

KITTITAS COUNTY COMMUNITY DEVELOPMENT SERVICES

411 N. Ruby St., Suite 2, Ellensburg, WA 98926

CDS@CO.KITTITAS.WA.US

Office (509) 962-7506

"Building Partnerships – Building Communities"

SEPA ENVIRONMENTAL CHECKLIST

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 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: [\[help\]](#)

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 non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

APPLICATION FEES:

\$600.00 Kittitas County Community Development Services (KCCDS)**

\$950.00* Kittitas County Department of Public Works**

\$275.00 Kittitas County Public Health

\$1,825.00 Total fees due for this application (One check made payable to KCCDS)

*2 hours of review included in Public Works Fee. Additional review hours will be billed at \$243 per hour.

** Note:KCCDS and PW fees are waived if project is a VSP sponsored fish enhancement project.

FOR STAFF USE ONLY

Application Received by (CDS Staff Signature): _____	DATE: _____	RECEIPT# _____	 DATE STAMP IN BOX
---	--------------------	-----------------------	--

A. Background [\[help\]](#)

1. Name of proposed project, if applicable: [\[help\]](#)

Brown Road, LLC Long Plat & Grading Permit

2. Name of applicant: [\[help\]](#)

Brown Road Estates, LLC - Joel Greear

3. Address and phone number of applicant and contact person: [\[help\]](#)

1410 W Dolarway Road, Ste 301, Ellensburg, WA 98926. Joel Greear 509-899-7371

4. Date checklist prepared: [\[help\]](#)

2/15/2025

5. Agency requesting checklist: [\[help\]](#)

Kittitas County

6. Proposed timing or schedule (including phasing, if applicable): [\[help\]](#)

Upon preliminary approval the applicant intends to develop the property and seek final plat approval as soon as possible. This project will be developed in one phase.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [\[help\]](#)

Not at this time

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [\[help\]](#)

A critical area report has been prepared for this project and is attached as part of this submission

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [\[help\]](#)

None known

10. List any government approvals or permits that will be needed for your proposal, if known. [\[help\]](#)

Kittitas County Engineered Grading Permit. Kittitas County Access Permit/Road Approval. Kittitas County Long Plat Application. Water mitigation purchase. Issuance of DOE groundwater permit.

11. Give 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.) [\[help\]](#)

Long plat of an existing 45.76 acres subdivided into 8 ea 5 acre lots and 1 ea 5.76 acre lot. Construction of approx. 4,000 feet of shared driveway. Strip sod, install base course, top course, asphalt surface. Potable water will be provided through a water rights permit using water purchased from a mitigation bank. The project will include installation of utilities and each lot will rely on an on-site septic system

12. 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. [\[help\]](#)

1601 Brown Road, Ellensburg, WA 98926, see attached site plan

B. ENVIRONMENTAL ELEMENTS [\[help\]](#)

1. Earth [\[help\]](#)

a. General description of the site: [\[help\]](#)

(circle one) Flat rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)? [\[help\]](#)

2%

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. [\[help\]](#)

Sandy loam/round gravel

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [\[help\]](#)

No

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. [\[help\]](#)

Shared driveway is approx 24' wide and 4,000 feet long consisting of 12" base rock and 3" asphalt.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [\[help\]](#)

Not likely. Site topography and local weather make erosion highly unlikely.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [\[help\]](#)

Less than 1%

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [\[help\]](#)

None needed

2. Air [\[help\]](#)

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. [\[help\]](#)

Normal emissions of equipment during construction. Vehicle emissions associated with rural 5 acre density once project is completed

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [\[help\]](#)

Not known.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any: [\[help\]](#)
None.

3. **Water** [\[help\]](#)

a. Surface Water:

- 1) 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. [\[help\]](#)

Yakima river is to the east of one parcel

- 2) 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. [\[help\]](#)

No

- 3) 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. [\[help\]](#)

Not applicable.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [\[help\]](#)

No

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [\[help\]](#)

No

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [\[help\]](#)

No

b. Ground Water:

- 1) 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. [\[help\]](#)

Water will be supplied by one or more group b systems. Water will be purchased from a local mitigation bank and the group B system will be designed and engineered.

- 2) 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. [\[help\]](#)

Domestic on site septic systems

c. Water runoff (including stormwater):

- 1) 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. [\[help\]](#)

Driveway runoff will be retained onsite. Site water will not flow into other waters.

- 2) Could waste materials enter ground or surface waters? If so, generally describe. [\[help\]](#)

No

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. [\[help\]](#)

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [\[help\]](#)

None

4. Plants [\[help\]](#)

a. Check the types of vegetation found on the site: [\[help\]](#)

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? [\[help\]](#)

Grass sod

c. List threatened and endangered species known to be on or near the site. [\[help\]](#)

None known.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [\[help\]](#)

None

- e. List all noxious weeds and invasive species known to be on or near the site. [\[help\]](#)

All varieties common to the Kittitas Valley

5. Animals [\[help\]](#)

- 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. [\[help\]](#)

Examples include:

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

- b. List any threatened and endangered species known to be on or near the site. [\[help\]](#)

None

- c. Is the site part of a migration route? If so, explain. [\[help\]](#)

Unknown

- d. Proposed measures to preserve or enhance wildlife, if any: [\[help\]](#)

None

- e. List any invasive animal species known to be on or near the site. [\[help\]](#)

None known.

6. Energy and Natural Resources [\[help\]](#)

- 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. [\[help\]](#)

None

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [\[help\]](#)

No

- 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: [\[help\]](#)

None

7. Environmental Health [\[help\]](#)

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. [\[help\]](#)

None known.

- 1) Describe any known or possible contamination at the site from present or past uses. [\[help\]](#)

None known.

- 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. [\[help\]](#)

None

- 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. [\[help\]](#)

None

- 4) Describe special emergency services that might be required. [\[help\]](#)

None

- 5) Proposed measures to reduce or control environmental health hazards, if any: [\[help\]](#)

None

- b. Noise [\[help\]](#)

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [\[help\]](#)

None

- 2) 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. [\[help\]](#)

None

- 3) Proposed measures to reduce or control noise impacts, if any: [\[help\]](#)

None needed

8. Land and Shoreline Use [\[help\]](#)

- 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. [\[help\]](#)
Agriculture. The proposal will have no affect on current adjacent land uses.

- 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? [\[help\]](#)

Yes, the property was previously used for agricultural purposes but the property has not been designated as agricultural land of long term commercial significance

1) 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: [\[help\]](#)
No

c. Describe any structures on the site. [\[help\]](#)
None

d. Will any structures be demolished? If so, what? [\[help\]](#)
No

e. What is the current zoning classification of the site? [\[help\]](#)
Agriculture 5

f. What is the current comprehensive plan designation of the site? [\[help\]](#)
Rural Residential

g. If applicable, what is the current shoreline master program designation of the site? [\[help\]](#)
Not Applicable

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [\[help\]](#)
No

i. Approximately how many people would reside or work in the completed project? [\[help\]](#)
An average of 2.5 people residing on each lot once homes are constructed

j. Approximately how many people would the completed project displace? [\[help\]](#)
0 people

k. Proposed measures to avoid or reduce displacement impacts, if any: [\[help\]](#)
None

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [\[help\]](#)
None

- m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any: [\[help\]](#)

None

9. Housing [\[help\]](#)

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [\[help\]](#)

9 single family units could be developed in the future

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [\[help\]](#)

0

- c. Proposed measures to reduce or control housing impacts, if any: [\[help\]](#)

None

10. Aesthetics [\[help\]](#)

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [\[help\]](#)

Not applicable

- b. What views in the immediate vicinity would be altered or obstructed? [\[help\]](#)

None known.

- c. Proposed measures to reduce or control aesthetic impacts, if any: [\[help\]](#)

None.

11. Light and Glare [\[help\]](#)

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [\[help\]](#)

None.

- b. Could light or glare from the finished project be a safety hazard or interfere with views? [\[help\]](#)

None.

- c. What existing off-site sources of light or glare may affect your proposal? [\[help\]](#)

Unkown

- d. Proposed measures to reduce or control light and glare impacts, if any: [\[help\]](#)

None.

12. Recreation [\[help\]](#)

- a. What designated and informal recreational opportunities are in the immediate vicinity? [\[help\]](#)

None.

b. Would the proposed project displace any existing recreational uses? If so, describe. [\[help\]](#)

No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [\[help\]](#)

None.

13. Historic and cultural preservation [\[help\]](#)

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 describe. [\[help\]](#)

No

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. [\[help\]](#)

No

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. [\[help\]](#)

None.

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. [\[help\]](#)

If artifacts are found, all work must cease until archaeologist or other specialist can examine the site to determine mitigation, per federal and state laws.

14. Transportation [\[help\]](#)

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. [\[help\]](#)

Brown Road

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? [\[help\]](#)

No

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [\[help\]](#)

0

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). [\[help\]](#)

No

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation?
If so, generally describe. [\[help\]](#)
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 nonpassenger vehicles). What data or transportation models were used to make these estimates? [\[help\]](#)

See included trip generation letter

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. [\[help\]](#)
No

h. Proposed measures to reduce or control transportation impacts, if any: [\[help\]](#)
None.

15. Public Services [\[help\]](#)

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. [\[help\]](#)
No

b. Proposed measures to reduce or control direct impacts on public services, if any. [\[help\]](#)
None.

16. Utilities [\[help\]](#)

a. Circle utilities currently available at the site: [\[help\]](#)
~~electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,~~
other
Communicaiton

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. [\[help\]](#)
Utilities are provided by PSE. On site trenching as required.

C. Signature [\[help\]](#)

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.

Signature: *Joel Greear*

Name of signee Joel Greear

Position and Agency/Organization Member, Solar Dolar, LLC

Date Submitted: 2/15/2025

D. supplemental sheet for nonproject actions [\[help\]](#)

(IT IS NOT NECESSARY to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

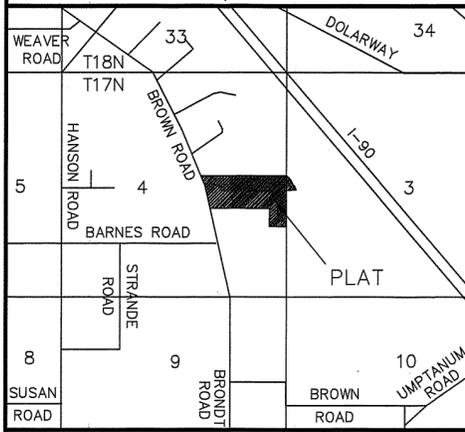
Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

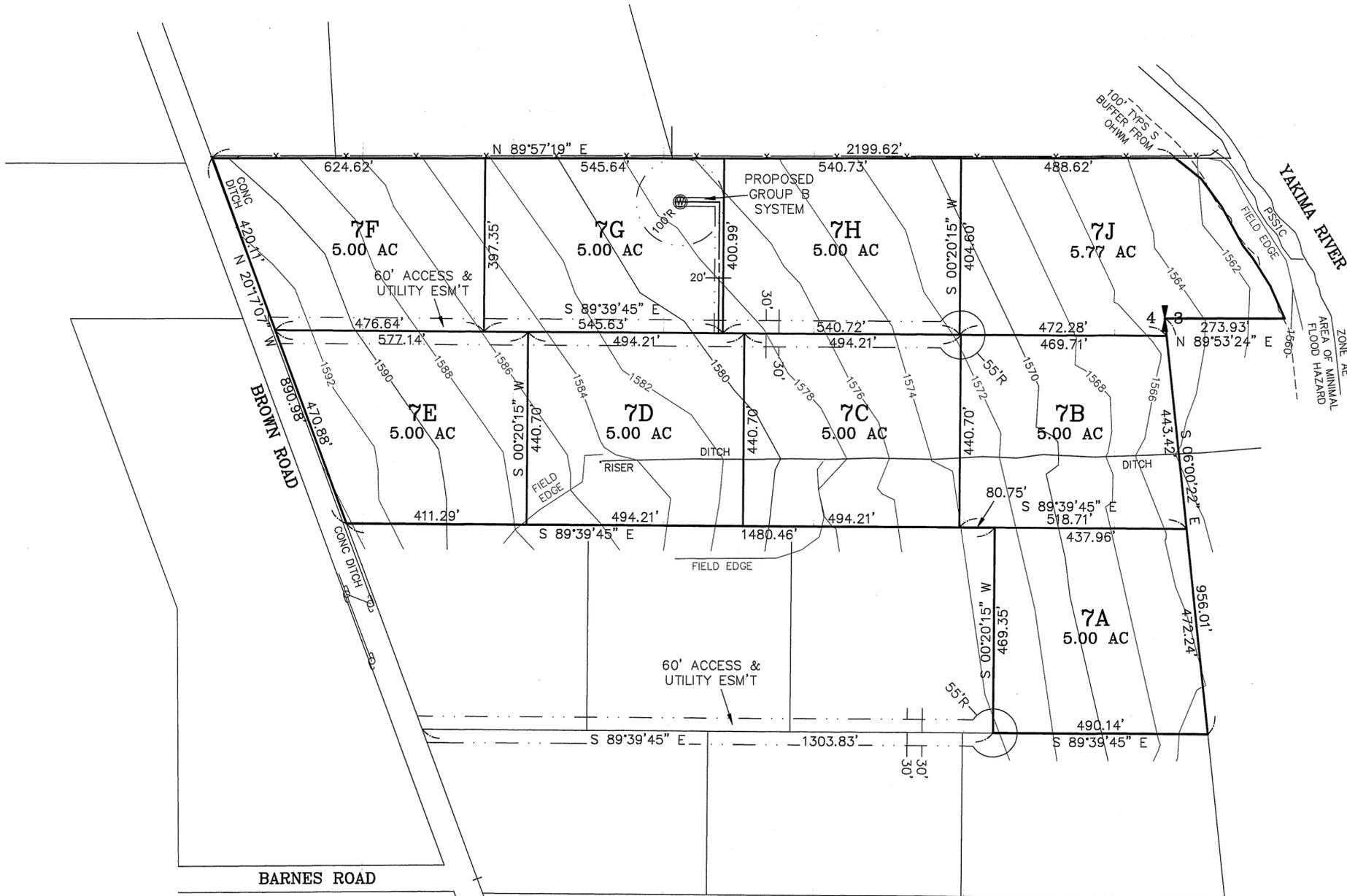
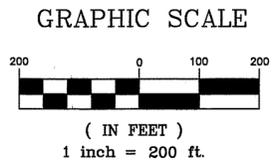
Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

VICINITY MAP



1601 BROWN ROAD PLAT
 PART OF SECTIONS 3 & 4, T. 17 N., R. 18 E., W.M.
 KITTITAS COUNTY, WASHINGTON
 - PRELIMINARY PLAT -



OWNER:
 BROWN ROAD ESTATES LLC
 1401 W DOLARWAY RD STE 301
 ELLENSBURG, WA 98926
 (509) 929-3980

TOTAL ACREAGE: 45.77 ACRES
 NO. OF LOTS: 9
 ZONE: AG 5
 ASSESSOR'S NO. 618133

SOURCE OF WATER: GROUP B WATER SYSTEM

SEWER SYSTEM: SEPTIC TANKS
 DRAINAGE: AS PER KITTITAS CO. STANDARDS
 ACCESS: PRIVATE ACCESS EASEMENT &
 COUNTY ROAD R/W

FLOOD ZONES SHOWN HEREON BASED ON FEMA
 FIRM PANEL 53037C1277D EFF. DATE 9/24/2021

WETLANDS & BUFFER PER SEWALL CRITICAL AREA
 REPORT DATED 9/30/2024.

VERT. DATUM = NAVD88 BASED ON TIES TO
 NGS MONUMENT SB0541.

CONTOURS BASED ON FIELD LOCATES COMPLETED
 11/1/24 AND ARE ACCURATE TO 1/2 CONTOUR
 INTERVAL.

SURVEYOR'S CERTIFICATE
 THIS MAP AND LOT LAYOUT IS A DEPICTION OF
 THE PROPERTY DESCRIBED HEREON. TOPOGRAPHIC
 INFORMATION IS BASED ON FIELD WORK DONE IN
 NOVEMBER OF 2024.

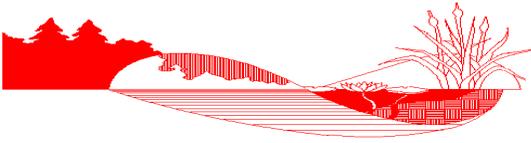
PRELIMINARY ONLY

CHRISTOPHER C. CRUSE
 Professional Land Surveyor
 License No. 36815

DATE _____

CRUSE & ASSOCIATES
 PROFESSIONAL LAND SURVEYORS
 217 E. Fourth St. P.O. Box 959
 Ellensburg, WA 98926 (509) 962-8242

1601 BROWN ROAD PLAT



Sewall Wetland Consulting, Inc.

PO Box 880
Fall City, WA 98024

Phone: 253-859-0515

September 30, 2024

Brown Road Estates, LLC
1410 West Dolarway Road, Suite 301
Ellensburg, Washington 98926

RE: Kittitas County Critical Area Report – Parcels #42833, 15435,
953834, 953835, 953836, 953837 & 618133
SWC Job #24-162

This report describes our observations of any jurisdictional wetlands, streams and/or buffers on or within 300' of Parcels #42833, 15435, 953834, 953835, 953836, 953837 & 618133 located at 1601 Brown Road in unincorporated Kittitas County, Washington.



Above: Vicinity Map of site



Above: Aerial photograph of the study area from Kittitas Mapsifter website.

The study area consists of seven (7) irregularly shaped, abutting parcels with a total area of 75.76 acres of irrigated hay fields located within the SE 1/4 of Section 4, Township 17 North, Range 18 east of the W.M.

METHODOLOGY

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site and areas within 300' of the site on September 23 of 2024.

The site was reviewed using methodology described in the **Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)** (USACOE September 2008) as required by the US Army Corps of Engineers starting in June of 2009. This is the methodology currently recognized by Kittitas County for wetland determinations and delineations. The site was also reviewed using methodology described in Soil colors were identified using the 1990 Edited and Revised Edition of the **Munsell Soil Color Charts** (Kollmorgen Instruments Corp. 1990).

Wetlands in Kittitas County are rated using the 2014 Washington State Department of Ecology Washington State *Wetland Rating System for Eastern Washington, 2014 Update* dated June 2014 Publication No. 14-06-018.

The ordinary high water mark (OHWM) of any streams was located based upon the criteria described in the *Washington Department of Ecology publication Determining The Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (WADOE Publication 16-06-029, March 2010 revised October 2016).

OBSERVATIONS

Existing Site Documentation.

Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included the Kittitas Taxsifter website, National Wetland Inventory Map, WDNR Fpars Stream Typing Map, WDFW Priority Habitats and Species Maps, and the NRCS Soil Survey online mapping and Data.

National Wetlands Inventory (NWI)

The NWI map depicts the old man made irrigation pond which no longer exists as an excavated unconsolidated bottom wetland. The Yakima River is depicted as riverine areas with some palustrine forested wetland to the east of the site. These areas were interpreted from color infrared aerial photographs by the US Fish and Wildlife Service using 1984 aerial photographs taken during irrigation season with no ground-truthing.



Above: NWI map of the area of the site

Kittitas Taxsifter Website

The Kittitas Taxsifter website with streams and wetland layers activated depicts the same features carried over from the NWI maps. In addition, the area west of the Yakima River are depicted as within the “Rural Conservancy” shoreline designation. A small portion of the site on the northeast below the bluff is depicted within the 100 Year floodplain.



Above: Kittitas County TaxsiFTER with wetland and stream layers activated.



Above: Kittitas County TaxsiFTER with Shoreline and Floodplain layers activated.

Soil Survey

The site is mapped as containing 3 soil types as well as noting one area as “pits”. The three soil types include well drained Ackna ashy loa, moderately well drained Brysill ashy loam, and somewhat poorly drained Nosal ashy silt loam. All of these osils are formed in alluvium none of these soil types are considered "hydric" soils according to the publication Hydric Soils of the United States (USDA NTCHS Pub No.1491, 1991). However, they can include inclusions of hydric soils to small to map.



Above: NRCS soil map of the site.

WADNR FPARS website

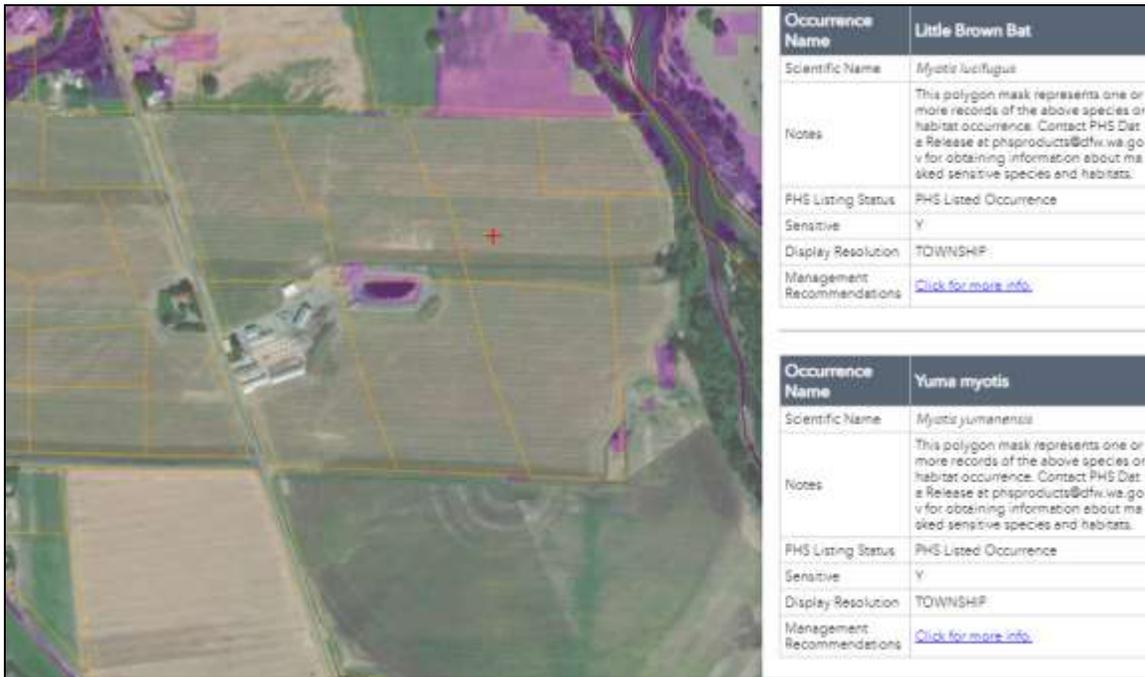
According to the WADNR FPARS website with stream types layer activated, the Yakima River, a Type S water passes along the east side of the site.



Above: WDNR Fpars Stream Mapping of the area of the site.

WDFW Priority Species Maps

The WDFW Priority Habitats and species maps for the site depicts the same areas of wetland as the NWI maps well as the site being in the Township in which the Yuma myotis and little brown bat area present.



Above: WDFW Priority Habitats and species map of the site.

Field observations

The site consists of a large, hay farm with associated single family home and agricultural buildings along the west side of the site bordering Brown Road. The remainder of the site is a large irrigated hay farm with associated wheel irrigation systems and several tailwater ditches. There was a large bermed and man-made pond just east of the structures that show up on several of the aerials and inventories but this has since been filled in and is now a large expanse of gravelly soil.

A tailwater ditch flows easterly across the site in the center, and a second tailwater ditch passes over the southeast corner of the site. Both of these drain to the Yakima River.

The site is relatively flat with a slight slope to the east. At the eastern edge of the site on the northeast the bluff above the Yakima River is present. This is a steep, near vertical feature roughly 70'-80' in height and drops directly into the Yakima River.



Above: Kittitas Taxsifter Lidar image of the site.

The site is a managed hayfield that was cut during our site visit but appears to be used to grow timothy hay. Other species of grass noted included ryegrass and quackgrass.

The site drops off down a near vertical bluff on the east. Large cottonwoods are rooted along the banks and the slope as well as chokecherry, rose, and numerous weedy species.

Soils throughout the site consist of dry, gravelly loams with soil colors of 10YR 3/3-3/4. No areas of hydric soil were encountered on the site.

Critical Areas

The site contains the banks of the Yakima River on the northeast. Some riparian wetland appears to be associated with the River to the east of Parcels #953834 & 953837. However these wetland areas are approximately 325' east of the site. This is further than the largest wetland buffer the county has and as such, these areas were not rated.

Yakima River

The Yakima River is located along the east side of the site on the very northeast of the site. The river bank is a near vertical drop of 70'-80' in this area. As a result the top of bank is at the top of the bluff. This was located with gps points 190-200.

As previously stated, forested vegetation and shrubs are found along the steep bluff which drops into the gravel bed of the river.

This stream is mapped as a Shoreline of the State or Type S water. Shoreline waters buffers are based upon KCC Table 17B.05.50-1. According to this table Type S waters in the Rural Conservancy Zone have a 100' buffer measured from the OHWM.

17B.05.050-1. Standard Shoreline Buffers (Type S Waters)

Shoreline Environment Designation	Type S Standard Shoreline Buffer Width (feet)
Urban Conservancy	100
Shoreline Residential	100
Rural Conservancy	100
Natural	150



Above: Mapping of critical areas and buffers on the site.

If you have any questions in regards to this report or need additional information, please feel free to contact me at (253) 859-0515 or at esewall@sewallwc.com .

Sincerely,
Sewall Wetland Consulting, Inc.

Ed Sewall
Senior Wetlands Ecologist PWS #212

Attached: Data sheets

REFERENCES

Cowardin, L., V. Carter, F. Golet, and E. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79-31, Washington, D. C.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. U. S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.

Kittitas County Municipal Code

Muller-Dombois, D. and H. Ellenberg. 1974. Aims and Methods of Vegetation Ecology. John Wiley & Sons, Inc. New York, New York.

Munsell Color. 1988. Munsell Soil Color Charts. Kollmorgen Instruments Corp., Baltimore, Maryland.

National Technical Committee for Hydric Soils. 1991. Hydric Soils of the United States. USDA Misc. Publ. No. 1491.

Reed, P., Jr. 1988. National List of Plant Species that Occur in Wetlands: Northwest (Region 9). 1988. U. S. Fish and Wildlife Service, Inland Freshwater Ecology Section, St. Petersburg, Florida.

Reed, P.B. Jr. 1993. 1993 Supplement to the list of plant species that occur in wetlands: Northwest (Region 9). USFWS supplement to Biol. Rpt. 88(26.9) May 1988.

USDA NRCS & National Technical Committee for Hydric Soils, September 1995. Field Indicators of Hydric Soils in the United States - Version 2.1

Northwest rd

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Brown Road Estates City/County: Kittitas Sampling Date: 9-23-24
Applicant/Owner: Ed Sewall State: WA Sampling Point: DPT 1
Investigator(s): Ed Sewall Section, Township, Range: S4 T17N R18E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [checked] No
Are Vegetation [checked], Soil, or Hydrology [checked] significantly disturbed? Are "Normal Circumstances" present? Yes [checked] No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes [checked] No
Hydric Soil Present? Yes No [checked]
Wetland Hydrology Present? Yes No [checked]
Is the Sampled Area within a Wetland? Yes No [checked]
Remarks: irrigated hay field

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1.
2.
3.
4.
= Total Cover
Sapling/Shrub Stratum (Plot size:)
1.
2.
3.
4.
5.
= Total Cover
Herb Stratum (Plot size:)
1. Phlox paniculata 20 FAC
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
= Total Cover
Woody Vine Stratum (Plot size:)
1.
2.
= Total Cover
% Bare Ground in Herb Stratum
Remarks: Mound

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =
Hydrophytic Vegetation Indicators:
Dominance Test is >50%
Prevalence Index is <= 3.0
Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
Wetland Non-Vascular Plants
Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Hydrophytic Vegetation Present? Yes [checked] No

SOIL

Sampling Point: SP #1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
16	10YR3/1						cobbly	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? Yes _____ No _____ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

mid north

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Brown Road Estates City/County: Kittitas Sampling Date: 9-23-24
Applicant/Owner: Ed Sewall State: WA Sampling Point: DP# 2
Investigator(s): Ed Sewall Section, Township, Range: S4 T17N R18E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [checked] No
Are Vegetation [checked], Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes [checked] No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes [checked] No
Hydric Soil Present? Yes No [checked]
Wetland Hydrology Present? Yes No [checked]
Is the Sampled Area within a Wetland? Yes No [checked]
Remarks: irrigated hay field

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1.
2.
3.
4.
= Total Cover
Sapling/Shrub Stratum (Plot size:)
1.
2.
3.
4.
5.
= Total Cover
Herb Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1. Phlox poliflora 100 FAC
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
= Total Cover
Woody Vine Stratum (Plot size:)
1.
2.
= Total Cover
% Bare Ground in Herb Stratum
Remarks:

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =
Hydrophytic Vegetation Indicators:
[checked] Dominance Test is >50%
Prevalence Index is <= 3.0^1
Morphological Adaptations^1 (Provide supporting data in Remarks or on a separate sheet)
Wetland Non-Vascular Plants^1
Problematic Hydrophytic Vegetation^1 (Explain)
^1 indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Hydrophytic Vegetation Present? Yes [checked] No

nut east

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Brown Road Estates City/County: Kittitas Sampling Date: 9-23-24
Applicant/Owner: State: WA Sampling Point: DP# 3
Investigator(s): Ed Sewall Section, Township, Range: S4 T17N R18E
Landform (hilllope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [checked] No
Are Vegetation [checked], Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes [checked] No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes [checked] No
Hydric Soil Present? Yes No [checked]
Wetland Hydrology Present? Yes No
Is the Sampled Area within a Wetland? Yes No [checked]
Remarks: irrigated hay field

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1.
2.
3.
4. = Total Cover
Sapling/Shrub Stratum (Plot size:)
1.
2.
3.
4.
5. = Total Cover
Herb Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1. Phlox pulchra 80 FAC
2.
3.
4.
5.
6.
7.
8.
9.
10.
11. = Total Cover
Woody Vine Stratum (Plot size:)
1.
2. = Total Cover
% Bare Ground in Herb Stratum
Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =
Hydrophytic Vegetation Indicators:
Dominance Test is >50%
Prevalence Index is <=3.0
Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
Wetland Non-Vascular Plants
Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Hydrophytic Vegetation Present? Yes [checked] No

east side

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Brown Road Estates City/County: Kittitas Sampling Date: 9-23-24

Applicant/Owner: _____ State: WA Sampling Point: DPE 4

Investigator(s): Ed Sewall Section, Township, Range: S4 T17N R10E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)

Are Vegetation , Soil _____, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>irrigated hay field</u>	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Phlox subulata</u>	<u>100</u>	<u>FA</u>	<u>FA</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____				

South center

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Brown Road Estates City/County: Kittitas Sampling Date: 9-23-24
Applicant/Owner: Ed Sewall State: WA Sampling Point: DP# 15
Investigator(s): Ed Sewall Section, Township, Range: S4 T17N R18E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes No
Hydric Soil Present? Yes No
Wetland Hydrology Present? Yes No
Is the Sampled Area within a Wetland? Yes No
Remarks: irrigated hay field

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1.
2.
3.
4.
= Total Cover
Sapling/Shrub Stratum (Plot size:)
1.
2.
3.
4.
5.
= Total Cover
Herb Stratum (Plot size:)
1. Phlox phlox EU FAC
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
= Total Cover
Woody Vine Stratum (Plot size:)
1.
2.
= Total Cover
% Bare Ground in Herb Stratum
Remarks:

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
Dominance Test is >50%
Prevalence Index is <= 3.0^1
Morphological Adaptations^1 (Provide supporting data in Remarks or on a separate sheet)
Wetland Non-Vascular Plants^1
Problematic Hydrophytic Vegetation^1 (Explain)
^1 indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: DP#5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
14	10Y 3/3						cobbly	lan

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? Yes _____ No _____ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

South west

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Brown Road Estates City/County: Kittitas Sampling Date: 9-23-24
Applicant/Owner: Ed Sewall State: WA Sampling Point: DP# 6
Investigator(s): Ed Sewall Section, Township, Range: S4 T17N R18E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [checked] No
Are Vegetation [checked], Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes [checked] No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes [checked] No
Hydric Soil Present? Yes No [checked]
Wetland Hydrology Present? Yes No
Is the Sampled Area within a Wetland? Yes No [checked]
Remarks: irrigated hay field

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1.
2.
3.
4. = Total Cover
Sapling/Shrub Stratum (Plot size:)
1.
2.
3.
4.
5. = Total Cover
Herb Stratum (Plot size:) Absolute % Cover Dominant Species? Indicator Status
1. Phlox pilosa 80 FAC
2.
3.
4.
5.
6.
7.
8.
9.
10.
11. = Total Cover
Woody Vine Stratum (Plot size:)
1.
2. = Total Cover
% Bare Ground in Herb Stratum = Total Cover
Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =
Hydrophytic Vegetation Indicators:
[checked] Dominance Test is >50%
Prevalence Index is <= 3.0^1
Morphological Adaptations^1 (Provide supporting data in Remarks or on a separate sheet)
Wetland Non-Vascular Plants^1
Problematic Hydrophytic Vegetation^1 (Explain)
^1 indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Hydrophytic Vegetation Present? Yes [checked] No

Technical Memo

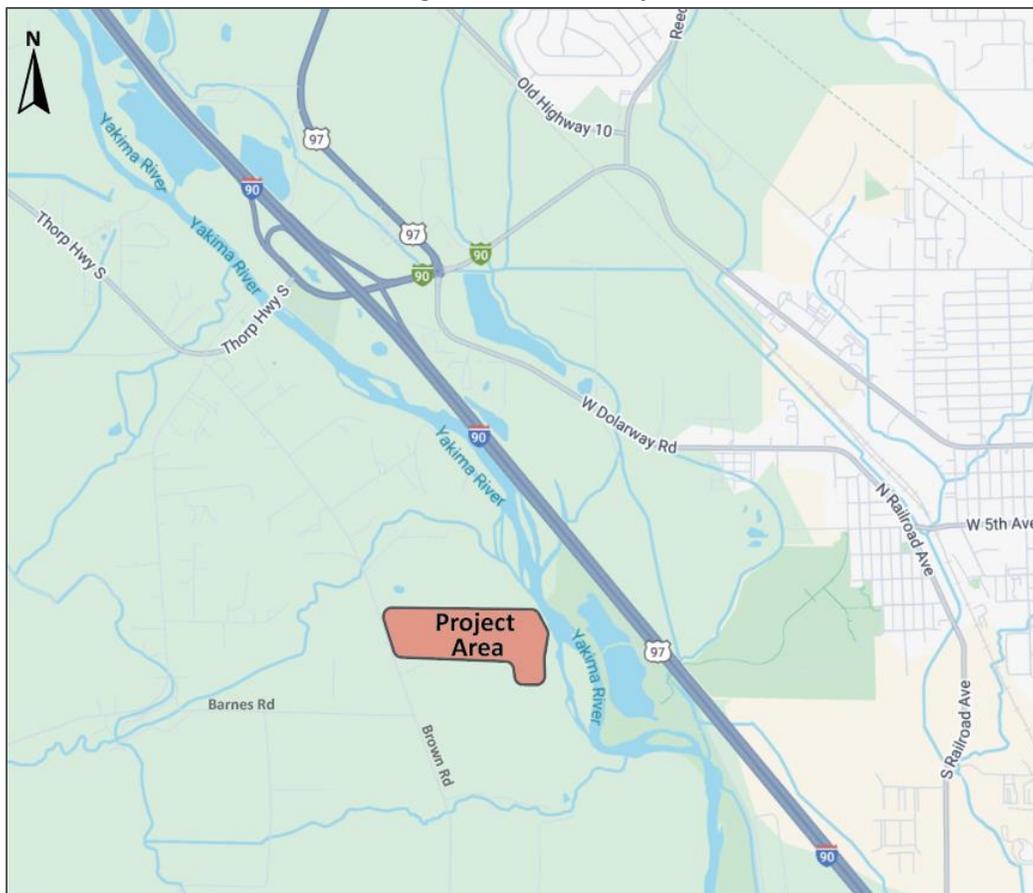
To: Joel Greear, Brown Road Estates, LLC
From: Ryan Shea, PTP, Senior Project Manager
Date: February 10, 2025
Project: Brown Road Estates
Subject: Trip Generation and Distribution Memo

Introduction

Brown Road Estates, LLC is pursuing a long plat to convert one existing 45-acre residential parcel into nine 5-acre residential parcels in Kittitas County, Washington. This project is located west of I-90 along Brown Road and adjacent to the Brown Road/Barnes Road intersection.

This trip generation and distribution memo identifies the potential traffic that could be added by the proposed long plat. **Figure 1** illustrates the site vicinity and the transportation network serving the project area.

Figure 1. Site Vicinity

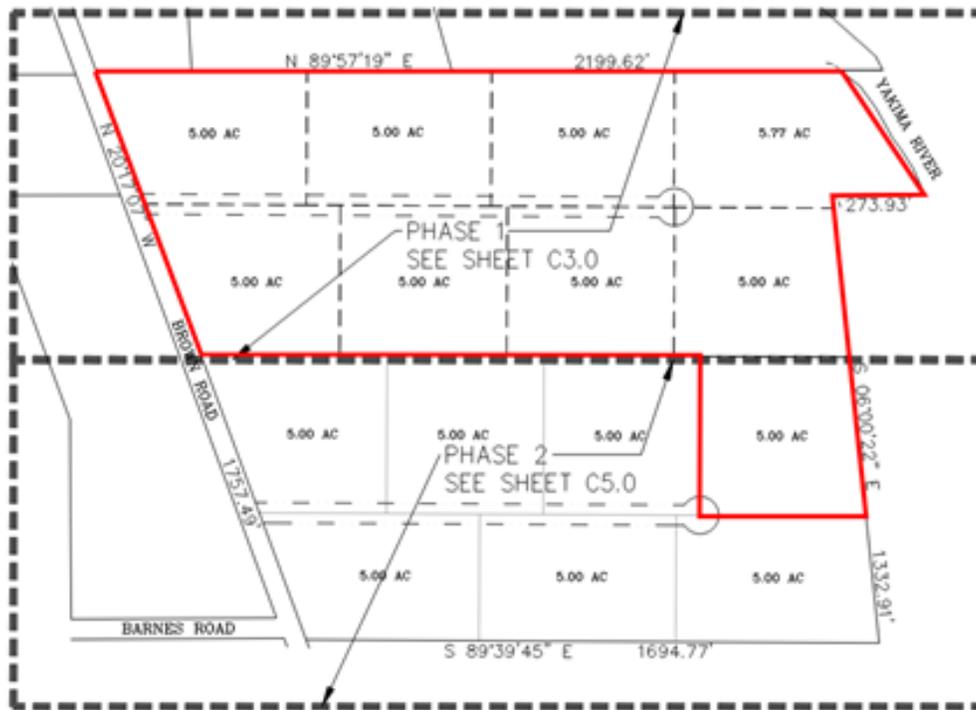


Proposed Development

The proposed Brown Road Estates project will convert one vacant residential property into 9 residential properties, resulting in a new increase of 8 residential properties. The project is located west of I-90 along Brown Road and adjacent to the Brown Road/Barnes Road intersection in Kittitas County. The total project site is approximately 45 acres.

Site access will be provided via Brown Road. Regional access will be provided via I-90 which intersects Thorp Highway north of the project site. A preliminary site plan for the boundary line adjustment is provided below (shown in red) in **Figure 2**.

Figure 2. Proposed Boundary Line Adjustment



Project Traffic Characteristics

The two project-related characteristics having the most effect on area traffic conditions are peak hour trip generation and the directional distribution of traffic volumes on the surrounding roadway network. These are discussed in the following paragraphs

Site-Generated Traffic Volumes

Vehicle trip generation was estimated using the trip generation rates contained in the 11th edition of the *Trip Generation Manual* by the Institute of Transportation Engineers (ITE). The land-use category “Single-Family Detached Housing” (land-use code 210) with the variable of dwelling units was determined to be the most applicable to this project. For this analysis, the “fitted-curve” equation was used to estimate trips in preference to using a specific trip rate as this approach was recommended by ITE.

The trip generation rates used for the proposed project are shown in **Table 1**.

Table 1. Trip Generation Rates – Single-Family Detached Housing (LUC 210)

Peak Period	Unit	Trip Rate	% Enter	% Exit
AM peak hour of Adjacent Street	Dwelling Units	0.89	25%	75%
PM peak hour of Adjacent Street	Dwelling Units	1.11 ¹	63%	37%
Daily	Dwelling Units	12.22 ¹	50%	50%

1. Fitted curve equation rate

The total trip generation expected from this project is calculated by applying the unit measure (dwelling units) to the appropriate trip generation rate. The trip generation calculations are shown in **Tables 2**.

Table 2. Project Trip Generation

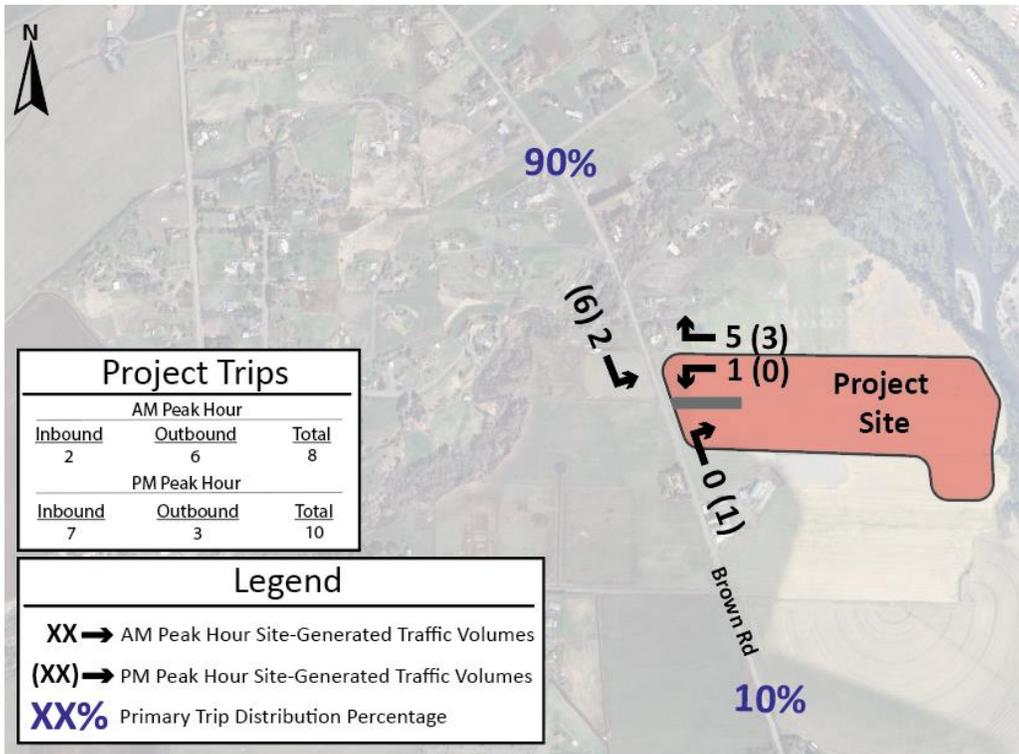
Peak Period	Size	Total Trips	Enter	Exit
AM peak hour of Adjacent Street	9	8	2	6
PM peak hour of Adjacent Street	9	10	7	3
Daily	9	110	55	55

It should be noted that currently the property is one residential parcel that would be expected to contain a single-family home. While the proposed subdivision will create nine residential lots, this is ultimately only a net increase of eight residential lots from what was previously constructable.

Site Traffic Distribution and Assignment

For this study, the regional distribution of traffic to and from the proposed project was estimated based on the existing roadway system. It is expected that most of the project traffic will travel to/from the north to I-90. The regional traffic distribution percentages and site traffic assignment for the proposed development for the AM peak hour and PM peak hour is shown on **Figure 3**.

Figure 3. Project Site Generated Volumes



The proposed Brown Road Estates subdivision will create eight additional residential lots, which is estimated to generate 8 trip ends during the AM peak hour and 10 trip ends during the PM peak hour. Due to the relatively low trip generation, it is not expected that further traffic analysis related to potential project impacts is necessary.

Thank you for reviewing the enclosed materials. If you have any questions or need additional information, please email me at rshea@gondolaventures.com.

Respectfully,

GVC Transportation Solutions

Ryan Shea, PTP, Senior Project Manager