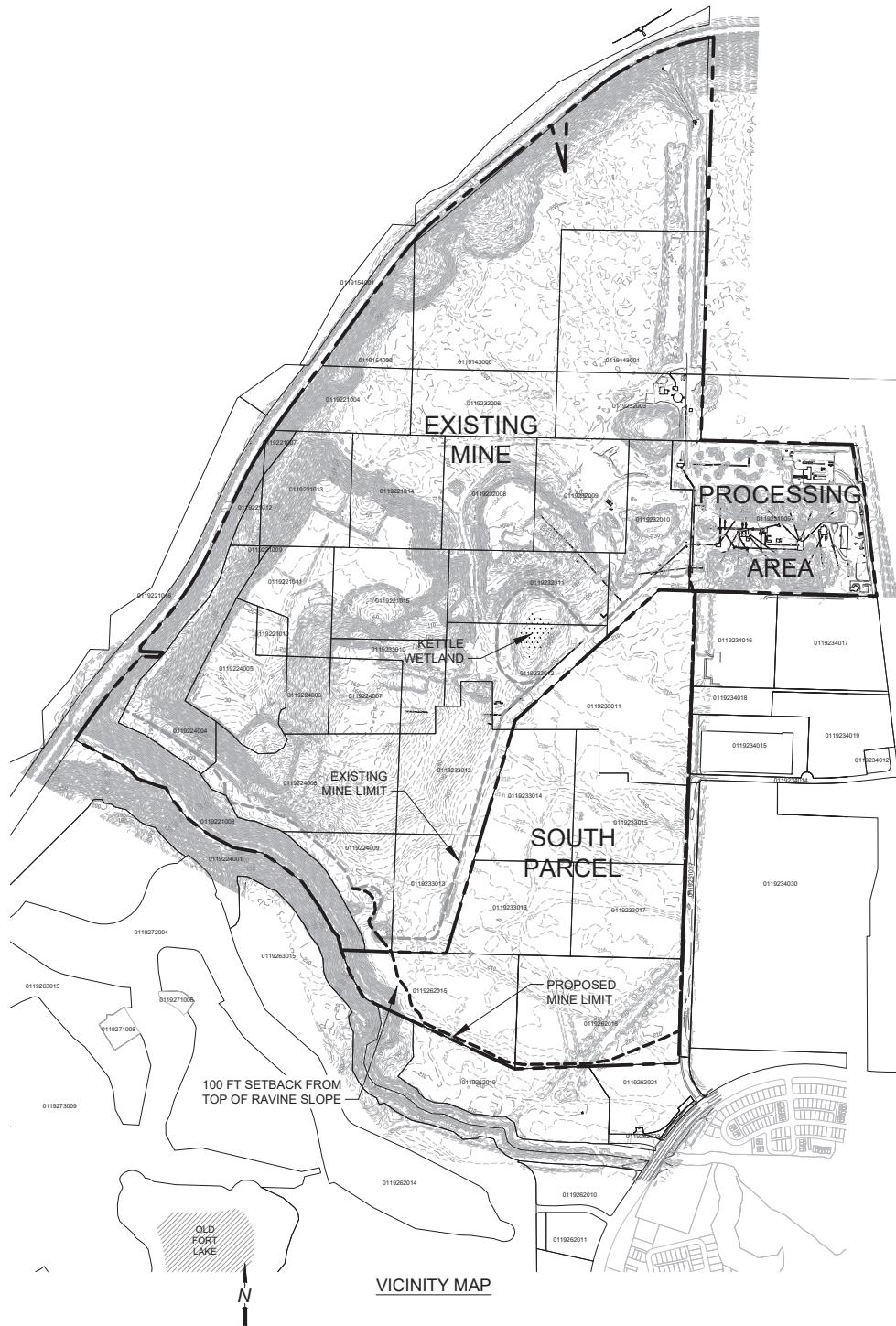


PIONEER AGGREGATES SOUTH PARCEL PROJECT

1 2 3 4 5 6



TAX ACCOUNT NUMBERS:

SOUTH PARCEL LEASE AREA:

0119233011
0119233014
0119233015
0119233016
0119233017
0119262015
0119262016

PROCESSING AREA:

0119231005
0119232003

EXISTING MINE LEASE AREA:

0119221007	0119224006
0119221008	0119224007
0119221009	0119224008
0119221010	0119224009
0119221011	0119232008
0119221012	0119232009
0119221013	0119232010
0119221014	0119232011
0119221015	0119232012
0119223013	0119233010
0119224004	0119233012
0119221005	

NORTH PARCEL:

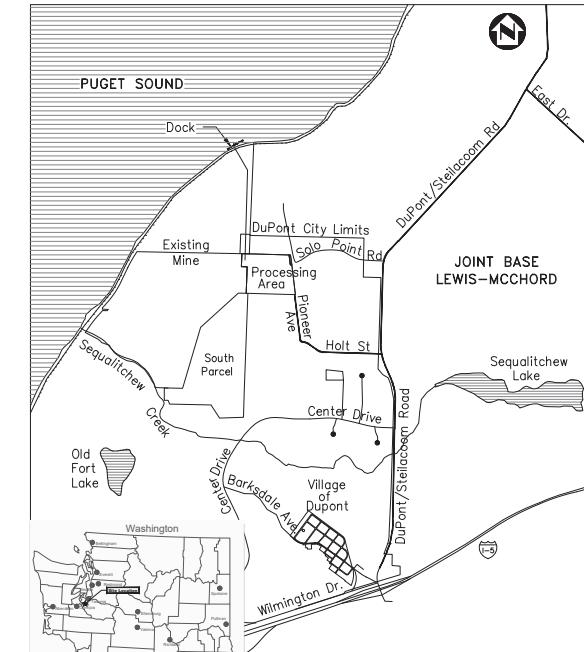
0119143000
0119143001
0119221004
0119232003
0119232006
0119154000

LEGAL DESCRIPTION OF 2006 ADDITION TO MINERAL RESOURCE OVERLAY AS MODIFIED IN 2018

THAT portion of Sections 23 and 26, Township 19 North, Range 1 East, W.M., City of DuPont, Pierce County, Washington, being more particularly described as follows:

BEGINNING at the southwest corner of said Section 23, as shown on that exempt segregation as depicted on Record of Survey recorded under Pierce County Recording No. 200609185006; THENCE 3 88°47'45" E, 500.26 feet; THENCE N 16°28'48" E, 2207.74 feet; THENCE N 47°49'56" E, 1770.29 feet; THENCE 3 88°24'40" E, 329.75 feet to the north-south centerline of said Section 23 as depicted on said exempt segregation; THENCE along said north-south centerline, S 02°06'11" W, 3353.98 feet to the north quarter corner of said Section 26 as depicted on said exempt segregation; THENCE 3 01°41'03" W, 949.13 feet to the southeasterly corner of Lot 23 of said exempt segregation; THENCE along said southerly line, S 87°59'18" W, 1492.66 feet to the southerly corner common to said Lot 23 and Lot 22 of said segregation; THENCE along the southerly line of said Lot 22, N 65°00'00" W, 897.54 feet; THENCE N 25°58'31" W, 35.06 feet to the west line of said Section 26 as depicted on said exempt segregation; THENCE along said west line, N 01°47'33" E, 297.73 feet to the POINT OF BEGINNING.

Containing 172.37 acres, more or less.



LOCATION MAP
NOT TO SCALE

SITE AREAS:

SOUTH PARCEL: 178 AC
EXISTING MINE LEASE: 360 AC
NORTH PARCEL: 201 AC
PROCESSING AREA: 52 AC

DISTURBED AREA:

EXISTING MINE LIMIT: 497 AC
PROPOSED MINE LIMIT: 620 AC

SITE ADDRESS:

4301 PIONEER AVENUE
DUPONT, WASHINGTON 98327

CONTACTS:

OWNER/APPLICANT: CALPORTLAND COMPANY
PETE STOLTZ
(206) 764-3000

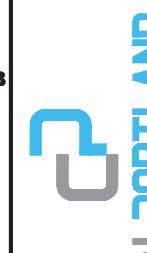
AERIAL MAPPING: AERO-METRIC, INC.
(206) 244-2300

GROUND SURVEY: ESM CONSULTING
ENGINEERS, LLC
(253) 838-8113

ENGINEER: ASPECT CONSULTING, LLC
OWEN REESE, P.E.
(206) 838-5844

SHEET INDEX:

- G1 COVER SHEET AND VICINITY MAP
- G2 EXISTING TOPOGRAPHY - WHOLE MINE SITE, 2007
- G3 EXISTING TOPOGRAPHY - EXISTING MINE AREA, 2018
- G4 SENSITIVE AREAS
- C1 FINAL SITE PLAN
- C2 STORMWATER SITE PLAN
- C3 CONSTRUCTION SEQUENCE
- C4 CROSS SECTIONS
- C5 DEWATERING SYSTEM
- C6 BERM AND SLOPE DETAILS
- C7 EROSION AND SEDIMENT CONTROL PLAN



Aspect CONSULTING
CALPORTLAND

PIONEER AGGREGATES
SOUTH PARCEL PROJECT
VICINITY MAP
CalPortland
DuPont, Washington

SHEET
REFERENCE
NUMBER:

G-1

SHEET 1 OF 11





UM:
RIZONTAL DATUM: STATE PLANE COORDINATE SYSTEM
HINGTON SOUTH ZONE, NAD 83/91,US FEET
TICAL DATUM: NCVD 29

MAP HAS BEEN PRODUCED USING PROCEDURES THAT HAVE BEEN DEMONSTRATED
TO YIELD MAPPING WHICH COMPLIES WITH THE NATIONAL STANDARD FOR SPATIAL DATA
ACCURACY (NSSDA) FOR A SCALE OF 1"=100'.
PAGING FROM AERIAL PHOTOGRAPHY TAKEN 12 JUNE 2007.

ERIAL MAPPING BY:
AERO-METRIC
SEATTLE
PROJECT NO. 507-0510

ASPECT CONSULTING
SOUTH PARCEL PROJECT
EXISTING TOPOGRAPHY
WHOLE MINE SITE - 2007
CalPortland



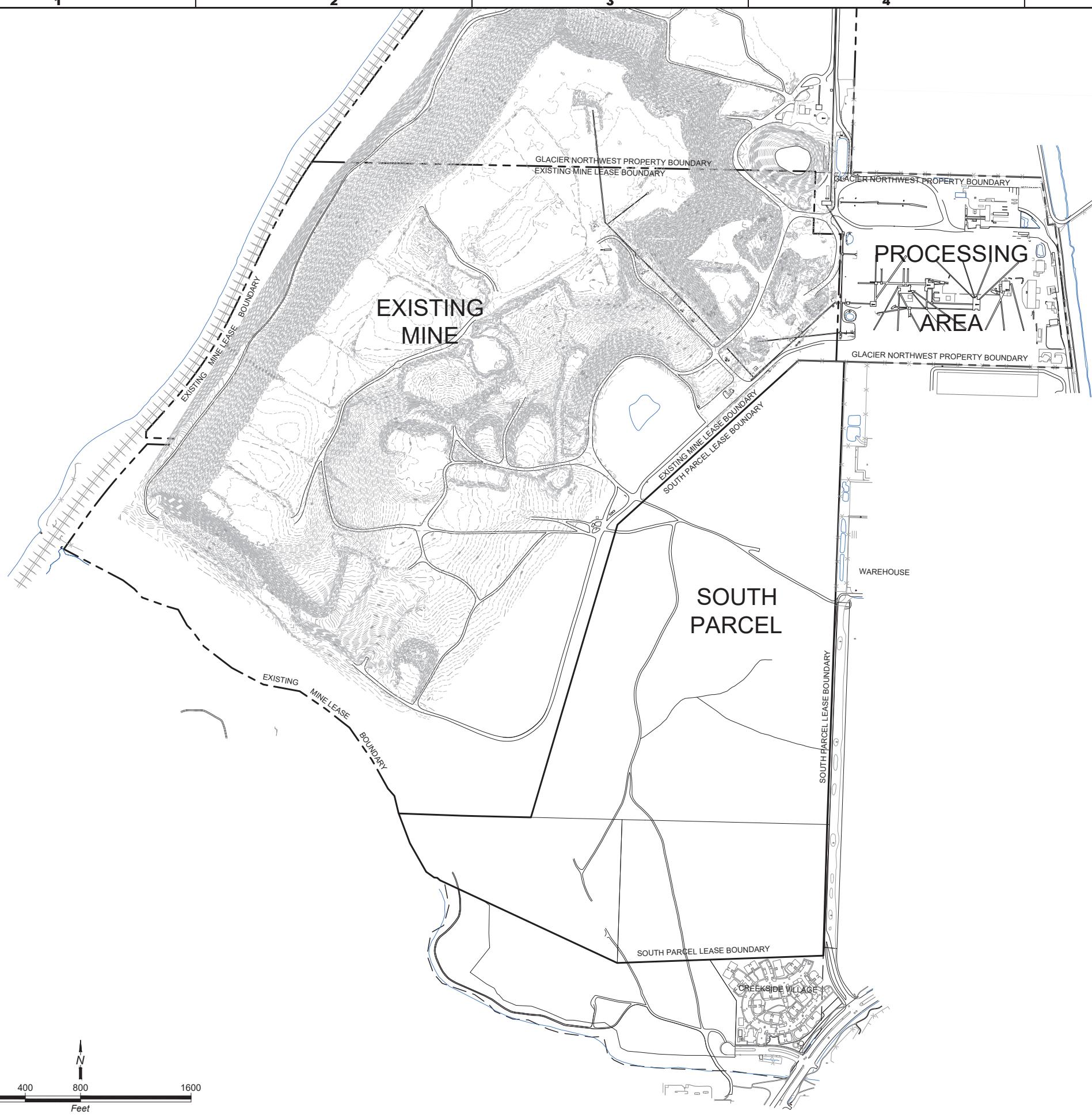
Aspect CONSULTING

Aspect CONSULTING

CALPORTLAND

DATE	REVISION:	PROJECT NUMBER:	DESIGNED BY:	DRAWN BY:	REVISED BY:	DESCRIPTION	DATE
JAN-2021	0	040001	OGR/BMG	CMV		REV.	APPR

SHEET 2 OF 11



UM:
RIZONTAL DATUM: STATE PLANE COORDINATE SYSTEM
HINGTON SOUTH ZONE, NAD 83/91,US FEET
TICAL DATUM: NCVD 29

MAP HAS BEEN PRODUCED USING PROCEDURES THAT HAVE BEEN DEMONSTRATED
TO FIELD MAPPING WHICH COMPLIES WITH THE NATIONAL STANDARD FOR SPATIAL DATA
ACCURACY (NSSDA) FOR A SCALE OF 1"=100'.
PAGING FROM AERIAL PHOTOGRAPHY TAKEN NOVEMBER 8, 2018.

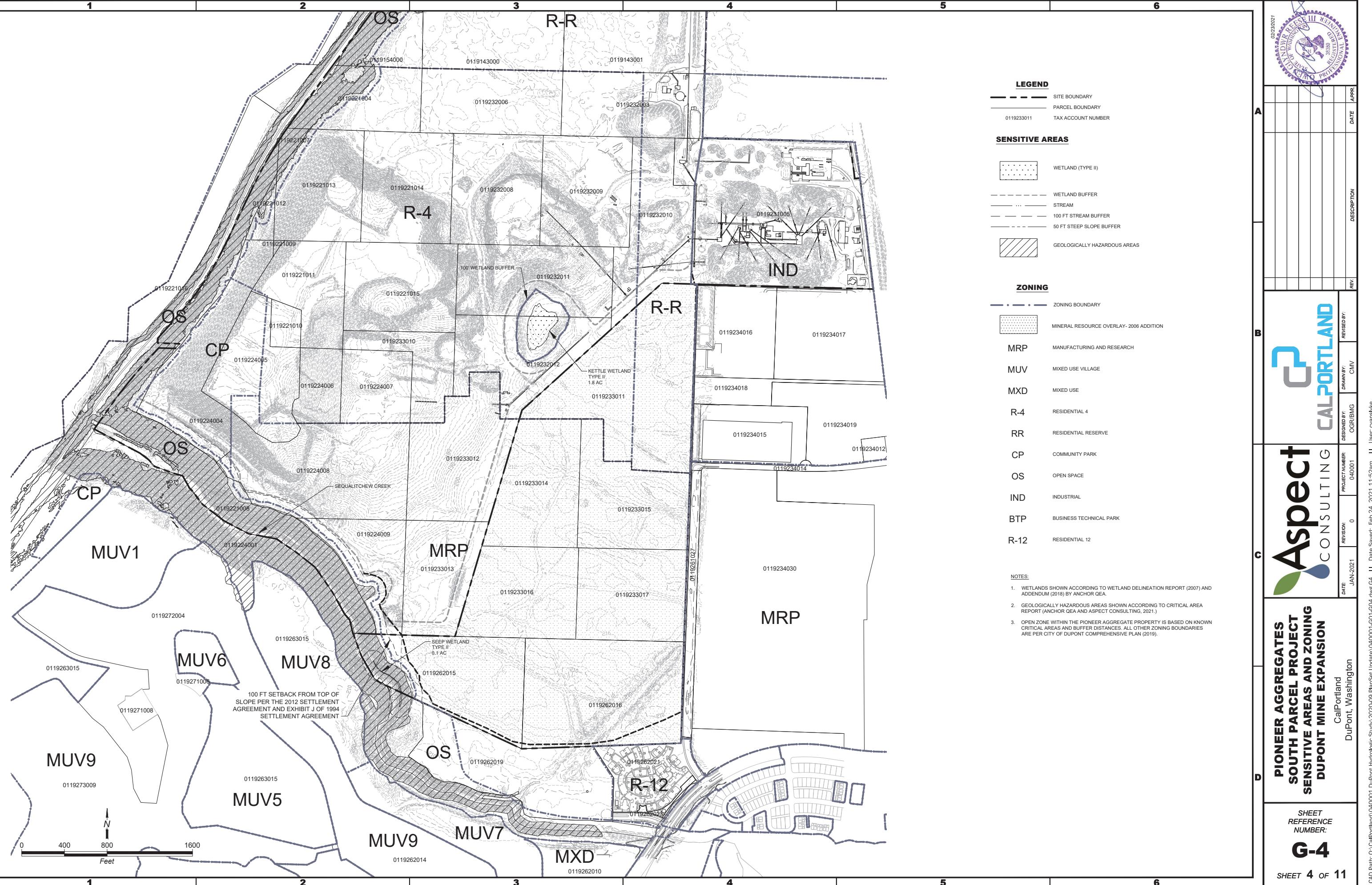
Aspect CONSULTING

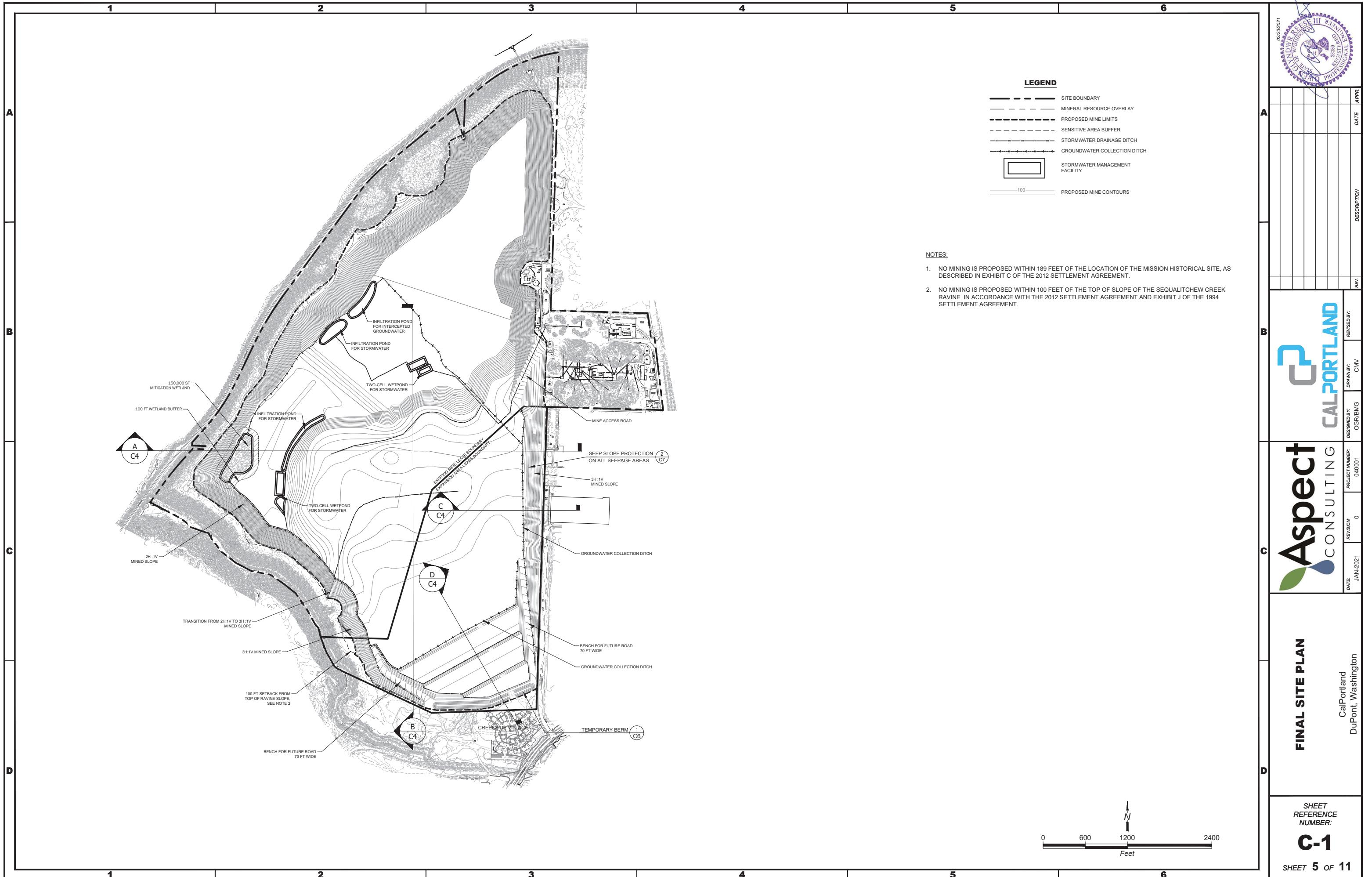
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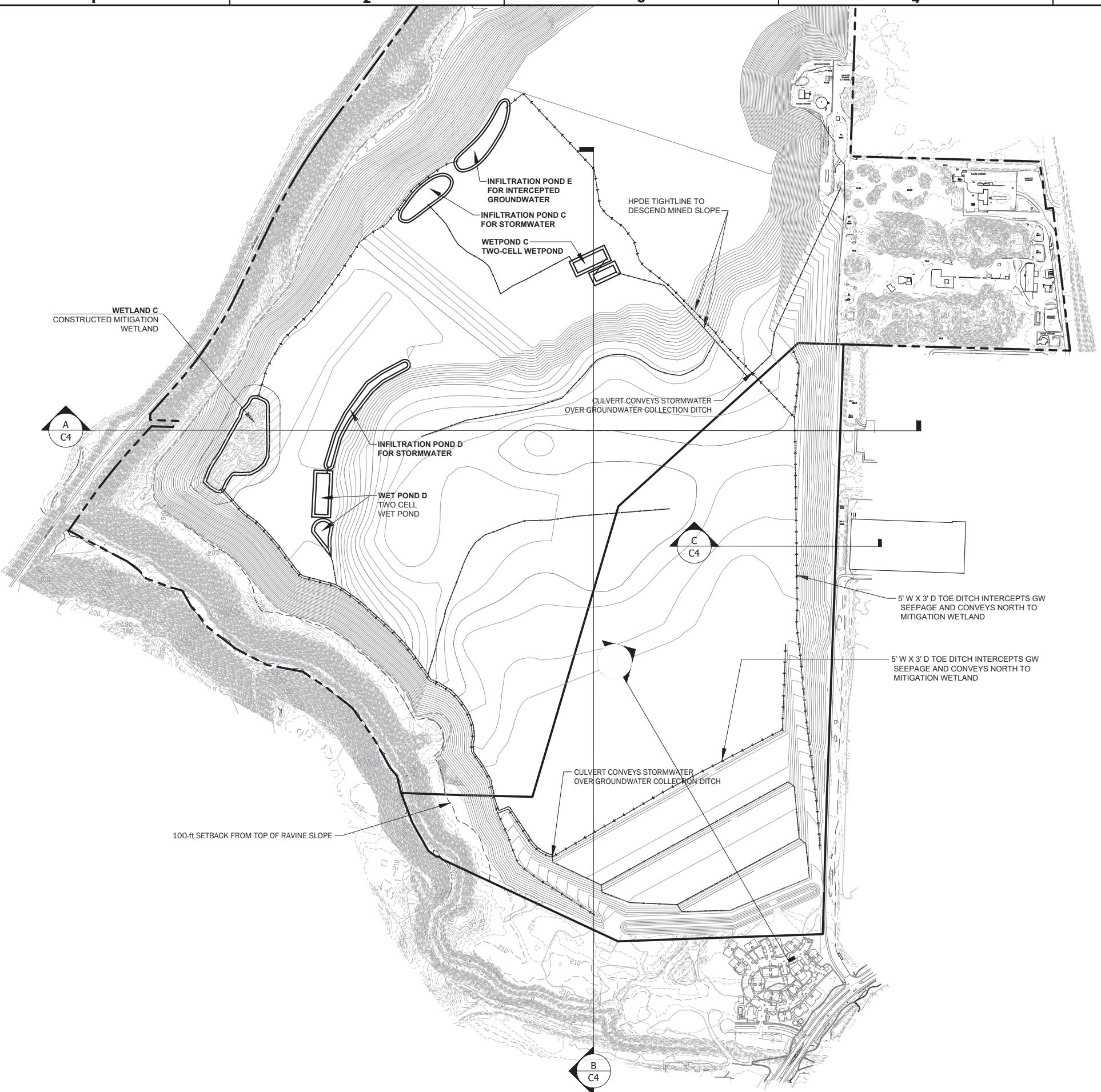
PIONEER AGGREGATES
SOUTH PARCEL PROJECT
EXISTING TOPOGRAPHY
EXISTING MINE AREA - 2018

SHEET 3 OF 11

CAD PATH: O:\CalPortland\040001_DuPont_Hydrologic Study\2020-09\PlanSet\040001-03.dwg G3 || Date Saved: Feb 24, 2021 11:52am || User: evanslyke







LEGEND

The legend includes the following entries:

- GROUNDWATER COLLECTION DITCH: Represented by a dashed line with arrows at both ends.
- DRAINAGE DITCH: Represented by a solid line with dots at both ends.
- STORMWATER FACILITY: Represented by a stylized orange and yellow shape.
- PROPOSED MINE CONTOURS: Represented by a solid line.

CONVEYANCE NOTES:

- 1) DITCH LOCATIONS SHOWN ARE BASED ON CURRENT UNDERSTANDING OF SUBSURFACE TOPOGRAPHY. DITCHES WILL BE CONSTRUCTED IN THE FIELD BASED ON CONDITIONS ENCOUNTERED.
 - 2) GRADE MINE FLOOR TO DRAIN TO MAIN DITCHES SHOWN ON PLAN.
 - 3) PERMANENT OR LONG-TERM DITCHES SHALL BE VEGETATED WHERE SLOPE IS LESS THAN 6 PERCENT, COBBLE-LINED WHERE SLOPE IS BETWEEN 6 TO 10 PERCENT, AND RIPRAP-LINED ON STEEPER SLOPES.

WETPOND DIMENSION SCHEDULE

POND	CELL	DEPTH IN FT	VOLUME IN CF
C	1	6	79,704
	2	7	187,614
D	1	6	111,816
	2	7	263,739

INFILTRATION POND DIMENSION SCHEDULE

POND	DESIGN INFILTRATION RATE IN INCH/HR	DEPTH IN FT	BOTTOM AREA IN SF	TOP AREA IN SF
C	8.2	5	50,762	66,748
D	8.1	5	37,655	68,755
E	8.2	6	57,807	82,120

WETPOND AND INFILTRATION POND NOTES:

- 1) POND LOCATIONS SHOWN ARE BASED ON CURRENT UNDERSTANDING OF SUBSURFACE CONDITIONS. PONDS LOCATIONS MAY CHANGE BASED ON CONDITIONS ENCOUNTERED OR OPERATIONAL NEEDS. RELOCATED PONDS SHALL BE CONSTRUCTED ACCORDING TO THE DIMENSIONS SCHEDULES SHOWN ON THIS SHEET.
 - 2) INFILTRATION PONDS AND WETPONDS SHALL HAVE 3H:1V SIDE SLOPES, EXCEPT FOR WETPOND BERMS WHICH SHALL HAVE 2H:1V SIDE SLOPES AND BE SUBMERGED BY 1 FT.
 - 3) POND DEPTH INCLUDES 1 FOOT OF FREEBOARD, AND 1 FOOT RESERVED FOR SEDIMENT STORAGE IN FIRST CELL OF WETPONDS.
 - 4) VOLUME IS WHEN FULL TO DESIGN WATER SURFACE ELEVATION AND DOES NOT INCLUDE RESERVE FOR SEDIMENT STORAGE.

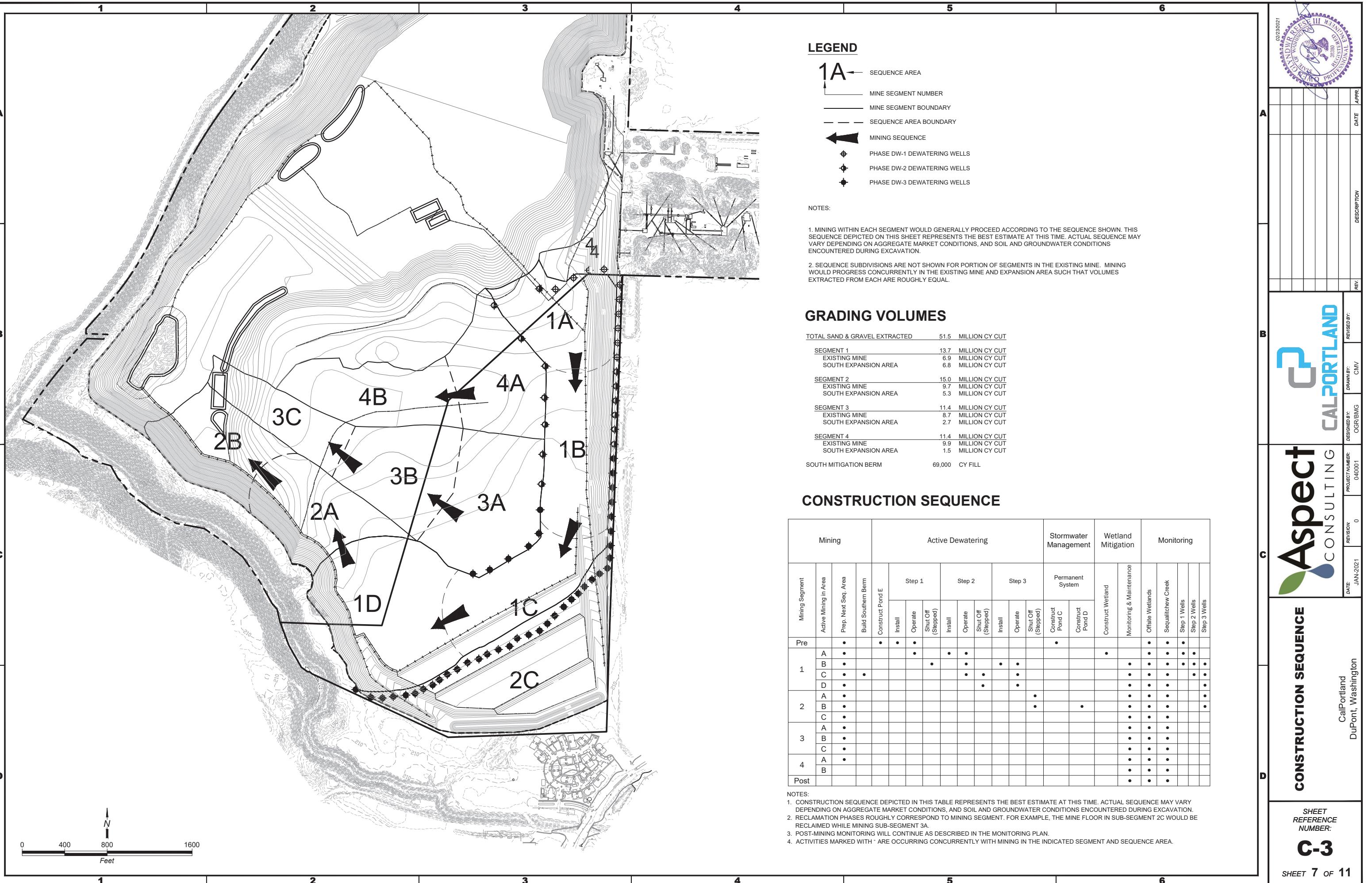
Aspect

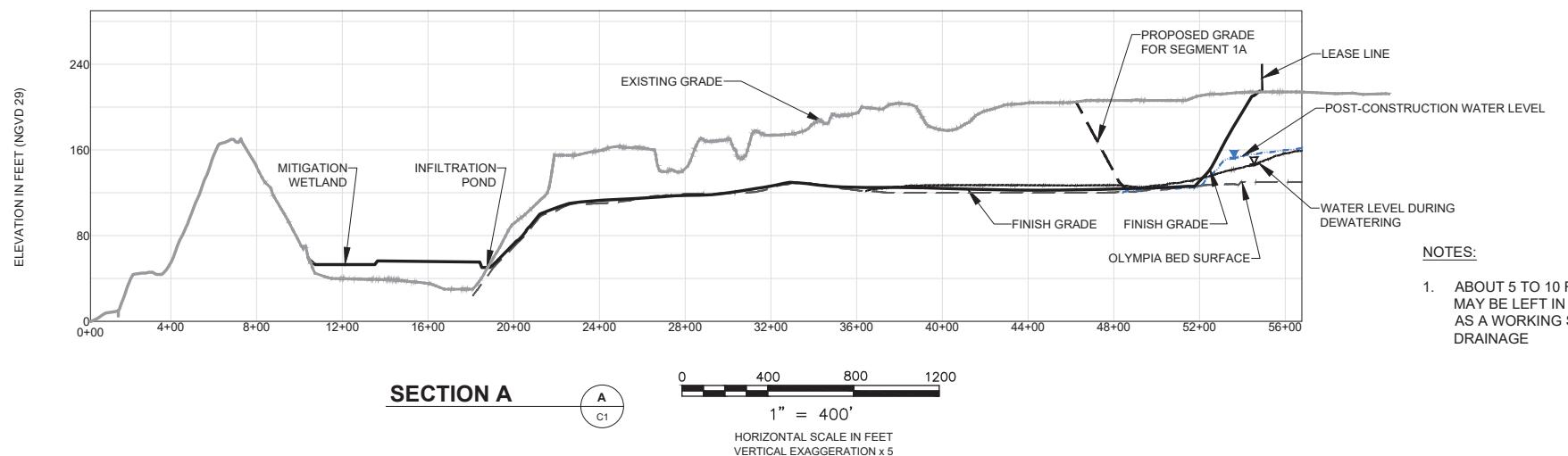
STORMWATER SITE PLAN

CalPortland
uPont, Washington

**SHEET
REFERENCE
NUMBER**

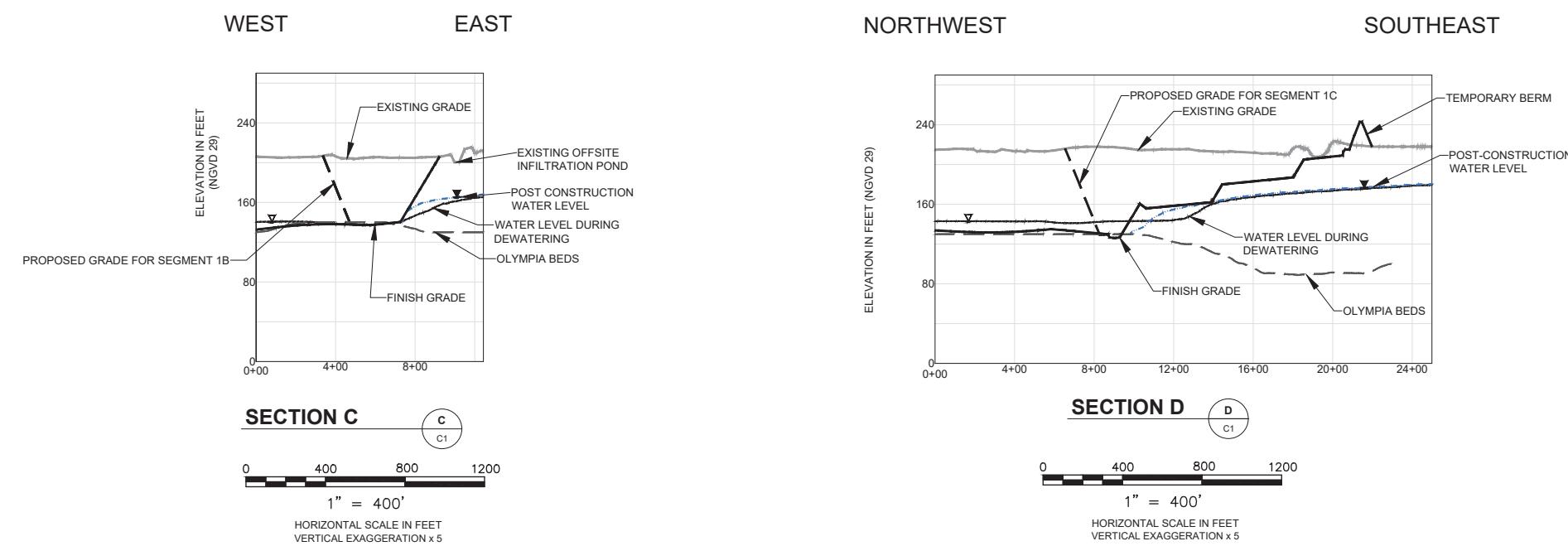
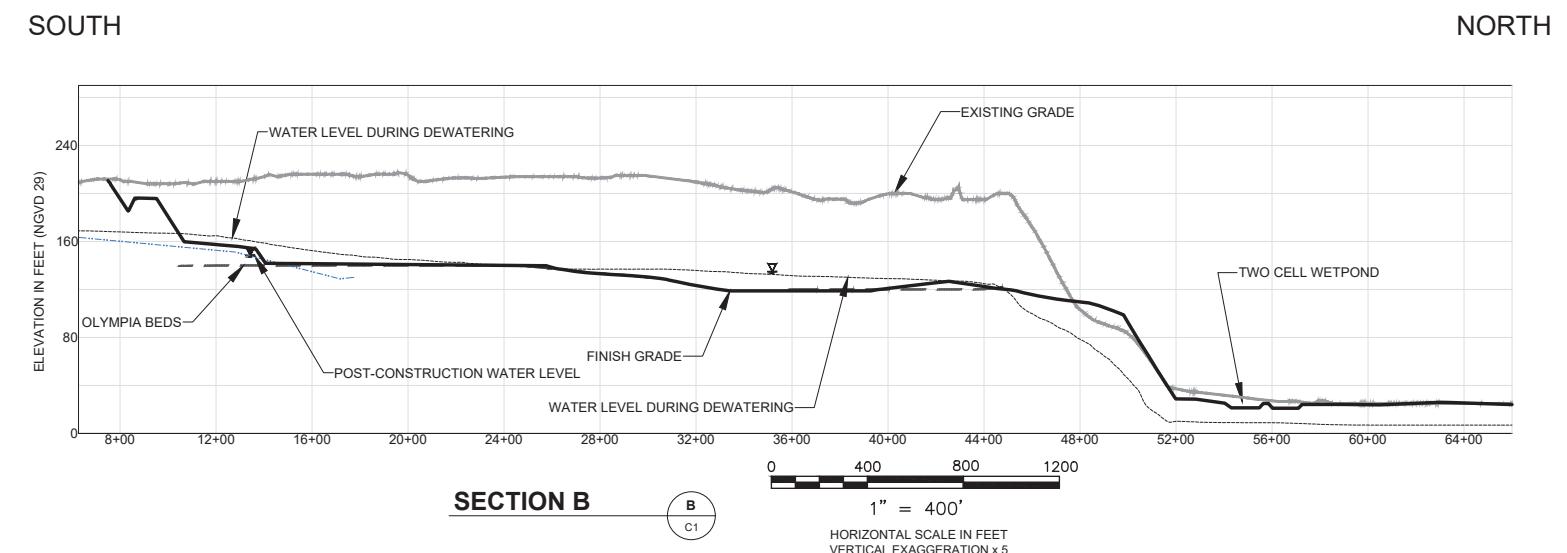
SHEET 6 OF 1





NOTES:

1. ABOUT 5 TO 10 FEET OF NATIVE SAND AND GRAVEL MAY BE LEFT IN PLACE ABOVE THE OLYMPIA BEDS AS A WORKING SURFACE AND TO FACILITATE DRAINAGE



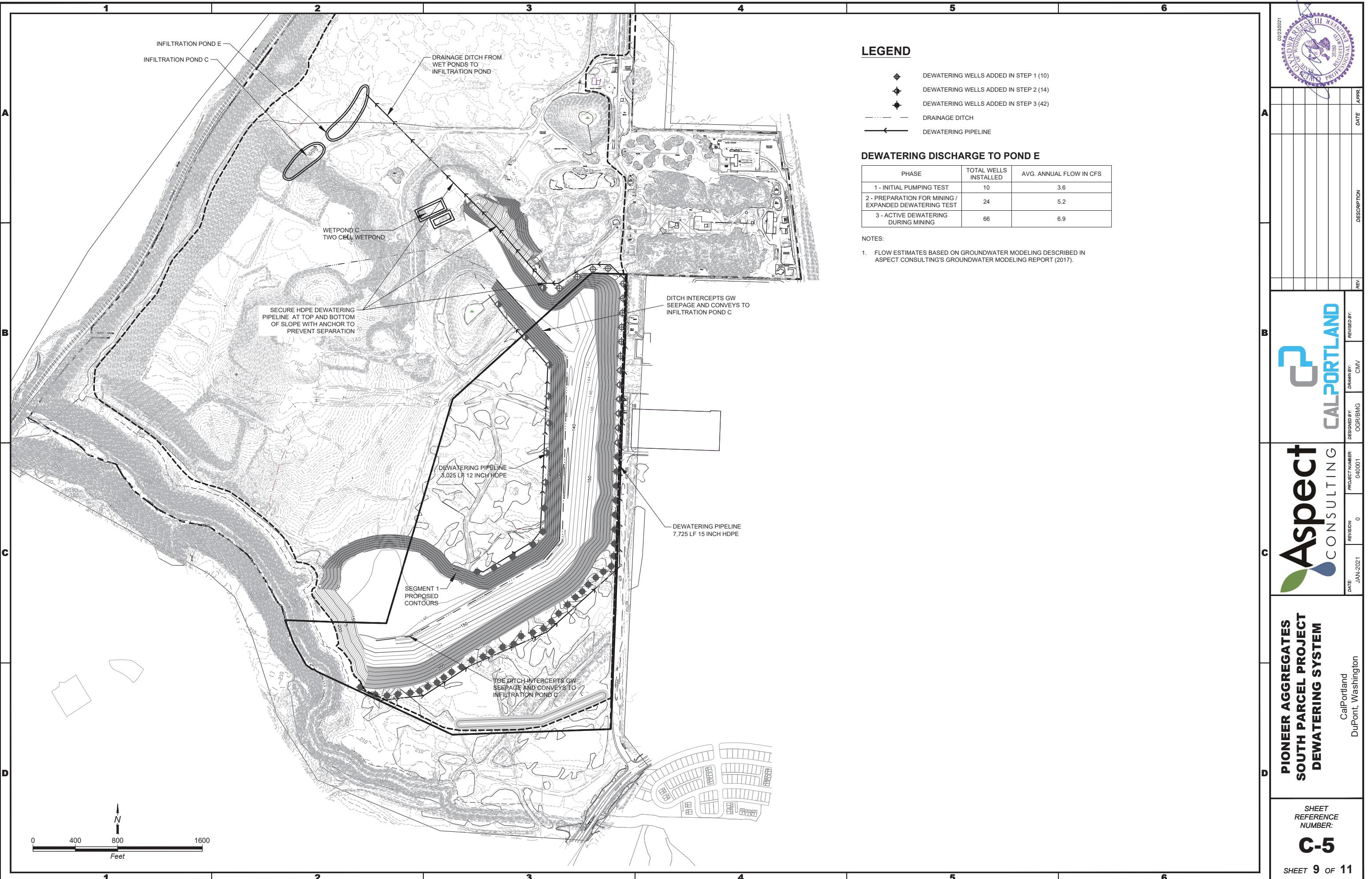
PORTLAND

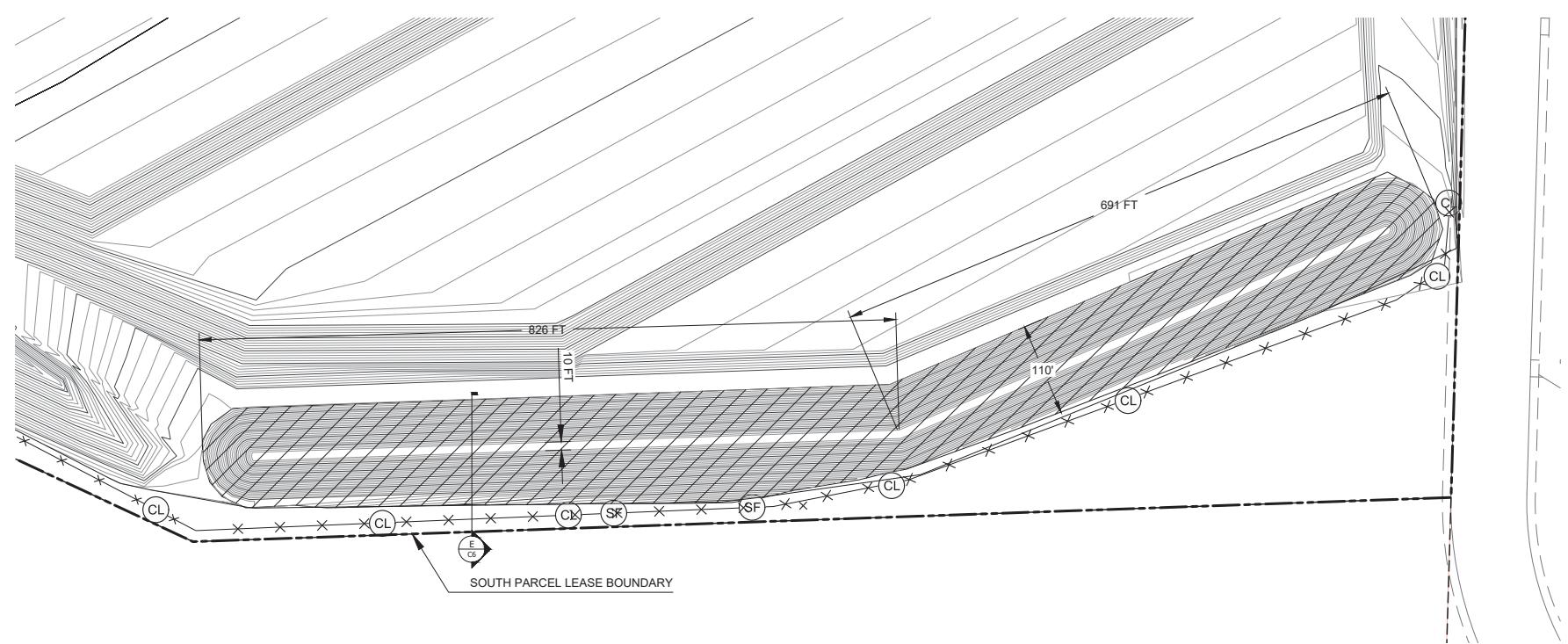
Aspect CONSULTING

PIIONEER ACACIAS SOUTH PARCEL PROJECT CROSS SECTIONS

**SHEET
REFERENCE
NUMBER:**

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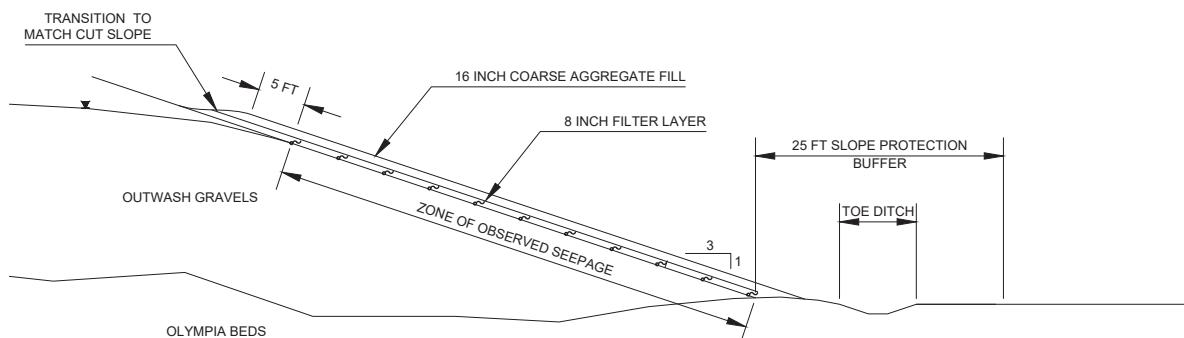




TEMPORARY BERM DETAIL

SCALE: 1" = 100'

1
C6



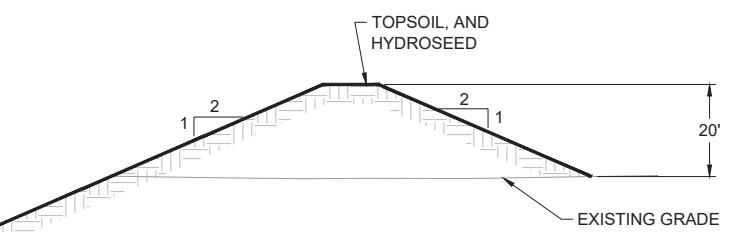
SLOPE PROTECTION AT SEEPS

SCALE: 1" = 100'

2
C6

SLOPE PROTECTION SPECIFICATIONS:

- 1) PLACE SEEP SLOPE PROTECTION IN ALL AREAS OF EASTERN MINE SLOPE WITH OBSERVED SEEPAGE SPRINGS AFTER DEWATERING WELLS HAVE BEEN TURNED OFF. SEEP SLOPE PROTECTION SHALL EXTEND A MINIMUM OF 5 FEET ABOVE AND TO THE SIDES OF OBSERVED SEEPAGE.
 - 2) SEEP SLOPE PROTECTION CONSISTS OF:
 - A) 6 INCH FILTER LAYER CONSISTING OF COARSE SAND/FINE GRAVEL. FILTER LAYER SPECIFICATIONS SHALL BE DETERMINED BASED ON GRAIN SIZE OF THE EXPOSED NATIVE MATERIAL ACCORDING TO THE FOLLOWING EQUATIONS:
$$D50\text{filter} < 25 * D50\text{native}$$
$$D15\text{filter} < 5 * D85\text{native}$$
 - B) 16 INCH LAYER OF CLEAN, WELL-GRADED AGGREGATE FILL.
 - C) TOPSOIL AND VEGETATION PER WETLAND MITIGATION PLAN.
 - 3) WHERE SPRINGS OR CONCENTRATED FLOW ARE PRESENT, PLACE COBBLE ARMOR INSTEAD OF TOPSOIL AND VEGETATION.



SECTION - TEMPORARY BERM

Scale: 1" = 30'

3

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AND
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CalPortland

CE

SHEET 10 OF 11





LEGEND

The legend consists of five entries, each with a line drawing and a label:

- SITE BOUNDARY**: Represented by a thick black line.
- SENSITIVE AREA BUFFER**: Represented by a dashed black line.
- DRAINAGE DITCH**: Represented by a line with a series of short dashes.
- STORMWATER MANAGEMENT FACILITY**: Represented by a thick black rectangle.
- PROPOSED MINE CONTOURS**: Represented by a thin black line.

ESC ZONES

INTERNALLY DRAINING AREA

ESC PROVIDED BY RECLAMATION ACTIVITIES
SEE RECLAMATION PLAN (ECOLOGICAL LAND SERVICES, 2007)

TEMPORARY BERM

SEE SHEET C6

NOTES:

1) BMPs SHALL BE IMPLEMENTED ACCORDING TO THE APPLICABLE ELEMENTS OF THE BMP DESCRIPTIONS IN THE 2012 ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON AS AMENDED IN DECEMBER 2014, AS APPROPRIATE FOR A MINE SITE, AND THE EROSION RISK IN EACH ESC ZONE.

2) SEE CSWPPP BY ASPECT CONSULTING (2020) FOR ADDITIONAL DETAIL REGARDING BMP IMPLEMENTATION

Aspect CONSULTING

EROSION AND SEDIMENT CONTROL PLAN

CalPortland
DuPont, Washington

**SHEET
REFERENCE**

SHEET 11 OF 11



Aspect CONSULTING		CALPORTLAND			
DATE	REVISION	PROJECT NUMBER	DESIGNED BY:	DRAWMN BY:	REV.
JAN-2021	0	040001	OGR/BM/G	CMV	DESCRIPTION
APPR.					

