

RECEIVED
SPOKANE COUNTY

AUG 13 2009

BIOLOGY SOIL & WATER, INC.

3102 N. Girard Road, Spokane Valley, WA 99212-1529
BLDG. & CODE ENFORCEMENT

Jessica Carpenter
Spokane County
1026 West Broadway Avenue
Spokane, WA 99260

August 10, 2009

Re: Wetland Update Report for the Pacific Northwest Tech Park

Greetings Jessica Carpenter:

Vandervert Construction retained Biology Soil & Water, Inc. to delineate and rate wetlands located at the Pacific Northwest Tech Park development site located east of Airway Heights in the Northwest 1/4 of Section 29, T25N, R42E in Spokane County, WA. James A. Carley, Professional Wetland Scientist and Certified Professional Soil Scientist, and Larry Dawes, Wetlands Biologist investigated the site on May 22-23, 2001. Several Category 3 vernal type wetlands were delineated on the site. Subsequent to delineation, the wetland and riparian area boundary flags were reviewed, adjusted, and approved by Washington Department of Ecology wetlands biologist Chris Merker on June 15, 2001. The DOE approved boundary flags were surveyed and plotted on a map (Figure 1). Part of the site has been developed.

In July 2009, Danielle Mullins, DCI Engineers, contacted the undersigned regarding the addition of Lot 1 Block 1 to the Preliminary Binding Site Plan. BSW was asked to investigate the site and determine if Lot 1 Block 1 was encumbered by wetlands or wetland buffers. BSW investigated the site on July 22 and determined that the closest wetland is well over 300 from Lot 1 Block 1 at its closest point. The undersigned met with John Pederson and Jessica Carpenter at Spokane County on July 30, 2009 to discuss changes to the site plan. Spokane County requested a Wetland Update Report that evaluated Wetlands #6 and #7 (Figure 1) under the Critical Areas Ordinance as revised in 2008. BSW returned to the site on August 2, 2009 to apply the current regulations to the site.

Background Information

The 2001 BSW wetland delineation was completed using criteria in the *1987 Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. The methodology in the 1987 Federal manual recommended for use by the US Army Corp of Engineers at that time, states that all three wetland criteria (vegetation, soils, and hydrology) must be met for a site to be classified as a wetland.

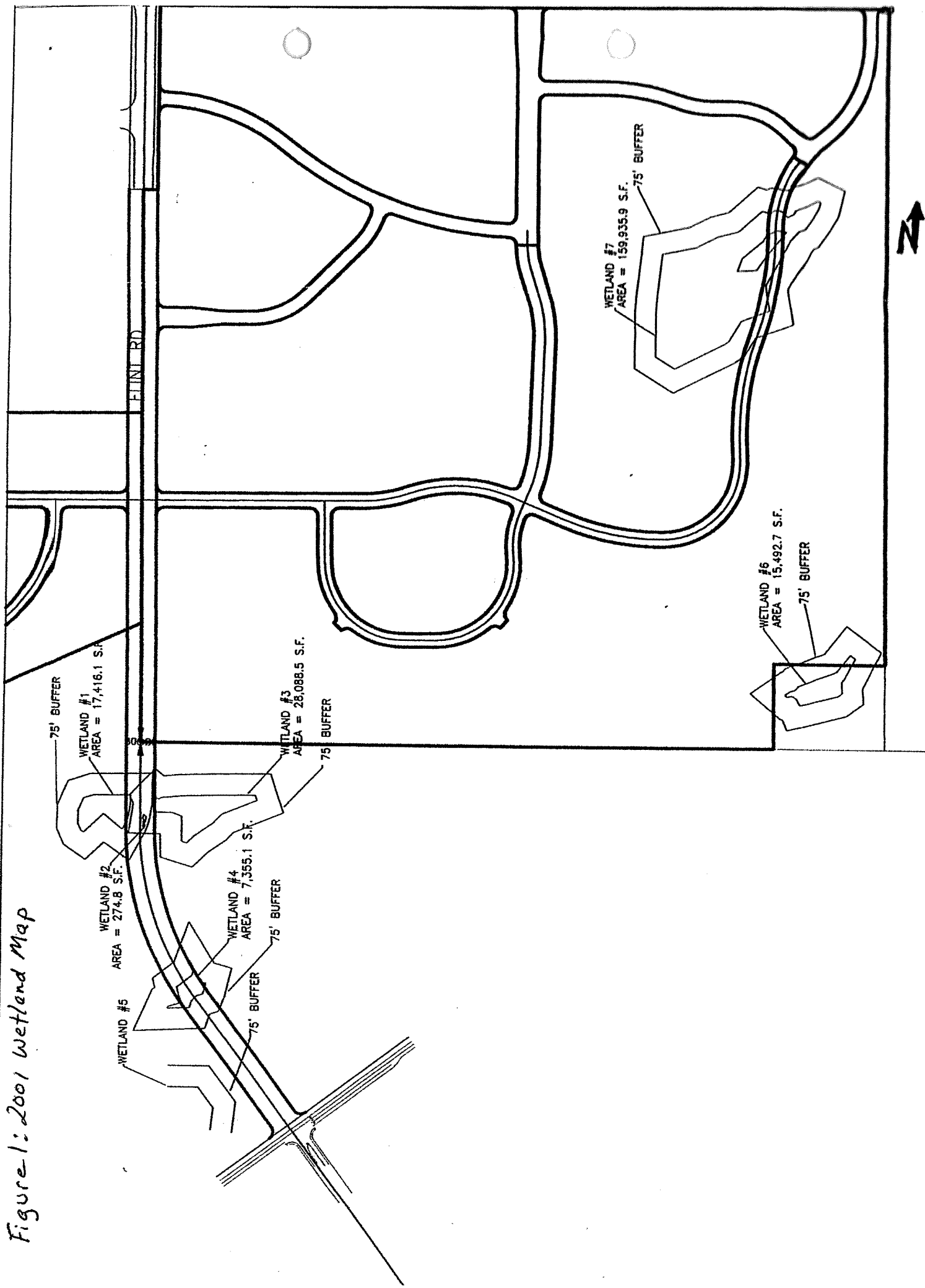
phone (509)-327-2684

fax (509)-327-2684

email bswinc@icehouse.net



Figure 1: 2001 Wetland Map



Although a new wetland rating system and new buffer widths were adopted when the County updated its ordinances, the revised CAO does not have any effect on the wetland/upland boundary delineation completed in 2001. The Washington State Wetlands Identification and Delineation Manual (WAC 173-22-080) and US Army Corps of Engineers (COE) 1987 Wetland Delineation Manual with COE Arid West Supplement must be used to identify a wetland boundary in 2009. According to DOE in a quote from *Wetlands in Washington State-Volume 2: Guidance for Protecting and Managing Wetlands*, “the *Washington State Wetlands Identification and Delineation Manual*” “is used to identify the actual boundary of a wetland. The manual is based on the 1987 Corps of Engineers wetlands delineation manual and incorporates changes made by the Corps since 1987. Since the Washington State Manual and the Corps manual rely on the same criteria and indicators for hydrology, soils, and vegetation, **proper use of either manual should result in the same wetland boundary.**”

2009 Critical Areas Investigation

BSW reviewed the 2001 wetland report and field data sheets describing the wetland, soils, vegetation, and hydrologic conditions at the site. BSW evaluated the site in 2009 using criteria in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region as prescribed in the Spokane County ordinances. The wetland boundary occurs in the same location regardless of which manual is used as a methodology for delineation. Since the wetland boundary was delineated in 2001 there have been no changes to the wetland soils, vegetation or hydrology so the 2001 wetland boundary delineation is still accurate. The surveyed wetland boundary appears on the attached site plan map that also shows the buffer extending landward from the wetland/upland boundary.

Wetland Category and Buffer Width Update

The Spokane County Critical Areas Ordinance was revised in 2008. The revisions include the new DOE wetland rating system and new buffer widths for each wetland category. In 2009, BSW applied the new DOE rating system to the subject wetlands. The old DOE wetland rating system that was applied to the wetlands in 2001 categorized both wetlands as Category 3 Wetlands with a buffer width of 75 feet. When the new DOE rating system is applied, the wetlands are still rated as Category 3. Wetlands #6 (Figure 2) and #7 (Figure 3) have a total score for functions of 38 and 35 points respectively so the wetlands are still rated as Category 3 Wetlands (Appendix 1: Wetland Rating Forms).

The revised CAO states that wetland buffer widths may be established by using any one of three criteria defined in the CAO. Alternative 3, based on intensity of impacts and wetland functions was used by BSW to define a buffer width for the wetlands in 2009. The proposed commercial development activity would be classified as High Intensity land use. The score for habitat functions for Wetlands #6 and #7 are 17 and 18 points respectively. The revised CAO prescribes an 80-foot buffer for Category 3 Wetlands where high intensity land use (commercial development) is proposed if habitat scores are less than 20 points. The habitat scores of both wetlands are less than 20 points so the buffer width is 80 feet. The site plan map (Figures #2 & #3) has been revised to show the new 80-foot buffer widths assigned to Wetlands #6 and #7.

Figure 2

PRELIMINARY BINDING SITE PLAN

LOCATED IN THE NORTHWEST 1/4 OF SECTION 29, T25N, R42E, W.M.
SPOKANE COUNTY, WASHINGTON

AUDITOR'S CERTIFICATE
FILED FOR RECORD THIS _____ DAY OF _____, 2007
AT _____ IN BOOK _____ PAGE _____ OF BINDING SITE PLANS, AT
THE REQUEST OF CENTURY SURVEY, INC.

SPOKANE COUNTY AUDITOR OR DEPUTY



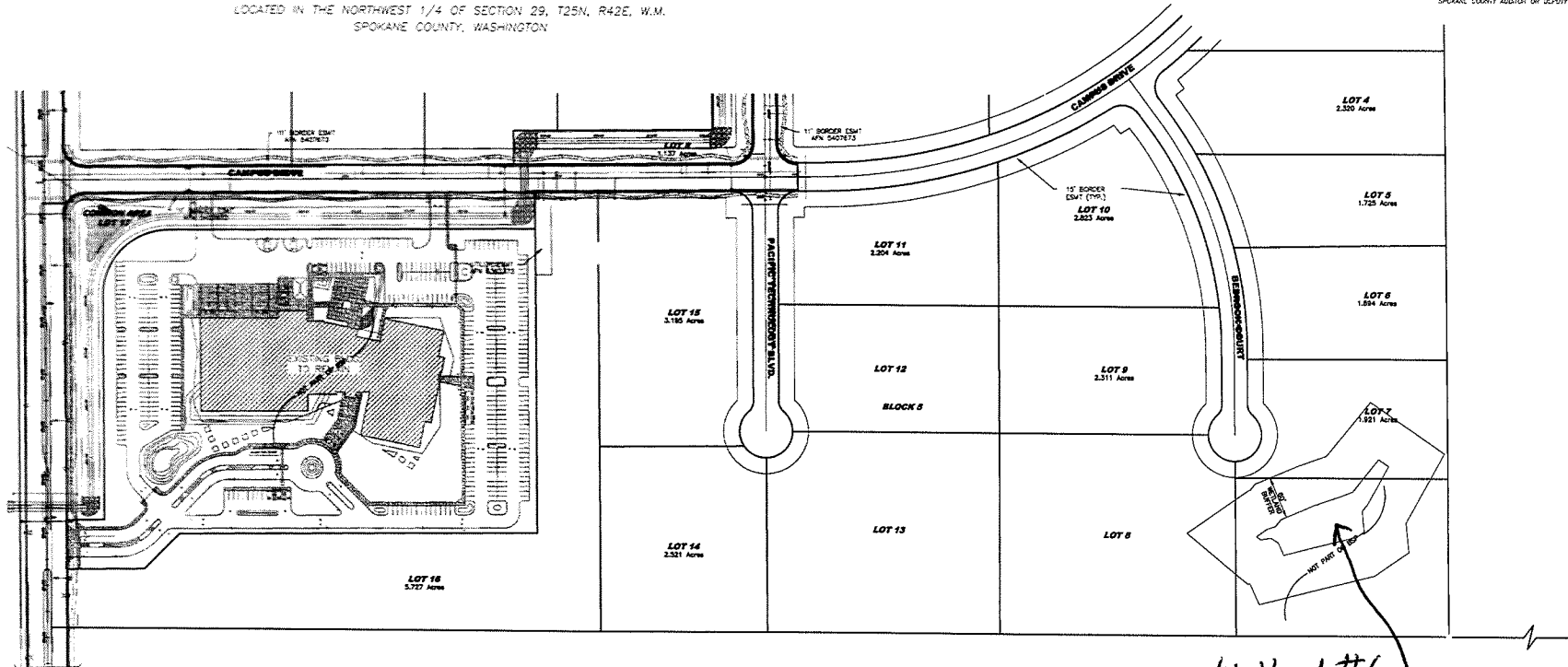
SURVEYOR'S CERTIFICATE
I, JEFFREY J. MACLENNAN, MEASUREMENT PROFESSIONAL
LAND SURVEYOR NUMBER 24150, CERTIFY THAT THIS
SURVEY WAS MADE BY ME OR UNDER MY DIRECT
SUPERVISION AND IN ACCORDANCE WITH THE SPOKANE
COUNTY SUBMISSION REQUIREMENTS.

ACCURACY STATEMENT
SURVEY PERFORMED WITH A TRIMBLE
SERIES 570 TOTAL STATION WITH
ACCURACY WITH ITRF 95 - 100 - 030.
BASIS OF BEARINGS
ASSUMED 500' PRODUCE ALONG THE
EAST LINE OF SECTION 29, T25N, R42E, W.M.

SURVEY INFORMATION
NORTHWEST QUARTER
SECTION 29
TOWNSHIP 25 NORTH
RANGE 42 EAST, W.M.
SPOKANE COUNTY, WASHINGTON



DRAWING INFORMATION
CLIENT: DC ENGINEERS
JOB NUMBER: 00011
DRAWING NAME: 00011-RSP
DRAWN BY: APZ
CHECKED BY: AMM
FIELD BOOK NO: CS 0237
DATE OF FIELD WORK: MARCH 2009



SURVEY REFERENCES

- (R1) 40022 MONUMENTATION MAP SHEETS 3 AND 4, 2004 AND SCALES ON 08/29/01 FOR SDC INFORMATION.
- (R2) RECORD OF SURVEY BOOK 114, PAGE 39
- (R3) RECORD OF SURVEY BOOK 47, PAGE 98
- (R4) RECORD OF SURVEY BOOK 34, PAGE 65

SURVEY NOTES

PREVIOUS SURVEYS AND RIGHT OF WAY DESIGNATION FOR THIS AREA BEING POINT OF BEGINNING OF SCALD RIVER P.S. IS CENTERED ON NORTHERLY SECTION LINE 24 NORTH, CORNERING ON STATE ROAD 2 SE NORTHERLY OF NORTHERLY SECTION LINE. PREVIOUS RIGHT OF WAY DESIGNATION FOR SCALD RIVER P.S. IS CENTERED ON NORTHERLY SECTION LINE. PREVIOUS RIGHT OF WAY DESIGNATION FOR SCALD RIVER P.S. IS CENTERED ON NORTHERLY SECTION LINE. PREVIOUS RIGHT OF WAY DESIGNATION FOR SCALD RIVER P.S. IS CENTERED ON NORTHERLY SECTION LINE.

LINE	LENGTH	BEARING
L1	11.85	S02°14'37"
L2	68.66	S85°43'13"
L3	33.89	S47°00'07"
L4	13.19	S47°00'07"
L5	1.00	S04°28'17"E
L6	11.80	S85°20'37"
L7	68.66	S85°43'13"
L8	33.89	S47°00'07"
L9	13.19	S47°00'07"
L10	27.28	S32°54'32"
L11	44.2	N00°00'00"
L12	61.73	N00°00'00"
L13	75.00	S00°00'00"
L14	66.73	N00°00'00"
L15	75.00	S00°00'00"
L16	61.73	N00°00'00"
L17	44.2	N00°00'00"

CURVE	LENGTH	BEARING	CHORD	CHORD BEARING	
C1	70.85	S33.00	122.11	63.75	S44°37'00"
C2	43.91	S72.00	100.00	50.00	S45°00'00"
C3	206.31	S75.00	370.10	201.43	N00°00'00"
C4	44.18	S75.00	100.00	50.00	S00°00'00"
C5	43.90	S72.00	100.00	50.00	S45°00'00"
C6	70.85	S33.00	122.11	70.85	N00°00'00"
C7	206.31	S75.00	370.10	201.43	N00°00'00"
C8	108.44	S75.00	185.05	100.71	N00°00'00"
C9	43.74	S75.00	100.00	50.00	N00°00'00"
C10	108.44	S75.00	185.05	100.71	N00°00'00"
C11	43.74	S75.00	100.00	50.00	N00°00'00"
C12	207.64	S75.00	370.10	201.43	N00°00'00"
C13	70.85	S33.00	122.11	70.85	N00°00'00"
C14	43.91	S72.00	100.00	50.00	S45°00'00"
C15	206.31	S75.00	370.10	201.43	N00°00'00"
C16	43.91	S72.00	100.00	50.00	S45°00'00"
C17	128.11	S38.00	175.00	109.94	S44°31'18"
C18	43.91	S72.00	100.00	50.00	S45°00'00"
C19	1.25	S43.00	2.00	1.25	S00°00'00"
C20	70.85	S33.00	122.11	70.85	N00°00'00"

CURVE	LENGTH	BEARING	CHORD	CHORD BEARING	
C21	43.18	S72.00	100.00	50.00	N00°00'00"
C22	61.74	S72.00	100.00	61.74	N00°00'00"
C23	61.74	S72.00	100.00	61.74	S00°00'00"
C24	43.18	S72.00	100.00	50.00	S00°00'00"
C25	43.18	S72.00	100.00	50.00	S45°00'00"
C26	61.74	S72.00	100.00	61.74	S00°00'00"
C27	61.74	S72.00	100.00	61.74	S45°00'00"
C28	43.18	S72.00	100.00	50.00	S45°00'00"
C29	61.74	S72.00	100.00	61.74	S00°00'00"
C30	61.74	S72.00	100.00	61.74	S45°00'00"
C31	43.18	S72.00	100.00	50.00	S45°00'00"
C32	61.74	S72.00	100.00	61.74	S00°00'00"
C33	61.74	S72.00	100.00	61.74	S45°00'00"
C34	43.18	S72.00	100.00	50.00	S45°00'00"
C35	61.74	S72.00	100.00	61.74	S00°00'00"
C36	61.74	S72.00	100.00	61.74	S45°00'00"
C37	43.18	S72.00	100.00	50.00	S45°00'00"
C38	61.74	S72.00	100.00	61.74	S00°00'00"
C39	61.74	S72.00	100.00	61.74	S45°00'00"
C40	43.18	S72.00	100.00	50.00	S45°00'00"
C41	28.97	S43.00	50.00	28.97	S00°00'00"
C42	43.30	S72.00	100.00	43.30	S44°58'11"

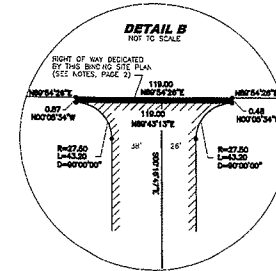
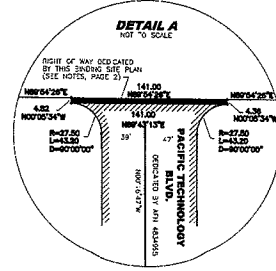


Figure 3

PRELIMINARY BINDING SITE PLAN

LOCATED IN THE NORTHWEST 1/4 OF SECTION 29, T25N, R42E, W.M.
SPOKANE COUNTY, WASHINGTON

AUDITOR'S CERTIFICATE
FILED FOR RECORD THIS _____ DAY OF _____, 2027
AT _____ IN BOOK _____ PAGE _____ OF BINDING SITE PLANS, AT
THE REQUEST OF CENTURY SURVEY, INC.

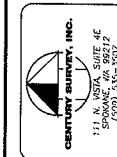
SPOKANE COUNTY AUDITOR OR DEPUTY



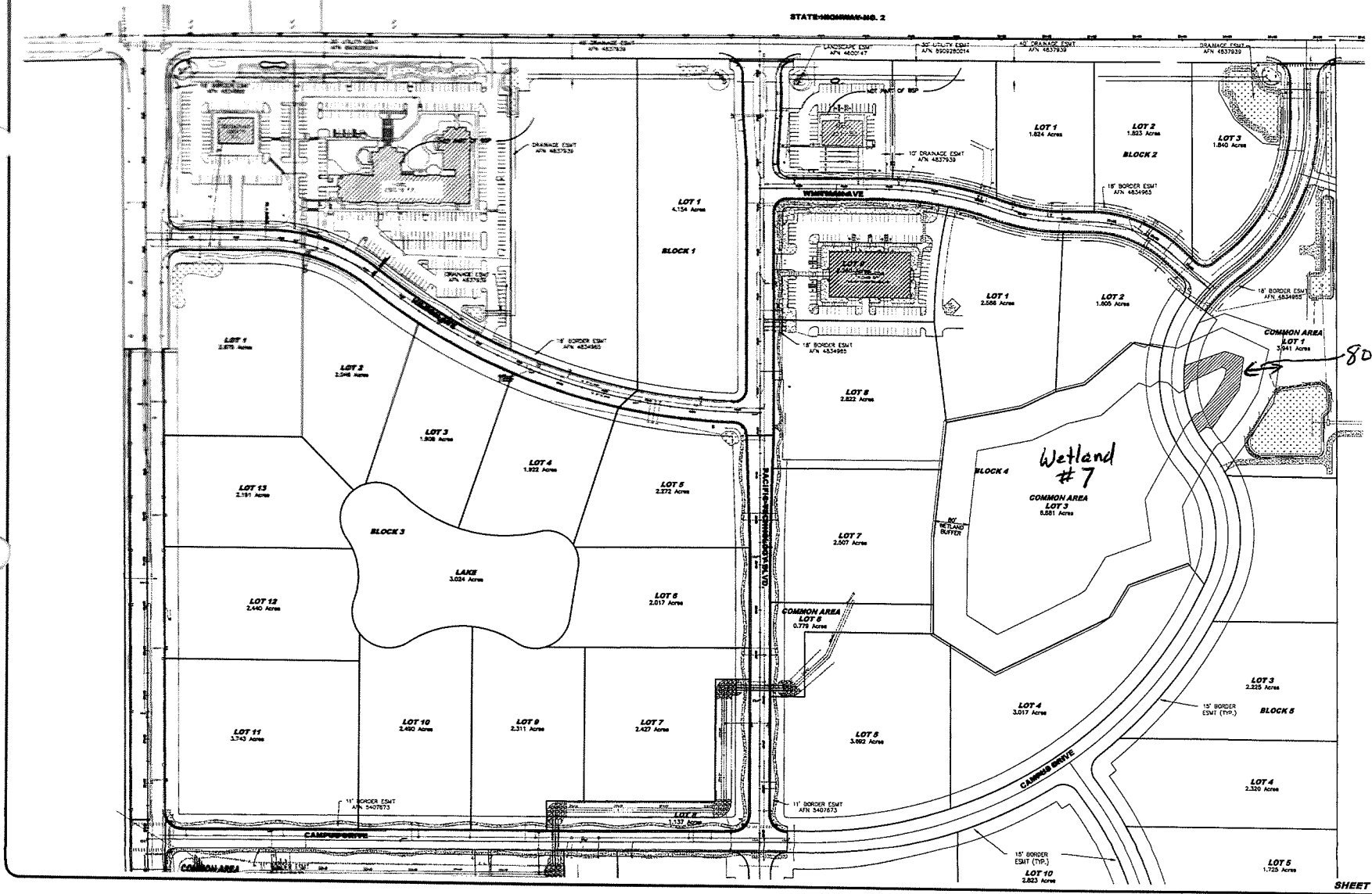
SURVEYOR CERTIFICATE
JEFFREY M. MACKLE, WASHINGTON PROFESSIONAL
LAND SURVEYOR NUMBER 24100, CERTIFY THAT THIS
SURVEY WAS CONDUCTED AND THIS SITE PLAN WAS
PREPARED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SPOKANE
COUNTY SUBDIVISION ORDINANCE.

ACCURACY STATEMENT
SURVEY PERFORMED WITH A TRIANGLE
SIGNAL, TRIPLET, 300' STAFF, AND
FIELD INSTRUMENTS, MEASURED IN
ACCORDANCE WITH WAC 232-20-090.
BASIS OF BEARINGS
MEASURED TO SPOKANE COUNTY RECORDS
ALONG THE BOUNDARIES OF SECTION 29, T25N, R42E, W.M.

SURVEY INFORMATION
NORTHWEST QUARTER
SECTION 29
TOWNSHIP 25 NORTH
RANGE 42 EAST, W.M.
SPOKANE COUNTY, WASHINGTON



DRAWING INFORMATION
CLIENT: DCI ENGINEERS
JOB NUMBER: 08011
DRAWING NAME: 08011-ISP
DRAWN BY: JPM
CHECKED BY: JPM
FIELD RECORD NO: 08011
DATE OF FIELD WORK: MARCH 2009



Wetland Mitigation Plan Update

The 2008 CAO revision also changed the mitigation ratios for wetlands. The 2001 mitigation plan stated that impacts to Wetland #7 would be mitigated at a replacement ratio of 1.5:1. A minimum area of 8090-ft² (0.186 acres) of new wetland was to be created to replace the total 5,393 ft² (0.124 acres) of wetland impact. The CAO as revised in 2008 states that the replacement ratio for a Category 3 Wetland impact is 2:1. Under the revised CAO a minimum 10,786-ft² area of new wetland will have to be created to compensate for the 5,393-ft² impact. The site plan map has been revised to reflect the larger mitigation area (Figure 3.) The hatched area in Figure 3 represents the minimum 10,786-ft² wetland creation area required under the 2008 CAO revision. Figure 3 also shows an 80-foot wide buffer attached to the 10,786-ft² wetland creation area.

The 2001 Wetland Mitigation Plan prescribed herbaceous seed plantings in the entire wetland and buffer of Wetland #7. The same species and planting densities will be applied to the new wetland creation and new buffer areas described above. The provisions for monitoring prescribed in the 2001 Mitigation Plan shall apply to the newly created wetland and buffer areas.

Conclusion

BSW evaluated the site in 2009 using criteria in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region as prescribed in the Spokane County ordinances. The wetland boundary occurs in the same location regardless of which manual is used as a methodology for delineation. The wetlands are still classified as Category 3 Wetlands. The buffer width has increased from 75 feet in 2001 to 80 feet in 2009. The wetland replacement ratio changed from 1.5:1 in 2001 to 2:1 in 2008 so the mitigation area was enlarged to accommodate that CAO revision.

Please accept this letter as a formal Wetland Report and Mitigation Plan Update. Please send a copy of the written decision and/or requests for additional information to the undersigned using the current contact information provided below. Thank you.

Respectfully submitted,



Larry Dawes, Principal Biologist
Biology Soil & Water, Inc.
3102 N. Girard Road
Spokane Valley, WA 99212-1529
Phone 509-327-2684
Email: bswinc@icehouse.net

Appendix #1

Wetland Rating Forms — Eastern Washington

Wetland name or number 6

WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Tech Park Wetland #6 Date of site visit: 8-2-09

Rated by Larry Dawes Trained by Ecology? Yes No Date of training 2008

SEC: 29 TWSHP: 25 RNGE: 42 Is S/T/R in Appendix D? Yes No

Map of wetland unit: Figure Estimated size

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I II III IV

Category I = Score ≥ 70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for "Water Quality" Functions

Score for Hydrologic Functions

Score for Habitat Functions

TOTAL score for functions

11
10
17
38

Category based on SPECIAL CHARACTERISTICS of wetland

I II III Does not Apply

Final Category (choose the "highest" category from above)

High Intensity land Use = 80 foot buffer

3

Summary of basic information about the wetland unit

Wetland Type	Wetland Class	
Vernal Pool	Depressional	<input checked="" type="checkbox"/>
Alkali	Riverine	<input type="checkbox"/>
Natural Heritage Wetland	Lake-fringe	<input type="checkbox"/>
Bog	Slope	<input type="checkbox"/>
Forest		<input type="checkbox"/>
None of the above	Check if unit has multiple HGM classes present	<input type="checkbox"/>

Wetland name or number 7

WETLAND RATING FORM – EASTERN WASHINGTON

Version 2 - Updated June 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Tech Park Wetland #7 Date of site visit: 8-2-09

Rated by Larry Dawes Trained by Ecology? Yes No Date of training 2008

SEC: 29 TWSHP: 25 RNGE: 42 Is S/T/R in Appendix D? Yes No

Map of wetland unit: Figure Estimated size

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I II III IV

Category I = Score \geq 70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for "Water Quality" Functions

Score for Hydrologic Functions

Score for Habitat Functions

TOTAL score for functions

9
8
18
35

Category based on SPECIAL CHARACTERISTICS of wetland

I II III Does not Apply

Final Category (choose the "highest" category from above)

High Intensity land Use = 80 foot buffer

3

Summary of basic information about the wetland unit

Wetland Type	Wetland Class	
Vernal Pool	Depressional	
Alkali	Riverine	
Natural Heritage Wetland	Lake-fringe	
Bog	Slope	<input checked="" type="checkbox"/>
Forest		
None of the above	Check if unit has multiple HGM classes present	