

Chelan Substation Property Planning

Board of Commission Update

Special Board Meeting
September 19, 2017

Today's Agenda

- Update on efforts to site North Shore substation north of Chelan-Manson transmission line and close to the load center
- New developments
- Options executed with two property owners
- Engineering and Cost Analysis on two sites
- Next Steps & Timeline
- No decisions required today
- Seeking guidance

Public Outreach

- Sept. 15:
 - Email to distribution list (160) announcing Sept. 19 meeting
 - Email to adjacent property owners announcing Sept. 18 & 19 meetings
 - Calls to adjacent property owners
 - Calls to active focus group members
- Sept. 18 - Meeting with focus group and adjacent property owners
- Sept. 25 – Chelan focus group meeting:
 - Seek guidance on possible community meeting and outreach next steps

Options Overview

- Options secured from 2 property owners covering 3 areas
 - Hellyer option site off Boyd Road, 2.3 miles from intersection with SR150
 - Henderson option #7 site off Henderson Road
 - Included in the Henderson option is a requirement to purchase his property near Stehekin Way and Crest Drive
- The District is only evaluating the Boyd Road and Henderson #7 sites for a future substation
- Options are valid through November
- Immediate goal is to select the best site to begin the next phase of substation siting
- If feasible, staff may recommend purchasing both options in support of long-range planning

North Shore Chelan Substation



Legend

- Transmission (Yellow dashed line)
- Wapato (Yellow solid line)
- North Load Center Focus (Orange oval)
- City Limits (Pink shaded area)

1 in = 0.12 miles

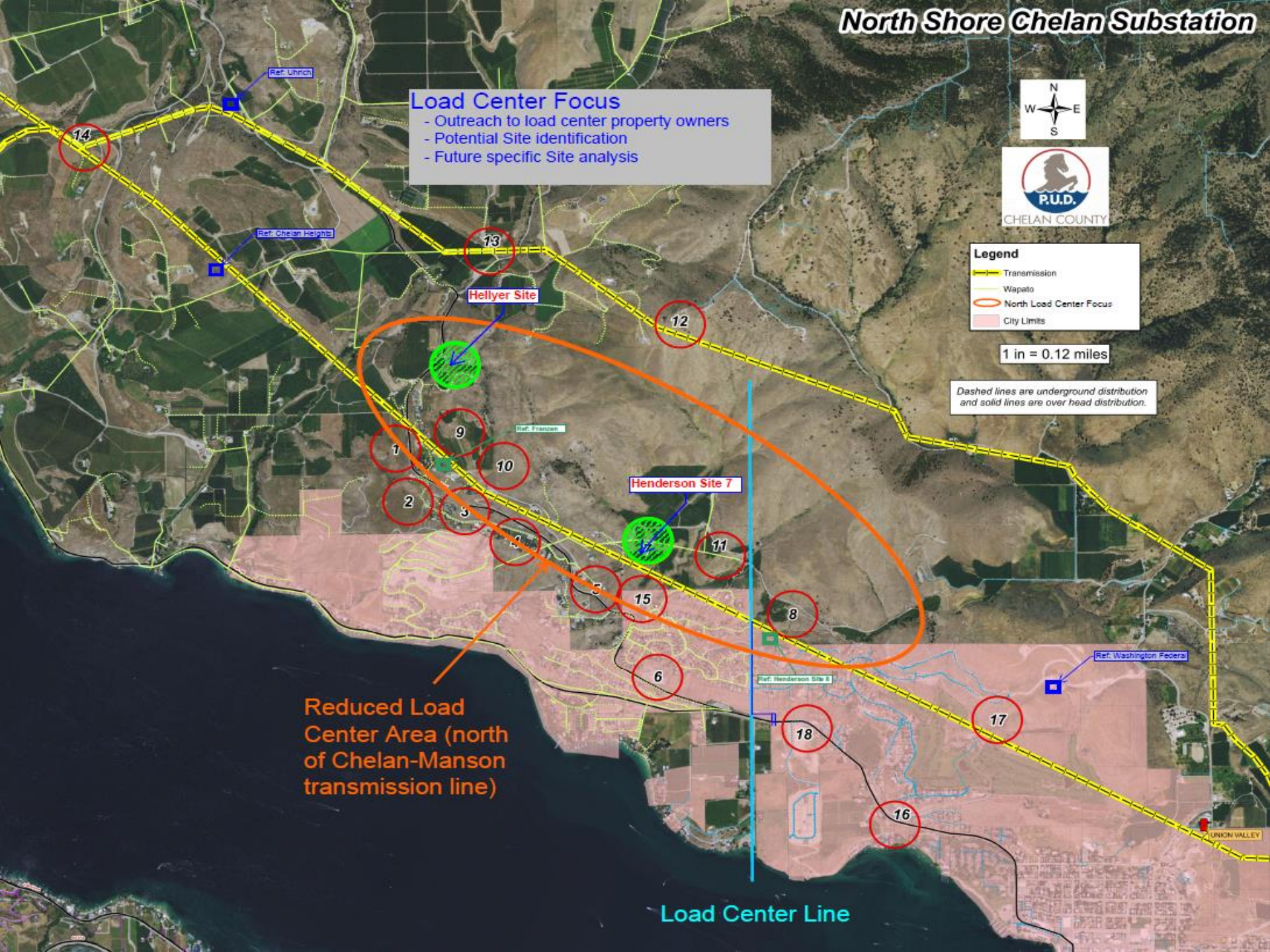
Dashed lines are underground distribution and solid lines are over head distribution.

Load Center Focus

- Outreach to load center property owners
- Potential Site identification
- Future specific Site analysis

Reduced Load Center Area (north of Chelan-Manson transmission line)

Load Center Line



Boyd Road Substation
 - Proposed Feeder Circuit Routes
 - Visual & Easement Impacts
 - T&D Distances
 - Preliminary Cost Estimates



Legend

- Alternative Trans Route
- Circuit Tie In
- Existing Dist OH
- Existing Distribution UG
- Feeder Route
- Hellyer Substation Site
- Primary Trans Route
- Transmission Tie In

T&D Distances:

Trans:	0.6 mi
Dist OH:	0.7 mi
Dist UG:	2.2 mi
Total T&D:	3.5 mi

Visual Impacts:

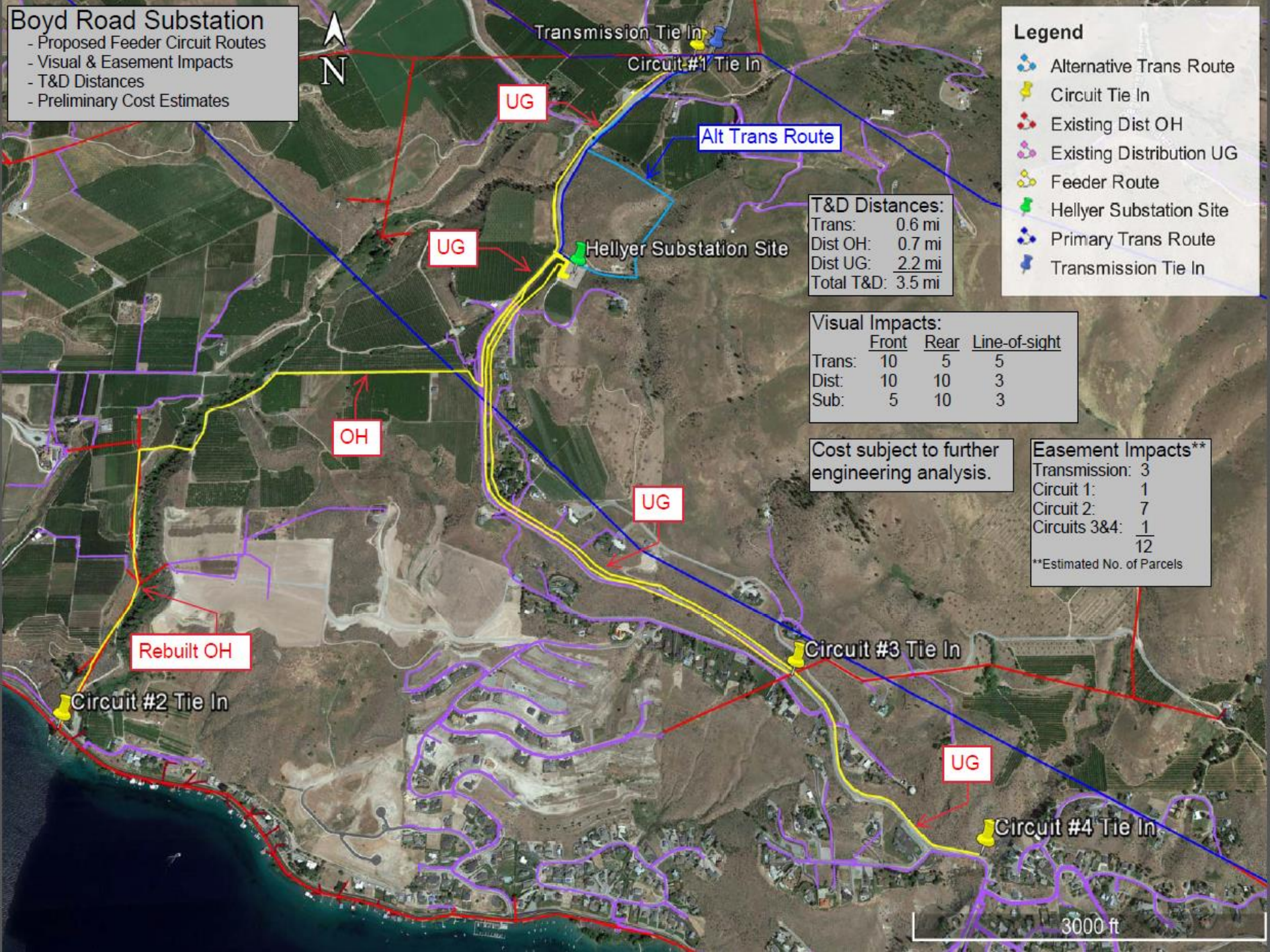
	Front	Rear	Line-of-sight
Trans:	10	5	5
Dist:	10	10	3
Sub:	5	10	3

Cost subject to further engineering analysis.

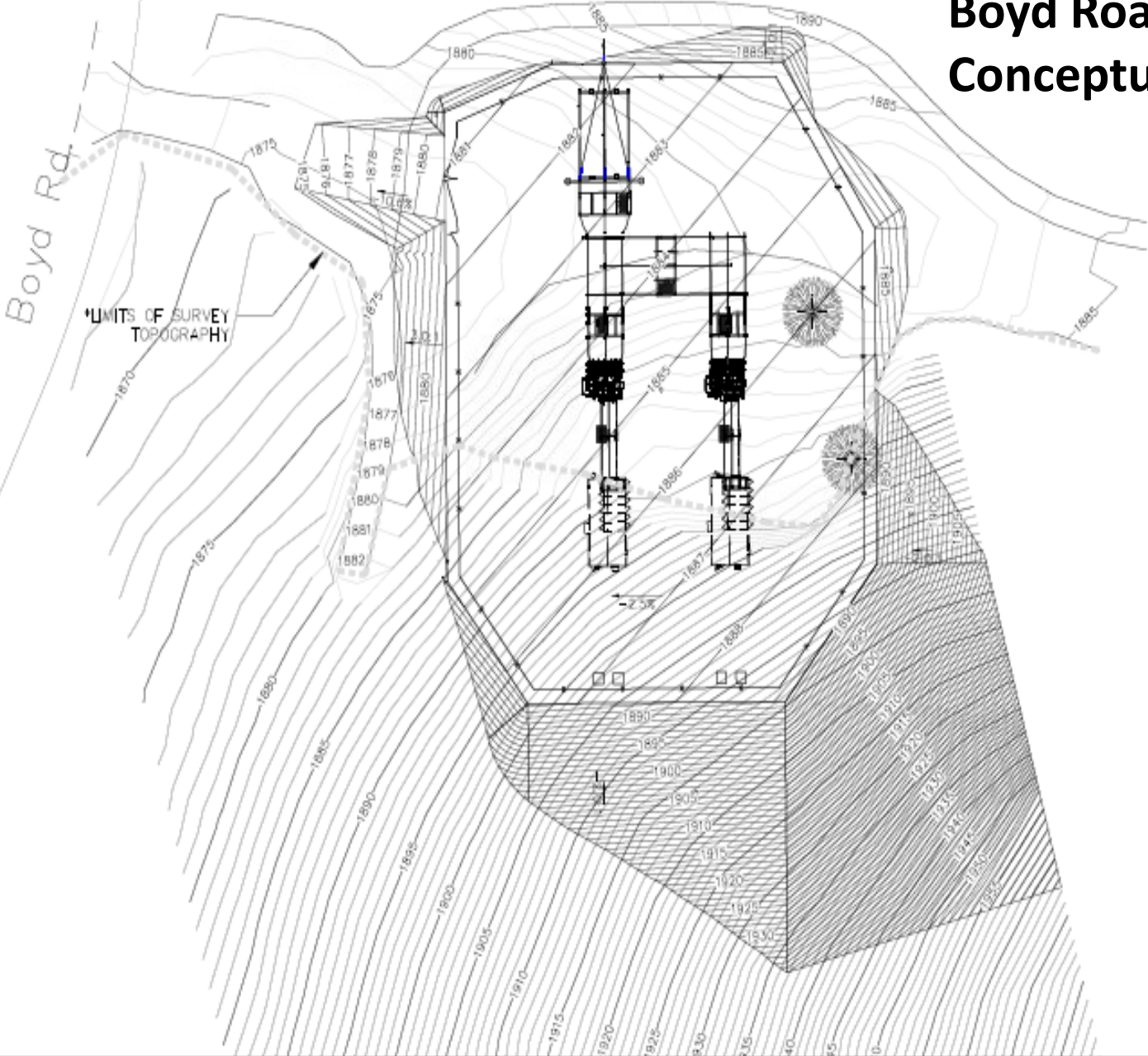
Easement Impacts**

Transmission:	3
Circuit 1:	1
Circuit 2:	7
Circuits 3&4:	1
Total:	12

**Estimated No. of Parcels



Boyd Road Site Conceptual Grading



ESTIMATE OF QUANTITIES

GRAVEL	12,000 CY
BASE	5,000 CY
PAVEMENT	8,000 CY
ASPHALT CONCRETE	700 CY
GRAVEL FOR SURFING	400 CY
TOTAL	23,100 CY

NOTE: THIS ESTIMATE IS BASED ON THE ASSUMPTIONS LISTED ON SHEET 4 OF THIS SET OF PLANS. THE ACTUAL QUANTITIES WILL BE DETERMINED BY THE CONTRACTOR.

CONCEPTUAL

SCALE 1" = 40'	NO. OF SHEETS 1 OF 4	SURVEY SCALE 1" = 40'	NO. OF SHEETS 1 OF 4
REV. DATE	DESCRIPTION	REV. DATE	DESCRIPTION

**PUBLIC UTILITY DISTRICT NO. 1
OF CHELAN COUNTY**

**HELLYER SITE
GRADING PLAN VIEW**

SHEET 1 OF 1
REVISION 4
DATE 02/21/17
DWG

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Boyd Road Site Existing



Boyd Road Site Rendering



Boyd Road Site
Proposed transmission line route existing view



Boyd Road Site

Proposed transmission line route rendering



Henderson Site 7 Substation

- Proposed Feeder Circuit Routes
- Visual & Easement Impacts
- T&D Distances
- Preliminary Cost Estimates



Legend

- Circuit Tie In
- Existing Dist OH
- Existing Dist UG
- Existing Transmission
- Feeder Route
- Henderson Substation Site
- New Transmission
- Transmission Tie In

Circuit #2 Tie In

UG

Circuit #1 Tie In

UG

OH

UG

Henderson Substation Site

OH

UG

UG

Circuit #3 & #4 Tie In

T&D Distances:

Trans:	0.1 mi
Dist OH:	0.4 mi
Dist UG:	1.7 mi
Total T&D:	2.3 mi

Visual Impacts:

	Front	Rear	Line-of-sight
Trans:	5	5	0
Dist:	5	10	0
Sub:	5	5	0

Cost subject to further engineering analysis.

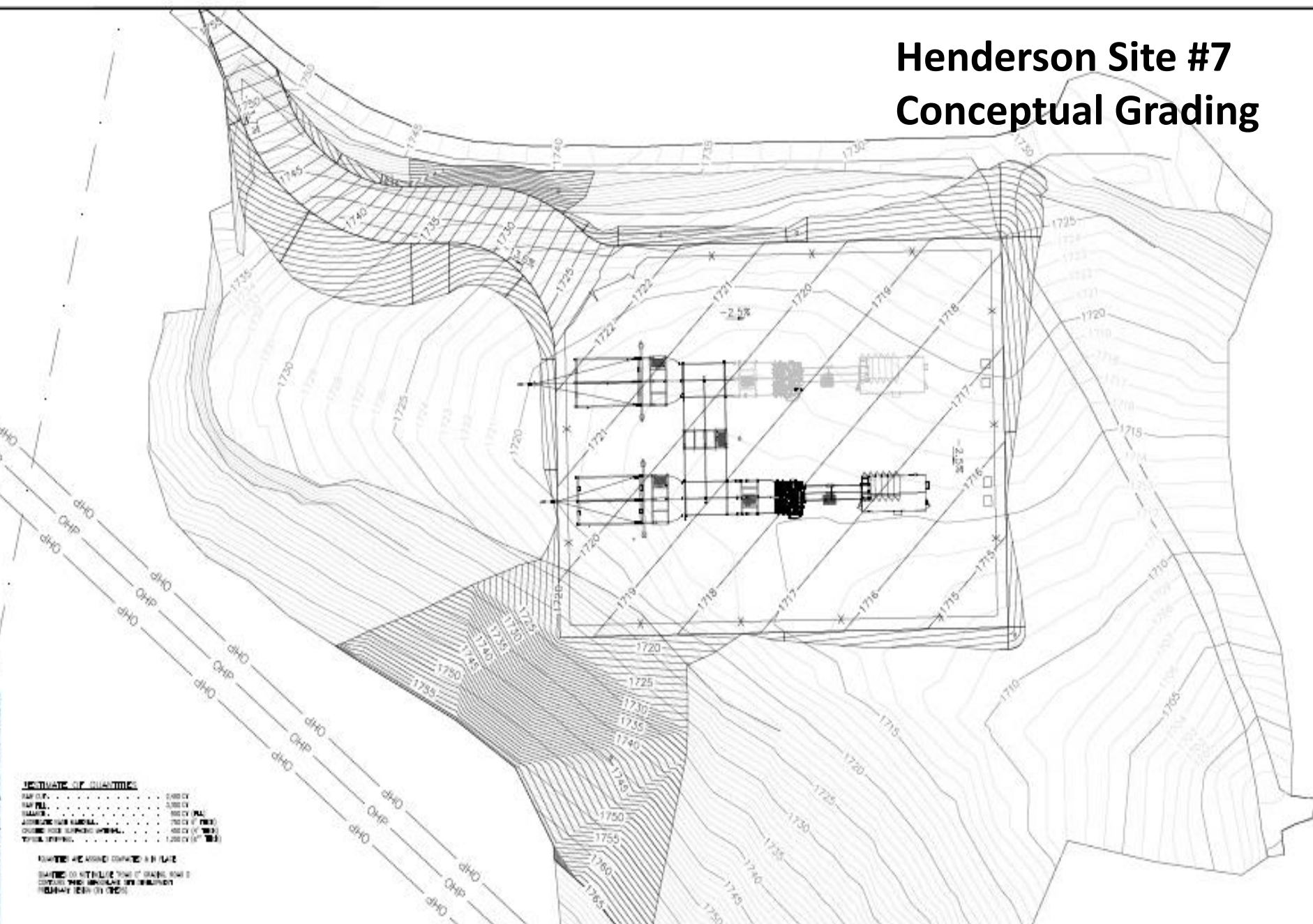
Easement Impacts*

Circuit 1:	4
Circuit 2:	2
Circuits 3&4:	$\frac{2}{8}$

*Estimated No. of Parcels



Henderson Site #7 Conceptual Grading



ESTIMATE OF QUANTITIES

PAV. (C)	2,000 CY
PAV. (S)	3,000 CY
GRAVEL	100,000 CY
ADJUSTED SAND	700 CY (10%)
CONCRETE FOR PAVED DRIVE	400 CY (10%)
TOTAL SPILL	1,000 CY (10%)

NOTES: ALL SHOWN CONFORM TO PLAN
 SHOWN TO INDICATE TYPE OF GRADE AND TO
 CONTROL FLOOD DAMAGE AND PREVENT
 EROSION (SEE 01/10/02)

SCALE 1" = 40'	DATE OF PLAN 01/10/02	PROJECT NAME HENDERSON	DATE OF SHEET 01/10/02	BY JL	CHK JL
4 01/10/02		FIELD FOR CONCEPTUAL DESIGN		88	
REV	DATE	DESCRIPTION	BY	CHK	APP

**PUBLIC UTILITY DISTRICT NO. 1
OF CHELAN COUNTY**

WILSON, BARBOTT

HENDERSON SITE
CONCEPTUAL PLAN

SHEET 1 OF 1
DATE 01/10/02
DWG

Henderson Site #7 Existing



Henderson Site #7 Rendering



Next Steps

- Sept. 25 – Chelan focus group meeting:
 - Seek guidance on possible community meeting and outreach next steps
- Sept. – seeking public input
- Sept. – continue feasibility analysis
- Oct. – present recommendation to PUD Commissioners
- Oct.-Nov. – decision on path forward
- Q4 2017 – begin major equipment purchases
- 2018 – Planning, permitting and engineering
- 2019-2020 – Construction and energization

Questions?