APPENDIX A

Wetland Rating Forms

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Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Algona - Wetland A Date of site visit: 9-10-15

Rated by Paul Hamidi Trained by Ecology? X Yes ___ No Date of training 2013

HGM Class used for rating Depressional Wetland has multiple HGM classes? X Y ___ N

NOTE: Form is not complete without the figures requested *(figures can be combined).*

Source of base aerial photo/map ESRI Basemap Imagery

OVERALL WETLAND CATEGORY III (based on functions ✓ or special characteristics ___)

1. Category of wetland based on FUNCTIONS

___ **Category I** – Total score = 23 - 27

___ **Category II** – Total score = 20 - 22

X **Category III** – Total score = 16 - 19

___ **Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H (M) L	H M (L)	H (M) L	
Landscape Potential	H (M) L	(H) M L	H (M) L	
Value	(H) M L	H (M) L	H (M) L	TOTAL
Score Based on Ratings	7	6	6	19

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	✓

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	A
Hydroperiods	D 1.4, H 1.2	B
Location of outlet *(can be added to map of hydroperiods)*	D 1.1, D 4.1	B
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	A
Map of the contributing basin	D 4.3, D 5.3	C
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	D
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	E
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	E

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number A

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO - go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3 **YES** – The wetland class is **Flats**

*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
   ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO - go to 4 **YES** – The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
   ___The wetland is on a slope (*slope can be very gradual*),
   ___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
   ___The water leaves the wetland **without being impounded.**

NO - go to 5 **YES** – The wetland class is **Slope**

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
   ___The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
   ___The overbank flooding occurs at least once every 2 years.

Wetland name or number A

(NO) go to 6 **YES** – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

(NO) go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

(NO) go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

	HGM classes within the wetland unit being rated	HGM class to use in rating
X	Slope + Riverine	Riverine
X	Slope + Depressional	Depressional
	Slope + Lake Fringe	Lake Fringe
X	Depressional + Riverine along stream within boundary of depression	Depressional
	Depressional + Lake Fringe	Depressional
	Riverine + Lake Fringe	Riverine
	Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*. Yes = 4 No = 0	4
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	0
Total for D 1 Add the points in the boxes above	11

Rating of Site Potential If score is: ___ 12-16 = H X 6-11 = M ___ 0-5 = L *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source_____ Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___ 3 or 4 = H X 1 or 2 = M ___ 0 = L *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	3

Rating of Value If score is: X 2-4 = H ___ 1 = M ___ 0 = L *Record the rating on the first page*

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland: — **2**

- Wetland is a depression or flat depression with no surface water leaving it (no outlet) — points = 4
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet — points = 2
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch — points = 1
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing — points = 0

D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* — **3**

- Marks of ponding are 3 ft or more above the surface or bottom of outlet — points = 7
- Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet — points = 5
- Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet — points = 3
- The wetland is a "headwater" wetland — points = 3
- Wetland is flat but has small depressions on the surface that trap water — points = 1
- Marks of ponding less than 0.5 ft (6 in) — points = 0

D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* — **0**

- The area of the basin is less than 10 times the area of the unit — points = 5
- The area of the basin is 10 to 100 times the area of the unit — points = 3
- The area of the basin is more than 100 times the area of the unit — points = 0
- Entire wetland is in the Flats class — points = 5

Total for D 4 — Add the points in the boxes above — **5**

Rating of Site Potential If score is: ___ 12-16 = H ___ 6-11 = M X 0-5 = L — *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1
Total for D 5	Add the points in the boxes above	**3**

Rating of Landscape Potential If score is: X 3 = H ___ 1 or 2 = M ___ 0 = L — *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* — **1**

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):

- Flooding occurs in a sub-basin that is immediately down-gradient of unit. — points = 2
- Surface flooding problems are in a sub-basin farther down-gradient. — points = (1)

Flooding from groundwater is an issue in the sub-basin. — points = 1

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* _____ — points = 0

There are no problems with flooding downstream of the wetland. — points = 0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 — **0**

Total for D 6 — Add the points in the boxes above — **1**

Rating of Value If score is: ___ 2-4 = H X 1 = M ___ 0 = L — *Record the rating on the first page*

Wetland name or number A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

___ Aquatic bed	4 structures or more: points = 4
___ Emergent	3 structures: points = 2
X Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
X Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

X The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

2

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

___ Permanently flooded or inundated	4 or more types present: points = 3
___ Seasonally flooded or inundated	3 types present: points = 2
X Occasionally flooded or inundated	2 types present: points = 1
X Saturated only	1 type present: points = 0
X Permanently flowing stream or river in, or adjacent to, the wetland	
___ Seasonally flowing stream in, or adjacent to, the wetland	
___ **Lake Fringe wetland**	**2 points**
___ **Freshwater tidal wetland**	**2 points**

2

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

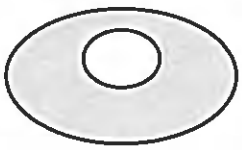
If you counted: > 19 species	points = 2
5 - 19 species	points = 1
< 5 species	points = 0

1

H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*

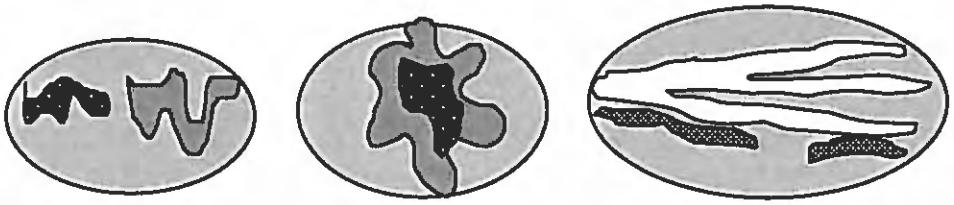
None = 0 points



Low = 1 point

Moderate = 2 points

All three diagrams in this row are **HIGH** = 3points



2

Wetland name or number A

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). X Standing snags (dbh > 4 in) within the wetland ___ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)* ___ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* X Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	3
Total for H 1 Add the points in the boxes above	10

Rating of Site Potential If score is: ___ 15-18 = H X 7-14 = M ___ 0-6 = L *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat 18 + [(% moderate and low intensity land uses)/2] 1 = 19 % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	1
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 24 + [(% moderate and low intensity land uses)/2] 1 = 25 % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	2
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	1

Rating of Landscape Potential If score is: ___ 4-6 = H X 1-3 = M ___ < 1 = L *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = (1) Site does not meet any of the criteria above points = 0	1

Rating of Value If score is: ___ 2 = H X 1 = M ___ 0 = L *Record the rating on the first page*

Wetland name or number A

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

— **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

X **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

— **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland name or number B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Algona - Wetland B Date of site visit: 9-10-15

Rated by Paul Hamidi Trained by Ecology? X Yes ___ No Date of training 2013

HGM Class used for rating Depressional **Wetland has multiple HGM classes?** ___ Y X N

NOTE: Form is not complete without the figures requested *(figures can be combined).*

Source of base aerial photo/map ESRI Basemap Imagery

OVERALL WETLAND CATEGORY III (based on functions ✓ or special characteristics ___)

1. Category of wetland based on FUNCTIONS

___ **Category I** – Total score = 23 - 27

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X **Category III** – Total score = 16 - 19

___ **Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H (M) L	H (M) L	H M (L)	
Landscape Potential	H (M) L	(H) M L	H (M) L	
Value	(H) M L	H (M) L	H (M) L	TOTAL
Score Based on Ratings	7	7	5	19

Score for each function based on three ratings *(order of ratings is not important)*

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4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	✓

Wetland name or number B

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	A
Hydroperiods	D 1.4, H 1.2	B
Location of outlet *(can be added to map of hydroperiods)*	D 1.1, D 4.1	B
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	A
Map of the contributing basin	D 4.3, D 5.3	C
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	D
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	E
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	E

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number B

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

   (NO) go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

   1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

   (NO) **Saltwater Tidal Fringe (Estuarine)** **YES – Freshwater Tidal Fringe**

   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

   (NO) go to 3 **YES** – The wetland class is **Flats**

   *If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?

   ___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

   ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

   (NO) go to 4 **YES** – The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?

   ___The wetland is on a slope (*slope can be very gradual*),

   ___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

   ___The water leaves the wetland **without being impounded**.

   (NO) go to 5 **YES** – The wetland class is **Slope**

   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?

   ___The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

   ___The overbank flooding occurs at least once every 2 years.

Wetland name or number B

NO → go to 6 **YES** – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 7 **YES** → The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number B

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	3
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*. Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	3
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	4
Total for D 1 Add the points in the boxes above	10

Rating of Site Potential If score is: ___ 12-16 = H X 6-11 = M ___ 0-5 = L *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source_____ Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___ 3 or 4 = H X 1 or 2 = M ___ 0 = L *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	3

Rating of Value If score is: X 2-4 = H ___ 1 = M ___ 0 = L *Record the rating on the first page*

Wetland name or number B

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	4
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	

D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.*

Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	5
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	

D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.*

The area of the basin is less than 10 times the area of the unit	points = 5	0
The area of the basin is 10 to 100 times the area of the unit	points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	
Entire wetland is in the Flats class	points = 5	

Total for D 4	Add the points in the boxes above	9

Rating of Site Potential If score is: ___ 12-16 = H X 6-11 = M ___ 0-5 = L *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1
Total for D 5	Add the points in the boxes above	3

Rating of Landscape Potential If score is: X 3 = H ___ 1 or 2 = M ___ 0 = L *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.*

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):		1
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	
• Surface flooding problems are in a sub-basin farther down-gradient.	points = (1)	
Flooding from groundwater is an issue in the sub-basin.	points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* _____	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0
Total for D 6	Add the points in the boxes above	1

Rating of Value If score is: ___ 2-4 = H X 1 = M ___ 0 = L *Record the rating on the first page*

Wetland name or number B

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

___ Aquatic bed	4 structures or more: points = 4
_X_ Emergent	3 structures: points = 2
_X_ Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
___ Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

___ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

1

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

_X_ Permanently flooded or inundated	4 or more types present: points = 3
_X_ Seasonally flooded or inundated	3 types present: points = 2
___ Occasionally flooded or inundated	2 types present: points = 1
_X_ Saturated only	1 type present: points = 0
___ Permanently flowing stream or river in, or adjacent to, the wetland	
___ Seasonally flowing stream in, or adjacent to, the wetland	
___ **Lake Fringe wetland**	**2 points**
___ **Freshwater tidal wetland**	**2 points**

2

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

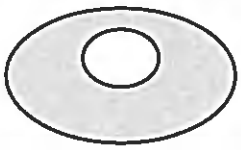
If you counted: > 19 species	points = 2
5 - 19 species	points = 1
< 5 species	points = 0

1

H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*

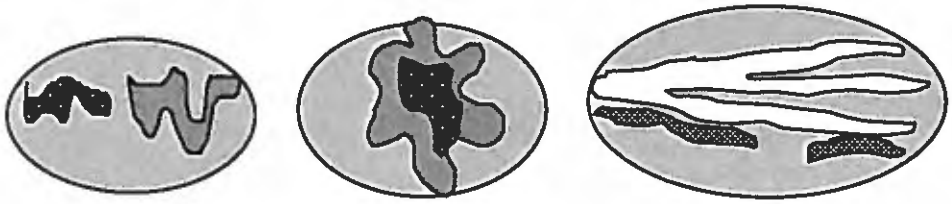
None = 0 points



Low = 1 point

Moderate = 2 points

All three diagrams in this row are **HIGH** = 3points



1

Wetland name or number B

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). ____Standing snags (dbh > 4 in) within the wetland ____Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)* ____At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	1
Total for H 1 Add the points in the boxes above	6

Rating of Site Potential If score is: ___15-18 = H ___7-14 = M X 0-6 = L *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat 18 + [(% moderate and low intensity land uses)/2] 1 = 19 % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	1
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 24 + [(% moderate and low intensity land uses)/2] 1 = 25 % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	2
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___4-6 = H X 1-3 = M ___< 1 = L *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If score is: ___2 = H X 1 = M ___0 = L *Record the rating on the first page*

Wetland name or number AB

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

— **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

✓ **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

— **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

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Date: 9/22/2015 | joel_hancock

Figure A

Cowardin Classes

Wetlands A and B
King County SCRTS

C:\GIS\Projects\KingCounty\mxd\wetlandratings\WetlandsA&B_HydroperiodsOutlets.mxd
Date: 9/22/2015 | joel_hancock

Figure B

Hydroperiods

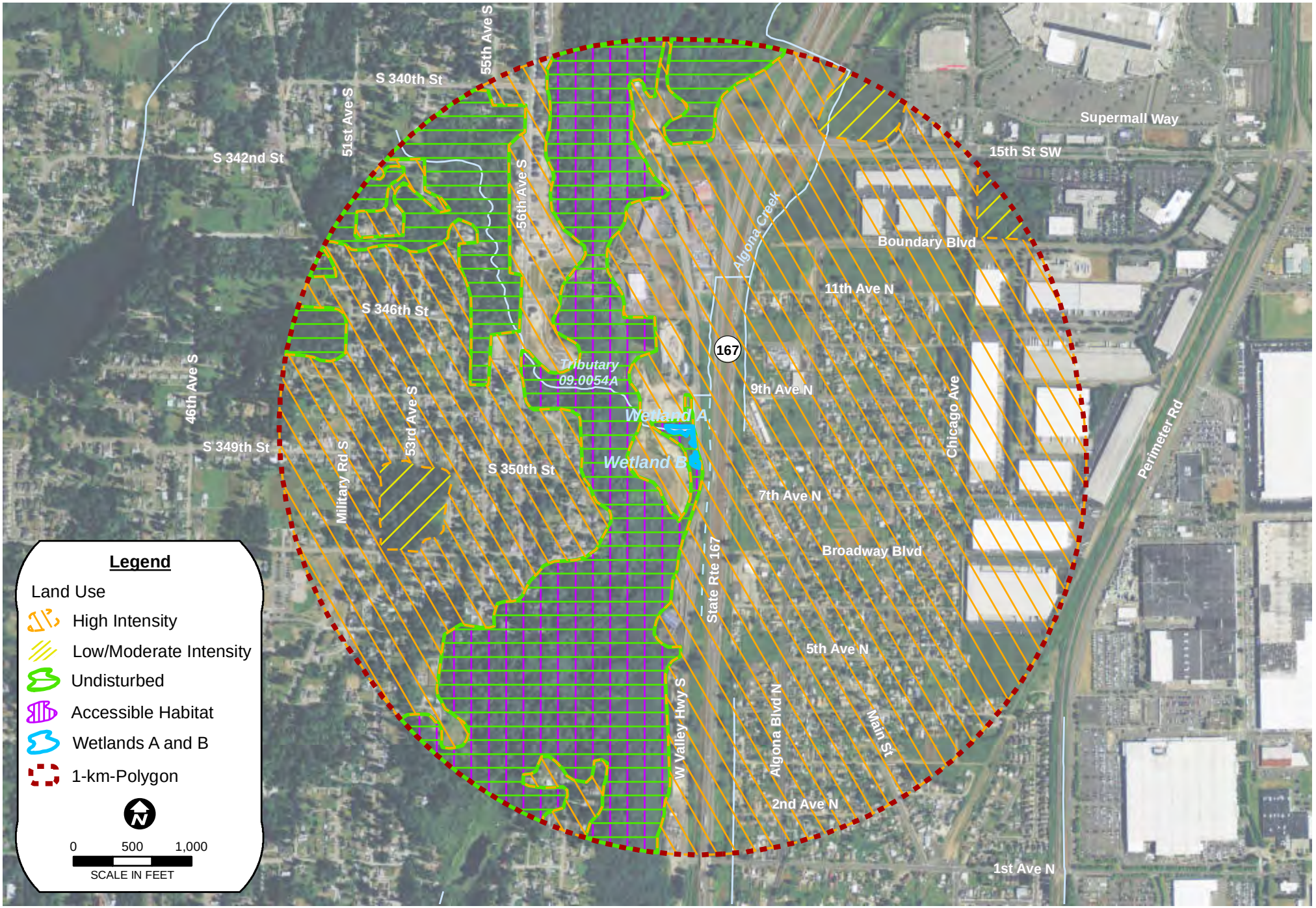
Wetlands A and B
King County SCRTS

C:\GIS\Projects\KingCounty\mxd\wetlandratings\WetlandsA&B_ContributingBasins.mxd
Date: 9/22/2015 | joel_hancock

Figure C

Contributing Basins

Wetlands A and B
King County SCRTS



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Date: 9/18/2015 | joel_hancock

Figure D

Accessible and Undisturbed Habitat in 1 KM Polygon

Wetlands A and B
King County SCRTS

C:\GIS\Projects\KingCounty\mxd\wetlandratings\WetlandsA&B_303d_WRIA_TMDL.mxd
Date: 9/18/2015 | joel_hancock

Figure E

303 (d) Waters, WRIAs, and TMDLs

Wetlands A and B
King County SCRTS

Wetland name or number C

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Algona - Wetland C Date of site visit: 9-10-15

Rated by Paul Hamidi Trained by Ecology? X Yes ___No Date of training 2013

HGM Class used for rating Depressional Wetland has multiple HGM classes? ___Y X N

NOTE: Form is not complete without the figures requested *(figures can be combined).*

Source of base aerial photo/map ESRI Basemap Imagery

OVERALL WETLAND CATEGORY III (based on functions ✓ or special characteristics ___)

1. Category of wetland based on FUNCTIONS

___**Category I** – Total score = 23 - 27

___**Category II** – Total score = 20 - 22

X **Category III** – Total score = 16 - 19

___**Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	(H) M L	H (M) L	H M (L)	
Landscape Potential	H (M) L	H (M) L	H M (L)	
Value	(H) M L	H (M) L	H M (L)	TOTAL
Score Based on Ratings	8	6	3	17

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	✓

Wetland name or number C

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	A
Hydroperiods	D 1.4, H 1.2	B
Location of outlet *(can be added to map of hydroperiods)*	D 1.1, D 4.1	B
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	A
Map of the contributing basin	D 4.3, D 5.3	C
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	D
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	E
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	E

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number C

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

   (NO) go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

   1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

   NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**

   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

   (NO) go to 3 **YES** – The wetland class is **Flats**

   *If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
   ___At least 30% of the open water area is deeper than 6.6 ft (2 m).

   (NO) go to 4 **YES** – The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
   ___The wetland is on a slope (*slope can be very gradual*),
   ___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
   ___The water leaves the wetland **without being impounded**.

   (NO) go to 5 **YES** – The wetland class is **Slope**

   NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
   ___The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
   ___The overbank flooding occurs at least once every 2 years.

Wetland name or number C

NO – go to 6 **YES** – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number C

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = (1) Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	1
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*. Yes = 4 No = 0	4
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	4
Total for D 1 Add the points in the boxes above	14

Rating of Site Potential If score is: X **12-16 = H** ___ **6-11 = M** ___ **0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source_____ Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___ **3 or 4 = H** X **1 or 2 = M** ___ **0 = L** *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	3

Rating of Value If score is: X **2-4 = H** ___ **1 = M** ___ **0 = L** *Record the rating on the first page*

Wetland name or number C

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland: — **0**

- Wetland is a depression or flat depression with no surface water leaving it (no outlet) — points = 4
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet — points = 2
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch — points = 1
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing — points = 0

D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* — **5**

- Marks of ponding are 3 ft or more above the surface or bottom of outlet — points = 7
- Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet — points = 5
- Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet — points = 3
- The wetland is a "headwater" wetland — points = 3
- Wetland is flat but has small depressions on the surface that trap water — points = 1
- Marks of ponding less than 0.5 ft (6 in) — points = 0

D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* — **3**

- The area of the basin is less than 10 times the area of the unit — points = 5
- The area of the basin is 10 to 100 times the area of the unit — points = 3
- The area of the basin is more than 100 times the area of the unit — points = 0
- Entire wetland is in the Flats class — points = 5

Total for D 4 — Add the points in the boxes above — **8**

Rating of Site Potential If score is: ___ 12-16 = H ___X___ 6-11 = M ___ 0-5 = L — *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	0
Total for D 5	Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___ 3 = H ___X___ 1 or 2 = M ___ 0 = L — *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* — **1**

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):

- Flooding occurs in a sub-basin that is immediately down-gradient of unit. — points = 2
- Surface flooding problems are in a sub-basin farther down-gradient. — points = (1)

Flooding from groundwater is an issue in the sub-basin. — points = 1

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* _____ — points = 0

There are no problems with flooding downstream of the wetland. — points = 0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0
Total for D 6	Add the points in the boxes above	1

Rating of Value If score is: ___ 2-4 = H ___X___ 1 = M ___ 0 = L — *Record the rating on the first page*

Wetland name or number C

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

____ Aquatic bed	4 structures or more: points = 4
_X_ Emergent	3 structures: points = 2
____ Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
____ Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

____ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

____ Permanently flooded or inundated	4 or more types present: points = 3
_X_ Seasonally flooded or inundated	3 types present: points = 2
_X_ Occasionally flooded or inundated	2 types present: points = 1
_X_ Saturated only	1 type present: points = 0
____ Permanently flowing stream or river in, or adjacent to, the wetland	
____ Seasonally flowing stream in, or adjacent to, the wetland	
____ **Lake Fringe wetland**	**2 points**
____ **Freshwater tidal wetland**	**2 points**

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

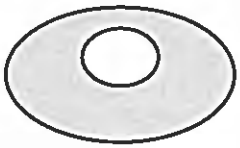
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

If you counted: > 19 species	points = 2
5 - 19 species	points = 1
< 5 species	points = 0

H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*

None = 0 points



Low = 1 point

Moderate = 2 points

All three diagrams in this row are **HIGH** = 3points

Wetland name or number C

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ____Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). ____Standing snags (dbh > 4 in) within the wetland ____Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)* ____At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	0
Total for H 1 Add the points in the boxes above	2

Rating of Site Potential If score is:___15-18 = H ___7-14 = M X 0-6 = L *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat 0 + [(% moderate and low intensity land uses)/2] 1 = 1 % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat 22 + [(% moderate and low intensity land uses)/2] 1 = 23 % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	2
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	0

Rating of Landscape Potential If score is:___4-6 = H ___1-3 = M X < 1 = L *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	0

Rating of Value If score is:___2 = H ___1 = M X 0 = L *Record the rating on the first page*

Wetland name or number C

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

— **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

— **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

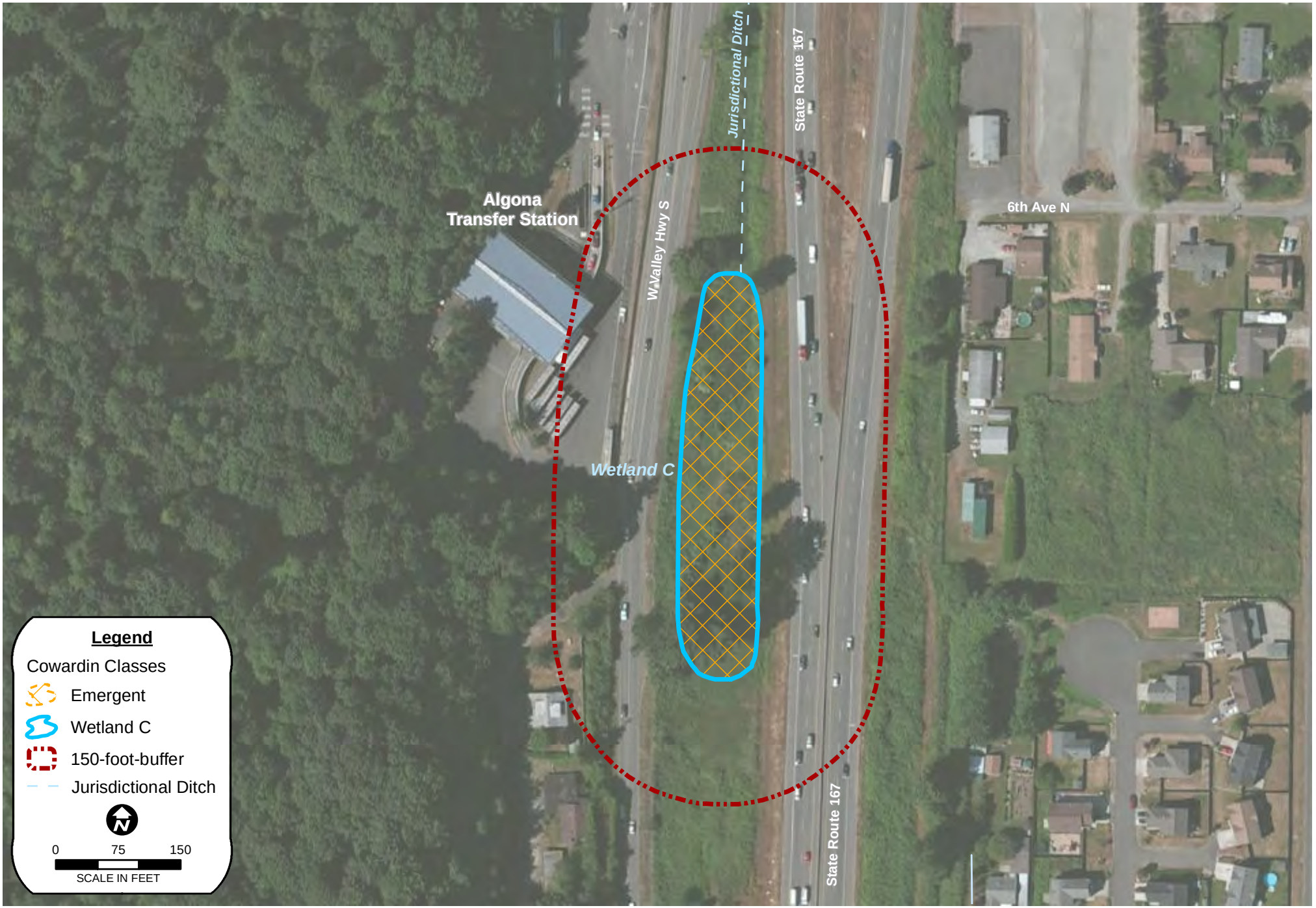
— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

— **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.



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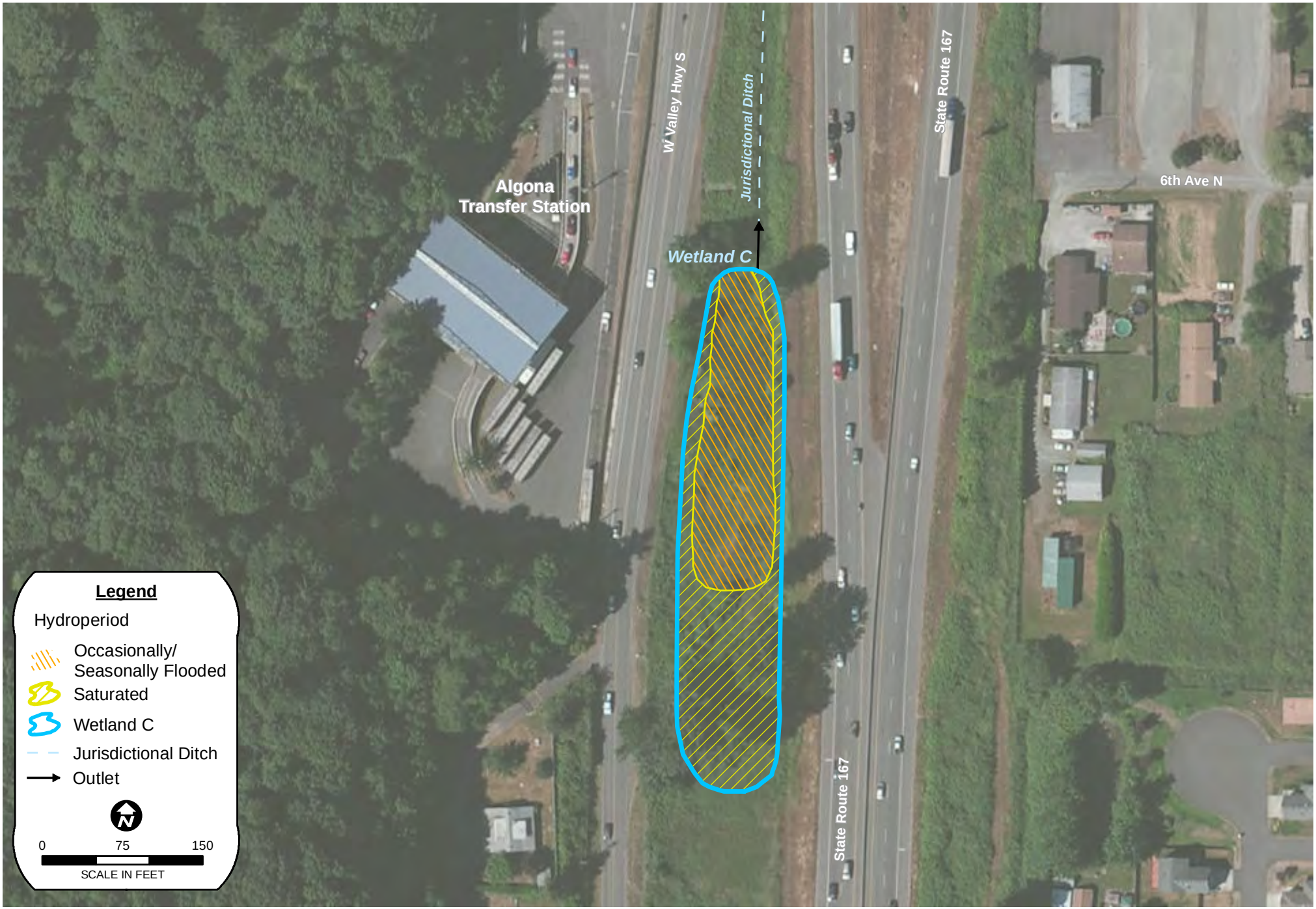
Date: 9/22/2015 | joel_hancock

Figure F

Cowardin Classes

Wetland C
King County SCRTS



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Date: 9/22/2015 | joel_hancock

Figure G

Hydroperiods

Wetland C
King County SCRTS

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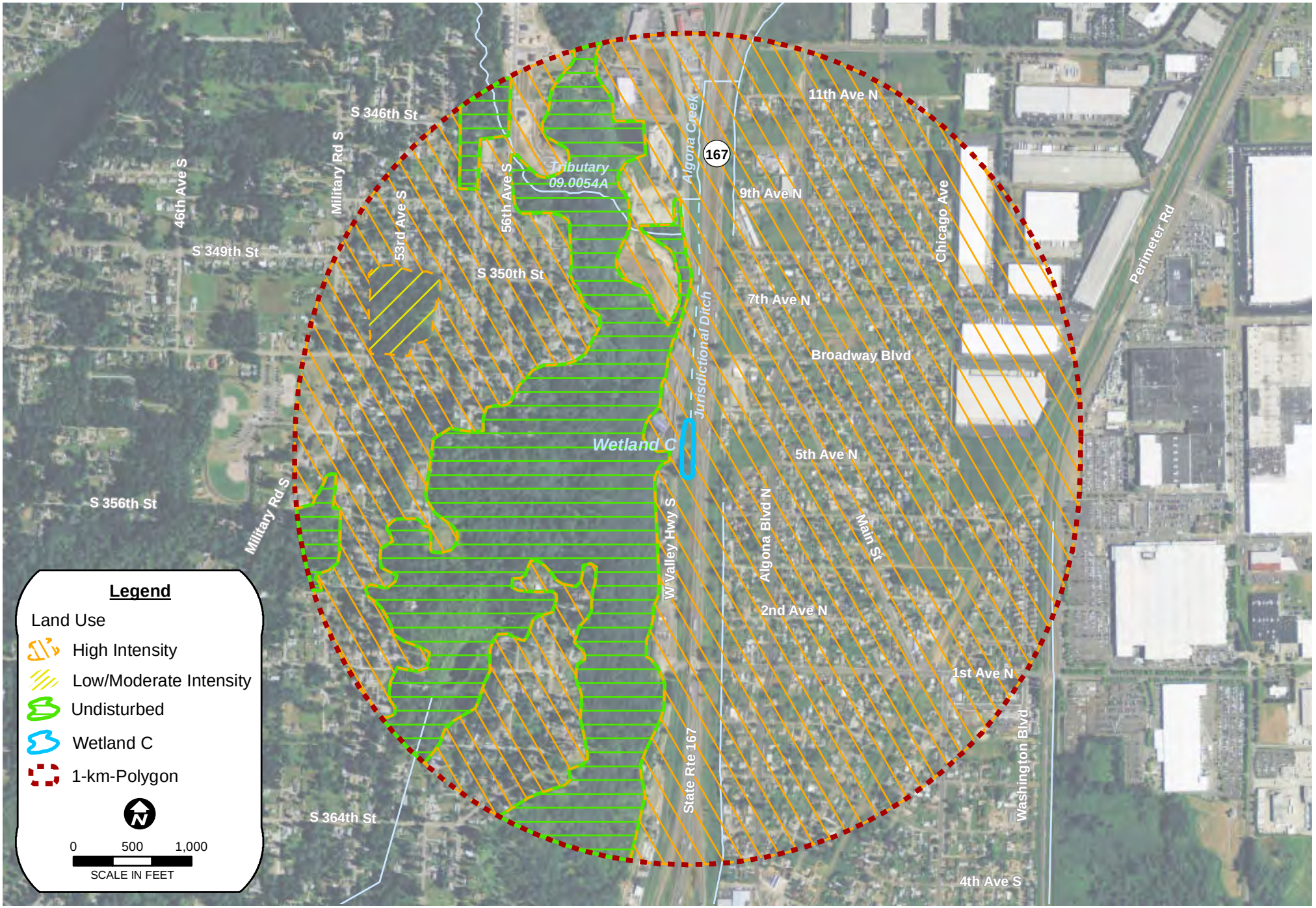
Date: 9/22/2015 | joel_hancock

Figure H

Contributing Basin

Wetland C
King County SCRTS



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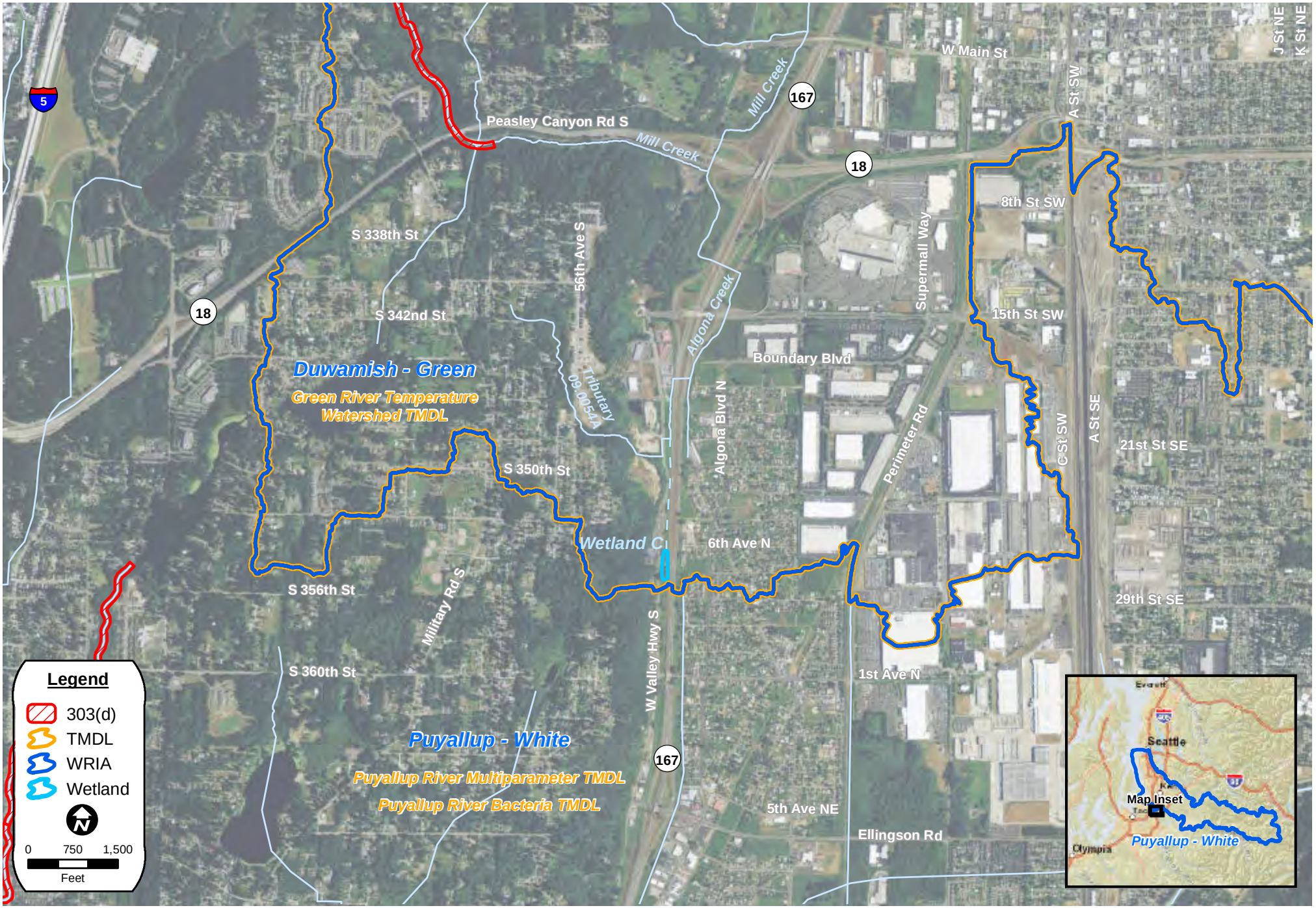
Date: 9/22/2015 | joel_hancock

Figure I

Accessible and Undisturbed Habitat in 1 KM Polygon

Wetland C
King County SCRTS



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Date: 9/18/2015 | joel_hancock

Figure J

303 (d) Waters, WRIAs, and TMDLs

Wetland C
King County SCRTS

Wetland name or number Auburn C Strat

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Auburn C Strat Date of site visit: 10-12-15

Rated by Paul Hamidi Trained by Ecology? X Yes ___ No Date of training 2013

HGM Class used for rating Depressional Wetland has multiple HGM classes? ___ Y X N

NOTE: Form is not complete without the figures requested *(figures can be combined).*

Source of base aerial photo/map ESRI Basemap Imagery

OVERALL WETLAND CATEGORY IV (based on functions ✓ or special characteristics ___)

1. Category of wetland based on FUNCTIONS

___ **Category I** – Total score = 23 - 27

___ **Category II** – Total score = 20 - 22

___ **Category III** – Total score = 16 - 19

✓ **Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the appropriate ratings		
Site Potential	H (M) L	H (M) L	H M (L)	
Landscape Potential	H (M) L	(H) M L	H M (L)	
Value	H (M) L	H M (L)	H M (L)	TOTAL
Score Based on Ratings	6	6	3	15

Score for each function based on three ratings *(order of ratings is not important)*

9 = H,H,H
8 = H,H,M
7 = H,H,L
7 = H,M,M
6 = H,M,L
6 = M,M,M
5 = H,L,L
5 = M,M,L
4 = M,L,L
3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	✓

Wetland name or number Auburn C street

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	A
Hydroperiods	D 1.4, H 1.2	B
Location of outlet *(can be added to map of hydroperiods)*	D 1.1, D 4.1	B
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	A
Map of the contributing basin	D 4.3, D 5.3	C
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	D
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	E
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	E

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number C Street

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO - go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3 **YES** – The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?
___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
___At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO - go to 4 **YES** – The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
___The wetland is on a slope (*slope can be very gradual*),
___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
___The water leaves the wetland **without being impounded**.

NO - go to 5 **YES** – The wetland class is **Slope**

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
___The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
___The overbank flooding occurs at least once every 2 years.

Wetland name or number C St.

NO – go to 6 **YES** – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number C St.

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	3
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*. Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	2
Total for D 1 Add the points in the boxes above	10

Rating of Site Potential If score is: ___ **12-16 = H** X **6-11 = M** ___ **0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source_____ Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	2

Rating of Landscape Potential If score is: ___ **3 or 4 = H** X **1 or 2 = M** ___ **0 = L** *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	0
Total for D 3 Add the points in the boxes above	1

Rating of Value If score is: ___ **2-4 = H** X **1 = M** ___ **0 = L** *Record the rating on the first page*

Wetland name or number C St.

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland: — **4**

- Wetland is a depression or flat depression with no surface water leaving it (no outlet) — points = 4
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet — points = 2
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch — points = 1
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing — points = 0

D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* — **3**

- Marks of ponding are 3 ft or more above the surface or bottom of outlet — points = 7
- Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet — points = 5
- Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet — points = (3)
- The wetland is a "headwater" wetland — points = 3
- Wetland is flat but has small depressions on the surface that trap water — points = 1
- Marks of ponding less than 0.5 ft (6 in) — points = 0

D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* — **3**

- The area of the basin is less than 10 times the area of the unit — points = 5
- The area of the basin is 10 to 100 times the area of the unit — points = 3
- The area of the basin is more than 100 times the area of the unit — points = 0
- Entire wetland is in the Flats class — points = 5

Total for D 4 — Add the points in the boxes above — **10**

Rating of Site Potential If score is: ___ **12-16 = H** X **6-11 = M** ___ **0-5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1
Total for D 5	Add the points in the boxes above	3

Rating of Landscape Potential If score is: X **3 = H** ___ **1 or 2 = M** ___ **0 = L** *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* — **0**

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):

- Flooding occurs in a sub-basin that is immediately down-gradient of unit. — points = 2
- Surface flooding problems are in a sub-basin farther down-gradient. — points = 1

Flooding from groundwater is an issue in the sub-basin. — points = 1

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* wetland is de-coupled from downstream flooding. — points = (0)

There are no problems with flooding downstream of the wetland. — points = 0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 — **0**

Total for D 6 — Add the points in the boxes above — **0**

Rating of Value If score is: ___ **2-4 = H** ___ **1 = M** X **0 = L** *Record the rating on the first page*

Wetland name or number C St.

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

____Aquatic bed	4 structures or more: points = 4
_X_ Emergent	3 structures: points = 2
_X_ Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
____Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

____The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

1

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

____Permanently flooded or inundated	4 or more types present: points = 3
_X_ Seasonally flooded or inundated	3 types present: points = 2
____Occasionally flooded or inundated	2 types present: points = 1
_X_ Saturated only	1 type present: points = 0
____Permanently flowing stream or river in, or adjacent to, the wetland	
____Seasonally flowing stream in, or adjacent to, the wetland	
____**Lake Fringe wetland**	**2 points**
____**Freshwater tidal wetland**	**2 points**

1

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

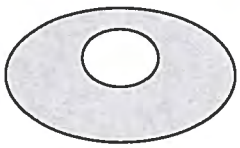
If you counted: > 19 species	points = 2
5 - 19 species	points = 1
< 5 species	points = 0

1

H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*

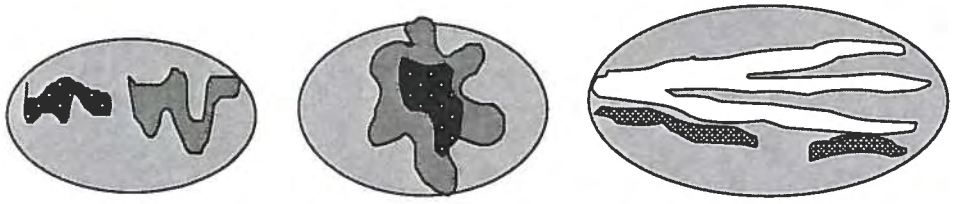
None = 0 points



Low = 1 point

Moderate = 2 points

All three diagrams in this row are **HIGH** = 3points



1

Wetland name or number C st.

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ____Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). ____Standing snags (dbh > 4 in) within the wetland ____Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)* ____At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* ____Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	0
Total for H 1 Add the points in the boxes above	4

Rating of Site Potential If score is:___**15-18 = H** ___**7-14 = M** X **0-6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat <1 + [(% moderate and low intensity land uses)/2] 0 = <1 % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat <1 + [(% moderate and low intensity land uses)/2] 0 = <1 % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	0
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	-2

Rating of Landscape Potential If score is:___**4-6 = H** ___**1-3 = M** X **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	0

Rating of Value If score is:___**2 = H** ___**1 = M** X **0 = L** *Record the rating on the first page*

Wetland name or number C St.

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: http://wdfw.wa.gov/conservation/phs/list/)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE:*** *This question is independent of the land use between the wetland unit and the priority habitat.*

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

— **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

— **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

— **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

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Date: 10/13/2015 | joel_hancock

Figure A

Cowardin Classes

C St SW Wetland
King County SCRTS

C:\GIS\Projects\KingCounty\mxd\wetlandratings\WetlandCStSW_Hydroperiod.mxd
Date: 10/13/2015 | joel_hancock

Figure B

Hydroperiods

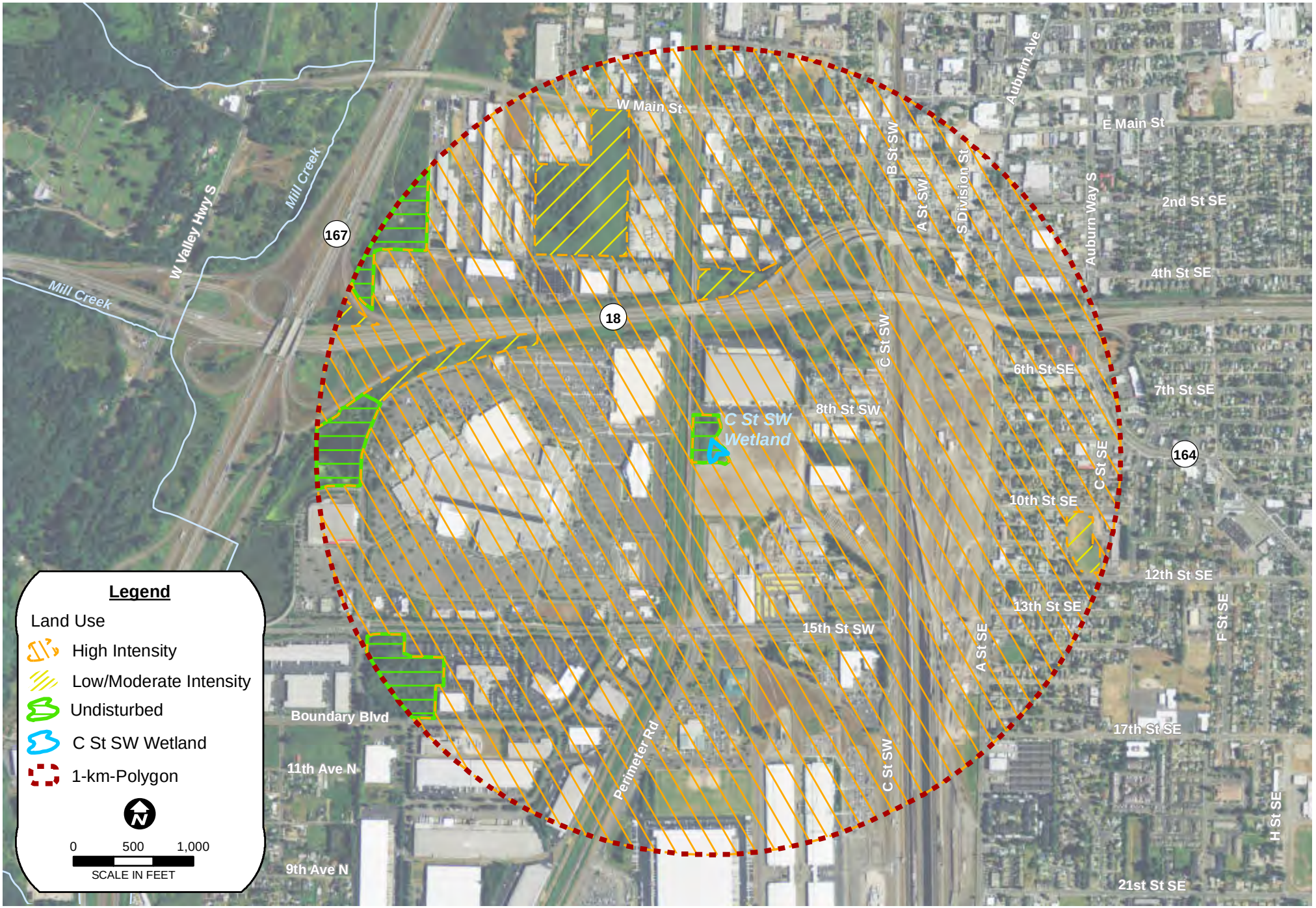
C St SW Wetland
King County SCRTS

C:\GIS\Projects\KingCounty\mxd\wetlandratings\WetlandCStSW_ContributingBasin.mxd
Date: 10/13/2015 | joel_hancock

Figure C

Contributing Basin

C St SW Wetland
King County SCRTS



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Date: 10/6/2015 | joel_hancock

Figure D

Accessible and Undisturbed Habitat in 1 KM Polygon

C St SW Wetland
King County SCRTS

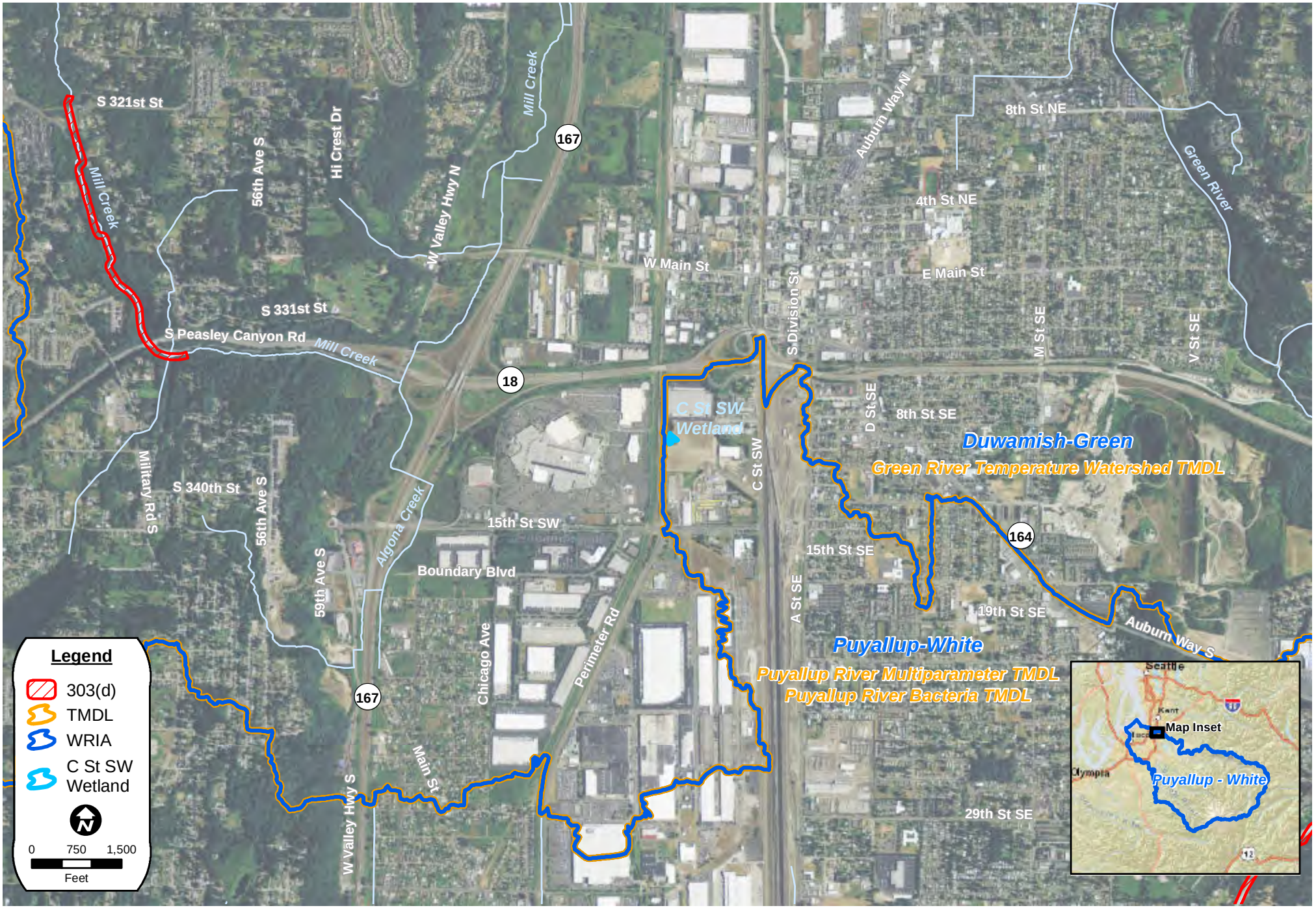

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Figure E

303 (d) Waters, WRIAs, and TMDLs

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APPENDIX B

Noise Methodology and Model Output

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Noise Metrics

The following mathematical descriptors correlate with human response to sound, and are used to assess sounds that vary over time:

- Equivalent Sound Level (Leq): Leq is the average of a time-varying A-weighted sound level during a specified interval. The Leq is used to characterize complex, fluctuating sound levels with a single number. This study utilizes an hourly Leq.
- Maximum Sound Level (Lmax): Lmax is the maximum recorded A-weighted sound level for a given time interval or event. This study utilizes an hourly Lmax fast (125 millisecond averaging time) to correlate with the typical response time of the human ear.
- Percent Sound Level (Ln): Ln is the sound level that is exceeded n percent of the time; for example, L_{08} is the level exceeded 8 percent of the time. L_{25} is the sound level exceeded 25 percent of the time. Percent sound levels isolate louder events of short duration in a given measurement period, the smaller the percentage, the more shorter-duration events influence the value.

The appropriate descriptor for a given situation will depend on the following sound source, receiver, and analysis conditions:

- Transient character of the sound (constant level, changes frequently over time)
- Jurisdictional criteria (descriptors defined by municipal code, interpretations of code requirements, existing sound levels)
- Source characterization (influence of each sound source)

Noise Modeling Methodology

The primary methodology used for the environmental sound level analysis and prediction was a computer noise model. This model was created with the acoustic modeling software Cadna/A. Cadna/A uses the Control of Accuracy and Debugging for Numerical Applications (CADNA) computation engine developed by the Pierre et Marie Curie University of Paris. The Cadna/A model utilizes the International Organization for Standardization (ISO) 9613 standard for predicting outdoor sound levels (ISO 1996). Sound propagation over distances greater than 1,000 feet is strongly influenced by meteorological conditions. Special atmospheric conditions, such as inverted thermal gradients or downwind conditions can create a downward-refracting atmosphere that could potentially increase sound levels at large distances. The Cadna/A implementation of ISO 9613 always includes the effects of a moderately downward-refractive atmosphere. While under some atmospheric conditions the sound levels at great distances may be greater than what is predicted by Cadna/A, the received sound levels should generally be less (when no downward-refraction occurs) or much less (when upward-refraction occurs).

The Cadna/A model was built from CAD drawings provided by URS/AECOM, satellite imagery, and King County Geographic Information Systems data. The data contained within the noise model included: conceptual site layouts, topography, property boundaries, zoning, and streets (where applicable). After the noise model was constructed, sound emissions from both alternatives were predicted based on conceptual site layouts, expected facility equipment, and trip generation estimates. Where increases to local traffic are anticipated, traffic on public

roadways was also modeled. Sound emissions from vehicles operating within the site boundaries were only modeled where the receiving properties were zoned as residential or rural in the King County Noise Ordinance, as vehicles operated off of public roadways are exempt in receiving properties that are zoned commercial or industrial. The baseline permissible sound levels and the exceedances allowed for short-term sound events defined in the King County Noise Ordinance are typically applied as statistical sound levels (L_{25} for the baseline limit, L_{08} for the 5 dB exceedance, L_{02} for the 10 dB exceedance, and Lmax for the 15 dB exceedance). However, the level of project design detail available during environmental review pursuant to SEPA does not support this level of analysis. Therefore, this analysis assesses regulatory compliance using the baseline sound level limits applied as an hourly Leq metric, which is the average sound during one-hour. Potential noise impacts are also identified based on increases to existing average hourly noise conditions.

Table B-1. No Action Alternative, Long Term Daytime Ambient Noise Monitoring Hourly Data (LT-NA), dBA

Date	Time	L_{eq}	L_{max}	L_{min}	Date	Time	L_{eq}	L_{max}	L_{min}	Date	Time	L_{eq}	L_{max}	L_{min}
6/28/13	12:00 PM	70	86	61	6/30/13	10:00 AM	68	82	56	7/1/13	7:00 PM	69	83	56
6/28/13	1:00 PM	70	91	55	6/30/13	11:00 AM	69	91	58	7/1/13	8:00 PM	68	84	57
6/28/13	2:00 PM	69	84	56	6/30/13	12:00 PM	68	79	60	7/1/13	9:00 PM	67	77	56
6/28/13	3:00 PM	68	86	57	6/30/13	1:00 PM	69	83	58	7/2/13	7:00 AM	70	87	63
6/28/13	4:00 PM	69	84	57	6/30/13	2:00 PM	68	85	59	7/2/13	8:00 AM	70	86	60
6/28/13	5:00 PM	68	81	57	6/30/13	3:00 PM	68	88	59	7/2/13	9:00 AM	70	81	60
6/28/13	6:00 PM	70	83	60	6/30/13	4:00 PM	68	80	58	7/2/13	10:00 AM	70	82	61
6/28/13	7:00 PM	69	84	60	6/30/13	5:00 PM	68	85	59	7/2/13	11:00 AM	70	85	61
6/28/13	8:00 PM	69	85	60	6/30/13	6:00 PM	68	83	60	7/2/13	12:00 PM	70	88	60
6/28/13	9:00 PM	69	85	58	6/30/13	7:00 PM	68	80	60	7/2/13	1:00 PM	70	87	63
6/29/13	9:00 AM	69	87	58	6/30/13	8:00 PM	67	79	58	7/2/13	2:00 PM	70	84	59
6/29/13	10:00 AM	69	85	61	6/30/13	9:00 PM	67	78	57	7/2/13	3:00 PM	69	85	58
6/29/13	11:00 AM	69	82	60	7/1/13	7:00 AM	70	84	61	7/2/13	4:00 PM	69	89	59
6/29/13	12:00 PM	69	88	58	7/1/13	8:00 AM	70	81	61	7/2/13	5:00 PM	68	82	57
6/29/13	1:00 PM	69	93	57	7/1/13	9:00 AM	70	82	61	7/2/13	6:00 PM	68	82	57
6/29/13	2:00 PM	69	84	58	7/1/13	10:00 AM	71	85	61	7/2/13	7:00 PM	69	87	59
6/29/13	3:00 PM	69	88	58	7/1/13	11:00 AM	70	81	58	7/2/13	8:00 PM	68	83	59
6/29/13	4:00 PM	69	84	58	7/1/13	12:00 PM	70	86	60	7/2/13	9:00 PM	67	79	57
6/29/13	5:00 PM	69	84	59	7/1/13	1:00 PM	71	83	63	7/3/13	7:00 AM	71	84	62
6/29/13	6:00 PM	68	89	60	7/1/13	2:00 PM	70	93	61	7/3/13	8:00 AM	71	81	63
6/29/13	7:00 PM	68	81	60	7/1/13	3:00 PM	69	88	59	7/3/13	9:00 AM	71	86	63
6/29/13	8:00 PM	68	81	58	7/1/13	4:00 PM	69	85	59	7/3/13	10:00 AM	71	88	61
6/29/13	9:00 PM	67	80	57	7/1/13	5:00 PM	68	80	58	7/3/13	11:00 AM	72	83	66
6/30/13	9:00 AM	68	86	53	7/1/13	6:00 PM	69	84	61	7/1/13	7:00 PM	69	83	56
Lower quartile L_{eq}		68				Median L_{eq}	69				Upper quartile L_{eq}	70		

Table B-2. Alternative 1, Long Term Daytime Ambient Noise Monitoring Hourly Data (LT-1), dBA

Date	Time	L_{eq}	L_{max}	L_{min}	Date	Time	L_{eq}	L_{max}	L_{min}	Date	Time	L_{eq}	L_{max}	L_{min}
7/3/13	2:00 PM	63	93	50	7/5/13	10:00 AM	58	83	48	7/6/13	9:00 PM	60	86	49
7/3/13	3:00 PM	63	84	50	7/5/13	11:00 AM	59	87	48	7/7/13	9:00 AM	59	80	45
7/3/13	4:00 PM	61	83	50	7/5/13	12:00 PM	62	83	50	7/7/13	10:00 AM	58	80	47
7/3/13	5:00 PM	58	84	51	7/5/13	1:00 PM	58	81	48	7/7/13	11:00 AM	57	83	47
7/3/13	6:00 PM	58	87	49	7/5/13	2:00 PM	63	81	49	7/7/13	12:00 PM	61	84	47
7/3/13	7:00 PM	59	86	49	7/5/13	3:00 PM	63	84	54	7/7/13	1:00 PM	56	80	47
7/3/13	8:00 PM	58	84	49	7/5/13	4:00 PM	61	90	55	7/7/13	2:00 PM	60	79	47
7/3/13	9:00 PM	63	85	48	7/5/13	5:00 PM	61	86	55	7/7/13	3:00 PM	57	79	46
7/4/13	9:00 AM	64	85	54	7/5/13	6:00 PM	60	74	56	7/7/13	4:00 PM	59	80	47
7/4/13	10:00 AM	60	85	55	7/5/13	7:00 PM	60	76	57	7/7/13	5:00 PM	55	76	47
7/4/13	11:00 AM	62	86	55	7/5/13	8:00 PM	60	73	57	7/7/13	6:00 PM	55	72	47
7/4/13	12:00 PM	61	90	54	7/5/13	9:00 PM	61	83	56	7/7/13	7:00 PM	59	83	47
7/4/13	1:00 PM	60	83	54	7/6/13	9:00 AM	64	85	49	7/7/13	8:00 PM	56	76	50
7/4/13	2:00 PM	59	75	54	7/6/13	10:00 AM	58	83	47	7/7/13	9:00 PM	55	71	50
7/4/13	3:00 PM	61	79	54	7/6/13	11:00 AM	59	79	48					
7/4/13	4:00 PM	62	88	56	7/6/13	12:00 PM	57	81	48					
7/4/13	5:00 PM	62	91	54	7/6/13	1:00 PM	57	78	48					
7/4/13	6:00 PM	60	74	56	7/6/13	2:00 PM	58	87	49					
7/4/13	7:00 PM	61	84	56	7/6/13	3:00 PM	56	76	48					
7/4/13	8:00 PM	59	78	56	7/6/13	4:00 PM	59	84	49					
7/4/13	9:00 PM	60	83	56	7/6/13	5:00 PM	55	74	49					
7/5/13	7:00 AM	61	76	56	7/6/13	6:00 PM	56	79	49					
7/5/13	8:00 AM	61	83	47	7/6/13	7:00 PM	56	76	50					
7/5/13	9:00 AM	60	79	47	7/6/13	8:00 PM	58	80	52					
Lower quartile L_{eq}		58			Median L_{eq}		59			Upper quartile L_{eq}		61		

Table B-3. Alternative 2, Long Term Daytime Ambient Noise Monitoring Hourly Data (LT-2), dBA

Date	Time	L_{eq}	L_{max}	L_{min}	Date	Time	L_{eq}	L_{max}	L_{min}	Date	Time	L_{eq}	L_{max}	L_{min}
6/28/13	12:00 PM	61	73	56	6/30/13	10:00 AM	63	72	57	7/1/13	7:00 PM	62	68	56
6/28/13	1:00 PM	59	66	55	6/30/13	11:00 AM	63	78	56	7/1/13	8:00 PM	61	70	52
6/28/13	2:00 PM	59	70	54	6/30/13	12:00 PM	62	71	57	7/1/13	9:00 PM	61	71	53
6/28/13	3:00 PM	60	67	53	6/30/13	1:00 PM	61	78	55	7/2/13	7:00 AM	63	68	57
6/28/13	4:00 PM	60	71	55	6/30/13	2:00 PM	61	68	56	7/2/13	8:00 AM	63	68	58
6/28/13	5:00 PM	60	78	54	6/30/13	3:00 PM	60	70	53	7/2/13	9:00 AM	64	74	59
6/28/13	6:00 PM	63	73	57	6/30/13	4:00 PM	61	67	55	7/2/13	10:00 AM	63	68	58
6/28/13	7:00 PM	62	73	55	6/30/13	5:00 PM	62	69	56	7/2/13	11:00 AM	63	73	54
6/28/13	8:00 PM	62	78	56	6/30/13	6:00 PM	63	71	58	7/2/13	12:00 PM	62	69	56
6/28/13	9:00 PM	61	69	54	6/30/13	7:00 PM	63	71	56	7/2/13	1:00 PM	63	73	56
6/29/13	9:00 AM	63	72	57	6/30/13	8:00 PM	62	71	56	7/2/13	2:00 PM	60	76	55
6/29/13	10:00 AM	63	72	58	6/30/13	9:00 PM	62	74	56	7/2/13	3:00 PM	60	75	55
6/29/13	11:00 AM	63	72	57	7/1/13	7:00 AM	63	73	57	7/2/13	4:00 PM	59	71	54
6/29/13	12:00 PM	63	72	55	7/1/13	8:00 AM	64	77	60	7/2/13	5:00 PM	60	72	56
6/29/13	1:00 PM	62	69	55	7/1/13	9:00 AM	64	75	59	7/2/13	6:00 PM	61	74	55
6/29/13	2:00 PM	62	75	56	7/1/13	10:00 AM	64	73	56	7/2/13	7:00 PM	62	71	57
6/29/13	3:00 PM	62	71	55	7/1/13	11:00 AM	63	74	58	7/2/13	8:00 PM	64	74	57
6/29/13	4:00 PM	63	72	57	7/1/13	12:00 PM	64	78	56	7/2/13	9:00 PM	64	75	56
6/29/13	5:00 PM	63	74	56	7/1/13	1:00 PM	64	76	58	7/3/13	7:00 AM	64	79	60
6/29/13	6:00 PM	62	70	55	7/1/13	2:00 PM	62	83	56	7/3/13	8:00 AM	65	71	60
6/29/13	7:00 PM	63	75	56	7/1/13	3:00 PM	61	75	55	7/3/13	9:00 AM	64	77	59
6/29/13	8:00 PM	63	69	55	7/1/13	4:00 PM	60	75	54					
6/29/13	9:00 PM	63	70	58	7/1/13	5:00 PM	61	74	54					
6/30/13	9:00 AM	62	73	54	7/1/13	6:00 PM	63	75	57					
Lower quartile L_{eq}		61			Median L_{eq}		62			Upper quartile L_{eq}		63		

Table B-4. Operational Noise Model Sound Level Input Data

Sound Source	Sound Level at 50 feet	Usage Factor	Reference
Vehicles			
Commercial Haul	84	100%	FHWA Specification 721.560
Residential Haul	65	100%	FHWA Specification 721.560
Stationary Equipment			
Compactor	102	100%	South Transfer Station measurements, 2013, Seattle, WA
Compactor Power Pack	90	100%	
Compactor Radiator	96	100%	
Mobile Equipment			
Backup Alarm	85	10%	Greenbusch historical data
Goat Truck	94	50%	Algona Transfer Station measurements, 2013
Tipping Floor Activities			
Front End Loader	91	100%	FHWA 2006
Dump Truck	104	100%	
Pickup Truck	85	100%	FHWA 2006 + 10 dB

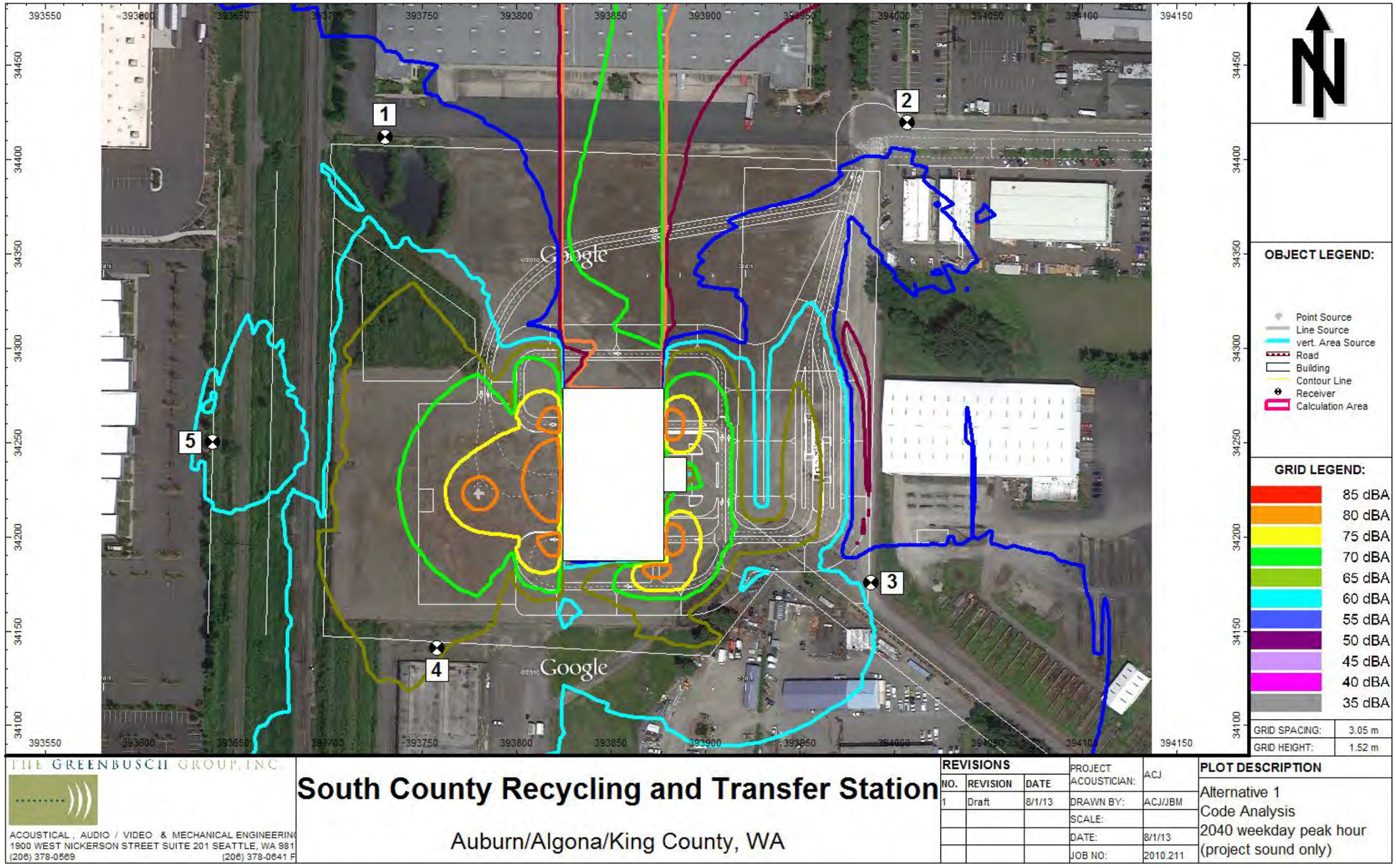
Table B-5. Noise Model Operational Traffic Input Data, Vehicles Per Hour

Vehicle Class	2020		2040	
	Weekday	Saturday	Weekday	Saturday
Self-Haul – peak hour	73	162	94	209
Commercial Haul – peak hour	17	12	19	14
Total Trip Generation	90	174	113	223

Source: Totals from the Transpo Group Trip Generation Summary, July 2013.

Self-haul/commercial haul distributions based on field observations by The Greenbusch Group, Inc., 2013

Figure B-1. Alternative 1, Regulatory Compliance Noise Model



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South County Recycling and Transfer Station

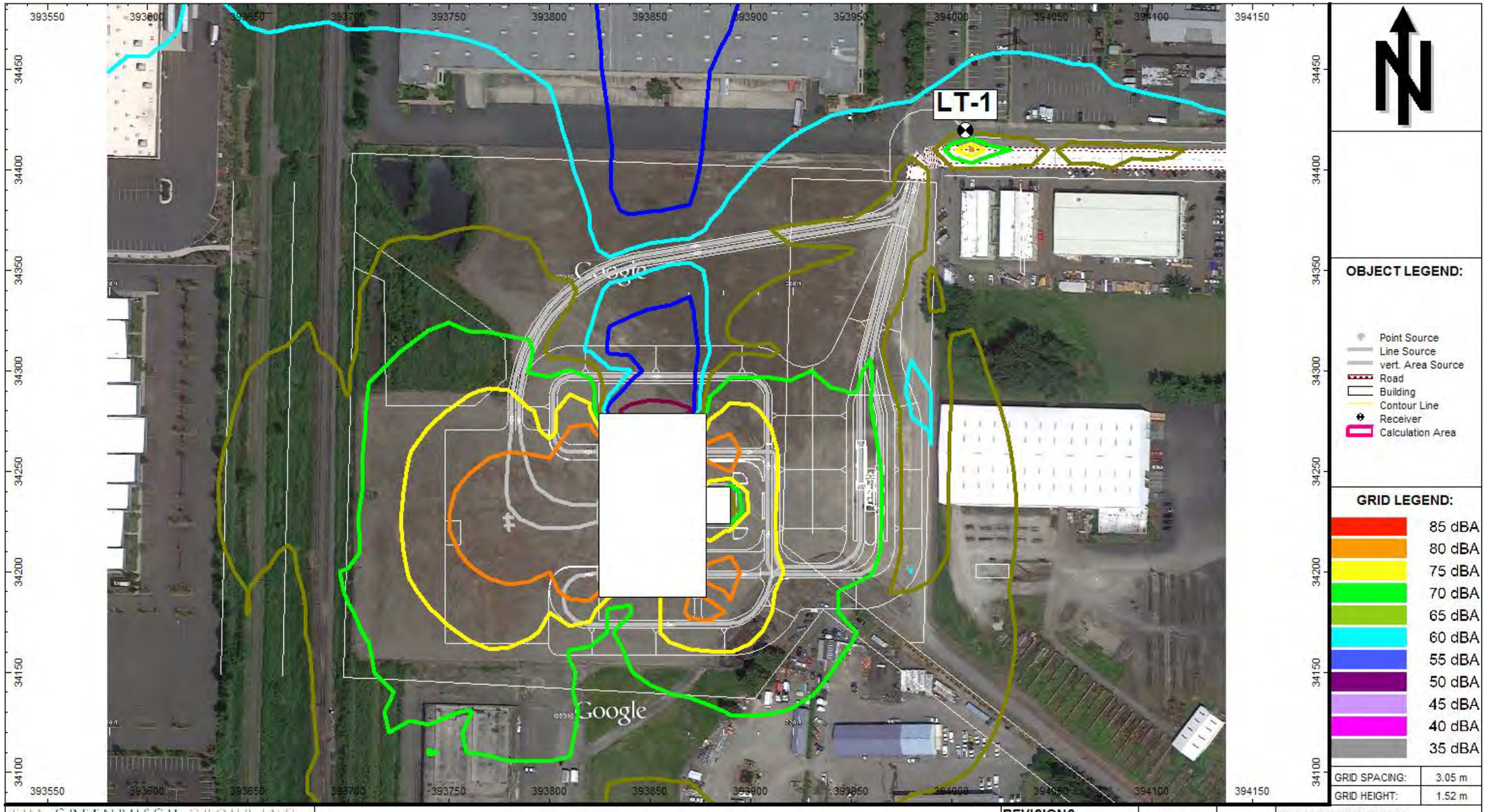
Auburn/Algona/King County, WA

REVISIONS			PROJECT ACOUSTICIAN:	ACJ
NO.	REVISION	DATE		
1	Draft	8/1/13	DRAWN BY:	ACJ/JBM
			SCALE:	
			DATE:	8/1/13
			JOB NO:	2010.211

PLOT DESCRIPTION

Alternative 1
Code Analysis
2040 weekday peak hour
(project sound only)

Figure B-2. Alternative 1, Impact Analysis Noise Model



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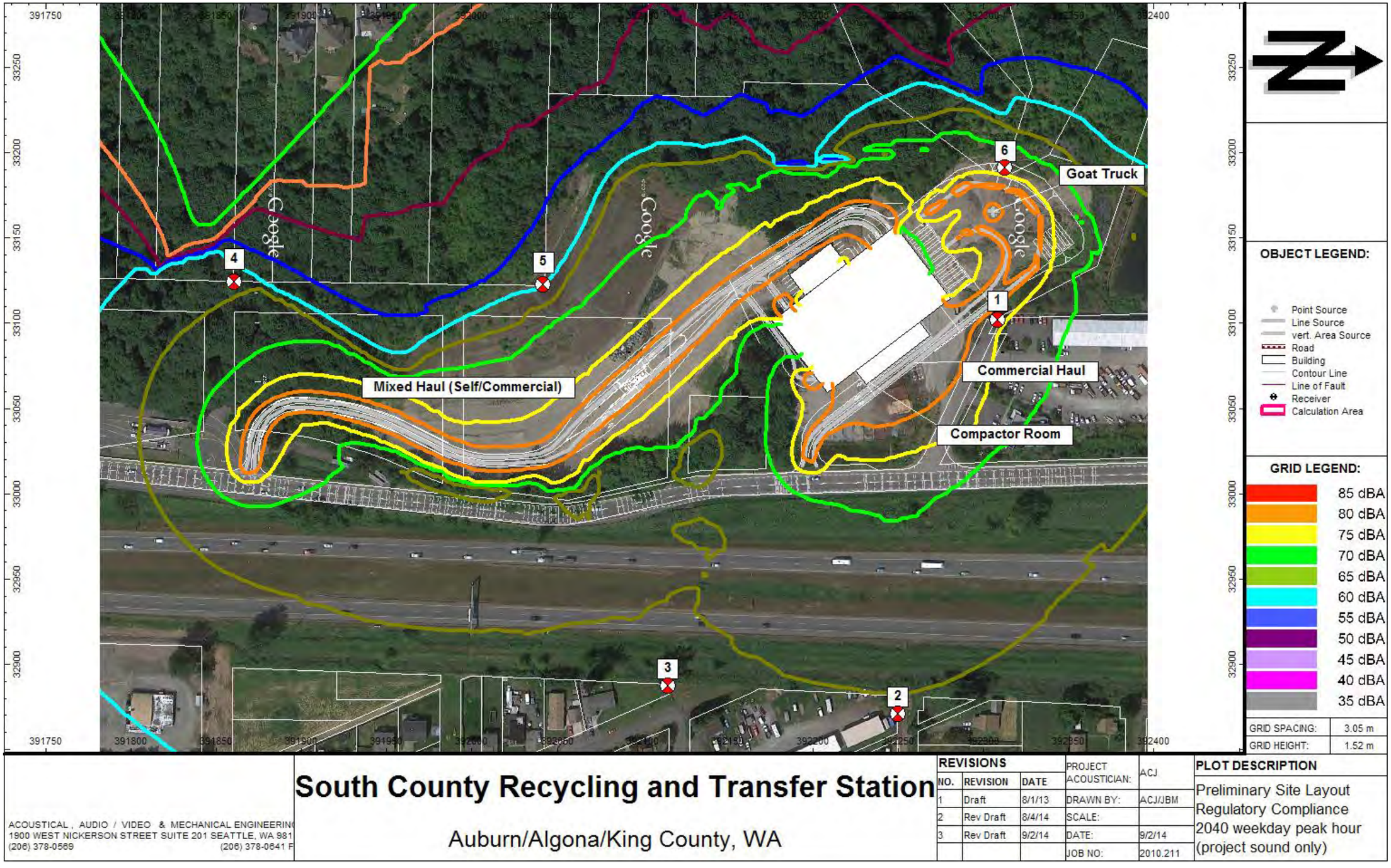
			SCALE:	
			DATE:	8/1/13
			JOB NO:	2010.211

PLOT DESCRIPTION

Alternative 1
Impact Analysis
2040 weekday peak hour
(project sound only)

Figure B-3. Alternative 2, Regulatory Compliance Noise Model



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3	Rev Draft	9/2/14

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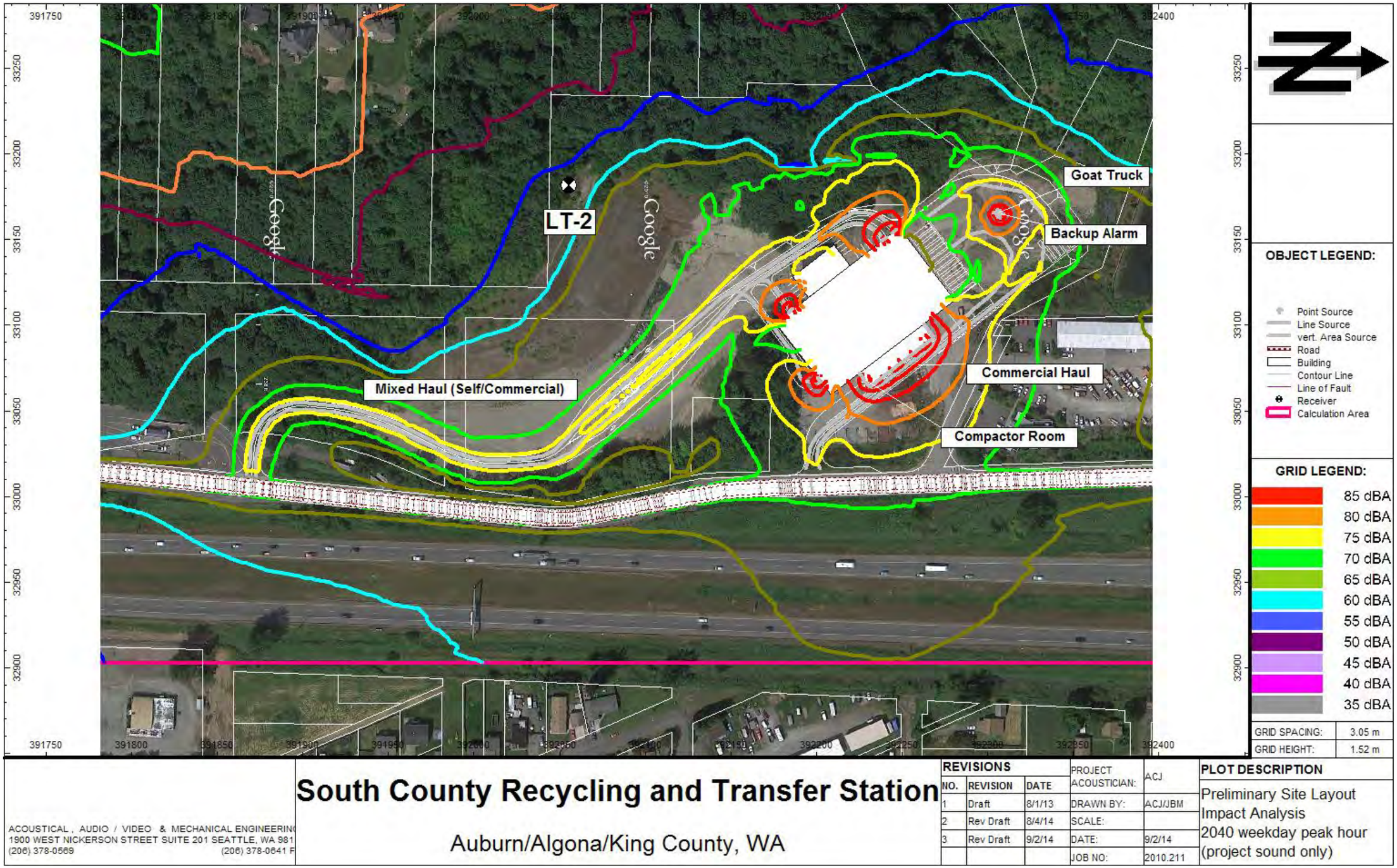
SCALE:	
DATE:	9/2/14
JOB NO:	2010.211

PLOT DESCRIPTION

Preliminary Site Layout
Regulatory Compliance
2040 weekday peak hour
(project sound only)

Figure B-4. Alternative 2, Impact Analysis Noise Model



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1	Draft	8/1/13
2	Rev Draft	8/4/14
3	Rev Draft	9/2/14

PROJECT ACOUSTICIAN:	ACJ
DRAWN BY:	ACJ/JBM
SCALE:	
DATE:	9/2/14
JOB NO:	2010.211

PLOT DESCRIPTION

Preliminary Site Layout
Impact Analysis
2040 weekday peak hour
(project sound only)

APPENDIX C

Visual Quality Rating Analysis Matrix

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VISUAL ANALYSIS MATRIX

Project Title King County SCRTS Project

ALTERNATIVE		ORIENTATION TO FACILITY	VIVIDNESS				INTACTNESS			UNITY	
			LANDFORM	VEGETATIVE	MAN-MADE ELEMENTS	AVERAGE	DEVELOPMENT	ENCROACHMENT	AVERAGE	UNITY	TOTAL VISUAL QUALITY
No Action Alternative											
VIEWPOINT NA-A	EXISTING	To	2	5	2	3.00	4	3	3.5	3	3.17
	PROPOSED		2	5	2	3.00	4	3	3.5	3	3.17
VIEWPOINT NA-B	EXISTING	To	2	4	4	3.33	4	5	4.5	3	3.61
	PROPOSED		2	4	4	3.33	4	5	4.5	3	3.61
VIEWPOINT NA-C	EXISTING	To	2	2	1	1.67	3	2	2.5	1	1.72
	PROPOSED		2	2	1	1.67	3	2	2.5	1	1.72
VIEWPOINT NA-D	EXISTING	To	1	2	1	1.33	3	2	2.5	1	1.61
	PROPOSED		1	2	1	1.33	3	2	2.5	1	1.61
VIEWPOINT NA-E	EXISTING	To	3	3	2	2.67	3	4	3.5	1	2.39
	PROPOSED		3	3	2	2.67	3	4	3.5	1	2.39

Vividness:
7- Very High
6 - High
5 - Moderately High
4- Average
3 - Moderately Low
2 - Low
1 - Very Low
-- Non existent

Intactness:
Development:
7 - No development
6- Little development
5 - Some development
4 - Average level of development
3 - Moderately high development
2 - High level of development
1 - Very high level of development
Encroachment (undesirable eyesores):
7 - None
6 - Few
5 - Some
4 - Average
3 - Several
2- Many
1 - Very Many

Unity:
7 - Very High
6 - High
5 - Moderately High
4 - Average
3 - Moderately Low
2 - Low
1 - Very Low
- - Non existent

Existing

Equal to Existing

Higher than Existing

Rater's Total Visual Quality Score Breakdown
7 - Dramatic, Pristine Natural Environment with water, mountains, and mature vegetation or Superb example of built environment in dramatic physical setting.
6 - Very High
5 - High
4 - Moderately High
3 - Average
2 - Moderately Low
1 - Low

VISUAL ANALYSIS MATRIX

Project Title King County SCRTS Project

ALTERNATIVE		ORIENTATION TO FACILITY	VIVIDNESS				INTACTNESS			UNITY	TOTAL VISUAL QUALITY
			LANDFORM	VEGETATIVE	MAN-MADE ELEMENTS	AVERAGE	DEVELOPMENT	ENCROACHMENT	AVERAGE	UNITY	
Alternative 1											
VIEWPOINT 1-A	EXISTING	To	4	4	3	3.67	2	6	4	4	3.89
	PROPOSED		4	4	2	3.33	2	5	3.5	2	2.94
VIEWPOINT 1-B	EXISTING	To	3	4	3	3.33	3	6	4.5	4	3.94
	PROPOSED		3	4	2	3	2	5	3.5	3	3.17
VIEWPOINT 1-C	EXISTING	To	2	2	2	2	3	4	3.5	3	2.83
	PROPOSED		2	1	1	1.33	2	4	3	2	2.11
VIEWPOINT 1-D	EXISTING	To	2	4	2	2.67	4	5	4.5	4	3.72
	PROPOSED		2	4	2	2.67	4	5	4.5	4	3.72
VIEWPOINT 1-E	EXISTING	To	3	3	1	2.33	5	5	5	2	3.11
	PROPOSED		1	1	1	1	2	3	2.5	1	1.50
VIEWPOINT 1-F	EXISTING	To	2	3	1	2	2	2	2	1	1.67
	PROPOSED		2	2	1	1.67	2	1	1.5	1	1.39

Vividness:
7- Very High
6 - High
5 - Moderately High
4- Average
3 - Moderately Low
2 - Low
1 - Very Low
-- Non existent

Intactness:
Development:
7 - No development
6- Little development
5 - Some development
4 - Average level of development
3 - Moderately high development
2 - High level of development
1 - Very high level of development
Encroachment (undesirable eyesores):
7 - None
6 - Few
5 - Some
4 - Average
3 - Several
2- Many
1 - Very Many

Unity:
7 - Very High
6 - High
5 - Moderately High
4 - Average
3 - Moderately Low
2 - Low
1 - Very Low
- - Non existent

Existing

Equal to Existing

Higher than Existing

Rater's Total Visual Quality Score Breakdown
7 - Dramatic, Pristine Natural Environment with water, mountains, and mature vegetation or Superb example of built environment in dramatic physical setting.
6 - Very High
5 - High
4 - Moderately High
3 - Average
2 - Moderately Low
1 - Low

VISUAL ANALYSIS MATRIX

Project Title King County SCRTS Project

ALTERNATIVE		ORIENTATION TO FACILITY	VIVIDNESS				INTACTNESS			UNITY	TOTAL VISUAL QUALITY
			LANDFORM	VEGETATIVE	MAN-MADE ELEMENTS	AVERAGE	DEVELOPMENT	ENCROACHMENT	AVERAGE	UNITY	
Alternative 2											
VIEWPOINT 2-A	EXISTING	To	4	5	4	4.33	3	4	3.5	4	3.94
	PROPOSED		4	5	4	4.33	3	4	3.5	4	3.94
VIEWPOINT 2-B	EXISTING	To	4	4	5	4.33	4	6	5	5	4.78
	PROPOSED		4	4	5	4.33	4	6	5	5	4.78
VIEWPOINT 2-C	EXISTING	To	4	4	4	4	4	6	5	4	4.33
	PROPOSED		4	4	4	4	4	5	4.5	4	4.17
VIEWPOINT 2-D	EXISTING	To	3	4	3	3.33	4	3	3.5	3	3.28
	PROPOSED		3	3	2	2.67	3	2	2.5	3	2.72

Vividness:
7- Very High
6 - High
5 - Moderately High
4- Average
3 - Moderately Low
2 - Low
1 - Very Low

Intactness:
Development:
7 - No development
6- Little development
5 - Some development
4 - Average level of development
3 - Moderately high development
2 - High level of development
1 - Very high level of development
Encroachment (undesirable eyesores):
7 - None
6 - Few
5 - Some
4 - Average
3 - Several
2- Many
1 - Very Many

Unity:
7 - Very High
6 - High
5 - Moderately High
4 - Average
3 - Moderately Low
2 - Low
1 - Very Low
- - Non existent

Existing

Equal to Existing

Higher than Existing

Rater's Total Visual Quality Score Breakdown
7 - Dramatic, Pristine Natural Environment with water, mountains, and mature vegetation or Superb example of built environment in dramatic physical setting.
6 - Very High
5 - High
4 - Moderately High
3 - Average
2 - Moderately Low
1 - Low

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APPENDIX D

Transportation Data and Figures

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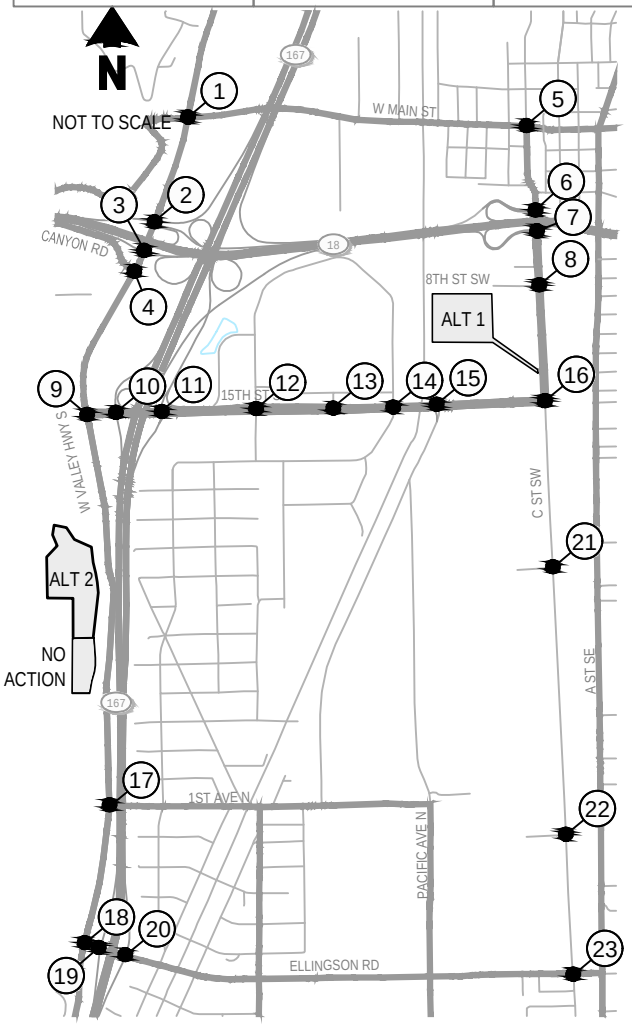


1 W VALLEY HWY N / MAIN ST
510 | 10 120 | 10 45 | 45 50 | 10 95 | 20 85 | 145

2 W VALLEY HWY N / SR 18 WB RAMPS
505 | 100 | 30 | 260 | 220 375

3 W VALLEY HWY N / SR 18 EB RAMPS
720 | 50 | 95 5 595 | 305 | 505

4 W VALLEY HWY N / PEASLEY CANYON RD
1,035 | 300 | 320 | 500 | 390 475

5 C ST SW / MAIN ST
525 | 15 100 | 25 20 | 190 105 | 50 285 | 70 115 | 135

6 C ST SW / SR 18 WB RAMPS
820 | 235 5 | 25 5 | 5 5 | 250 35 | 195 10 | 215

7 C ST SW / SR 18 EB RAMPS
1,075 | 115 | 295 | 145 | 245 695

8 C ST SW / 8TH ST SW
1,170 | 75 | 65 | 15 | 10 860

9 W VALLEY HWY / 15TH ST SW
835 | 730 | 745 | 210 | 150 55 | 150

10 SR 167 SB RAMPS / 15TH ST SW
5 | 165 295 | 150 | 555 785 | 230

11 SR 167 NB RAMPS / 15TH ST SW
15 360 | 840 605 | 310 205 | 5

12 O ST / 15TH ST SW
95 | 380 75 | 295 55 | 350 360 | 200 40 | 210 15 | 75

13 MARKET ST / 15TH ST SW
5 | 90 100 | 80 110 | 360 305 | 5 0 | 65 15 | 5

14 SUPERMALL WAY / 15TH ST SW
55 | 100 395 | 65 440 | 420 300 | 15 150 | 15 105 | 35

15 PERIMETER RD / 15TH ST SW
840 775 | 95 95 | 110 120

16 C ST SW / 15TH ST SW
535 | 655 | 660 | 395 | 210 185

17 W VALLEY HWY / 1ST AVE N
920 | 10 100 | 5 30 | 5 5 | 5 10 | 5 5 | 85

18 W VALLEY HWY / ELLINGSON RD
515 | 415 | 55 | 50 | 40 20

19 SR 167 SB RAMPS / ELLINGSON RD
5 | 30 230 | 270 75 | 165 370

20 SR 167 NB RAMPS / ELLINGSON RD
10 285 | 475 440 | 5 215 | 5

21 C ST SW / GSA ACCESS
905 | 5 | 65 | 70 | 0 325

22 C ST SW / SAFEWAY ACCESS
1,005 | 10 | 5 | 5 | 5 310

23 C ST SW / ELLINGSON RD
10 | 395 570 | 60 230 | 765 445 | 5 5 | 5 75 | 30

LEGEND: X = WEEKDAY PM PEAK HOUR (X) = STUDY INTERSECTION

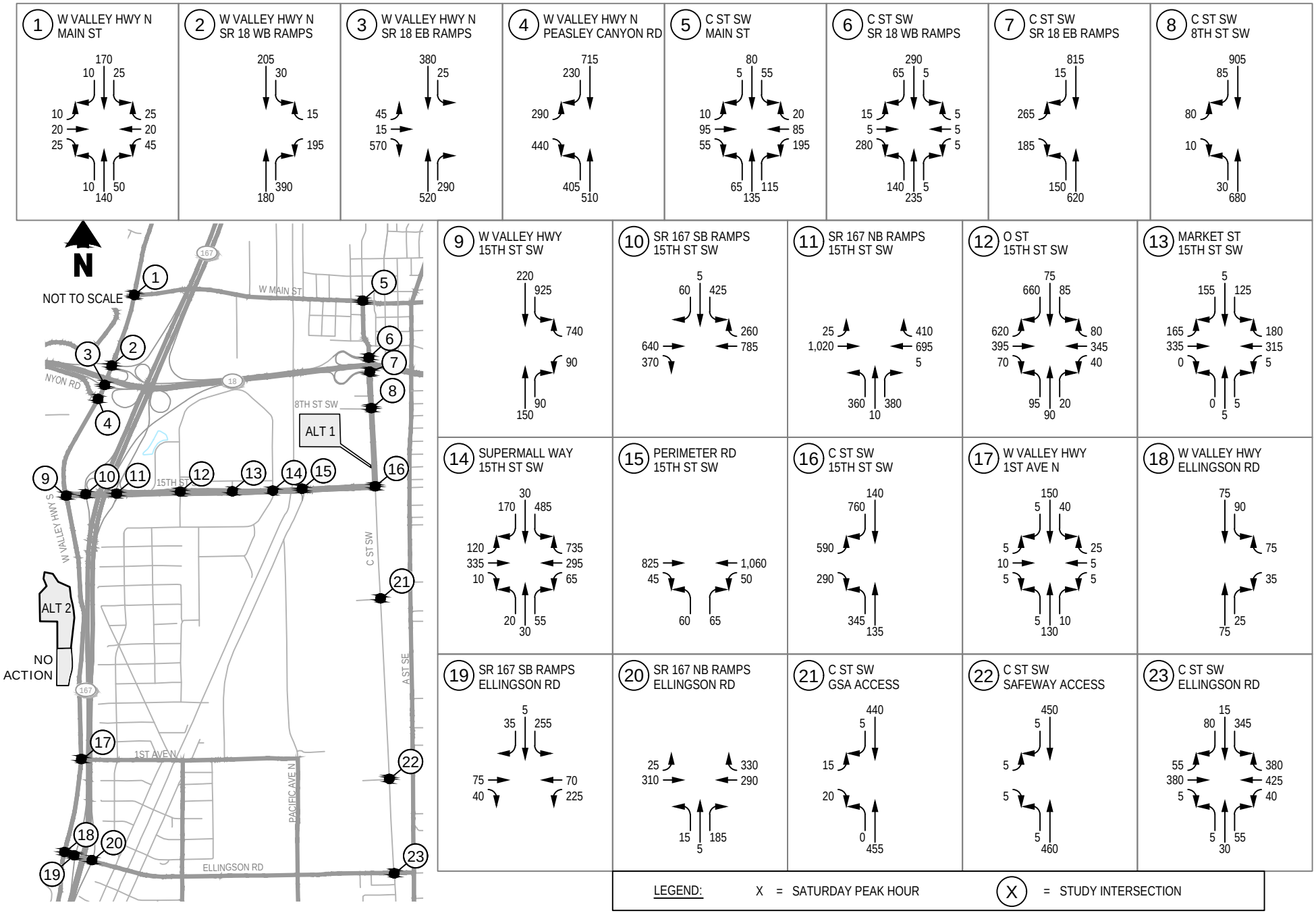
Existing Weekday PM Peak Hour Traffic Volumes

FIGURE 3.12-2

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Ex Vol_PM> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



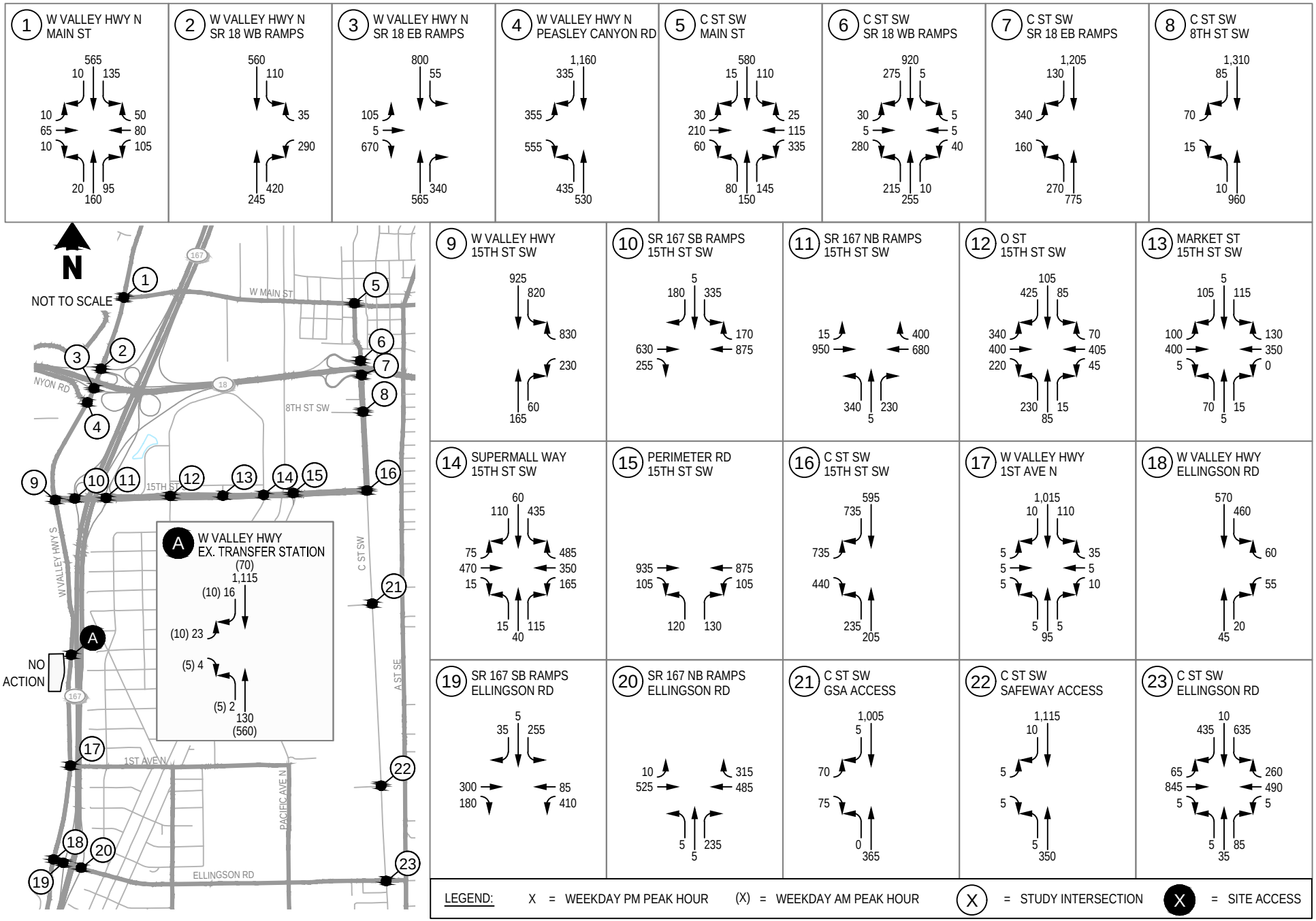
Existing Saturday Peak Hour Traffic Volumes

FIGURE **3.12-3**

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Ex Vol_Sat> walkerc 05/21/15 09:57

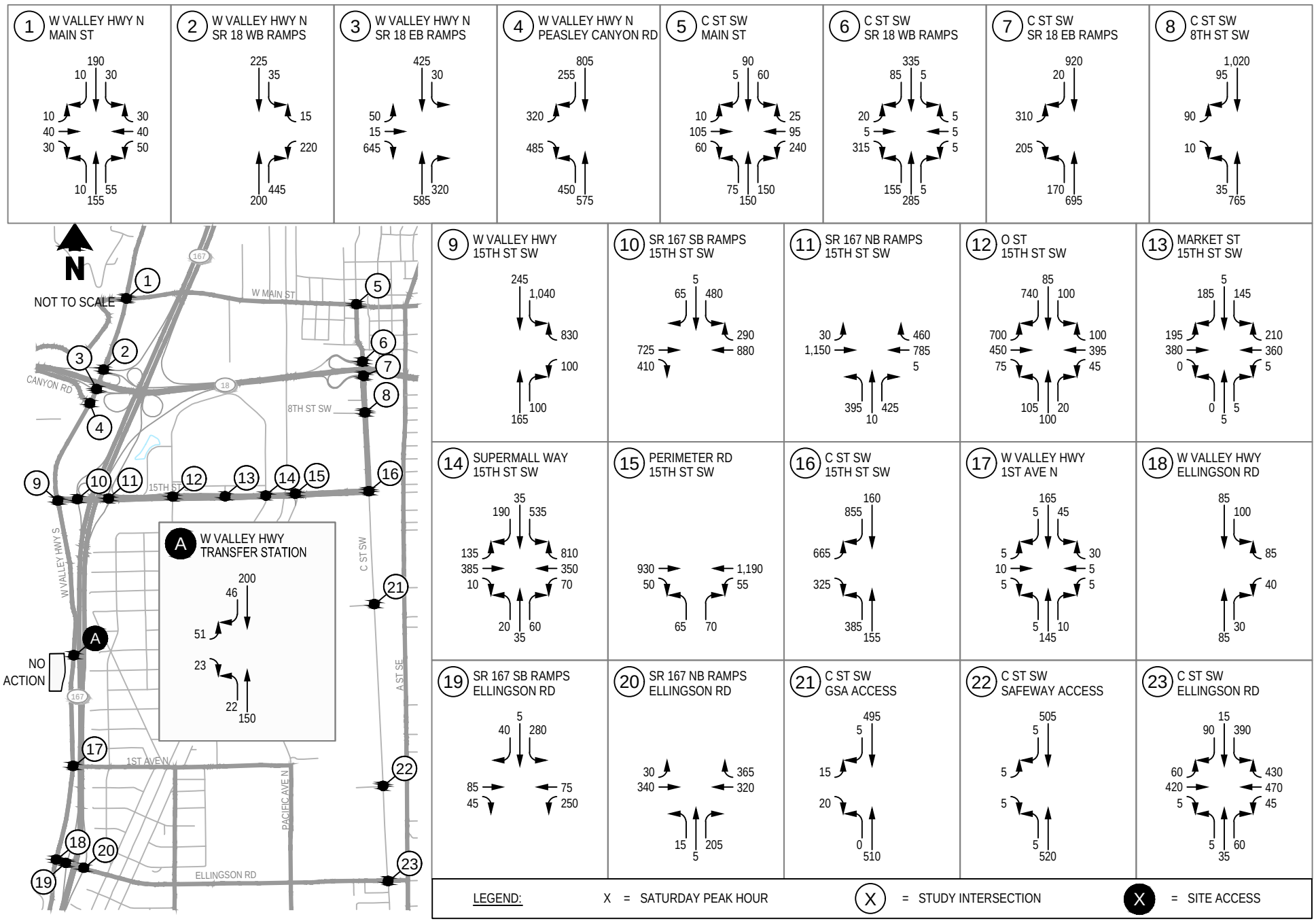
transpogroup WHAT TRANSPORTATION CAN BE.



No Action - 2020 Weekday Peak Hour Traffic Volumes

FIGURE **3.12-4**

King County South Transfer Station



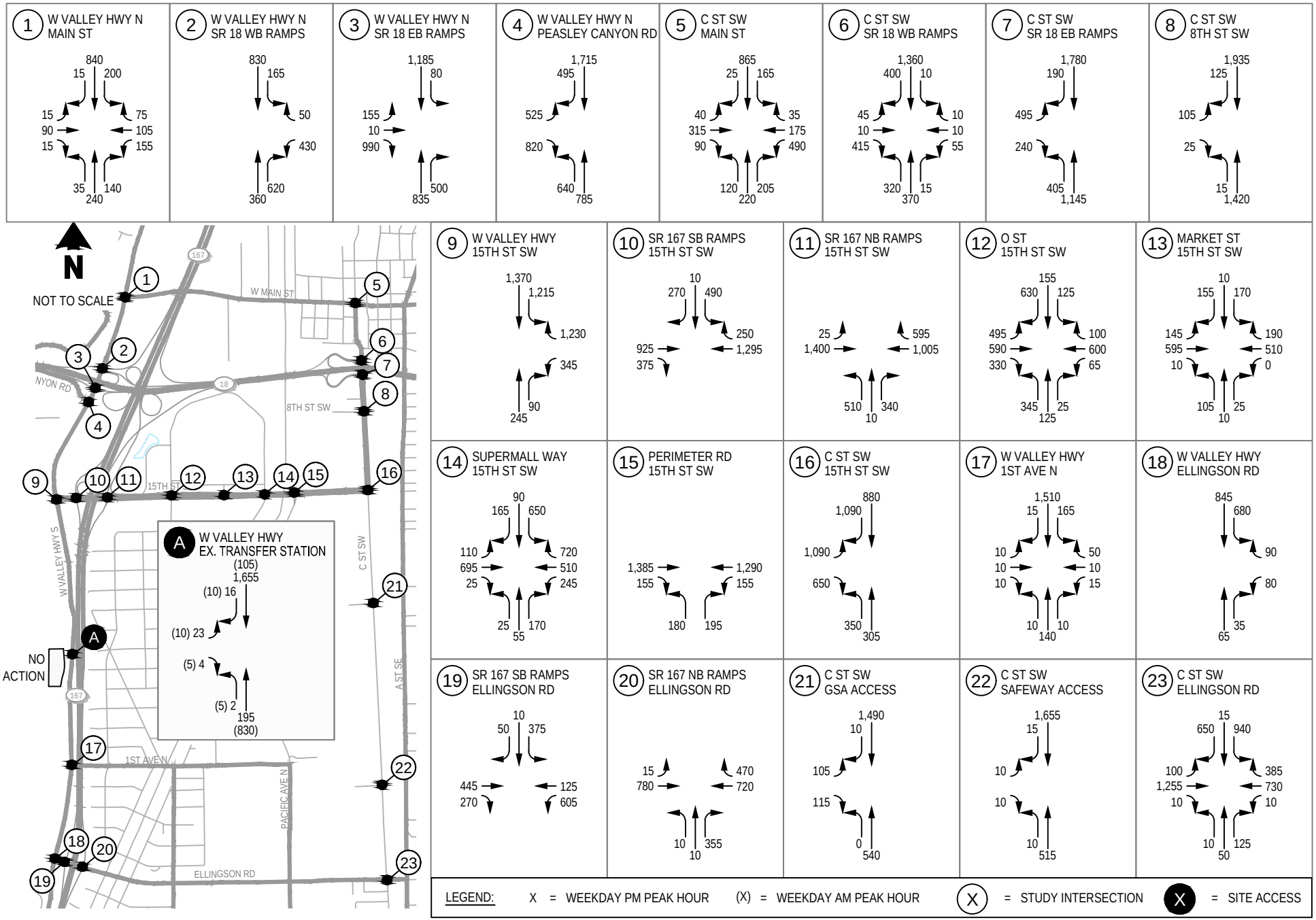
No Action - 2020 Saturday Peak Hour Traffic Volumes

FIGURE 3.12-5

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <NA_Sat_2020> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



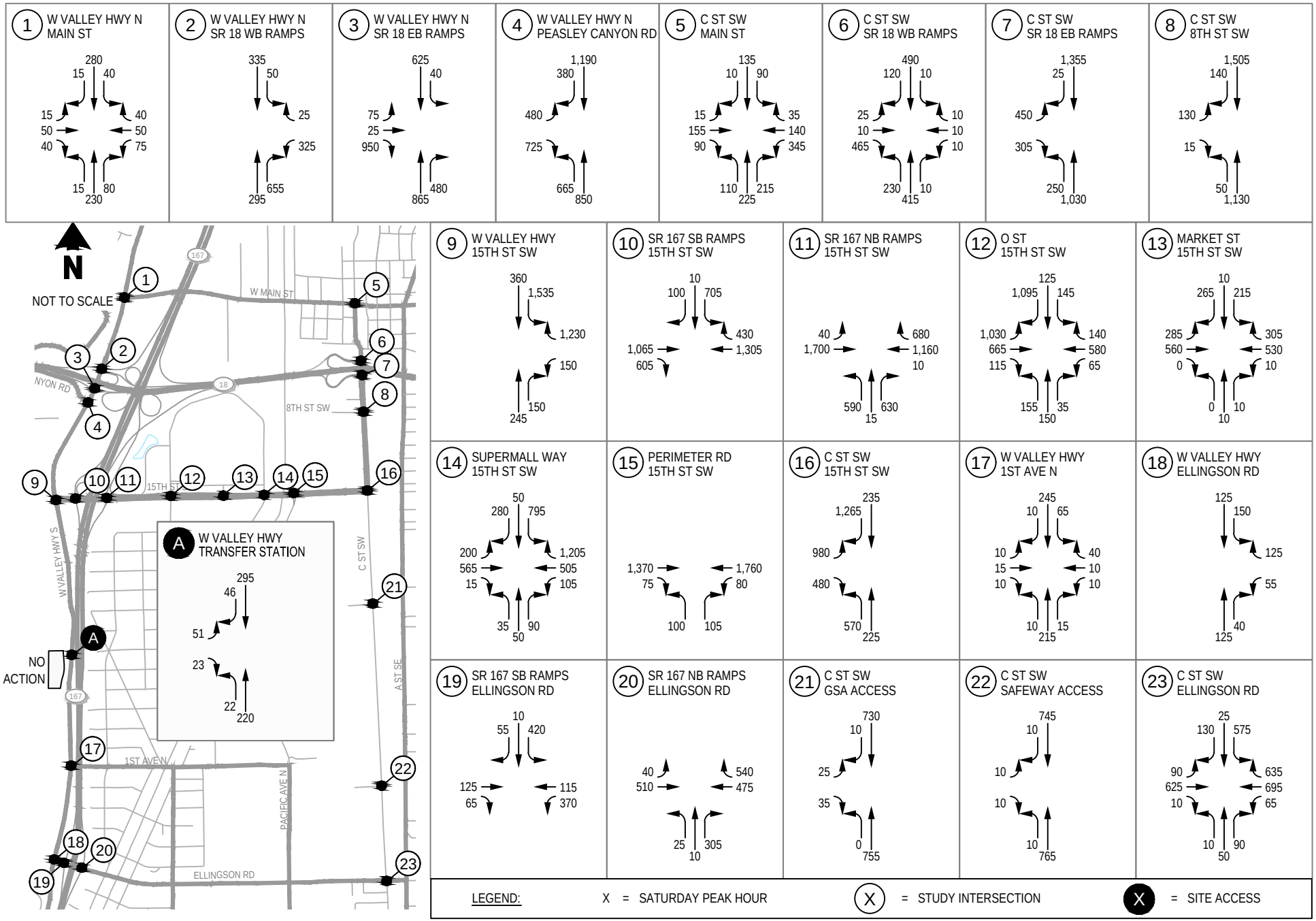
No Action - 2040 Weekday Peak Hour Traffic Volumes

FIGURE **3.12-6**

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <NA_Weekday_2040> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



No Action - 2040 Saturday Peak Hour Traffic Volumes

FIGURE 3.12-7

King County South Transfer Station

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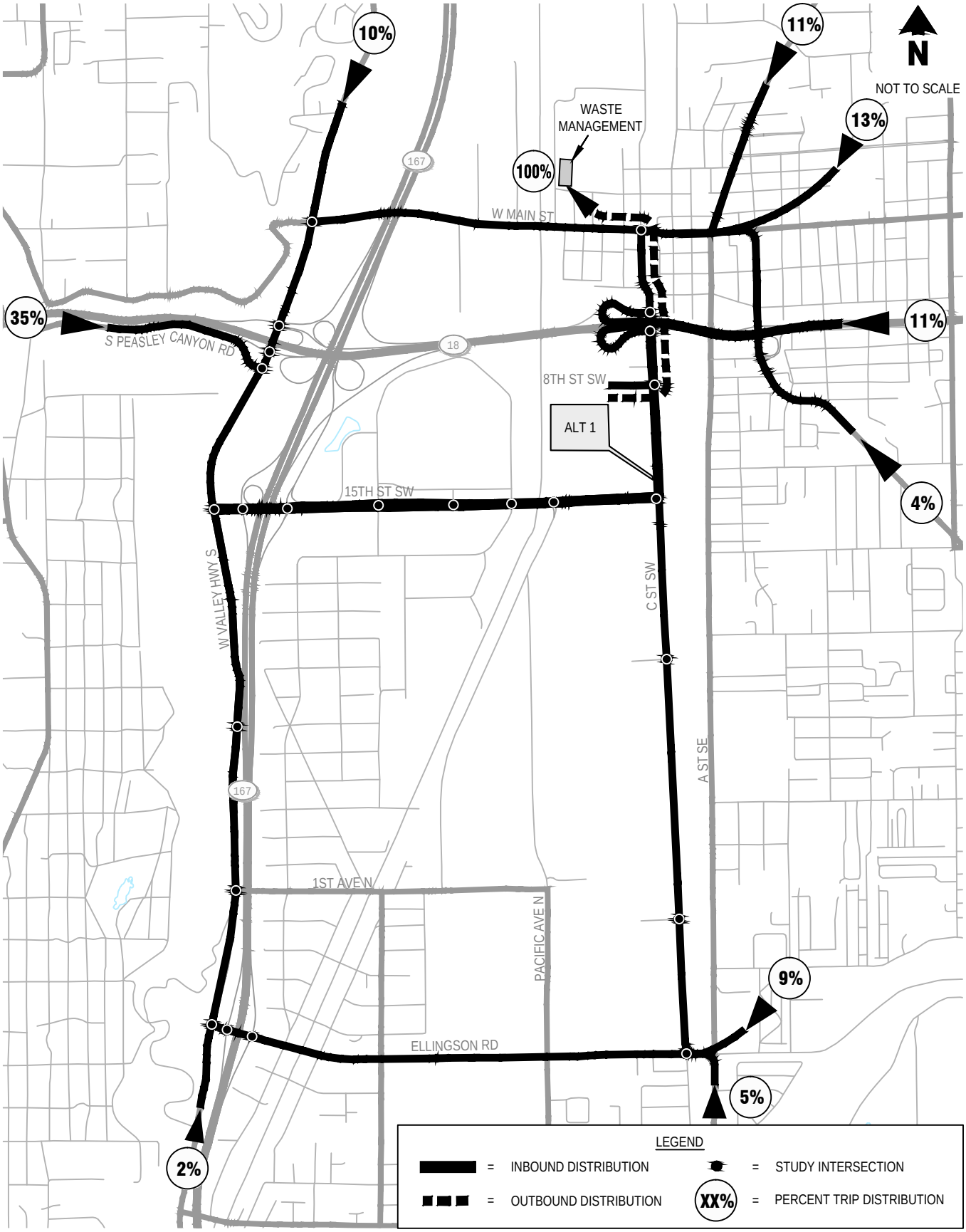
transpogroup WHAT TRANSPORTATION CAN BE.



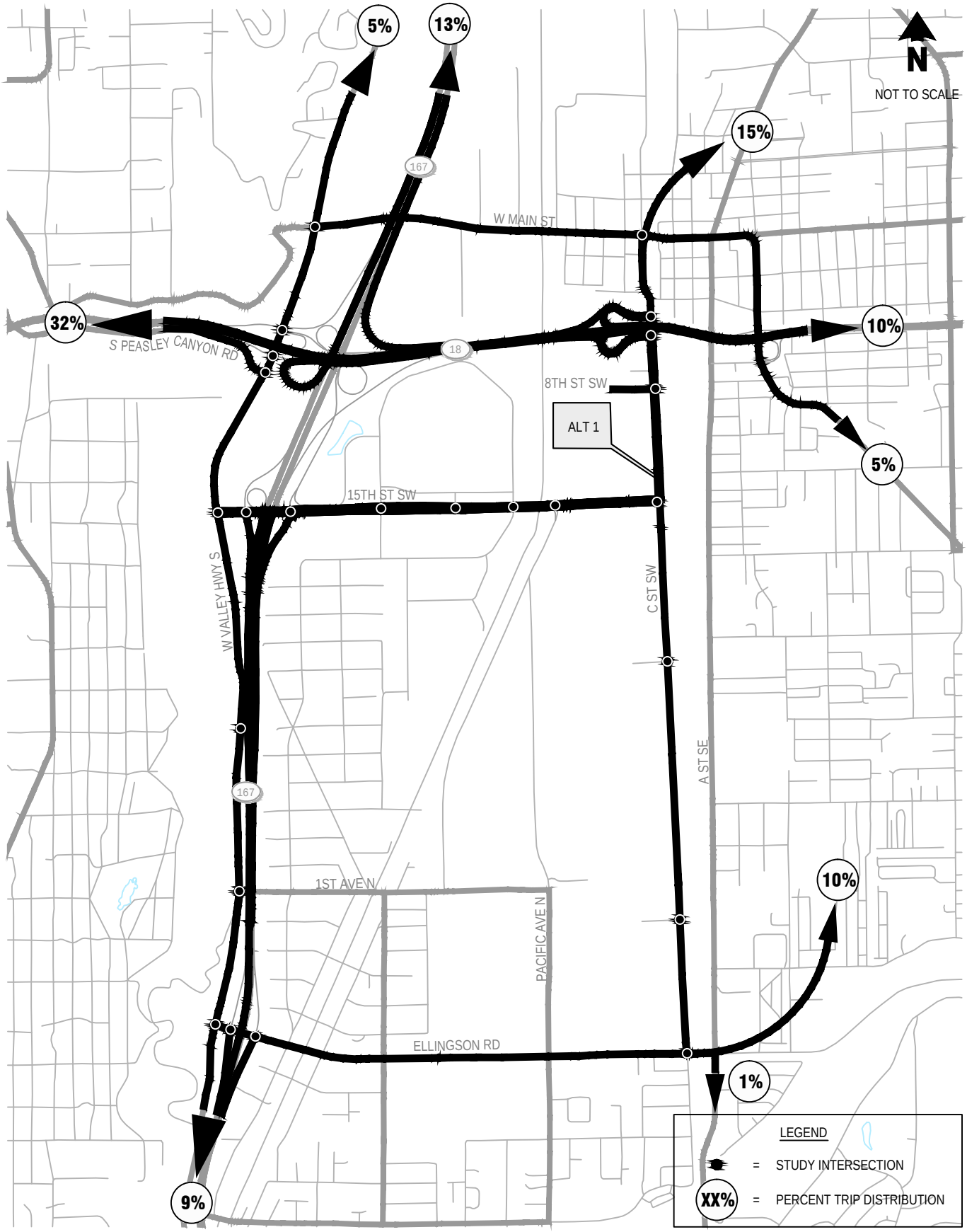
Alternative 1 - Commercial-haul Trip Distribution

King County South Transfer Station

FIGURE **3.12-9**

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt1_CH> walkerc 05/21/15 09:57

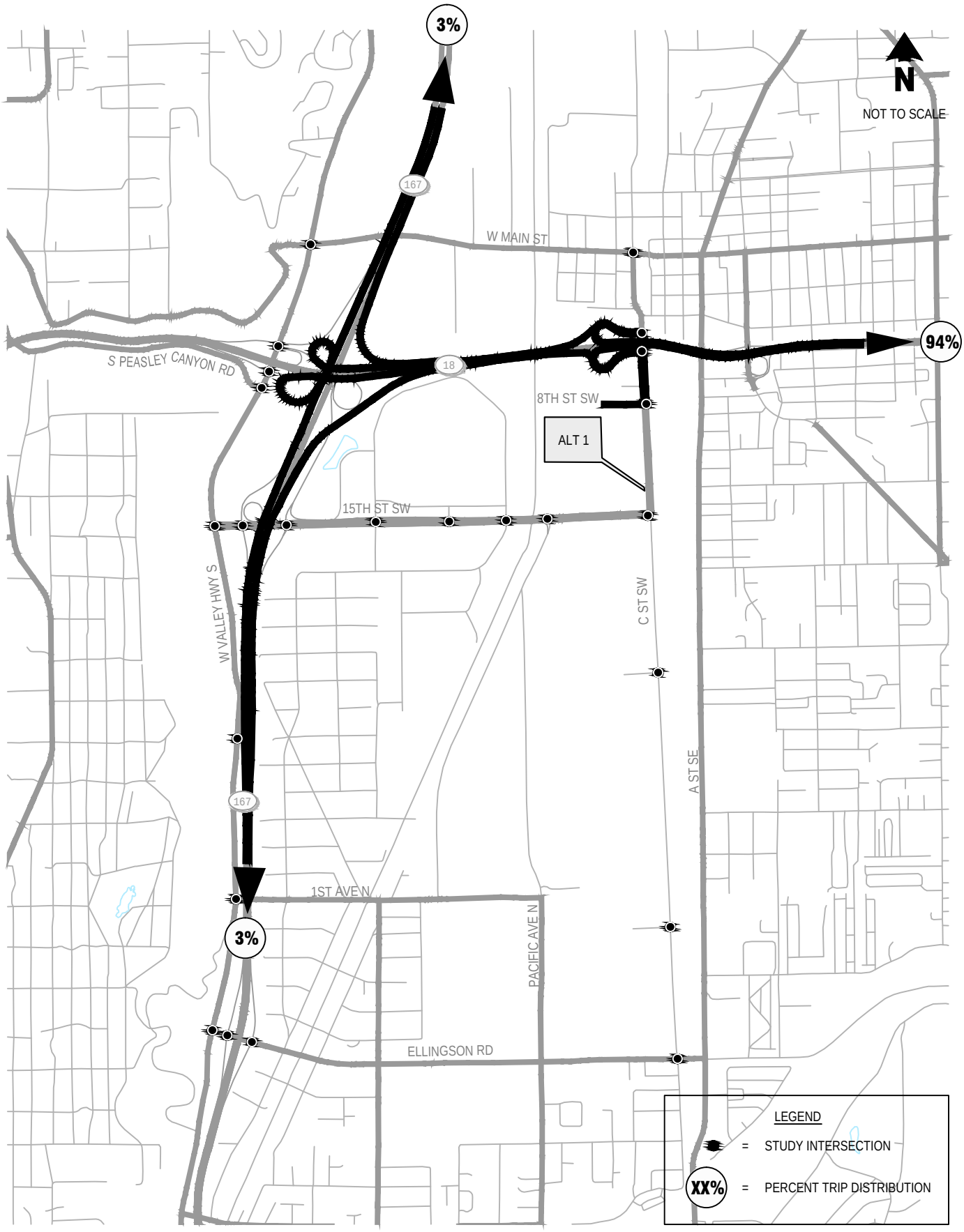
transpogroup
WHAT TRANSPORTATION CAN BE.



Alternative 1 - Self-haul Trip Distribution

King County South Transfer Station

FIGURE **3.12-10**



Alternative 1 - Transfer Trailers & Recyclables Trip Distribution

FIGURE 3.12-11

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt1_HA> walkerc 05/21/15 09:57

transpogroup
WHAT TRANSPORTATION CAN BE.

Alternative 1 - 2020 Weekday Peak Hour Trip Assignment

FIGURE

3.12-12

King County South Transfer Station

transpogroup

WHAT TRANSPORTATION CAN BE.

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 1_Weekday_2020_assign> walkerc 05/21/15 09:57

Alternative 1 - 2020 Saturday Peak Hour Trip Assignment

FIGURE 3.12-13

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 1_Sat_2020_assign> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.

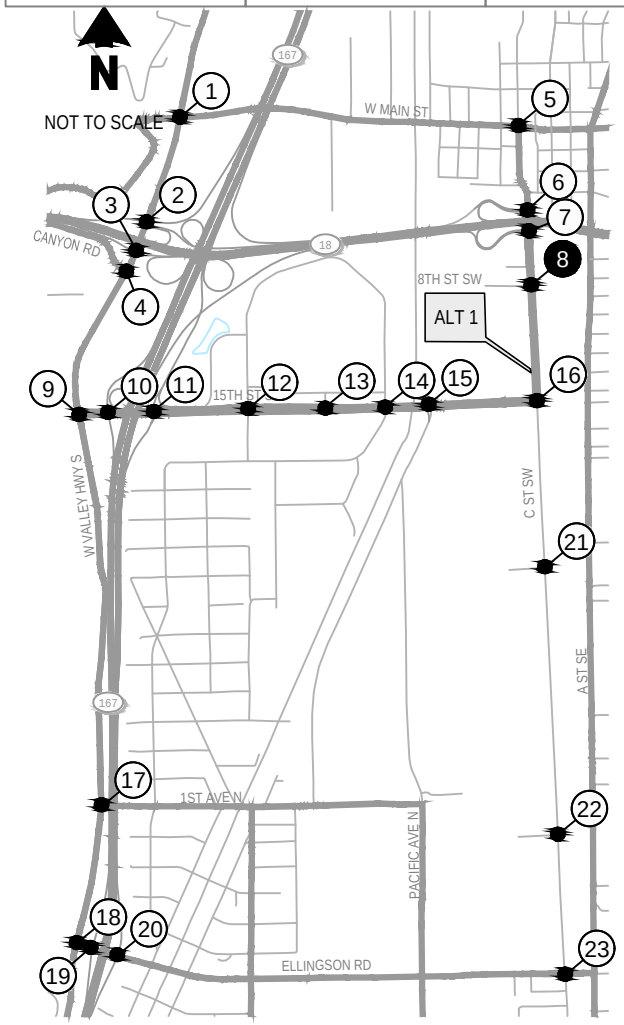
Alternative 1 - 2040 Weekday Peak Hour Trip Assignment

FIGURE 3.12-14

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 1_Weekday_2040_assign> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



1 W VALLEY HWY N / MAIN ST
7
7
11
12

2 W VALLEY HWY N / SR 18 WB RAMPS
11
-7
12
-26

3 W VALLEY HWY N / SR 18 EB RAMPS
4
-27
-7
-14

4 W VALLEY HWY N / PEASLEY CANYON RD
-34
11
12
12
11
-33

5 C ST SW / MAIN ST
19
29
18
28

6 C ST SW / SR 18 WB RAMPS
48
28
81
46

7 C ST SW / SR 18 EB RAMPS
75
83
26
127

8 C ST SW / 8TH ST SW
2
156
156
62
63
-3

9 W VALLEY HWY / 15TH ST SW
-34
12
11
-9
-33
-15

10 SR 167 SB RAMPS / 15TH ST SW
-14
10
-3
16

11 SR 167 NB RAMPS / 15TH ST SW
-15
12
26
8

12 O ST / 15TH ST SW
20
26

13 MARKET ST / 15TH ST SW
20
26

14 SUPERMALL WAY / 15TH ST SW
20
26

15 PERIMETER RD / 15TH ST SW
20
26

16 C ST SW / 15TH ST SW
38
26
20
40

17 W VALLEY HWY / 1ST AVE N
-20
-19

18 W VALLEY HWY / ELLINGSON RD
3
-23
-22
3
3
3

19 SR 167 SB RAMPS / ELLINGSON RD
-14
-19
-6
3

20 SR 167 NB RAMPS / ELLINGSON RD
-14
-12
-4
3

21 C ST SW / GSA ACCESS
38
40

22 C ST SW / SAFEWAY ACCESS
38
40

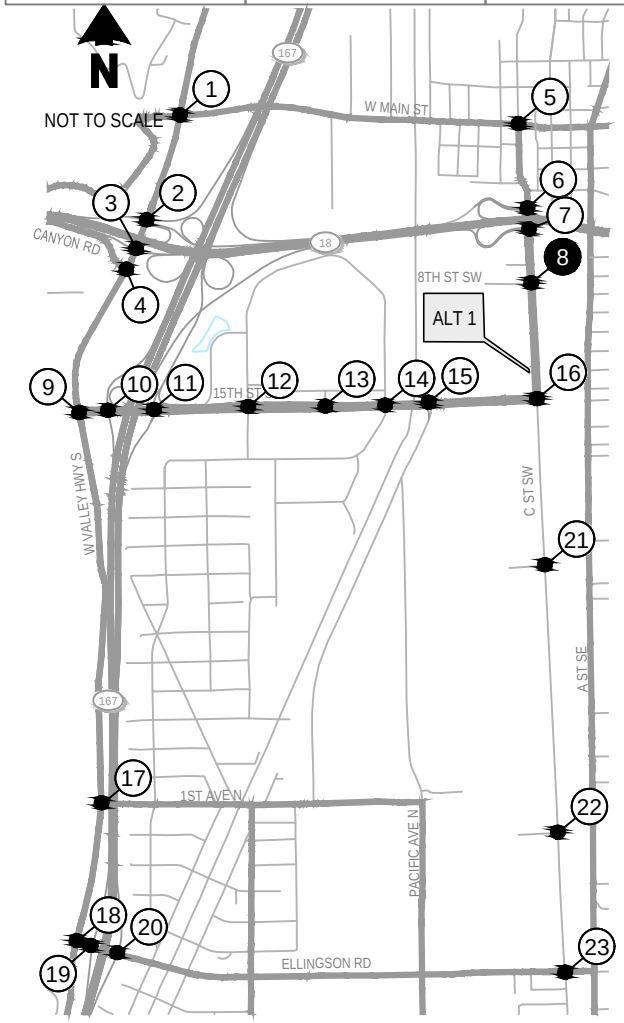
23 C ST SW / ELLINGSON RD
6
32
6
34
-17
-18

LEGEND: X = SATURDAY PEAK HOUR (X) = STUDY INTERSECTION X = SITE ACCESS

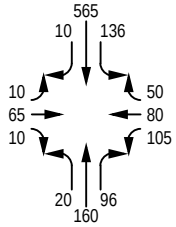
Alternative 1 - 2040 Saturday Peak Hour Trip Assignment

FIGURE 3.12-15

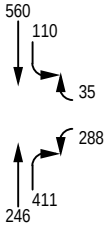
King County South Transfer Station



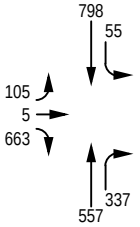
1 W VALLEY HWY N / MAIN ST



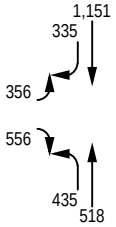
2 W VALLEY HWY N / SR 18 WB RAMPS



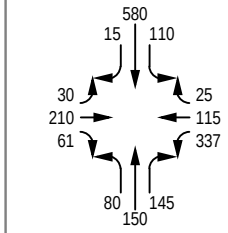
3 W VALLEY HWY N / SR 18 EB RAMPS



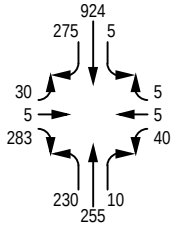
4 W VALLEY HWY N / PEASLEY CANYON RD



5 C ST SW / MAIN ST

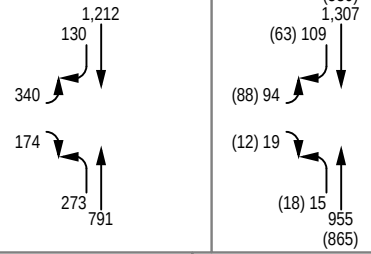


6 C ST SW / SR 18 WB RAMPS

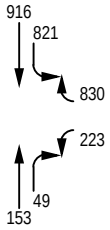


7 C ST SW / SR 18 EB RAMPS

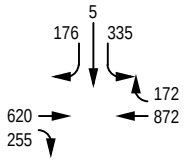
8 C ST SW / 8TH ST SW



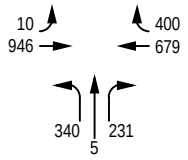
9 W VALLEY HWY / 15TH ST SW



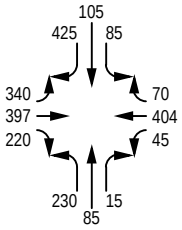
10 SR 167 SB RAMPS / 15TH ST SW



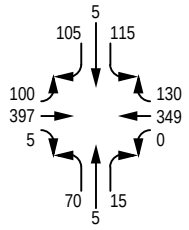
11 SR 167 NB RAMPS / 15TH ST SW



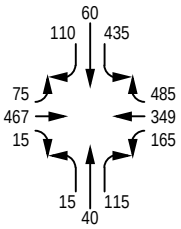
12 O ST / 15TH ST SW



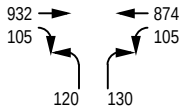
13 MARKET ST / 15TH ST SW



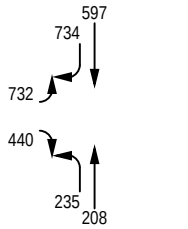
14 SUPERMALL WAY / 15TH ST SW



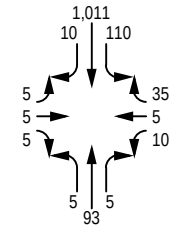
15 PERIMETER RD / 15TH ST SW



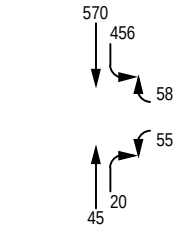
16 C ST SW / 15TH ST SW



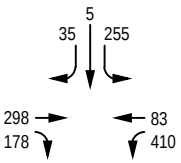
17 W VALLEY HWY / 1ST AVE N



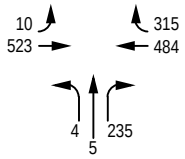
18 W VALLEY HWY / ELLINGSON RD



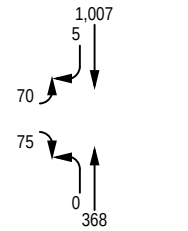
19 SR 167 SB RAMPS / ELLINGSON RD



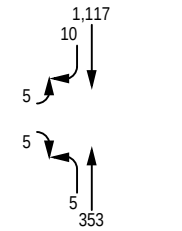
20 SR 167 NB RAMPS / ELLINGSON RD



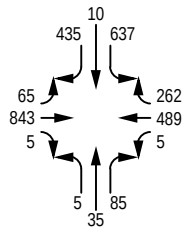
21 C ST SW / GSA ACCESS



22 C ST SW / SAFEWAY ACCESS



23 C ST SW / ELLINGSON RD



LEGEND: X = WEEKDAY PM PEAK HOUR (X) = WEEKDAY AM PEAK HOUR (X) = STUDY INTERSECTION X = SITE ACCESS

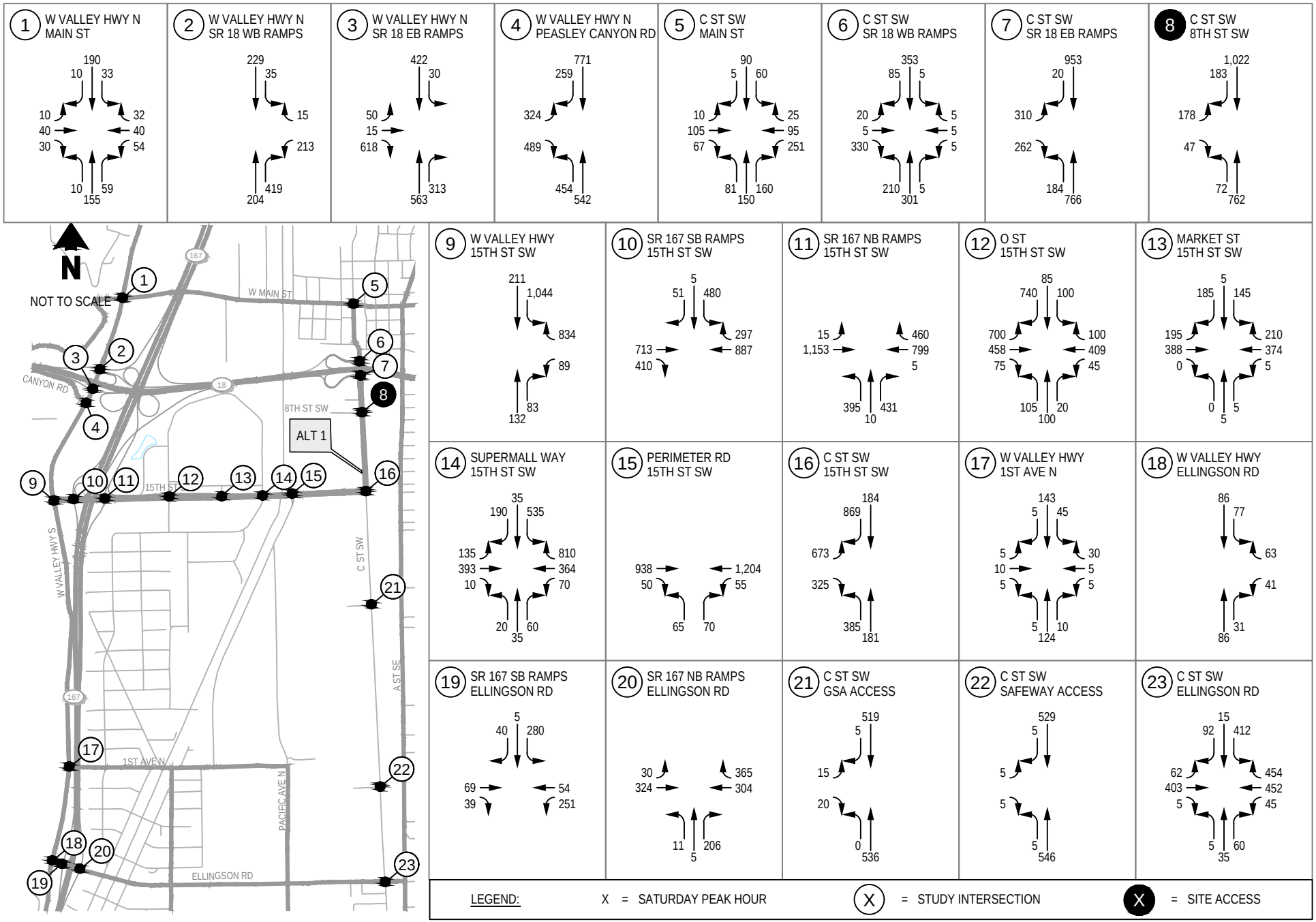
Alternative 1 - 2020 Weekday Peak Hour Traffic Volumes

FIGURE 3.12-16

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 1_Weekday_2020> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



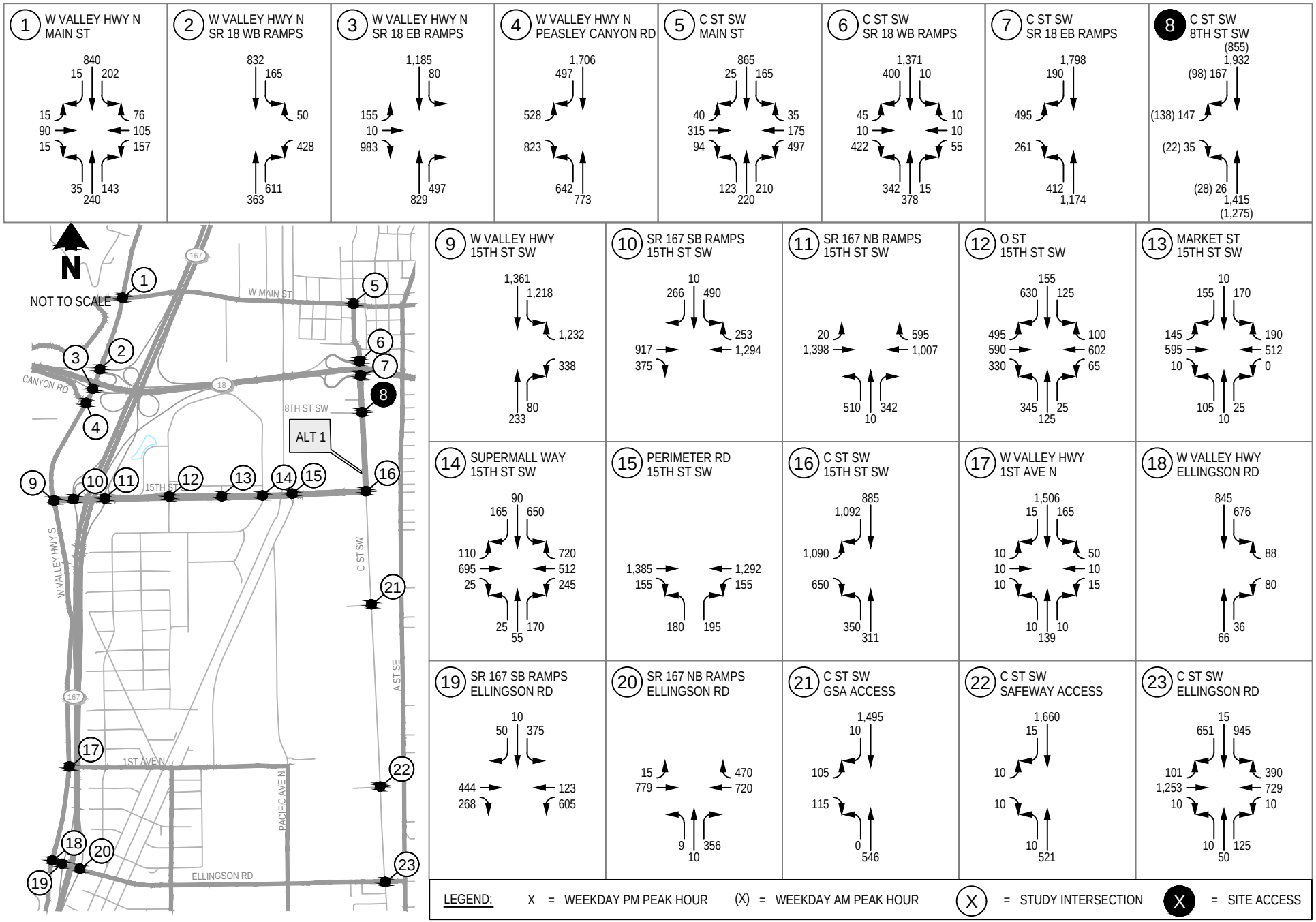
Alternative 1 - 2020 Saturday Peak Hour Traffic Volumes

FIGURE 3.12-17

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 1_Saturday_2020> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



Alternative 1 - 2040 Weekday Peak Hour Traffic Volumes

FIGURE 3.12-18

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 1_Weekday_2040> walkerc 05/21/15 09:57

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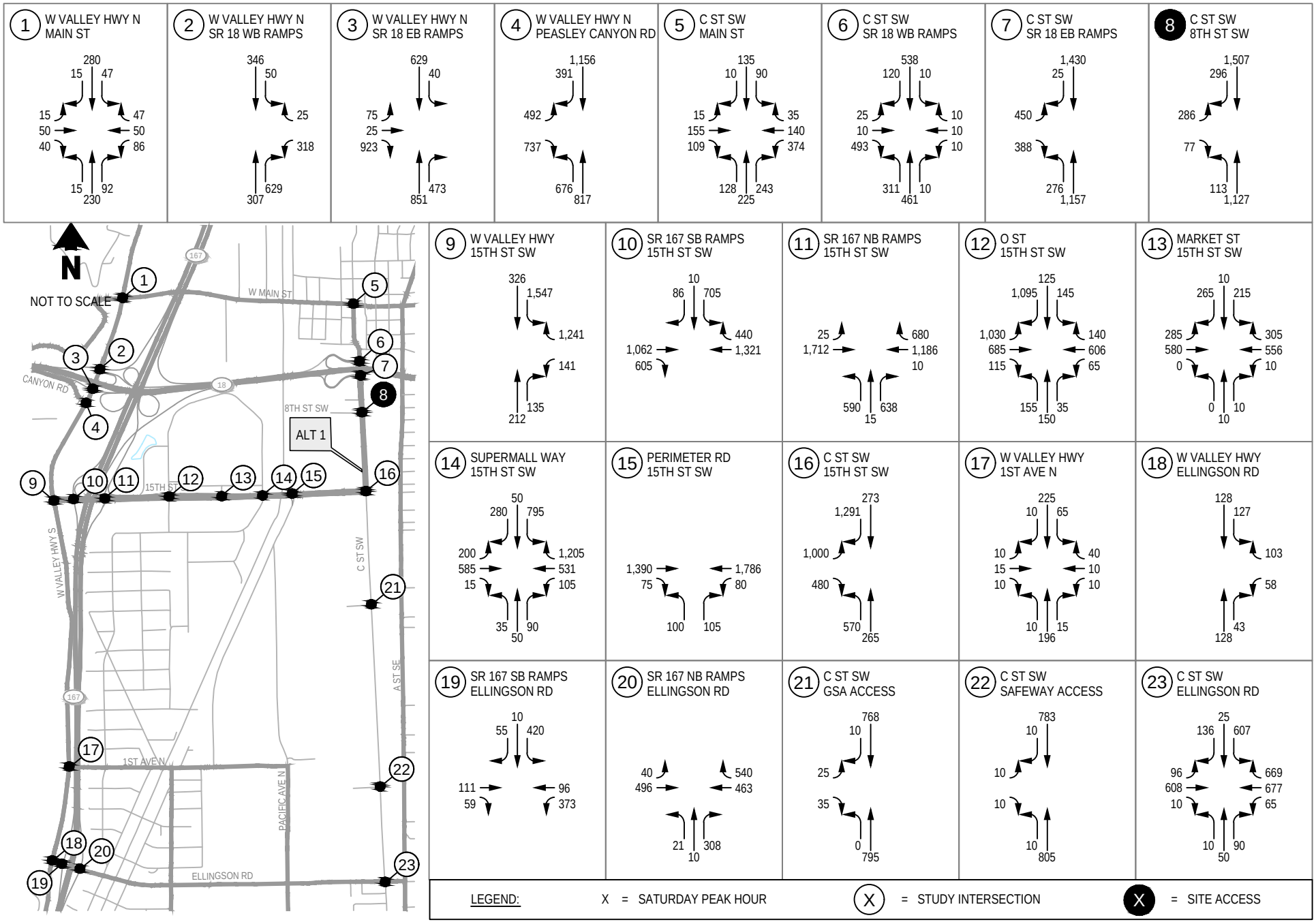


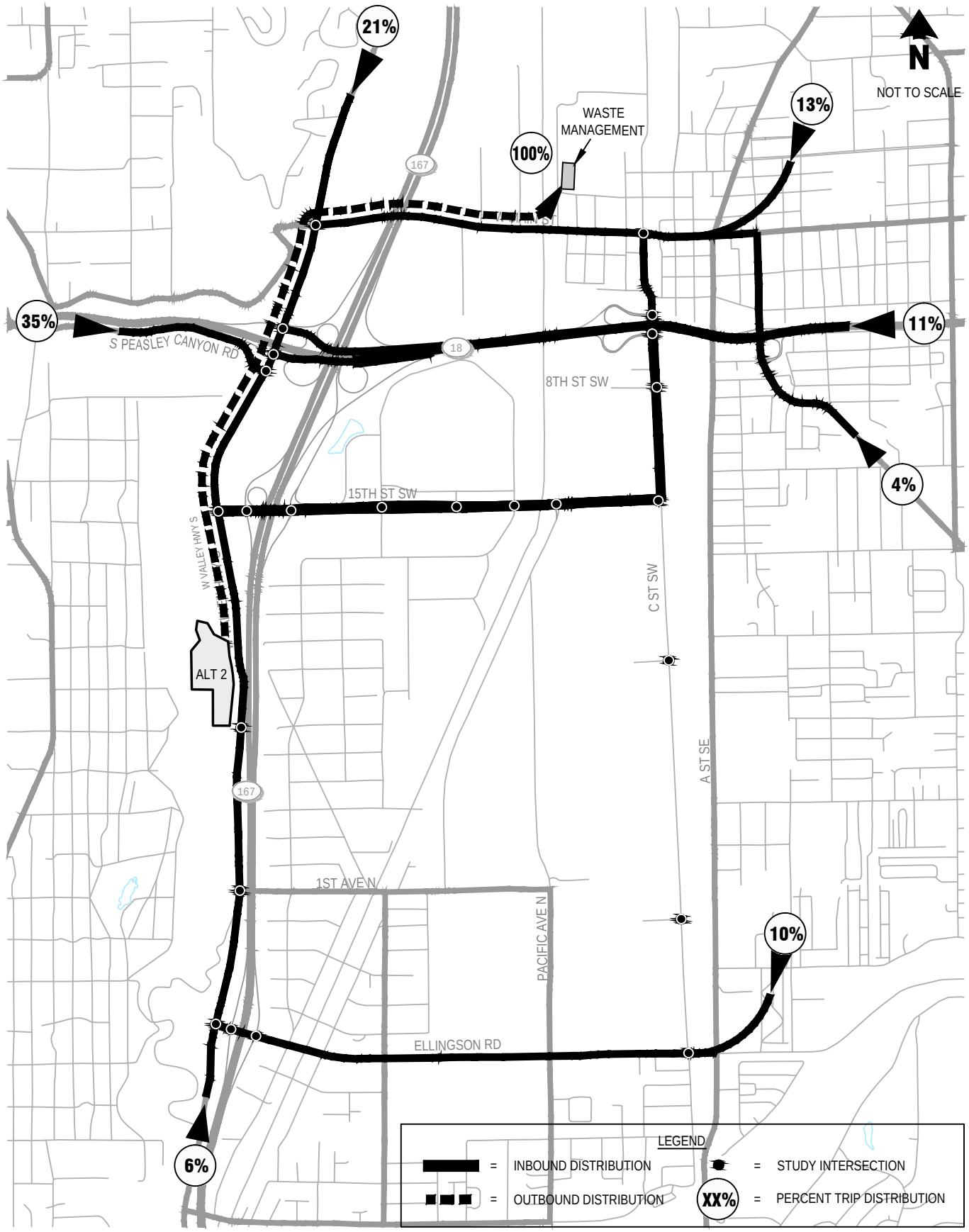
Alternative 1 - 2040 Saturday Peak Hour Traffic Volumes

FIGURE 3.12-19

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 1_Saturday_2040> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



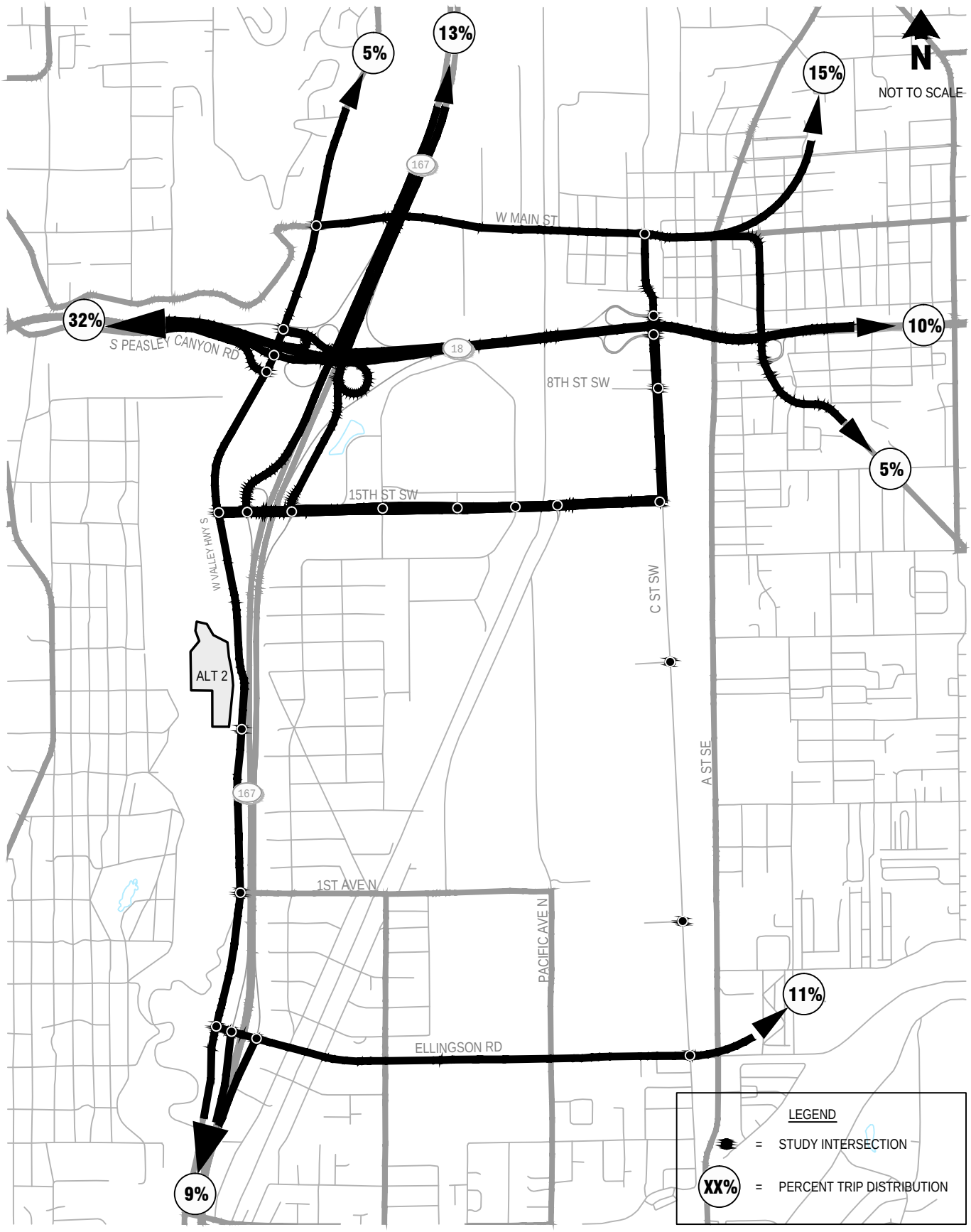
Alternative 2 - Commercial Haul Trip Distribution

FIGURE 3.12-20

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt2_CH> walkerc 05/21/15 09:57

transpogroup
WHAT TRANSPORTATION CAN BE.



Alternative 2 - Self-haul Trip Distribution

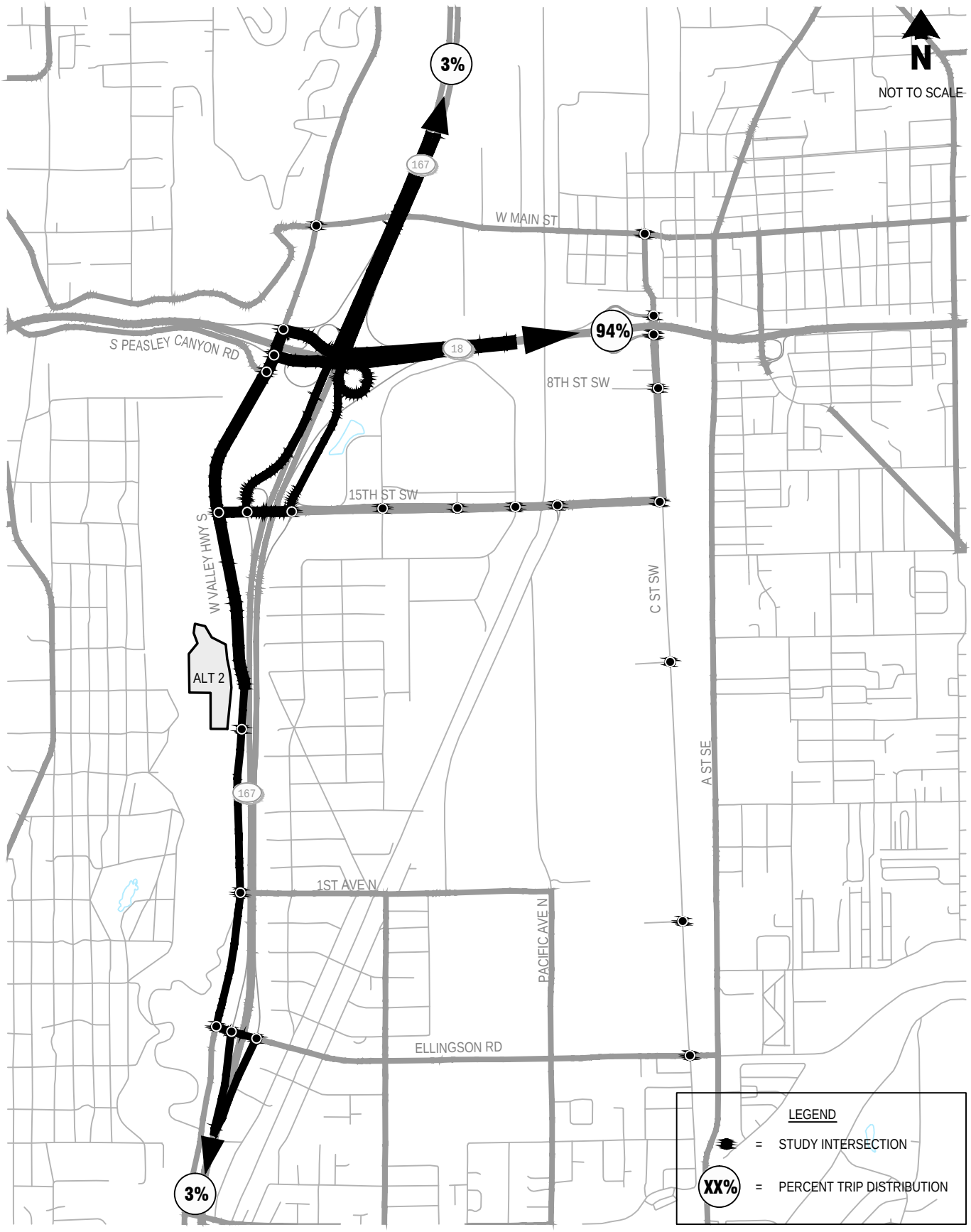
FIGURE

King County South Transfer Station

3.12-21

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt2_SH> walkerc 05/21/15 09:57

transpogroup
WHAT TRANSPORTATION CAN BE.



Alternative 2 - Transfer Trailers & Recyclables Trip Distribution

FIGURE 3.12-22

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt2_HA> walkerc 05/21/15 09:57

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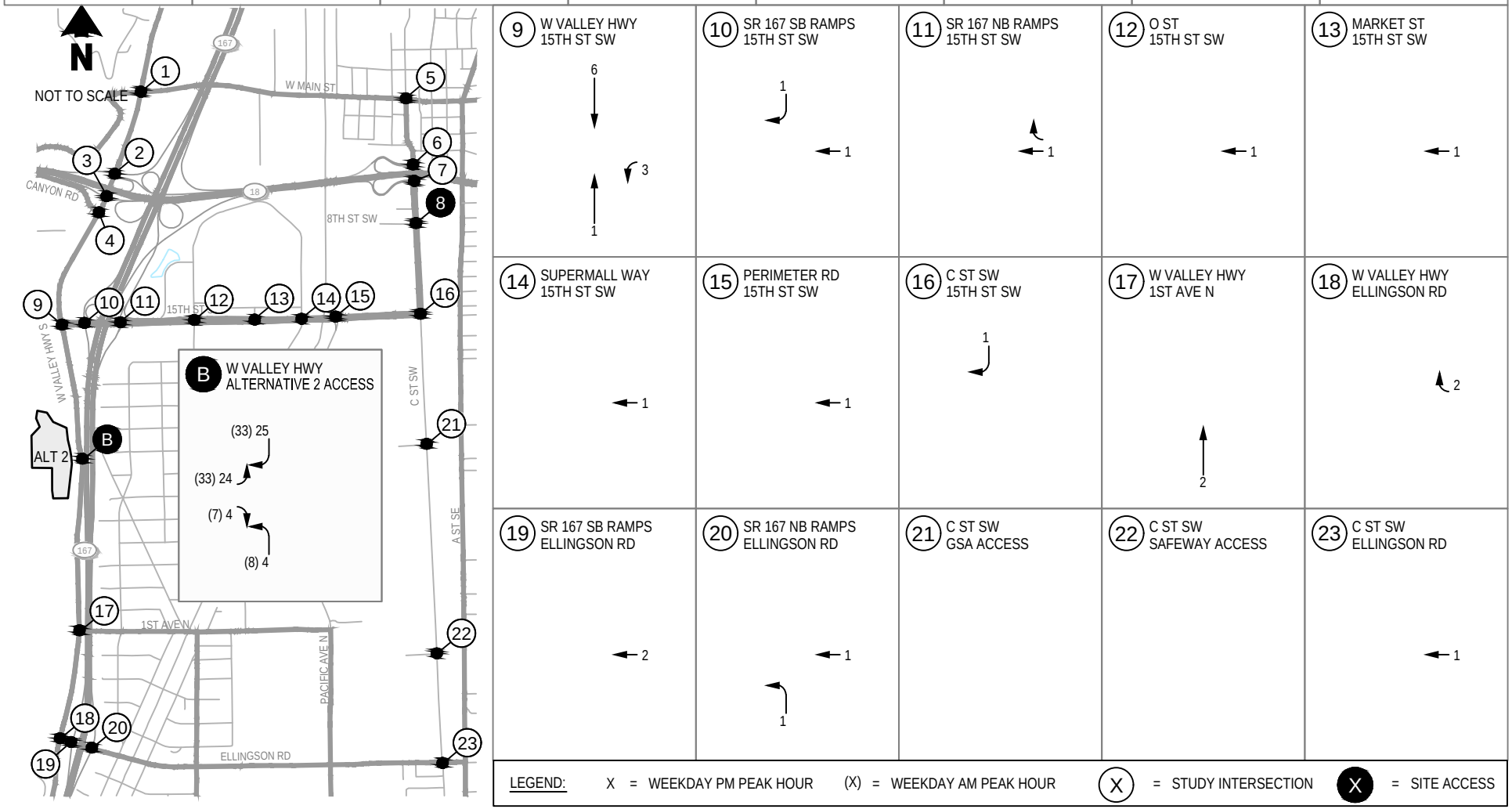
WHAT TRANSPORTATION CAN BE.



Alternative 2 - 2020 Weekday Peak Hour Trip Assignment

FIGURE 3.12-23

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 2_Weekday_2020 assign> walkerc 05/21/15 09:57

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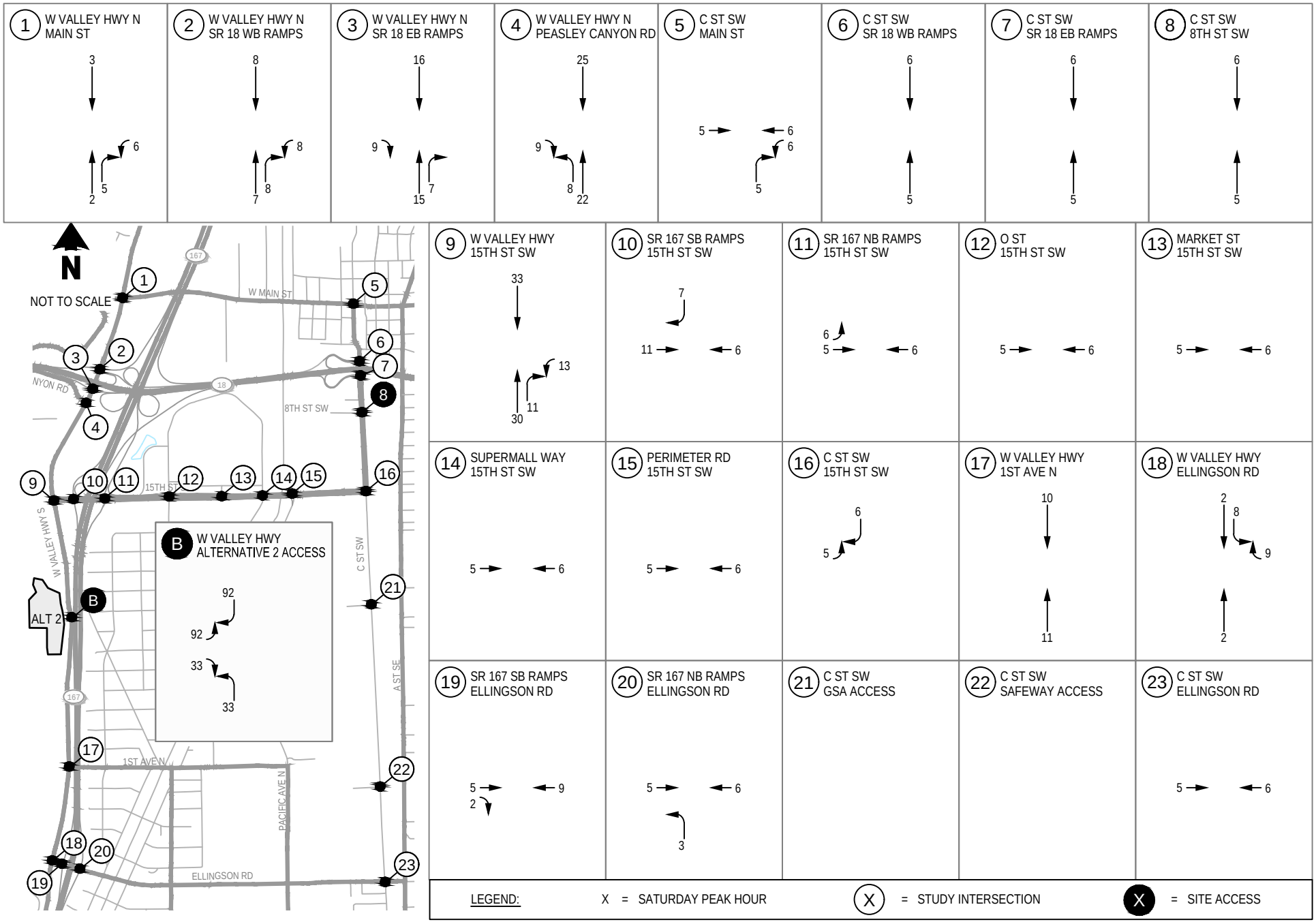


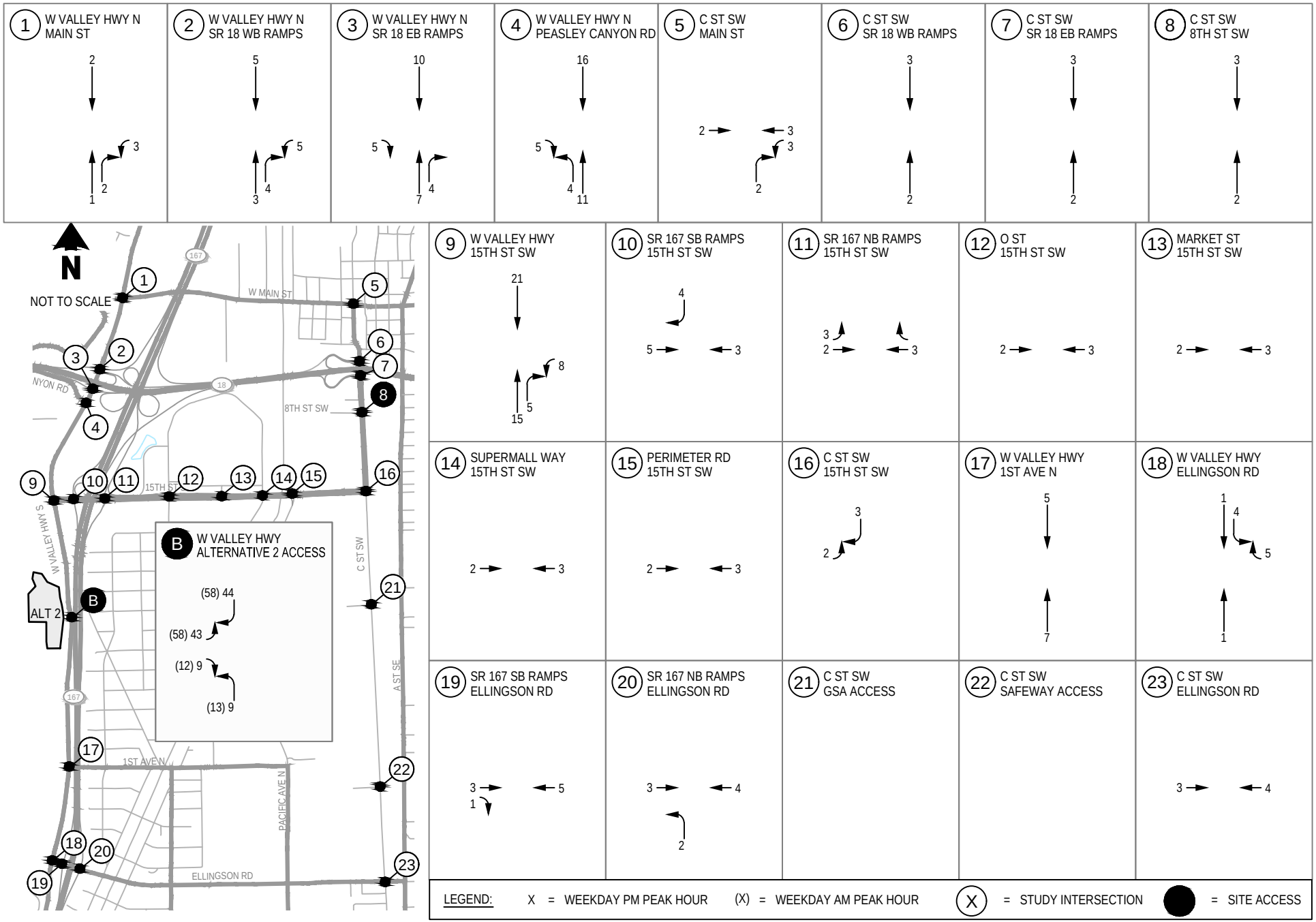
Alternative 2 - 2020 Saturday Peak Hour Trip Assignment

FIGURE **3.12-24**

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 2_Sat_2020 assign> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



Alternative 2 - 2040 Weekday Peak Hour Trip Assignment

FIGURE 3.12-25

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 2_Weekday_2040 assign> walkerc 05/21/15 09:57

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Alternative 2 - 2040 Saturday Peak Hour Trip Assignment

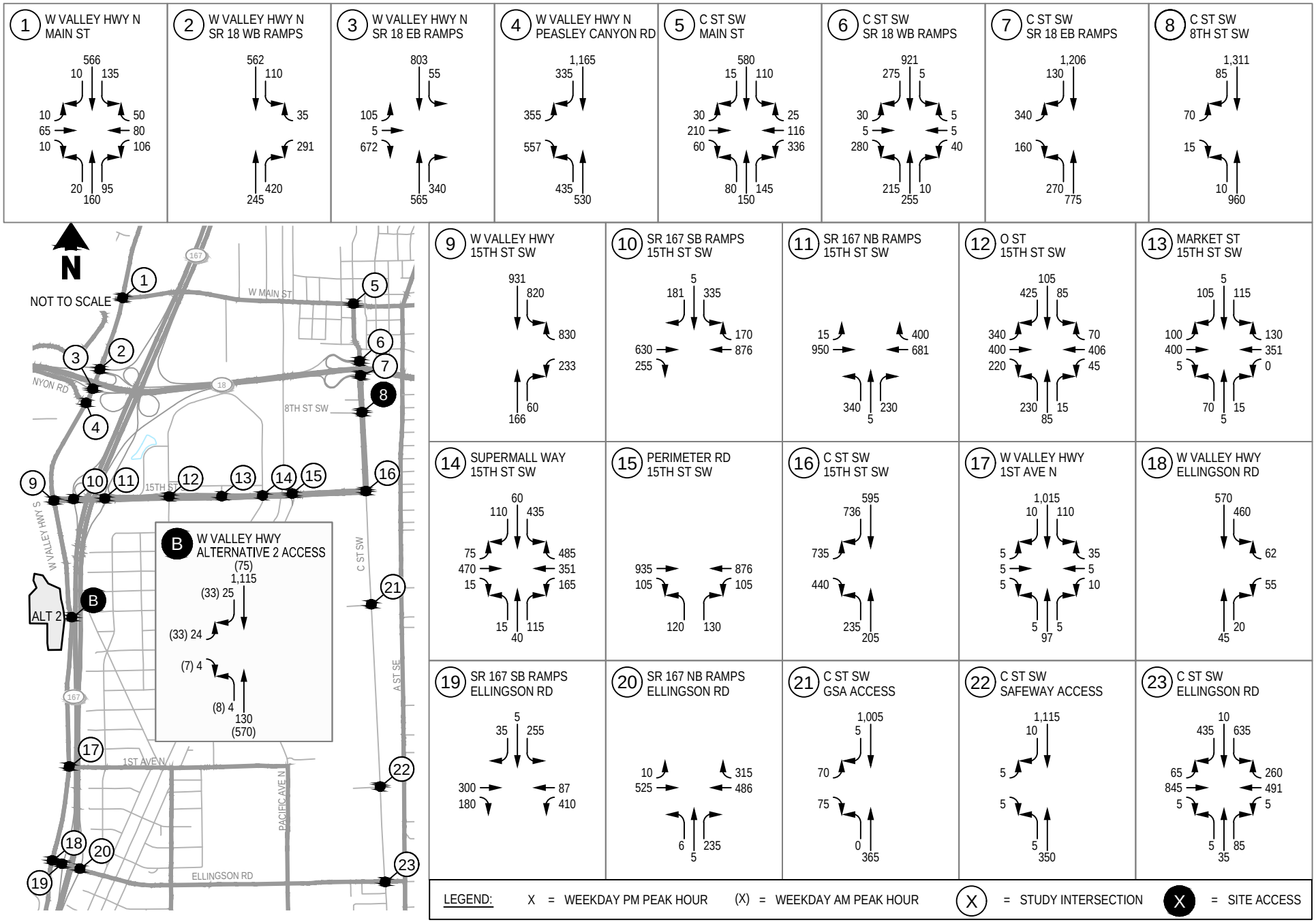
FIGURE

King County South Transfer Station

3.12-26

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 2_Sat_2040 assign> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



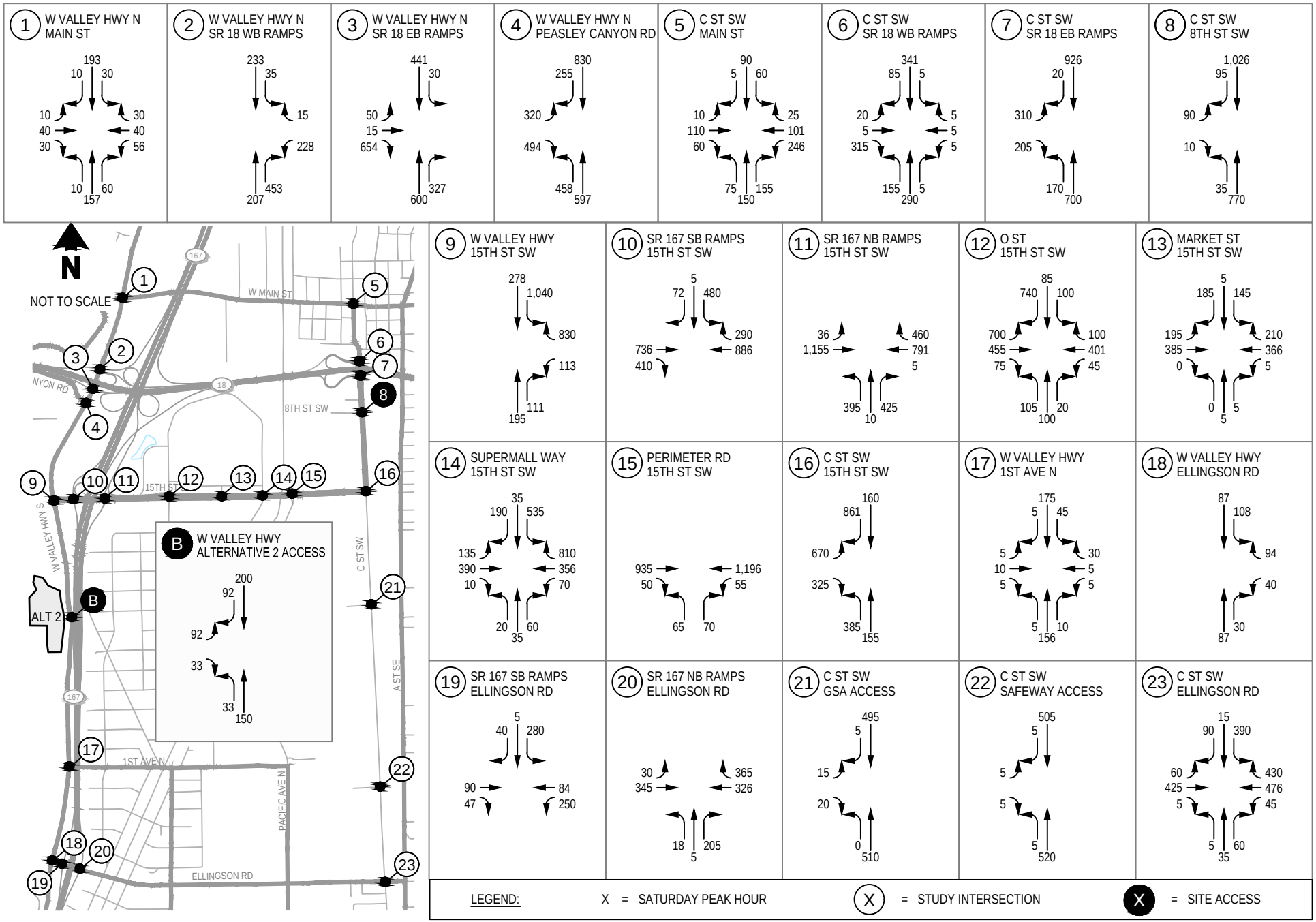
Alternative 2 - 2020 Weekday Peak Hour Traffic Volumes

FIGURE 3.12-27

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 2_Weekday_2020> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.

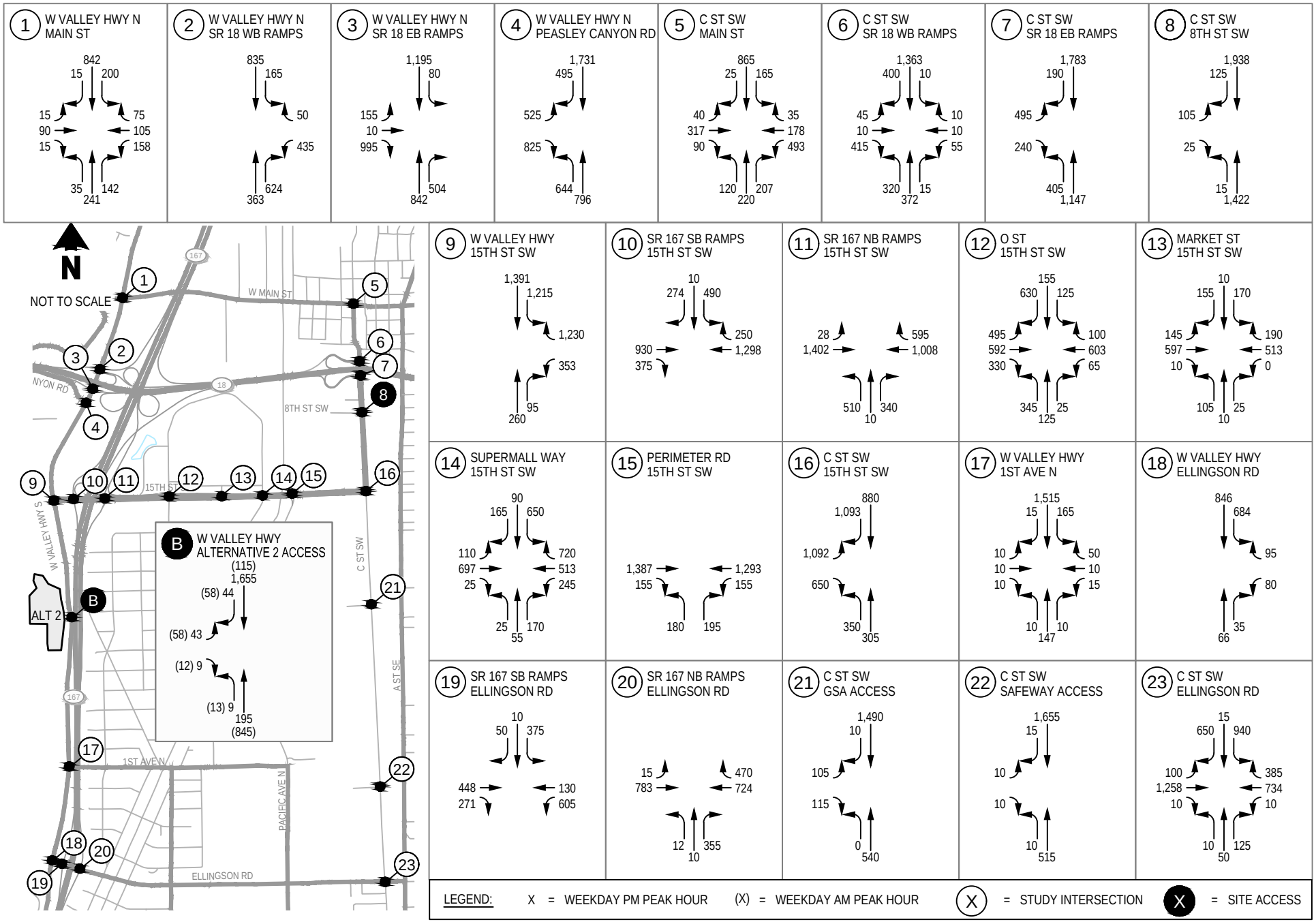


Alternative 2 - 2020 Saturday Peak Hour Traffic Volumes *King County South Transfer Station*

FIGURE **3.12-28**

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 2_Sat_2020> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



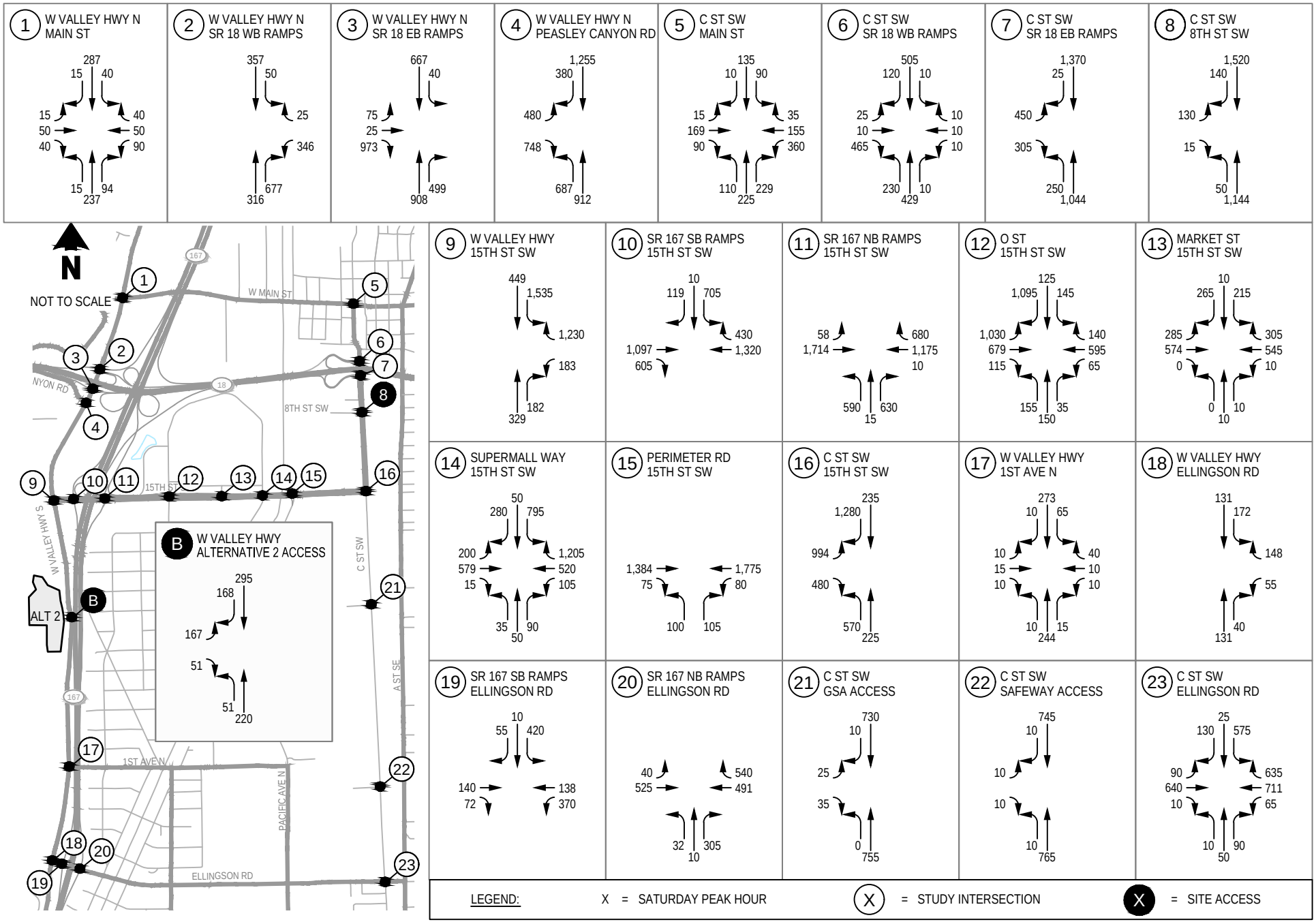
Alternative 2 - 2040 Weekday Peak Hour Traffic Volumes

FIGURE 3.12-29

King County South Transfer Station

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 2_Weekday_2040> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.



Alternative 2 - 2040 Saturday Peak Hour Traffic Volumes *King County South Transfer Station*

FIGURE **3.12-30**

\\srv-dfs-wa\MM_Projects\Projects\12\12014.00 - King County Recycling & Transfer Station\South Sound Sites\Graphics\12014_EIS graphics <Alt 2_Sat_2040> walkerc 05/21/15 09:57

transpogroup WHAT TRANSPORTATION CAN BE.