

Appendix A

Asbuilt Drawings and Layer Thickness Measurements

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Asbuilt Drawings and Layer Thickness Measurements

This appendix contains the layer contour elevation asbuilt drawings and the layer thickness measurements.

Asbuilt Drawings—The asbuilt drawings show contour elevations for the top of the following engineered barrier layer:

- SL-1 Consolidated soils layer asbuilt
- SL-1 4 in. pea gravel layer asbuilt
- SL-1 Cobble layer asbuilt
- SL-1 6 in. pea gravel layer asbuilt
- SL-1 Rip-rap layer asbuilt
- SL-1 Asbuilt cross sections
- BORAX-I Consolidated soils layer asbuilt
- BORAX-I Rip-rap layer asbuilt.
- BORAX-I Asbuilt cross section

Layer Thickness Field Measurements—The field crew consisting of the Subcontractor jobsite supervisor, HSO and/or laborer, and the Parsons CE performed layer thickness measurements to ensure layers were of proper thickness prior to proceeding with installation of the next layer. Pin flags were placed where additional materials needed to be placed. After repair was made these areas were measured again. The thickness shown in this appendix are the final measurements. Notes regarding the repairs are in the CE force reports and Subcontractor daily logs located in the project files.

Measurement data points were located 30 m (100 ft) apart in the E-W direction and approximately 4.6 m (15 ft) apart in the N-S direction beginning with the north top of slope, center, and south top of slope, or otherwise as noted on the data sheets.

Rip-rap field thickness measurements were recorded for Pit 1, the first area where rip-rap was installed; however, repair proved difficult due to hand carrying the repair rocks. For follow on rip-rap placement, rip-rap was added as needed while the trackhoe was within reach of the repair location. Notes regarding the remaining rip-rap thickness verification are recorded in the daily follow-up inspection forms located in the project files, vendor data item No. 3-08.

Repair of the layers was required as follows:

- SL-1 10 cm (4 in.) pea gravel biotic barrier—three areas required repair. Additionally, the pea gravel did not extend completely over Trench 1 and Pit 2 as required. These two areas were also repaired (page A-4)
- SL-1 30 cm (12 in.) cobble rock layer—two large areas and four small areas required additional cobble
- SL-1 15 cm (6 in.) pea gravel biotic barrier—four areas required repair
- SL-1 rip-rap—estimated 65 places required additional rocks.

The tabulation in Table A-1 shows the required thickness, minimum thickness measured, and average thickness of each layer.

Table A-1. Layer thickness.

Layer	Required Thickness (m [ft])	Minimum Measured Thickness (m [ft])	Average Thickness (m [ft])
SL-1 10 cm (4 in.) pea gravel	0.1 (0.33)	0.1 (0.33)	0.15 (0.49)
SL-1 cobble	0.3 (1.0)	0.3 (1.0)	0.34 (1.11)
SL-1 15 cm (6 in.) pea gravel	0.15 (0.50)	0.15 (0.50)	0.2 (0.67)
SL-1 rip-rap, Pit 1	0.6 (2.0)	0.6 (2.0)	0.66 (2.18)

1ST LAYER PEA GRAVEL MEASUREMENT

9/17/96

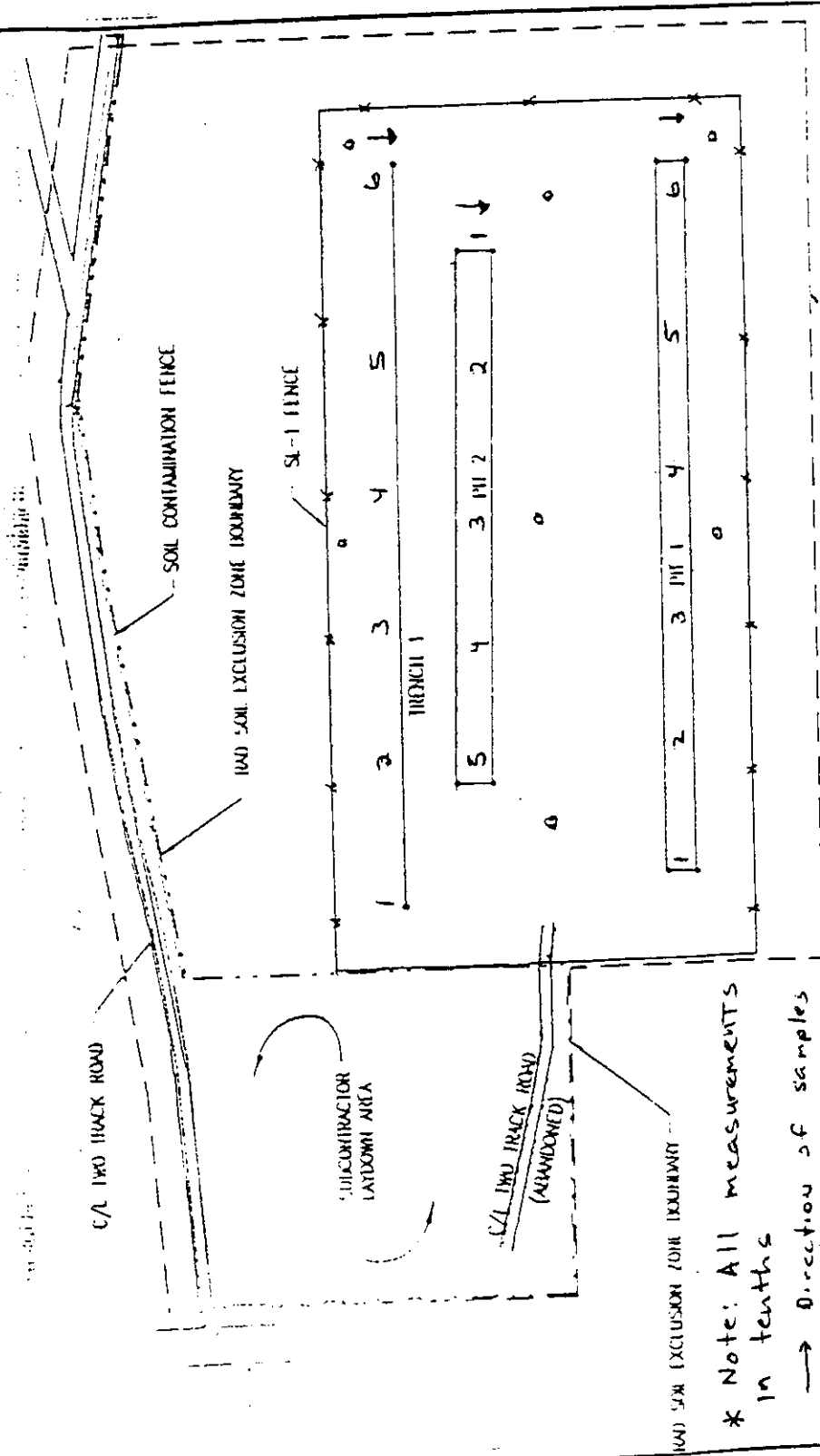
A-3

Measurements witnessed by: Al Gram, Steve Clark, Ross Langseth
 CF ES:H JSS

Jim Stephensen
 labor

Sample points: approx. 100' apart.

N ↑



* Note: All measurements
 in tenths
 → Direction of samples

- Trench 1
- 1) .6 , .7
 - 2) .4 , .47
 - 3) .44 , .57
 - 4) .5 , .68
 - 5) .62 , .47
 - 6) .6 , .78

- Pit 2
- 1) .55 , .64 , .62
 - 2) .47 , .52 , .44
 - 3) .58 , .54 , .57
 - 4) .48 , .57 , .59
 - 5) .48 , .34 , .50

- Pit 1
- 1) .33 , .34 , .39
 - 2) .39 , .50 , .45
 - 3) .54 , .34 , .37
 - 4) .62 , .61 , .60
 - 5) .43 , .47 , .63
 - 6) .56 , .39 , .55

DAILY LOG	DATE			
	NO.			
	SHEET		OF	

FIELD ACTIVITY DAILY LOG

OBJECT NAME SL-1

PROJECT NO.

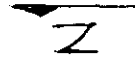
FIELD ACTIVITY SUBJECT: Regravel thickness of EXTRA GRAVEL ADDED

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS: ON NORTH & SOUTH SIDE SLOPE OF CONSOLIDATED SOIL BETWEEN TRENCH 1 & PIT 2.

NOTE: MEASUREMENTS IN TENTHS

TRENCH 1

Pit 2



1	1)	.55
1A	1A)	.37
1B	1B)	.44
2	2)	.33
2A	2A)	.34
2B	2B)	.38
3	3)	.33
3A	3A)	.41
3B	3B)	.33
4	4)	.42
4A	4A)	.33
4B	4B)	.35
5	5)	.54
5A	5A)	.33
5B	5B)	.33
5C	5C)	.44
6	6)	.51

1	1)	.37
1A	1A)	.41
1B	1B)	.33
2	2)	.35
2A	2A)	.35
2B	2B)	.41
3	3)	.33
3A	3A)	.42
3B	3B)	.44
4	4)	.41
4A	4A)	.40
4B	4B)	.34
5	5)	.49

NOTE: MEASUREMENTS TAKEN 2' NORTH from edge of pit and distance between measurements approx. 33'

NOTE: MEASUREMENTS TAKEN AT 3 1/2' ^{south} from E of trench and distance between measurements approx. 33'

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
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WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:
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IT PERSONNEL ON SITE:

SIGNATURE R. Jaks DATE: 9/23/95

FIELD ACTIVITY DAILY LOG

DAILY LOG	DATE	9	24	96
	NO.			
	SHEET	1 OF 1		

JECT NAME SL-1

PROJECT NO

Pit

Note: ALL measurements in tenths, thickness checked approx 100' apart

Witness: AL Cram - Parsons
 Steve Clark - IT Corp
 Ross Langseth - IT Corp

2

Pit 1 (NTS)

- 6) 1.15, 1.25
- 5) 1.1, 1.0
- 4) 1.05, 1.0
- 3) 1.15, 1.15
- 2) 1.15, 1.2
- 1) 1.1, 1.3

VISITORS ON SITE:

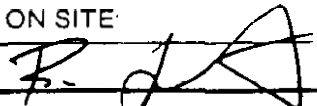
CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS

IT PERSONNEL ON SITE:

SIGNATURE



DATE: 9/24/96

DAILY LOG	DATE	9	25	96
	NO.			
	SHEET	/	OF	/

FIELD ACTIVITY DAILY LOG

PROJECT NAME SLI PROJECT NO. 767662

FIELD ACTIVITY SUBJECT: Cobble measurements / Thickness (Pit 2; Trench 1).

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

Note: Measurements in tenths and thickness checked every 100' approx.

Witness: Al Gram - Parsons
 Steve Clark - IT Corp
 Ross Langseth - IT Corp

Trench 1

Pit 2

- 6) 1.0, 1.2
- 5) 1.2, 1.1
- 4) 1.15, 1.1
- 3) 1.0, 1.1
- 2) 1.1, 1.0
- 1) 1.0, 1.15

- 5) 1.0, 1.1
- 4) 1.2, 1.1
- 3) 1.05, 1.1
- 2) 1.2, 1.1
- 1) 1.15, 1.1

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

IT PERSONNEL ON SITE:

SIGNATURE RJA DATE: 9/25/96

DAILY LOG	DATE	9	27	96
	NO.			
	SHEET	OF		

FIELD ACTIVITY DAILY LOG

PROJECT NAME SL-1 PROJECT NO.

FIELD ACTIVITY SUBJECT: Pit 1 2nd layer Pea gravel measurement

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

Note: measurements in inches and taken approx. every 100'

Witness: AL Gram - Parsons
Steve Clark - IT Corp
Ross Langseth - IT Corp



Pit 1

- 6. 6) 7", 9", 9", 8"
- 5. 5) 8", 7", 7", 8"
- 4. 4) 11", 6", 8", 6"
- 3. 3) 8", 7", 8", 11"
- 2. 2) 8", 8", 6 1/2", 8"
- 1. 1) 10", 13", 11", 6"

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
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WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:
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IT PERSONNEL ON SITE:

SIGNATURE [Signature] DATE: 9/27/96



DAILY LOG	DATE	9	30	96
	NO.			
	SHEET	1	OF	1

FIELD ACTIVITY DAILY LOG

PROJECT NAME <u>SL-1</u>	PROJECT NO. <u>767662</u>
FIELD ACTIVITY SUBJECT: <u>Pit 2 2nd Lift Pea gravel</u>	
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:	
<p>Note: all measurements in INCHES and measurements taken approx. 100' apart</p> <p>Witness: AL Gram - PARSONS ENVIRONMENTAL Ross Langseth - IT Corp</p>	
<p><u>Pit 2</u> Z</p>	
<p>5. 5) 7", 8½", 8"</p> <p>4. 4) 8", 8", 8"</p> <p>3. 3) 7", 8", 10"</p> <p>2. 2) 7½", 7", 10½"</p> <p>1. 1) 7", 7", 8½"</p>	
VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:
IT PERSONNEL ON SITE	
SIGNATURE <u>RJA</u>	DATE: <u>9/30/96</u>

DAILY LOG	DATE	10	2	96
	NO.			
	SHEET	(OF)		

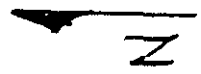
FIELD ACTIVITY DAILY LOG

PROJECT NAME SL-1 PROJECT NO. _____

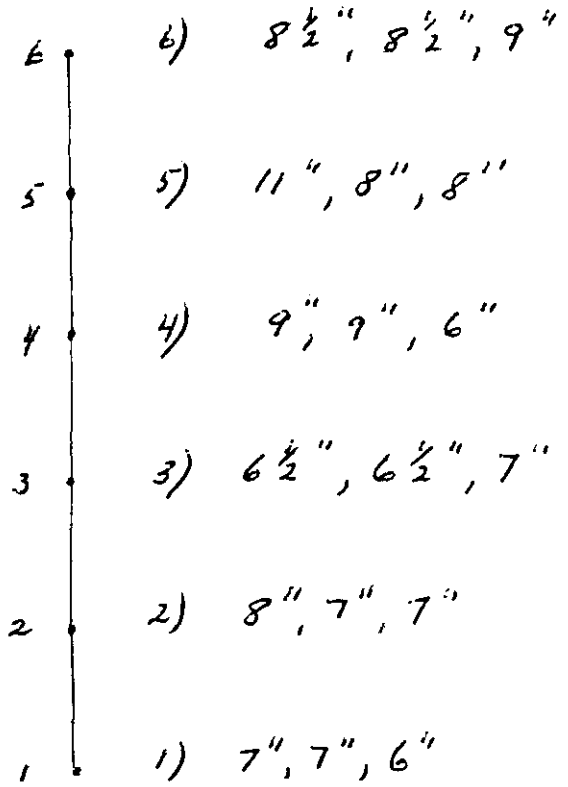
FIELD ACTIVITY SUBJECT: Trench 1 2nd lift pea gravel measurements

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

NOTE: ALL measurements in inches and taken approx. 100' apart
 Witness: AL Gram - Parsons ES
 Ross Langseth - IT Corp.



Trench 1



VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

IT PERSONNEL ON SITE:

SIGNATURE [Signature]

DATE: 10/2/96



DAILY LOG	DATE	10	21	96
	NO.			
	SHEET	1 OF 1		

FIELD ACTIVITY DAILY LOG

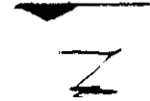
PROJECT NAME SL-1

PROJECT NO. 767662

FIELD ACTIVITY SUBJECT: INSPECTION OF R.P RAP Pit 1

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

Note: Depth checks made approx. every 100', all measurements in inches
Witness: AL Cram - Parsons ES
Ross Lungseth - IT Corp.



Pit 1

- 6 • 6) 26", 26", 24"
- 5 • 5) 34", 24", 26"
- 4 • 4) 26", 24", 28"
- 3 • 3) 29", 25", 31"
- 2 • 2) 24", 24", 26"
- 1 • 1) 24", 25", 25"

<input checked="" type="checkbox"/>	A	WORK MAY PROCEED SUBJECT TO INCORPORATION OF COMMENTS
<input type="checkbox"/>	B	REVISE AND RESUBMIT WORK MAY PROCEED SUBJECT TO INCORPORATION OF CHANGES INDICATED
<input type="checkbox"/>	C	REVISE AND RESUBMIT WORK MAY NOT PROCEED
<input type="checkbox"/>	D	REVIEW NOT REQUIRED WORK MAY PROCEED

CONTRACT NO. S-7600001-117
BY: Annette Poole R.O.
DATE: 11-4-96

INSPECTED AREA, found 5 places where there were voids, filled these SPOTS IN.

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

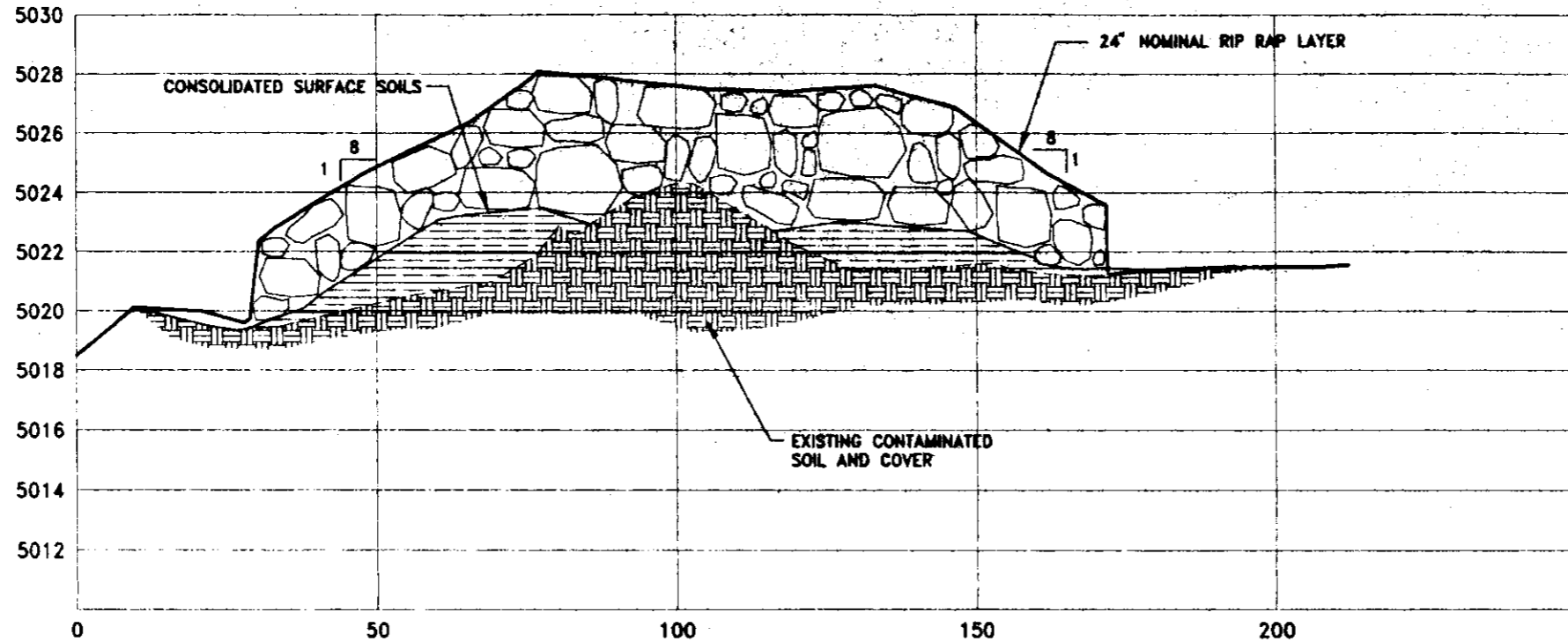
IT PERSONNEL ON SITE

SIGNATURE

[Handwritten Signature]

DATE: 10/21/96




BORAX-1 LANDFILL



SECTION A

SCALE: 1" = 20' HORZ.
1" = 4' VERT.

LEGEND

-  24" NOMINAL RIP RAP LAYER
-  CONSOLIDATED SURFACE SOILS
-  EXISTING CONTAMINATED SOIL AND COVER

SURVEYORS CERTIFICATE

I, Kim H. Leavitt, a Registered Professional Land Surveyor in the State of Idaho do hereby certify that this plat is an accurate representation of the survey completed under my supervision.

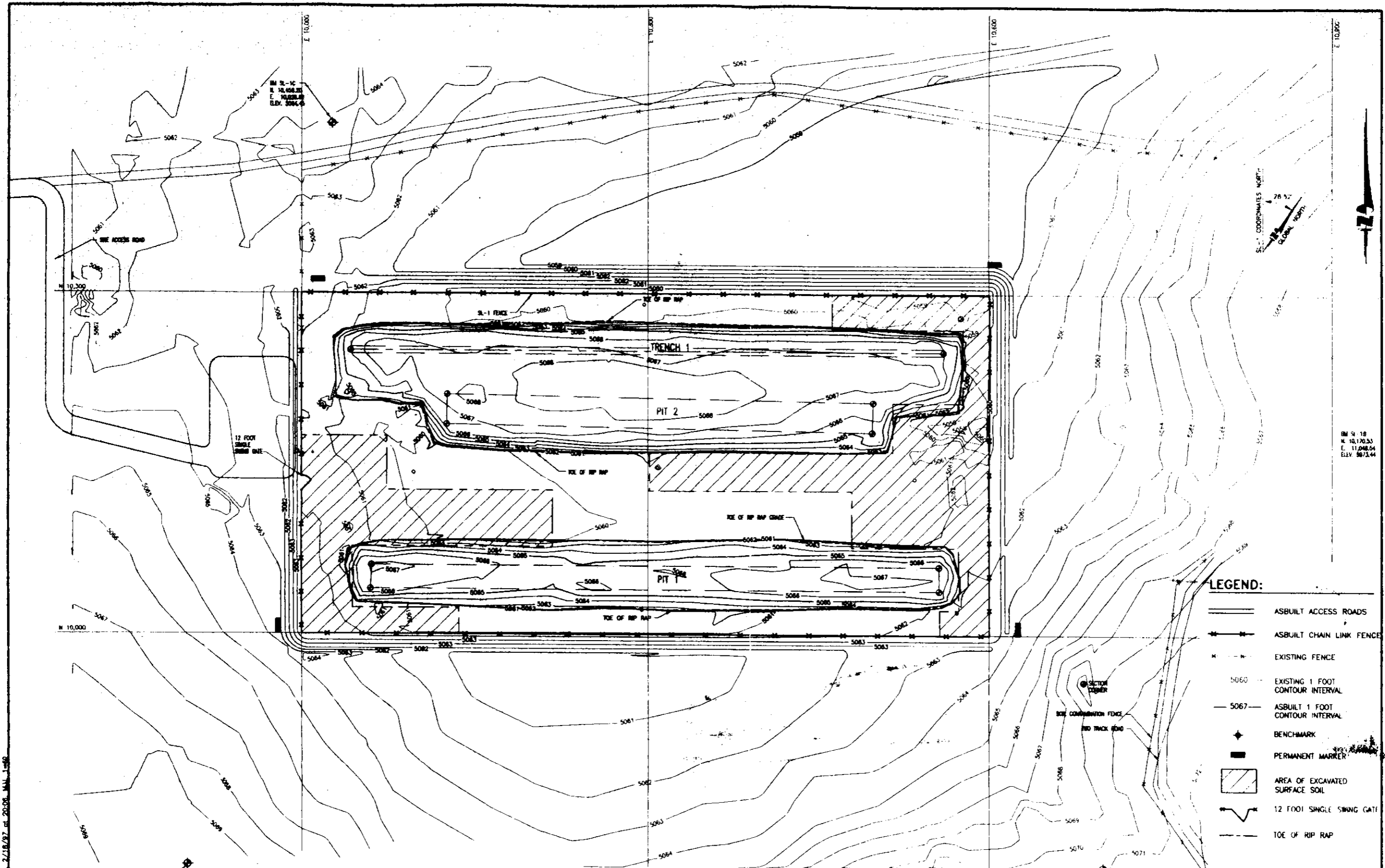
Kim H. Leavitt 1-29-97
Kim H. Leavitt License No. 4563 Date



REV#	REVISIONS	APPROVAL	DATE

APPROVED:	
CHECKED:	
DESIGNED:	
DATE:	

Lockheed	
Idaho Technological Company	
BORAX-1 & SL-1 BURIAL GROUNDS	
BORAX-1 ASBUILT CROSS SECTION	
DATE: 1/29/97	BY: DRY-VSEC.DWG
SCALE: AS SHOWN	1 of 1



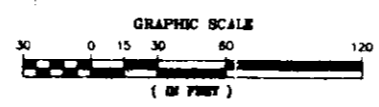
LEGEND:

- ASBUILT ACCESS ROADS
- ASBUILT CHAIN LINK FENCE
- EXISTING FENCE
- 5060 — EXISTING 1 FOOT CONTOUR INTERVAL
- 5067 — ASBUILT 1 FOOT CONTOUR INTERVAL
- ◆ BENCHMARK
- PERMANENT MARKER
- ▨ AREA OF EXCAVATED SURFACE SOIL
- 12 FOOT SINGLE SWING GATE
- - - - - TOE OF RIP RAP

SURVEYORS CERTIFICATE

I, Kim H. Leavitt, a Registered Professional Land Surveyor in the State of Idaho do hereby certify that this plot is an accurate representation of the survey completed under my supervision.

Kim H. Leavitt 2-10-06
 Kim H. Leavitt License No. 4563 Date



REV#	REVISIONS	APPROVALS	DATE

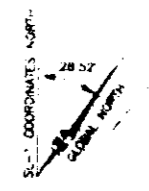
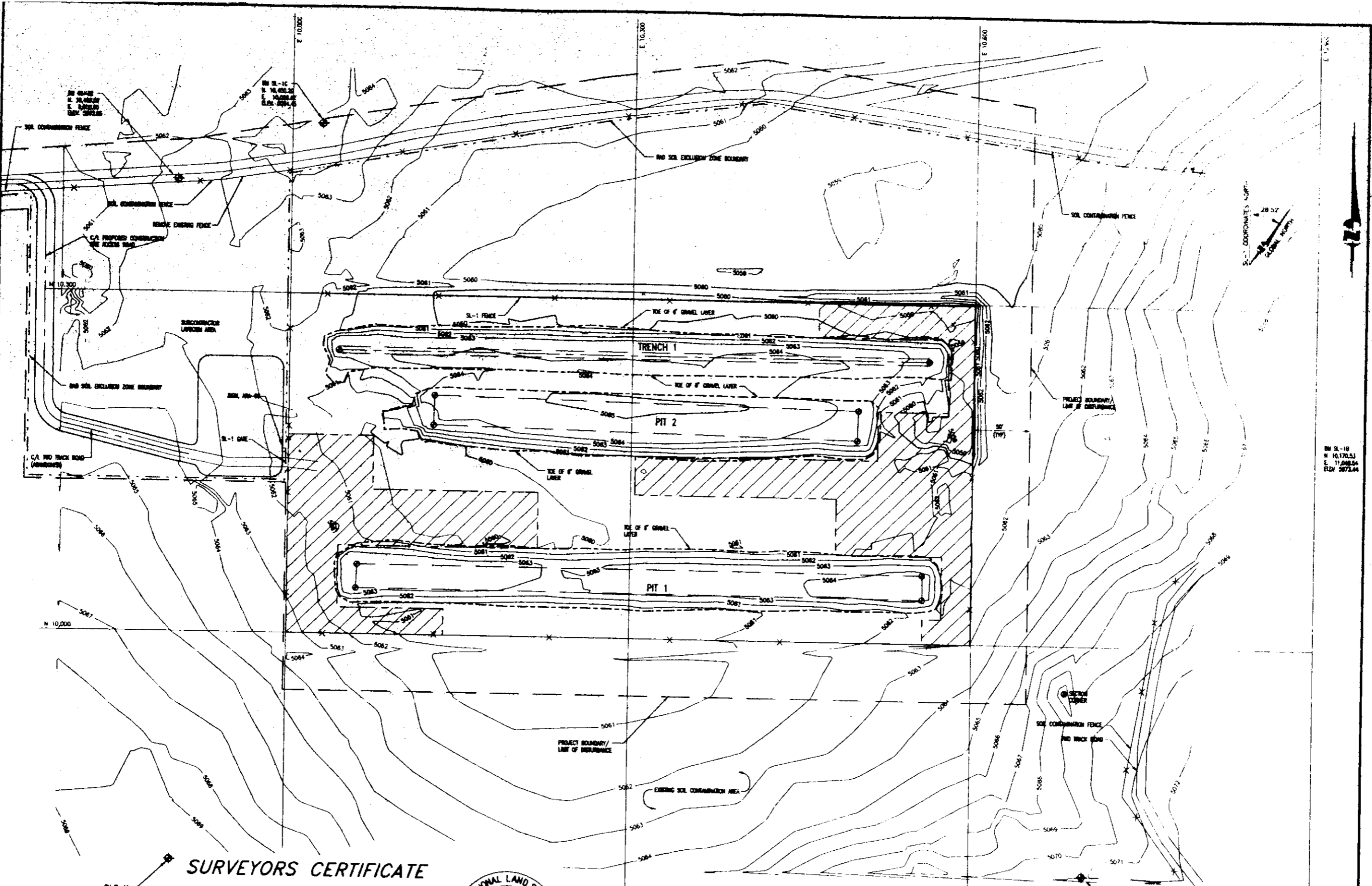
Lockheed
 Idaho Technologies Company

BORAX-1 & SL-1 BURIAL GROUNDS
 SL-1 RIP RAP LAYER ASBUILT
 (PIT 1, PIT 2 & TRENCH 1)

APPROVED: [Signature] DATE: 2/13/06
 CHECKED: [Signature] DATE: 2/13/06
 DRAWN: [Signature] DATE: 2/13/06
 DESIGNED: [Signature] DATE: 2/13/06

PROJECT NO: BPSL172.DWG
 SCALE: AS SHOWN
 SHEET NO: 1 OF 1

CALDWELL-CORP-ILL-BORE-BPSL172-2-13-06-MAL-1-06

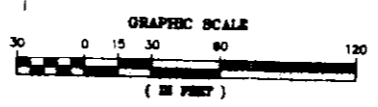


BN SL-10
N 10,170.53
E 11,088.54
Elev. 5073.44

SURVEYORS CERTIFICATE

I, Kim H. Leavitt, a Registered Professional Land Surveyor in the State of Idaho do hereby certify that this plot is an accurate representation of the survey completed under my supervision.

Kim H. Leavitt 2-10-97
Kim H. Leavitt License No. 4563 Date

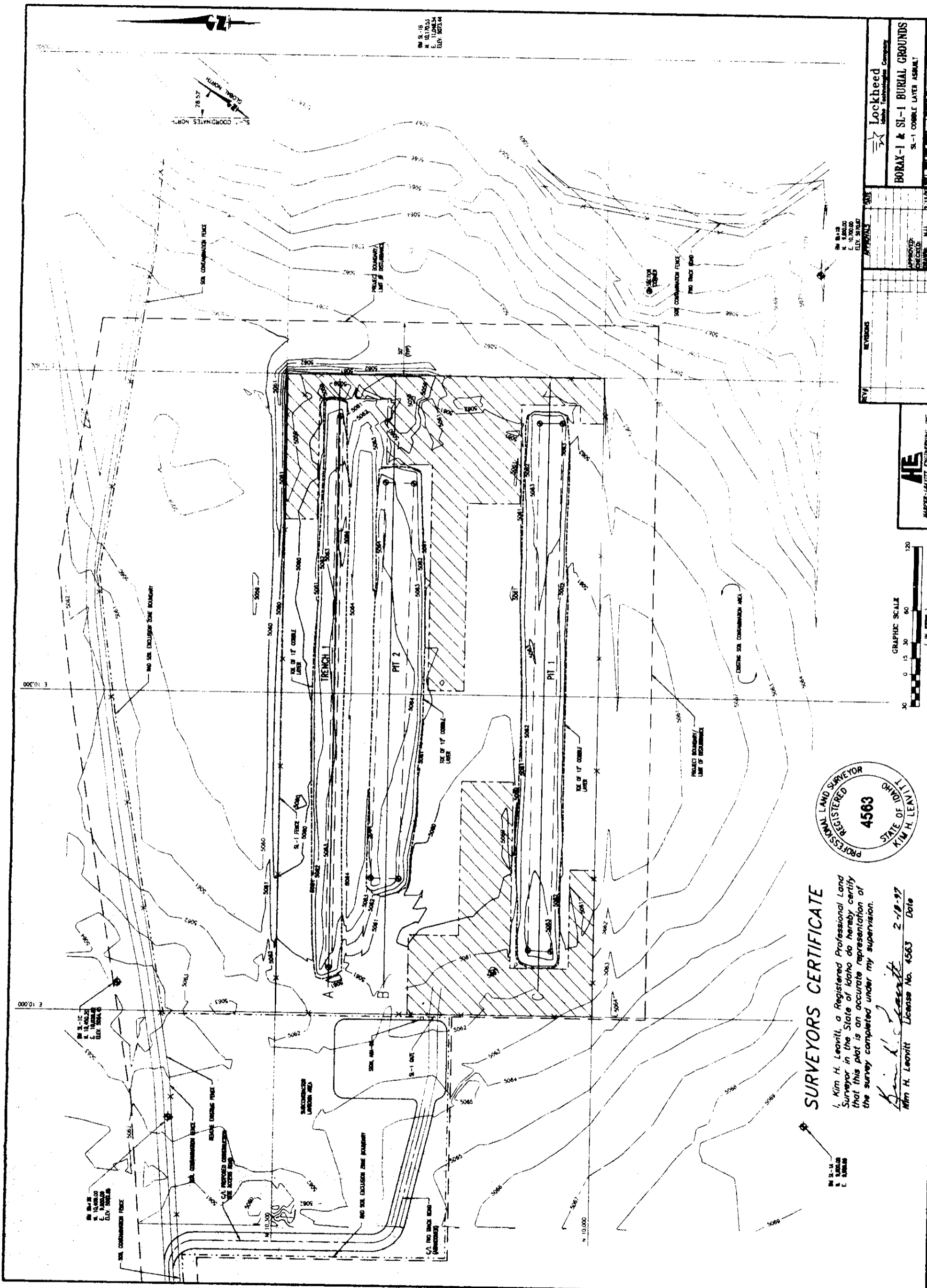


REV#	REVISIONS	APPROVALS	DATE

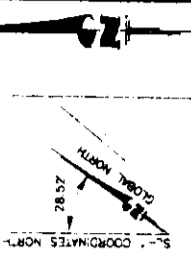
<p>Lockheed Idaho Technologies Company</p>	
<p>BORAX-1 & SL-1 BURIAL GROUNDS 6" PEA GRAVEL LAYER ASPHALT (PIT 1, TRENCH 1 & PIT 2)</p>	
<p>APPROVED: DATE: 2/15/97</p>	<p>DATE: 11-3-97</p>
<p>BY: [Signature]</p>	<p>BY: [Signature]</p>
<p>SCALE: AS SHOWN</p>	<p>1 of 1</p>

BN SL-14
N 1,888.00
E 1,888.00

BN SL-10
N 1,890.00
E 10,700.00
Elev. 5070.87



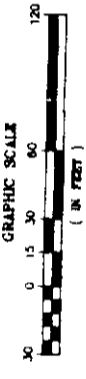
BM 5-18
 A. 10.7033
 B. 10.7034
 ELEV. 5023.4



Lockheed
 Geomatics Technology Company

BORAX-1 & SL-1 BURIAL GROUNDS
 SL-1 COBBLE LAYER ASSESSMENT

DATE: 8-25-99
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]
 PROJECT NO.: [Number]
 SHEET NO.: 1 of 1



SURVEYORS CERTIFICATE

I, Kim H. Leavitt, a Registered Professional Land Surveyor in the State of Idaho do hereby certify that this plat is an accurate representation of the survey completed under my supervision.

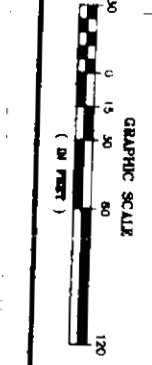
Kim H. Leavitt
 Kim H. Leavitt License No. 4563 Date 2-18-97

BM 5-18
 A. 10.7033
 B. 10.7034
 ELEV. 5023.4

SURVEYORS CERTIFICATE

I, Kim H. Leavitt, a Registered Professional Land Surveyor in the State of Idaho do hereby certify that this plot is an accurate representation of the survey completed under my supervision.

Kim H. Leavitt
 Kim H. Leavitt License No. 4563 Date 3-26-97

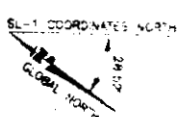
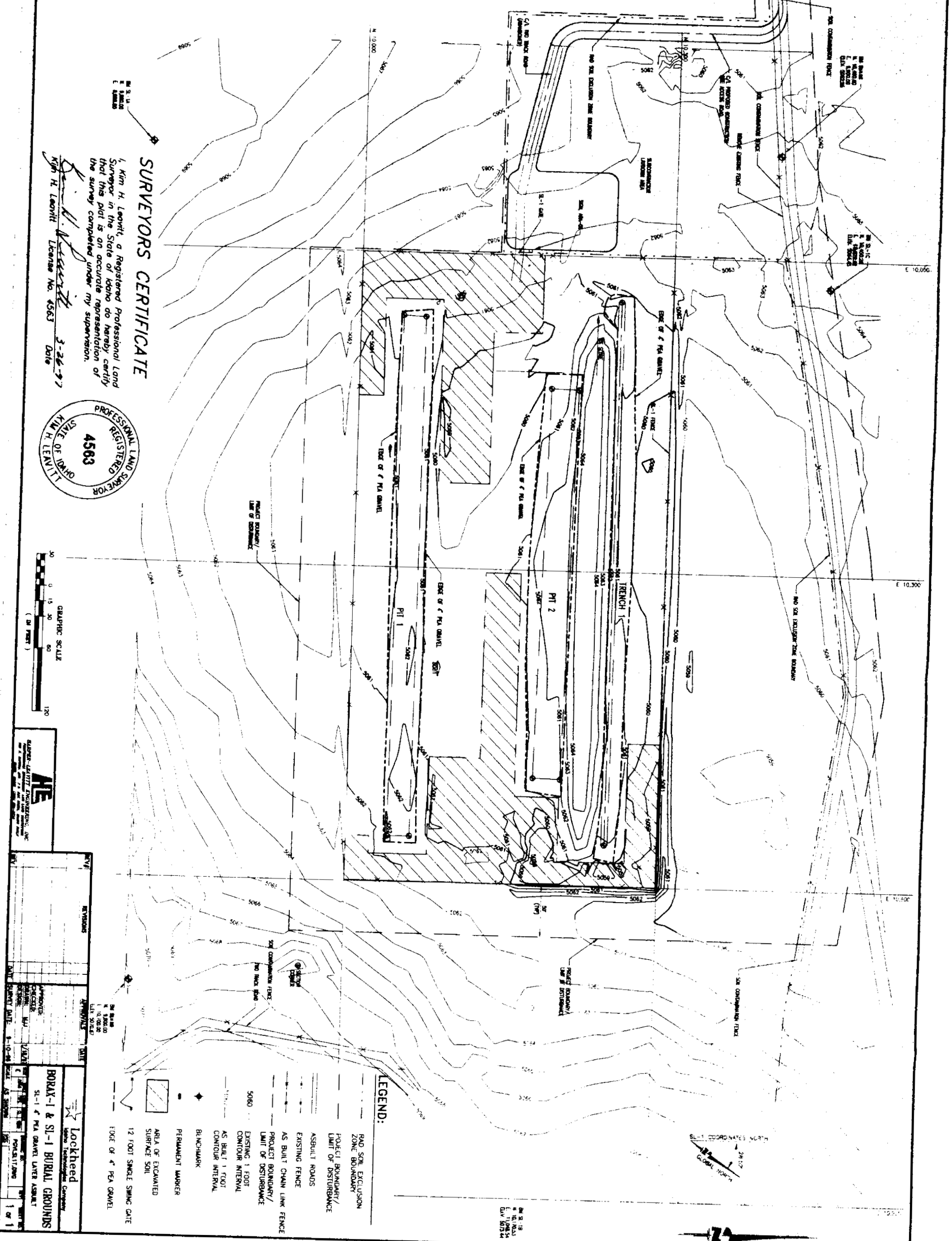


NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	2-10-97
2	REVISED	3-10-97

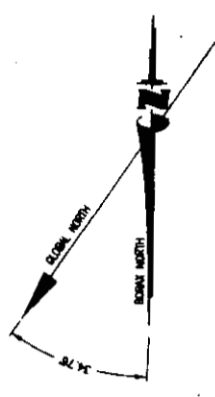
Lockheed
 Lockheed Technology Company

BORAX-1 & SL-1 BURIAL GROUNDS
 SL-1 & PEA GRAVEL LAYER ASSEMBLY

DATE: 3-26-97
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT NO.: [Number]
 SHEET NO.: 1 OF 1



28 51.18
 10.7033
 8073.24



N.A.D. STATE PLANE COORDINATES

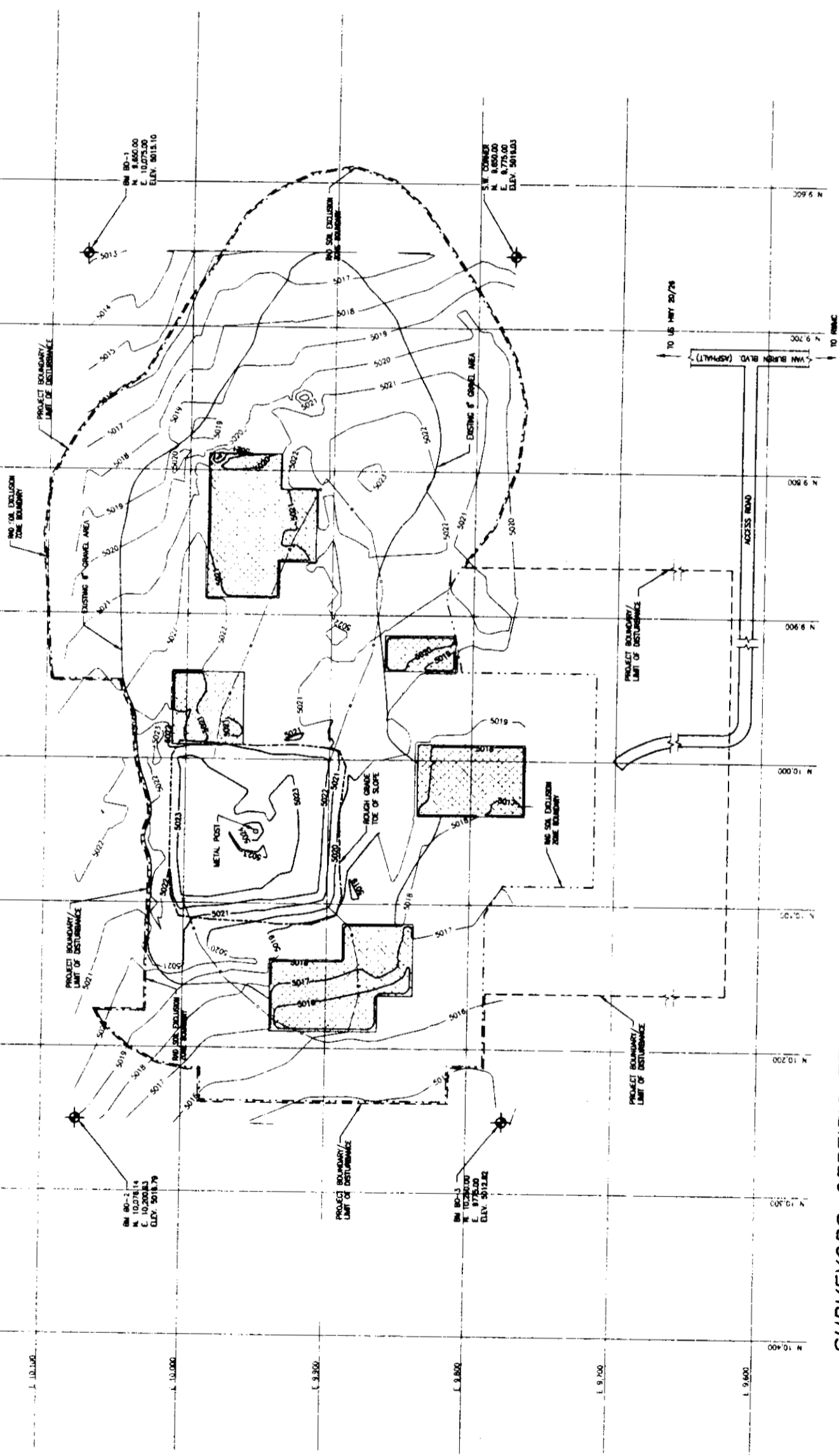
BM 50-1
 N. 10278.14
 E. 10278.14
 ELEV. 5018.79

 BM 50-2
 N. 10278.14
 E. 10278.14
 ELEV. 5018.79

 BM 50-3
 N. 10278.14
 E. 10278.14
 ELEV. 5018.79

 BM 50-4
 N. 10278.14
 E. 10278.14
 ELEV. 5018.79

- LEGEND**
- ACCESS ROADS
 - - - PROJECT BOUNDARY/LIMIT OF DISTURBANCE
 - - - ROAD SOIL EXCLUSION ZONE BOUNDARY
 - - - EXISTING 1 FOOT CONTOUR INTERNAL
 - - - ASSEMBLY 1 FOOT CONTOUR INTERNAL
 - ⊕ BENCHMARK
 - ▨ EXCAVATED AREAS



SURVEYORS CERTIFICATE

I, Kim H. Leavitt, a Registered Professional Land Surveyor in the State of Idaho do hereby certify that this plat is an accurate representation of the survey completed under my supervision.

Kim H. Leavitt License No. 4563 Date 2-18-92



BORAX-I ROUGH GRADE ASPHALT DRAWING



Lockheed
Lighting Technologies Company

BORAX-I & SL-I BURIAL GROUNDS
BORAX-I CONSOLIDATED SOILS LAYER ASPHALT

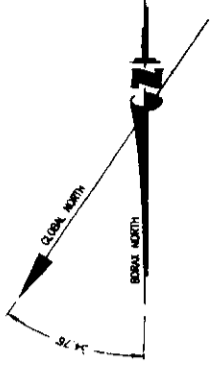
DATE SURVEY DATE: 10/1/78

SCALE: AS SHOWN

1 OF 1



1. 10000 2. 9800 3. 9600 4. 9400 5. 9200 6. 9000 7. 8800 8. 8600 9. 8400 10. 8200 11. 8000 12. 7800 13. 7600 14. 7400 15. 7200 16. 7000 17. 6800 18. 6600 19. 6400 20. 6200 21. 6000 22. 5800 23. 5600 24. 5400 25. 5200 26. 5000 27. 4800 28. 4600 29. 4400 30. 4200 31. 4000 32. 3800 33. 3600 34. 3400 35. 3200 36. 3000 37. 2800 38. 2600 39. 2400 40. 2200 41. 2000 42. 1800 43. 1600 44. 1400 45. 1200 46. 1000 47. 800 48. 600 49. 400 50. 200 51. 0 52. 200 53. 400 54. 600 55. 800 56. 1000 57. 1200 58. 1400 59. 1600 60. 1800 61. 2000 62. 2200 63. 2400 64. 2600 65. 2800 66. 3000 67. 3200 68. 3400 69. 3600 70. 3800 71. 4000 72. 4200 73. 4400 74. 4600 75. 4800 76. 5000 77. 5200 78. 5400 79. 5600 80. 5800 81. 6000 82. 6200 83. 6400 84. 6600 85. 6800 86. 7000 87. 7200 88. 7400 89. 7600 90. 7800 91. 8000 92. 8200 93. 8400 94. 8600 95. 8800 96. 9000 97. 9200 98. 9400 99. 9600 100. 9800 101. 10000

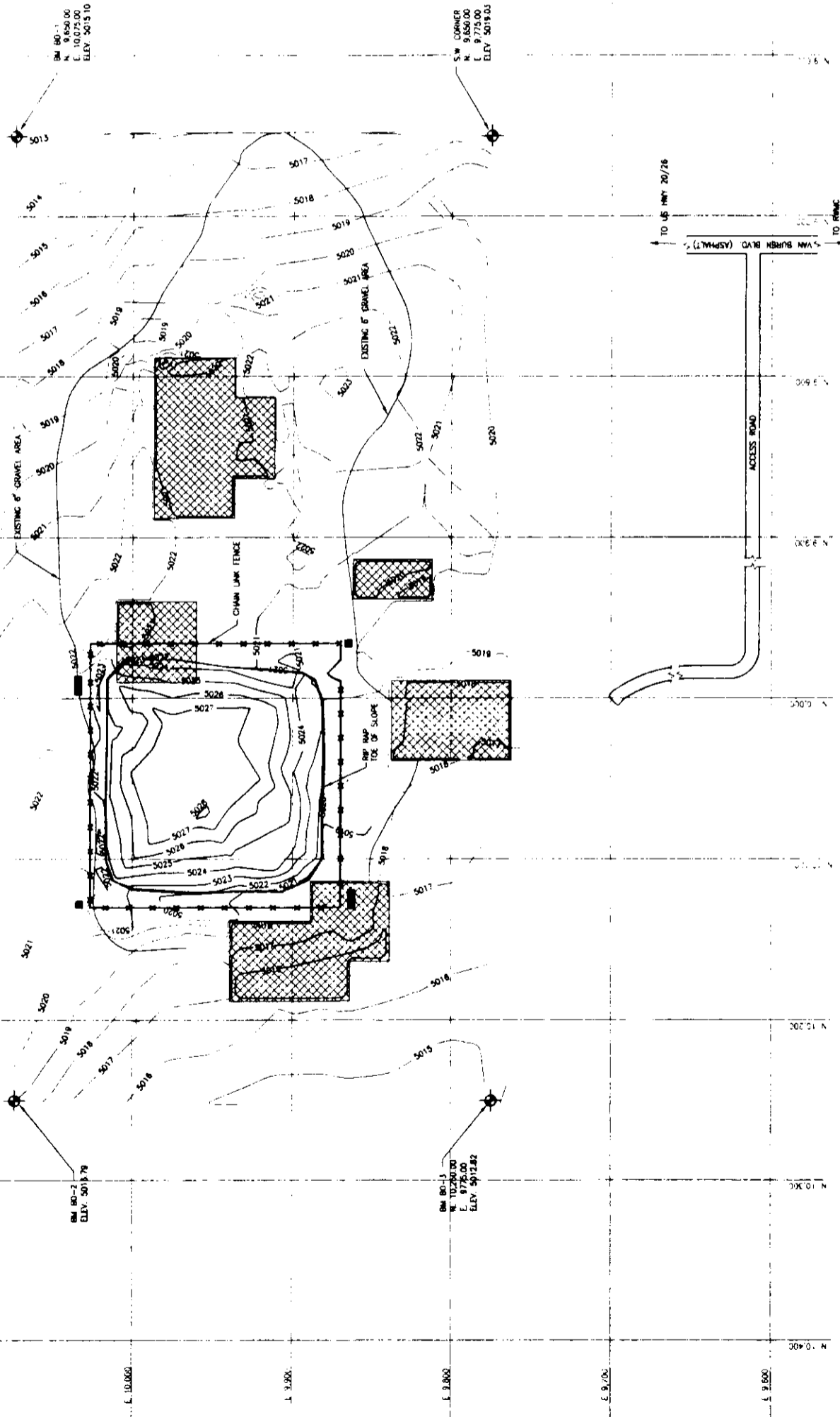


N.A.D. STATE PLANE COORDINATES

BM 80-1
 N. 4724281
 E. 4326540
 BM 80-2
 N. 4726849
 E. 4321044
 BM 80-3
 N. 4729444
 E. 4318187

LEGEND

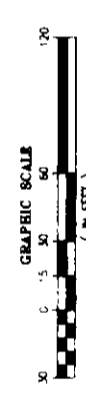
- ACCESS ROAD
- CHAIN LINK FENCE
- EXISTING 1 FOOT CONTOUR INTERVAL
- ASBUILT 1 FOOT CONTOUR INTERVAL
- BENCHMARK
- BRASS CAP
- PERMANENT MARKER
- EXCAVATED AREAS
- 12 FOOT SINGLE SINGE GATE
- TOE OF SLOPE



SURVEYORS CERTIFICATE

I, Kim H. Leavitt, a Registered Professional Land Surveyor in the State of Idaho do hereby certify that this plat is an accurate representation of the survey completed under my supervision.

Kim H. Leavitt
 Kim H. Leavitt License No. 4563 Date 2-18-97



APPROVALS DATE
 LOCKHEED
 HOKI & SL-1 BURIAL GROUNDS
 BORAX-1 IMP RAP LAYER ASSEMBLY
 APPROVED: [Signature]
 DATE: 2/18/97
 LOCKHEED
 HOKI & SL-1 BURIAL GROUNDS
 BORAX-1 IMP RAP LAYER ASSEMBLY
 APPROVED: [Signature]
 DATE: 2/18/97

