washington Emissions Data System
ASBESTOS ---- ASBESTOS
COAL ASH ---- Coal Ash Disposal Site Listing
DRYCLEANERS ---- Drycleaner List
Financial Assurance ---- Financial Assurance Information Listing
Inactive Drycleaners ---- Inactive Drycleaners
MANIFEST ---- Hazardous Waste Manifest Data
NPDES ---- Water Quality Permit System Data
UIC ---- Underground Injection Wells Listing
MINES MRDS ---- Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS ---- Recovered Government Archive State Hazardous Waste Facilities List
RGA LF ---- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

ALLSITES: Information on facilities and sites of interest to the Department of Ecology.

A review of the ALLSITES list, as provided by EDR, and dated 02/03/2021 has revealed that there are 6

EXECUTIVE SUMMARY

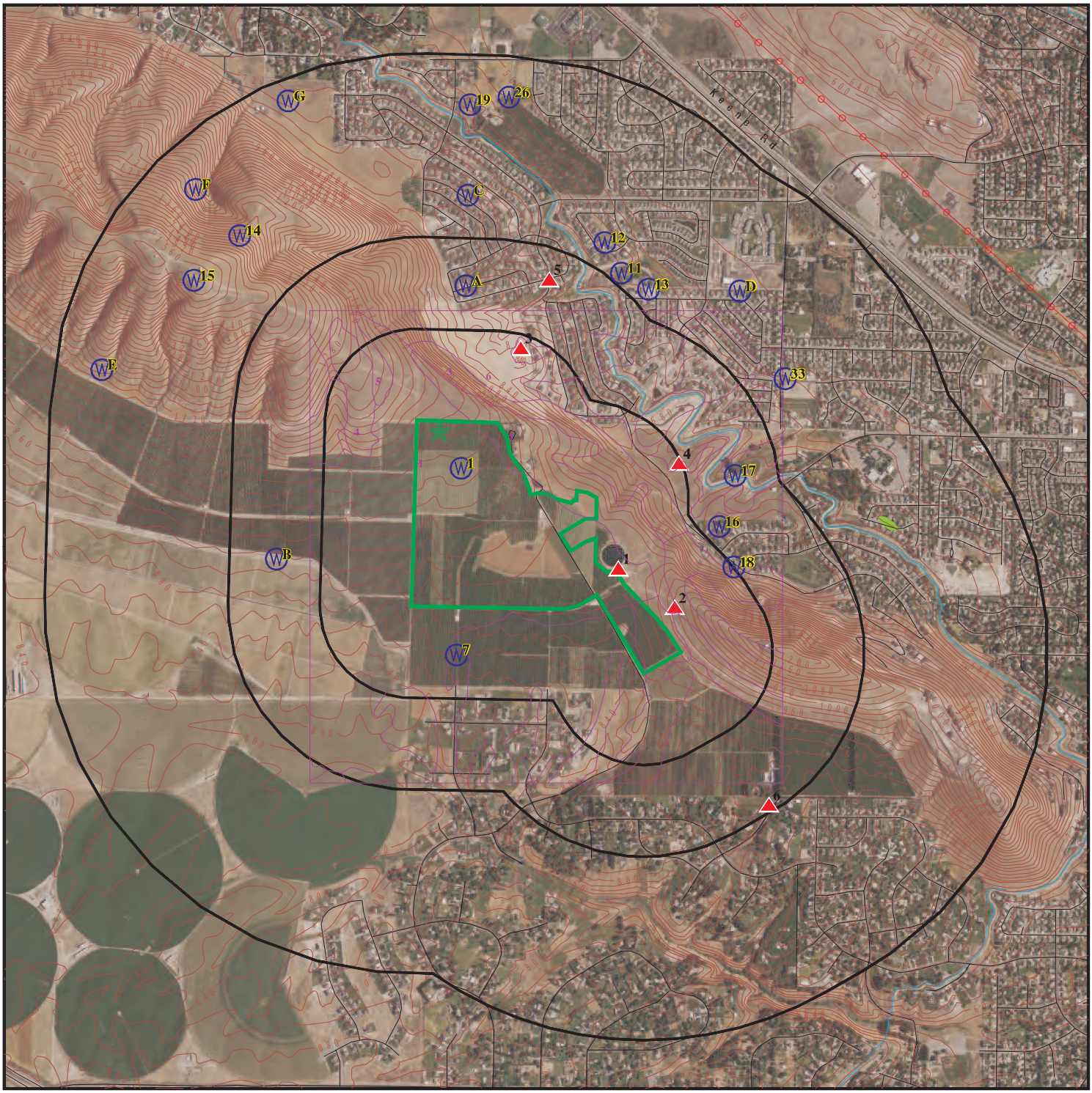
ALLSITES sites within approximately 0.5 miles of the target property.

Site	Address	Dist / Dir	Map ID	Page
BADGER MOUNTAIN IRR Facility Id: 55851413		0 - 1/8 (0.012 mi.) SE	1	8
WESTCLIFFE HEIGHTS Facility Id: 5850		0 - 1/8 (0.058 mi.) SE	2	8
WESTCLIFFE PHASES 14 Facility Id: 11804		1/8 - 1/4 (0.214 mi.) NE	3	8
THE RESERVE AT SUMME Facility Id: 57395		1/8 - 1/4 (0.243 mi.) E	4	9
WESTCLIFFE PHASE 9 Facility Id: 14093	MEADOW HILLS DR AND	1/4 - 1/2 (0.415 mi.) NE	5	9
BADGER MOUNTAIN, INC Facility Id: 38056	***1106 N JURUPA ST***	***1/4 - 1/2 (0.480 mi.) SE***	***6***	***9***

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 6560399.2S



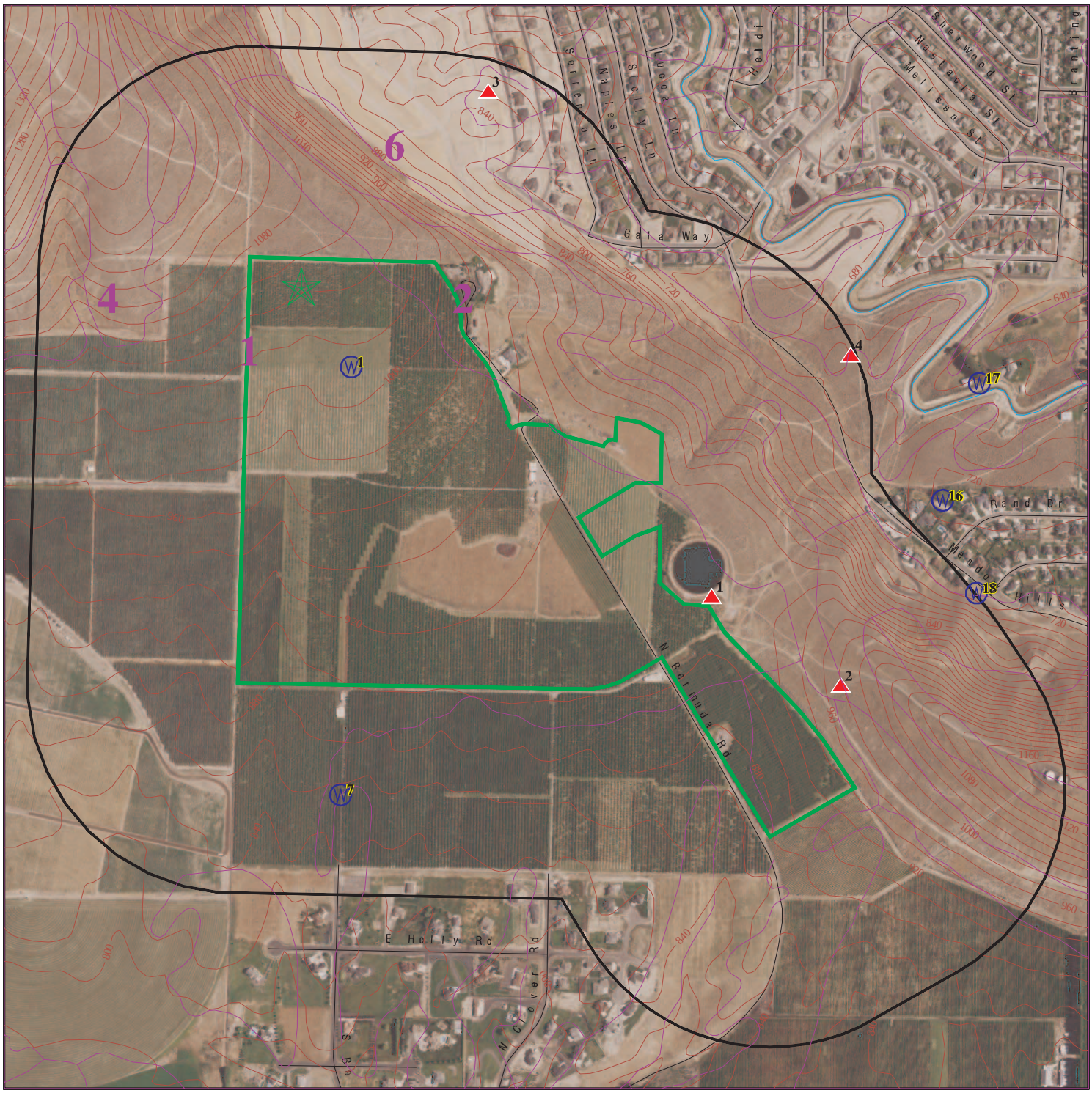
- Target Property
- Toxic Sites
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 1900 N BERMUDA RD	CLIENT: PBS Engineering & Env.
ADDRESS: 1900 N BERMUDA RD Kennewick WA 99338	CONTACT: Kanani Young
LAT/LONG: 46.22744 / 119.305368	INQUIRY #: 6560399.2s DATE: June 30, 2021 7:20 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 6560399.2S



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 1900 N BERMUDA RD ADDRESS: 1900 N BERMUDA RD Kennewick WA 99338 LAT/LONG: 46.22744 / 119.305368	CLIENT: PBS Engineering & Env. CONTACT: Kanani Young INQUIRY #: 6560399.2s DATE: June 30, 2021 7:21 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
HSL	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
CSCSL	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
ICR	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
PTAP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
SWTIRE	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
ALLSITES	0.500		2	2	2	NR	NR	6
CDL	0.001		0	NR	NR	NR	NR	0
HIST CDL	0.001		0	NR	NR	NR	NR	0
CSCSL NFA	0.500		0	0	0	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
AQUEOUS FOAM	0.500		0	0	0	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SPILLS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
ASBESTOS	0.001		0	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
Inactive Drycleaners	0.250		0	0	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	2	2	2	0	0	6

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SE
< 1/8
0.012 mi.
65 ft.

BADGER MOUNTAIN IRR DIST RESERVOIR EXPAN
, WA

ALLSITES | **S110626760** | **N/A**

ALLSITES:

Name:	BADGER MOUNTAIN IRR DIST RESERVOIR EXPAN
Facility Id:	55851413
Interaction:	51779
Interaction 1:	A
Interaction 2:	DAM
Ecology Program:	WATRES
Program Data:	DSS
Facility Alt.:	Badger Mountain Irr Dist Reservoir Expan
Program ID:	Not reported
Date Interaction:	1999-05-26 00:00:00
Date Interaction 3:	Dam Site
Latitude:	46.222094143
Longitude:	-119.295183928

2
SE
< 1/8
0.058 mi.
305 ft.

WESTCLIFFE HEIGHTS
RICHLAND, WA 99352

ALLSITES | **S120066460** | **N/A**

ALLSITES:

Name:	WESTCLIFFE HEIGHTS
Facility Id:	5850
Interaction:	121982
Interaction 1:	A
Interaction 2:	CONSTSWGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	Westcliffe Heights
Program ID:	WAR305335
Date Interaction:	2017-04-05 00:00:00
Date Interaction 3:	Construction SW GP
Latitude:	46.220564670999998
Longitude:	-119.291980896

3
NE
1/8-1/4
0.214 mi.
1128 ft.

WESTCLIFFE PHASES 14 & 15
RICHLAND, WA 99352

ALLSITES | **S118493776** | **N/A**

ALLSITES:

Name:	WESTCLIFFE PHASES 14 & 15
Facility Id:	11804
Interaction:	116361
Interaction 1:	I

WESTCLIFFE PHASES 14 & 15 (Continued) — **S118493776**

Interaction 2:	CONSTSWGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	Westcliffe Phases 14 & 15
Program ID:	WAR303676
Date Interaction:	2015-11-30 00:00:00
Date Interaction 3:	Construction SW GP
Latitude:	46.230793964
Longitude:	-119.300726075

---

4 — **THE RESERVE AT SUMMERVIEW TERRACE** — **ALLSITES** — **S121970377**
East — **N/A**
1/8-1/4 — **RICHLAND, WA 99338**
0.243 mi.
1285 ft.

ALLSITES:

Name:	THE RESERVE AT SUMMERVIEW TERRACE
Facility Id:	57395

---

5 — **WESTCLIFFE PHASE 9** — **ALLSITES** — **S110764487**
NE — **MEADOW HILLS DR AND SUMMIT DR** — **N/A**
1/4-1/2 — **RICHLAND, WA 99532**
0.415 mi.
2193 ft.

ALLSITES:

Name:	WESTCLIFFE PHASE 9
Facility Id:	14093

Interaction:	96328
Interaction 1:	I
Interaction 2:	CONSTSWGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	Westcliffe Phase 9
Program ID:	WAR124845
Date Interaction:	2011-02-04 00:00:00
Date Interaction 3:	Construction SW GP
Latitude:	46.229094142999998
Longitude:	-119.29578592599999

---

6 — **BADGER MOUNTAIN, INC.** — **ALLSITES** — **S125422738**
SE — **1106 N JURUPA ST** — **NPDES** — **N/A**
1/4-1/2 — **KENNEWICK, WA 99338**
0.480 mi.
2532 ft.

ALLSITES:

Name:	BADGER MOUNTAIN INC
Facility Id:	38056

BADGER MOUNTAIN, INC. (Continued) **S125422738**

NPDES:

Name:	BADGER MOUNTAIN, INC.
Address:	1106 N JURUPA ST
City,State,Zip:	KENNEWICK, WA 99338
Facility Status:	Not reported
Facility Type:	Winery GP
Admin Region:	Central
Date Issued:	05/17/2018
Latitude:	Not reported
Longitude:	Not reported
Permit ID:	WA0991026
Permit Version:	Not reported
Permit Status:	Active
Permit SubStatus:	Not reported
Ecology Contact:	Not reported
WRIA:	Not reported
Permit Expiration Date:	07/01/2024
Effective Date:	10/01/2019
Days to Expiration:	-1266

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/30/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/23/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/09/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 39

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/05/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 02/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 02/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/24/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 85

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

HSL: Hazardous Sites List

The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

Date of Government Version: 02/24/2021
Date Data Arrived at EDR: 03/04/2021
Date Made Active in Reports: 05/24/2021
Number of Days to Update: 81

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 06/04/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Semi-Annually

State- and tribal - equivalent CERCLIS

CSCSL: Confirmed and Suspected Contaminated Sites List

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 04/12/2021
Date Data Arrived at EDR: 04/14/2021
Date Made Active in Reports: 06/29/2021
Number of Days to Update: 76

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facility Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/31/2021
Date Data Arrived at EDR: 04/09/2021
Date Made Active in Reports: 06/29/2021
Number of Days to Update: 81

Source: Department of Ecology
Telephone: 360-407-6132
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tanks Site List

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 02/09/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 05/06/2021
Number of Days to Update: 84

Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/09/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/30/2020
Date Data Arrived at EDR: 12/22/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 80
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/07/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/02/2020
Date Data Arrived at EDR: 12/18/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 84
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/29/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 02/09/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 05/06/2021
Number of Days to Update: 84
Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Quarterly

AST: Aboveground Storage Tank Locations
A listing of aboveground storage tank locations regulated by the Department of Ecology's Spill Prevention, Preparedness and Response Program.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 02/02/2016
Date Made Active in Reports: 05/03/2016
Number of Days to Update: 91
Source: Department of Ecology
Telephone: 360-407-7562
Last EDR Contact: 04/22/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/07/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/02/2020
Date Data Arrived at EDR: 12/18/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 84

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/30/2020
Date Data Arrived at EDR: 12/22/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/09/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Institutional Control Site List
Sites that have institutional controls.

Date of Government Version: 04/12/2021
Date Data Arrived at EDR: 04/14/2021
Date Made Active in Reports: 06/29/2021
Number of Days to Update: 76

Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/15/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Varies

ICR: Independent Cleanup Reports
These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree. This database is no longer updated by the Department of Ecology.

Date of Government Version: 12/01/2002
Date Data Arrived at EDR: 01/03/2003
Date Made Active in Reports: 01/22/2003
Number of Days to Update: 19

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 08/10/2009
Next Scheduled EDR Contact: 11/09/2009
Data Release Frequency: No Update Planned

VCP: Voluntary Cleanup Program Sites
Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

Date of Government Version: 01/12/2021
Date Data Arrived at EDR: 01/13/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 83

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

PTAP: PTAP Site Listing
A list of sites accepted into the Petroleum Technical Assistance Program. The Petroleum Technical Assistance Program (PTAP) expands the state's ability to respond to the high customer demand to clean up petroleum contaminated sites. Under the PTAP, the Pollution Liability Insurance Agency (PLIA) may provide informal site-specific technical consultations and issue written opinion letters to persons conducting independent remedial actions at qualifying petroleum cleanup sites. PLIA may provide these services under the authority of RCW 70.149.040(9) and the Model Toxics Control Act (MTCA), Chapter 70.149 RCW and Chapter 173-340 WAC.

Date of Government Version: 02/09/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 05/06/2021
Number of Days to Update: 84

Source: Department of Ecology
Telephone: 360-407-0515
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites Listing

A listing of brownfields sites included in the Confirmed & Suspected Sites Listing. Brownfields are abandoned, idle or underused commercial or industrial properties, where the expansion or redevelopment is hindered by real or perceived contamination. Brownfields vary in size, location, age, and past use -- they can be anything from a five-hundred acre automobile assembly plant to a small, abandoned corner gas station.

Date of Government Version: 04/12/2021
Date Data Arrived at EDR: 04/14/2021
Date Made Active in Reports: 06/29/2021
Number of Days to Update: 76

Source: Department of Ecology
Telephone: 360-725-4030
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/15/2021
Date Data Arrived at EDR: 03/16/2021
Date Made Active in Reports: 06/10/2021
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/10/2021
Next Scheduled EDR Contact: 09/27/2021
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWTIRE: Solid Waste Tire Facilities

This study identified sites statewide with unauthorized accumulations of scrap tires.

Date of Government Version: 11/01/2005
Date Data Arrived at EDR: 03/16/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 28

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

SWTIRE 2: Solid Waste Tire Facilities 2

solid waste tire piles

Date of Government Version: 03/04/2021
Date Data Arrived at EDR: 03/05/2021
Date Made Active in Reports: 05/26/2021
Number of Days to Update: 82

Source: Department of Ecology
Telephone: 425-649-7104
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Varies

SWRCY: Recycling Facility List
A llisting of recycling center locations.

Date of Government Version: 02/03/2021
Date Data Arrived at EDR: 02/05/2021
Date Made Active in Reports: 03/17/2021
Number of Days to Update: 40
Source: Department of Ecology
Telephone: 360-407-6105
Last EDR Contact: 04/19/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/22/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 04/29/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 83
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/22/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ALLSITES: Facility/Site Identification System Listing
Information on facilities and sites of interest to the Department of Ecology.

Date of Government Version: 02/03/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 61
Source: Department of Ecology
Telephone: 360-407-6423
Last EDR Contact: 04/22/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

CDL: Clandestine Drug Lab Contaminated Site List
Illegal methamphetamine labs use hazardous chemicals that create public health hazards. Chemicals and residues can cause burns, respiratory and neurological damage, and death. Biological hazards associated with intravenous needles, feces, and blood also pose health risks.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 02/13/2020
Date Made Active in Reports: 04/22/2020
Number of Days to Update: 69
Source: Department of Health
Telephone: 360-236-3380
Last EDR Contact: 04/29/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

HIST CDL: List of Sites Contaminated by Clandestine Drug Labs
This listing of contaminated sites by Clandestine Drug Labs includes non-remediated properties. The current CDL listing does not. This listing is no longer updated by the state agency.

Date of Government Version: 02/08/2007
Date Data Arrived at EDR: 06/26/2007
Date Made Active in Reports: 07/19/2007
Number of Days to Update: 23
Source: Department of Health
Telephone: 360-236-3381
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

CSCSL NFA: Confirmed and Contaminated Sites - No Further Action
This report contains information about sites that are undergoing cleanup and sites that are awaiting further investigation and/or cleanup. Sites on the Hazardous Sites List (see above) are included in this data set.

Date of Government Version: 04/12/2021
Date Data Arrived at EDR: 04/14/2021
Date Made Active in Reports: 06/29/2021
Number of Days to Update: 76
Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 83
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Quarterly

AQUEOUS FOAM: Firefighting Foam Incidents
Aqueous film-forming foam-laced water running off from fuel spills, firefighting events and routine training sessions has put those chemicals in ground water, surface water, sediments, biota, and other natural resources of the state.

Date of Government Version: 03/26/2021
Date Data Arrived at EDR: 04/01/2021
Date Made Active in Reports: 06/23/2021
Number of Days to Update: 83
Source: Department of Ecology
Telephone: 360-407-6116
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

PFOS and PFOA stand for perfluorooctane sulfonate and perfluorooctanoic acid, respectively. Both are fluorinated organic chemicals, part of a larger family of compounds referred to as perfluoroalkyl substances (PFASs).

Date of Government Version: 04/23/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 04/30/2021
Number of Days to Update: 2

Source: Department of Ecology
Telephone: 360-407-6116
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/24/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 85

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

SPILLS: Reported Spills

Spills reported to the Spill Prevention, Preparedness and Response Division.

Date of Government Version: 05/26/2021
Date Data Arrived at EDR: 06/02/2021
Date Made Active in Reports: 06/04/2021
Number of Days to Update: 2

Source: Department of Ecology
Telephone: 360-407-6950
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Semi-Annually

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 05/23/2006
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 47

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 04/30/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/07/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 09/27/2021
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/17/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/20/2021
Date Data Arrived at EDR: 01/21/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 60

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 01/22/2021
Date Data Arrived at EDR: 02/18/2021
Date Made Active in Reports: 05/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/19/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/05/2021
Number of Days to Update: 50

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/19/2020
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/09/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/11/2021
Date Made Active in Reports: 05/11/2021
Number of Days to Update: 61

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/07/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/22/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/13/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 68

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/06/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/28/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 05/27/2021
Date Made Active in Reports: 06/10/2021
Number of Days to Update: 14

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/26/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/01/2021
Date Data Arrived at EDR: 02/24/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/23/2021
Date Data Arrived at EDR: 03/25/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/14/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 33

Source: EPA
Telephone: (206) 553-1200
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2021
Date Data Arrived at EDR: 04/06/2021
Date Made Active in Reports: 06/25/2021
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/06/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/13/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/17/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/14/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Quarterly

AIRS (EMI): Washington Emissions Data System

Emissions inventory data.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/14/2021
Date Made Active in Reports: 06/29/2021
Number of Days to Update: 76

Source: Department of Ecology
Telephone: 360-407-6040
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Annually

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 12/02/2020
Date Data Arrived at EDR: 12/03/2020
Date Made Active in Reports: 12/11/2020
Number of Days to Update: 8

Source: Department of Labor & Industries
Telephone: 360-902-6209
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 08/29/2021
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Site Listing

A listing of coal ash disposal site locations.

Date of Government Version: 03/31/2021
Date Data Arrived at EDR: 04/09/2021
Date Made Active in Reports: 06/29/2021
Number of Days to Update: 81

Source: Department of Ecology
Telephone: 360-407-6933
Last EDR Contact: 05/26/2021
Next Scheduled EDR Contact: 09/12/2021
Data Release Frequency: Varies

DRYCLEANERS: Drycleaner List

A listing of registered drycleaners who registered with the Department of Ecology (using the SIC code of 7215 and 7216) as hazardous waste generators.

Date of Government Version: 01/12/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 81

Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 04/12/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/24/2021
Date Data Arrived at EDR: 05/25/2021
Date Made Active in Reports: 05/28/2021
Number of Days to Update: 3

Source: Department of Ecology
Telephone: 360-586-1060
Last EDR Contact: 05/20/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: No Update Planned

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 1

Source: Department of Ecology
Telephone: 360-407-6754
Last EDR Contact: 05/06/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/15/2017
Date Data Arrived at EDR: 11/20/2017
Date Made Active in Reports: 01/04/2018
Number of Days to Update: 45

Source: Department of Ecology
Telephone: 360-407-6136
Last EDR Contact: 05/06/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: No Update Planned

INACTIVE DRYCLEANERS: Inactive Drycleaners

A listing of inactive drycleaner facility locations.

Date of Government Version: 01/12/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 81

Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 04/12/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Annually

WA MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 07/24/2020
Date Made Active in Reports: 10/13/2020
Number of Days to Update: 81

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/09/2021
Next Scheduled EDR Contact: 09/27/2021
Data Release Frequency: Annually

NPDES: Water Quality Permit System Data

A listing of permitted wastewater facilities.

Date of Government Version: 01/12/2021
Date Data Arrived at EDR: 01/13/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 83

Source: Department of Ecology
Telephone: 360-407-6073
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

UIC: Underground Injection Wells Listing

A listing of underground injection wells.

Date of Government Version: 01/12/2021
Date Data Arrived at EDR: 01/13/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 82

Source: Department of Ecology
Telephone: 360-407-6143
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Ecology in Washington.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Ecology in Washington.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Ecology in Washington.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

KING COUNTY:

LF KING: Abandoned Landfill Study in King County
The King County Abandoned Landfill Survey was conducted from October through December 1984 by the Health Department's Environmental Health Division at the request of the King County Council. The primary objective of the survey was to determine if any public health problems existed at the predetermined 24 sites.

Date of Government Version: 04/30/1985
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle-King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE COUNTY:

LF SEATTLE CITY: Abandoned Landfill Study in the City of Seattle
The Seattle Abandoned Landfill Survey was conducted in June and July of 1984 by the Health Department's Environmental Health Division at the request of the Mayor's Office. The primary objective of the survey was to determine if any public health problems existed at the predetermined 12 sites.

Date of Government Version: 07/30/1984
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle - King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE/KING COUNTY:

LF SEATTLE/KING: Seattle - King County Abandoned Landfill Toxicity / Hazard Assessment Project
This report presents the Seattle-King County Health Department's follow-up investigation of two city owned and four county owned abandoned landfills which was conducted from February to December 1986.

Date of Government Version: 12/31/1986
Date Data Arrived at EDR: 08/18/1995
Date Made Active in Reports: 09/20/1995
Number of Days to Update: 33

Source: Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 08/14/1995
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SNOHOMISH COUNTY:

LF SNOHOMISH: Solid Waste Sites of Record at Snohomish Health District
Solid waste disposal and/or utilization sites in Snohomish County.

Date of Government Version: 09/23/2019
Date Data Arrived at EDR: 09/25/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 29

Source: Snohomish Health District
Telephone: 206-339-5250
Last EDR Contact: 06/14/2021
Next Scheduled EDR Contact: 09/27/2021
Data Release Frequency: No Update Planned

TACOMA/PIERCE COUNTY:

LF TACOMA/PIERCE: Closed Landfill Survey
Following numerous requests for information about closed dumpsites and landfills in Pierce County, the Tacoma-Pierce County Health Department decided to conduct a study on the matter. The aim of the study was to evaluate public health risks associated with the closed dumpsites and landfills, and to determine the need, if any, for further investigations of a more detailed nature. The sites represent all of the known dumpsites and landfills closed after 1950.

Date of Government Version: 09/01/2002
Date Data Arrived at EDR: 03/24/2003
Date Made Active in Reports: 05/14/2003
Number of Days to Update: 51

Source: Tacoma-Pierce County Health Department
Telephone: 206-591-6500
Last EDR Contact: 03/19/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 10/05/2020
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 05/10/2021
Number of Days to Update: 82

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/11/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 04/30/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/09/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Daycare Center Listing
Source: Department of Social & Health Services
Telephone: 253-383-1735

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Ecology
Telephone: 360-407-6121

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

1900 N BERMUDA RD
1900 N BERMUDA RD
KENNEWICK, WA 99338

TARGET PROPERTY COORDINATES

Latitude (North):	46.22744 - 46° 13' 38.78''
Longitude (West):	119.305368 - 119° 18' 19.32''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	322219.4
UTM Y (Meters):	5121683.5

USGS TOPOGRAPHIC MAP

Target Property Map:	6003885 BADGER MOUNTAIN, WA
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ENE

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
5302370600B	FEMA Q3 Flood data
Additional Panels in search area:	**FEMA Source Type**
5355330015E	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
BADGER MOUNTAIN	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

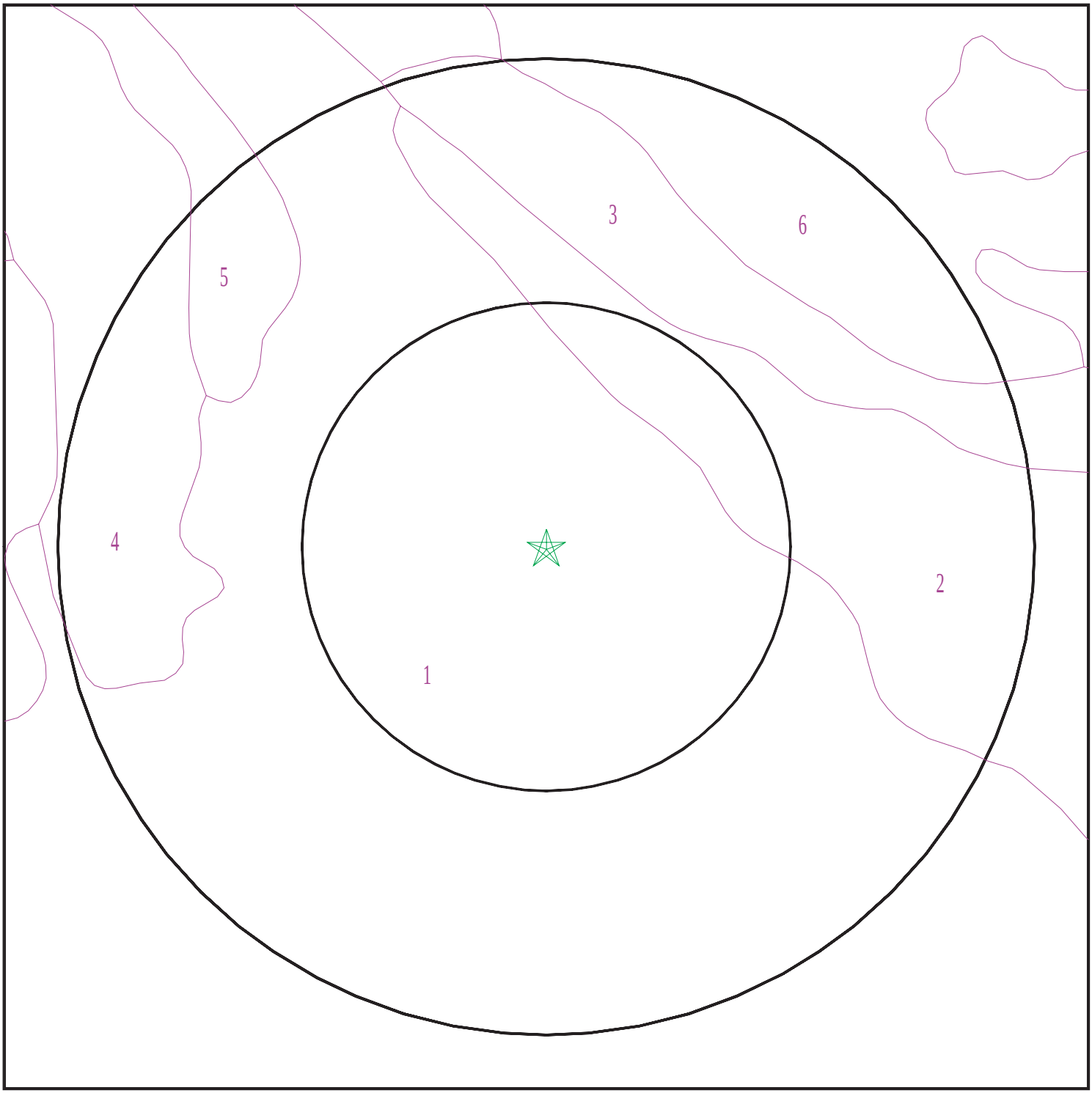
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6560399.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	1900 N BERMUDA RD	CLIENT:	PBS Engineering & Env.
ADDRESS:	1900 N BERMUDA RD Kennewick WA 99338	CONTACT:	Kanani Young
LAT/LONG:	46.22744 / 119.305368	INQUIRY #:	6560399.2s
		DATE:	June 30, 2021 7:21 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Hezel

Soil Surface Texture: loamy fine sand

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 9 Min: 7.4
2	3 inches	16 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 9 Min: 7.4
3	16 inches	59 inches	stratified fine sandy loam to silt loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 9 Min: 7.4

Soil Map ID: 2

Soil Component Name: Kiona

Soil Surface Texture: very stony silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	very stony silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	3 inches	20 inches	very stony silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 14 Min: 4	Max: 8.4 Min: 7.9
3	20 inches	59 inches	very gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: Shano

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9 Min: 7.4
2	7 inches	33 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9 Min: 7.4
3	33 inches	59 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9 Min: 7.4

Soil Map ID: 4

Soil Component Name: Kiona

Soil Surface Texture: very stony silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	very stony silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	3 inches	20 inches	very stony silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 14 Min: 4	Max: 8.4 Min: 7.9
3	20 inches	59 inches	very gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 5

Soil Component Name: Shano

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9 Min: 7.4
2	5 inches	20 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9 Min: 7.4
3	20 inches	59 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9 Min: 7.4

Soil Map ID: 6

Soil Component Name: Warden

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	1 inches	11 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
3	11 inches	59 inches	stratified very fine sandy loam to silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
11	USGS40001213576	1/2 - 1 Mile NE
16	USGS40001213424	1/2 - 1 Mile ESE
26	USGS40001213700	1/2 - 1 Mile NNE
33	USGS40001213524	1/2 - 1 Mile East

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

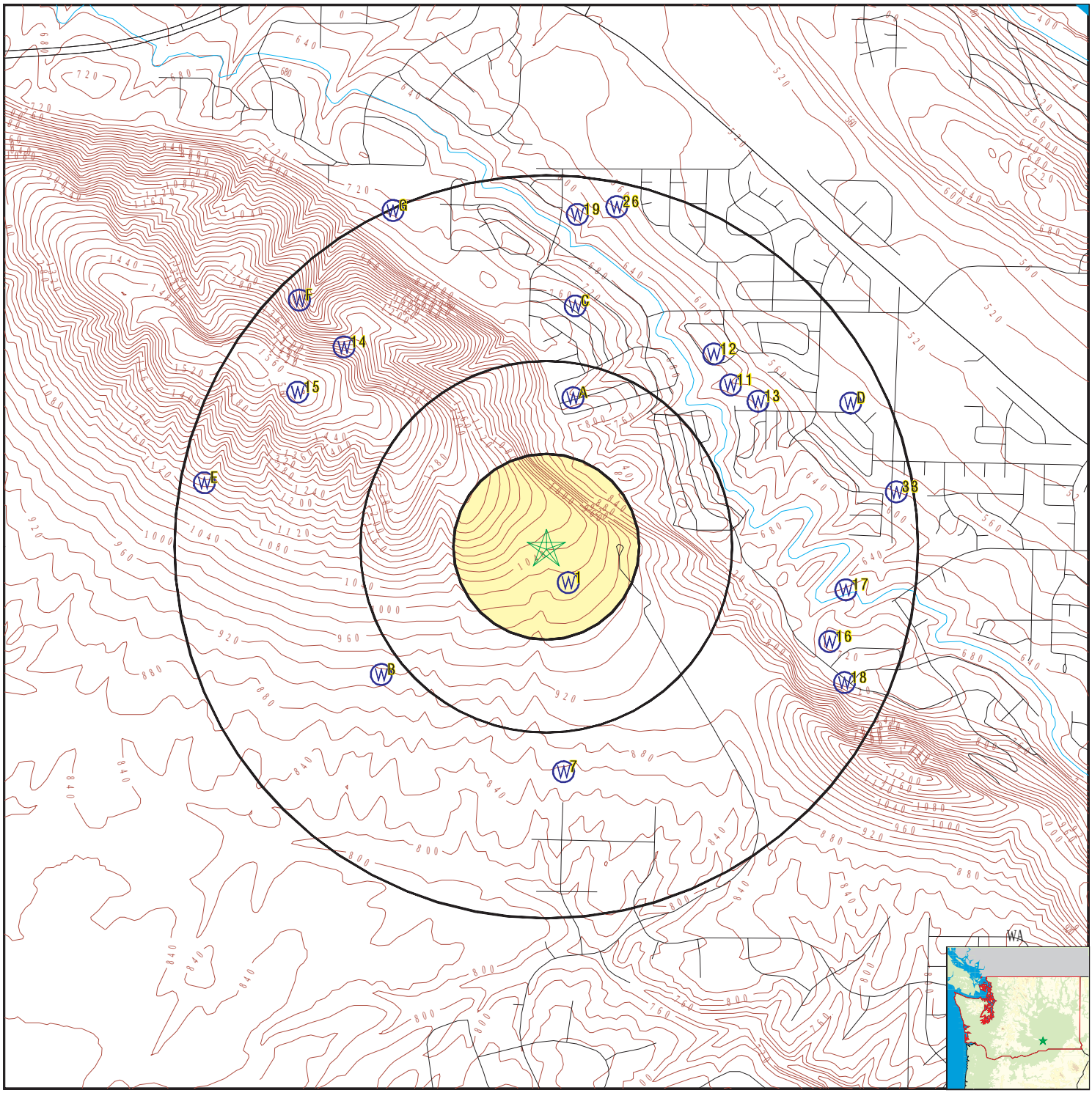
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	WALOG1000137660	0 - 1/8 Mile SSE
A2	WALOG1000281654	1/4 - 1/2 Mile North
A3	WALOG1000281653	1/4 - 1/2 Mile North
A4	WALOG1000281650	1/4 - 1/2 Mile North
B5	WALOG1000475875	1/2 - 1 Mile SW
B6	WALOG1000475876	1/2 - 1 Mile SW
7	WALOG1000136364	1/2 - 1 Mile South
C8	WALOG1000614116	1/2 - 1 Mile North
C9	WALOG1000614124	1/2 - 1 Mile North
C10	WALOG1000614132	1/2 - 1 Mile North
12	WALOG1000264314	1/2 - 1 Mile NE
13	WALOG1000227128	1/2 - 1 Mile NE
14	WALOG1000358715	1/2 - 1 Mile NW
15	WALOG1000375828	1/2 - 1 Mile WNW
17	WALOG1000242686	1/2 - 1 Mile East
18	WALOG1000133429	1/2 - 1 Mile ESE
19	WALOG1000130597	1/2 - 1 Mile North
D20	WALOG1000613842	1/2 - 1 Mile ENE
D21	WALOG1000613821	1/2 - 1 Mile ENE
D22	WALOG1000130256	1/2 - 1 Mile ENE
D23	WALOG1000646020	1/2 - 1 Mile ENE
D24	WALOG1000646008	1/2 - 1 Mile ENE
D25	WALOG1000645999	1/2 - 1 Mile ENE
E27	WALOG1000541369	1/2 - 1 Mile West
E28	WALOG1000541370	1/2 - 1 Mile West
F29	WALOG1000631695	1/2 - 1 Mile NW
F30	WALOG1000631691	1/2 - 1 Mile NW
F31	WALOG1000631698	1/2 - 1 Mile NW
F32	WALOG1000631696	1/2 - 1 Mile NW
G34	WALOG1000136760	1/2 - 1 Mile NNW
G35	WALOG1000206870	1/2 - 1 Mile NNW

PHYSICAL SETTING SOURCE MAP - 6560399.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: 1900 N BERMUDA RD	CLIENT: PBS Engineering & Env.
ADDRESS: 1900 N BERMUDA RD Kennewick WA 99338	CONTACT: Kanani Young
LAT/LONG: 46.22744 / 119.305368	INQUIRY #: 6560399.2s DATE: June 30, 2021 7:21 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **SSE** **0 - 1/8 Mile** **Lower**	**WA WELLS**	**WALOG1000137660**

Database:	Ecology Well Logs	Well Log ID:	148207
Well Tag:	ACE618	Project Tag:	Not Reported
Notice of Intent #:	W085173	Date Received:	22-JAN-97
Diameter:	6	Casing Depth:	60
Well Completion:	17-JUN-96	Well Owner:	David Herrig
Well Type:	Water	Driller #:	0483
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

A2 **North** **1/4 - 1/2 Mile** **Lower**	**WA WELLS**	**WALOG1000281654**

Database:	Ecology Well Logs	Well Log ID:	360530
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	S012805	Date Received:	08-MAY-03
Diameter:	6	Casing Depth:	45
Well Completion:	16-APR-03	Well Owner:	Milo Bauder
Well Type:	Resource Protection	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

A3 **North** **1/4 - 1/2 Mile** **Lower**	**WA WELLS**	**WALOG1000281653**

Database:	Ecology Well Logs	Well Log ID:	360529
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	S012805	Date Received:	08-MAY-03
Diameter:	6	Casing Depth:	35
Well Completion:	16-APR-03	Well Owner:	Milo Bauder
Well Type:	Resource Protection	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

A4 **North** **1/4 - 1/2 Mile** **Lower**	**WA WELLS**	**WALOG1000281650**

Database:	Ecology Well Logs	Well Log ID:	360526
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	S012805	Date Received:	08-MAY-03
Diameter:	6	Casing Depth:	50

Well Completion:	16-APR-03	Well Owner:	Milo Bauder
Well Type:	Resource Protection	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

B5
SW
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000475875**

Database:	Ecology Well Logs	Well Log ID:	630408
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	AE07921	Date Received:	04-JAN-10
Diameter:	8	Casing Depth:	20
Well Completion:	15-DEC-09	Well Owner:	Nor Am Investment Llc
Well Type:	Decommisioning	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

B6
SW
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000475876**

Database:	Ecology Well Logs	Well Log ID:	630410
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	SE06075	Date Received:	04-JAN-10
Diameter:	8	Casing Depth:	20
Well Completion:	15-DEC-09	Well Owner:	Nor Am Investment Llc
Well Type:	Resource Protection	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

7
South
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000136364**

Database:	Ecology Well Logs	Well Log ID:	146749
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	Not Reported	Date Received:	06-MAY-95
Diameter:	6	Casing Depth:	950
Well Completion:	23-AUG-94	Well Owner:	Wilsun
Well Type:	Water	Driller #:	0483
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
C8 **North** **1/2 - 1 Mile** **Lower**	**WA WELLS**	**WALOG1000614116**

Database:	Ecology Well Logs	Well Log ID:	903370
Well Tag:	BIG257	Project Tag:	Not Reported
Notice of Intent #:	RE09075	Date Received:	03-MAR-14
Diameter:	2	Casing Depth:	40
Well Completion:	01-OCT-13	Well Owner:	Ali Baroon
Well Type:	Resource Protection	Driller #:	3164
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Static Level	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

	Database	EDR ID Number
C9 **North** **1/2 - 1 Mile** **Lower**	**WA WELLS**	**WALOG1000614124**

Database:	Ecology Well Logs	Well Log ID:	903378
Well Tag:	BIG256	Project Tag:	Not Reported
Notice of Intent #:	RE09075	Date Received:	03-MAR-14
Diameter:	2	Casing Depth:	26
Well Completion:	01-OCT-13	Well Owner:	Ali Baroon
Well Type:	Resource Protection	Driller #:	3164
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Static Level	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

	Database	EDR ID Number
C10 **North** **1/2 - 1 Mile** **Lower**	**WA WELLS**	**WALOG1000614132**

Database:	Ecology Well Logs	Well Log ID:	903388
Well Tag:	BIG255	Project Tag:	Not Reported
Notice of Intent #:	RE09075	Date Received:	03-MAR-14
Diameter:	2	Casing Depth:	40
Well Completion:	01-OCT-13	Well Owner:	Ali Baroon
Well Type:	Resource Protection	Driller #:	3164
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Static Level	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

	Database	EDR ID Number
11 **NE** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40001213576**

Organization ID:	USGS-WA		
Organization Name:	USGS Washington Water Science Center		
Monitor Location:	09N/28E-27K01	Type:	Well
Description:	Not Reported	HUC:	17030003

Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Saddle Mountains Basalt Formation
Aquifer Type:	Not Reported	Construction Date:	19770316
Well Depth:	525	Well Depth Units:	ft
Well Hole Depth:	525	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	2	Level reading date:	1988-02-21
Feet below surface:	202.9	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1977-04-08	Feet below surface:	193
Feet to sea level:	Not Reported	Note:	Not Reported

12
NE
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000264314**

Database:	Ecology Well Logs	Well Log ID:	339846
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	Not Reported	Date Received:	Not Reported
Diameter:	6	Casing Depth:	297
Well Completion:	24-DEC-60	Well Owner:	Mr Staples
Well Type:	Water	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

13
NE
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000227128**

Database:	Ecology Well Logs	Well Log ID:	296391
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	Not Reported	Date Received:	Not Reported
Diameter:	6	Casing Depth:	297
Well Completion:	16-MAR-78	Well Owner:	Frank Staples
Well Type:	Water	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

14
NW
1/2 - 1 Mile
Higher

WA WELLS **WALOG1000358715**

Database:	Ecology Well Logs	Well Log ID:	455701
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	S004259	Date Received:	31-JAN-01
Diameter:	0	Casing Depth:	7.5
Well Completion:	18-JAN-01	Well Owner:	Badger Mountain
Well Type:	Resource Protection	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0

Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

15
WNW **WA WELLS** **WALOG1000375828**
1/2 - 1 Mile
Higher

Database:	Ecology Well Logs	Well Log ID:	479880
Well Tag:	APA472	Project Tag:	Not Reported
Notice of Intent #:	W182776	Date Received:	21-MAY-07
Diameter:	6	Casing Depth:	300
Well Completion:	05-MAY-07	Well Owner:	Rebecca Magee
Well Type:	Water	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

16
ESE **FED USGS** **USGS40001213424**
1/2 - 1 Mile
Lower

Organization ID:	USGS-WA		
Organization Name:	USGS Washington Water Science Center		
Monitor Location:	09N/28E-34H01	Type:	Well
Description:	Not Reported	HUC:	17030003
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Wanapum Basalt Formation
Aquifer Type:	Not Reported	Construction Date:	19771122
Well Depth:	905	Well Depth Units:	ft
Well Hole Depth:	905	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	8	Level reading date:	1986-09-17
Feet below surface:	278.3	Feet to sea level:	Not Reported
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1986-07-22	Feet below surface:	258.9
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1986-06-19	Feet below surface:	259.5
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1986-05-22	Feet below surface:	258.7
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1986-03-11	Feet below surface:	256.9
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1986-02-25	Feet below surface:	256.9
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1984-03-01	Feet below surface:	260.4

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-05-09	Feet below surface:	266
Feet to sea level:	Not Reported	Note:	Not Reported

17
East **WA WELLS** **WALOG1000242686**
1/2 - 1 Mile
Lower

Database:	Ecology Well Logs	Well Log ID:	315874
Well Tag:	AGM118	Project Tag:	Not Reported
Notice of Intent #:	W148967	Date Received:	24-DEC-01
Diameter:	6	Casing Depth:	428.6
Well Completion:	21-DEC-01	Well Owner:	John Cadwell
Well Type:	Water	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

18
ESE **WA WELLS** **WALOG1000133429**
1/2 - 1 Mile
Lower

Database:	Ecology Well Logs	Well Log ID:	143406
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	Not Reported	Date Received:	30-MAY-78
Diameter:	16	Casing Depth:	905
Well Completion:	24-DEC-77	Well Owner:	Milo Bauder
Well Type:	Water	Driller #:	0001
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

19
North **WA WELLS** **WALOG1000130597**
1/2 - 1 Mile
Lower

Database:	Ecology Well Logs	Well Log ID:	140271
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	Not Reported	Date Received:	24-OCT-78
Diameter:	6	Casing Depth:	274
Well Completion:	17-JUN-70	Well Owner:	George Sharp
Well Type:	Water	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D20
ENE
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000613842**

Database:	Ecology Well Logs	Well Log ID:	903084
Well Tag:	BCK232	Project Tag:	Not Reported
Notice of Intent #:	RE09496	Date Received:	03-FEB-14
Diameter:	8.5	Casing Depth:	20
Well Completion:	24-JAN-14	Well Owner:	Richland School District
Well Type:	Resource Protection	Driller #:	3074
Static Level:	11.5	Flow Rate (GPM):	0
Flow Type:	Static Level	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

D21
ENE
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000613821**

Database:	Ecology Well Logs	Well Log ID:	903063
Well Tag:	BCK233	Project Tag:	Not Reported
Notice of Intent #:	RE09496	Date Received:	03-FEB-14
Diameter:	8.5	Casing Depth:	20
Well Completion:	23-JAN-14	Well Owner:	Richland School District
Well Type:	Resource Protection	Driller #:	3074
Static Level:	11.1000003815	Flow Rate (GPM):	0
Flow Type:	Static Level	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

D22
ENE
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000130256**

Database:	Ecology Well Logs	Well Log ID:	139898
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	Not Reported	Date Received:	28-FEB-78
Diameter:	12	Casing Depth:	525
Well Completion:	08-APR-77	Well Owner:	Frank Staples
Well Type:	Water	Driller #:	0196
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

D23
ENE
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000646020**

Database:	Ecology Well Logs	Well Log ID:	959777
Well Tag:	BCK233	Project Tag:	Not Reported
Notice of Intent #:	AE27853	Date Received:	11-DEC-14
Diameter:	2	Casing Depth:	20

Well Completion:	22-JUL-14	Well Owner:	Richland School District
Well Type:	Decommisioning	Driller #:	3074
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

D24
ENE **WA WELLS** **WALOG1000646008**
1/2 - 1 Mile
Lower

Database:	Ecology Well Logs	Well Log ID:	959757
Well Tag:	BCK232	Project Tag:	Not Reported
Notice of Intent #:	AE27853	Date Received:	11-DEC-14
Diameter:	2	Casing Depth:	20
Well Completion:	22-JUL-14	Well Owner:	Richland School District
Well Type:	Decommisioning	Driller #:	3074
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

D25
ENE **WA WELLS** **WALOG1000645999**
1/2 - 1 Mile
Lower

Database:	Ecology Well Logs	Well Log ID:	959744
Well Tag:	BCK288	Project Tag:	Not Reported
Notice of Intent #:	AE27854	Date Received:	11-DEC-14
Diameter:	2	Casing Depth:	20
Well Completion:	22-JUL-14	Well Owner:	Richland School District
Well Type:	Decommisioning	Driller #:	3074
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

26
NNE **FED USGS** **USGS40001213700**
1/2 - 1 Mile
Lower

Organization ID:	USGS-WA		
Organization Name:	USGS Washington Water Science Center		
Monitor Location:	09N/28E-27D01	Type:	Well
Description:	Not Reported	HUC:	17030003
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Saddle Mountains Basalt Formation
Aquifer Type:	Not Reported	Construction Date:	19700609
Well Depth:	274	Well Depth Units:	ft
Well Hole Depth:	274	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	4	Level reading date:	1988-02-21
Feet below surface:	170.7	Feet to sea level:	Not Reported
Note:	The site had been pumped recently.		

Level reading date:	1987-03-03	Feet below surface:	170.4
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1986-09-09	Feet below surface:	172.8
Feet to sea level:	Not Reported	Note:	The site had been pumped recently.
Level reading date:	1970-06-17	Feet below surface:	187
Feet to sea level:	Not Reported	Note:	Not Reported

E27
West
1/2 - 1 Mile
Higher

WA WELLS **WALOG1000541369**

Database:	Ecology Well Logs	Well Log ID:	758996
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	SE42889	Date Received:	08-JUL-11
Diameter:	8	Casing Depth:	15
Well Completion:	14-JUN-11	Well Owner:	C/O Fdh Engineering
Well Type:	Resource Protection	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

E28
West
1/2 - 1 Mile
Higher

WA WELLS **WALOG1000541370**

Database:	Ecology Well Logs	Well Log ID:	758998
Well Tag:	Not Reported	Project Tag:	Not Reported
Notice of Intent #:	AE13574	Date Received:	08-JUL-11
Diameter:	8	Casing Depth:	15
Well Completion:	14-JUN-11	Well Owner:	C/O Fdh Engineering
Well Type:	Decommisioning	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

F29
NW
1/2 - 1 Mile
Higher

WA WELLS **WALOG1000631695**

Database:	Ecology Well Logs	Well Log ID:	932952
Well Tag:	Not Reported	Project Tag:	B-1
Notice of Intent #:	SE52451	Date Received:	25-SEP-14
Diameter:	8	Casing Depth:	10
Well Completion:	20-AUG-14	Well Owner:	C/O Fdh Engineering
Well Type:	Resource Protection	Driller #:	2953
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Applicable	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F30
NW
1/2 - 1 Mile
Higher

WA WELLS **WALOG1000631691**

Database:	Ecology Well Logs	Well Log ID:	932947
Well Tag:	Not Reported	Project Tag:	B-2
Notice of Intent #:	AE28402	Date Received:	25-SEP-14
Diameter:	8	Casing Depth:	20
Well Completion:	20-AUG-14	Well Owner:	C/O Fdh Engineering
Well Type:	Decommisioning	Driller #:	2953
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

F31
NW
1/2 - 1 Mile
Higher

WA WELLS **WALOG1000631698**

Database:	Ecology Well Logs	Well Log ID:	932957
Well Tag:	Not Reported	Project Tag:	B-2
Notice of Intent #:	SE52451	Date Received:	25-SEP-14
Diameter:	8	Casing Depth:	20
Well Completion:	20-AUG-14	Well Owner:	C/O Fdh Engineering
Well Type:	Resource Protection	Driller #:	2953
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Applicable	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

F32
NW
1/2 - 1 Mile
Higher

WA WELLS **WALOG1000631696**

Database:	Ecology Well Logs	Well Log ID:	932953
Well Tag:	Not Reported	Project Tag:	B-1
Notice of Intent #:	AE28402	Date Received:	25-SEP-14
Diameter:	8	Casing Depth:	10
Well Completion:	20-AUG-14	Well Owner:	C/O Fdh Engineering
Well Type:	Decommisioning	Driller #:	2953
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

33
East
1/2 - 1 Mile
Lower

FED USGS **USGS40001213524**

Organization ID:	USGS-WA		
Organization Name:	USGS Washington Water Science Center		
Monitor Location:	09N/28E-27R01	Type:	Well
Description:	Not Reported	HUC:	17030003

Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Saddle Mountains Basalt Formation
Aquifer Type:	Not Reported	Construction Date:	19601224
Well Depth:	297	Well Depth Units:	ft
Well Hole Depth:	297	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1960-12-24
Feet below surface:	175	Feet to sea level:	Not Reported
Note:	Not Reported		

G34
NNW
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000136760**

Database:	Ecology Well Logs	Well Log ID:	147211
Well Tag:	AAN540	Project Tag:	Not Reported
Notice of Intent #:	W079106	Date Received:	13-MAY-96
Diameter:	8	Casing Depth:	600
Well Completion:	17-APR-96	Well Owner:	Kennewick Irrigation
Well Type:	Water	Driller #:	2215
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

G35
NNW
1/2 - 1 Mile
Lower

WA WELLS **WALOG1000206870**

Database:	Ecology Well Logs	Well Log ID:	255746
Well Tag:	AFF631	Project Tag:	Not Reported
Notice of Intent #:	W124383	Date Received:	05-JUN-00
Diameter:	6	Casing Depth:	108
Well Completion:	20-MAY-00	Well Owner:	Cheryl Coppinger
Well Type:	Water	Driller #:	Not Reported
Static Level:	0	Flow Rate (GPM):	0
Flow Type:	Not Reported	PSI:	0
Well Test:	Not Reported	Water Reclamation #:	37

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for BENTON County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for BENTON COUNTY, WA

Number of sites tested: 56

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.943 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.774 pCi/L	86%	10%	4%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Ecology
Telephone: 360-407-6121

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Wells
Source: Department of Health
Telephone: 360-236-3148
Group A and B well locations.

Water Well Listing
Source: Public Utility District
Telephone: 206-779-7656
A listing of water well locations in Kitsap County.

Ecology Well Logs
Source: Department of Ecology
Telephone: 360-407-7294
Point geodatabase with a record for each Ecology well report. Points are located by quarter quarter section centroid. Points contain all well report types including water wells, resource protection wells, and decommissioned wells.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Listing
Source: Department of Natural Resources
Telephone: 360-902-1450
Locations that represent oil and gas test well sites in Washington State from 1890 to present.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

Appendix D

Historical Research Records

Historical Aerial Photographs
Historical Topographic Maps
Building Department Records
Local Street Directories
Title Records

1900 N BERMUDA RD

1900 N BERMUDA RD

Kennewick, WA 99338

Inquiry Number: 6560399.11

July 01, 2021

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

07/01/21

Site Name:

1900 N BERMUDA RD
1900 N BERMUDA RD
Kennewick, WA 99338
EDR Inquiry # 6560399.11

Client Name:

PBS Engineering & Env.
400 Bradley Boulevard , Suite 300
Richland, WA 99352
Contact: Kanani Young

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2017	1"=625'	Flight Year: 2017	USDA/NAIP
2013	1"=625'	Flight Year: 2013	USDA/NAIP
2009	1"=625'	Flight Year: 2009	USDA/NAIP
2006	1"=625'	Flight Year: 2006	USDA/NAIP
1996	1"=625'	Acquisition Date: January 01, 1996	USGS/DOQQ
1991	1"=625'	Flight Date: July 02, 1991	USGS
1988	1"=625'	Flight Date: July 08, 1988	USGS
1982	1"=625'	Flight Date: August 01, 1982	USDA
1976	1"=625'	Flight Date: July 01, 1976	USGS
1963	1"=625'	Flight Date: September 09, 1963	USGS
1952	1"=625'	Flight Date: October 17, 1952	USGS
1948	1"=625'	Flight Date: June 02, 1948	USGS

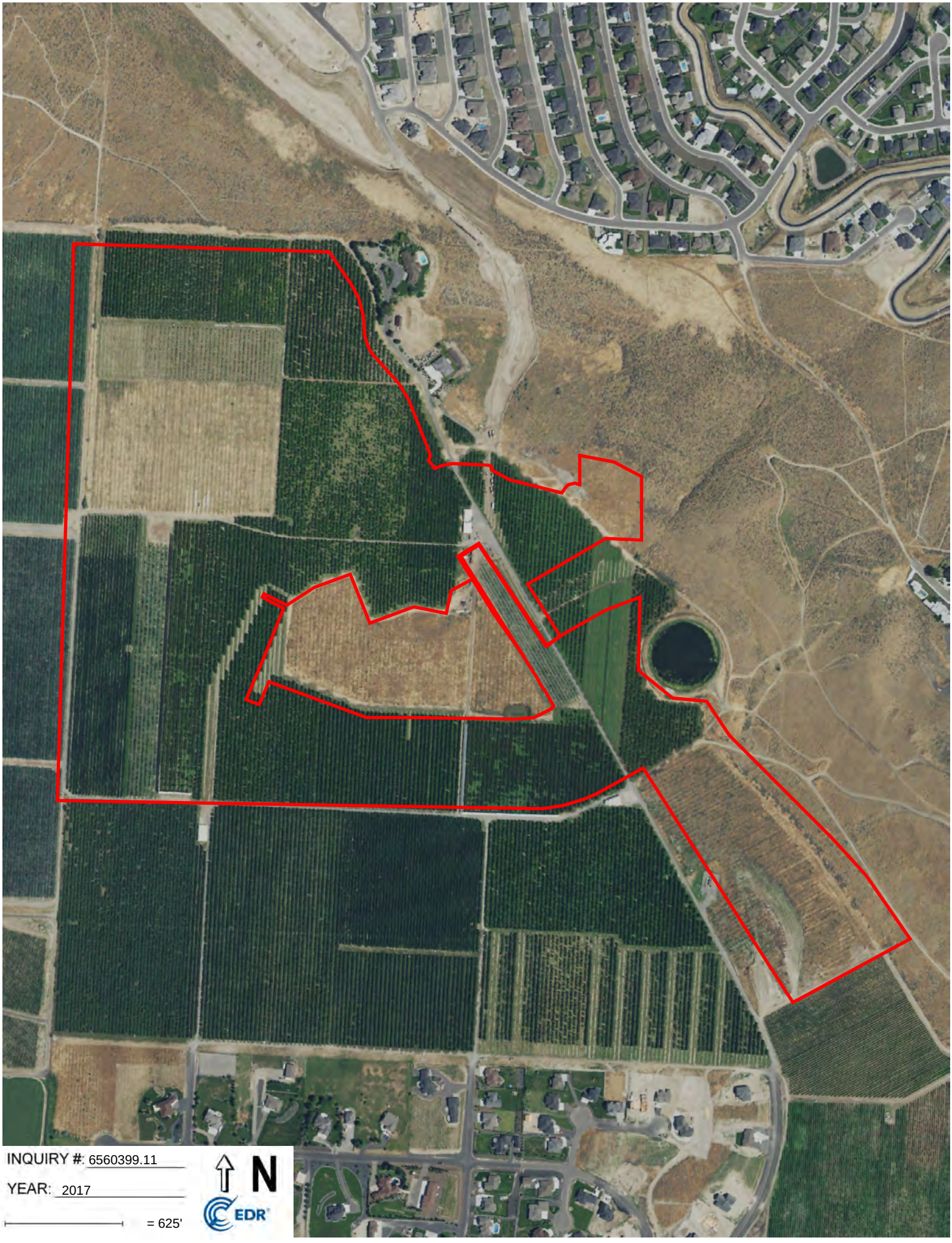
When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

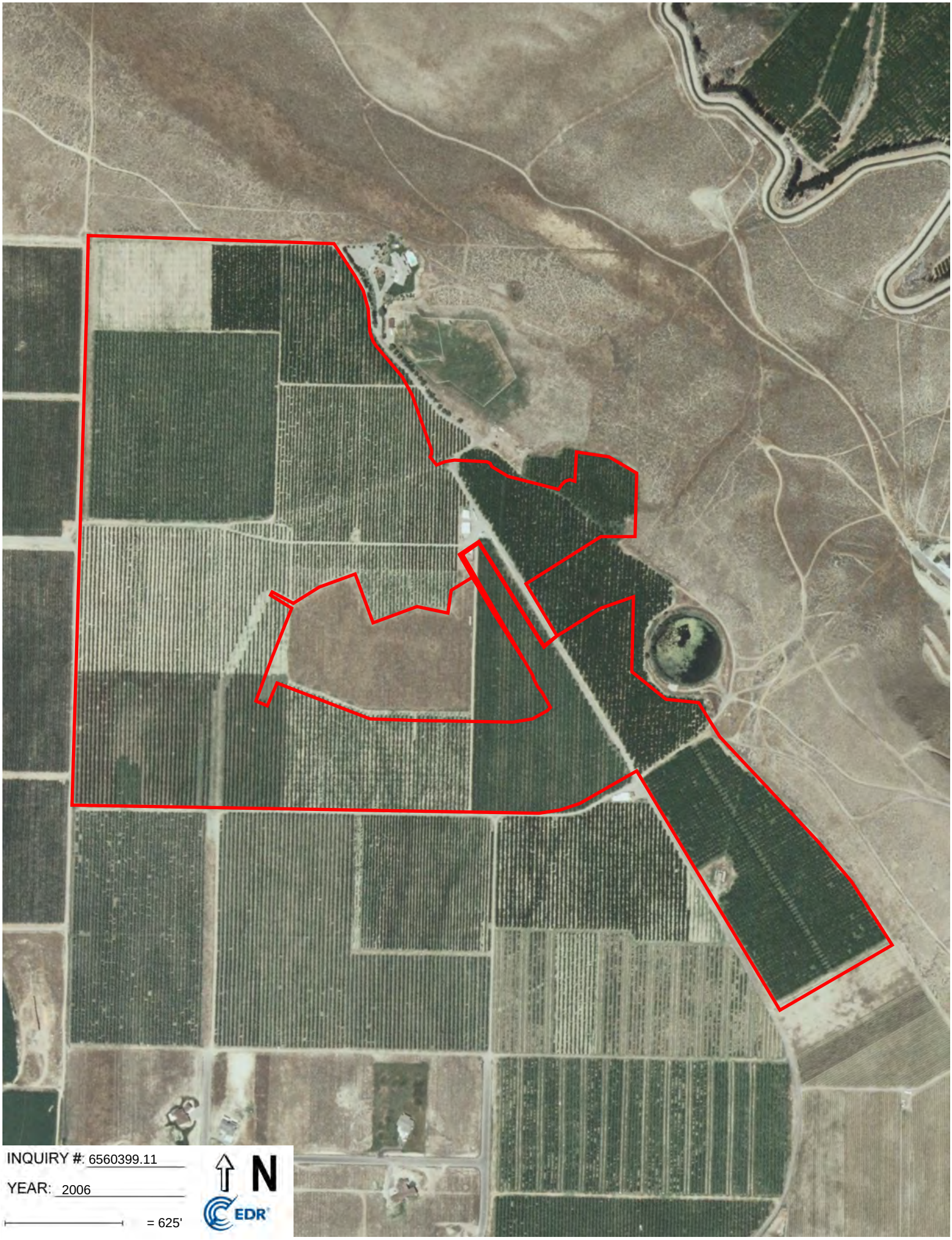
Copyright 2021 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.


INQUIRY #: 6560399.11
YEAR: 2017
= 625'
N
EDR

INQUIRY #: 6560399.11
YEAR: 2013
= 625'
N
EDR

INQUIRY #: 6560399.11
YEAR: 2009
= 625'
N
EDR


INQUIRY #: 6560399.11
YEAR: 2006
= 625'
N
EDR

INQUIRY #: 6560399.11

YEAR: 1996

= 625'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

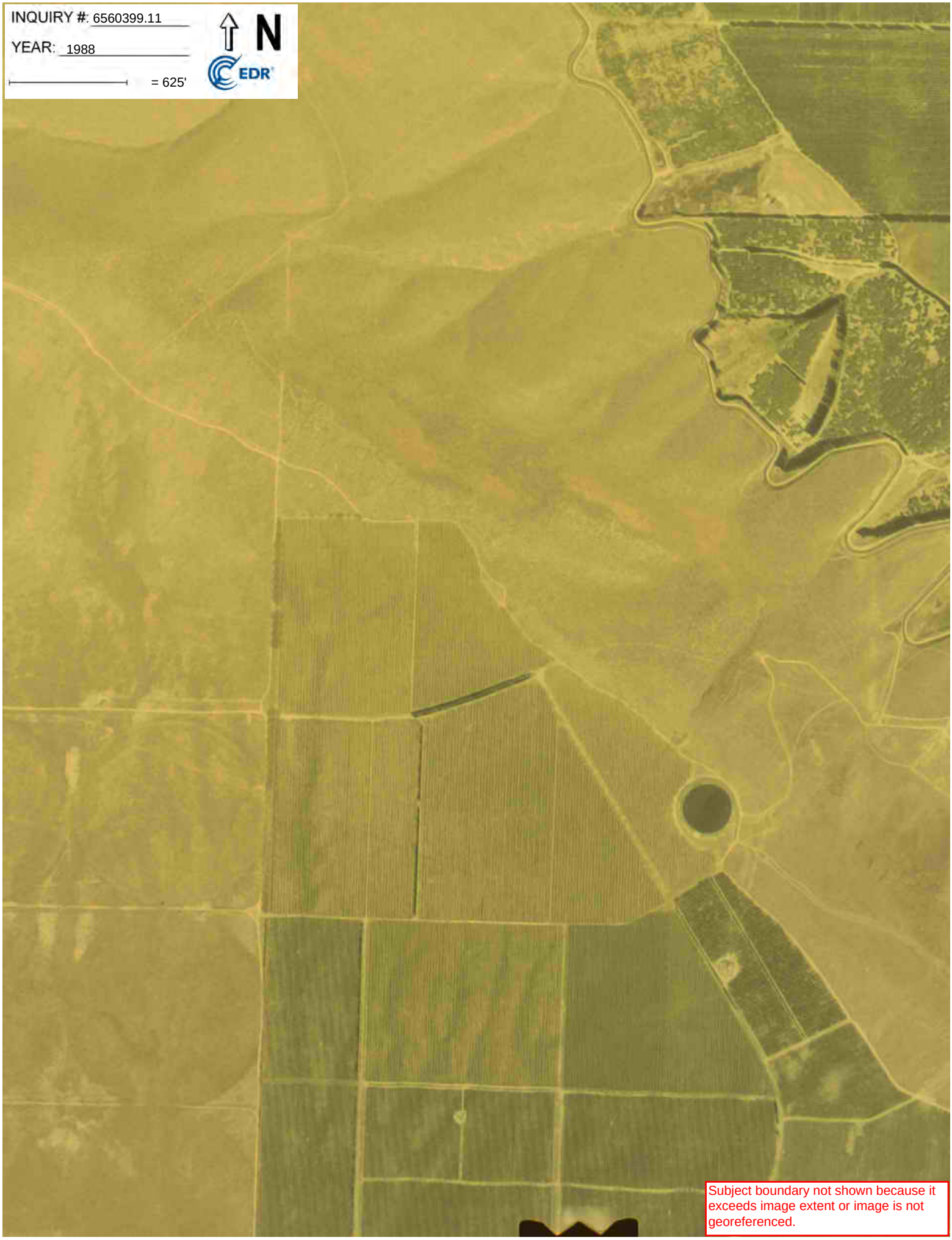
INQUIRY #: 6560399.11

YEAR: 1991

= 625'

N

EDR


INQUIRY #: 6560399.11
YEAR: 1988
= 625'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.

INQUIRY #: 6560399.11
YEAR: 1982
= 625'
N
EDR

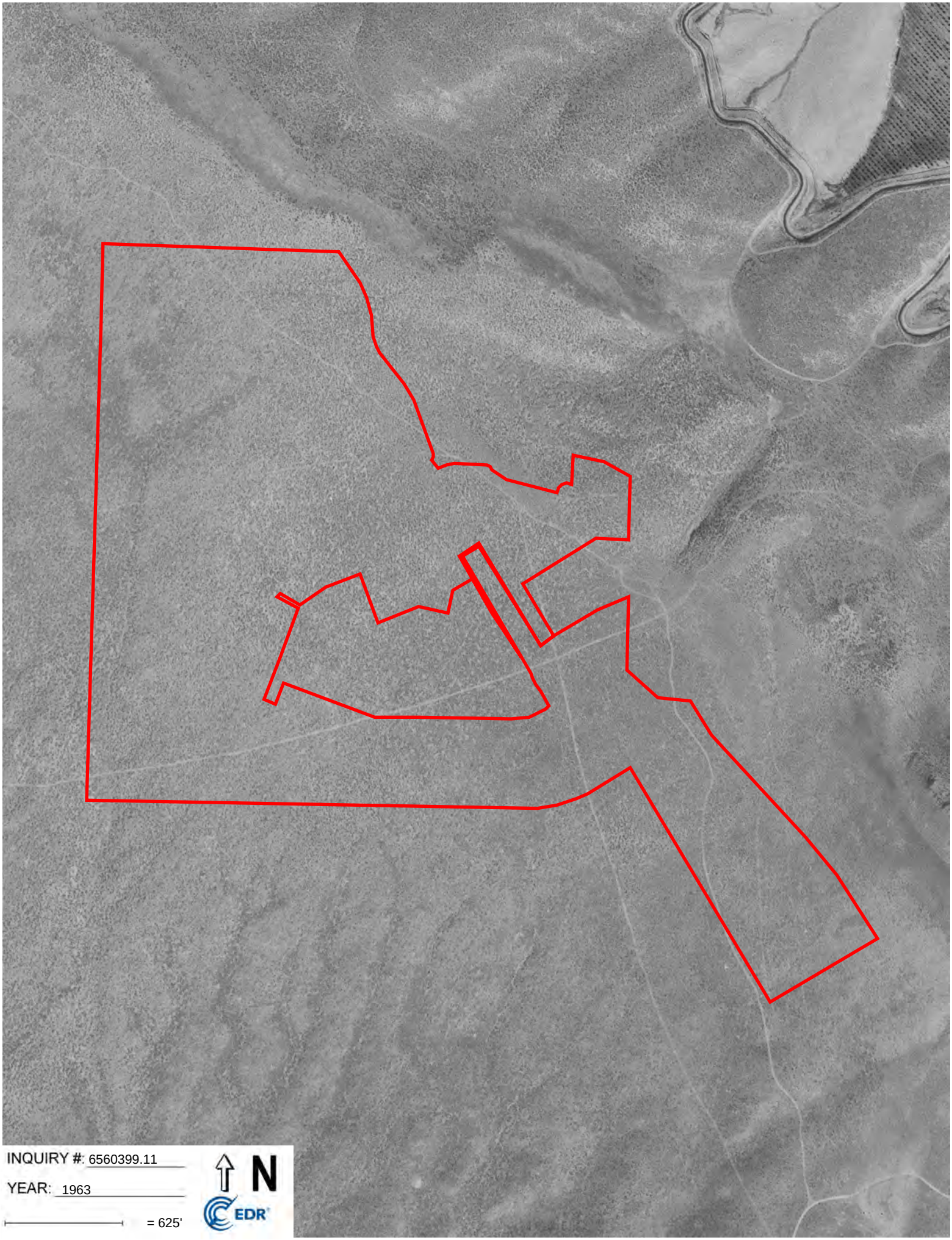
INQUIRY #: 6560399.11

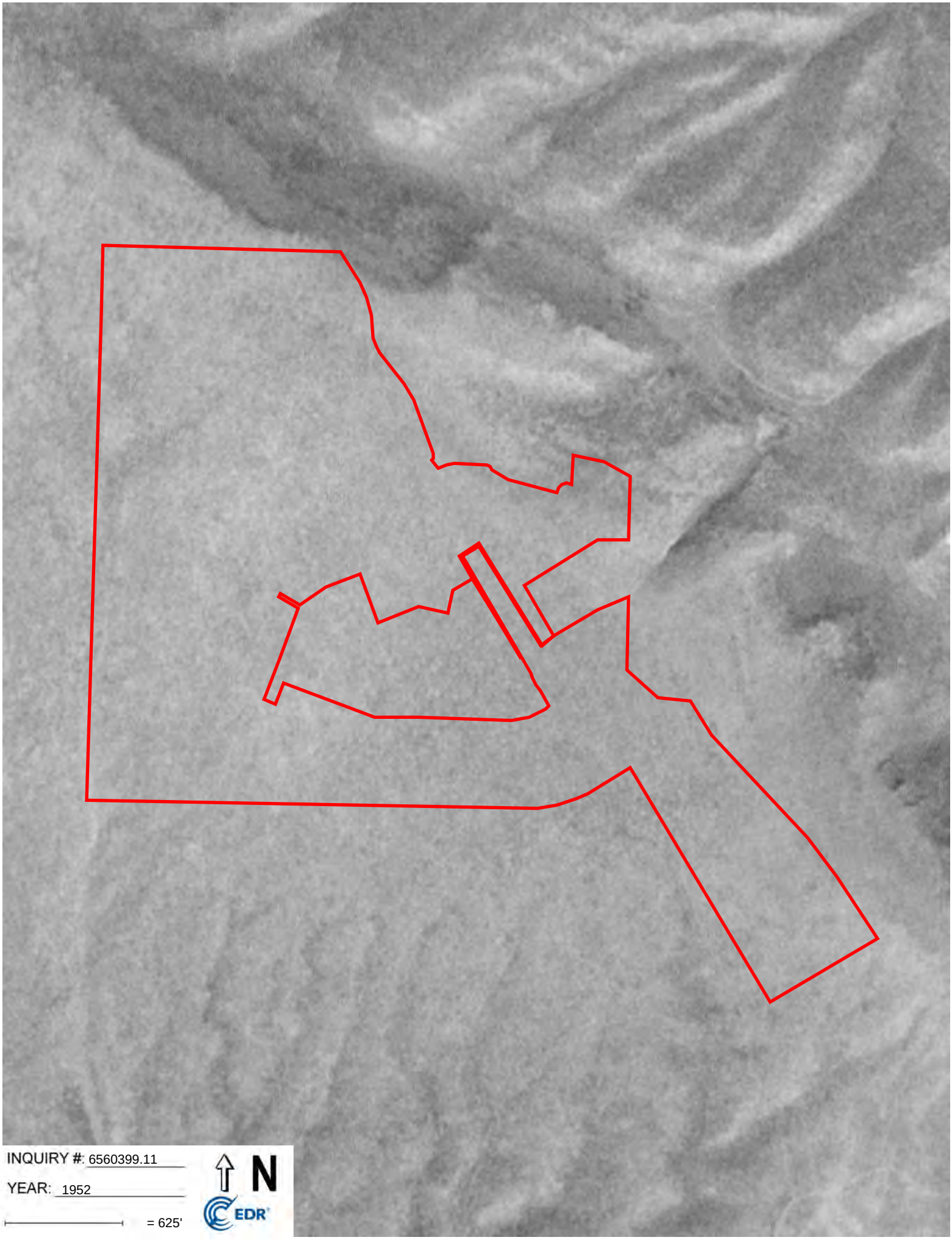
YEAR: 1976

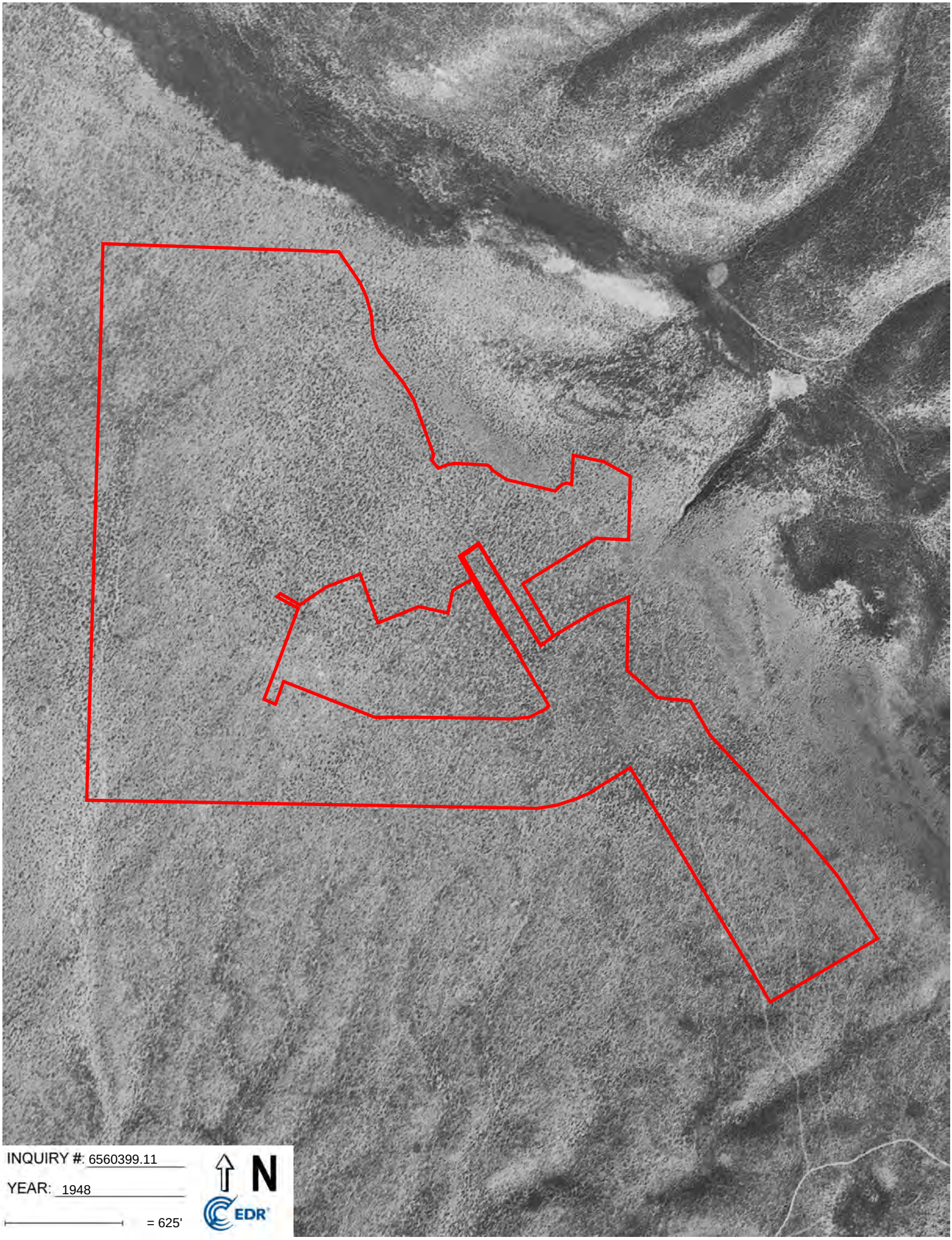
= 625'

N

EDR


INQUIRY #: 6560399.11
YEAR: 1963
= 625'
N
EDR


INQUIRY #: 6560399.11
YEAR: 1952
= 625'
N
EDR


INQUIRY #: 6560399.11
YEAR: 1948
= 625'
N
EDR

1900 N BERMUDA RD
1900 N BERMUDA RD
Kennewick, WA 99338

Inquiry Number: 6560399.8
June 30, 2021

EDR Building Permit Report

Target Property and Adjoining Properties

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

About This Report

Executive Summary

Findings

Glossary

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EDR BUILDING PERMIT REPORT

About This Report

The EDR Building Permit Report provides a practical and efficient method to search building department records for indications of environmental conditions. Generated via a search of municipal building permit records gathered from more than 1,600 cities nationwide, this report will assist you in meeting the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

Building permit data can be used to identify current and/or former operations and structures/features of environmental concern. The data can provide information on a target property and adjoining properties such as the presence of underground storage tanks, pump islands, sumps, drywells, etc., as well as information regarding water, sewer, natural gas, electrical connection dates, and current/former septic tanks.

ASTM and EPA Requirements

ASTM E 1527-13 lists building department records as a "standard historical source," as detailed in § 8.3.4.7: "Building Department Records - The term building department records means those records of the local government in which the property is located indicating permission of the local government to construct, alter, or demolish improvements on the property." ASTM also states that "Uses in the area surrounding the property shall be identified in the report, but this task is required only to the extent that this information is revealed in the course of researching the property itself."

EPA's Standards and Practices for All Appropriate Inquires (AAI) states: "§312.24: Reviews of historical sources of information. (a) Historical documents and records must be reviewed for the purposes of achieving the objectives and performance factors of §312.20(e) and (f). Historical documents and records may include, but are not limited to, aerial photographs, fire insurance maps, building department records, chain of title documents, and land use records."

Methodology

EDR has developed the EDR Building Permit Report through our partnership with BuildFax, the nation's largest repository of building department records. BuildFax collects, updates, and manages building department records from local municipal governments. The database now includes 30 million permits, on more than 10 million properties across 1,600 cities in the United States.

The EDR Building Permit Report comprises local municipal building permit records, gathered directly from local jurisdictions, including both target property and adjoining properties. Years of coverage vary by municipality. Data reported includes (where available): date of permit, permit type, permit number, status, valuation, contractor company, contractor name, and description.

Incoming permit data is checked at seven stages in a regimented quality control process, from initial data source interview, to data preparation, through final auditing. To ensure the building department is accurate, each of the seven quality control stages contains, on average, 15 additional quality checks, resulting in a process of approximately 105 quality control "touch points."

For more information about the EDR Building Permit Report, please contact your EDR Account Executive at (800) 352-0050.

EDR® Environmental Data Resources Inc

BUILD FAX® PROPERTY HISTORY

EXECUTIVE SUMMARY: SEARCH DOCUMENTATION

A search of building department records was conducted by Environmental Data Resources, Inc (EDR) on behalf of PBS Engineering & Env. on Jun 30, 2021.

TARGET PROPERTY

1900 N BERMUDA RD
Kennewick, WA 99338

SEARCH METHODS

EDR searches available lists for both the Target Property and Surrounding Properties.

RESEARCH SUMMARY

Building permits identified: **YES**

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Benton County Unincorporated Area

Year	*Source*	*TP*	*Adjoining*
2019	Benton County		X
2018	Benton County		
2017	Benton County		X
2016	Benton County		
2015	Benton County		
2014	Benton County		
2013	Benton County		
2012	Benton County		
2011	Benton County		
2010	Benton County		
2009	Benton County		X

Name: JurisdictionName
Years: Years
Source: Source
Phone: Phone

BUILDING DEPARTMENT RECORDS SEARCHED

Name: Benton County Unincorporated Area
Years: 2009-2019
Source: Benton County, KENNEWICK, WA
Phone: (509) 786-5710

Name: Richland
Years: 1994-2021
Source: City of Richland, Building and Planning, RICHLAND, WA
Phone: (509) 942-7390

Name: Des Moines
Years: 1900-2021
Source: City of Des Moines, Planning and Building, SEATTLE, WA
Phone: (206) 870-6519

Name: Kennewick
Years: 1991-2021
Source: City of Kennewick, Development Services, KENNEWICK, WA
Phone: (509) 585-4558

TARGET PROPERTY FINDINGS

TARGET PROPERTY DETAIL

1900 N BERMUDA RD
Kennewick, WA 99338

No Permits Found

ADJOINING PROPERTY FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

E VALENCIA DR

91904 E VALENCIA DR

Date:	**7/1/2009**
Permit Type:	**DRA**
Description:	**REROOF**
Permit Description:	**Dwelling repair & addition**
Work Class:	
Proposed Use:	
Permit Number:	24624
Status:	
Valuation:	$4,000.00
Contractor Company:	
Contractor Name:	PALMER ROOFING COMPANY

S BERMUDA RD

1605 S BERMUDA RD

Date:	**6/30/2017**
Permit Type:	**DRA**
Description:	**KITCHEN REMODEL**
Permit Description:	**Dwelling repair & addition**
Work Class:	
Proposed Use:	
Permit Number:	31376
Status:	ISSUED
Valuation:	$6,120.00
Contractor Company:	
Contractor Name:	

ADJOINING PROPERTY FINDINGS

2504 S BERMUDA RD

Date:	**2/27/2019**
Permit Type:	**SOB**
Description:	**BATHROOM REMODEL**
Permit Description:	**Structure Other than Building**
Work Class:	
Proposed Use:	
Permit Number:	33096
Status:	COMPLETE
Valuation:	$24,155.00
Contractor Company:	
Contractor Name:	VINCENT CONSTRUCTION LLC

Date:	**9/14/2017**
Permit Type:	**SOB**
Description:	**HEAT PUMP SYSTEM & WATER HEATER**
Permit Description:	**Structure Other than Building**
Work Class:	
Proposed Use:	
Permit Number:	31695
Status:	COMPLETE
Valuation:	$15,000.00
Contractor Company:	
Contractor Name:	M Campbell & Company Inc

GLOSSARY

General Building Department concepts

- **ICC:** The International Code Council. The governing body for the building/development codes used by all jurisdictions who've adopted the ICC guidelines. MOST of the US has done this. Canada, Mexico, and other countries use ICC codes books and guides as well. There are a few states who have added guidelines to the ICC codes to better fit their needs. For example, California has added seismic retrofit requirements for most commercial structures.
- **Building Department (Permitting Authority, Building Codes, Inspections Department, Building and Inspections):** This is the department in a jurisdiction where an owner or contractor goes to obtain permits and inspections for building, tearing down, remodeling, adding to, re-roofing, moving or otherwise making changes to any structure, Residential or Commercial.
- **Jurisdiction:** This is the geographic area representing the properties over which a Permitting Authority has responsibility.
- **GC:** General Contractor. Usually the primary contractor hired for any Residential or Commercial construction work.
- **Sub:** Subordinate contracting companies or subcontractors. Usually a "trades" contractor working for the GC. These contractors generally have an area of expertise in which they are licensed like Plumbing, Electrical, Heating and Air systems, Gas Systems, Pools etc. (called "trades").
- **Journeymen:** Sub contractors who have their own personal licenses in one or more trades and work for different contracting companies, wherever they are needed or there is work.
- **HVAC (Mechanical, Heating & Air companies):** HVAC = Heating, Ventilation, and Air Conditioning.
- **ELEC (Electrical, TempPole, TPole, TPower, Temporary Power, Panel, AMP Change, Power Release):** Electrical permits can be pulled for many reasons. The most common reason is to increase the AMPs of power in an electrical power panel. This requires a permit in almost every jurisdiction. Other commons reason for Electrical permits is to insert a temporary power pole at a new construction site. Construction requires electricity, and in a new development, power has yet to be run to the lot. The temporary power pole is usually the very first permit pulled for new development. The power is released to the home owner when construction is complete and this sometimes takes the form of a Power Release permit or inspection.
- **"Pull" a permit:** To obtain and pay for a building permit.
- **CBO:** Chief Building Official
- **Planning Department:** The department in the development process where the building /structural plans are reviewed for their completeness and compliance with building codes
- **Zoning Department:** The department in the development process where the site plans are reviewed for their compliance with the regulations associated with the zoning district in which they are situated.
- **Zoning District:** A pre-determined geographic boundary within a jurisdiction where certain types of structures are permitted / prohibited. Examples are Residential structure, Commercial/Retail structures, Industrial/Manufacturing structures etc. Each zoning district has regulations associated with it like the sizes of the lots, the density of the structures on the lots, the number of parking spaces required for certain types of structures on the lots etc.
- **PIN (TMS, GIS ID, Parcel#):** Property Identification Number and Tax Map System number.
- **State Card (Business license):** A license card issued to a contractor to conduct business.
- **Building Inspector (Inspector):** The inspector is a building department employee that inspects building construction for compliance to codes.
- **C.O.:** Certificate of Occupancy. This is the end of the construction process and designates that the owners now have permission to occupy a structure after its building is complete. Sometimes also referred to as a Certificate of Compliance.

GLOSSARY

Permit Content Definitions

- Permit Number: The alphanumerical designation assigned to a permit for tracking within the building department system. Sometimes the permit number gives clues to its role, e.g. a "PL" prefix may designate a plumbing permit.
- Description: A field on the permit form that allows the building department to give a brief description of the work being done. More often than not, this is the most important field for EP's to find clues to the prior use(s) of the property.
- Permit Type: Generally a brief designation of the type of job being done. For example BLDG-RES, BLDG-COM, ELEC, MECH etc.

Sample Building Permit Data

Date: Nov 09, 2000
Permit Type: Bldg -
New Permit Number: 101000000405
Status: Valuation: $1,000,000.00
Contractor Company: OWNER-BUILDER
Contractor Name:

Description: New one store retail (SAV-ON) with drive-thru pharmacy. Certificate of Occupancy.

1900 N BERMUDA RD
1900 N BERMUDA RD
Kennewick, WA 99338

Inquiry Number: 6560399.5
July 02, 2021

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

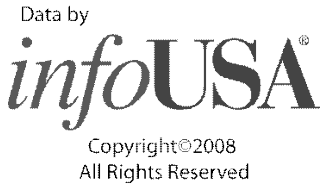
DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer. Reproduction of City Directories without permission of the publisher or licensed vendor may be a violation of copyright.



RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☐	EDR Digital Archive
2010	☐	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☐	☐	EDR Digital Archive
1995	☐	☐	EDR Digital Archive
1993	☐	☐	POLK DIRECTORY CO
1988	☐	☐	POLK DIRECTORY CO
1983	☐	☐	POLK DIRECTORY CO
1979	☐	☐	POLK DIRECTORY CO
1974	☐	☐	POLK DIRECTORY CO
1969	☐	☐	POLK DIRECTORY CO
1964	☐	☐	POLK DIRECTORY CO

FINDINGS

TARGET PROPERTY STREET

1900 N BERMUDA RD
Kennewick, WA 99338

Year	*CD Image*	*Source*	
N BERMUDA RD			
2014	pg A1	EDR Digital Archive	
2010	-	EDR Digital Archive	Target and Adjoining not listed in Source
2005	-	EDR Digital Archive	Target and Adjoining not listed in Source
2005	pg A2	EDR Digital Archive	
2000	-	EDR Digital Archive	Target and Adjoining not listed in Source
1995	-	EDR Digital Archive	Target and Adjoining not listed in Source
1993	-	POLK DIRECTORY CO	Street not listed in Source
1988	-	POLK DIRECTORY CO	Street not listed in Source
1983	-	POLK DIRECTORY CO	Street not listed in Source
1979	-	POLK DIRECTORY CO	Street not listed in Source
1974	-	POLK DIRECTORY CO	Street not listed in Source
1969	-	POLK DIRECTORY CO	Street not listed in Source
1964	-	POLK DIRECTORY CO	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

N BERMUDA RD 2014

1232 OCCUPANT UNKNOWN,
1276 OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

N BERMUDA RD 2005

1276 WILSON, WILLIAM M

1900 N BERMUDA RD

1900 N BERMUDA RD

Kennewick, WA 99338

Inquiry Number: 6560399.4

June 30, 2021

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

06/30/21

Site Name:

1900 N BERMUDA RD
1900 N BERMUDA RD
Kennewick, WA 99338
EDR Inquiry # 6560399.4

Client Name:

PBS Engineering & Env.
400 Bradley Boulevard , Suite 300
Richland, WA 99352
Contact: Kanani Young

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by PBS Engineering & Env. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 66336.000
Project: Monson Six Parcels Bermuda F

Coordinates:

Latitude: 46.22744 46° 13' 39" North
Longitude: -119.305368 -119° 18' 19" West
UTM Zone: Zone 11 North
UTM X Meters: 322224.84
UTM Y Meters: 5121901.39
Elevation: 1041.65' above sea level

Maps Provided:

2013
1978
1965
1917

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2021 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

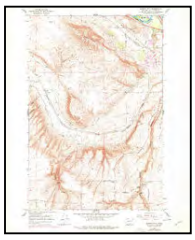
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

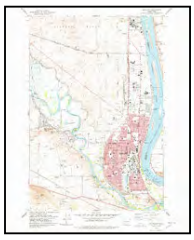
2013 Source Sheets

Badger Mountain
2013
7.5-minute, 24000

1978 Source Sheets



Badger Mtn
1978
7.5-minute, 24000
Aerial Photo Revised 1970

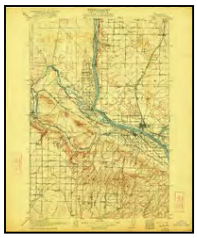


Richland
1978
7.5-minute, 24000
Aerial Photo Revised 1973

1965 Source Sheets

Badger Mtn
1965
7.5-minute, 24000
Aerial Photo Revised 1963

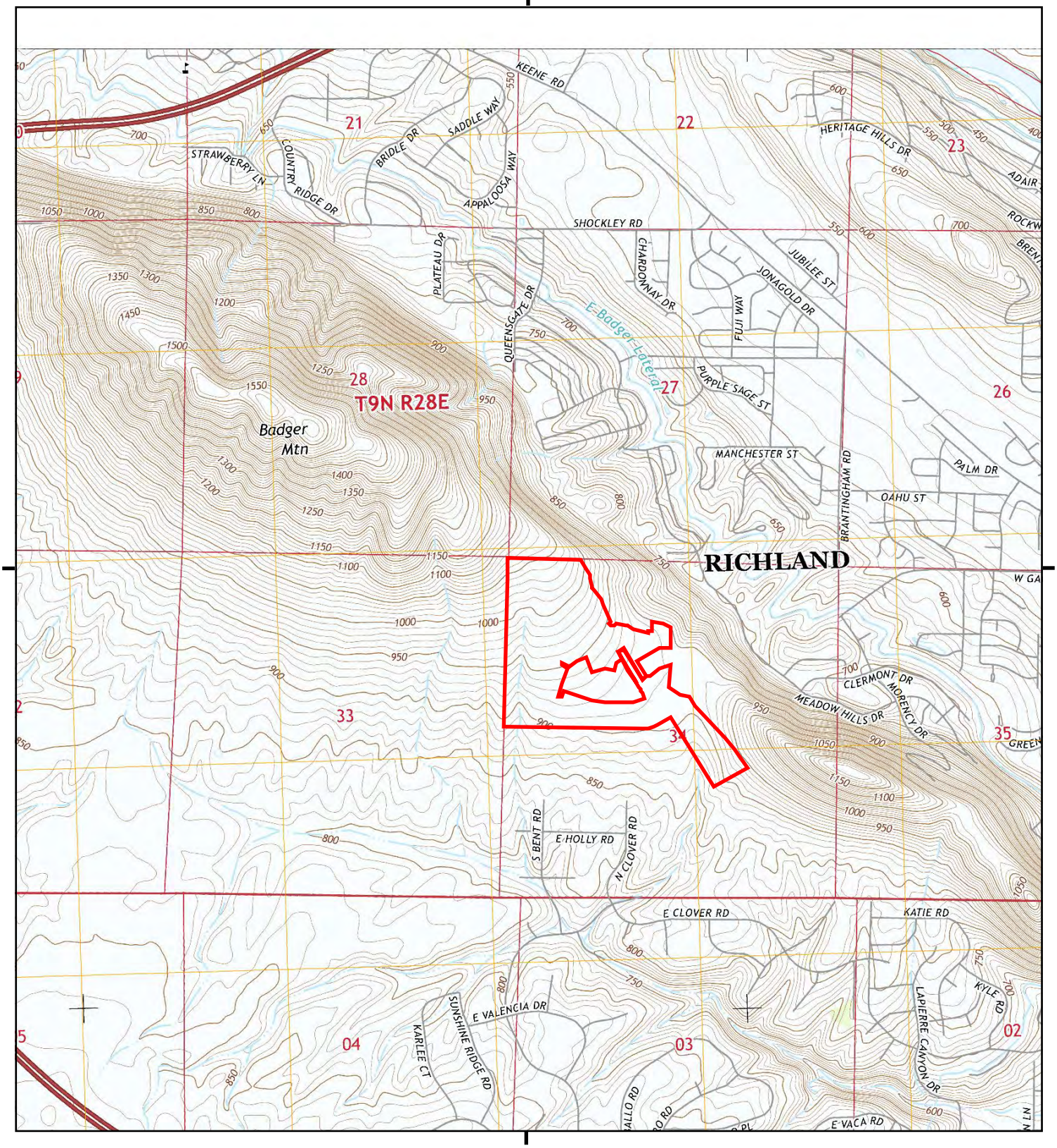
1917 Source Sheets



Pasco
1917
30-minute, 125000

Historical Topo Map

2013



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

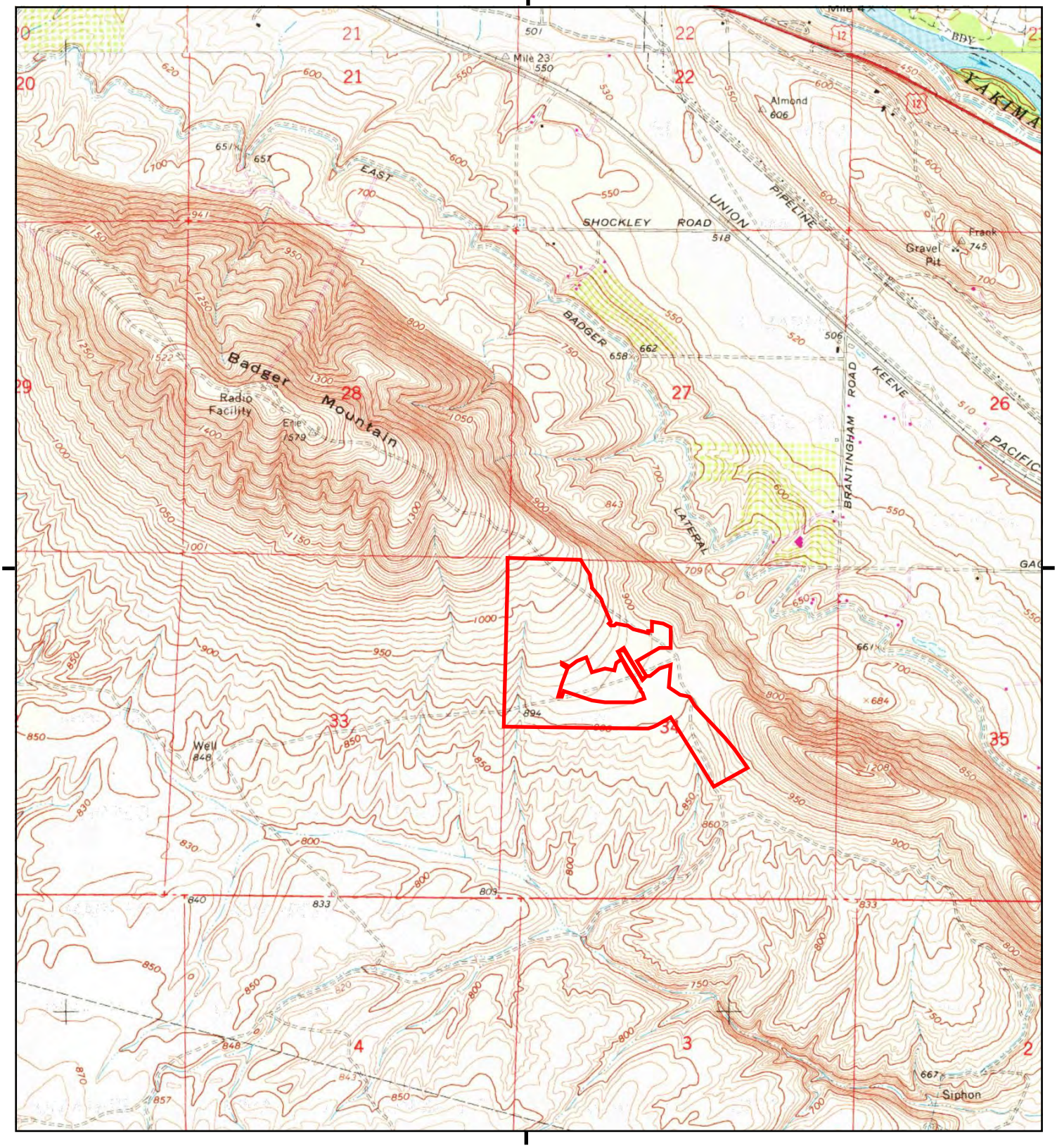
TP, Badger Mountain, 2013, 7.5-minute

SITE NAME: 1900 N BERMUDA RD
ADDRESS: 1900 N BERMUDA RD
Kennewick, WA 99338
CLIENT: PBS Engineering & Env.

N

Historical Topo Map

1978



This report includes information from the following map sheet(s).

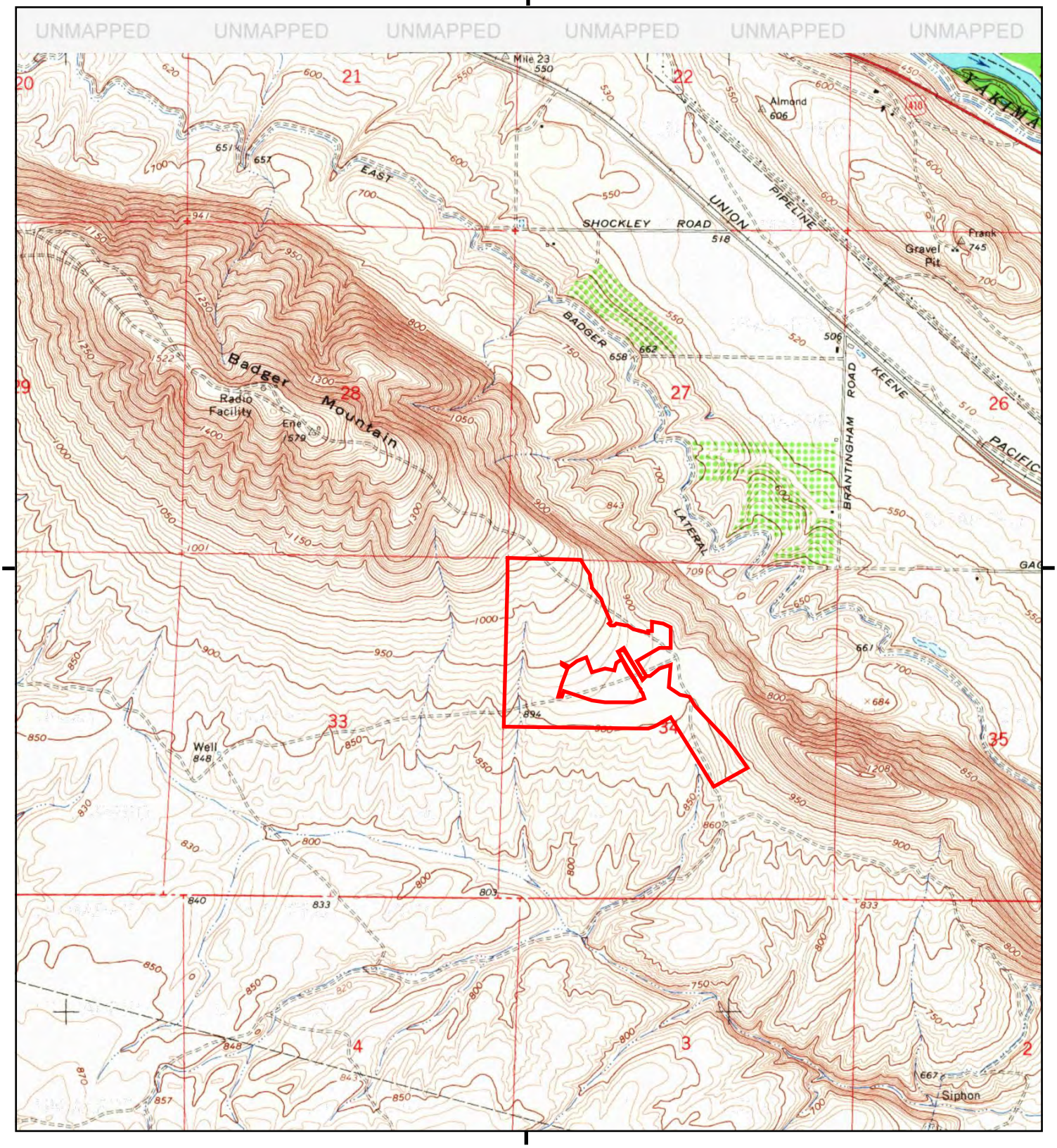
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Badger Mtn, 1978, 7.5-minute
N, Richland, 1978, 7.5-minute

SITE NAME: 1900 N BERMUDA RD
ADDRESS: 1900 N BERMUDA RD
Kennewick, WA 99338
CLIENT: PBS Engineering & Env.

N



This report includes information from the following map sheet(s).

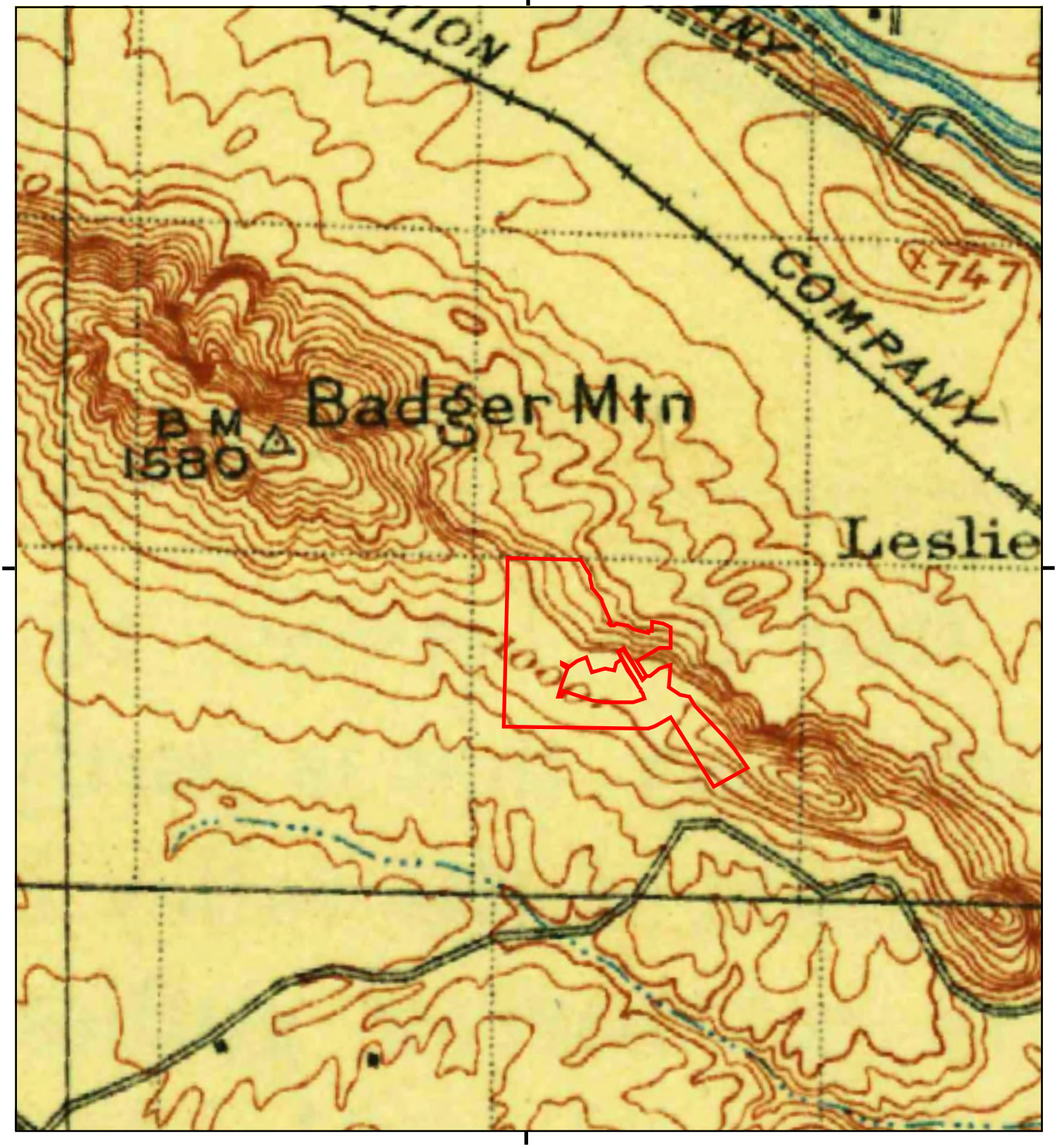
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Badger Mtn, 1965, 7.5-minute

SITE NAME: 1900 N BERMUDA RD
ADDRESS: 1900 N BERMUDA RD
Kennewick, WA 99338
CLIENT: PBS Engineering & Env.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Pasco, 1917, 30-minute

SITE NAME: 1900 N BERMUDA RD
ADDRESS: 1900 N BERMUDA RD
Kennewick, WA 99338
CLIENT: PBS Engineering & Env.

N

Appendix E

Site Reconnaissance Records

Site Photographs
Field Checklist

Photo 1. Northwest corner

Photo 2. Northwest corner

Photo 3. Western edge looking down access road.

Photo 4. West adjacent farm.

Photo 5. West side view of central access road.

Photo 6. Western gravel boundary road.

Photo 7. Southwestern farm.

Photo 8. Southern undeveloped lot.

Photo 9. Southern access road.

Photo 10. South central access yard.

Photo 11. Southern adjacent property.

Photo 12. Bermuda road.

Photo 13. Empty ast.

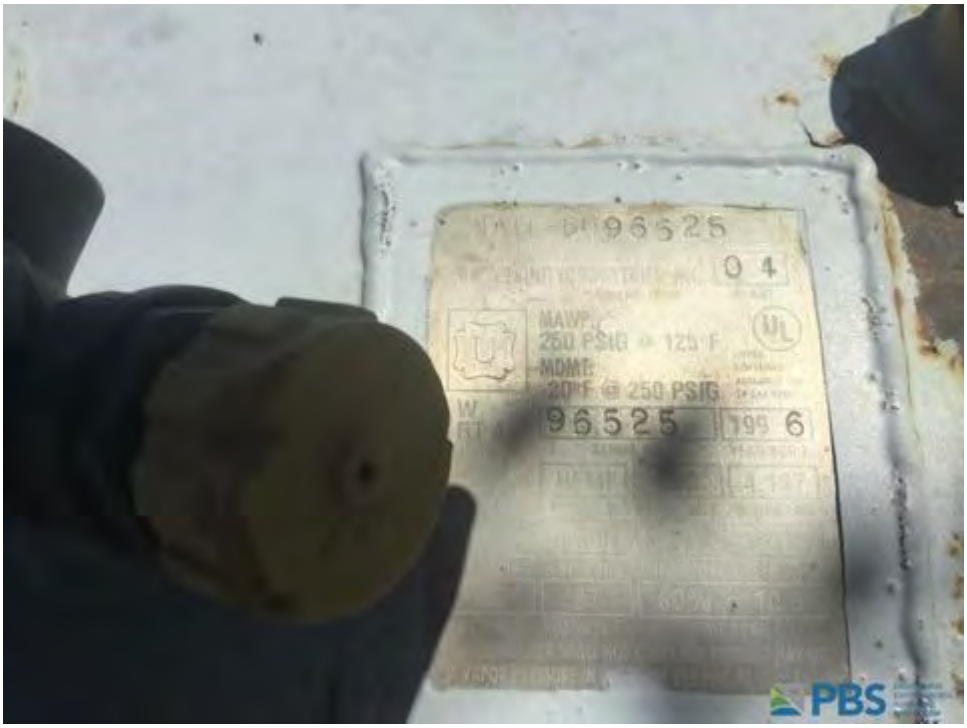


Photo 14. Empty ast label.

Photo 15. Empty ast and turbine.

Photo 16. Empty ast with wind turbine.

Photo 17. Adjacent undeveloped lot.

Photo 18. Ast with wind turbine.

Photo 19. North adjacent property.

Photo 20. Central east adjacent property.

Photo 21. North east adjacent property.

Photo 22. North adjacent property.

Photo 23. Rubble pile.

Photo 24. Adjacent residential houses.

Photo 25. Utility boxes.

Photo 26. Utility access manholes.

Photo 27. East adjacent housing.

Photo 28. Overview of property.

Photo 29. Work trailer.

Photo 30. Utility box.

Photo 31. Soil storage mound.

Photo 32. Southern adjacent property.

Photo 33. East adjacent pond.

Photo 34. Storage barn.

Photo 35. Storage barn supplies.

Photo 36. Storage barn supplies and equipment.

Photo 37. Chemical table.

Photo 38. Oxygen tanks.

Photo 39. Lime sulfur tanks.

Photo 40. Mobile ast gasoline tanks.

Photo 41. Material storage yard.

Photo 42. Wood and tire storage.

Photo 43. Main entrance.

PBS

Phase I Field Checklist & Photo Log

Project No.: 66336

Completed By: Wesley Garcia **Date:**

Site Name/Address: Manson

Site Contact:

Site Description (e.g., single-family residential, multi-tenant commercial)**:**

Commercial Farm

Tenant(s)/Occupant(s)

Areas not accessed (state reasons)**:** Storage Container - Locked

Office trailer - Locked

Weather at the time of site visit (e.g., overcast, heavy rain, snow)**:**

Sunny

Topography/Slope: Midgentle Slope

SITE DEVELOPMENT

Building Descriptions (e.g., wood-frame residence, concrete tilt-up commercial) ***NOTE: For multi-building sites, include individual addresses or building numbers.*** ☐ **No buildings on the subject property**	**#Stories**	**Basement?**
Barn	1	no
Office trailer	1	no
Storage container	1	no
Exterior Features (e.g., paving, gravel, landscaping)		

UTILITIES

Heating *(e.g., natural gas, oil, electricity)*	electric
Water (well or municipal) *(if a water well is present, indicate location)*	Irrigation district
Sewer (municipal) or Septic *(if a septic tank is present, note location)*	none
Stormwater *(note features such as detention ponds, catch basins, swales; note whether unusual odors or staining are present)*	over land

SITE OBSERVATIONS

ASTs *(approx. size and location; note secondary containment, evidence of leakage, spills)*	none

USTs *(approx. size and location; note associated pumps, fill ports, vent pipes)*	new USTs, storage yard + mob. lot
Drums *(note locations, condition, contents, labeling, secondary containment, evidence of spills)*	none
Automobile repair/maintenance activities *(note in-ground hoists, parts washers, stored batteries, stored engine blocks & other oily parts, lube pits, oil sumps)*	none
Stored chemicals, hazardous materials *(e.g., 5-gallon buckets, pre-packaged retail containers; note condition, evidence of spills)*	Various containers in good condition
Floor drains *(note locations, stains, odors, chemical storage nearby)*	none
Oil-Water Separator *(note location, cleaning schedule, if known)*	none
Solid waste *(e.g., dumping, litter, refuse not in a dumpster or other appropriate receptacle)*	none
Pits, lagoons, other surface impoundments *(artificial features; note unusual staining, odors)*	none

Other Features/Conditions	**Yes**	**No**	***(if yes to these items, include more information under "Notes," below)***	**Yes**	**No**
Dip tanks		X	Wetlands, ponds, lakes *(natural features)*		X
Landfills		X	Railroad spurs		X
Concrete patching *(e.g., old hoists, tanks)*		X	Stressed vegetation *(not due to dryness)*		X
Discolored/stained soils		X	Remnant foundations		X
Disturbed soil *(mounding, soil piles, scraped areas)*		X	Buried utilities		X
Boreholes or Test Pits		X	Trails, dead end roads		X
Monitoring wells		X	Unusual odors		X
Dry wells		X	Transient camps		X
Fill material		X	Rivers, streams, creeks		X
Depressions		X	Wildlife, livestock		X
Transformers *(on-site only)*		X	*(Note location, whether pad/pole mounted, labels, condition, evidence of leakage)*		
Is the property abandoned?		X	*(if abandoned, interview neighbors)*		
Other Conditions of Concern					

Notes: Active Orchard

ADJACENT PROPERTIES

North: Undeveloped land

South: Developing land for residential use

East: Residential neighborhood + Irrigation pond

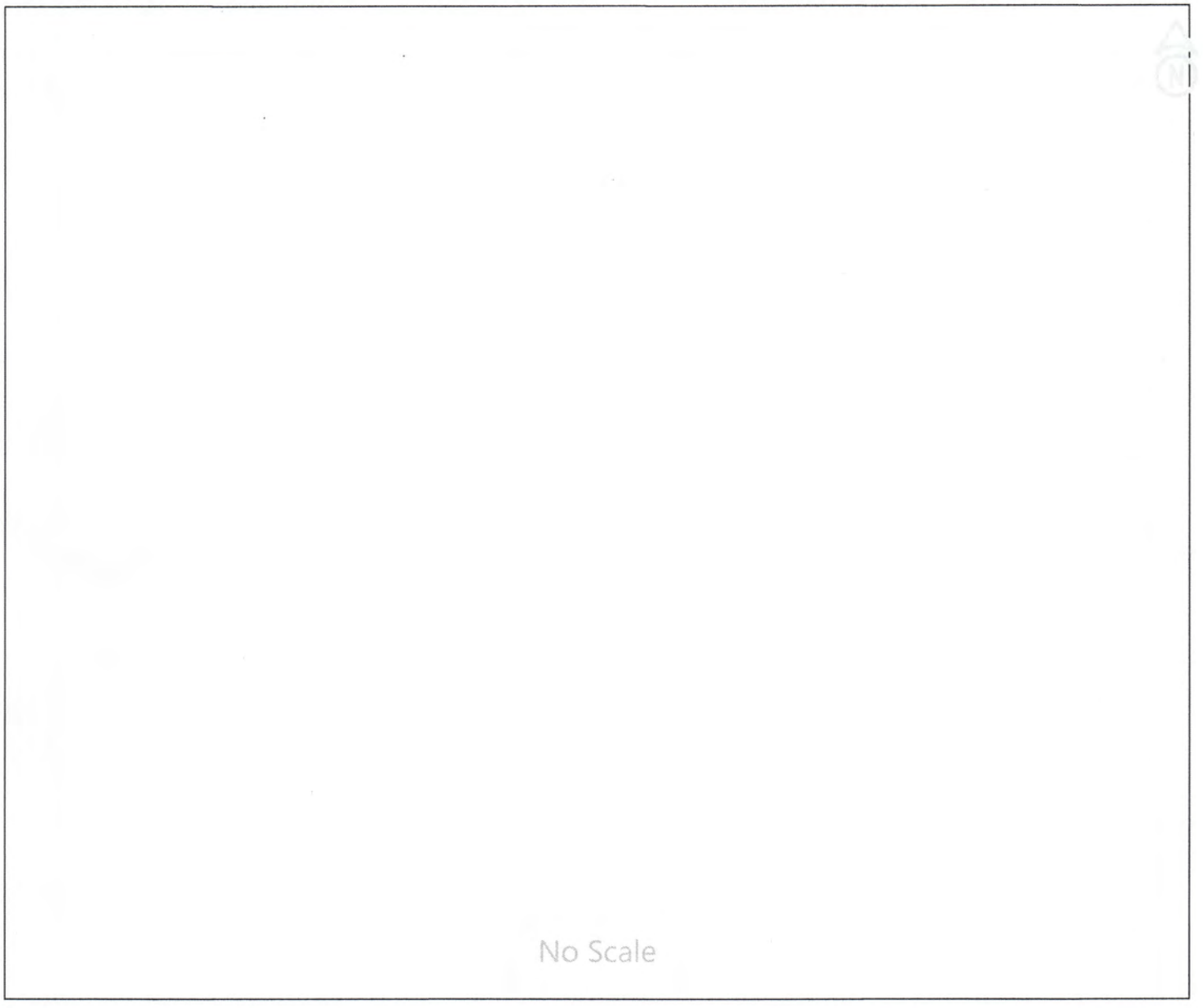
West: Farm

Conditions of Concern on Adjacent Properties *(e.g., USTs, ASTs, automobile repairs, industrial uses)*

Commercial Farm to the west

Visual Surveys ☐ **Not in Scope of Work**	**Observations**	**Samples?**
Asbestos	—	
Lead-based paint	—	
Mold	—	
Other	—	

SITE SKETCH *(or attach site plan/aerial that includes field notations)*


N
No Scale

ON-SITE INTERVIEWS

Name:

Information:

Name:

Information:

Notes:

PHOTO#	DIRECTION	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Appendix F

Questionnaires

Property Owner/Representative Questionnaire
Client/User Questionnaire

PBS

CLIENT/USER QUESTIONNAIRE

This form is the **User Questionnaire**, as defined and required by ASTM E1527-13. The **User** is the party seeking to rely on the Phase I Environmental Site Assessment; this is typically **not** the current property owner. The User's responses to these questions are an important element to meeting the all appropriate inquiry rule. It is acceptable to write "Do not know."

PROPERTY ADDRESS: Six Benton County Tax Parcels, Bermuda Road, Richland

FORM COMPLETED BY: Bill Wilson

RELATIONSHIP TO PROPERTY: Owner

QUESTIONNAIRE

Please complete this information to the best of your knowledge.

1. Are you aware of any environmental cleanup liens against the property that are filed under federal, tribal, state, or local law? ☐ Yes ☒ No (If yes, summarize below.)

2. Are you aware of any activity and land use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls in place at the site and/or filed or recorded in a registry under federal, tribal, state, or local law? ☐ Yes ☒ No (If yes, summarize below.)

3. As the User of this environmental site assessment, do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property, or an adjoining property, so you would have specialized knowledge of the chemicals and processes used by that type of business?

   NO

4. Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

   ☐ Yes ☒ No

   If you conclude that there is a difference from fair market value, is the lower price because contamination is known or believed to be present at the property?

PBS

PROJECT CHECKLIST

Site Address: Six Benton County Tax Parcels, Bermuda Road, Richland

Please provide the following information regarding site access, report submittal, and other documents relevant to the completion of a Phase I ESA.

Why is this Phase I ESA being performed? (e.g., to obtain refinancing, for purchase/sale)

Who should we contact for site access? (Please provide name, telephone number, and email address.) Bill 5094304788

To whom should we address the report, if different than the client? (Please provide name and address.)

1276 N Bermuda Rd
Richland 99352

The following documents are useful to PBS when completing this assessment. Please provide if available:

- Preliminary title report / chain of title
- Previous environmental assessment reports
- Tax map, legal description, aerial photograph
- Special requirements for the assessment (e.g., non-ASTM tasks required by lender, lender-specific reliance letters)

ADDITIONAL SERVICES (Optional)

Phase I ESAs assess CERCLA liability. Building- and land-related environmental conditions may contribute to non-CERCLA "business environmental risks," and can include asbestos, lead-based paint, mold, radon, wetlands, and other issues.

PBS will provide the following additional services ***upon request*** ***(please check) at no additional cost:***

- ☐ Review and summarize regional radon data pertinent to the site.
- ☐ Limited, visual-only screen of potential asbestos-containing materials, lead-containing paint, and mold observed in accessible areas during the course of the site visit.

The following additional services, which are non-Phase I ESA tasks not included in this proposal, can also be provided by PBS but will be ***associated with a separate scope of work, additional fees, and extended completion schedules.*** Please check the boxes of additional services desired and PBS will contact you to discuss them.

☐ Asbestos-containing materials testing	☐ Health and safety audit
☐ Lead-in-paint testing	☐ Regulatory compliance audit
☐ Radon testing	☐ On-site drywell registration (UICs)
☐ Mold testing	☐ Vapor migration assessment per ASTM E2600-10
☐ Drinking water testing	☐ Greenhouse gas emissions/carbon footprint
☐ NEPA/SEPA survey	☐ Cultural and historic resources survey
☐ Wetland determination/delineation	☐ Geotechnical evaluation
☐ Water rights evaluation	☐ ALTA Survey
☐ Other (please contact PBS to discuss)	

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional (EP) identify conditions indicative of releases or threatened releases?

   For example:

   Do you know the past uses of the property? FARMing

   Do you know of specific chemicals that are present or once present at the property? MOST ARE ORGAINIC

   Do you know of any spills or other chemical releases that have taken place at the property? NO

   Do you know of any environmental cleanups that have taken place at the property? NO

   Any other environmentally significant information? NO

6. Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property? NO

Signature: Bill Wilson Date: 7-7-21

Please Print Name: Bill Wilson Title: owner

Company (if applicable): _____

Geotechnical Engineering Report

Monson Property Work Plan
S Bermuda Road
Richland, Washington

Prepared for:
Monson Development Washington, LLC
63615 E Jacobs Road
Benton City, Washington 99320

August 20, 2021
PBS Project 66336.000

PBS
4412 S CORBETT AVENUE
PORTLAND, OR 97239
503.248.1939 MAIN
866.727.0140 FAX
PBSUSA.COM

Geotechnical Engineering Report

Monson Property Work Plan
S Bermuda Road
Richland, Washington

Prepared for:
Monson Development Washington, LLC
63615 E Jacobs Road
Benton City, Washington 99320

August 20, 2021
PBS Project 66336.000

Prepared by:

August 20, 2021

Clint Nealey, PE
Geotechnical Staff Engineer

Reviewed by:

Saiid Behboodi, PE, GE (OR)
Principal Geotechnical Engineer

© 2021 PBS Engineering and Environmental Inc.

Table of Contents

1 INTRODUCTION 1
1.1 General 1
1.2 Purpose and Scope 1
1.2.1 Literature and Records Review 1
1.2.2 Subsurface Explorations 1
1.2.3 Field Infiltration Testing 1
1.2.4 Soils Testing 1
1.2.5 Geotechnical Engineering Analysis 1
1.2.6 Report Preparation 1
1.3 Project Understanding 2
2 SITE CONDITIONS 2
2.1 Surface Description 2
2.2 Geologic Setting 2
2.2.1 Local Geology 3
2.3 Subsurface Conditions 3
2.4 Groundwater 4
2.5 Infiltration Testing 4
3 CONCLUSIONS AND RECOMMENDATIONS 5
3.1 Geotechnical Design Considerations 5
3.2 Shallow Foundations 5
3.2.1 Minimum Footing Widths and Design Bearing Pressure 5
3.2.2 Footing Embedment Depths 5
3.2.3 Footing Preparation 6
3.2.4 Lateral Resistance 6
3.3 Floor Slabs 6
3.4 Seismic Design Considerations 6
3.4.1 Code-Based Seismic Design Parameters 6
3.4.2 Liquefaction Potential 7
3.5 Temporary and Permanent Slopes 7
3.6 Ground Moisture 7
3.6.1 General 7
3.6.2 Perimeter Footing Drains 7
3.6.3 Vapor Flow Retarder 8
3.7 Pavement Design 8
4 CONSTRUCTION RECOMMENDATIONS 8
4.1 Site Preparation 8
4.1.1 Proofrolling/Subgrade Verification 9
4.1.2 Wet/Freezing Weather and Wet Soil Conditions 9
4.1.3 Compacting Test Pit Locations 9
4.2 Excavation 10
4.3 Structural Fill 10
4.3.1 On-Site Soil 10

4.3.2 Imported Granular Materials 10
4.3.3 Base Aggregate 11
4.3.4 Foundation Base Aggregate 11
4.3.5 Trench Backfill 11
4.3.6 Stabilization Material 11
5 ADDITIONAL SERVICES AND CONSTRUCTION OBSERVATIONS 12
6 LIMITATIONS 12
7 REFERENCES 13

Supporting Data

TABLES

Table 1. Infiltration Test Results
Table 2. Cation Exchange Capacity Test Results
Table 3. 2018 IBC Seismic Design Parameters
Table 4. Minimum AC Pavement Sections

FIGURES

Figure 1. Vicinity Map
Figure 2. Site Plan

APPENDICES

Appendix A: Field Explorations

Table A-1. Terminology Used to Describe Soil
Table A-2. Key to Test Pit and Boring Log Symbols
Figures A1–A27. Logs for Test Pits TP-1 through TP-27

Appendix B: Laboratory Testing

Figure B1. Summary of Laboratory Data

1 INTRODUCTION

1.1 General

This report presents results of PBS Engineering and Environmental Inc. (PBS) geotechnical engineering services for the proposed subdivision located at S Bermuda Road in Richland, Washington (site). The general site location is shown on the Vicinity Map, Figure 1. The locations of PBS' explorations in relation to existing and proposed site features are shown on the Site Plan, Figure 2.

1.2 Purpose and Scope

The purpose of PBS' services was to develop geotechnical design and construction recommendations in support of the planned development. Please note our services were provided for and limited to site development and infrastructure and not for individual lots or residences. This was accomplished by performing the following scope of services.

1.2.1 Literature and Records Review

PBS reviewed various published geologic maps of the area for information regarding geologic conditions and hazards at or near the site. PBS also reviewed previously completed reports for the project vicinity.

1.2.2 Subsurface Explorations

PBS excavated 27 test pits within the proposed subdivision to depths of up to 11 feet below the existing ground surface (bgs). The test pits were logged and representative soil samples collected by a member of the PBS geotechnical engineering staff. Interpreted test pit logs are included as Figures A1 through A27 in Appendix A, Field Explorations.

1.2.3 Field Infiltration Testing

Four open-hole, falling-head field infiltration tests were completed in test pits TP-2, TP-6, TP-13, and TP-21 within the proposed development at depths between 4 and 6 feet bgs. Infiltration testing was monitored by PBS geotechnical engineering staff.

1.2.4 Soils Testing

Soil samples were returned to our laboratory and classified in general accordance with the Unified Soil Classification System (ASTM D2487) and/or the Visual-Manual Procedure (ASTM D2488). Laboratory tests included natural moisture contents and grain-size analyses. Laboratory test results are included in the exploration logs in Appendix A, Field Explorations; and in Appendix B, Laboratory Testing.

1.2.5 Geotechnical Engineering Analysis

Data collected during the subsurface exploration, literature research, and testing were used to develop site-specific geotechnical design parameters and construction recommendations.

1.2.6 Report Preparation

This Geotechnical Engineering Report summarizes the results of our explorations, testing, and analyses, including information relating to the following:

- Field exploration logs and site plan showing approximate exploration locations
- Laboratory test results
- Infiltration test results
- Groundwater levels and considerations
- Liquefaction potential

- Shallow foundation recommendations:
    - Minimum embedment
    - Allowable bearing pressure
    - Estimated settlement
    - Sliding coefficient
- Earthwork and grading, cut, and fill recommendations:
    - Structural fill materials and preparation
    - Utility trench excavation and backfill requirements
    - Slab and pavement subgrade preparation
    - Wet weather considerations
- Seismic design criteria in accordance with the 2018 International Building Code (IBC) with state of Washington amendments
- Slab-on-grade design recommendations
- Asphalt concrete (AC) pavement section recommendations

1.3 Project Understanding

Plans are currently in the conceptual stages; however, development will generally consist of mass grading for subdivision and construction of single-family homes. PBS assumes the homes will be one- to two-story, wood-framed structures. Development will include installation of utilities as well as addition of paved roadways. This report pertains to general infrastructure and shall not be applied to individual residential lots.

2 SITE CONDITIONS

2.1 Surface Description

The roughly 110-acre site is irregularly shaped and located southeast of Badger Mountain. It is presently in use as an orchard. A 14-acre parcel located within the site boundary is currently owned by Richland School District, who plans to build a new school. The area generally slopes to the south with surface elevations ranging from 872 to 1061 feet above mean sea level (amsl). Areas to the north, east, and south are generally occupied by single-family residences and areas to the west are currently used for agriculture.

2.2 Geologic Setting

The site is located within the eastern extent of the Yakima fold and thrust belt, a structural-tectonic sub-province occupying the western extent of the greater Columbia Basin geologic province. The Columbia Basin province is separated from the Deschutes-Columbia Plateau and Blue Mountains provinces of Oregon by the Oregon border. The province is composed primarily of volcanic basement rocks of the Columbia River Basalt Group (CRBG) subdivided into smaller recognizable flows and members that are overlain by Quaternary deposits (Derkey et al., 2006). These older flood basalts were generated by volcanic eruptions in eastern Oregon, eastern Washington, and western Idaho between 16.7 million years ago (Ma) and 5.5 Ma (Reidel, 2004).

The Yakima fold and thrust belt is an actively deforming series of faults and folds that is accommodating clockwise rotation through crustal shortening within the western Columbia province (McCaffrey et al., 2016). Active Quaternary and Holocene faults are found throughout this sub-province. Northwest-southeast and east-west trending anticlinal ridges and wide synclinal valleys dominate much of the Yakima fold and thrust belt. Reverse faulting is pervasive along the flanks of these anticline-syncline complexes (Gomberg et al., 2012). The eastern-most extent of the Yakima fold and thrust belt is continued across the Oregon-Washington border by

the Horse Heaven Anticline (locally referred to as the Horse Heaven Hills) and the Wallula fault system before reaching the Blue Mountains province of Oregon.

The Horse Heaven Anticline forms the local topographic high point along the southern margin of the Columbia Basin and has been continuously incised by the ancestral and historical Columbia River, resulting in a narrow water gap at the southern extent of the Columbia Basin (Reidel and Fecht, 1994; Schuster, 1994). Throughout the Pleistocene, cataclysmic outburst flood waters from Glacial Lake Missoula resulted in rapid sedimentation as floodwaters ponded behind the Horse Heaven Anticline. Slowing flood waters blanketed the basin with slackwater flood deposits over much of the low-lying areas, as well as created extensive gravel bar complexes near the Columbia River. After glacial outburst flooding, reworking of fine-grained material by aeolian processes has created deposits of loess in elevated areas that were not directly affected by glacial floodwaters.

2.2.1 Local Geology

The site is mapped as underlain by Pleistocene Cataclysmic fine-grained flood deposits (Reidel and Fecht, 1994). These flood deposits are described as sand- to silt-sized particles of predominantly quartz, feldspar, and basalt sands, and mapped as greater than 60 feet thick. They are commonly rhythmically bedded and contain lenses of rounded gravels.

Badger Mountain and the associated northwest-oriented linear ridgeline is mapped as consisting of various compositions of the Miocene to Pliocene age CRBG. These rocks are described as well-stratified lava flows of dark gray and gray-black basalt with occasional layers of sedimentary rocks between lava flows. The ridgeline is a surface expression of the Rattlesnake Hills anticline and fault complex that borders the eastern margin of the Yakima fold and thrust belt. Faulting throughout the Quaternary has elevated and deformed the basalts that comprise Badger Mountain, forming steep sloping ridgelines protruding upward from younger surficial deposits.

2.3 Subsurface Conditions

The site was explored by excavating 27 test pits, designated TP-1 through TP-27, to depths of up to 11 feet bgs. The excavation was performed by SG Construction, LLC, of Kennewick, Washington, using a Deere 50G excavator outfitted with a 24-inch-wide toothed bucket. Three additional test pits were planned but not excavated due to utility conflicts.

PBS has summarized the subsurface units as follows:

FILL:	Fill consisting of silt and fine-grained sand was encountered from the ground surface to the termination depth of 11 feet bgs in test pit TP-1. The fill was generally brown to gray and very stiff at 4 feet bgs based on direct cone penetrometer (DCP) blow counts. The fine-grained portion of the fill was non-plastic, and an organic odor was present throughout the excavation. A layer of roots was present at approximately 9 feet bgs.
SILT:	Native silt was encountered in all test pits except TP-1. The brown silt ranged from medium stiff to hard based on DCP blow counts and exhibited no observable plasticity. Fine-grained sand was intermixed with the silt. The silt was generally cemented with difficult digging noted in test pit TP-7. Caliche lenses were observed in test pits TP-10, TP-11, TP-12, TP-19, TP-20, and TP-22.
SAND:	Brown to olive, poorly graded, fine- to medium-grained sand was observed in test pits TP-2 through TP-7 and TP-18. The sand was found at depths between 6 to 9 feet bgs and extended to the termination depth where found.

BASALT: Test pits terminated in dark gray basalt in test pits TP-9 through TP-16, TP-19, TP-22, and TP-24 through TP-27. The depth to basalt ranged from 2.5 to 11 feet bgs.

2.4 Groundwater

Static groundwater was not encountered during our explorations. Based on a review of regional groundwater logs available from the Washington State Department of Ecology, we anticipate that the static groundwater level is present at a depth greater than 30 feet bgs. Please note that groundwater levels can fluctuate during the year depending on climate, irrigation season, extended periods of precipitation, drought, and other factors.

2.5 Infiltration Testing

PBS completed four open-hole, falling-head infiltration tests in test pits TP-2, TP-6, TP-13, and TP-21 at depths between 4 and 6 feet bgs. The infiltration tests were conducted in general accordance with the Stormwater Management Manual for Eastern Washington procedures. The infiltration tests were conducted within the unlined test pits which were filled with water to achieve a minimum 1-foot-high column of water. After a period of saturation, the height of the water column was measured initially and at regular, timed intervals. Results of our field infiltration testing are presented in Table 1. Results of cation exchange capacity testing are presented in Table 2.

Table 1. Infiltration Test Results

Test Location	Depth (feet bgs)	Field Measured Infiltration Rate (in/hr)	Soil Classification
TP-2	6	2.3	Sand (SP)
TP-6	6	2.4	Sandy Silt (ML)
TP-13	4	2.4	Sandy Silt (ML)
TP-21	6	1.7	Silt with Sand (ML)

The infiltration rates listed in Table 1 are not permeabilities/hydraulic conductivities, but field-measured rates, and do not include correction factors related to long-term infiltration rates. The design engineer should determine the appropriate correction factors to account for the planned level of pre-treatment, maintenance, vegetation, siltation, etc. Field-measured infiltration rates are typically reduced by a minimum factor of 2 to 4 for use in design. PBS recommends using the lowest infiltration rate to account for the mixing of site soils that occurs during normal construction activities.

Soil types can vary significantly over relatively short distances. The infiltration rates noted above are representative of one discrete location and depth. Installation of infiltration systems within the layer the field rate was measured is considered critical to proper performance of the systems. PBS should be retained to verify that infiltration systems drain as designed.

Table 2. Cation Exchange Capacity Test Results

Test Location	Depth (feet bgs)	Soil pH	Organic Matter (%)	Cation Exchange Capacity (meq/100g)
TP-1	4	8.0	1.72	11.8
TP-7	4	8.4	1.91	14.8
TP-17	2	8.2	1.70	15.6

3 CONCLUSIONS AND RECOMMENDATIONS

3.1 Geotechnical Design Considerations

The subsurface conditions at the site generally consist of silt and sand overlaying basalt bedrock, which was encountered at depths as shallow as 2.5 feet during our explorations. Most shallow excavations may be completed using conventional equipment. Deeper excavation or excavation where basalt is shallow may require a pneumatic rock hammer or large, single-shank ripper. Alternatively, blasting may be necessary, as was the case during development of a neighboring parcel.

Undocumented fill was encountered in test pit TP-1. PBS does not currently know the depth or extent of the fill. Footings should not be supported on undocumented fill.

The grading and final development plans for the project had not been completed when this report was prepared. Once completed, PBS should be engaged to review the project plans and update our recommendations as necessary. Conventional foundation support on shallow spread footings is feasible.

3.2 Shallow Foundations

Shallow spread footings bearing on the native silt and sand soils found at the surface may be used to support loads associated with the proposed development, provided the recommendations in this report are followed. Footings should not be supported on undocumented fill.

3.2.1 Minimum Footing Widths and Design Bearing Pressure

Continuous wall and isolated spread footings should be at least 18 and 24 inches wide, respectively. Footings should be sized using a maximum allowable bearing pressure of 2,000 pounds per square foot (psf). This is a net bearing pressure and the weight of the footing and overlying backfill can be disregarded in calculating footing sizes. The recommended allowable bearing pressure applies to the total of dead plus long-term live loads. Allowable bearing pressures may be increased by one-third for seismic and wind loads.

Footings will settle in response to column and wall loads. Based on our evaluation of the subsurface conditions and our analysis, we estimate post-construction settlement will be less than 1 inch for the column and perimeter foundation loads. Differential settlement will be on the order of one-half of the total settlement.

3.2.2 Footing Embedment Depths

PBS recommends that all footings be founded a minimum of 24 inches below the lowest adjacent grade. The footings should be founded below an imaginary line projecting upward at a 1H:1V (horizontal to vertical) slope from the base of any adjacent, parallel utility trenches or deeper excavations.

3.2.3 Footing Preparation

Excavations for footings should be carefully prepared to a neat and undisturbed state. A representative from PBS should confirm suitable bearing conditions and evaluate all exposed footing subgrades. Observations should also confirm that loose or soft materials have been removed from new footing excavations and concrete slab-on-grade areas. Localized deepening of footing excavations may be required to penetrate loose, wet, or deleterious materials.

PBS recommends a layer of compacted, crushed rock be placed over the footing subgrades to help protect them from disturbance due to foot traffic and the elements. Placement of this rock is the prerogative of the contractor; regardless, the footing subgrade should be in a dense or stiff condition prior to pouring concrete. Based on our experience, approximately 4 inches of compacted crushed rock will be suitable beneath the footings.

3.2.4 Lateral Resistance

Lateral loads can be resisted by passive earth pressure on the sides of footings and grade beams, and by friction at the base of the footings. A passive earth pressure of 200 pounds per cubic foot (pcf) may be used for footings confined by native soils and new structural fills. The allowable passive pressure has been reduced by a factor of two to account for the large amount of deformation required to mobilize full passive resistance. Adjacent floor slabs, pavements, or the upper 12-inch depth of adjacent unpaved areas should not be considered when calculating passive resistance. For footings supported on native soils or new structural fills, use a coefficient of friction equal to 0.35 when calculating resistance to sliding. These values do not include a factor of safety (FS).

3.3 Floor Slabs

Satisfactory subgrade support for building floor slabs can be obtained from the native silt and sand subgrade prepared in accordance with our recommendations presented in the Site Preparation, Wet/Freezing Weather and Wet Soil Conditions, and Imported Granular Materials sections of this report. A minimum 6-inch-thick layer of imported granular material should be placed and compacted over the prepared subgrade. Thicker aggregate sections may be necessary where undocumented fill is present, soft/loose soils are present at subgrade elevation, and/or during wet conditions. Imported granular material should be composed of crushed rock or crushed gravel that is relatively well graded between coarse and fine, contains no deleterious materials, has a maximum particle size of 1 inch, and has less than 5% by dry weight passing the US Standard No. 200 Sieve.

Floor slabs supported on a subgrade and base course prepared in accordance with the preceding recommendations may be designed using a modulus of subgrade reaction (k) of 100 pounds per cubic inch (pci).

3.4 Seismic Design Considerations

3.4.1 Code-Based Seismic Design Parameters

The current seismic design criteria for this project are based on the 2018 International Building Code with State of Washington amendments. Based on subsurface conditions encountered at the site, Site Class D is appropriate for use in design. The seismic design criteria, in accordance with the 2018 IBC, are summarized in Table 3.

Table 3. 2018 IBC Seismic Design Parameters

Parameter	Short Period	1 Second
Maximum Credible Earthquake Spectral Acceleration	S_s = 0.43 g	S_1 = 0.16 g
Site Class	D	
Site Coefficient	F_a = 1.46	F_v = 2.27
Adjusted Spectral Acceleration	S_{MS} = 0.63 g	S_{M1} = 0.37 g
Design Spectral Response Acceleration Parameters	S_{DS} = 0.42 g	S_{D1} = 0.25 g

g= Acceleration due to gravity

3.4.2 Liquefaction Potential

Liquefaction is defined as a decrease in the shear resistance of loose, saturated, cohesionless soil (e.g., sand) or low plasticity silt soils, due to the buildup of excess pore pressures generated during an earthquake. This results in a temporary transformation of the soil deposit into a viscous fluid. Liquefaction can result in ground settlement, foundation bearing capacity failure, and lateral spreading of ground.

Based on a review of the Washington Division of Geology and Earth Resources, the site is shown as having a low to moderate liquefaction hazard. Based on the soil types and lack of groundwater encountered in our explorations, as well as the depth to groundwater reported in nearby well logs, our current opinion is that the risk of structurally damaging liquefaction settlement at the site is low.

3.5 Temporary and Permanent Slopes

All temporary cut slopes should be excavated with a smooth-bucket excavator, with the slope surface repaired if disturbed. In addition, upslope surface runoff should be rerouted to not run down the face of the slopes. Equipment should not be allowed to induce vibration or infiltrate water above the slopes, and no surcharges are allowed within 25 feet of the slope crest.

Permanent cut and fill slopes up to 10 feet high can be inclined at 2H:1V in medium dense or silt and sand soils or compacted structural fill. If slow seepage is present, use of a rock blanket or a suitably revegetated, reinforced erosion control blanket may be required. PBS should be consulted if seepage is present; additional erosion control measures, such as additional drainage elements, and/or flatter slopes, may also be required. Exposed soils that are soft or loose may also require these measures. Fill slopes should be over-built and cut back into compacted structural fill at the design inclination using a smooth-bucket excavator. Erosion control is critical to maintaining slopes.

3.6 Ground Moisture

3.6.1 General

The perimeter ground surface and hard-scape should be sloped to drain away from all structures and away from adjacent slopes. Gutters should be tight-lined to a suitable discharge and maintained as free-flowing. All crawl spaces should be adequately ventilated and sloped to drain to a suitable, exterior discharge.

3.6.2 Perimeter Footing Drains

Due to the relatively low permeability of site soils and the potential for perched groundwater at the site, we recommend perimeter foundation drains be installed around all proposed structures.

The foundation subdrainage system should include a minimum 4-inch diameter perforated pipe in a drain rock envelope. A non-woven geotextile filter fabric, such as Mirafi 140N or equivalent, should be used to completely

wrap the drain rock envelope, separating it from the native soil and footing backfill materials. The invert of the perimeter drain lines should be placed approximately at the bottom of footing elevation. Also, the subdrainage system should be sealed at the ground surface. The perforated subdrainage pipe should be laid to drain by gravity into a non-perforated solid pipe and finally connected to the site drainage stem at a suitable location. Water from downspouts and surface water should be independently collected and routed to a storm sewer or other positive outlet. This water must not be allowed to enter the bearing soils.

3.6.3 Vapor Flow Retarder

A continuous, impervious barrier must be installed over the ground surface in the crawl space and under slabs of all structures. Barriers should be installed per the manufacturer's recommendations.

3.7 Pavement Design

The provided pavement recommendations were developed using our experience with similar projects as well as the American Association of State Highway and Transportation Officials (AASHTO) design methods and references the associated Washington Department of Transportation (WSDOT) specifications for construction. Our evaluation considered a maximum of two trucks per day for a 20-year design life.

The minimum recommended pavement section thicknesses are provided in Table 4. Depending on weather conditions at the time of construction, a thicker aggregate base course section could be required to support construction traffic during preparation and placement of the pavement section. In this case, thicker base course and/or asphalt may be required.

Table 4. Minimum AC Pavement Sections

Traffic Loading	AC (inches)	Base Course (inches)	Subgrade
Drive Lanes and Access Roads	3	9	Stiff subgrade as verified by PBS personnel*

* Subgrade must pass proofroll

The asphalt cement binder should be selected following WSDOT SS 9-02.1(4) – Performance Graded Asphalt Binder. The AC should consist of ½-inch hot mix asphalt (HMA) with a maximum lift thickness of 3 inches. The AC should conform to WSDOT SS 5-04.3(7)A – Mix Design, WSDOT SS 9-03.8(2) – HMA Test Requirements, and WSDOT SS 9-03.8(6) – HMA Proportions of Materials. The AC should be compacted to 91% of the maximum theoretical density (Rice value) of the mix, as determined in accordance with ASTM D2041, following the guidelines set in WSDOT SS 5-04.3(10) – Compaction.

Heavy construction traffic on new pavements or partial pavement sections (such as base course over the prepared subgrade) will likely exceed the design loads and could potentially damage or shorten the pavement life; therefore, we recommend construction traffic not be allowed on new pavements, or that the contractor take appropriate precautions to protect the subgrade and pavement during construction.

If construction traffic is to be allowed on newly constructed road sections, an allowance for this additional traffic will need to be made in the design pavement section.

4 CONSTRUCTION RECOMMENDATIONS

4.1 Site Preparation

Construction of the proposed residential subdivision will involve clearing and grubbing of the existing vegetation or demolition of possible existing structures. Demolition should include removal of existing

pavement, utilities, etc., throughout the proposed new development. Underground utility lines or other abandoned structural elements should also be removed. The voids resulting from removal of foundations or loose soil in utility lines should be backfilled with compacted structural fill. The base of these excavations should be excavated to firm native subgrade before filling, with sides sloped at a minimum of 1H:1V to allow for uniform compaction. Materials generated during demolition should be transported off site or stockpiled in areas designated by the owner's representative.

4.1.1 Proofrolling/Subgrade Verification

Following site preparation and prior to placing aggregate base over shallow foundation, floor slab, and pavement subgrades, the exposed subgrade should be evaluated either by proofrolling or another method of subgrade verification. The subgrade should be proofrolled with a fully loaded dump truck or similar heavy, rubber-tire construction equipment to identify unsuitable areas. If evaluation of the subgrades occurs during wet conditions, or if proofrolling the subgrades will result in disturbance, they should be evaluated by PBS using a steel foundation probe. We recommend that PBS be retained to observe the proofrolling and perform the subgrade verifications. Unsuitable areas identified during the field evaluation should be compacted to a firm condition or be excavated and replaced with structural fill.

4.1.2 Wet/Freezing Weather and Wet Soil Conditions

Due to the presence of fine-grained silt and sands in the near-surface materials at the site, construction equipment may have difficulty operating on the near-surface soils when the moisture content of the surface soil is more than a few percentage points above the optimum moisture required for compaction. Soils disturbed during site preparation activities, or unsuitable areas identified during proofrolling or probing, should be removed and replaced with compacted structural fill.

Site earthwork and subgrade preparation should not be completed during freezing conditions, except for mass excavation to the subgrade design elevations. We recommend the earthwork construction at the site be performed during the dry season.

Protection of the subgrade is the responsibility of the contractor. Construction of granular haul roads to the project site entrance may help reduce further damage to the pavement and disturbance of site soils. The actual thickness of haul roads and staging areas should be based on the contractors' approach to site development, and the amount and type of construction traffic. The imported granular material should be placed in one lift over the prepared undisturbed subgrade and compacted using a smooth-drum, non-vibratory roller. A geotextile fabric should be used to separate the subgrade from the imported granular material in areas of repeated construction traffic. Depending on site conditions, the geotextile should meet Washington State Department of Transportation (WSDOT) SS 9-33.2 – Geosynthetic Properties for soil separation or stabilization. The geotextile should be installed in conformance with WSDOT SS 2-12.3 – Construction Geosynthetic (Construction Requirements) and, as applicable, WSDOT SS 2-12.3(2) – Separation or WSDOT SS 2-12.3(3) – Stabilization.

4.1.3 Compacting Test Pit Locations

The test pit excavations were backfilled using the excavator bucket and relatively minimal compactive effort; therefore, soft spots can be expected at these locations. We recommend that the relatively uncompacted soil be removed from the test pits to a depth of at least 3 feet below finished subgrade elevation in pavement areas and to full depth in building areas. The resulting excavation should be backfilled with structural fill.

4.2 Excavation

The near-surface soils at the site can be excavated with conventional earthwork equipment. Deeper excavations may require use of a pneumatic rock hammer or large single-shank ripper. Blasting may be necessary for some deep utility excavations. Sloughing and caving should be anticipated. All excavations should be made in accordance with applicable Occupational Safety and Health Administration (OSHA) and state regulations. The contractor is solely responsible for adherence to the OSHA requirements. Trench cuts should stand relatively vertical to a depth of approximately 4 feet bgs, provided no groundwater seepage is present in the trench walls. Open excavation techniques may be used provided the excavation is configured in accordance with the OSHA requirements, groundwater seepage is not present, and with the understanding that some sloughing may occur. Trenches/excavations should be flattened if sloughing occurs or seepage is present. Use of a trench shield or other approved temporary shoring is recommended if vertical walls are desired for cuts deeper than 4 feet bgs. If dewatering is used, we recommend that the type and design of the dewatering system be the responsibility of the contractor, who is in the best position to choose systems that fit the overall plan of operation.

4.3 Structural Fill

Structural fill should be placed over subgrade that has been prepared in conformance with the Site Preparation and Wet/Freezing Weather and Wet Soil Conditions sections of this report. Structural fill material should consist of relatively well-graded soil, or an approved rock product that is free of organic material and debris, and contains particles not greater than 3 inches nominal dimension.

The suitability of soil for use as compacted structural fill will depend on the gradation and moisture content of the soil when it is placed. As the amount of fines (material finer than the US Standard No. 200 Sieve) increases, soil becomes increasingly sensitive to small changes in moisture content and compaction becomes more difficult to achieve. Soils containing more than about 5% fines cannot consistently be compacted to a dense, non-yielding condition when the water content is significantly greater (or significantly less) than optimum.

If fill and excavated material will be placed on slopes steeper than 5H:1V, these must be keyed/benched into the existing slopes and installed in horizontal lifts. Vertical steps between benches should be approximately 2 feet.

4.3.1 On-Site Soil

On-site soils encountered in our explorations are generally suitable for placement as structural fill for mass grading to raise the site during moderate, dry weather when moisture contents can be maintained by air drying and/or addition of water. The fine-grained fraction of the site soils are moisture sensitive, and during wet weather, may become unworkable because of excess moisture content. In order to reduce moisture content, some aerating and drying of fine-grained soils may be required. The material should be placed in lifts with a maximum uncompacted thickness of approximately 8 inches and compacted to at least 92% of the maximum dry density, as determined by ASTM D1557 (modified proctor).

4.3.2 Imported Granular Materials

Imported granular material used during periods of wet weather or for haul roads, building pad subgrades, staging areas, etc., should be pit or quarry run rock, crushed rock, or crushed gravel and sand, and should meet the specifications provided in WSDOT SS 9-03.14(2) – Select Borrow. In addition, the imported granular material should be fairly well graded between coarse and fine, and of the fraction passing the US Standard No. 4 Sieve, less than 5% by dry weight should pass the US Standard No. 200 Sieve.

Imported granular material should be placed in lifts with a maximum uncompacted thickness of 9 inches and be compacted to not less than 95% of the maximum dry density, as determined by ASTM D1557.

4.3.3 Base Aggregate

Base aggregate for floor slabs and beneath pavements should be clean crushed rock or crushed gravel. The base aggregate should contain no deleterious materials, meet specifications provided in WSDOT SS 9-03.9(3) – Crushed Surfacing Base Course, and have less than 5% (by dry weight) passing the US Standard No. 200 Sieve. The imported granular material should be placed in one lift and compacted to at least 95% of the maximum dry density, as determined by ASTM D1557.

4.3.4 Foundation Base Aggregate

Imported granular material placed at the base of excavations for spread footings, slabs-on-grade, and other below-grade structures should be clean, crushed rock or crushed gravel and sand that is fairly well graded between coarse and fine. The granular materials should contain no deleterious materials, have a maximum particle size of 1½ inch, and meet WSDOT SS 9-03.12(1)A – Gravel Backfill for Foundations (Class A). The imported granular material should be placed in one lift and compacted to not less than 95% of the maximum dry density, as determined by ASTM D1557.

4.3.5 Trench Backfill

Trench backfill placed beneath, adjacent to, and for at least 2 feet above utility lines (i.e., the pipe zone) should consist of well-graded granular material with a maximum particle size of 1 inch and less than 10% by dry weight passing the US Standard No. 200 Sieve, and should meet the standards prescribed by WSDOT SS 9-03.12(3) – Gravel Backfill for Pipe Zone Bedding. The pipe zone backfill should be compacted to at least 90% of the maximum dry density as determined by ASTM D1557, or as required by the pipe manufacturer or local building department.

Within pavement areas or beneath building pads, the remainder of the trench backfill should consist of well-graded granular material with a maximum particle size of 1½ inches, less than 10% by dry weight passing the US Standard No. 200 Sieve, and should meet standards prescribed by WSDOT SS 9-03.19 – Bank Run Gravel for Trench Backfill. This material should be compacted to at least 92% of the maximum dry density, as determined by ASTM D1557, or as required by the pipe manufacturer or local building department. The upper 2 feet of the trench backfill should be compacted to at least 95% of the maximum dry density, as determined by ASTM D1557.

Outside of structural improvement areas (e.g., roadway alignments or building pads), trench backfill placed above the pipe zone should consist of excavated material free of wood waste, debris, clods, or rocks greater than 6 inches in diameter and meet WSDOT SS 9-03.14 – Borrow and WSDOT SS 9-03.15 – Native Material for Trench Backfill. This general trench backfill should be compacted to at least 90% of the maximum dry density, as determined by ASTM D1557, or as required by the pipe manufacturer or local building department.

4.3.6 Stabilization Material

Stabilization rock should consist of pit or quarry run rock that is well-graded, angular, crushed rock consisting of 4- or 6-inch-minus material with less than 5% passing the US Standard No. 4 Sieve. The material should be free of organic matter and other deleterious material. WSDOT SS 9-13.1(5) – Quarry Spalls can be used as a general specification for this material with the stipulation of limiting the maximum size to 6 inches.

5 ADDITIONAL SERVICES AND CONSTRUCTION OBSERVATIONS

In most cases, other services beyond completion of a final geotechnical engineering report are necessary or desirable to complete the project. Occasionally, conditions or circumstances arise that require additional work that was not anticipated when the geotechnical report was written. PBS offers a range of environmental, geological, geotechnical, and construction services to suit the varying needs of our clients.

PBS should be retained to review the plans and specifications for this project before they are finalized. Such a review allows us to verify that our recommendations and concerns have been adequately addressed in the design. Satisfactory earthwork performance depends on the quality of construction. Sufficient observation of the contractor's activities is a key part of determining that the work is completed in accordance with the construction drawings and specifications. We recommend that PBS be retained to observe general excavation, stripping, fill placement, footing subgrades, and/or pile installation. Subsurface conditions observed during construction should be compared with those encountered during the subsurface explorations. Recognition of changed conditions requires experience; therefore, qualified personnel should visit the site with sufficient frequency to detect whether subsurface conditions change significantly from those anticipated.

6 LIMITATIONS

This report has been prepared for the exclusive use of the addressee, and their architects and engineers, for aiding in the design and construction of the proposed development and is not to be relied upon by other parties. It is not to be photographed, photocopied, or similarly reproduced, in total or in part, without express written consent of the client and PBS. It is the addressee's responsibility to provide this report to the appropriate design professionals, building officials, and contractors to ensure correct implementation of the recommendations.

The opinions, comments, and conclusions presented in this report are based upon information derived from our literature review, field explorations, laboratory testing, and engineering analyses. It is possible that soil, rock, or groundwater conditions could vary between or beyond the points explored. If soil, rock, or groundwater conditions are encountered during construction that differ from those described herein, the client is responsible for ensuring that PBS is notified immediately so that we may reevaluate the recommendations of this report.

Unanticipated fill, soil and rock conditions, and seasonal soil moisture and groundwater variations are commonly encountered and cannot be fully determined by merely taking soil samples or completing explorations such as test pits. Such variations may result in changes to our recommendations and may require additional funds for expenses to attain a properly constructed project; therefore, we recommend a contingency fund to accommodate such potential extra costs.

The scope of work for this subsurface exploration and geotechnical report did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this site.

If there is a substantial lapse of time between the submission of this report and the start of work at the site, if conditions have changed due to natural causes or construction operations at or adjacent to the site, or if the basic project scheme is significantly modified from that assumed, this report should be reviewed to determine the applicability of the conclusions and recommendations presented herein. Land use, site conditions (both on and off site), or other factors may change over time and could materially affect our findings; therefore, this report should not be relied upon after three years from its issue, or in the event that the site conditions change.

7 REFERENCES

ASCE. (2016). Minimum Design Loads for Buildings and Other Structures (ASCE 7-16).

Derkey, R. E., Stradling, D. F., Lindsey, K. A., and Tolan, T. L. (2006). Geologic map of the College Place and Walla Walla 7.5-minute quadrangle, Walla Walla County, Washington, and Umatilla County, Oregon: Washington Division of Geology and Earth Resources, Geologic Map GM-62, scale 1:24,000.

Gomberg, J., Sherrod, B., Trautman, M., Burns, E., and Snyder, D. (2012). Contemporary seismicity in and around the Yakima fold-and-thrust belt in eastern Washington. Bulletin of the Seismological Society of America, Vol. 12, No., 1, pp. 309-320.

IBC. (2018). International Building Code. Country Club Hills, IL: International Code Council, Inc. Washington State Amendments to the International Building Code.

McCaffrey, R., King, R. W., Wells, R. E., Lancaster, R., and Miller, M. M. (2016). Contemporary deformation in the Yakima fold and thrust belt estimated with GPS. Geophysical Journal International, Vol. 207, Issue 1.

Palmer, S. P, Magsino, S. L, Bilderback, E. L., Poelstra, J. L, Folger, D. S., Niggeman, R. A. (2004). Site Class Map of Benton County, Washington. Washington State Department of Natural Resources.

Reidel, Stephen P., Fecht, Karl R. (1994). Geologic Map the Richland 1:100,000 Quadrangle, Washington State Division of Geology and Earth Resources.

Reidel, S. P. (2004). The Geologic Development of the Pasco Basin, South-Central Washington. Northwest Geological Society. Society Field Trips in Pacific Northwest Geology.

Schuster, J. E. (1994). Geologic map of the Walla Walla 1:100,000 quadrangle, Washington: Washington Division of Geology and Earth Resources, Open File Report 94-3, scale 1:100,000.

Washington State Department of Ecology (2004). Stormwater Management Manual for Eastern Washington, publication number 04-10-076.

Washington State Department of Transportation (WSDOT SS). (2021). Standard Specifications for Road, Bridge, and Municipal Construction, M 41-10, Olympia, Washington.

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

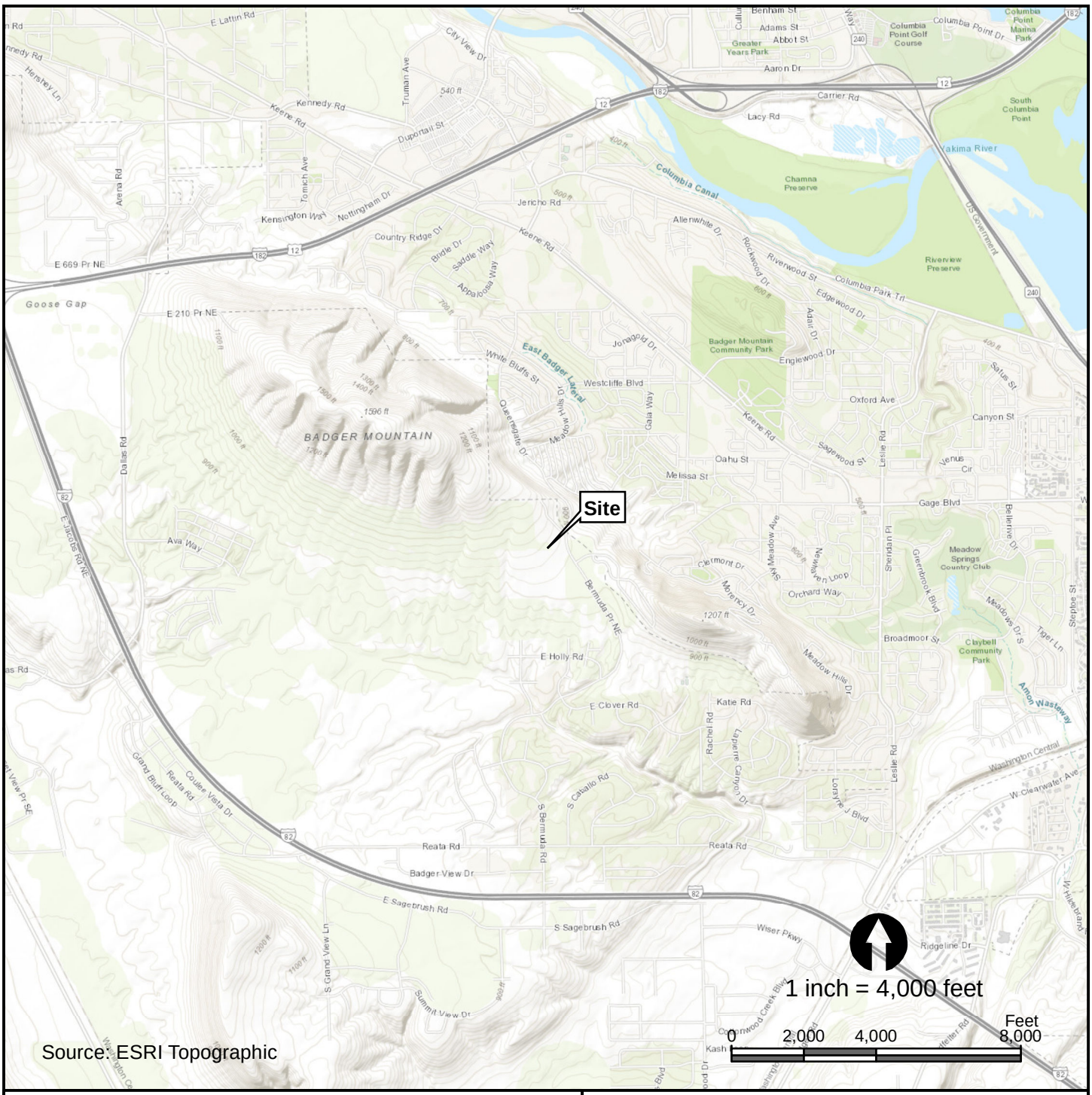
While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

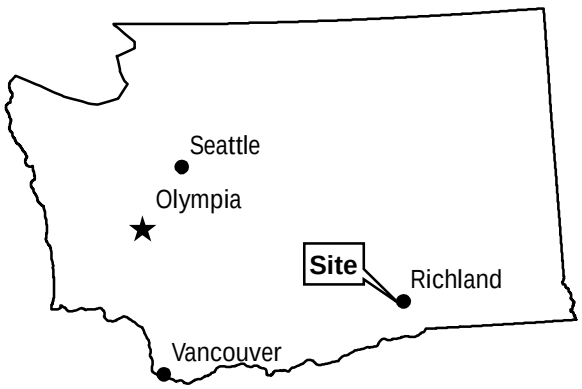
GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

Copyright 2019 by Geoprofessional Business Association (GBA). Duplication, reproduction, or copying of this document, in whole or in part, by any means whatsoever, is strictly prohibited, except with GBA's specific written permission. Excerpting, quoting, or otherwise extracting wording from this document is permitted only with the express written permission of GBA, and only for purposes of scholarly research or book review. Only members of GBA may use this document or its wording as a complement to or as an element of a report of any kind. Any other firm, individual, or other entity that so uses this document without being a GBA member could be committing negligent or intentional (fraudulent) misrepresentation.

Figures





VICINITY MAP
MONSON PROPERTY
WORK PLAN
RICHLAND, WASHINGTON

DATE: AUG 2021 · PROJECT: 66336.000

PBS

FIGURE
1

L:\Gis\GEOTECH\project\66336.000\fig_01_WA_tricities.mxd

EXPLANATION

- TP-1 - Test pit name and approximate location
- TP-2 - Test pit name and approximate location with infiltration test

SOURCES: Google Earth 2018 imagery

1 inch = 300 feet

0 150 300 600 Feet

SITE PLAN
MONSON PROPERTY
WORK PLAN
RICHLAND, WASHINGTON

DATE: AUG 2021 · PROJECT: 66336.000

PBS

FIGURE
2

L:\Gis\GEOTECH\project\66336.000\fig_02_landscape_11x17_legend_right.mxd · Modified By: shaunc · Date Saved: 8/16/2021 4:07:37 PM

Appendix A
Field Explorations

Appendix A: Field Explorations

A1 GENERAL

PBS explored subsurface conditions at the project site by excavating test pits to depths of up to 11 feet bgs on July 20 and July 21, 2021. The approximate locations of the explorations are shown on Figure 2, Site Plan. The procedures used to advance the test pits, collect samples, and other field techniques are described in detail in the following paragraphs. Unless otherwise noted, all soil sampling and classification procedures followed engineering practices in general accordance with relevant ASTM procedures. "General accordance" means that certain local excavation and descriptive practices and methodologies have been followed.

A2 TEST PITS

A2.1 Excavation

Test pits were excavated using a Deere 50G excavator equipped with a 24-inch-wide, toothed bucket provided and operated by SG Excavation, LLC, of Kennewick, Washington. The test pits were observed by a member of the PBS geotechnical staff, who maintained a detailed log of the subsurface conditions and materials encountered during the course of the work.

A2.2 Sampling

Representative disturbed samples were taken at selected depths in the test pits. The disturbed soil samples were examined by a member of the PBS geotechnical staff and sealed in plastic bags for further examination.

A2.3 Test Pit Logs

The test pit logs show the various types of materials that were encountered in the excavations and the depths where the materials and/or characteristics of these materials changed, although the changes may be gradual. Where material types and descriptions changed between samples, the contacts were interpreted. The types of samples taken during excavation, along with their sample identification number, are shown to the right of the classification of materials. The natural water (moisture) contents are shown farther to the right. Measured seepage levels, if observed, are noted in the column to the right.

A3 MATERIAL DESCRIPTION

Initially, samples were classified visually in the field. Consistency, color, relative moisture, degree of plasticity, and other distinguishing characteristics of the soil samples were noted. Afterward, the samples were reexamined in the PBS laboratory, various standard classification tests were conducted, and the field classifications were modified where necessary. The terminology used in the soil classifications and other modifiers are defined in Table A-1, Terminology Used to Describe Soil.

Table A-1
Terminology Used to Describe Soil

Soil Descriptions

Soils exist in mixtures with varying proportions of components. The predominant soil, i.e., greater than 50 percent based on total dry weight, is the primary soil type and is capitalized in our log descriptions (SAND, GRAVEL, SILT, or CLAY). Smaller percentages of other constituents in the soil mixture are indicated by use of modifier words in general accordance with the ASTM D2488-06 Visual-Manual Procedure. "General Accordance" means that certain local and common descriptive practices may have been followed. In accordance with ASTM D2488-06, group symbols (such as GP or CH) are applied on the portion of soil passing the 3-inch (75mm) sieve based on visual examination. The following describes the use of soil names and modifying terms used to describe fine- and coarse-grained soils.

Fine-Grained Soils (50% or greater fines passing 0.075 mm, No. 200 sieve)
The primary soil type, i.e., SILT or CLAY is designated through visual-manual procedures to evaluate soil toughness, dilatency, dry strength, and plasticity. The following outlines the terminology used to describe fine-grained soils, and varies from ASTM D2488 terminology in the use of some common terms.

Primary soil NAME, Symbols, and Adjectives			Plasticity Description	Plasticity Index (PI)
SILT (ML & MH)	**CLAY (CL & CH)**	**ORGANIC SOIL (OL & OH)**		
SILT		Organic SILT	Non-plastic	0 – 3
SILT		Organic SILT	Low plasticity	4 – 10
SILT/Elastic SILT	Lean CLAY	Organic SILT/ Organic CLAY	Medium Plasticity	10 – 20
Elastic SILT	Lean/Fat CLAY	Organic CLAY	High Plasticity	20 – 40
Elastic SILT	Fat CLAY	Organic CLAY	Very Plastic	>40

Modifying terms describing secondary constituents, estimated to 5 percent increments, are applied as follows:

Description	% Composition	
With Sand	% Sand ≥ % Gravel	15% to 25% plus No. 200
With Gravel	% Sand < % Gravel	
Sandy	% Sand ≥ % Gravel	≤30% to 50% plus No. 200
Gravelly	% Sand < % Gravel	

Borderline Symbols, for example CH/MH, are used when soils are not distinctly in one category or when variable soil units contain more than one soil type. **Dual Symbols,** for example CL-ML, are used when two symbols are required in accordance with ASTM D2488.

Soil Consistency terms are applied to fine-grained, plastic soils (i.e., PI ≥ 7). Descriptive terms are based on direct measure or correlation to the Standard Penetration Test N-value as determined by ASTM D1586-84, as follows. SILT soils with low to non-plastic behavior (i.e., PI < 7) may be classified using relative density.

Consistency Term	SPT N-value	Unconfined Compressive Strength	
		tsf	kPa
Very soft	Less than 2	Less than 0.25	Less than 24
Soft	2 – 4	0.25 – 0.5	24 – 48
Medium stiff	5 – 8	0.5 – 1.0	48 – 96
Stiff	9 – 15	1.0 – 2.0	96 – 192
Very stiff	16 – 30	2.0 – 4.0	192 – 383
Hard	Over 30	Over 4.0	Over 383

Soil Descriptions

Coarse - Grained Soils (less than 50% fines)

Coarse-grained soil descriptions, i.e., SAND or GRAVEL, are based on the portion of materials passing a 3-inch (75mm) sieve. Coarse-grained soil group symbols are applied in accordance with ASTM D2488-06 based on the degree of grading, or distribution of grain sizes of the soil. For example, well-graded sand containing a wide range of grain sizes is designated SW; poorly graded gravel, GP, contains high percentages of only certain grain sizes. Terms applied to grain sizes follow.

Material NAME	Particle Diameter	
	Inches	Millimeters
SAND (SW or SP)	0.003 – 0.19	0.075 – 4.8
GRAVEL (GW or GP)	0.19 – 3	4.8 – 75
Additional Constituents:		
Cobble	3 – 12	75 – 300
Boulder	12 – 120	300 – 3050

The primary soil type is capitalized, and the fines content in the soil are described as indicated by the following examples. Percentages are based on estimating amounts of fines, sand, and gravel to the nearest 5 percent. Other soil mixtures will have similar descriptive names.

Example: Coarse-Grained Soil Descriptions with Fines

>5% to < 15% fines (Dual Symbols)	≥15% to < 50% fines
Well graded GRAVEL with silt: GW-GM	Silty GRAVEL: GM
Poorly graded SAND with clay: SP-SC	Silty SAND: SM

Additional descriptive terminology applied to coarse-grained soils follow.

Example: Coarse-Grained Soil Descriptions with Other Coarse-Grained Constituents

Coarse-Grained Soil Containing Secondary Constituents	
With sand or with gravel	≥ 15% sand or gravel
With cobbles; with boulders	Any amount of cobbles or boulders.

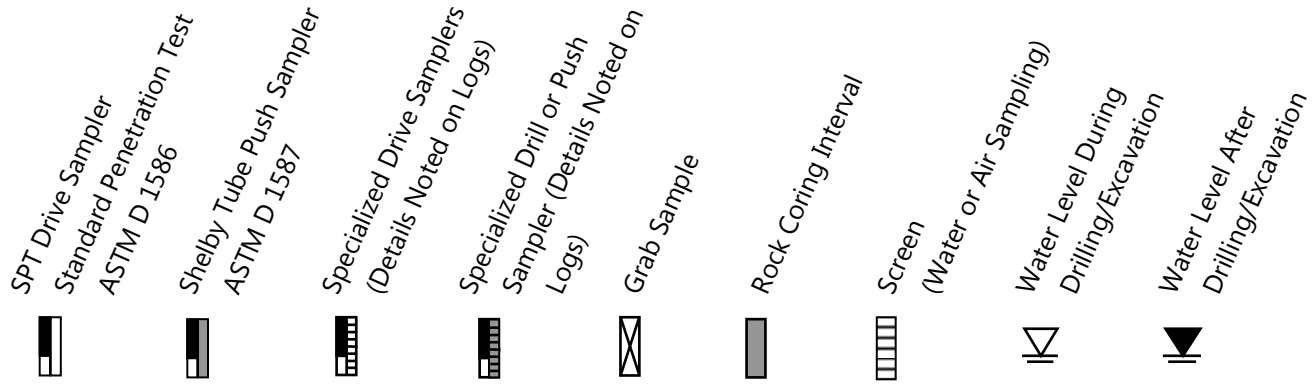
Cobble and boulder deposits may include a description of the matrix soils, as defined above.

Relative Density terms are applied to granular, non-plastic soils based on direct measure or correlation to the Standard Penetration Test N-value as determined by ASTM D1586-84.

Relative Density Term	SPT N-value
Very loose	0 – 4
Loose	5 – 10
Medium dense	11 – 30
Dense	31 – 50
Very dense	> 50

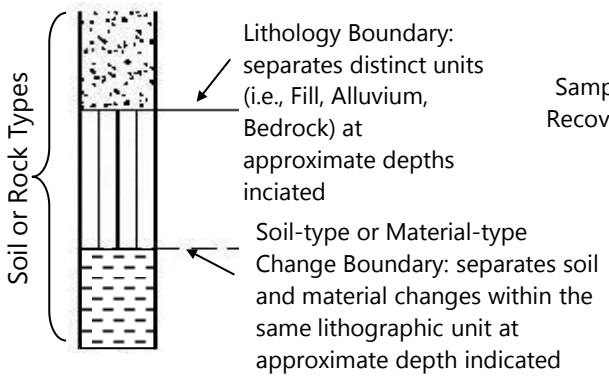
Table A-2
Key To Test Pit and Boring Log Symbols

SAMPLING DESCRIPTIONS

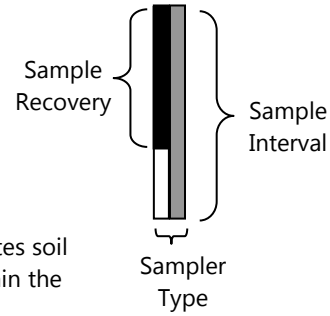


LOG GRAPHICS

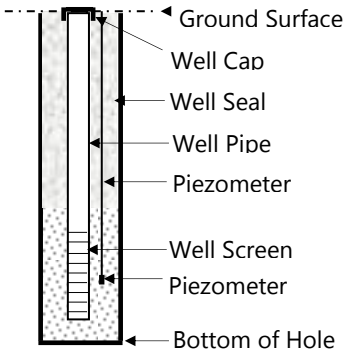
Soil and Rock



Sampling Symbols



Instrumentation Detail



Geotechnical Testing Acronym Explanations

PP	Pocket Penetrometer	HYD	Hydrometer Gradation
TOR	Torvane	SIEV	Sieve Gradation
DCP	Dynamic Cone Penetrometer	DS	Direct Shear
ATT	Atterberg Limits	DD	Dry Density
PL	Plasticity Limit	CBR	California Bearing Ratio
LL	Liquid Limit	RES	Resilient Modulus
PI	Plasticity Index	VS	Vane Shear
P200	Percent Passing US Standard No. 200 Sieve	bgs	Below ground surface
OC	Organic Content	MSL	Mean Sea Level
CON	Consolidation	HCL	Hydrochloric Acid
UC	Unconfined Compressive Strength		

Details of soil and rock classification systems are available on request.

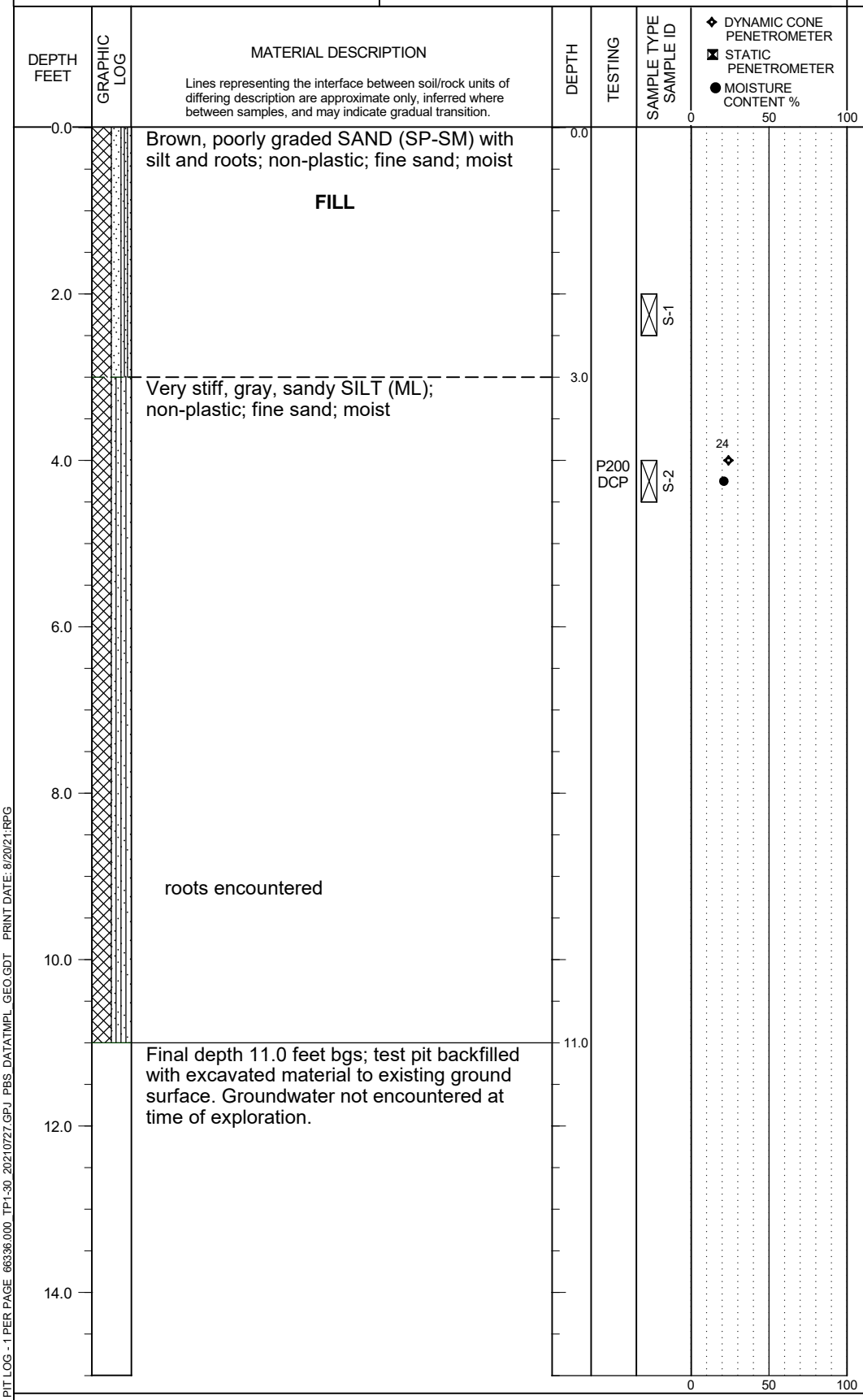
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-1

APPROX. TEST PIT TP-1 LOCATION:
(See Site Plan)

Lat: 46.22107 Long: -119.30583



LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A1
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/20/21:RPG

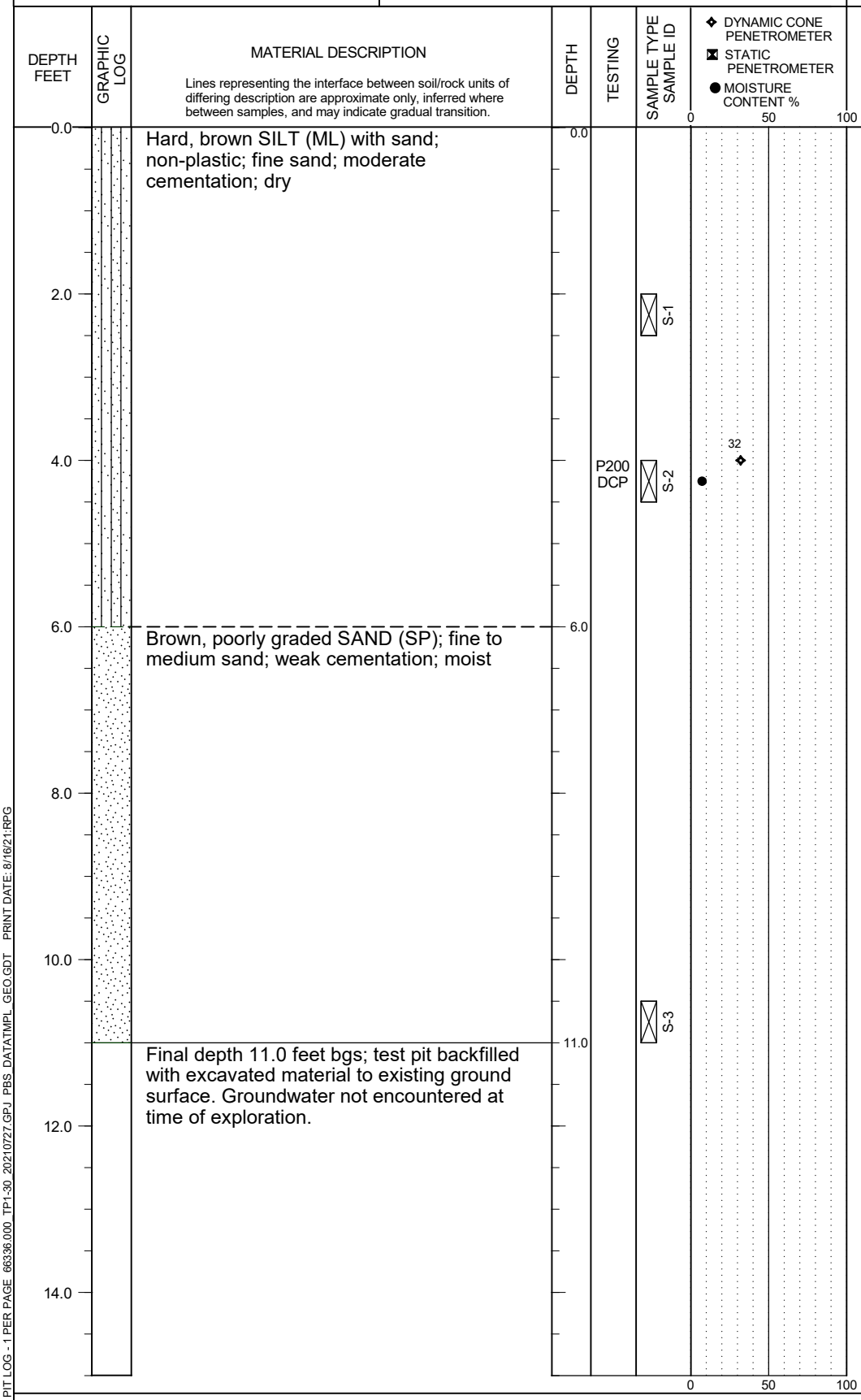
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-2

APPROX. TEST PIT TP-2 LOCATION:
(See Site Plan)

Lat: 46.22052 Long: -119.30466



LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A2
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-3

APPROX. TEST PIT TP-3 LOCATION:
(See Site Plan)

Lat: 46.22131 Long: -119.30426

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Very stiff, brown, sandy SILT (ML); non-plastic; fine sand; moderate cementation; dry	0.0				Surface Conditions: Agricultural Field
2.0					S-1		
4.0				DCP	S-2	17	
8.0		Brown, poorly graded SAND (SP); fine to medium sand; weak cementation; moist	8.0				
10.0		Final depth 10.0 feet bgs; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	10.0				
12.0							
14.0							

Lines representing the interface between soil/rock units of differing description are approximate only, inferred where between samples, and may indicate gradual transition.

LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A3
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

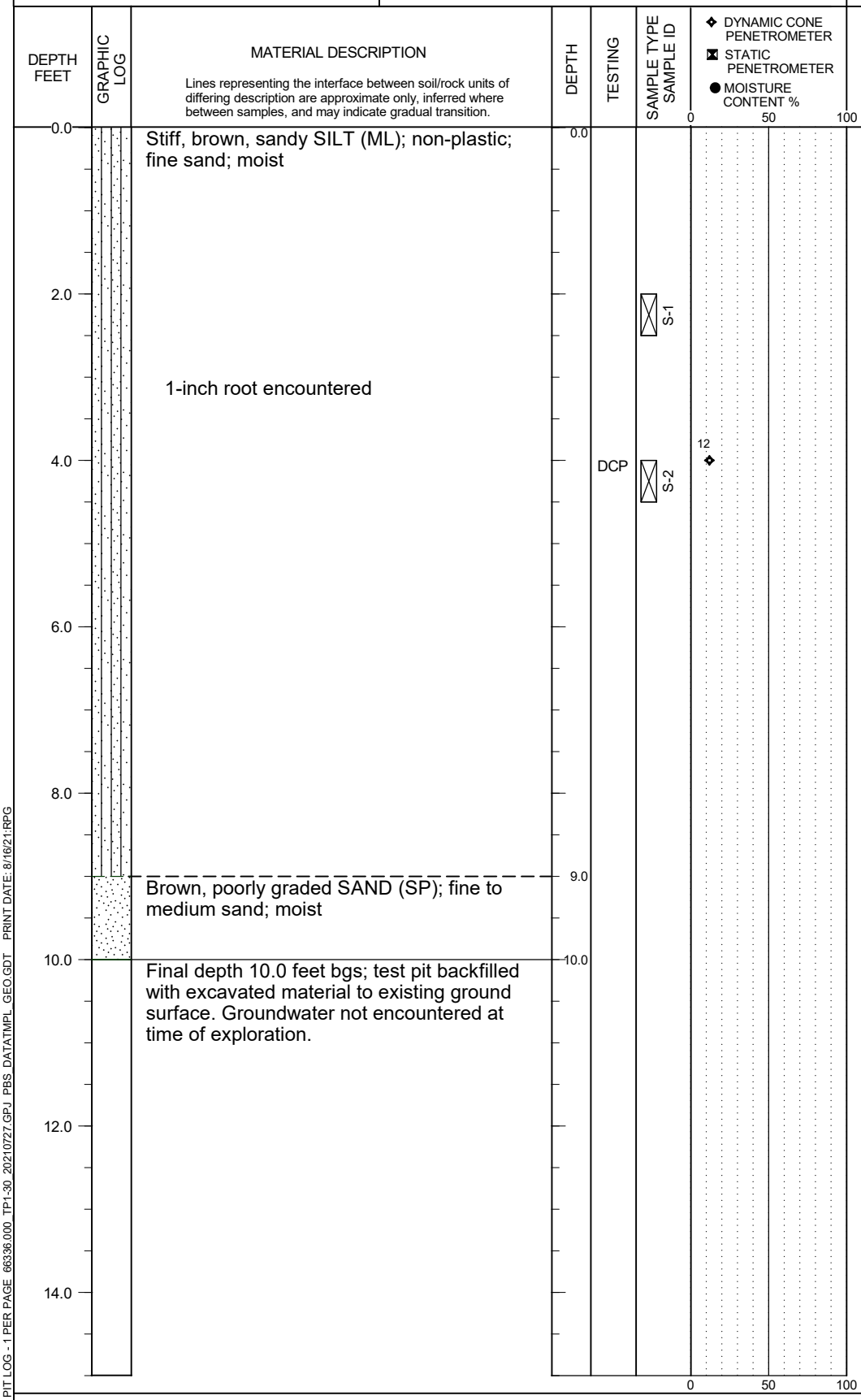
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-4

APPROX. TEST PIT TP-4 LOCATION:
(See Site Plan)

Lat: 46.22215 Long: -119.30418



LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A4
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

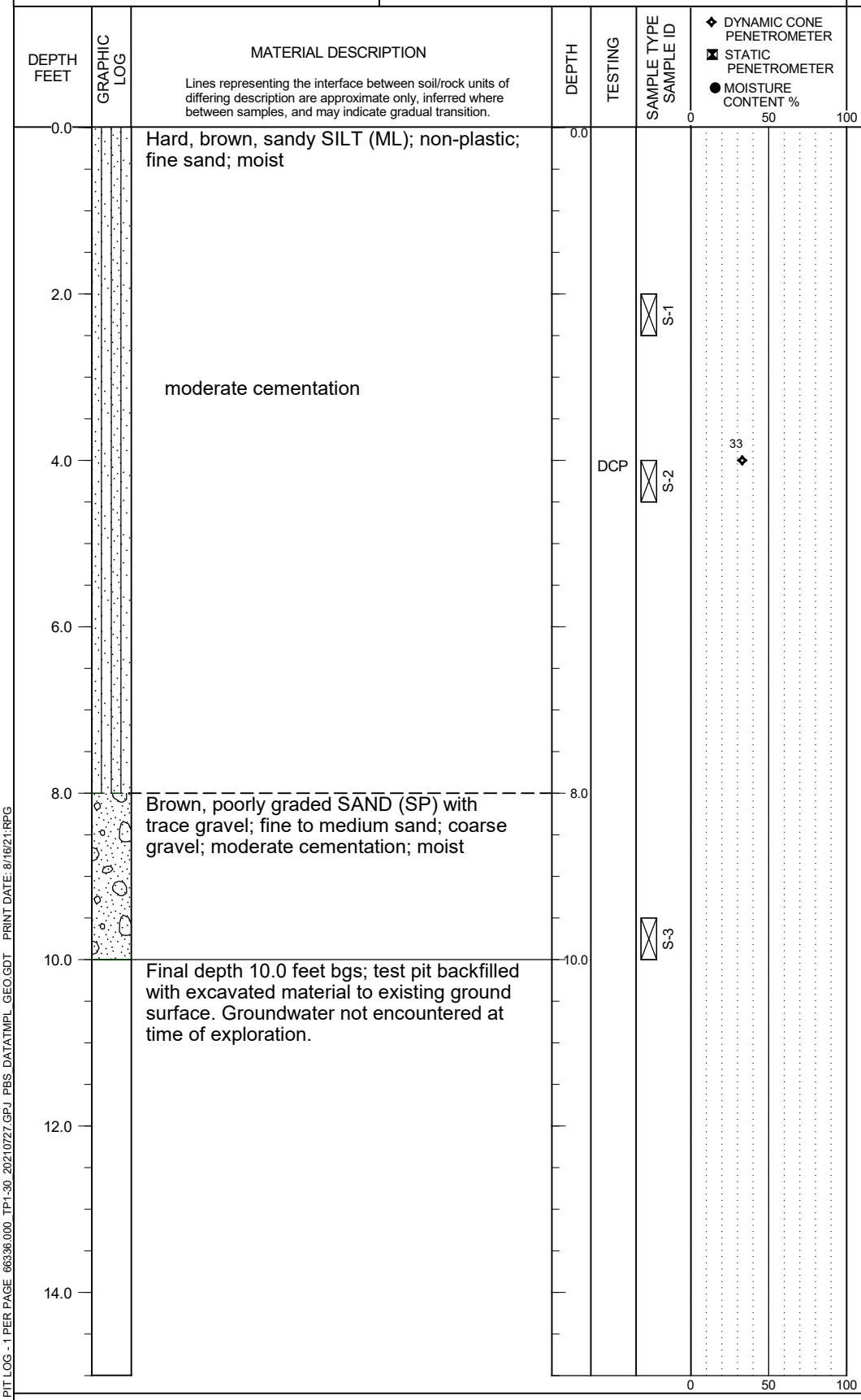
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-5

APPROX. TEST PIT TP-5 LOCATION:
(See Site Plan)

Lat: 46.22320 Long: -119.30346



LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A5
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

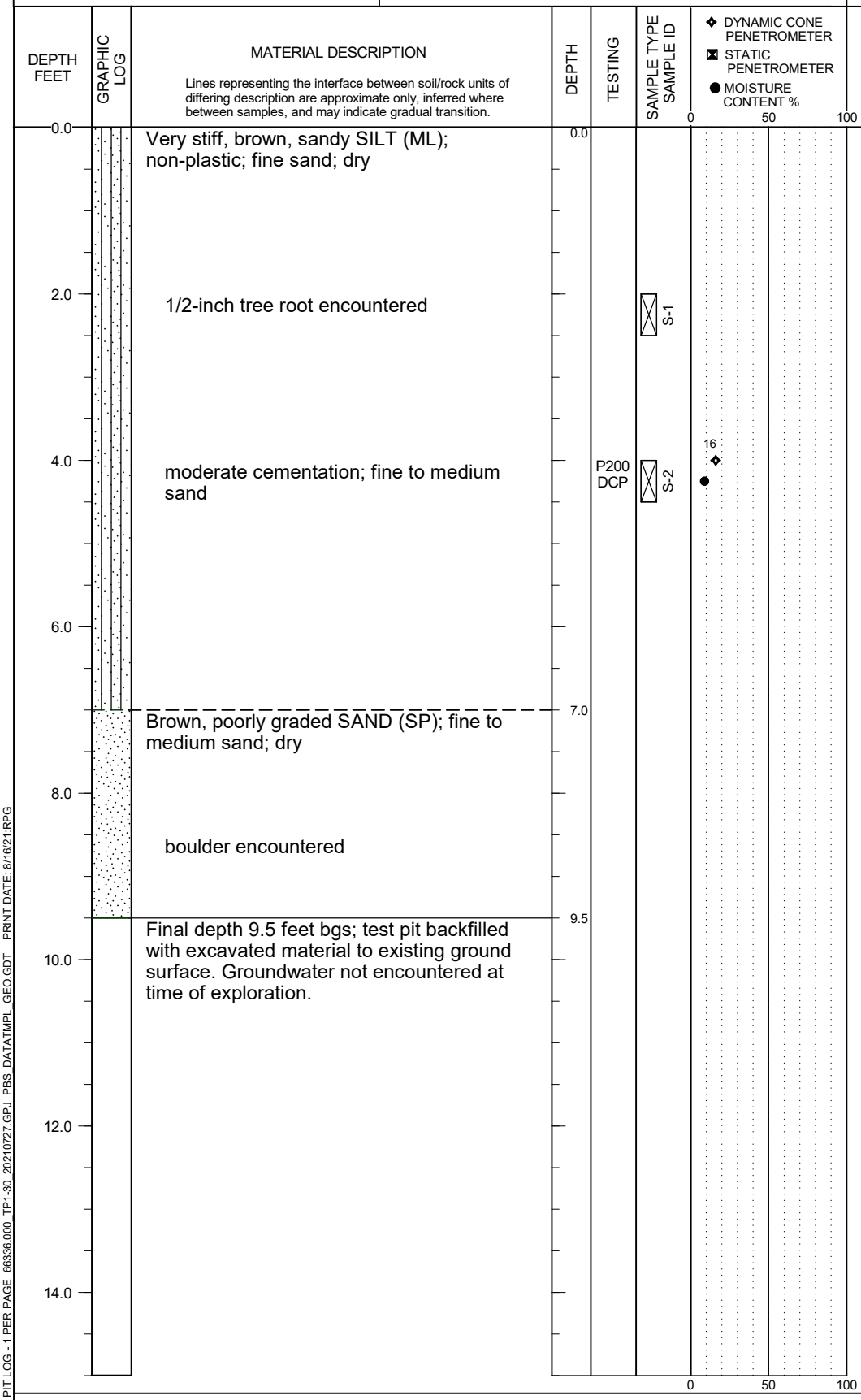
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-6

APPROX. TEST PIT TP-6 LOCATION:
(See Site Plan)

Lat: 46.22051 Long: -119.30213



LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A6
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

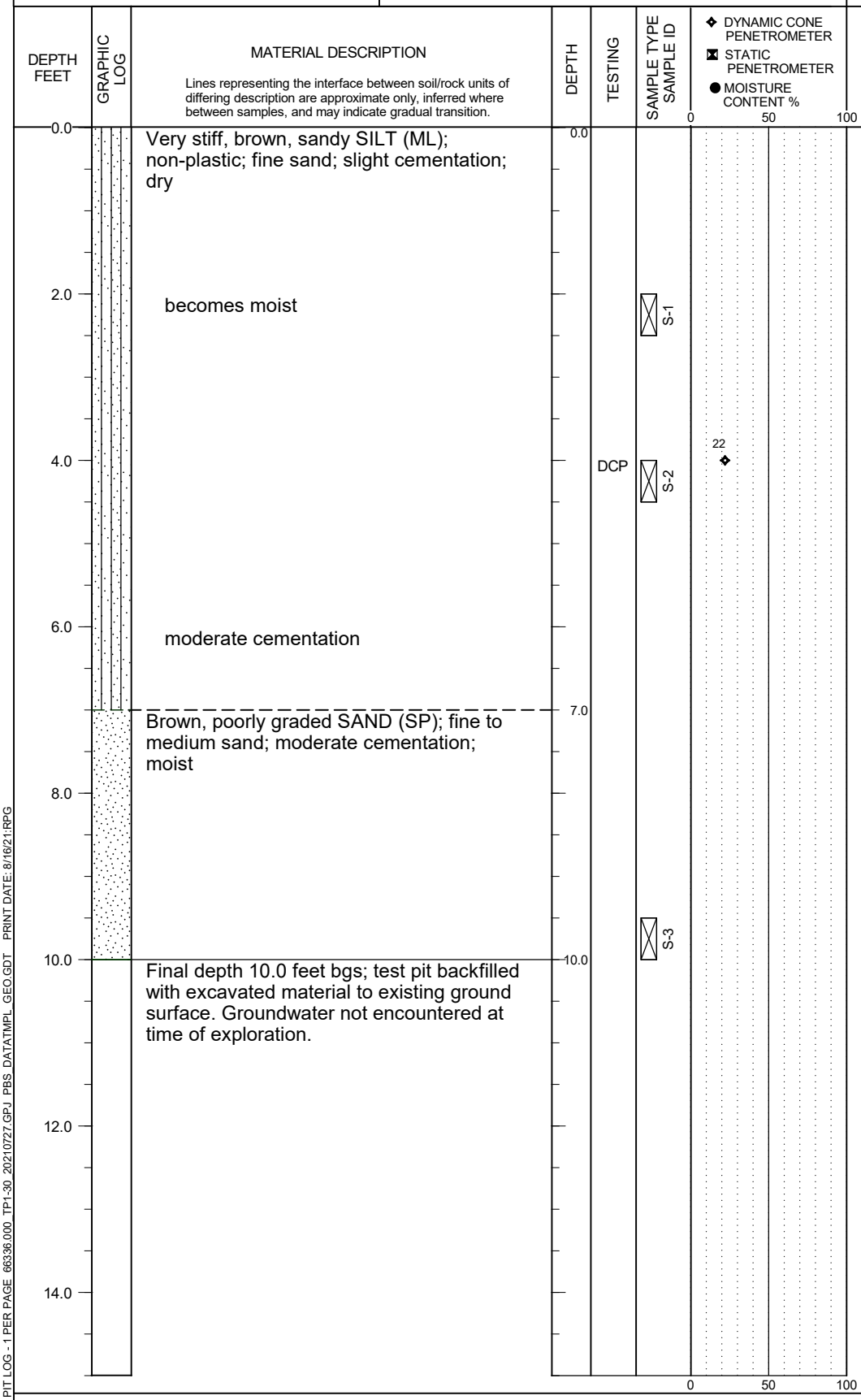
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-7

APPROX. TEST PIT TP-7 LOCATION:
(See Site Plan)

Lat: 46.22176 Long: -119.30098



LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A7
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-8

APPROX. TEST PIT TP-8 LOCATION:
(See Site Plan)

Lat: 46.22077 Long: -119.29710

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT %	COMMENTS
0.0		Very stiff, brown, sandy SILT (ML); non-plastic; fine sand; moderate cementation; dry	0.0	DCP	S-1, S-2, S-3	20	Surface Conditions: Agricultural Field
11.0		Final depth 11.0 feet bgs; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	11.0				

Lines representing the interface between soil/rock units of differing description are approximate only, inferred where between samples, and may indicate gradual transition.

0 50 100

LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A8
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-9

APPROX. TEST PIT TP-9 LOCATION:
(See Site Plan)

Lat: 46.22162 Long: -119.29638

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT %	COMMENTS
0.0		Brown, sandy SILT (ML); non-plastic; fine sand; moist	0.0		S-1	0 50 100	Surface Conditions: Agricultural Field
2.0							
4.0					S-2		
6.0							
		BASALT	7.3				
7.5		Final depth 7.5 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.					
8.0							
10.0							
12.0							
14.0							

LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A9
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

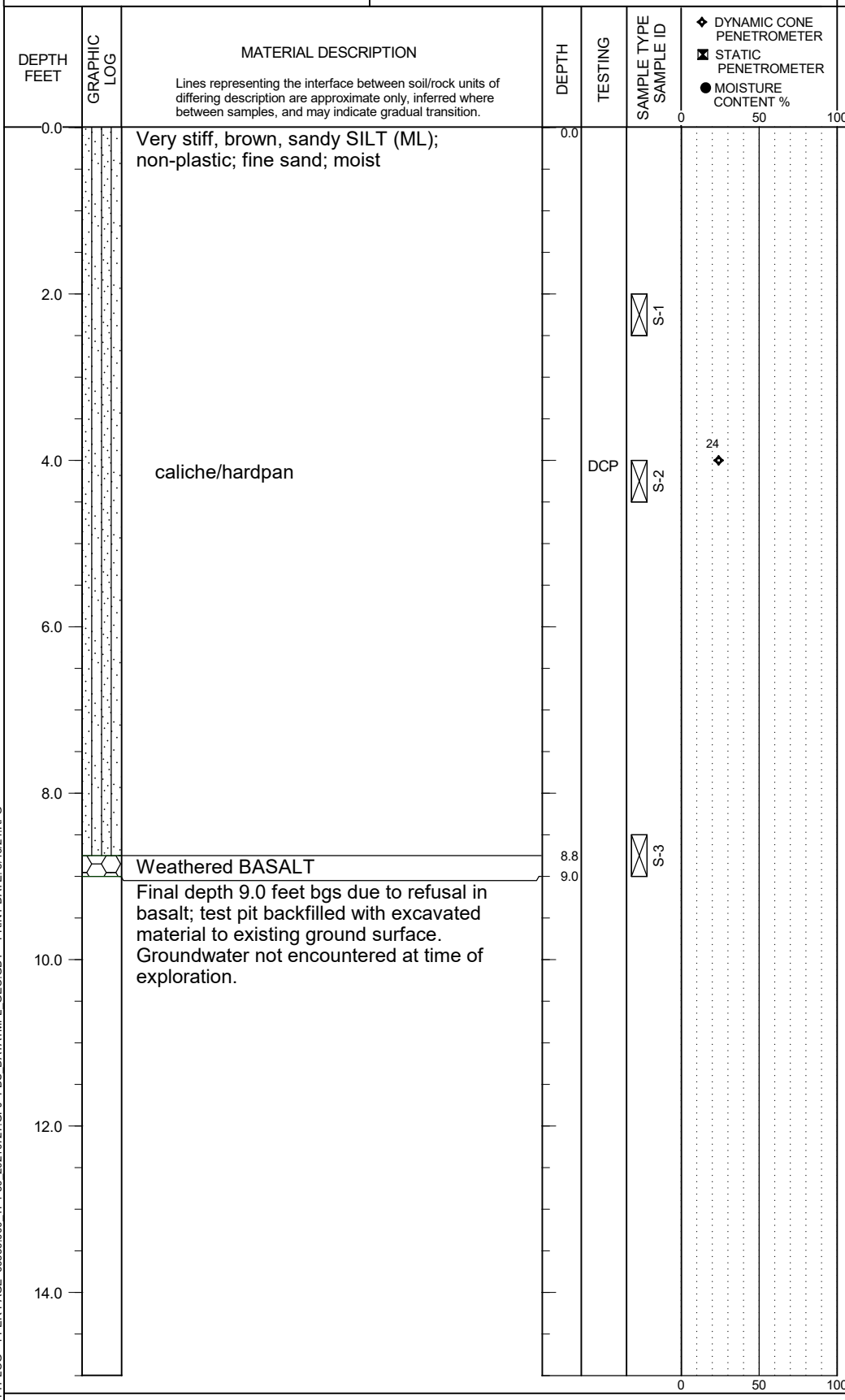
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-10

APPROX. TEST PIT TP-10 LOCATION:
(See Site Plan)

Lat: 46.22244 Long: -119.30579



LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A10
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-11

APPROX. TEST PIT TP-11 LOCATION:
(See Site Plan)

Lat: 46.22387 Long: -119.30574

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION Lines representing the interface between soil/rock units of differing description are approximate only, inferred where between samples, and may indicate gradual transition.	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	DYNAMIC CONE PENETROMETER STATIC PENETROMETER MOISTURE CONTENT %	COMMENTS
0.0		Very stiff, brown, sandy SILT (ML); non-plastic; fine sand; dry	0.0				Surface Conditions: Agricultural Field
2.0					S-1		
4.0		caliche/hardpan		DCP	S-2	22	
6.0							
		Weathered BASALT	7.3				
7.5		Final depth 7.5 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	7.5				
8.0							
10.0							
12.0							
14.0							

0 50 100

LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A11
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

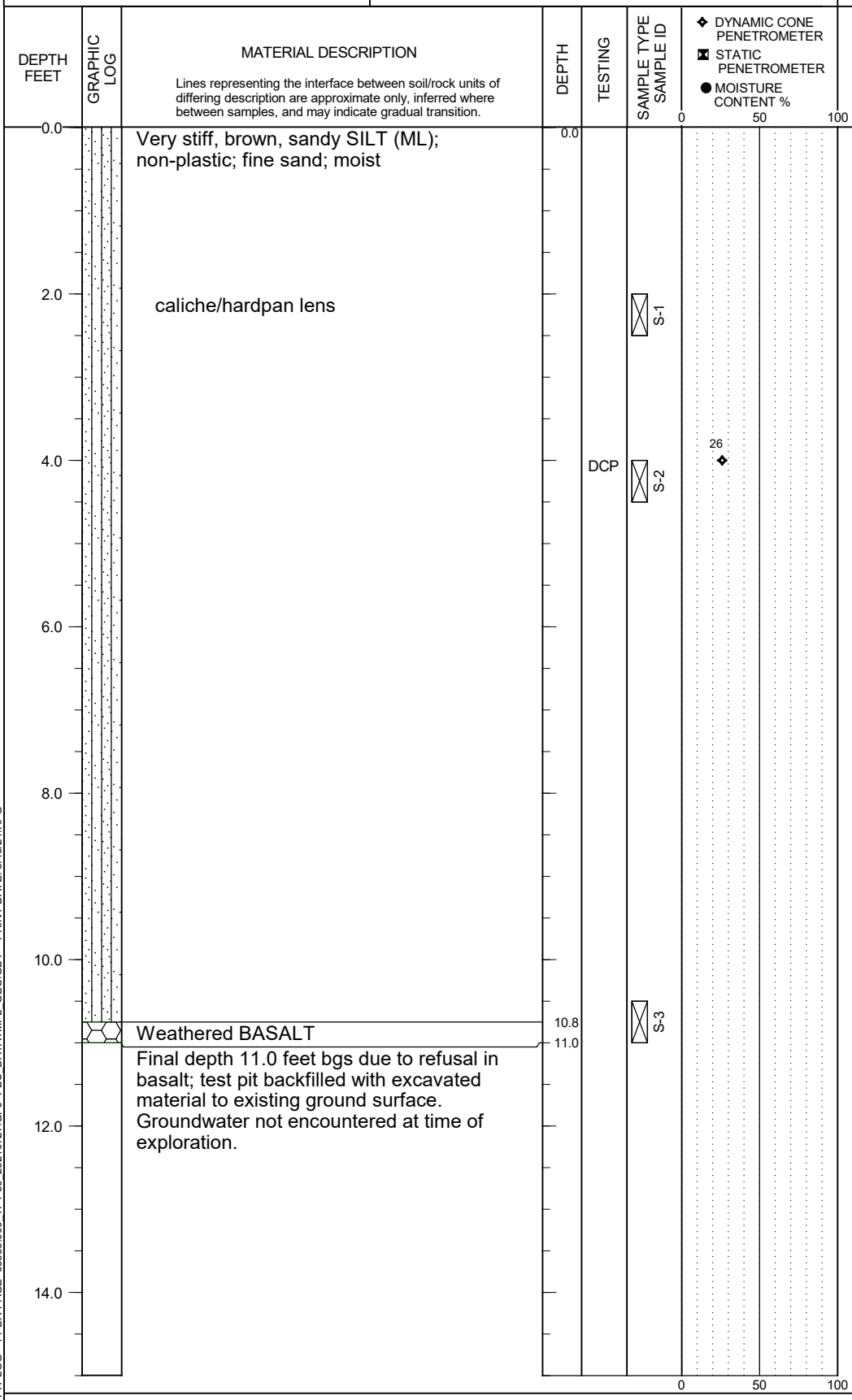
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-12

APPROX. TEST PIT TP-12 LOCATION:
(See Site Plan)

Lat: 46.22383 Long: -119.30286



LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A12
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-13

APPROX. TEST PIT TP-13 LOCATION:
(See Site Plan)

Lat: 46.22394 Long: -119.30132

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Stiff, brown, sandy SILT (ML); non-plastic; fine sand; dry fine roots to 12 inches bgs	0.0				Surface Conditions: Agricultural Field
2.0					S-1		
4.0				P200 DCP	S-2	15	Infiltration testing completed at 4 feet bgs P200 = 70%
6.0		BASALT Final depth 6.0 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	5.8 6.0				
8.0							
10.0							
12.0							
14.0							

LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A13
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-14

APPROX. TEST PIT TP-14 LOCATION:
(See Site Plan)

Lat: 46.22451 Long: -119.29775

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Brown, sandy SILT (ML); non-plastic; fine sand; moderate cementation; moist	0.0				Surface Conditions: Agricultural Field
2.0					S-1		
		BASALT	3.3				
4.0		Final depth 3.5 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	3.5				
6.0							
8.0							
10.0							
12.0							
14.0							

LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A14
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-15

APPROX. TEST PIT TP-15 LOCATION:
(See Site Plan)

Lat: 46.22598 Long: -119.30203

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Brown, sandy SILT (ML); non-plastic; fine sand; moist roots to 6 inches bgs	0.0				Surface Conditions: Agricultural Field
2.0		BASALT	2.3		S-1		
		Final depth 2.5 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	2.5				
4.0							
6.0							
8.0							
10.0							
12.0							
14.0							

Lines representing the interface between soil/rock units of differing description are approximate only, inferred where between samples, and may indicate gradual transition.

LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A15
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-16

APPROX. TEST PIT TP-16 LOCATION:
(See Site Plan)

Lat: 46.22230 Long: -119.29714

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Brown, sandy SILT (ML); non-plastic; fine sand; moist	0.0				Surface Conditions: Agricultural Field
2.0					S-1		
4.0					S-2		
6.0							
		BASALT	7.3				
7.5		Final depth 7.5 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.					
8.0							
10.0							
12.0							
14.0							

LOGGED BY: C. Nealey
COMPLETED: 7/21/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A16
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

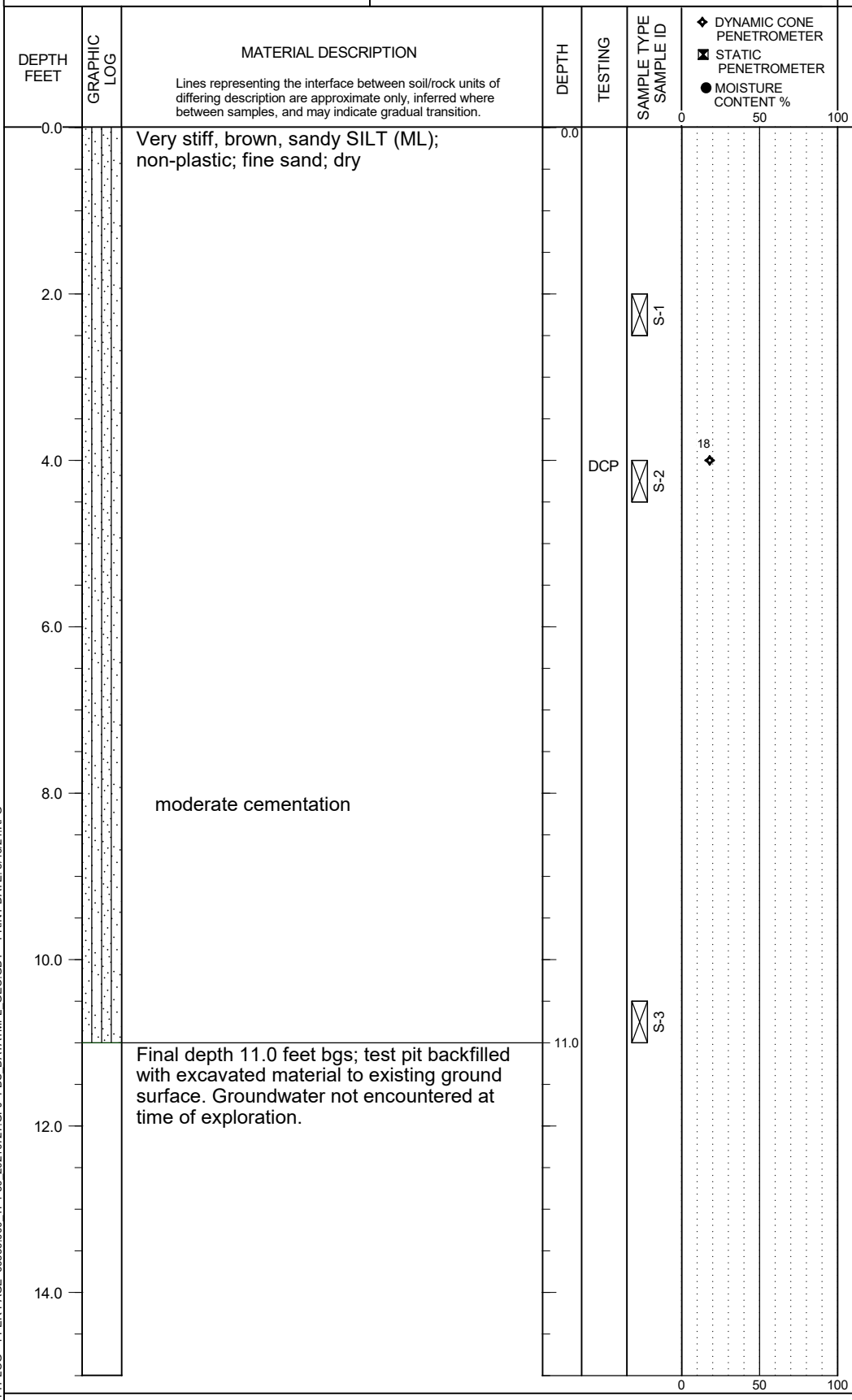
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-17

APPROX. TEST PIT TP-17 LOCATION:
(See Site Plan)

Lat: 46.22517 Long: -119.30666



LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A17
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

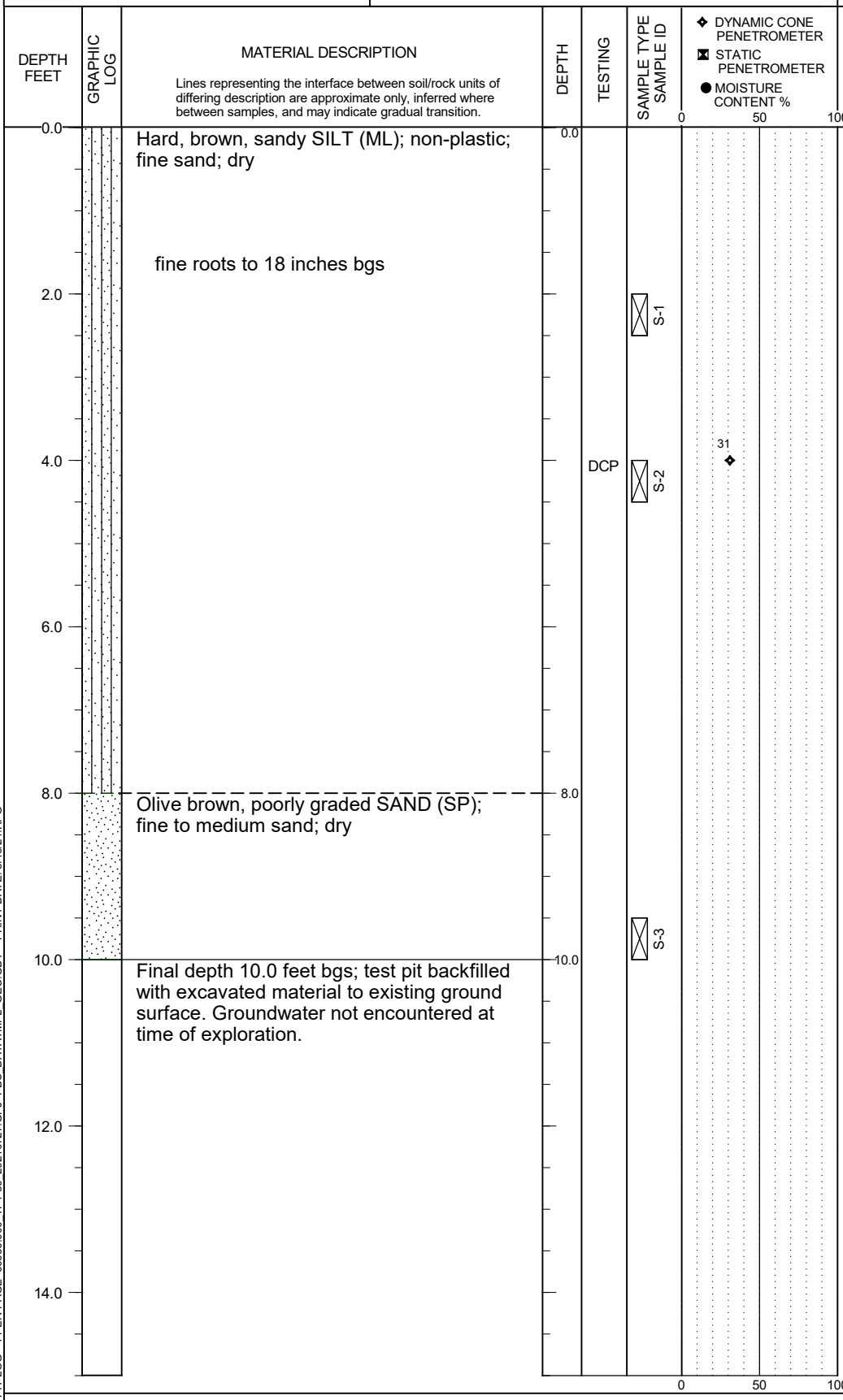
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-18

APPROX. TEST PIT TP-18 LOCATION:
(See Site Plan)

Lat: 46.22413 Long: -119.30453



LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A18
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-19

APPROX. TEST PIT TP-19 LOCATION:
(See Site Plan)

Lat: 46.22497 Long: -119.30322

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT %	COMMENTS
0.0		Medium stiff, brown, sandy SILT (ML); non-plastic; fine sand; moist	0.0				Surface Conditions: Agricultural Field
2.0		caliche/hardpan lens			S-1		
4.0				DCP	S-2	7	
6.0							
8.0							
		Weathered BASALT	9.3		S-3		
10.0		Final depth 9.5 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	9.5				
12.0							
14.0							

0 50 100

LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A19
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

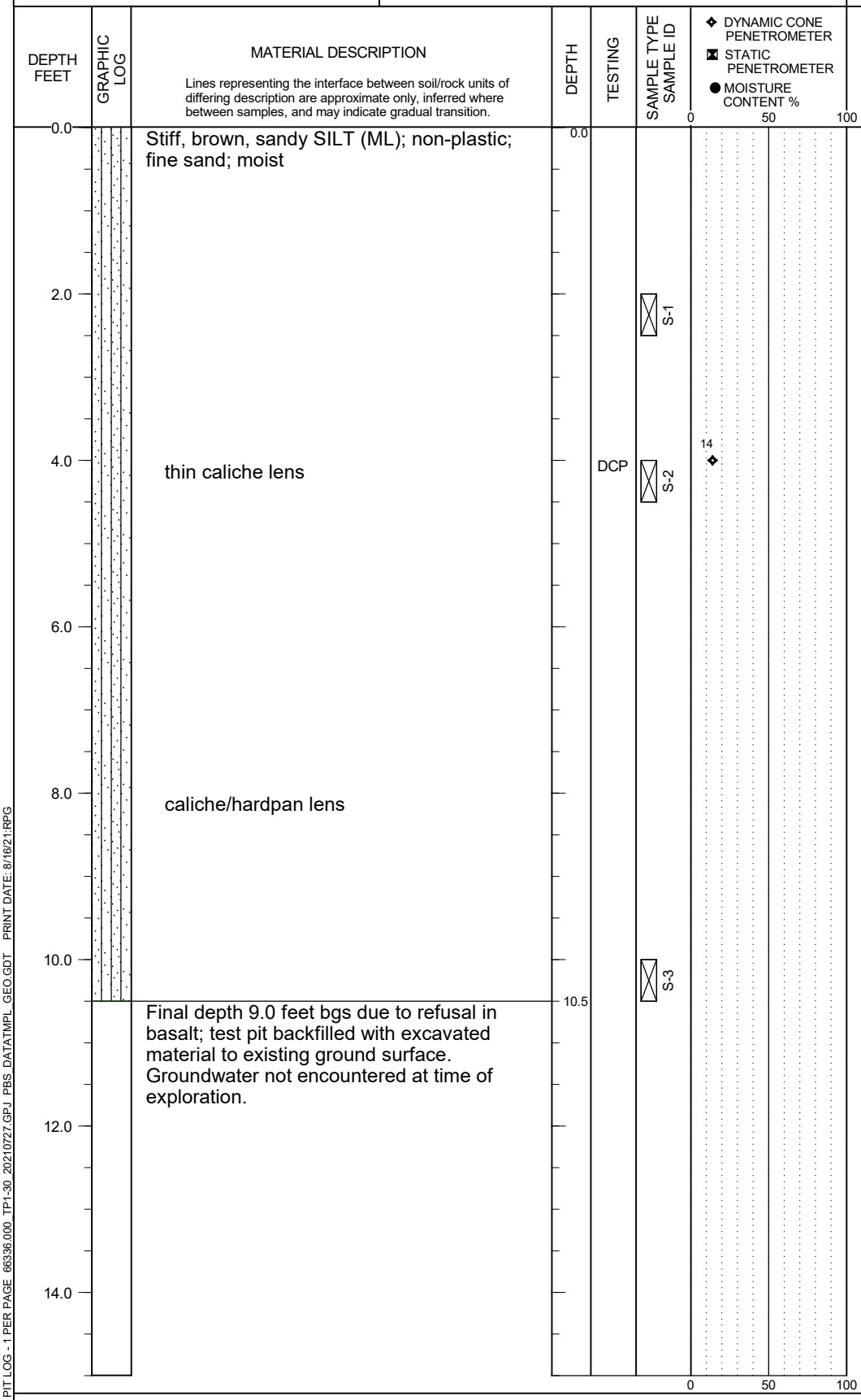
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-20

APPROX. TEST PIT TP-20 LOCATION:
(See Site Plan)

Lat: 46.22595 Long: -119.30400



LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A20
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 8/16/21:RPG

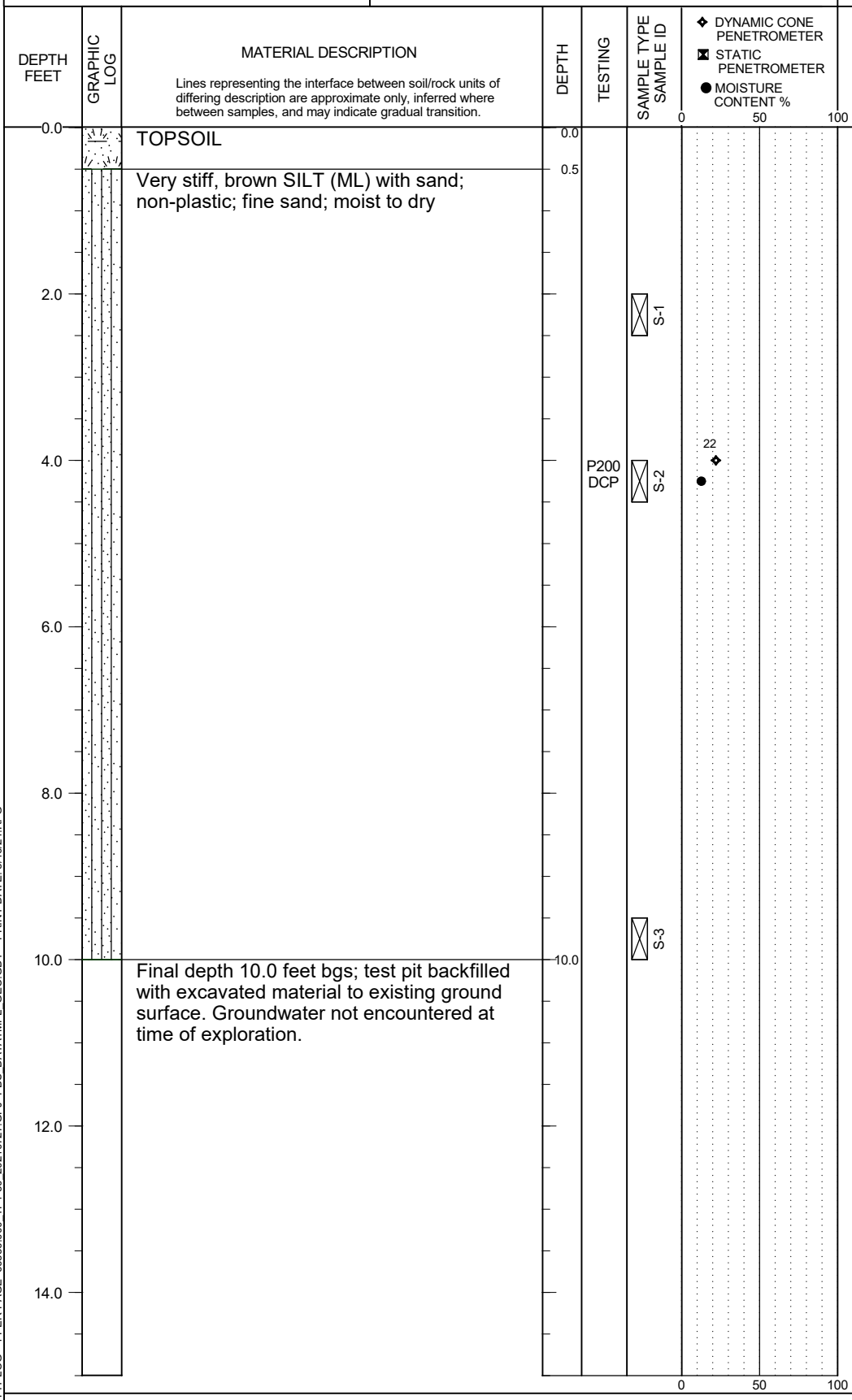
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-21

APPROX. TEST PIT TP-21 LOCATION:
(See Site Plan)

Lat: 46.22670 Long: -119.30618



LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A21
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

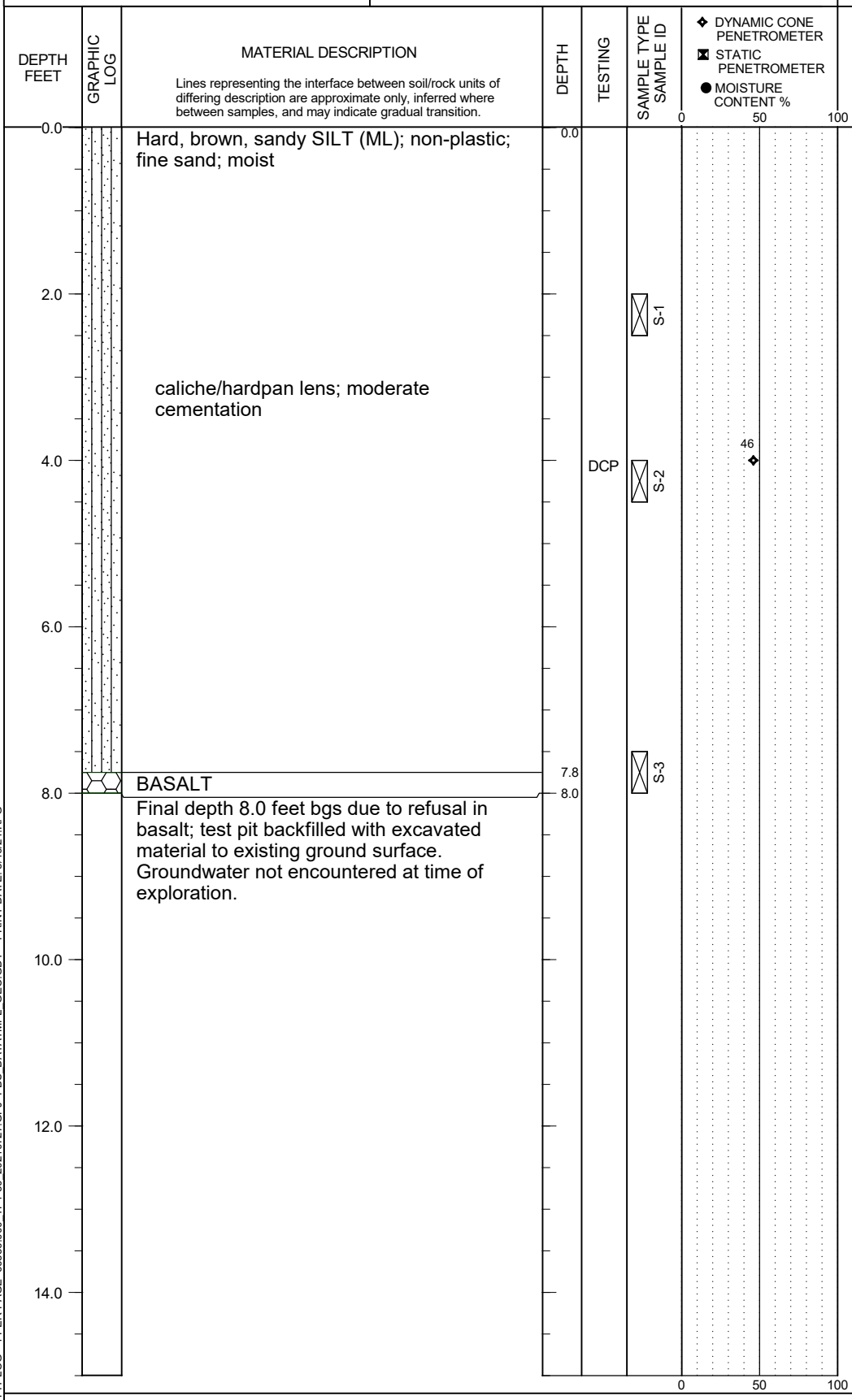
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-22

APPROX. TEST PIT TP-22 LOCATION:
(See Site Plan)

Lat: 46.22667 Long: -119.30366



LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A22
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-23

APPROX. TEST PIT TP-23 LOCATION:
(See Site Plan)

Lat: 46.22785 Long: -119.30578

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT %	COMMENTS
0.0		TOPSOIL	0.0				Surface Conditions: Agricultural Field
		Very stiff, brown, sandy SILT (ML); non-plastic; fine sand; moist to dry	0.5				
2.0					S-1		
4.0				DCP	S-2	19	
6.0							
8.0							
10.0					S-3		
		Final depth 11.0 feet bgs; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	11.0				
12.0							
14.0							

0 50 100

LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A23
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-24

APPROX. TEST PIT TP-24 LOCATION:
(See Site Plan)

Lat: 46.22781 Long: -119.30389

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Brown, sandy SILT (ML); non-plastic; fine sand; dry	0.0				Surface Conditions: Agricultural Field
2.0		18-inch boulder encountered			S-1		
3.8		BASALT	3.8		S-2		
4.0		Final depth 4.0 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	4.0				
6.0							
8.0							
10.0							
12.0							
14.0							

LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A24
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

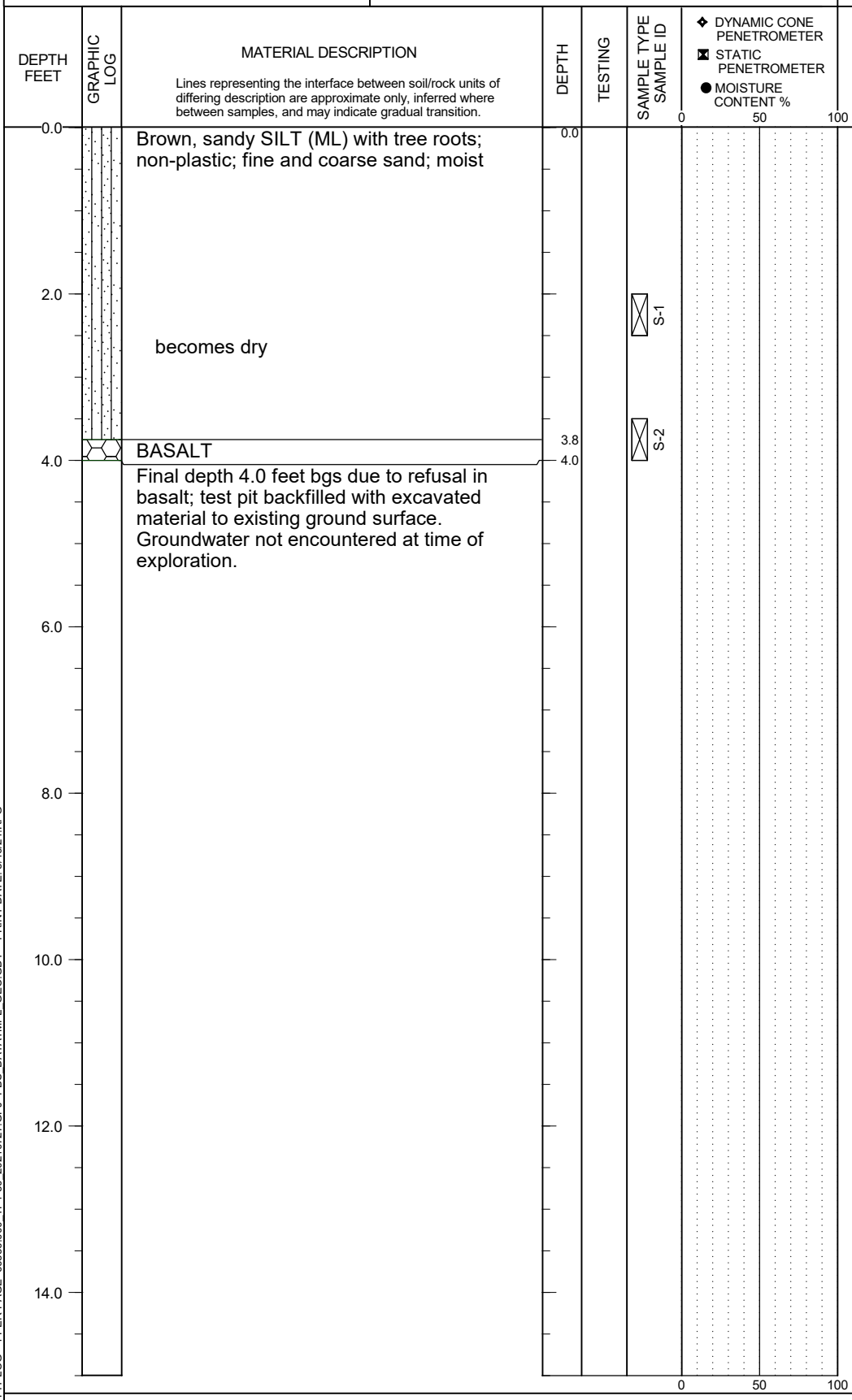
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-25

APPROX. TEST PIT TP-25 LOCATION:
(See Site Plan)

Lat: 46.22749 Long: -119.30179



LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A25
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21:RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-26

APPROX. TEST PIT TP-26 LOCATION:
(See Site Plan)

Lat: 46.22651 Long: -119.30121

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID
0.0		TOPSOIL	0.0		
		Brown, sandy SILT (ML); non-plastic; fine sand; dry	0.5		S-1
2.0		Weathered BASALT	2.0		
		Final depth 3.0 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	3.0		
4.0					
6.0					
8.0					
10.0					
12.0					
14.0					

Lines representing the interface between soil/rock units of differing description are approximate only, inferred where between samples, and may indicate gradual transition.

DYNAMIC CONE PENETROMETER
STATIC PENETROMETER
MOISTURE CONTENT %
0 50 100

COMMENTS

Surface Conditions: Agricultural Field

LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A26
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

PBS PROJECT NUMBER:
66336.000

TEST PIT TP-27

APPROX. TEST PIT TP-27 LOCATION:
(See Site Plan)

Lat: 46.22553 Long: -119.30020

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION Lines representing the interface between soil/rock units of differing description are approximate only, inferred where between samples, and may indicate gradual transition.	DEPTH	TESTING	SAMPLE TYPE / SAMPLE ID	DYNAMIC CONE PENETROMETER / STATIC PENETROMETER / MOISTURE CONTENT % (0 50 100)	COMMENTS
0.0		Brown, sandy SILT (ML) with tree roots; non-plastic; fine sand; dry	0.0				Surface Conditions: Agricultural Field
2.0					S-1		
		BASALT	2.8				
		Final depth 3.0 feet bgs due to refusal in basalt; test pit backfilled with excavated material to existing ground surface. Groundwater not encountered at time of exploration.	3.0				
4.0							
6.0							
8.0							
10.0							
12.0							
14.0							

LOGGED BY: C. Nealey
COMPLETED: 7/20/2021

EXCAVATED BY: SG Excavation
EXCAVATION METHOD: Deere 50G with Toothed Bucket

FIGURE A27
Page 1 of 1

TEST PIT LOG - 1 PER PAGE 66336.000 TP1-30 20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/16/21.RPG

Appendix B
Laboratory Testing

Appendix B: Laboratory Testing

B1 GENERAL

Samples obtained during the field explorations were examined in the PBS laboratory. The physical characteristics of the samples were noted and field classifications were modified where necessary. During the course of examination, representative samples were selected for further testing. The testing program for the soil samples included standard classification tests, which yield certain index properties of the soils important to an evaluation of soil behavior. The testing procedures are described in the following paragraphs. Unless noted otherwise, all test procedures are in general accordance with applicable ASTM standards. "General accordance" means that certain local and common descriptive practices and methodologies have been followed.

B2 CLASSIFICATION TESTS

B2.1 Visual Classification

The soils were classified in accordance with the Unified Soil Classification System with certain other terminology, such as the relative density or consistency of the soil deposits, in general accordance with engineering practice. In determining the soil type (that is, gravel, sand, silt, or clay) the term that best described the major portion of the sample is used. Modifying terminology to further describe the samples is defined in Table A-1, Terminology Used to Describe Soil, in Appendix A.

B2.2 Moisture (Water) Contents

Natural moisture content determinations were made on samples of the fine-grained soils (that is, silts, clays, and silty sands). The natural moisture content is defined as the ratio of the weight of water to dry weight of soil, expressed as a percentage. The results of the moisture content determinations are presented on the exploration logs in Appendix A and on Figure B1, Summary of Laboratory Data, in Appendix B.

B2.3 Grain-Size Analyses (P200 Wash)

Washed sieve analyses (P200) were completed on samples to determine the portion of soil samples passing the No. 200 Sieve (i.e., silt and clay). The results of the P200 test results are presented on the exploration logs in Appendix A and on Figure B1, Summary of Laboratory Data, in Appendix B.

SUMMARY OF LABORATORY DATA

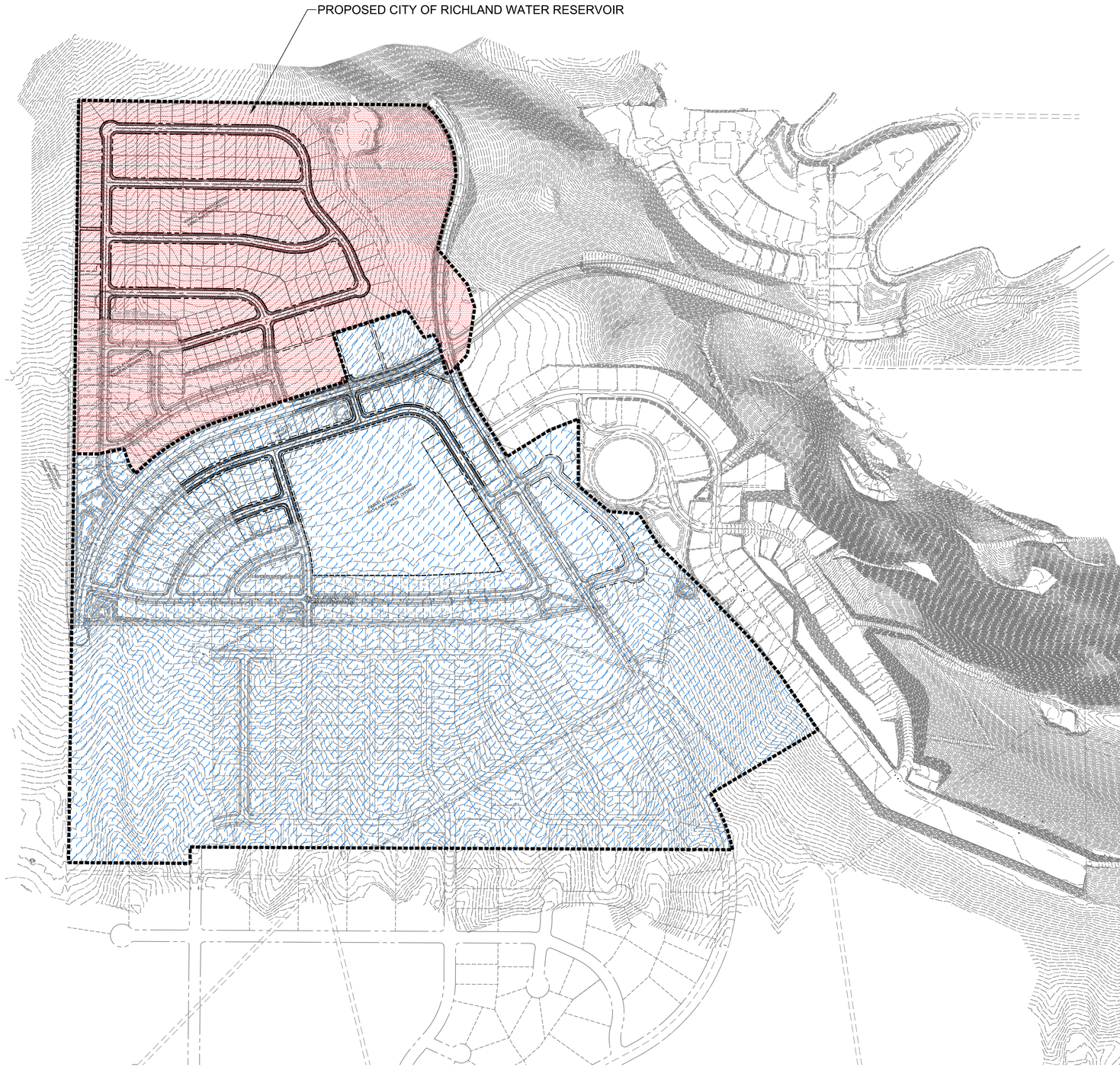
MONSON PROPERTY WORK PLAN
RICHLAND, WASHINGTON

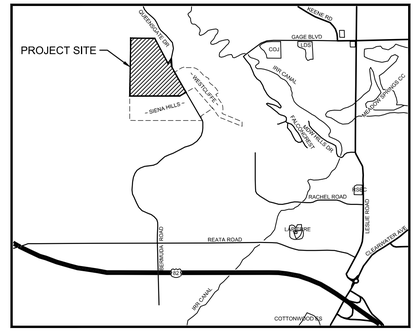
PBS PROJECT NUMBER:
66336.000

SAMPLE INFORMATION				MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	SIEVE			ATTERBERG LIMITS		
EXPLORATION NUMBER	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	ELEVATION (FEET)			GRAVEL (PERCENT)	SAND (PERCENT)	P200 (PERCENT)	LIQUID LIMIT (PERCENT)	PLASTIC LIMIT (PERCENT)	PLASTICITY INDEX (PERCENT)
TP-1	S-2	4		21.0				62			
TP-2	S-2	4		7.2				87			
TP-6	S-2	4		8.8				52			
TP-13	S-2	4		9.3				70			
TP-21	S-2	4		12.6				76			

FIGURE B1

__LAB SUMMARY 66336.000_TP1-30_20210727.GPJ PBS_DATATMPL_GEO.GDT PRINT DATE: 8/3/21:RPG





VICINITY MAP
NOT TO SCALE

Scale 1" = 300'

0 150 300 600

SEWER BASIN LEGEND

APPROXIMATE WATER PRESSURE BOUNDARIES BASED ON EXISTING CONTOUR DATA AND PREVIOUS DESIGNS

ZONE 4

ZONE 5

Apex Companies, LLC
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
apexcos.com

APEX

WATER PRESSURE MAP FOR: PEACH TREE ESTATES III

A SITE LOCATED IN THE CITY OF RICHLAND, WASHINGTON

811 Know what's below. Call before you dig.

JASON L. MATTON — STATE OF WASHINGTON — 14707 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

DESIGNED:	ELG/MCR
CHECKED:	JLM
	JUNE 2025
	24012988
SHEET ID	

SHEET 1 OF 1

Filename: L:\Projects_DVP\MMD\0002\24012988\Civil\CAD\WorkingExhibits\24012988_WaterPressureMap.dwg Layout Tab: WATERPRESSUREMAP User: Elisabeth Giever CAD Plot Date/Time: 6/20/2025 1:41:16 PM

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

MEMORANDUM

DATE: 8/16/2024

TO: Pete Rogalsky, P.E., City of Richland
Jason Mattox, P.E., PBS

CC:

FROM: Tirzah Eyre, P.E.
Ben Haws, P.E.

SUBJECT: Peach Tree Estates Phases 2 & 3 Sewer Model

The purpose of this technical memorandum is to address additional modeling scenarios proposed for the Peach Tree Estates Subdivision. This serves as an addendum to the original Peach Tree Estates Sewer Model memorandum dated 11/2/2022 and the Addendum dated 3/7/2023. Peach Tree Estates is planned to be constructed in five phases. PBS has begun design of Phases 2 and 3 and made some design changes. One change has altered the boundaries of Phases 2 and 3 resulting in fewer homes being developed in each phase. The second change has altered the Sienna Hills Lift Station service boundary for Phases 2 and 3. Additionally, PBS performed a survey of the existing sanitary sewer main in Meadow Hills Drive (Location #1 from previous memos). The survey found the actual pipe slopes and inverts did not match the model. Due to these changes and findings, the model was updated and Phase 2 and Phase 3 scenarios were re-run to identify any hydraulic capacity issues in the existing sanitary sewer system.

Model Setup

No changes were made to lot unit demands or diurnal curves as part of this analysis. Allocation of demands to proposed pipes were updated to reflect the new Phases 2 and 3 boundaries as well as the new lift station service area boundary. The updated allocation is shown in Figure 1.

Inverts and slopes of model pipes along Meadow Hills Drive were updated to reflect the PBS survey results.

Model Results

Scenarios for full buildout of Phase 2 and Phase 3 were run in the model. The phases were assumed to be fully built out in order from Phase 1 to Phase 3. Figure 1 shows the updated phase boundaries and demand allocation. The scenarios modeled are as follows:

Phase 1-2.....Figure 2
Phase 1-3.....Figure 3

Phase 1-2 Model Results

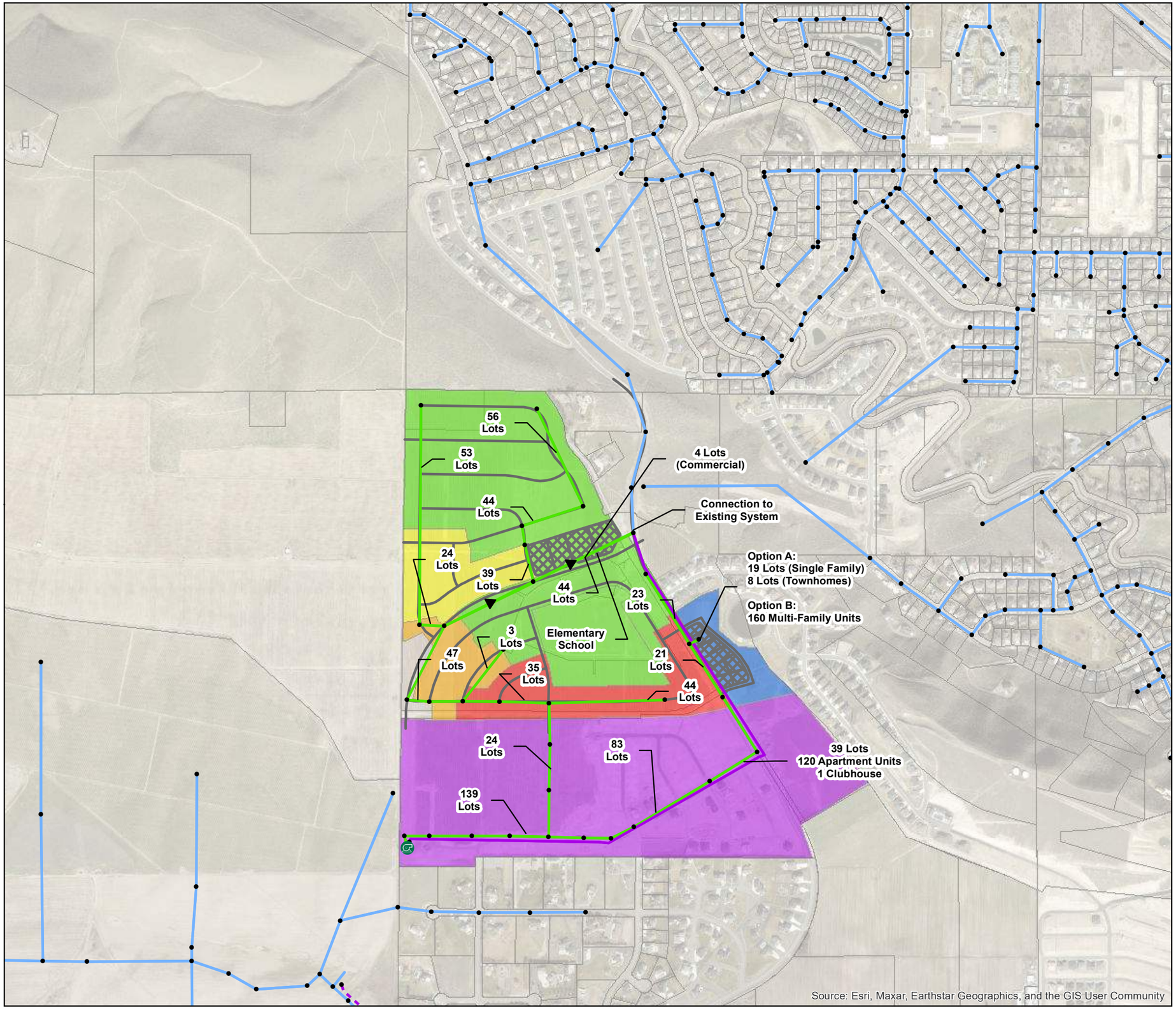
Figure 2 shows the depth over diameter (d/D) results for the Phase 1-2 scenario. Locations #1, #2, and #4 are nearing capacity. No locations exceed the City required maximum d/D of 0.90.

Phase 1-3 Model Results

Figure 3 shows the d/D results for the Phase 1-3 scenario. Locations #2 and #4 are nearing capacity. Location #1 has met the City required maximum d/D of 0.90 but has not exceeded it. No other locations exceed the City required maximum d/D.

Conclusion/Recommendations

The revised Phases 2 and 3 boundaries do not require improvements to the existing sanitary sewer collection system. However, full buildout of Phase 3 causes Location #1 to meet the City required maximum d/D of 0.90. Any additional flow contributing to location #1 beyond the full buildout of Phase 3 will cause the pipe to exceed the required maximum d/D. It is recommended to re-run the model scenarios if there are any changes to phase boundaries or demands as it may result in exceeding the maximum d/D.



City of Richland

2022-2026 Sewer Modeling

Figure 1

Peach Tree Estates Sewer Model

Legend

- Sienna Hills Lift Station
- Manhole (Model)
- Existing Gravity Pipe (Model)
- Existing Forcemain (Model)
- Proposed Gravity Pipe (Model)
- Proposed Forcemain (Model)

Phase

- 1 (Peach Tree)
- 2 (Peach Tree)
- 3 (Peach Tree)
- 4 (Peach Tree)
- 5 (Peach Tree)
- Sienna Hills

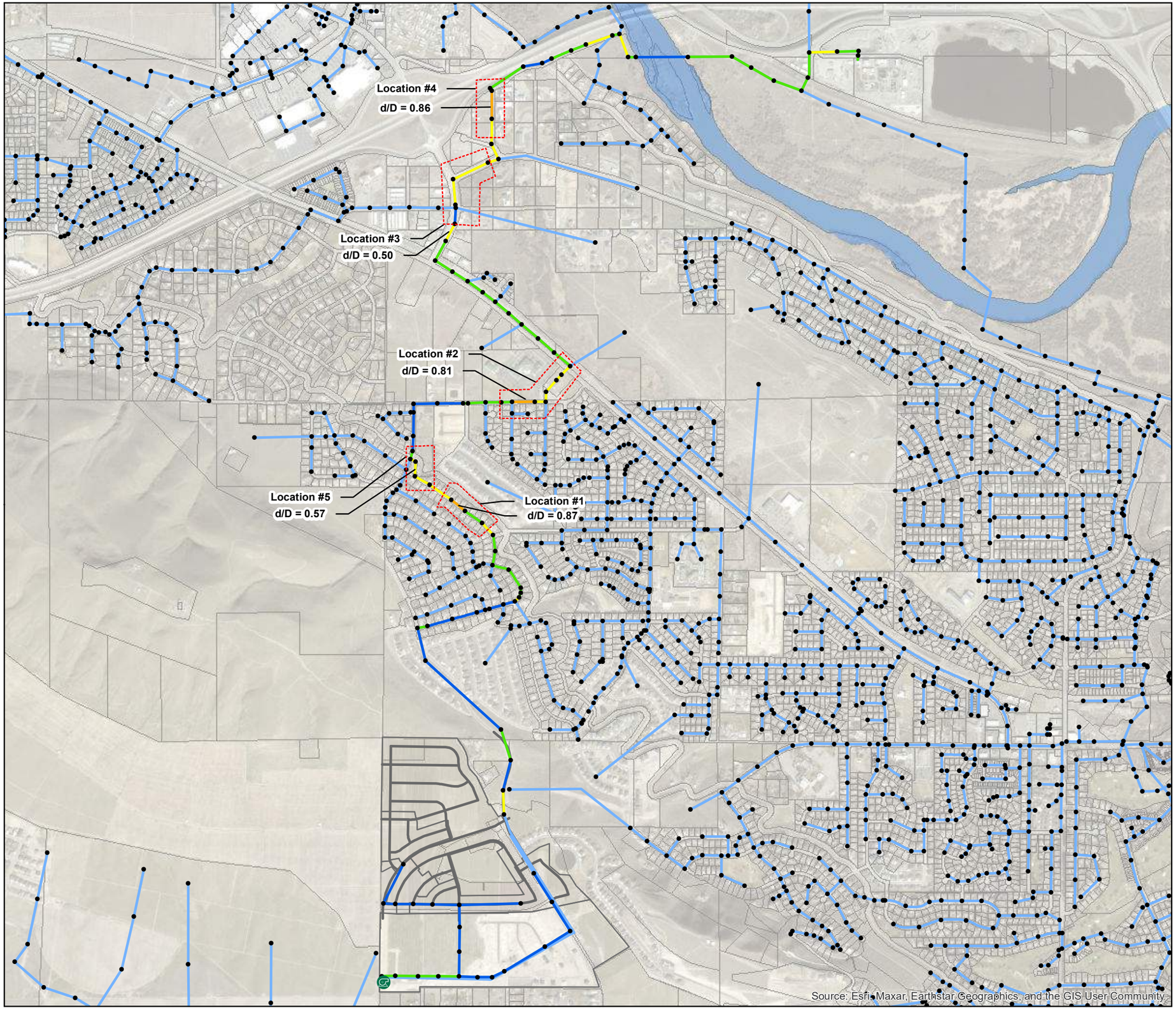
Notes:
1. Results include the design storm event (2yr, 3hr) - 0.424"

0 800 1,600 ft

N W E S

Date: 8/8/2024

J-U-B ENGINEERS, INC.



City of Richland

2022-2026 Sewer Modeling

Figure 2

Peach Tree Estates Phase 2 Depth Over Diameter

Legend

- Sienna Hills Lift Station
- Manhole (Model)
- Sewer Pipes (Model)

Depth Over Diameter

- 0.0 - 0.3
- 0.3 - 0.5
- 0.5 - 0.7
- 0.7 - 0.9
- > 0.9

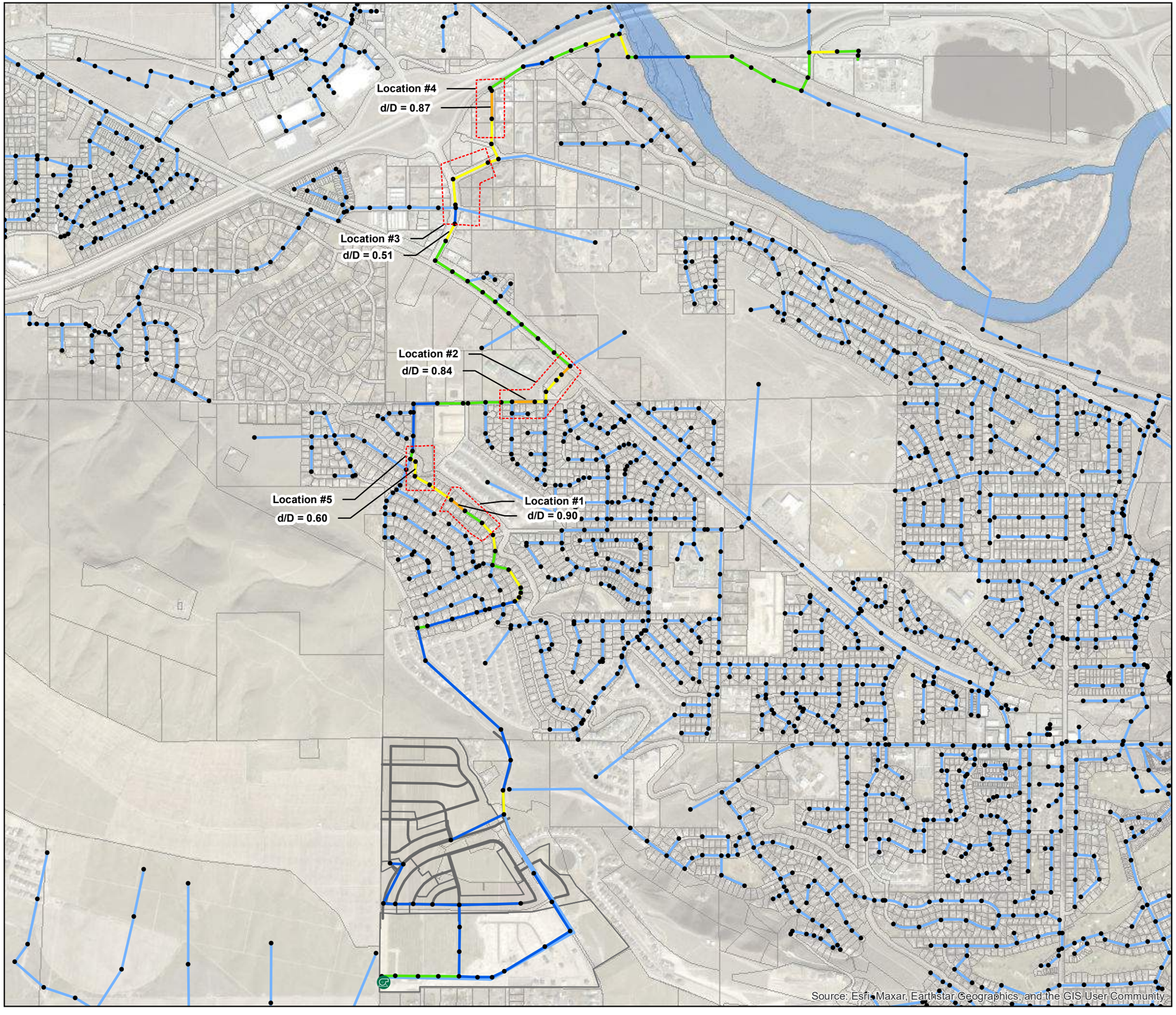
Notes:
1. Results include the design storm event (2yr, 3hr) - 0.424"

0 1,500 3,000 ft

N W E S

Date: 8/8/2024

J-U-B ENGINEERS, INC.



City of Richland

2022-2026 Sewer Modeling

Figure 3

Peach Tree Estates Phase 3 Depth Over Diameter

Legend

- Sienna Hills Lift Station
- Manhole (Model)
- Sewer Pipes (Model)

Depth Over Diameter

- 0.0 - 0.3
- 0.3 - 0.5
- 0.5 - 0.7
- 0.7 - 0.9
- > 0.9

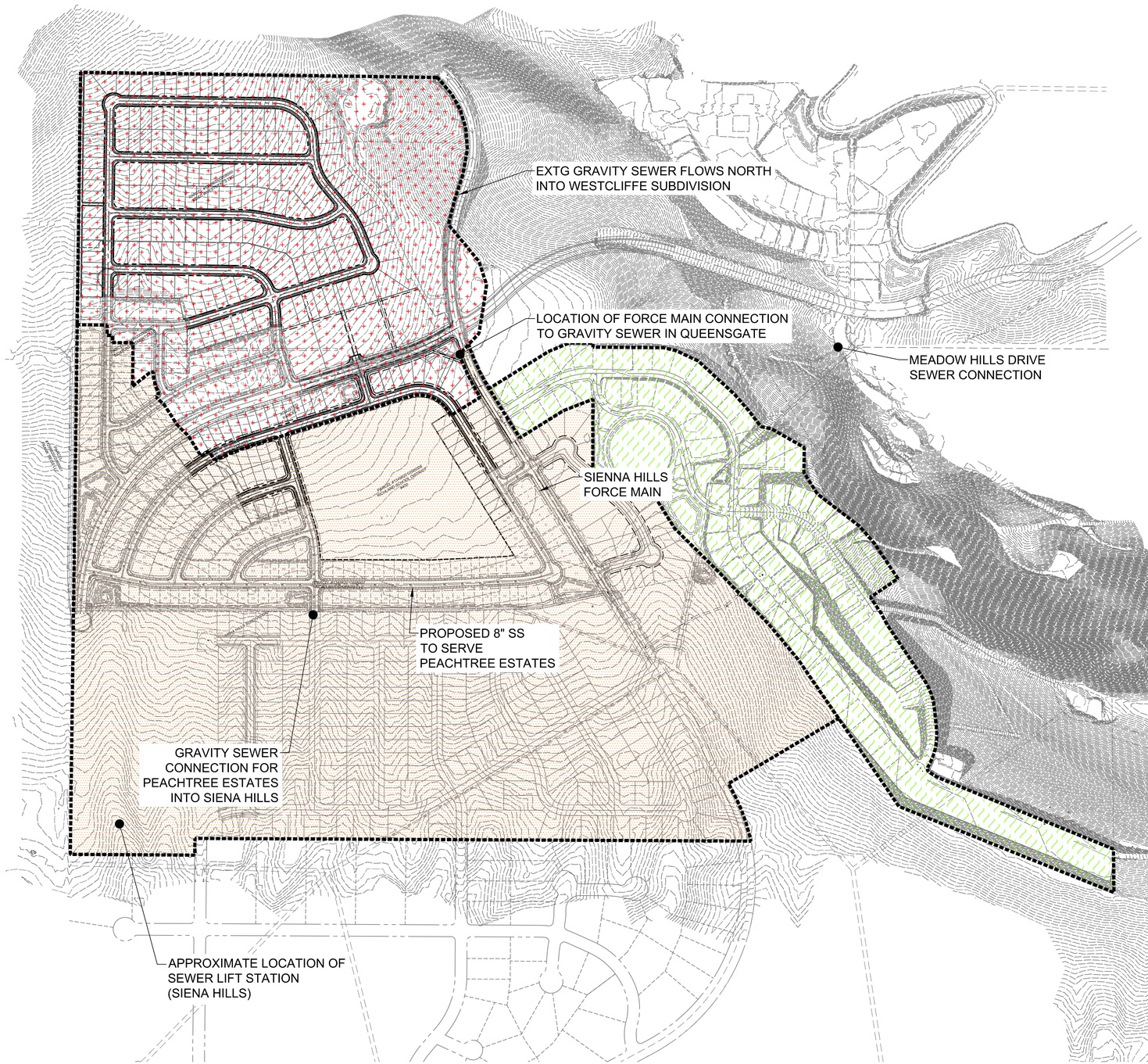
Notes:
1. Results include the design storm event (2yr, 3hr) - 0.424"

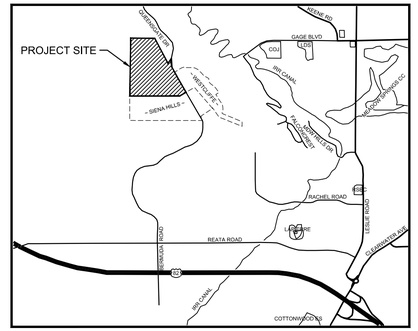
0 1,500 3,000 ft

N W E S

Date: 8/8/2024

J-U-B ENGINEERS, INC.





VICINITY MAP
NOT TO SCALE

Scale 1" = 160'
0 80 160 320

SEWER BASIN LEGEND

APPROXIMATE SEWER BASIN BOUNDARIES BASED ON EXISTING CONTOUR DATA AND PREVIOUS DESIGNS

BASIN 1 MEADOW HILLS DRIVE CONNECTION (GRAVITY) (WESTCLIFFE HEIGHTS) (45 ACRES)

BASIN 2 QUEENSGATE DRIVE CONNECTION (GRAVITY) (92 ACRES)

BASIN 3 QUEENSGATE DRIVE CONNECTION (PUMPED) (PUMP STATION INSTALLED IN SIENNA HILLS) (150 ACRES)

Apex Companies, LLC
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
apexcos.com

APEX

PROPOSED SITE ZONING MAP FOR:
PEACH TREE ESTATES III
A SITE LOCATED IN THE CITY OF RICHLAND, WASHINGTON

811 Know what's below. Call before you dig.

JASON L. MATTON
STATE OF WASHINGTON
14707
REGISTERED
PROFESSIONAL ENGINEER
PRELIMINARY

DESIGNED:	ELG/MCR
CHECKED:	JLM
	JUNE 2025
	24012988
SHEET ID	

SHEET 1 OF 1

Filename: L:\Projects_DV\PMMD\D0002\24012988\Civil\CAD\Working\Exhibits\24012988_SewerBasinMap.dwg Layout Tab: SEWERBASIN User: Elisabeth Giever CAD Plot Date/Time: 6/20/2025 11:18:10 AM

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

RH2 ENGINEERING
Richland
114 Columbia Point Drive, Suite C
Richland, WA 99352
1.800.720.8052 / rh2.com

June 9, 2025

Colby Getchell
District Manager
Badger Mountain Irrigation District
87525 E Reata Road
Kennewick, WA 99338

Sent via: *Email*

Subject: **Peach Tree Estates II Phases 1 and 2 – Hydraulic Analyses**

Dear Mr. Getchell:

This letter contains the results of hydraulic analyses conducted for the Badger Mountain Irrigation District's (District) proposed Peach Tree Estates II Phases 1 and 2 (Phases 1 and 2) development, located north of Snowking Street and west of Bermuda Road. The area primarily will be served by the Main Booster Pump Station (MBPS) located on the south side of Badger Mountain. RH2 Engineering, Inc., (RH2) performed this analysis using a computer model of the District's irrigation system to evaluate the proposed pipeline layout and diameters and develop recommendations as needed. Refer to **Attachment 1** for the District's existing irrigation system.

Background

Peach Tree Estates I (all phases) was modeled as an existing development (existing Peach Tree). Phases 1 and 2 are planned for near-term construction. Preliminary plans show additional parcels that would complete the remaining Peach Tree area at full build-out (Peach Tree build-out). At the District's request, RH2 evaluated pressures and velocities throughout the Peach Tree development using preliminary utility plans provided to RH2 by PBS Engineering and Environmental, Inc., (PBS) on May 21, 2025 (see **Attachment 2** for excerpt). The proposed irrigation infrastructure is based on PBS's file dated May 20, 2025. The results of these analyses will guide the near-term Phases 1 and 2 improvement recommendations.

WASHINGTON LOCATIONS
Bellingham
Bellevue
Bothell (Corporate)
East Wenatchee
Richland
Tacoma

OREGON LOCATIONS
Medford
Portland

IDAHO LOCATIONS
Nampa

Design Criteria

The following design criteria were applied:

- Minimum pressure during peak hour demand (PHD): 40 pounds per square inch (psi).
- Maximum pressure during PHD conditions: 90 psi.
- Maximum pipe velocity: 5 feet per second (fps).
- Minimum pipe diameter: 4 inches. The use of smaller pipes may be further evaluated at the District's discretion, but RH2 modeled a 6-inch-diameter minimum pipe size to reduce excessive velocities, align with developer plans, and accommodate future expansion.
- Pipe material: C900 polyvinyl chloride (PVC) (DR18).

Hydraulic Model Operating Conditions

The model was run with the following assumptions and initial conditions:

- Reservoir water level: 910.80 feet (2 feet below overflow per as-builts).
- All River Pump Station pumps are active and turned on.
- Six of 14 MBPS pumps are active and turned on (consistent with typical PHD operations as reported by the District).
- Elevations from Benton County GIS 10-foot contours.
- Pressure reducing valve (PRV) stations are consistent with District setpoints and Google Earth elevations.
- System demands (excluding Phases 1 and 2 and future developments):
    - Allocated based on the District's design criteria and served parcel acreage.
    - Estimated 2025 PHD: 22,495 gallons per minute (gpm) for the entire system.

Projected Development Demand

Demands were assigned based on the District's residential design criteria and estimated parcel sizes.

Preliminary development plans indicate that Peach Tree build-out includes approximately 439 total parcels. This includes existing and proposed parcels regardless of pressure zones.

- 427 parcels (less than ½ acre): 3 gpm per entire parcel.
- 2 parcels (between ½ acre and 1 acre): 6 gpm per parcel acreage.
- 10 parcels (greater than 1 acre): 8 gpm per parcel acreage.

- Peak demand at remote node: 30 gpm[1].
- Total projected irrigation demand: 1,590 gpm (replaces approximately 321 gpm of pre-existing agriculture demand).

Irrigation service within the development is recommended to be provided by two pressure zones, with the proposed development generally south of Gage Boulevard served by a lower pressure zone (directly served by the MBPS), and the proposed development generally north of Gage Boulevard served by a proposed developer booster pump station (DBPS). The breakdown of the projected 1,590 gpm irrigation demand for the entire development is as follows:

- Upper pressure zone (served by DBPS): 201 parcels.
    - 199 parcels (less than ½ acre): 3 gpm per entire parcel.
    - 2 parcels (greater than 1 acres): 8 gpm per parcel acreage.
    - Peak demand at remote node: 30 gpm[2].
    - Total projected irrigation demand: 712 gpm.
- Lower pressure zone (served by MBPS): 238 parcels.
    - 228 parcels (less than ½ acre): 3 gpm per entire parcel.
    - 2 parcels (between ½ and 1 acre): 6 gpm per parcel acreage.
    - 8 parcel (greater than 1 acre): 8 gpm per parcel acreage.
    - Total projected irrigation demand: 878 gpm.

Elevations

The entire Peach Tree development includes an elevation range from 1,047 feet in the northwest to 880 feet in the south, generally sloping southeast. This results in an elevation difference of 167 feet or approximately 72 psi.

Hydraulic Analysis Results

The figures referenced herein illustrate modeled node pressure and pipeline velocities. Color contours match the legend, and pipe diameters are labeled for reference.

The existing Peach Tree development is served by a connection to a 30-inch-diameter PVC main south of Snowking Street via a strainer box. No PRV is installed at this connection point. Field data measurements provided by the District and hydraulic model calculations indicate pressures near the connection point of approximately 75 and 71 psi, respectively. These

[1] Per the District's *Design Criteria for Irrigation Systems Serving Residential Development* (adopted February 2022) to ensure systems meet short duration peak flow rates for safe and reliable operation.
[2] Per the District's *Design Criteria for Irrigation Systems Serving Residential Development* (adopted February 2022) to ensure systems meet short duration peak flow rates for safe and reliable operation.

relatively similar pressures indicate consistency between the field pressures and existing model conditions.

Scenario 1: Peach Tree Build-Out – One Pressure Zone

This scenario models the Peach Tree build-out development if the development were to be served by a single pressure zone via the 30-inch-diameter PVC mainline without a DBPS.

The results of the analysis for this scenario are shown in **Figure 1**, which indicates that the District's minimum pressure requirement cannot be attained without additional improvements. Sensitivity analyses for this scenario to determine if pipe sizes larger than 6-inch-diameter would result in adequate pressures (as a result of reduced headlosses) were not performed due to the significant elevation difference between the pressure provided at the connection near Snowking Street and the northern extent of the proposed development. If pipe sizes were artificially increased to the point that no headlosses exist, the resulting pressure at the highest elevation in the proposed development would be approximately 0 psi, significantly below the District's 40 psi minimum pressure criteria. A summary of the pressure and velocity results for Scenario 1 with 6-inch-diameter piping throughout the development is as follows:

- Minimum pressure: approximately -16 psi in the northwest corner (below 40 psi design criteria).
- Maximum velocity: approximately 10.2 fps near the southern entrance (exceeds 5 fps design criteria).

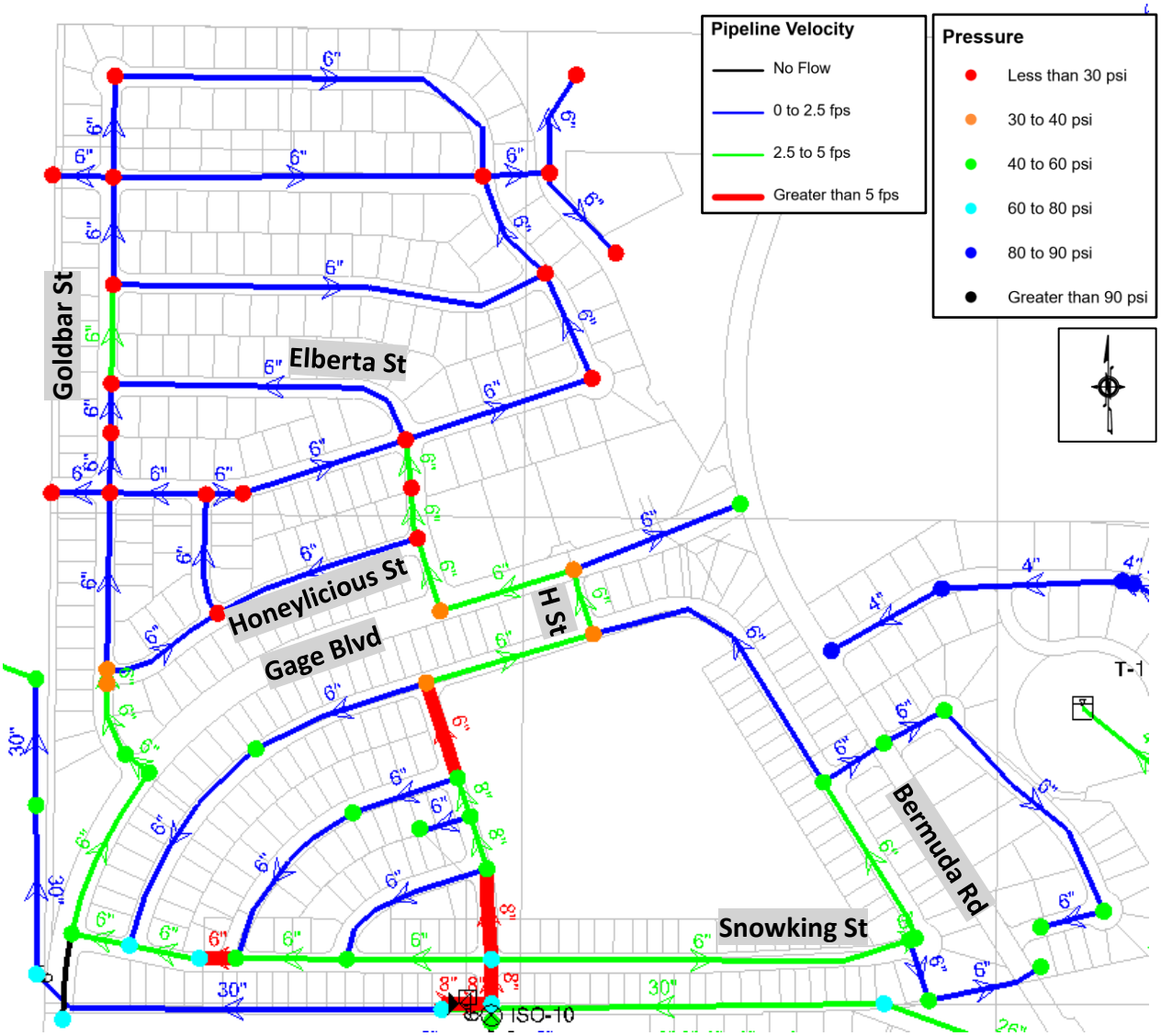


Figure 1 – Pressure and Velocity Results – Peach Tree Build-Out – One Pressure Zone

Scenario 2: Peach Tree Build-Out – Two Pressure Zones (with DBPS)

This scenario models the entire Peach Tree build-out development during PHD conditions if it were to be served by two pressure zones.

- The upper zone is served by a proposed Peach Tree DBPS serving the area outlined by the red polygon in **Figure 2**. The proposed DBPS is supplied by a second connection to the District's existing 30-inch-diameter PVC mainline as shown in **Figure 2** and was modeled with the following configuration to meet PHD demands:
    - Two pumps active and rated for 360 gpm at 115 feet total dynamic head (TDH).
    - Two smaller pumps inactive. Design point information for these pumps is included in the **Recommendations** section of this letter.

- The lower zone is served by the MBPS through the existing connection to the 30-inch-diameter PVC mainline.

The results of the analyses for this scenario are shown in **Figure 2** and are summarized as follows.

- Upper zone:
    - Minimum pressure: approximately 40 psi at the north end of Goldbar Street.
    - Maximum Pressure: approximately 93 psi at the Goldbar Street and Honeylicious Street intersection (exceeds 90 psi design constraint).
    - Maximum velocity: approximately 4.6 fps in the proposed 8-inch-diameter pipe downstream of the proposed DBPS.
- Lower zone:
    - Minimum pressure: approximately 43 psi at the Gage Boulevard and Elberta Street intersection.
    - Maximum Pressure: approximately 72 psi in the southwest along Gage Boulevard.
    - Maximum velocity: approximately 5.6 fps near the southern entrance (exceeds 5 fps design criteria).

The Scenario 2 configuration meets the minimum pressure constraint, slightly exceeds the maximum pressure constraint, and minimizes excess velocities throughout the development. If the high pressures are problematic, individual PRVs may be installed at affected customers.

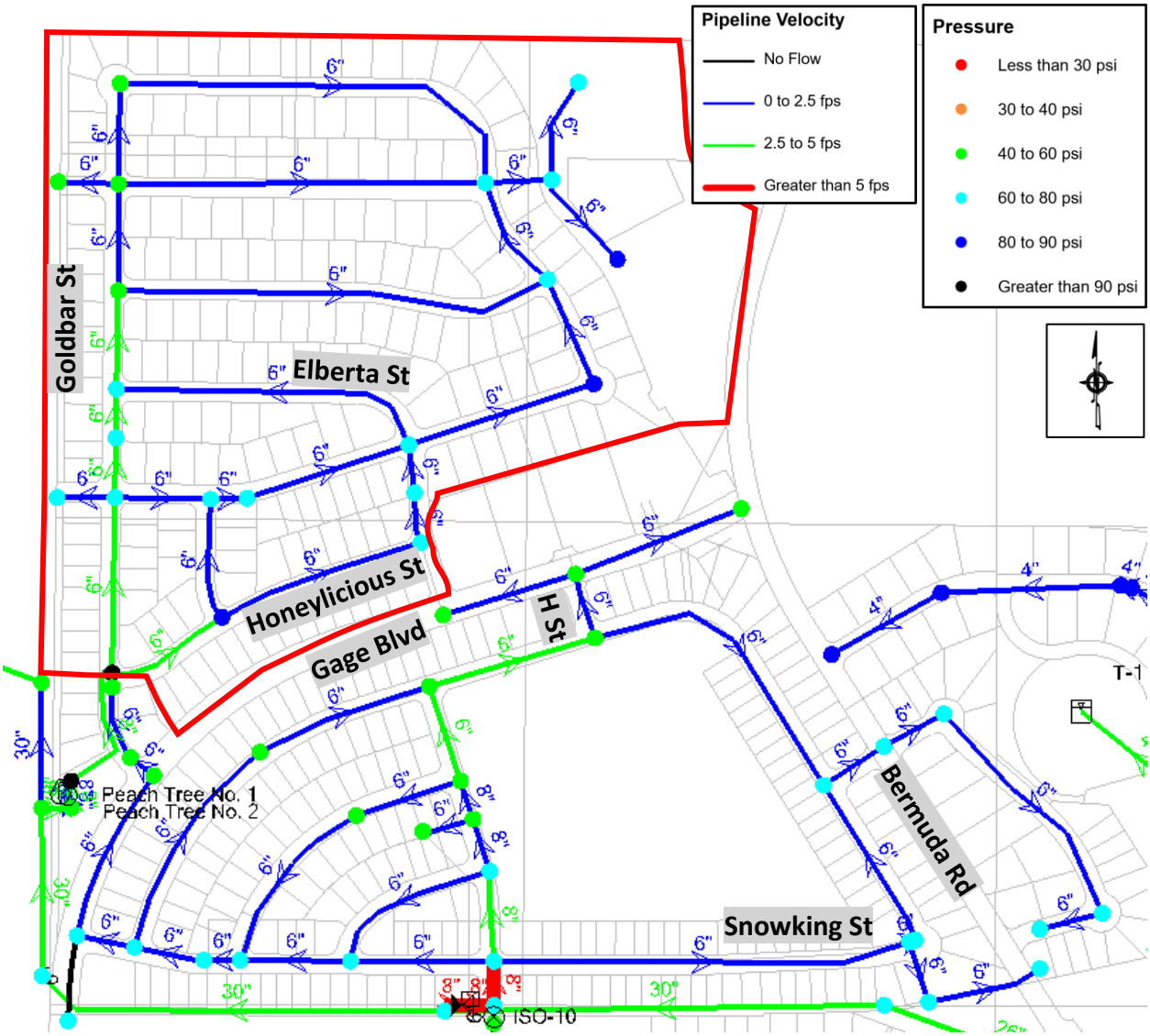


Figure 2 – Pressure and Velocity Results – Peach Tree Build-Out – Two Pressure Zones (with DBPS)

Recommendations

To adequately serve Phases 1 and 2, both in the near-term and at build-out, RH2 recommends the following:

- Install 6-inch-diameter PVC throughout Phases 1 and 2, except where shown in **Figure 2**.
- Install 8-inch-diameter PVC between the existing 30-inch-diameter PVC and the proposed DBPS, and to the Gage Boulevard and Goldbar Street intersection.

- Install a proposed DBPS with four pumps on the parcel at the intersection of Gage Boulevard and Goldbar Street.
    - Two pumps should be rated for 360 gpm at 115 feet TDH and equipped with variable frequency drives (VFDs), resulting in a total pumping rate of 720 gpm, slightly exceeding the projected 712 gpm PHD in the upper zone. These pumps will provide a high flow range between 125 gpm and 720 gpm. The recommended pumps are included in **Attachment 3**.
    - One pump should be rated for 125 gpm at 110 feet TDH and equipped with a VFD, providing medium flow (55 to 125 gpm). This recommended pump is included in **Attachment 3**.
    - One pump should be rated for 55 gpm at 110 feet TDH and equipped with a VFD, providing low flows (0 to 55 gpm). This recommended pump is included in **Attachment 3**.
    - The proposed pumps are recommended to be equipped with VFDs.
    - It is recommended the developer:
        - Install the 55 and 125 gpm pumps initially to serve early-phase developments. Provisions should be installed as part of the initial BPS construction to facilitate easy installation of the two future 360 gpm pumps and motors;
        - Install one 360 gpm pump alongside the small and medium pumps during later development phases for an incremental capacity increase as necessitated by development progress; and
        - Install the second 360 gpm pump as necessitated by development progress and to match the final development capacity needs.
- Ensure physical separation between the two pressure zones at the following locations:
    - Gage Boulevard and Goldbar Street intersection.
    - Honeylicious Street and Goldbar Street intersection.
    - In Elberta Street between Honeylicious Street and Gage Boulevard.
- Install individual PRVs at lots 37, 38, 39, 40, 52, 53, and 54 with expected high pressures (i.e., greater than 90 psi). If additional lots experience high pressures, the District is recommended to install individual PRVs on an “as-needed” basis.

If you have any questions regarding these analyses, please contact me at (509) 392-5023 or via email at jlawrence@rh2.com. Thank you for the opportunity to assist you with this project.

Sincerely,

Joe Lawrence, PE

Project Engineer
RMW/KRS/sp/fs

Signed: 6/9/25

Signed: 6/9/25

Attachments:

Attachment 1 – Figure I-1 Existing Irrigation System

Attachment 2 – Peach Tree Estates II Development Plans

Attachment 3 – Pump Curves

Attachments

Legend

- City Limits
- BMID Limits

Irrigation System Infrastructure

- Pressure Reducing Valve
- Pumps
- Reservoir
- River Intake
- Irrigation Main

Yakima River Intake
River Pump Station
Sundance 1
Sundance 2
Heritage Hills
Frank Hill
BM ELM Sch
BM COR Park
Cherrywood
Country Ridge
Gala
BMID Reservoir
Legacy
Main Booster Pump Station
Morency
Sienna Hills
D.O. 2B
D.O. 2A
D.O. 5C
D.O. 3
D.O. 6
D.O. 4
D.O. 7A
D.O. 7B
D.O. 10
Reata Ridge
D.O. 11
Reata 12
Reata Overpass
Booster A
D.O. 16
D.O. 17
D.O. 18
D.O. 29
D.O. 30
Bella Coola
Joshua
RDR 6
RDR 2
Reata
Meadowhills

Queensgate Dr
Columbia Park Trl
State Rte 240
Yakima River
Shockley Rd
I- 182
I- 82
Dallas Rd
Gala Way
Keene Rd
Englewood Dr
Canyon St
N Steptoe St
W Gage Blvd
Gage Blvd
Bermuda Rd
S Bermuda Rd
Reata Rd
E Reata Rd
Leslie Rd
W Clearwater Ave

Esri, HERE, Garmin, USGS, EPA, NPS

Geophex Surveys Ltd., Maxar

This map is a graphic representation derived from the BMID Geographic Information System. It was designed and intended for BMID staff use only; it is not guaranteed to survey accuracy. This map is based on the best information available on the date shown on this map.

Any reproduction or sale of this map, or portion thereof, is prohibited without express written authorization by the BMID.

This material is owned and copyrighted by Badger Mountain Irrigation District.

PRELIMINARY

Vicinity Map

Figure I-1
Existing Irrigation System

Badger Mountain Irrigation District

BMID

1 inch : 1,250 Feet

0 495 990 1,980 Feet

DRAWING IS FULL SCALE
WHEN BAR MEASURES 2"

RH2

NORTH

J:\DATA\BMID\24-0158\GIS\BMID GENERAL MAPS\BMID GENERAL MAP.APRX BY: JLAWRENCE PLOT DATE: MAY 8, 2025 COORDINATE SYSTEM: NAD 1983 STATEPLANE WASHINGTON SOUTH FIPS 4602 FEET

Attachment 2

Peach Tree Estates II Development Plans

PEACH TREE ESTATES II

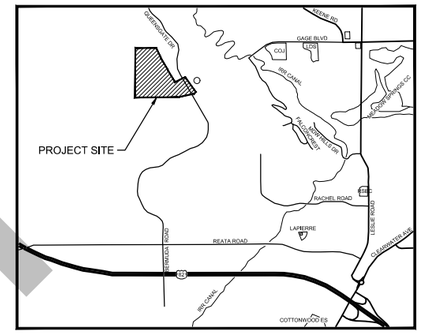
PHASES 1-2 IMPROVEMENTS

LOCATED IN THE NW 1/4, A PORTION OF THE SW 1/4 OF THE NE 1/4 AND A PORTION OF THE N. 1/2 OF THE SW 1/4 OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST OF THE WILLAMETTE MERIDIAN, LOCATED IN THE CITY OF RICHLAND, BENTON COUNTY, WASHINGTON

OWNER / DEVELOPER:
MD&D INVESTMENTS, LLC
63615 E. JACOBS RD NE SUITE 120
BENTON CITY, WA 99320

ENGINEER:
PBS ENGINEERING AND ENVIRONMENTAL
CONTACT: JASON MATTOX, PE
400 BRADLEY BLVD, SUITE 106
RICHLAND, WA 99352
(509) 942-1600

SURVEYOR:
PBS ENGINEERING AND ENVIRONMENTAL
CONTACT: CHRIS D'ORAZIO, PLS
400 BRADLEY BLVD, SUITE 106
RICHLAND, WA 99352
(509) 942-1600



VICINITY MAP
NOT TO SCALE

VERTICAL DATUM AND PROJECT BENCHMARK:

BRASS CAP AT THE INTERSECTION OF GALA WAY AND SICILY LANE, CITY OF RICHLAND NAVD88. ELEVATION FOR THIS MONUMENT IS 699.05.

SITE BENCHMARK:

SITE BENCH MARK IS A 5/8" IRON ROD IN PIPE AT THE NORTHWEST CORNER OF SECTION 34, ELEVATION FOR THIS MONUMENT IS 1072.36.

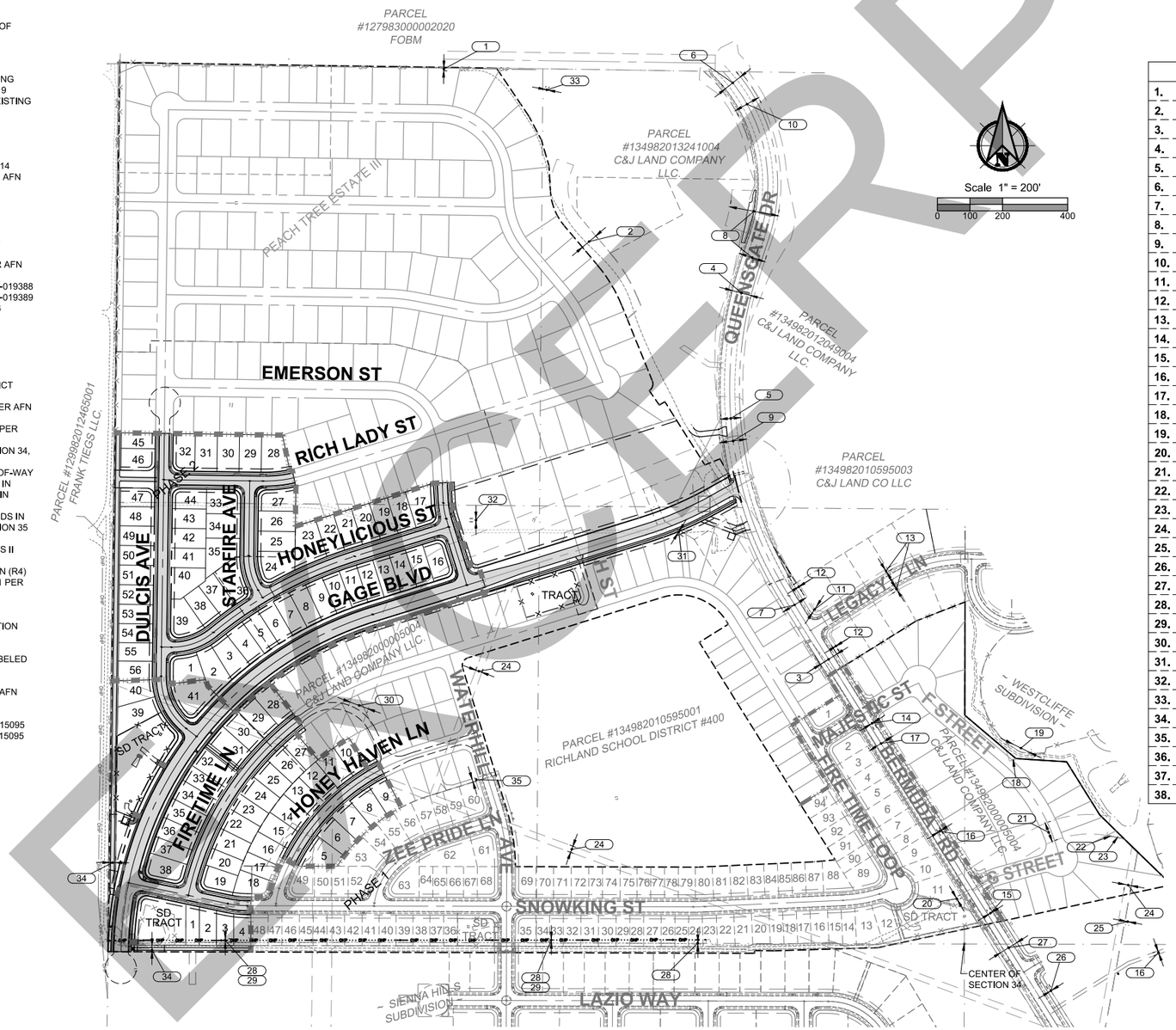
BASIS OF BEARINGS:

NAD83 WASHINGTON STATE SOUTH ZONE GRID BEARING OF S89°09'47"E ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 34, TOWNSHIP 9 NORTH, RANGE 28 EAST WILLAMETTE MERIDIAN AS MEASURED BETWEEN EXISTING MONUMENTS.

EASEMENT KEY: (XX)

1. 10' BENTON PUBLIC UTILITY DISTRICT NO. 1 EASEMENT PER AFN 1993-34114
2. 54' PRIVATE ROAD EASEMENT FOR USE OF 3 LOTS PER SHORT PLAT 3241 AFN 2010-007065
3. 60' RIGHT OF WAY PER AFN 2018-017826
4. 60' RIGHT OF WAY PER AFN 2018-017827
5. 60' RIGHT OF WAY PER AFN 2018-017828
6. 60' RIGHT OF WAY PER AFN 2018-017829
7. 80' ACCESS AND UTILITY EASEMENT TO THE CITY OF RICHLAND PER AFN 2017-019386
8. 80' / 150' ACCESS AND UTILITY EASEMENT TO THE CITY OF RICHLAND PER AFN 017-019387
9. 80' ACCESS AND UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2017-019388
10. 80' ACCESS AND UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2018-019389
11. VARIABLE WIDTH LANDSCAPE & ENTRY MONUMENT PER AFN 2018-037686
12. 1' NO ACCESS / SCREENING EASEMENT PER (R7)
13. 10' PUBLIC UTILITY EASEMENT PER (R7)
14. 10' WATERLINE EASEMENT TO CITY OF RICHLAND PER AFN 2018-001484
15. 10' WATERLINE EASEMENT TO CITY OF RICHLAND PER AFN 2018-001483
16. 10' WATERLINE EASEMENT TO CITY OF RICHLAND PER AFN 2018-001482
17. 80' ACCESS AND UTILITY EASEMENT PER AFN 2019-001554
18. VARIABLE WIDTH EASEMENTS TO BADGER MOUNTAIN IRRIGATION DISTRICT PER AFN 718936, PARTIALLY TERMINATED PER AFN 2019-005050
19. 60' SPILLWAY EASEMENT TO BADGER MOUNTAIN IRRIGATION DISTRICT PER AFN 2018-037403
20. 10' IRRIGATION EASEMENT TO BADGER MOUNTAIN IRRIGATION DISTRICT PER AFN 2020-033644
21. 60' ACCESS EASEMENT PER AFN 862635, BENEFITING ALL LANDS IN SECTION 34, EXCEPT THE N 1/2 OF THE NE 1/4 THAT PORTION OF SECTION 35 LYING SOUTHERLY AND WESTERLY OF THE K.I.D. EAST LATERAL CANAL RIGHT-OF-WAY
22. 60' INGRESS-EGRESS, UTILITY, & IRRIGATION EASEMENT PER AFN 898901 IN FAVOR OF LAND NOW BEING SHORT PLAT NO. 1452 (ADJACENT PORTION IN TRACT A OF WESTCLIFFE HEIGHTS II TERMINATED BY 2019-002642
23. 60' INGRESS-EGRESS EASEMENT PER AFN 87-16073, BENEFITING ALL LANDS IN SECTION 34, EXCEPT THE N 1/2 OF THE NE 1/4 & THAT PORTION OF SECTION 35 LYING SOUTHERLY AND WESTERLY OF THE K.I.D. EAST LATERAL CANAL RIGHT-OF-WAY (ADJACENT PORTION IN TRACT A OF WESTCLIFFE HEIGHTS II TERMINATED BY AFN 2019-000678)
24. 20' BADGER MOUNTAIN IRRIGATION DISTRICT EASEMENT AS DEPICTED ON (R4)
25. 10' RIGHT-OF-WAY EASEMENT TO BENTON PUBLIC UTILITY DISTRICT NO. 1 PER AFN 728681
26. 10' UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2016-004839
27. 60' RIGHT-OF-WAY PER SIENA HILLS PHASE 1 AFN 2021-051239
28. 10' UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2016-004839 (PORTION TO SOUTH TERMINATED BY AFN 2022-004850)
29. 10' UTILITY EASEMENT TO CITY OF RICHLAND PER AFN 2014-006658
30. 60' INGRESS-EGRESS EASEMENT PER AFN 765776, IN FAVOR OF LAND LABELED AS "PROPERTY" (AKA LOTS 1-4 OF (R1))
31. 10' IRRIGATION EASEMENT PER (R1)
32. 10' BENTON PUBLIC UTILITY DISTRICT NO. 1 ELECTRICAL EASEMENT PER AFN 85-4566
33. 10' UTILITY EASEMENT PER SHORT PLAT NO. 3241 AFN 2010-007065
34. 20' BADGER MOUNTAIN IRRIGATION DISTRICT EASEMENT PER AFN 2024-015095
35. 10' BADGER MOUNTAIN IRRIGATION DISTRICT EASEMENT PER AFN 2024-015095

(R1) SHORT PLAT NO. 595 FOR MILO BAUDER (AFN 771566) BY WEBBER
(R4) SURVEY NO. 2614 FOR BMID (AFN 1996-12391) BY ROGERS
(R7) SURVEY NO. 5031 (AFN 2018-018513) BY BAALMAN



SHEET INDEX	
1.	COVER SHEET
2.	GENERAL NOTES, LEGENDS, DETAILS, AND ROAD SECTIONS
3.	OVERALL GRADING PLAN (1)
4.	OVERALL GRADING PLAN (2)
5.	GAGE BOULEVARD PLAN AND PROFILE BEGIN TO STA: 46+50
6.	GAGE BOULEVARD PLAN AND PROFILE STA: 46+50 TO STA: 51+00
7.	GAGE BOULEVARD PLAN AND PROFILE STA: 51+00 TO STA: 56+50
8.	GAGE BOULEVARD PLAN AND PROFILE STA: 56+50 TO STA: 61+50
9.	GAGE BOULEVARD PLAN AND PROFILE STA: 61+50 TO STA: 66+00
10.	GAGE BOULEVARD PLAN AND PROFILE STA: 66+00 TO END
11.	SNOWKING STREET PLAN AND PROFILE BEGIN TO END
12.	HONEY HAVEN LANE PLAN AND PROFILE BEGIN TO STA: 5+50
13.	HONEY HAVEN LANE PLAN AND PROFILE STA: 5+00 END
14.	FIRE TIME LANE PLAN AND PROFILE BEGIN TO STA: 4+00
15.	FIRE TIME LANE PLAN AND PROFILE STA: 4+00 TO END
16.	DULCIS AVENUE PLAN AND PROFILE BEGIN TO STA: 2+50
17.	DULCIS AVENUE PLAN AND PROFILE STA: 2+50 TO STA: 7+00
18.	DULCIS AVENUE PLAN AND PROFILE STA: 7+00 TO END
19.	EMERSON AVENUE PLAN AND PROFILE
20.	HONEYLICIOUS STREET PLAN AND PROFILE BEGIN TO STA: 2+50
21.	HONEYLICIOUS STREET PLAN AND PROFILE STA: 2+50 TO STA: 6+50
22.	HONEYLICIOUS STREET PLAN AND PROFILE STA: 6+50 TO END
23.	RICH LADY STREET PLAN AND PROFILE BEGIN TO STA: 3+50
24.	RICH LADY STREET PLAN AND PROFILE STA: 3+50 TO END
25.	STARFIRE AVENUE PLAN AND PROFILE
26.	STORM DRAIN TRACT PLANS
27.	OVERALL STREET LIGHTING AND SIGNAGE PLAN
28.	STREET LIGHTING AND SIGNAGE PLAN (1)
29.	STREET LIGHTING AND SIGNAGE PLAN (2)
30.	STREET LIGHTING AND SIGNAGE PLAN (3)
31.	STREET LIGHTING AND SIGNAGE PLAN (4)
32.	STREET LIGHTING AND SIGNAGE PLAN (5)
33.	OVERALL IRRIGATION PLAN
34.	INTERSECTION PLANS
35.	INTERSECTION PLANS
36.	INTERSECTION PLANS
37.	INTERSECTION PLANS
38.	OVERALL UTILITY PLAN

DRAFT

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

COVER SHEET FOR:
PEACHTREE ESTATES II - PHASES 1-2
A RESIDENTIAL SUBDIVISION LOCATED IN THE CITY OF RICHLAND, WA.

Know what's below. Call before you dig.

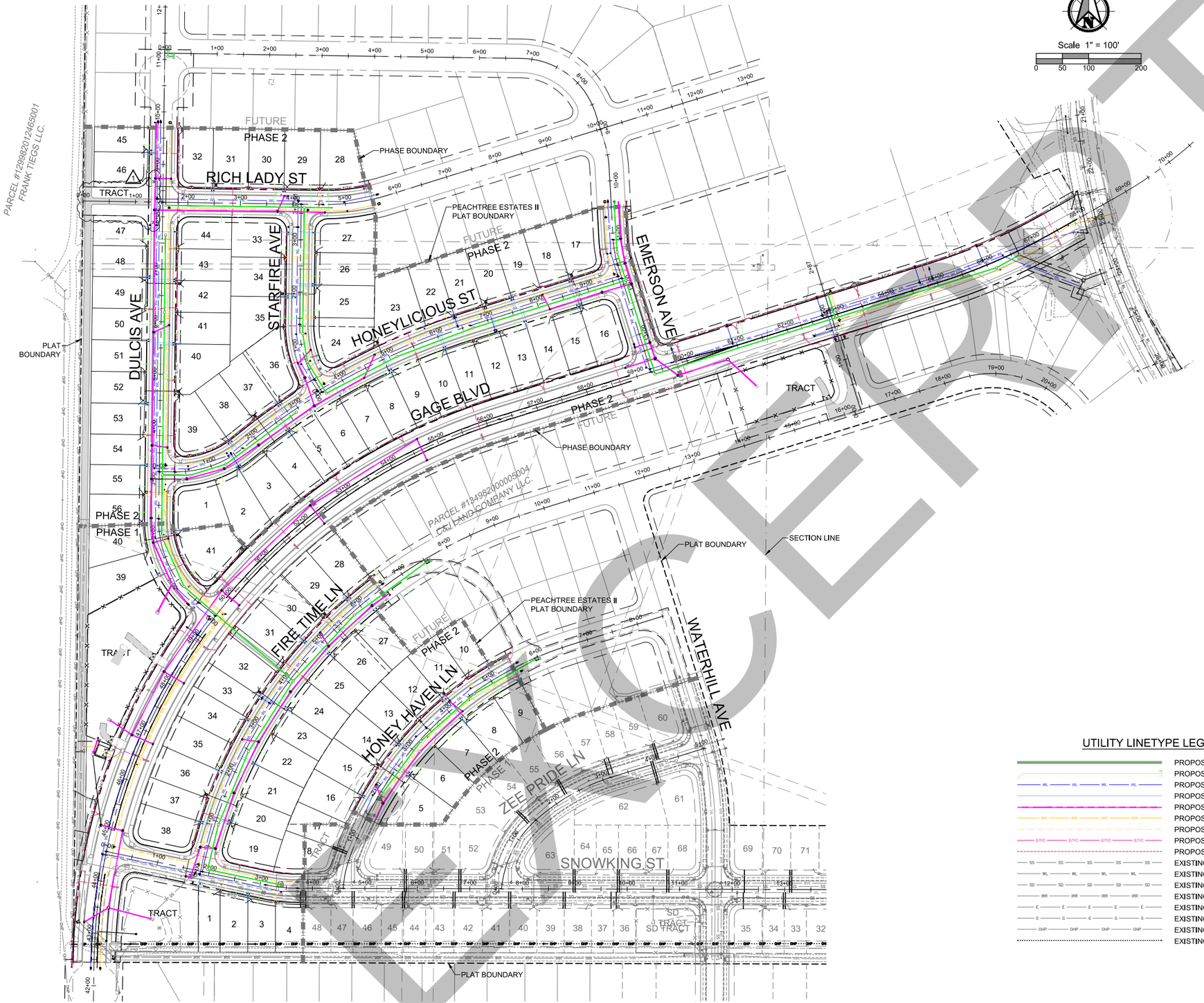
JASON L. MATTOX — STATE OF WASHINGTON — Date: 2025.05.20 10:20:02 -07'00' — 21612 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED:	MER
CHECKED:	JLM
APRIL 2025	66336.003
SHEET ID	

SHEET 1 OF 38

Filename: L:\Projects\66000\66336\66336-003\Civil\CADWorking\Sheets\66336.003_C01.dwg Layout Tab: 66336003_C01 User: Elisabeth Glever CAD Plot Date/Time: 5/15/2025 3:22:05 PM

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.



UTILITY LINETYPE LEGEND

- PROPOSED SANITARY SEWER MAIN LINE
- PROPOSED SANITARY SEWER SERVICE LINE
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE LINE
- PROPOSED STORM DRAIN MAIN LINE
- PROPOSED IRRIGATION MAIN LINE
- PROPOSED IRRIGATION SERVICE LINE
- PROPOSED ELECTRICAL UTILITY TRENCH
- PROPOSED STREET LIGHT CONDUIT
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING STORM DRAIN MAIN LINE
- EXISTING IRR MAIN LINE
- EXISTING ELECTRICAL CONDUIT
- EXISTING GAS LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING UTILITY LINE TO BE REMOVED/RELOCATED

No.	Revision	Date	By	App'd
1	ROADWAY CHANGES	MAY 2025	ELG	JLM

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

OVERALL UTILITY PLAN FOR: PEACHTREE ESTATES II - PHASES 1-2

A RESIDENTIAL SUBDIVISION LOCATED IN THE CITY OF RICHLAND, WA.

Know what's below. Call before you dig.

JASON L. MATTOX — STATE OF WASHINGTON — 44767 — REGISTERED PROFESSIONAL ENGINEER — Date: 2025.05.20 16:20:23

DESIGNED: MER
CHECKED: JLM
APRIL 2025
66336.003

SHEET ID

SHEET 38 OF 38

EXCERPT

Filename: L:\Projects\66000\66336\66336-003\Civil\CAD\Working\Sheets\66336.003_C33.dwg Layout Tab: 66336003_C38 User: Elisabeth Glever CAD Plot Date/Time: 5/19/2025 8:44:37 AM

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

Attachment 3

Pump Curves

Pump Performance Datasheet

Customer	:	Quote Number / ID	:
Customer ref. / PO	:	Model	: 30707 VL
Tag Number	: 001	Stages	: 1
Service	:	Based on curve number	: VL_30707_2P Rev Aug21
Quantity	: 1	Basic model number	: -
		Date last saved	: 03 Jun 2025 3:41 PM

Operating Conditions

Flow, rated	: 360.0 USgpm
Differential head / pressure, rated (requested)	: 115.0 ft
Differential head / pressure, rated (actual)	: 115.5 ft
Suction pressure, rated / max	: 0.00 / 0.00 psi.g
NPSH available, rated	: Ample
Site Supply Frequency	: 60 Hz

Performance

Speed, rated	: 3530 rpm
Impeller diameter, rated	: 5.98 in
Impeller diameter, maximum	: 7.10 in
Impeller diameter, minimum	: 5.50 in
Efficiency	: 75.29 %
NPSH required / margin required	: 10.68 / 0.00 ft
nq (imp. eye flow) / S (imp. eye flow)	: 31 / 178 Metric units
MCSF	: 109.1 USgpm
Head, maximum, rated diameter	: 138.3 ft
Head rise to shutoff	: 20.24 %
Flow, best eff. point	: 382.7 USgpm
Flow ratio, rated / BEP	: 94.06 %
Diameter ratio (rated / max)	: 84.23 %
Head ratio (rated dia / max dia)	: 60.51 %
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
Selection status	: Acceptable

Energy Indexes

PEI (CL)	: 0.93
ER (CL)	: 7

Liquid

Liquid type	: Cold Water
Additional liquid description	:
Solids diameter, max	: 0.00 in
Solids concentration, by volume	: 0.00 %
Temperature, max	: 68.00 deg F
Fluid density, rated / max	: 1.000 / 1.000 SG
Viscosity, rated	: 1.00 cP
Vapor pressure, rated	: 0.34 psi.a

Material

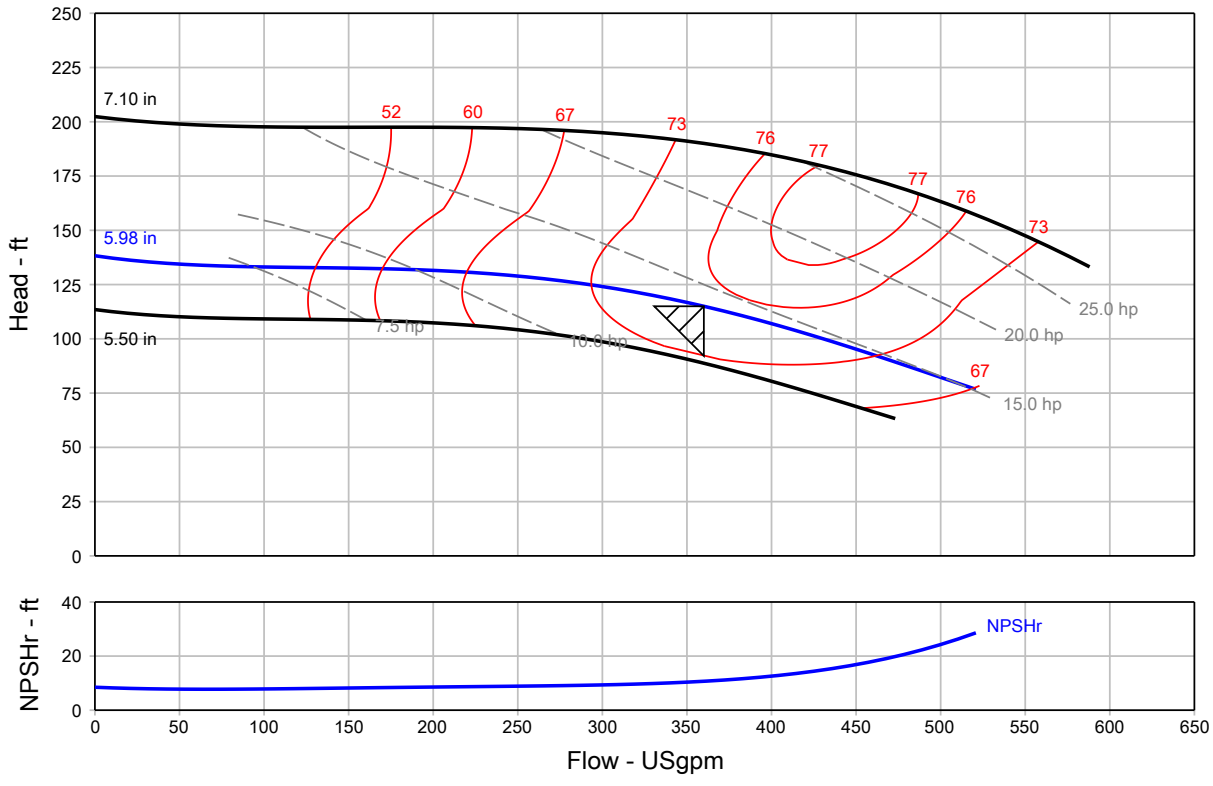
Material selected	: Cast iron - 125#

Pressure Data

Maximum working pressure	: 59.84 psi.g
Maximum allowable working pressure	: 175.0 psi.g
Maximum allowable suction pressure	: 175.0 psi.g
Hydrostatic test pressure	: 263.0 psi.g

Driver & Power Data (@Max density)

Motor sizing specification	: Max power (non-overloading)
Margin over specification	: 0.00 %
Service factor	: 1.00
Power, hydraulic	: 10.45 hp
Rated power (based on duty point)	: 13.88 hp
Max power (non-overloading)	: 15.12 hp
Nameplate motor rating	: 20.00 hp / 14.91 kW



GRUNDFOS GRUNDFOS EXPRESS

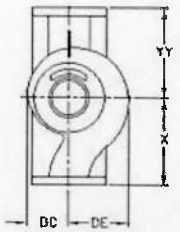
Instructions: Click on the pump part below to change selections.

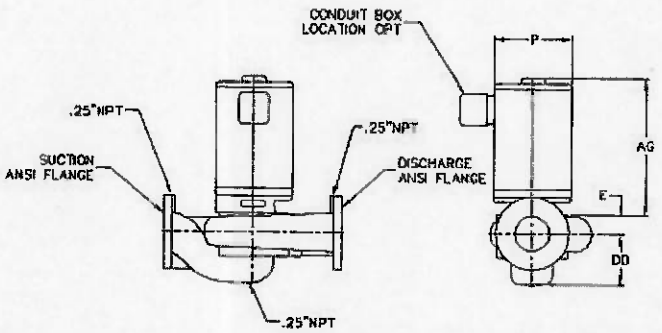
Project name	: Default	Tag Number	: 001
Consulting engineer	:	Service	:
Customer	:	Model	: 30707 VL
Customer ref. / PO	:	Quantity of pumps	: 1
Quote Number / ID	: 506540	Grundfos Partner	: Preferred Pump & Equipment
Date last saved	: 06/02/2025 3:46 PM	Quoted By (Sales Engineer)	: Doug Campbell

Do not install pump larger than 215JM in vertical piping.

Pressure and drain tap locations are approximate.

Suction and discharge flanges, are cast per 250# ANSI thickness and diameter. All flanges are flat face. Some holes may be threaded because of nut clearances.





NOT FOR CONSTRUCTION, UNLESS CERTIFIED AND REFERENCED ON ORDER

Units	Frame	S x D (in.)	AG (Max)	DC	DD	DE	E	P (Max)	X	YY	Weight ea
inches	215JM	3 X 3	22.00	5.94	6.25	6.94	2.63	12.00	9.00	9.00	284.0

Conditions of Service		Motor Data			
Flow: 360.0 USgpm	Fluid: Cold Water	HP: 15	Encl: ODP	Phase: 3	Efficiency: Premium
TDH: 115.0 ft	Temp.: 68.00 deg F	RPM: 3530 rpm	Hz: 60	Voltage: 230/460	S.F.: 1.15

Pump Performance Datasheet

Customer	:	Quote Number / ID	:
Customer ref. / PO	:	Model	: 15709 VL
Tag Number	: 001	Stages	: 1
Service	:	Based on curve number	: VL_15709_2P Rev 0
Quantity	: 1	Basic model number	: -
		Date last saved	: 06/02/2025 3:43 PM

Operating Conditions

Flow, rated	: 125.0 USgpm
Differential head / pressure, rated (requested)	: 110.0 ft
Differential head / pressure, rated (actual)	: 110.2 ft
Suction pressure, rated / max	: 0.00 / 0.00 psi.g
NPSH available, rated	: Ample
Site Supply Frequency	: 60 Hz

Performance

Speed, rated	: 3530 rpm
Impeller diameter, rated	: 5.61 in
Impeller diameter, maximum	: 7.10 in
Impeller diameter, minimum	: 4.00 in
Efficiency	: 61.01 %
NPSH required / margin required	: 29.05 / 0.00 ft
nq (imp. eye flow) / S (imp. eye flow)	: 18 / 55 Metric units
MCSF	: 47.94 USgpm
Head, maximum, rated diameter	: 129.7 ft
Head rise to shutoff	: 17.12 %
Flow, best eff. point	: 140.8 USgpm
Flow ratio, rated / BEP	: 88.77 %
Diameter ratio (rated / max)	: 79.01 %
Head ratio (rated dia / max dia)	: 53.71 %
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
Selection status	: Acceptable

Energy Indexes

PEI (CL)	: 0.94
ER (CL)	: 6

Liquid

Liquid type	: Cold Water
Additional liquid description	:
Solids diameter, max	: 0.00 in
Solids concentration, by volume	: 0.00 %
Temperature, max	: 68.00 deg F
Fluid density, rated / max	: 1.000 / 1.000 SG
Viscosity, rated	: 1.00 cP
Vapor pressure, rated	: 0.34 psi.a

Material

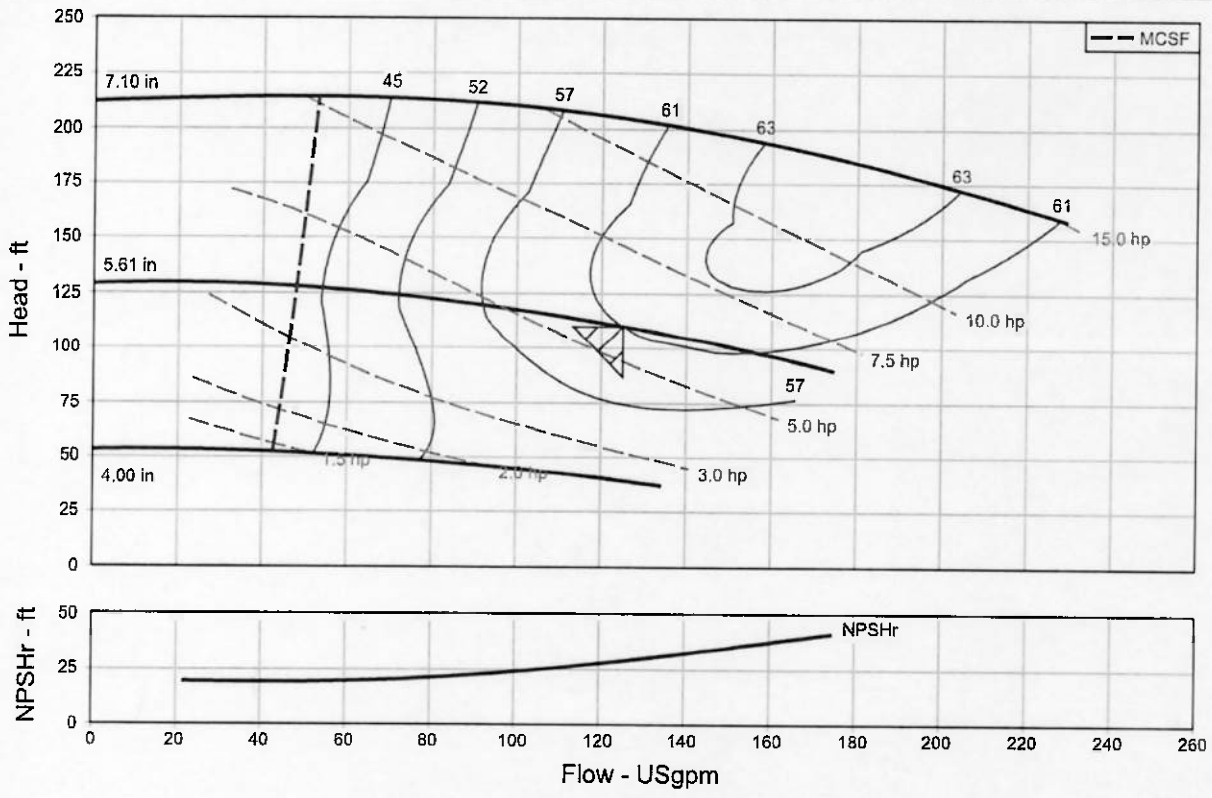
Material selected	: Cast iron - 125#

Pressure Data

Maximum working pressure	: 56.13 psi.g
Maximum allowable working pressure	: 175.0 psi.g
Maximum allowable suction pressure	: 175.0 psi.g
Hydrostatic test pressure	: 263.0 psi.g

Driver & Power Data (@Max density)

Motor sizing specification	: Max power (non-overloading)
Margin over specification	: 0.00 %
Service factor	: 1.15 (used)
Power, hydraulic	: 3.47 hp
Rated power (based on duty point)	: 5.69 hp
Max power (non-overloading)	: 6.72 hp
Nameplate motor rating	: 7.50 hp / 5.59 kW



GRUNDFOS | GRUNDFOS EXPRESS

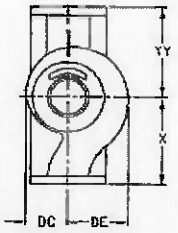
Instructions: Click on the pump part below to change selections.

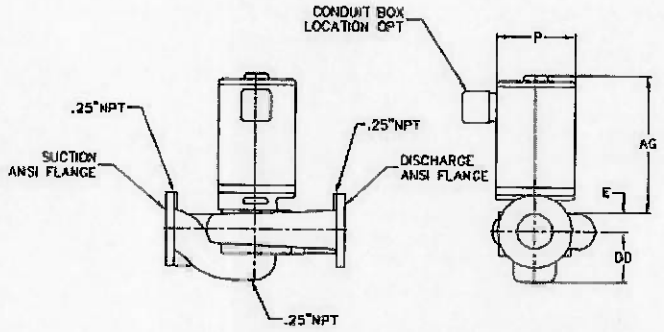
Project name	: Default	Tag Number	: 001
Consulting engineer	:	Service	:
Customer	:	Model	: 15709 VL
Customer ref. / PO	:	Quantity of pumps	: 1
Quote Number / ID	: 506540	Grundfos Partner	: Preferred Pump & Equipment
Date last saved	: 06/02/2025 3:43 PM	Quoted By (Sales Engineer)	: Doug Campbell

Do not install pump larger than 215JM in vertical piping.

Pressure and drain tap locations are approximate.

Suction and discharge flanges, are cast per 250# ANSI thickness and diameter. All flanges are flat face. Some holes may be threaded because of nut clearances.





NOT FOR CONSTRUCTION, UNLESS CERTIFIED AND REFERENCED ON ORDER

Units	Frame	S x D (in.)	AG (Max)	DC	DD	DE	E	P (Max)	X	YY	Weight ea
inches	184JM	1.5 X 1.5	20.00	4.38	4.43	5.13	2.19	10.00	7.00	7.00	168.0

Conditions of Service		Motor Data			
Flow: 125.0 USgpm	Fluid: Cold Water	HP: 7.5	Encl: ODP	Phase: 3	Efficiency: Premium
TDH: 110.0 ft	Temp.: 68.00 deg F	RPM: 3530 rpm	Hz: 60	Voltage: 230/460	S.F.: 1.15

Pump Performance Datasheet

Customer	:
Customer ref. / PO	:
Tag Number	: 001
Service	:
Quantity	: 1

Quote Number / ID	: 506540
Model	: 12707 VL
Stages	: 1
Based on curve number	: VL_12707_2P Rev 0
Basic model number	: -
Date last saved	: 06/02/2025 3:39 PM

Operating Conditions

Flow, rated	: 55.00 USgpm
Differential head / pressure, rated (requested)	: 110.0 ft
Differential head / pressure, rated (actual)	: 110.4 ft
Suction pressure, rated / max	: 0.00 / 0.00 psi.g
NPSH available, rated	: Ample
Site Supply Frequency	: 60 Hz

Performance

Speed, rated	: 3530 rpm
Impeller diameter, rated	: 5.35 in
Impeller diameter, maximum	: 7.10 in
Impeller diameter, minimum	: 4.50 in
Efficiency	: 49.84 %
NPSH required / margin required	: 26.03 / 0.00 ft
nq (imp. eye flow) / S (imp. eye flow)	: 14 / 56 Metric units
MCSF	: 24.41 USgpm
Head, maximum, rated diameter	: 119.0 ft
Head rise to shutoff	: 7.41 %
Flow, best eff. point	: 78.16 USgpm
Flow ratio, rated / BEP	: 70.36 %
Diameter ratio (rated / max)	: 75.35 %
Head ratio (rated dia / max dia)	: 51.76 %
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
Selection status	: Acceptable

Energy Indexes

PEI (CL)	: 0.87
ER (CL)	: 13

Liquid

Liquid type	: Cold Water
Additional liquid description	:
Solids diameter, max	: 0.00 in
Solids concentration, by volume	: 0.00 %
Temperature, max	: 68.00 deg F
Fluid density, rated / max	: 1.000 / 1.000 SG
Viscosity, rated	: 1.00 cP
Vapor pressure, rated	: 0.34 psi.a

Material

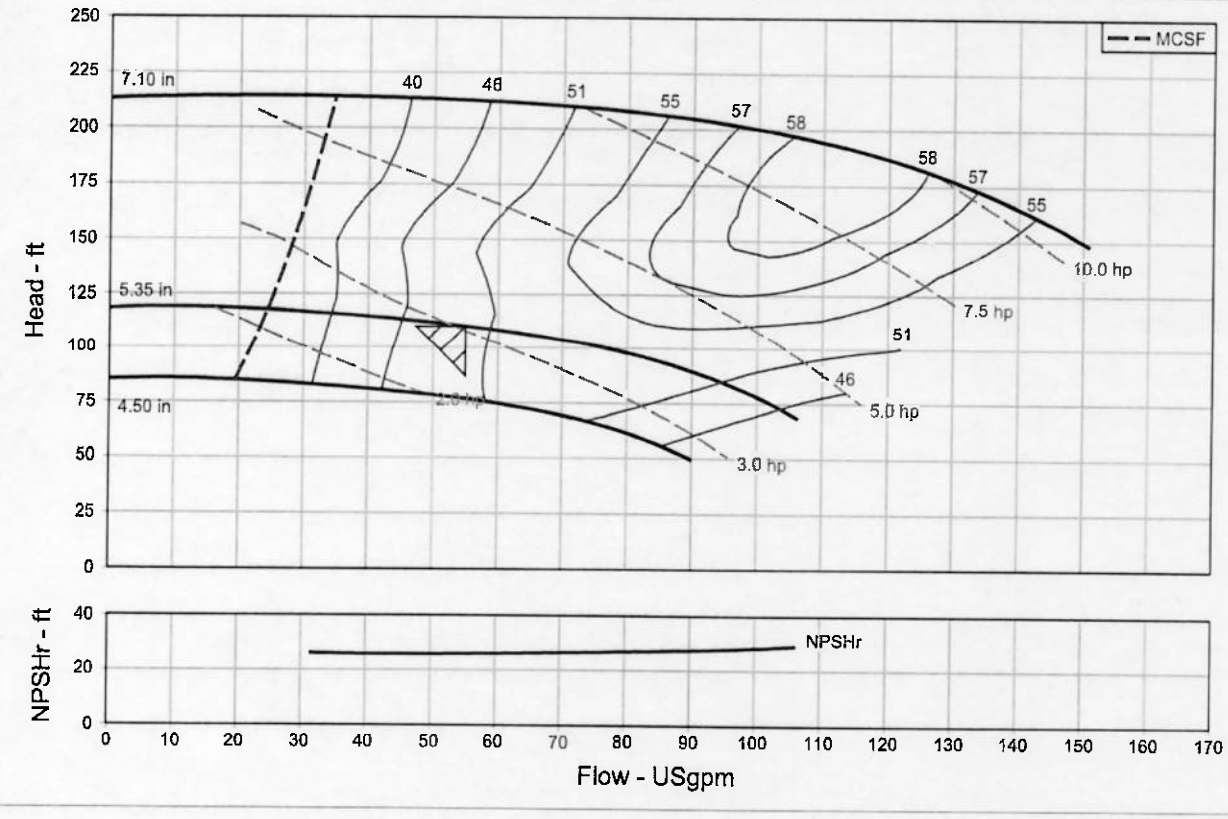
Material selected	: Cast iron - 125#

Pressure Data

Maximum working pressure	: 51.50 psi.g
Maximum allowable working pressure	: 175.0 psi.g
Maximum allowable suction pressure	: 175.0 psi.g
Hydrostatic test pressure	: 263.0 psi.g

Driver & Power Data (@Max density)

Motor sizing specification	: Max power (non-overloading)
Margin over specification	: 0.00 %
Service factor	: 1.15 (used)
Power, hydraulic	: 1.53 hp
Rated power (based on duty point)	: 3.07 hp
Max power (non-overloading)	: 4.18 hp
Nameplate motor rating	: 5.00 hp / 3.73 kW



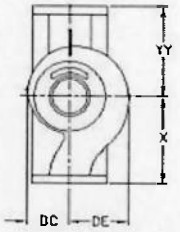
GRUNDFOS | GRUNDFOS EXPRESS

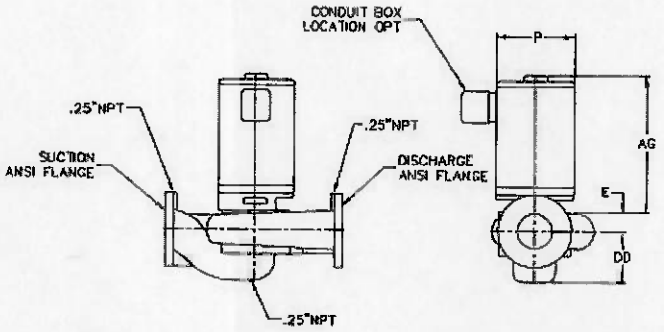
Project name	: Default	Tag Number	: 001
Consulting engineer	:	Service	:
Customer	:	Model	: 12707 VL
Customer ref. / PO	:	Quantity of pumps	: 1
Quote Number / ID	: 506540	Grundfos Partner	: Preferred Pump & Equipment
Date last saved	: 06/02/2025 3:39 PM	Quoted By (Sales Engineer)	: Doug Campbell

Do not install pump larger than 215JM in vertical piping.

Pressure and drain tap locations are approximate.

Suction and discharge flanges, are cast per 250# ANSI thickness and diameter. All flanges are flat face. Some holes may be threaded because of nut clearances.

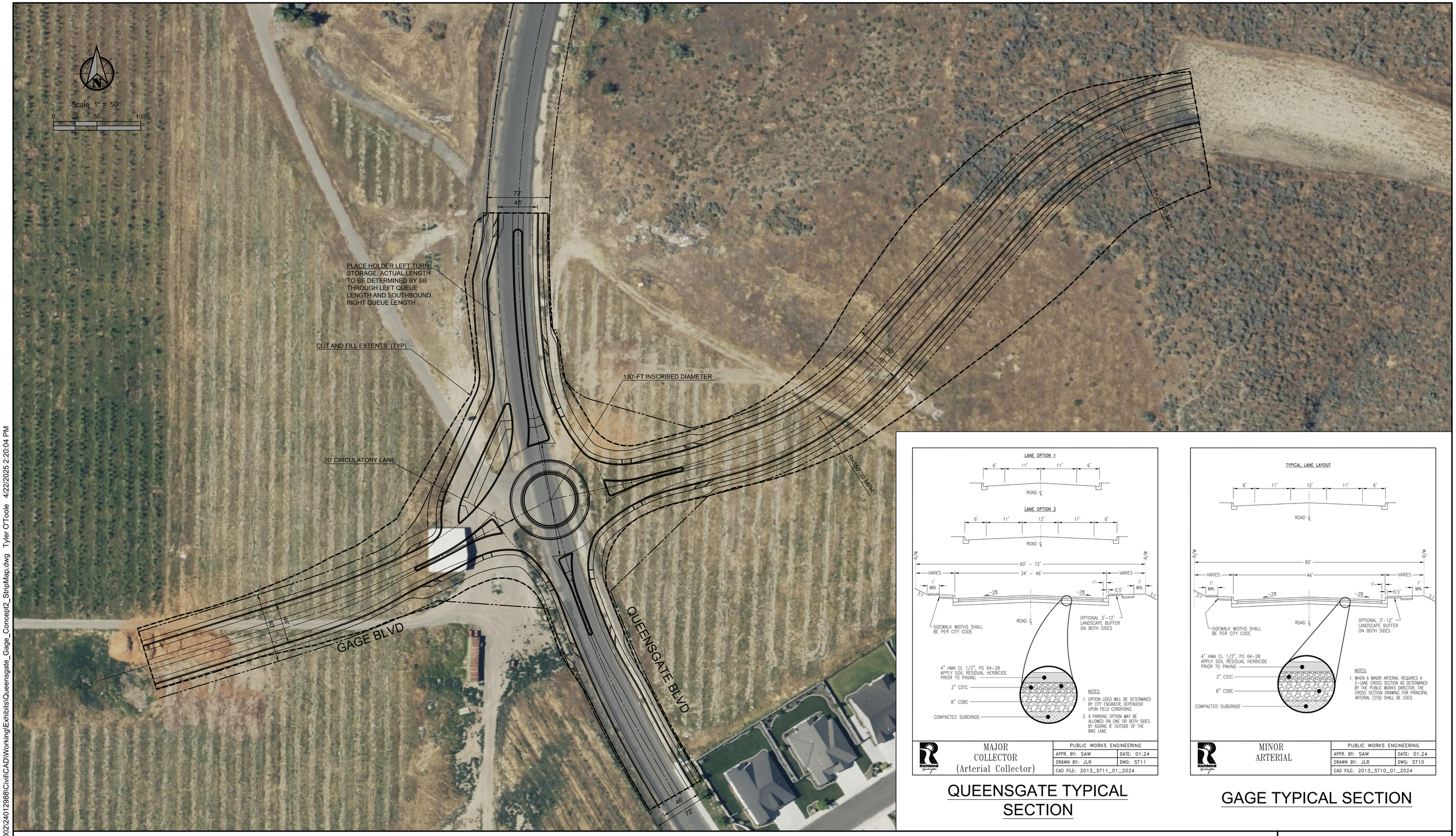




NOT FOR CONSTRUCTION, UNLESS CERTIFIED AND REFERENCED ON ORDER

Units	Frame	S x D (in.)	AG (Max)	DC	DD	DE	E	P (Max)	X	YY	Weight ea
inches	182JM	1.25 X 1.25	20.00	4.19	4.13	4.38	1.63	10.00	7.00	7.00	159.0

Conditions of Service		Motor Data			
Flow: 55.00 USgpm	Fluid: Cold Water	HP: 5	Encl: ODP	Phase: 3	Efficiency: Premium
TDH: 110.0 ft	Temp.: 68.00 deg F	RPM: 3530 rpm	Hz: 60	Voltage: 230/460	S.F.: 1.15



MAJOR COLLECTOR (Arterial Collector)	PUBLIC WORKS ENGINEERING	
	APPR. BY: SAW	DATE: 01.24
	DRAWN BY: JLR	DWG: ST11
	CAD FILE: 2013_ST11_01_2024	

QUEENSGATE TYPICAL SECTION

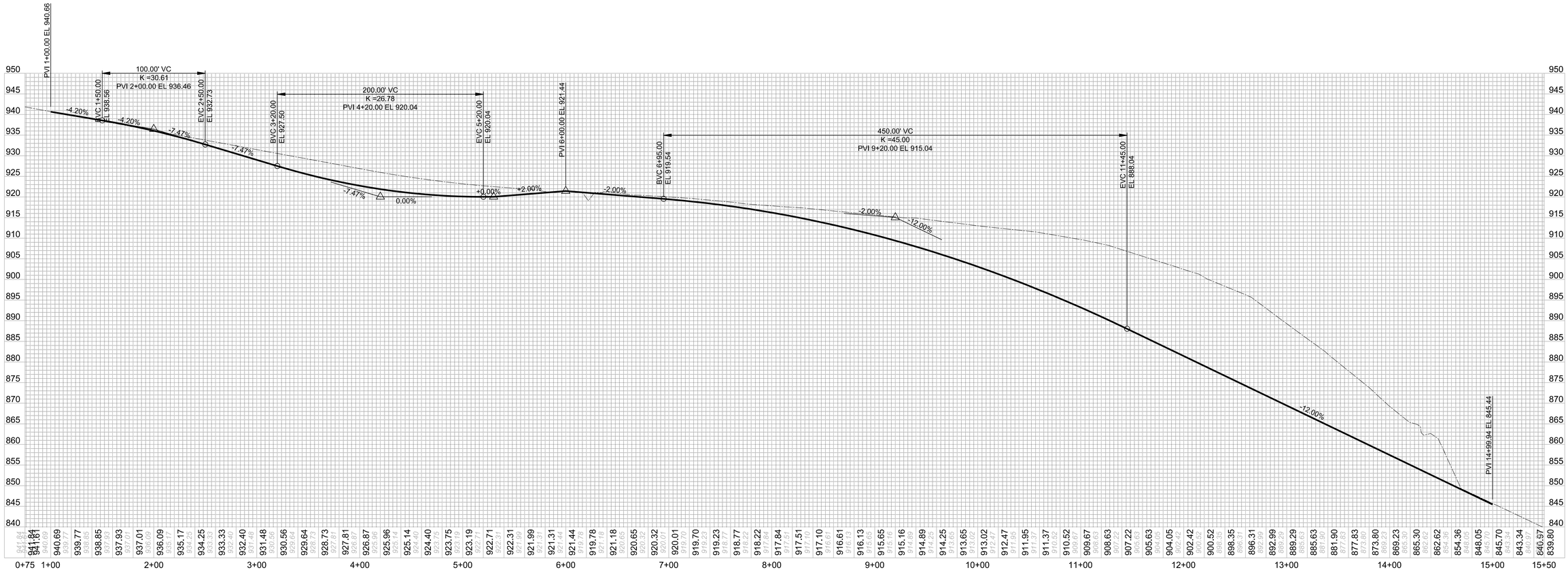
MINOR ARTERIAL	PUBLIC WORKS ENGINEERING	
	APPR. BY: SAW	DATE: 01.24
	DRAWN BY: JLR	DWG: ST10
	CAD FILE: 2013_ST10_01_2024	

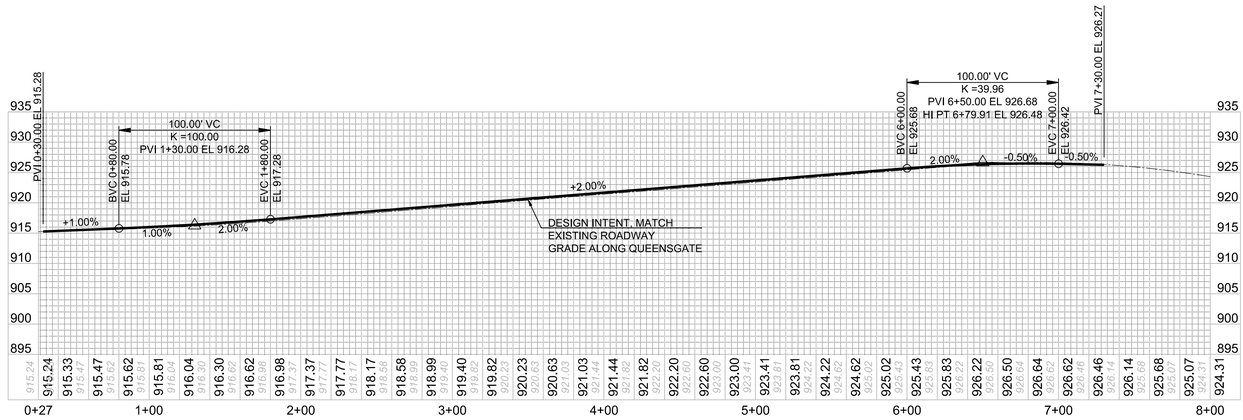
GAGE TYPICAL SECTION

PRELIMINARY QUEENSGATE/GAGE ROUNDABOUT
STRIP MAP

PBS AN APEX COMPANY

L:\Projects_DVP\MMDD0021240129881\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept2_StripMap.dwg Tyler.OToole 4/22/2025 2:20:04 PM

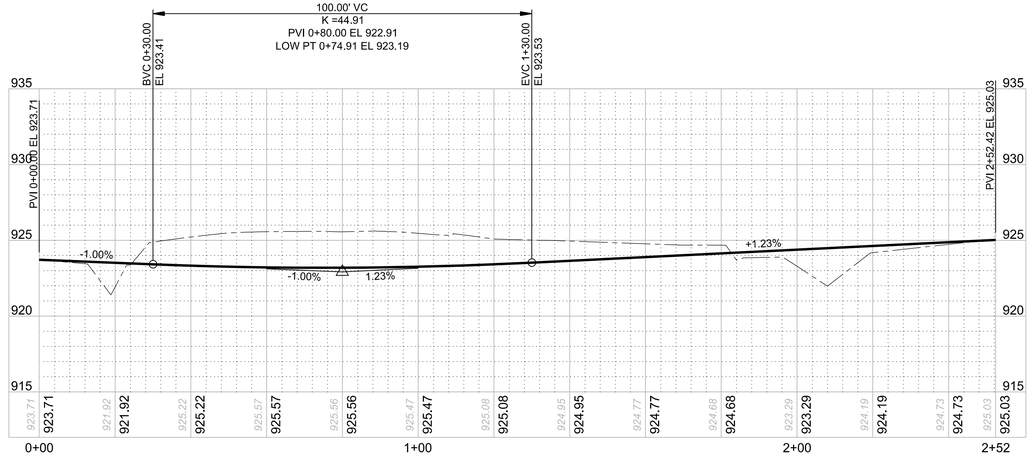

PVI 1+00.00 EL 940.66
100.00' VC
K =30.61
PVI 2+00.00 EL 936.46
BVC 1+50.00
EL 938.56
EVC 2+50.00
EL 932.73
200.00' VC
K =26.78
PVI 4+20.00 EL 920.04
BVC 3+20.00
EL 927.50
EVC 5+20.00
EL 920.04
PVI 6+00.00 EL 921.44
450.00' VC
K =45.00
PVI 9+20.00 EL 915.04
BVC 6+95.00
EL 919.54
EVC 11+45.00
EL 888.04
PVI 14+99.94 EL 845.44
-4.20%
-4.20%
-7.47%
-7.47%
-7.47%
0.00%
+0.00%
+2.00%
-2.00%
-2.00%
-12.00%
-12.00%
950
945
940
935
930
925
920
915
910
905
900
895
890
885
880
875
870
865
860
855
850
845
840
941.84 941.84 941.84



QUEENSGATE DR (DESIGN CL)

Scale 1" = 50'

0	25	50	100	HORIZ.
0	6.25	12.5	25	VERT.



SB RIGHT TURN POCKET

Scale 1" = 20'

0	10	20	40	HORIZ.
0	2.5	5	10	VERT.

PRELIMINARY QUEENSGATE/GAGE ROUNDABOUT
PROFILES

PBS
AN APEX COMPANY

Scale 1" = 30'

0 15 30 60

R4 = 60'
V = 15 MPH

R3 = 299'
V = 28 MPH

R2 = 88'
V = 17 MPH

R5 = 64'
V = 15 MPH

R1 = 167'
V = 24 MPH

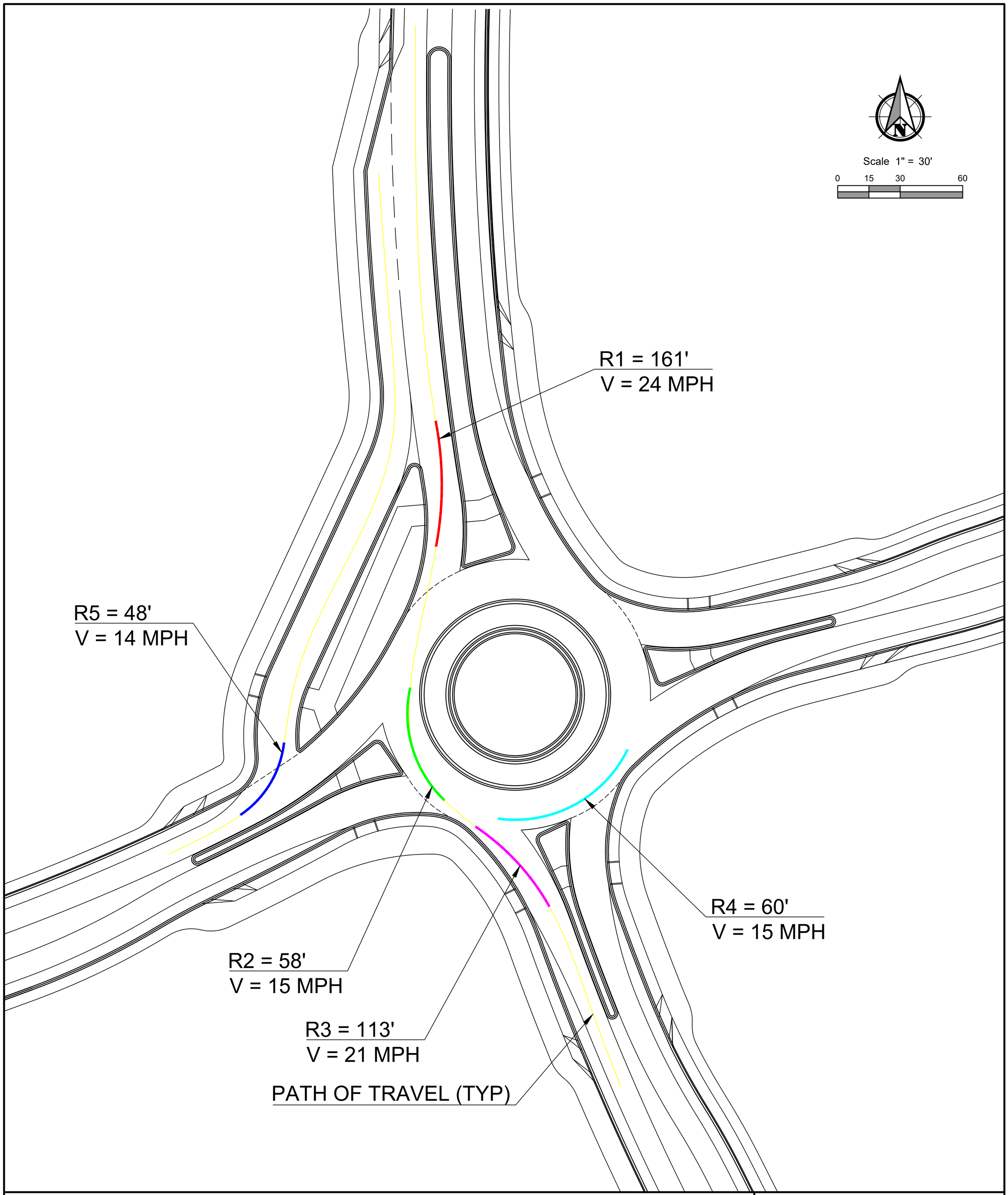
PATH OF TRAVEL (TYP)

QUEENSGATE/GAGE ROUNDABOUT CONCEPT
FASTEST PATH - WEST LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:05:40 PM



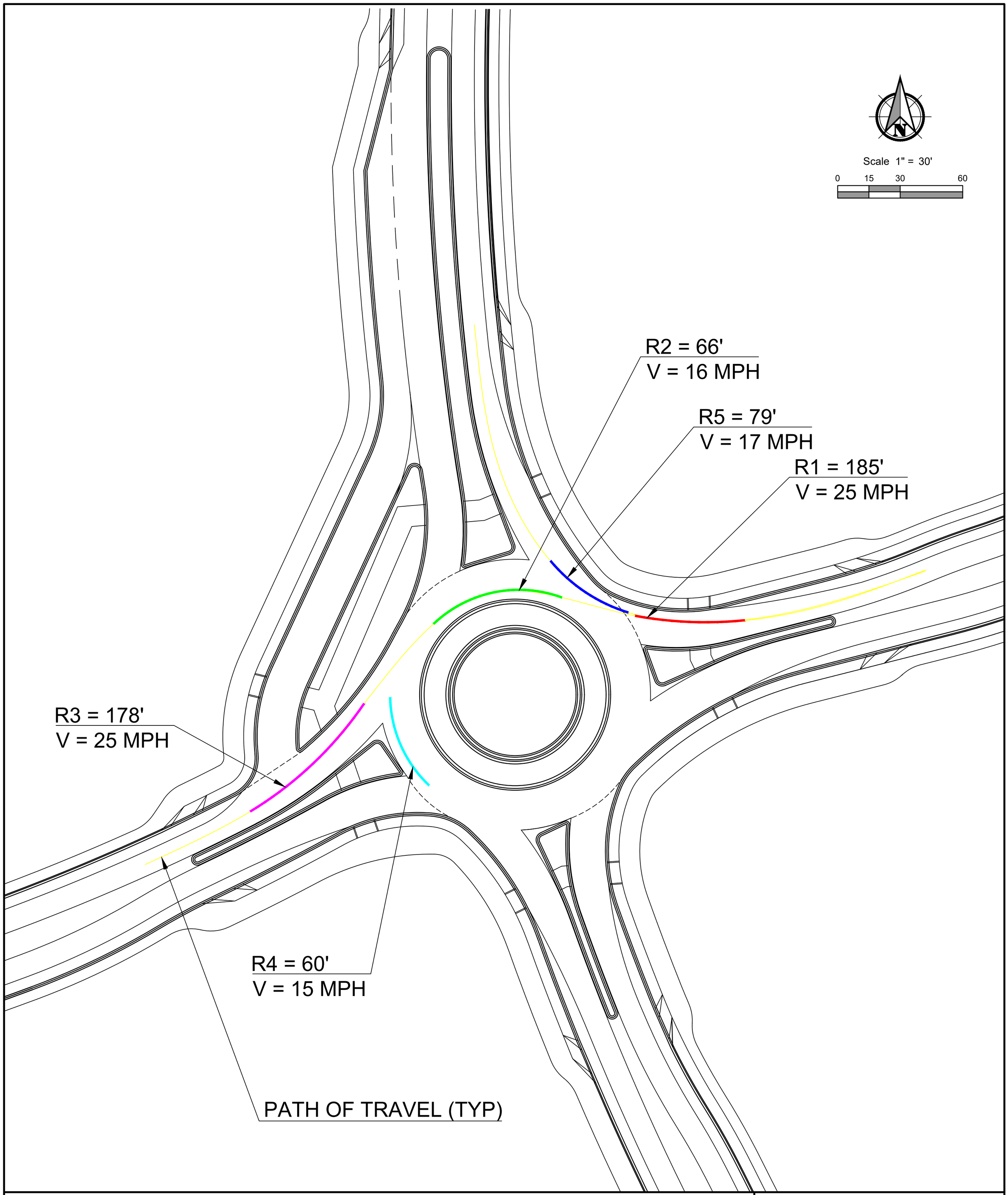
QUEENSGATE/GAGE ROUNDABOUT CONCEPT

FASTEST PATH - NORTH LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:05:41 PM

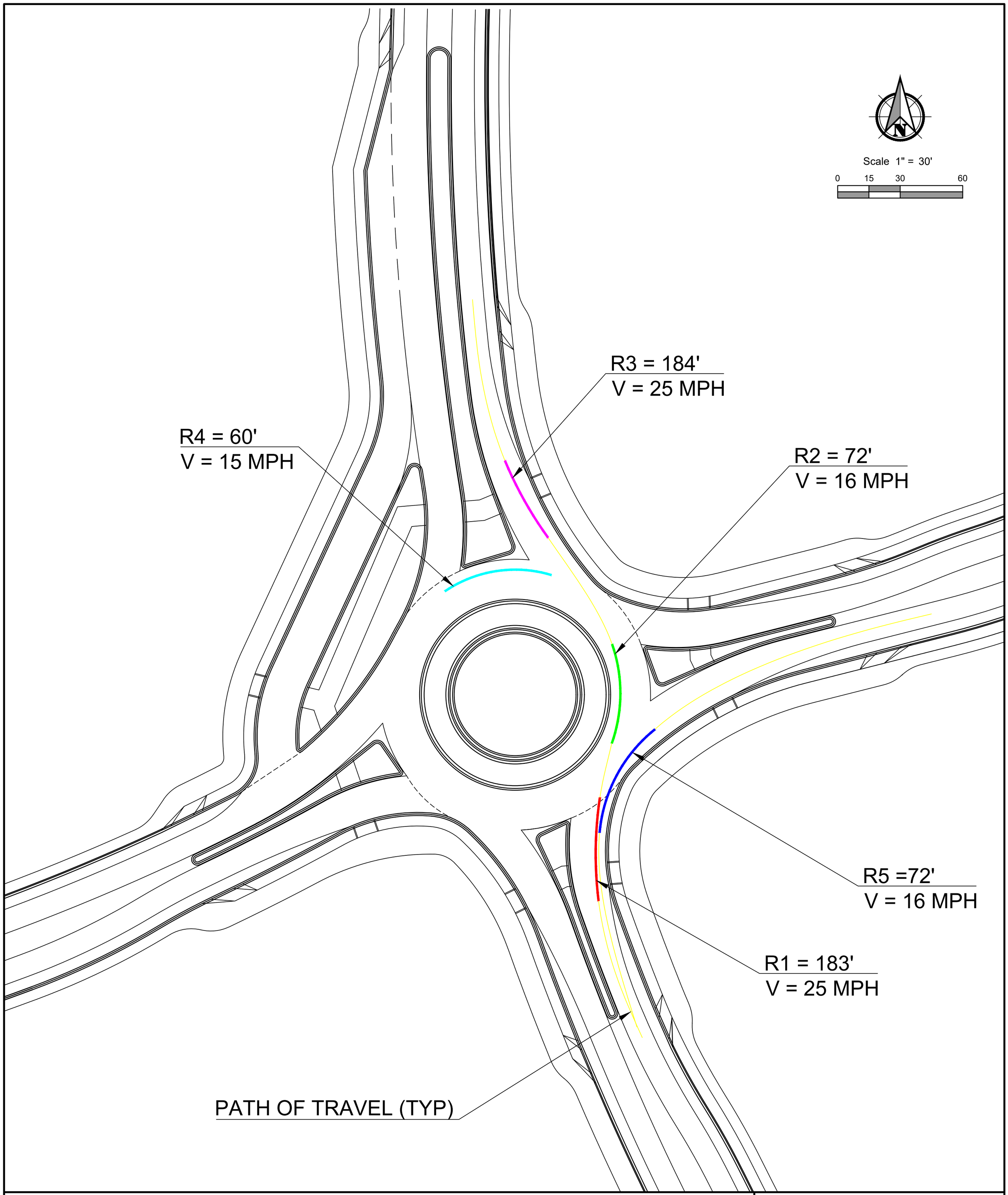


QUEENSGATE/GAGE ROUNDABOUT CONCEPT
FASTEST PATH - EAST LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:05:42 PM



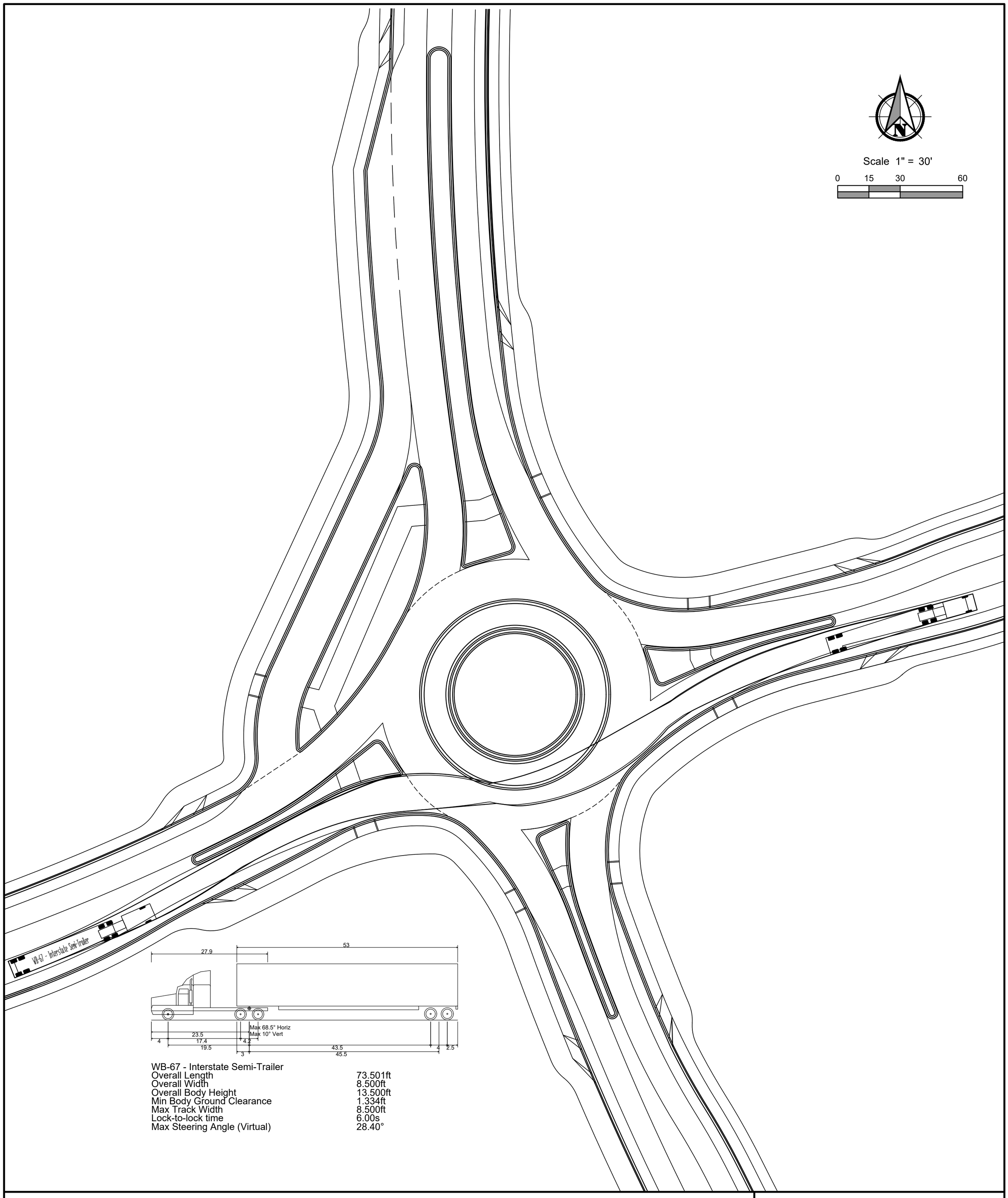
QUEENSGATE/GAGE ROUNDABOUT CONCEPT

FASTEST PATH - SOUTH LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:05:43 PM



WB-67 - Interstate Semi-Trailer

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

QUEENSGATE/GAGE ROUNDABOUT CONCEPT

WB-67 TRUCK TURNING - WEST LEG

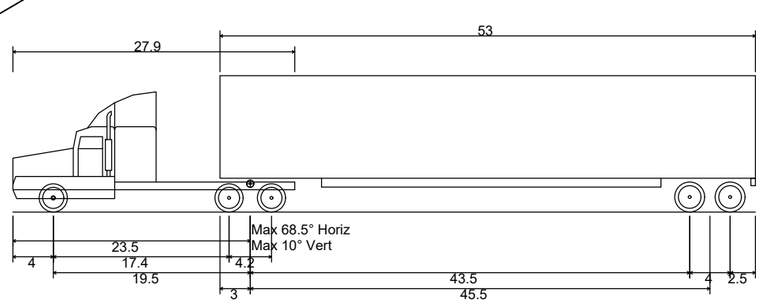
Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\2401298\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:02:56 PM

Scale 1" = 30'

0 15 30 60



WB-67 - Interstate Semi-Trailer

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

QUEENSGATE/GAGE ROUNDABOUT CONCEPT

WB-67 TRUCK TURNING - EAST LEG

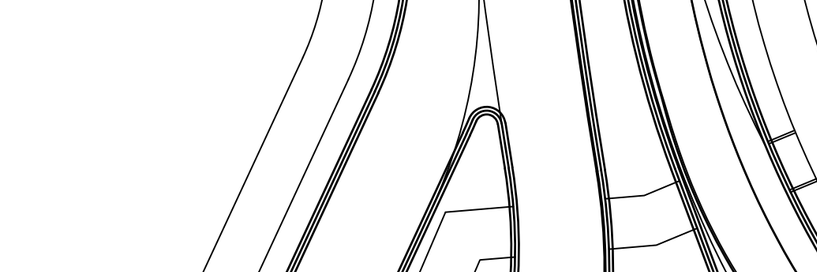
Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:02:57 PM

Scale 1" = 30'

0 15 30 60



WB-40 - Intermediate Semi-Trailer

Overall Length	45.499ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Track Width	8.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	20.30°

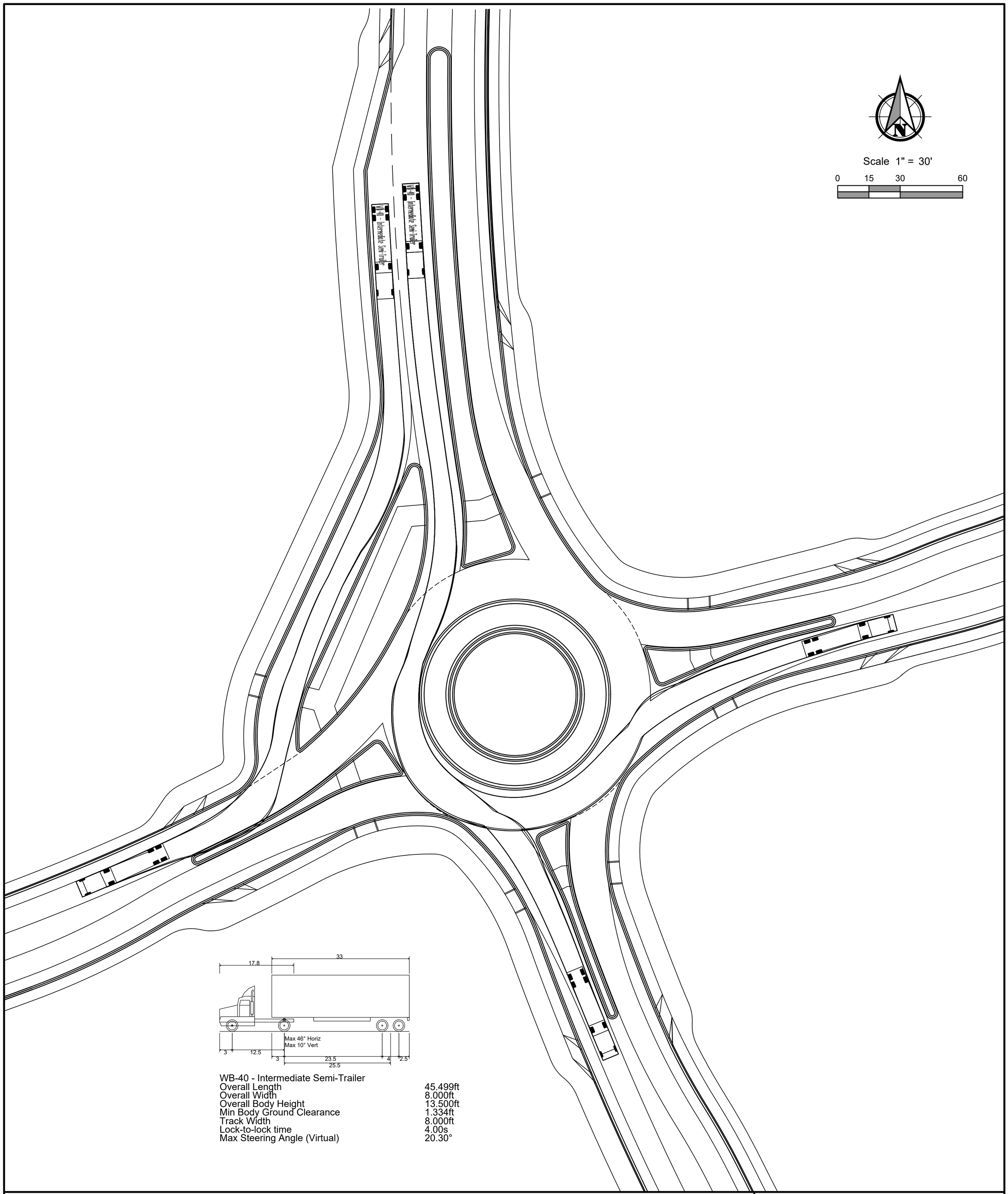
QUEENSGATE/GAGE ROUNDABOUT CONCEPT

WB-40 TRUCK TURNING - WEST LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:02:58 PM



WB-40 - Intermediate Semi-Trailer	
Overall Length	45.499ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Track Width	8.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	20.30°

QUEENSGATE/GAGE ROUNDABOUT CONCEPT

WB-40 TRUCK TURNING - NORTH LEG

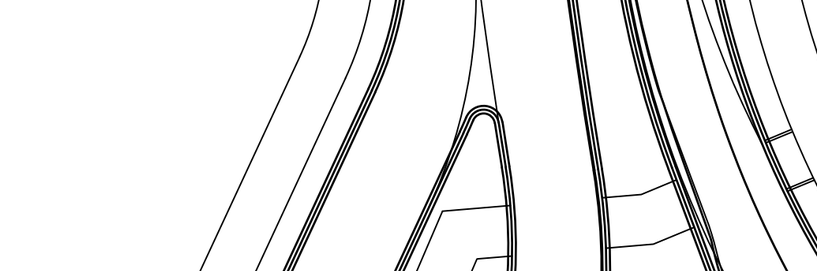
Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:02:58 PM

Scale 1" = 30'

0 15 30 60



WB-40 - Intermediate Semi-Trailer

Overall Length	45.499ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Track Width	8.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	20.30°

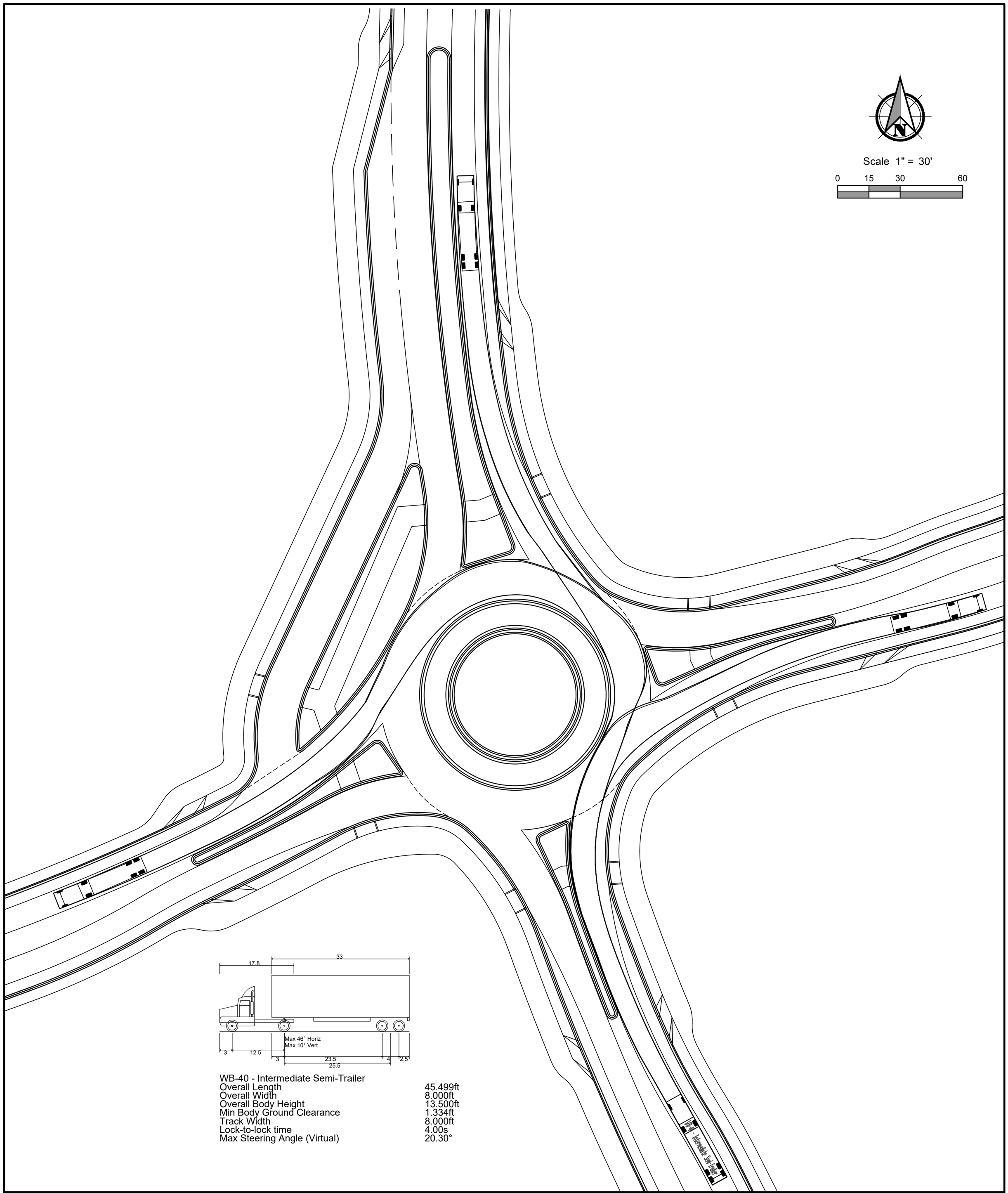
QUEENSGATE/GAGE ROUNDABOUT CONCEPT

WB-40 TRUCK TURNING - EAST LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:02:59 PM



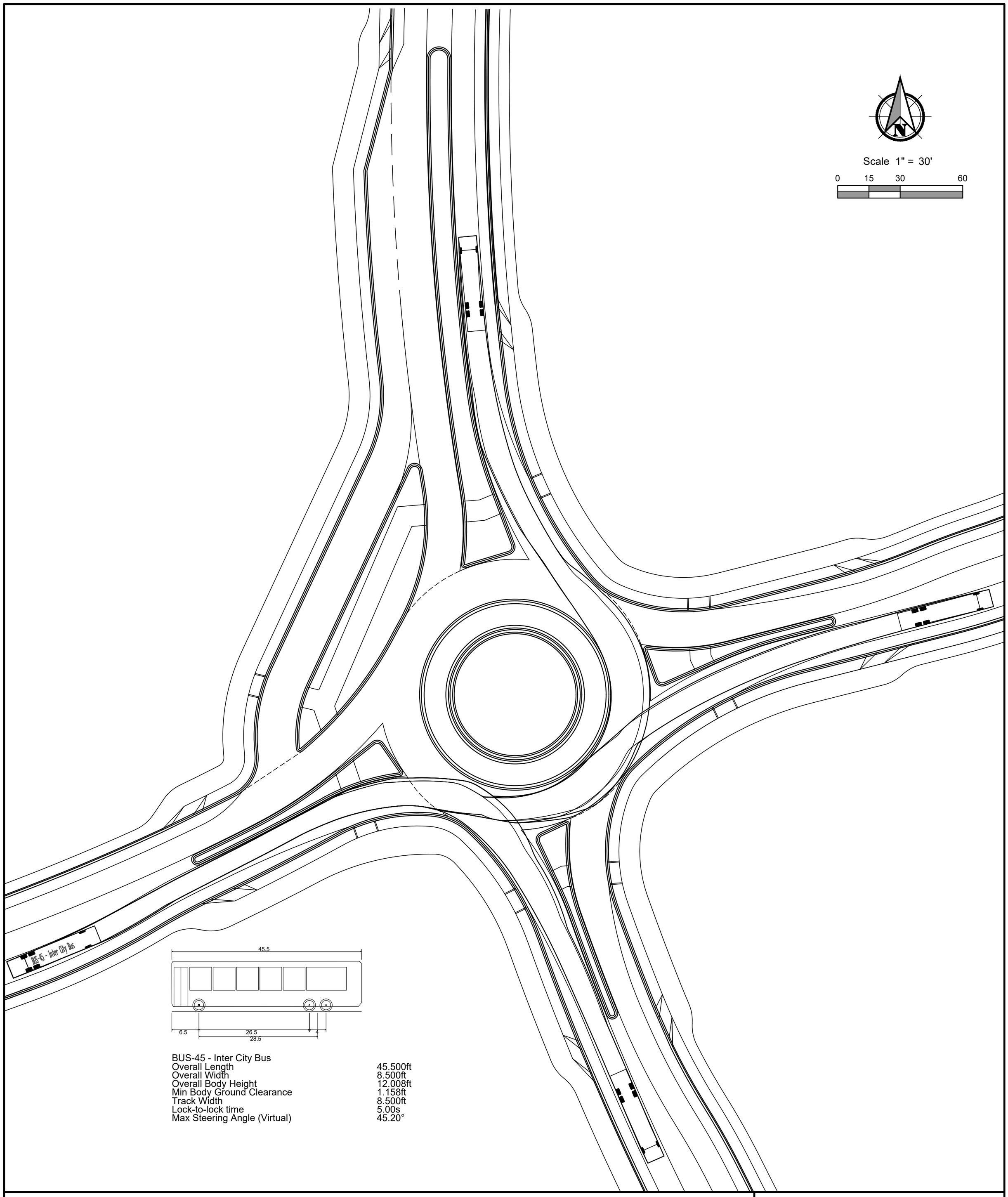
WB-40 - Intermediate Semi-Trailer	
Overall Length	45.499ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Track Width	8.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	20.30°

QUEENSGATE/GAGE ROUNDABOUT CONCEPT
WB-40 TRUCK TURNING - SOUTH LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:03:00 PM



BUS-45 - Inter City Bus

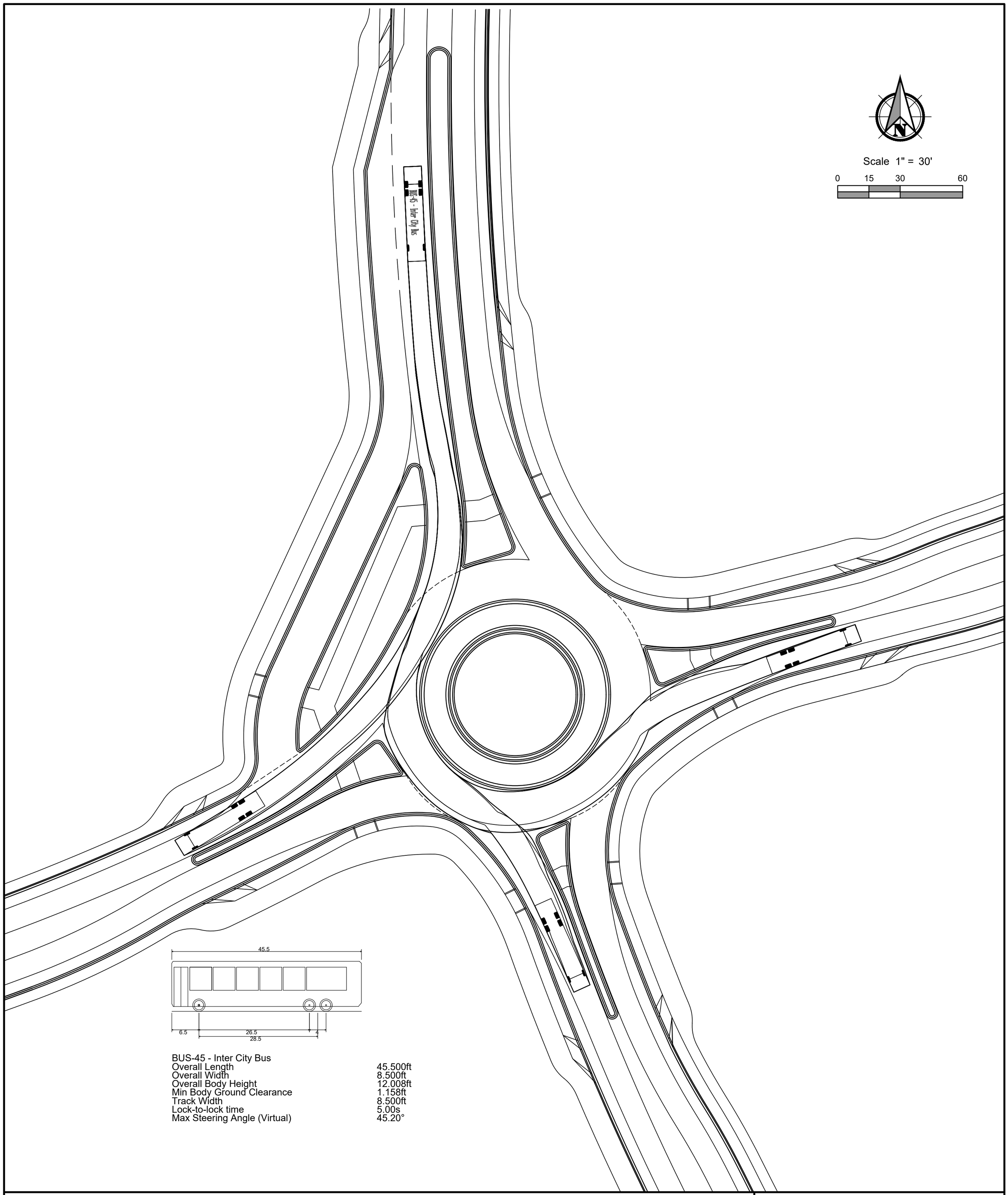
Overall Length	45.500ft
Overall Width	8.500ft
Overall Body Height	12.008ft
Min Body Ground Clearance	1.158ft
Track Width	8.500ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	45.20°

QUEENSGATE/GAGE ROUNDABOUT CONCEPT
LARGE BUS TURNING - WEST LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\2401298\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:03:01 PM



BUS-45 - Inter City Bus

Overall Length	45.500ft
Overall Width	8.500ft
Overall Body Height	12.008ft
Min Body Ground Clearance	1.158ft
Track Width	8.500ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	45.20°

QUEENSGATE/GAGE ROUNDABOUT CONCEPT
LARGE BUS TURNING - NORTH LEG

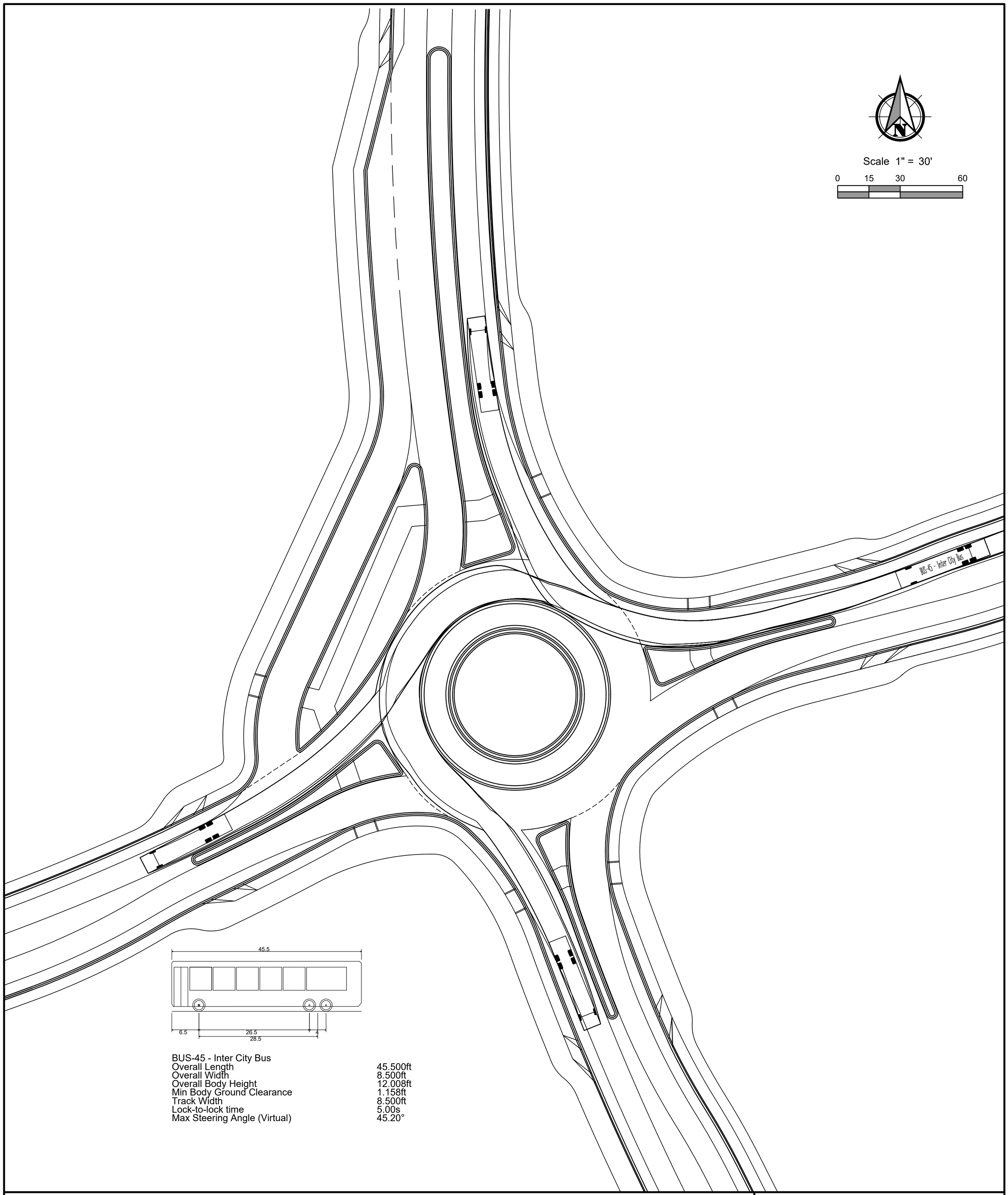
Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:03:01 PM

Scale 1" = 30'

0 15 30 60



BUS-45 - Inter City Bus	
Overall Length	45.500ft
Overall Width	8.500ft
Overall Body Height	12.008ft
Min Body Ground Clearance	1.158ft
Track Width	8.500ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	45.20°

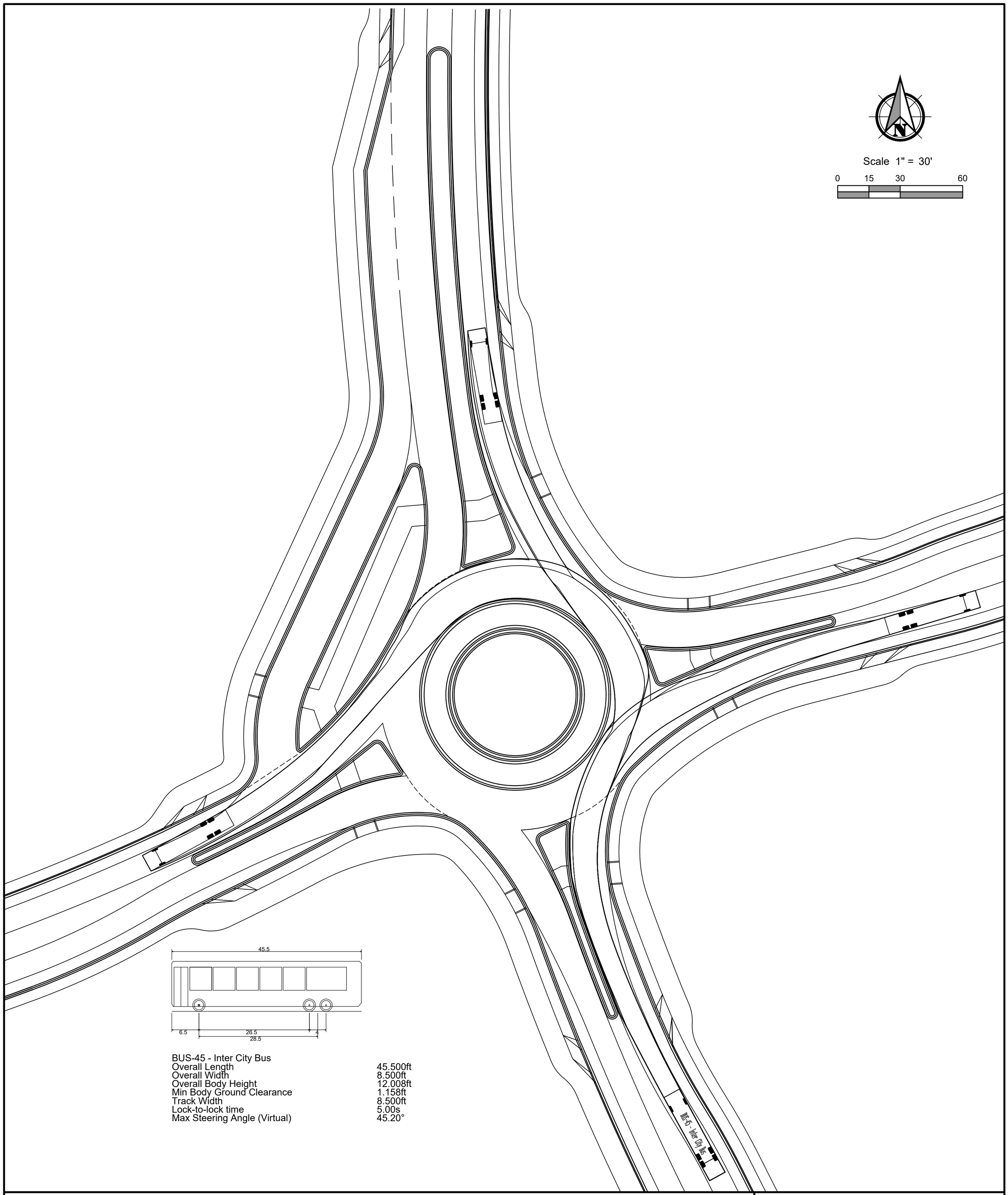
QUEENSGATE/GAGE ROUNDABOUT CONCEPT

LARGE BUS TURNING - EAST LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:03:02 PM



BUS-45 - Inter City Bus

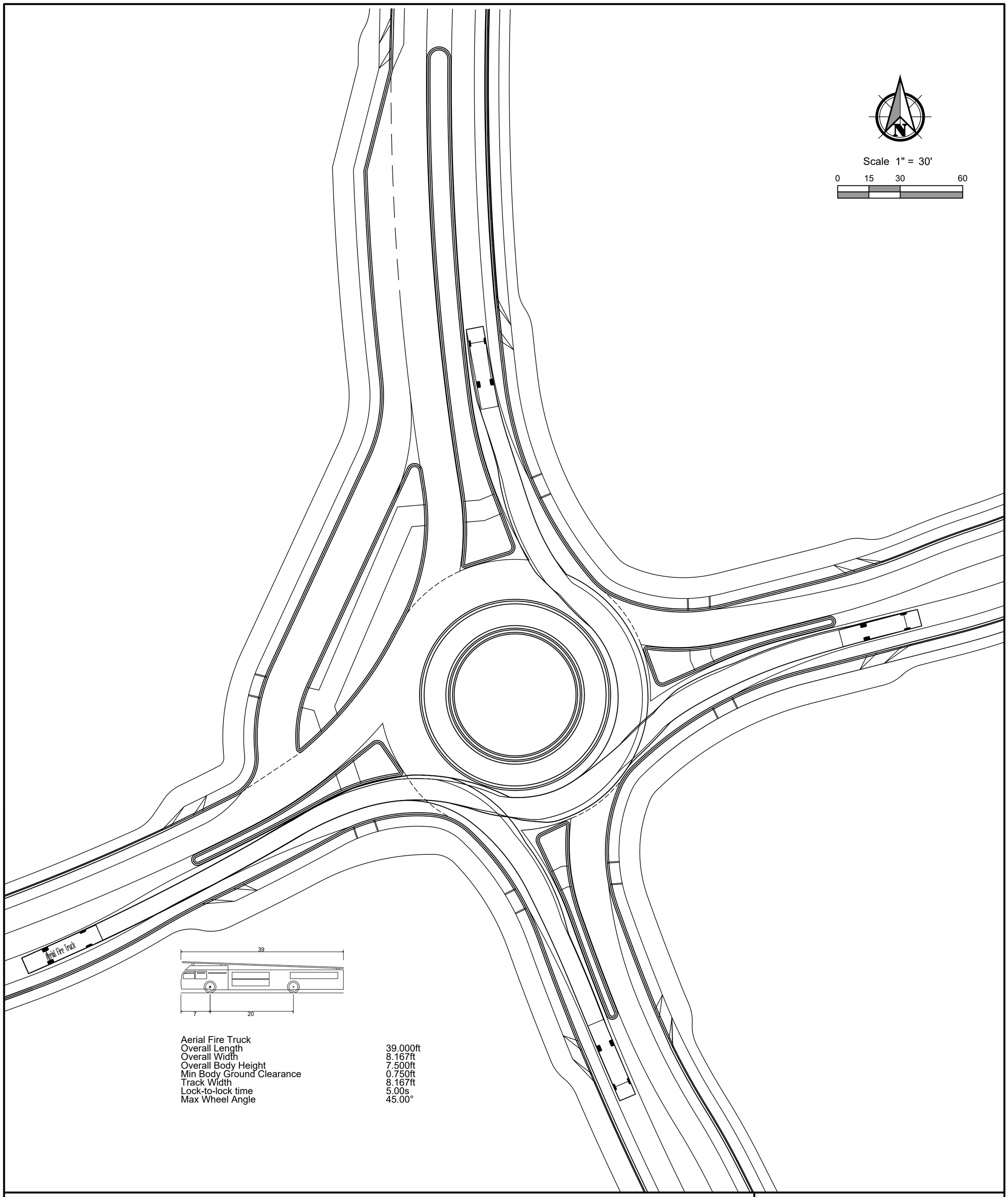
Overall Length	45.500ft
Overall Width	8.500ft
Overall Body Height	12.008ft
Min Body Ground Clearance	1.158ft
Track Width	8.500ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	45.20°

QUEENSGATE/GAGE ROUNDABOUT CONCEPT
LARGE BUS TURNING - SOUTH LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:03:03 PM



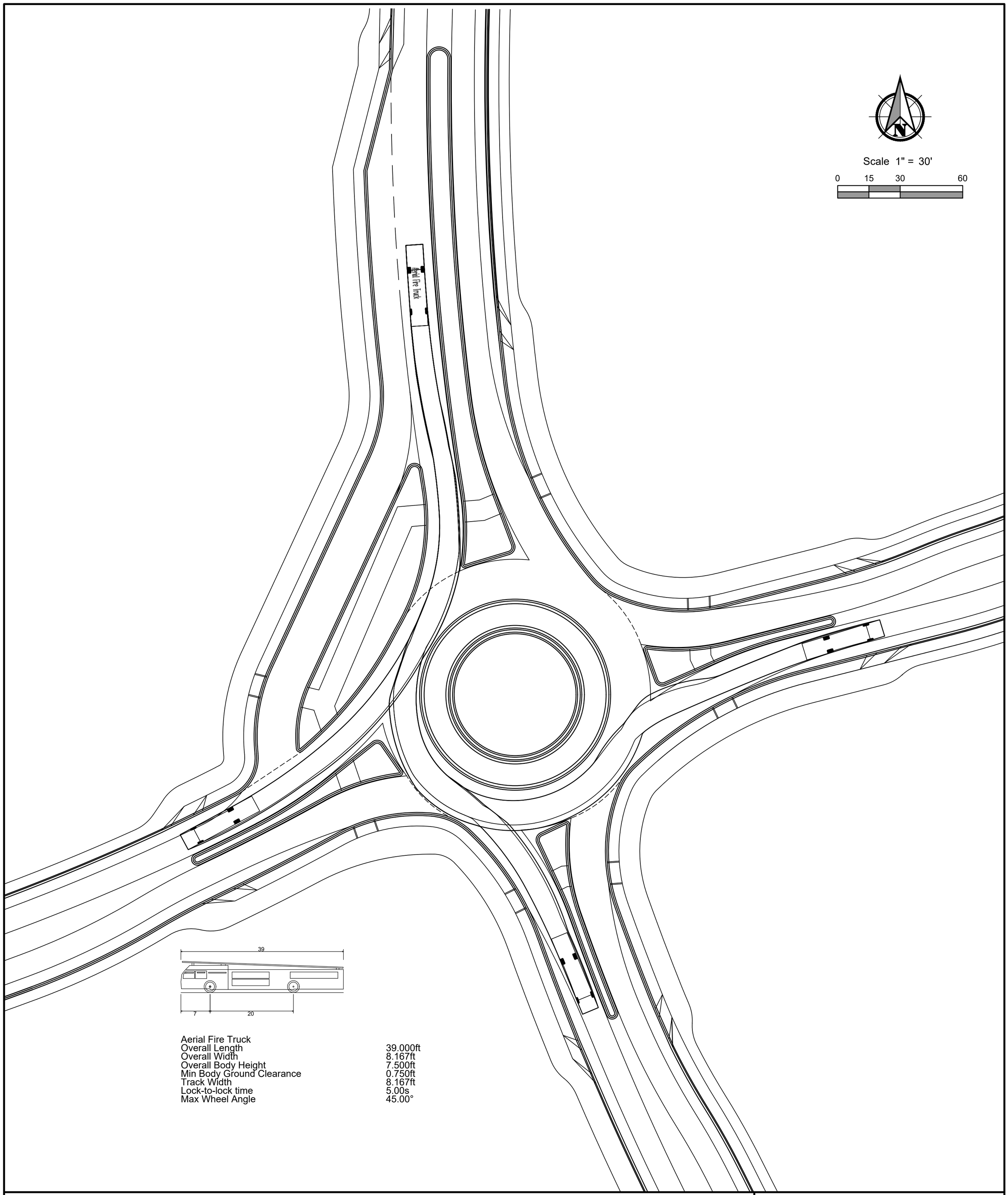
Aerial Fire Truck	
Overall Length	39.000ft
Overall Width	8.167ft
Overall Body Height	7.500ft
Min Body Ground Clearance	0.750ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

QUEENSGATE/GAGE ROUNDABOUT CONCEPT
LADDER TRUCK TURNING - WEST LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:03:03 PM



Aerial Fire Truck

Overall Length	39.000ft
Overall Width	8.167ft
Overall Body Height	7.500ft
Min Body Ground Clearance	0.750ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

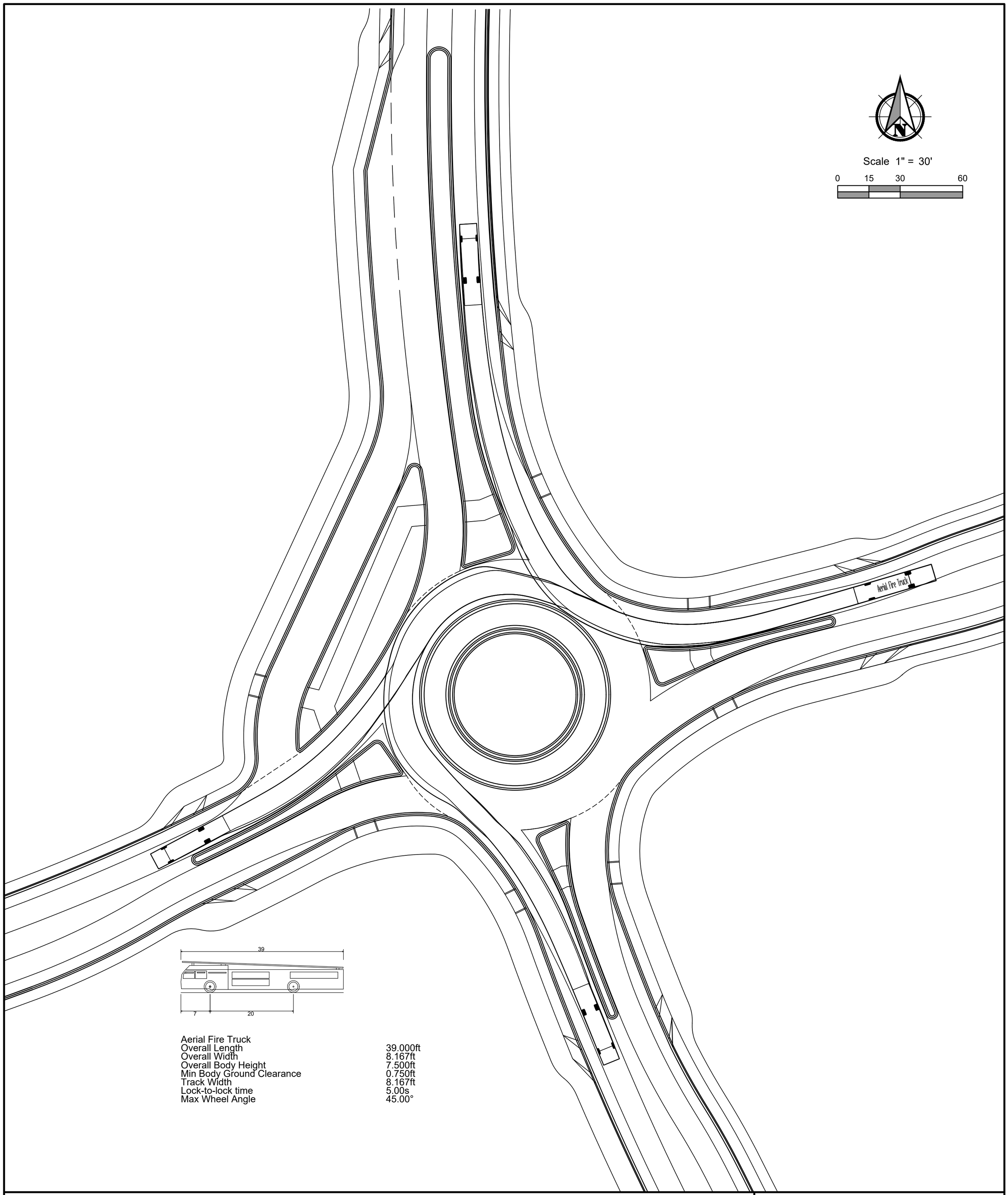
QUEENSGATE/GAGE ROUNDABOUT CONCEPT

LADDER TRUCK TURNING - NORTH LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:03:04 PM



Aerial Fire Truck

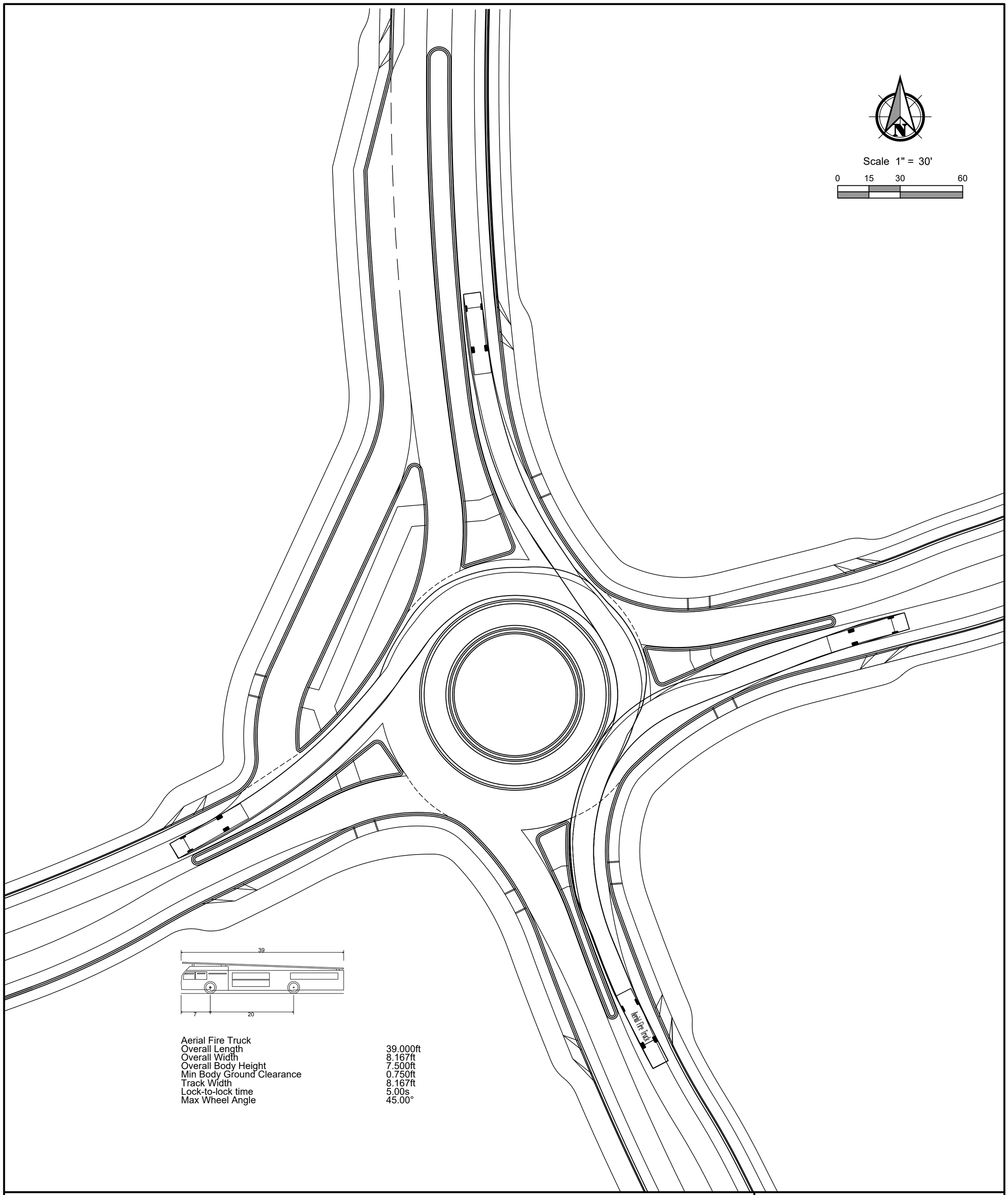
Overall Length	39.000ft
Overall Width	8.167ft
Overall Body Height	7.500ft
Min Body Ground Clearance	0.750ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

QUEENSGATE/GAGE ROUNDABOUT CONCEPT
LADDER TRUCK TURNING - EAST LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:03:05 PM



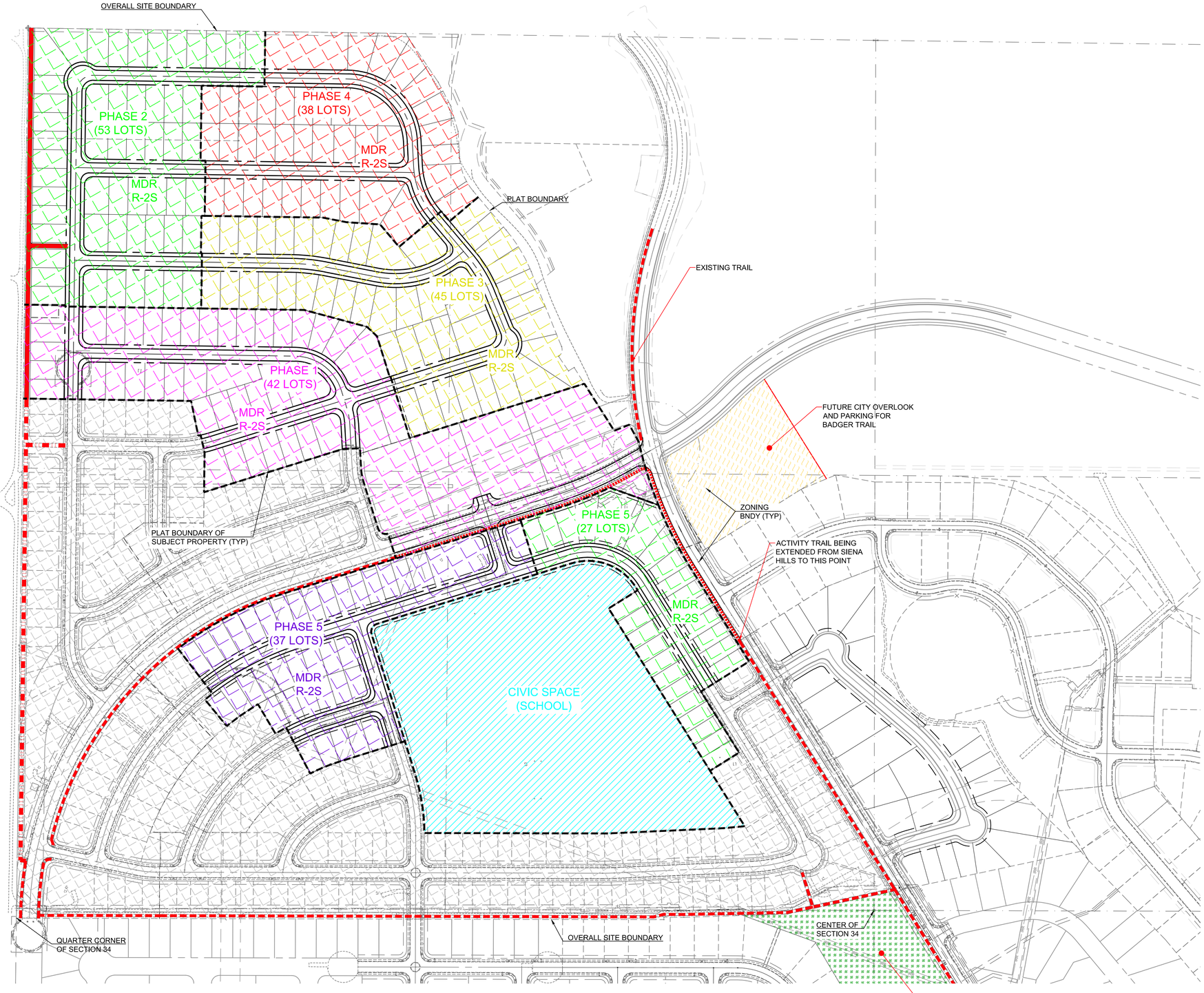
Aerial Fire Truck	
Overall Length	39.000ft
Overall Width	8.167ft
Overall Body Height	7.500ft
Min Body Ground Clearance	0.750ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

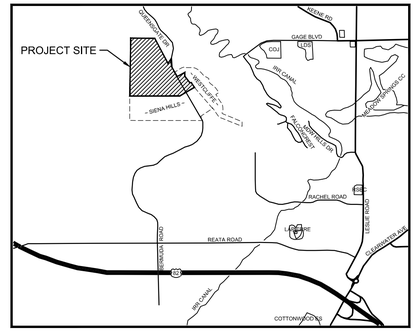
QUEENSGATE/GAGE ROUNDABOUT CONCEPT
LADDER TRUCK TURNING - SOUTH LEG

Scale: 1" = 15'	**Date:** 2/20/2025	**Drawing:** Queensgate_Gage_Concept-TruckTurning.dwg
Job #: 2401298	**Reference:**	

PBS
AN APEX COMPANY

L:\Projects_DVP\MMDD002\24012988\Civil\CAD\Working\Exhibits\Queensgate_Gage_Concept-TruckTurning.dwg Jose Ceniceros 2/24/2025 1:03:05 PM





VICINITY MAP
NOT TO SCALE

Scale 1" = 160'

0 80 160 320

12' WIDE ACTIVITY TRAIL TO BE COMPLETED FOR PEACH TREE ESTATES III

8' WIDE ACTIVITY TRAIL UNDER CONSTRUCTION OR PREVIOUSLY COMPLETED

12' WIDE ACTIVITY TRAIL UNDER CONSTRUCTION OR PREVIOUSLY COMPLETED

8' WIDE ACTIVITY TRAIL TO BE COMPLETED FOR PEACH TREE ESTATES III

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 106
Richland, WA 99352
509.942.1600
pbsusa.com

PBS

ACTIVITY TRAIL PLAN FOR:

PEACHTREE ESTATES III

A RESIDENTIAL SUBDIVISION IN THE CITY OF RICHLAND, WA.

811 Know what's **below.** **Call** before you dig.

JASON L. MATTOX — STATE OF WASHINGTON — 44707 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

DESIGNED:	JLM2
CHECKED:	JLM
MAY 2025	24012988
SHEET ID	
SHEET	1 OF 1

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

Filename: L:\Projects_DVP\MMDD0024\24012988\Civil\CADWorking\Exhibits\24012988_PathwayExhibit.dwg Layout Tab: PATHWAY_C01 User: Elisabeth Giever CAD Plot Date/Time: 5/14/2025 10:13:05 AM