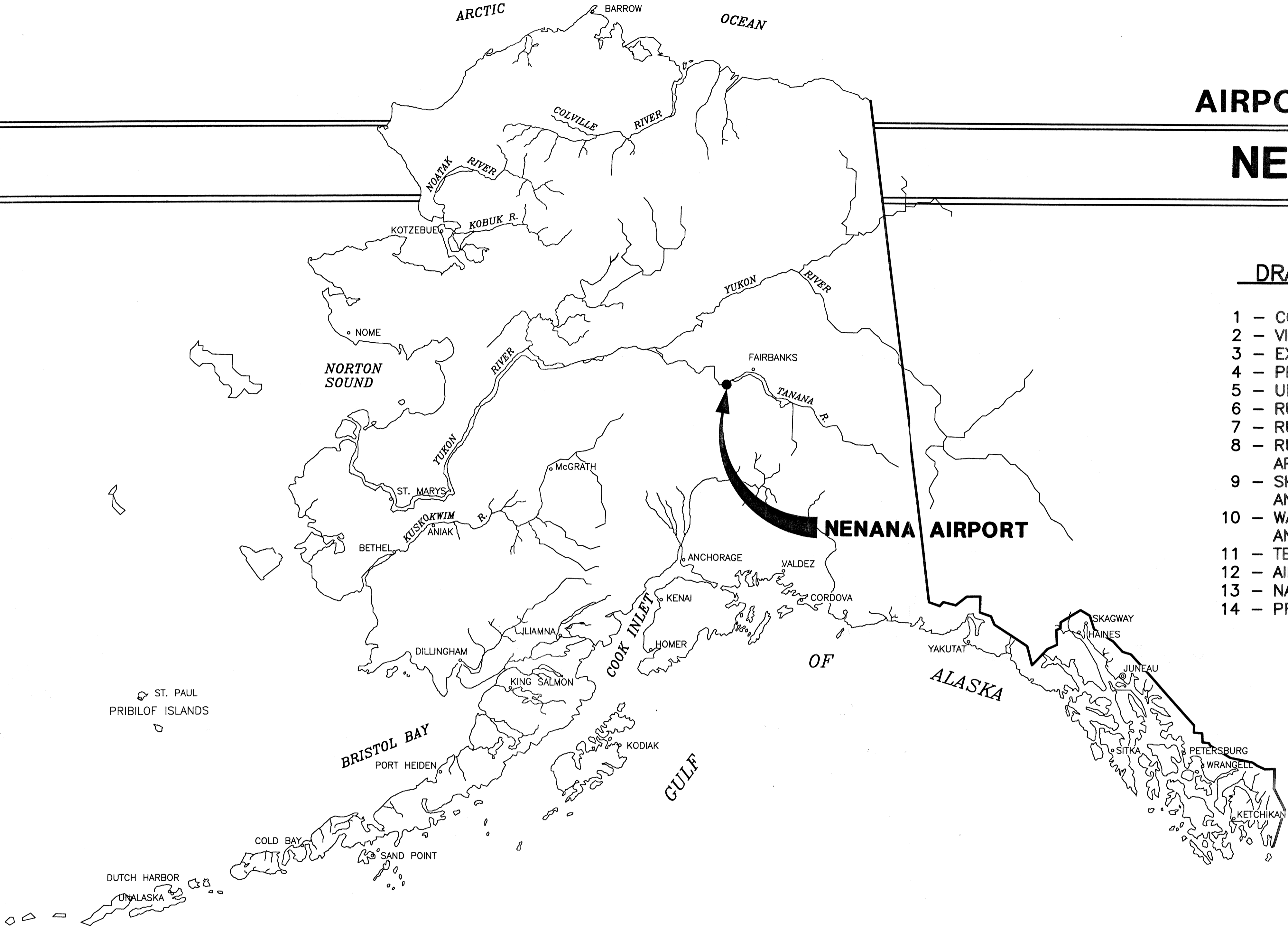
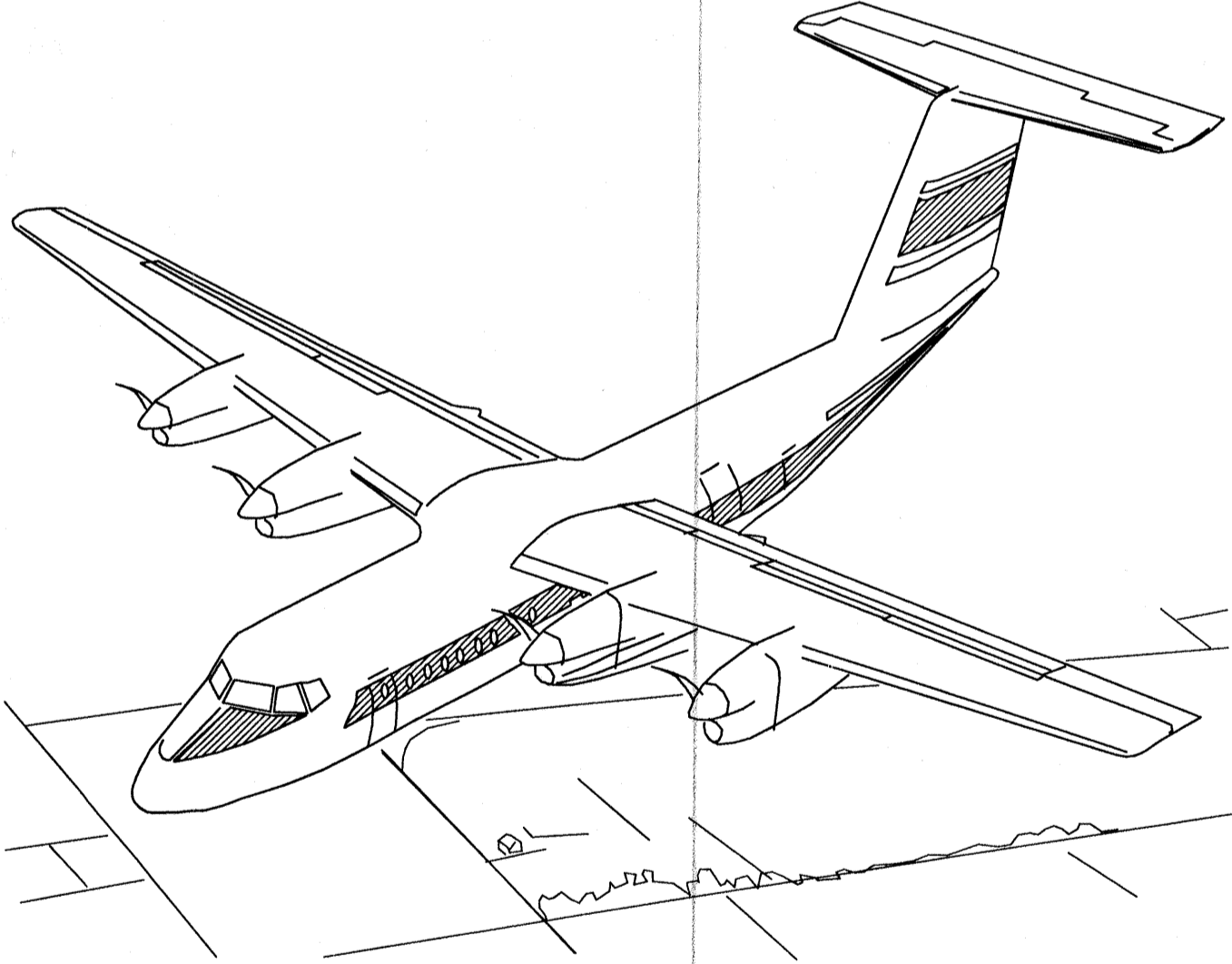


AIRPORT LAYOUT PLAN FOR NENANA AIRPORT

DRAWING INDEX

- 1 - COVER SHEET AND INDEX
- 2 - VICINITY MAP AND DATA TABLES
- 3 - EXISTING AIRPORT LAYOUT PLAN
- 4 - PROPOSED AIRPORT LAYOUT PLAN
- 5 - ULTIMATE AIRPORT LAYOUT PLAN
- 6 - RUNWAY 3L-21R PROPOSED PLAN & PROFILE
- 7 - RUNWAY 3L-21R ULTIMATE PLAN & PROFILE
- 8 - RUNWAY 3L-21R INNER PORTION OF APPROACH SURFACE
- 9 - SKI STRIP 3C-21C EXISTING PLAN & PROFILE AND INNER PORTION OF APPROACH SURFACE
- 10 - WATERLANE 3R-21L EXISTING PLAN & PROFILE AND INNER PORTION OF APPROACH SURFACE
- 11 - TERMINAL AREA PLAN
- 12 - AIR SPACE DRAWING
- 13 - NARRATIVE REPORT
- 14 - PROPERTY PLAN



Project: 00\051151\51151alp01, 1=40, 11/22/02 at 14:14 by djs
 VIEW: ALP01, ALPLOT
 XREF: XREF2

DESIGN	DJS	
DRAWN	PJB	
CHECKED	FDR	
BY	DATE	REVISIONS

CITY OF NENANA

APPROVED
Wayne Boedecker
 WAYNE BOEDECKER, P.E. PROJECT MANAGER

DATE 12/3/02

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
John P. Zant
 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601
 DATE 11/10/02

F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

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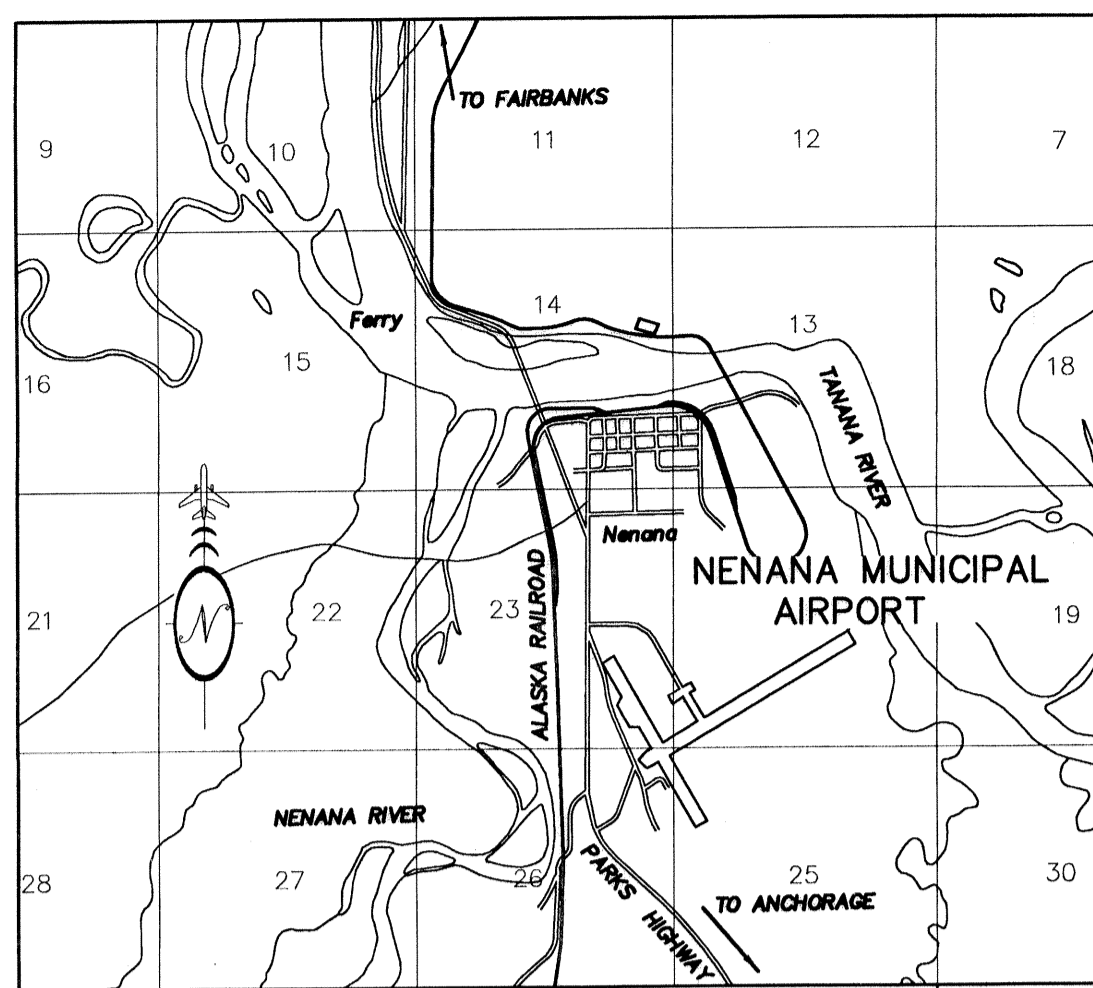
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 PH: (907) 522-1707, FAX: (907) 522-3403

NENANA AIRPORT
 AIRPORT LAYOUT PLAN

**COVER SHEET
 AND INDEX**

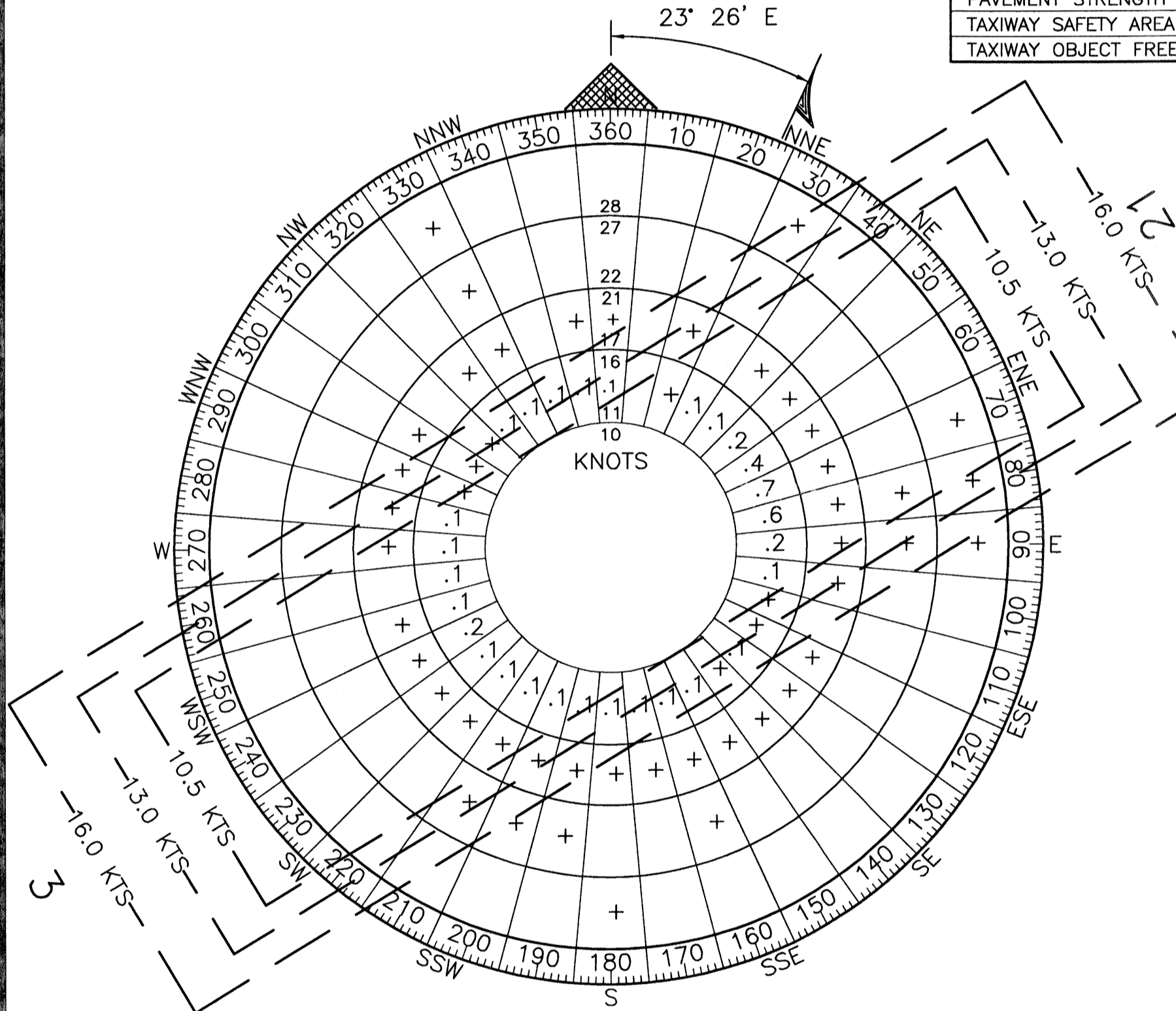
SHEET
 1
 OF
 14



VICINITY MAP

1"=1 MILE

MAGNETIC DECLINATION
JUNE 2002
23° 26' E



WIND DATA

SOURCE: E.N.R.I., U.A.A.
79,140 OBSERVATIONS
JAN 1992 TO OCT 2000

WIND COVERAGE			
	10.5 KTS	13 KTS	16 KTS
RUNWAY 3L-21R	98.95%	99.46%	99.90%

RUNWAY DATA TABLE

RUNWAY IDENTIFICATION	RUNWAY 3L - 21R			GRAVEL / SKI STRIP 3C - 21C		WATER LANE 3R - 21L	
	EXISTING	FUTURE	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE
RUNWAY END ELEVATIONS (MSL)	3L - 362.1 FT. MSL 21R - 360.5 FT. MSL	3L - 362.1 FT. MSL 21R - 360.5 FT. MSL	3L - 360.1 FT. MSL 21R - 360.5 FT. MSL	3L - 360.0 FT. MSL 21R - 360.0 FT. MSL	3L - 360.0 FT. MSL 21R - 360.0 FT. MSL	3L - 350.8 FT. MSL 21R - 350.8 FT. MSL	3L - 350.8 FT. MSL 21R - 350.8 FT. MSL
RUNWAY GEODETIC POSITIONS (N.A.D. 83)							
RUNWAY END 3L LAT.	N 64° 32' 44.19"	SAME	N 64° 32' 42.16"	RUNWAY END 3C LAT.	N 64° 32' 43.89"	RUNWAY END 3R LAT.	N 64° 32' 33.53"
RUNWAY END 3L LONG.	W 149° 05' 13.43"	SAME	W 149° 05' 21.26"	RUNWAY END 3C LONG.	W 149° 05' 01.27"	RUNWAY END 3R LONG.	W 149° 04' 50.63"
RUNWAY END 21R LAT.	N 64° 33' 09.58"	N 64° 33' 07.55"	SAME	RUNWAY END 21C LAT.	N 64° 32' 56.69"	RUNWAY END 21L LAT.	N 64° 32' 53.36"
RUNWAY END 21R LONG.	W 149° 03' 35.46"	W 149° 03' 43.30"	SAME	RUNWAY END 21C LONG.	W 149° 04' 11.89"	RUNWAY END 21L LONG.	W 149° 03' 42.37"
RUNWAY DIMENSION	100' x 5000'	100' x 4600'	100' x 5000'		60' x 2520'		107' x 3600'
RUNWAY SAFETY AREA DIMENSION	300' x 6000'	300' x 5800'	300' x 6200'		120' x 3000'		120' x 3000'
RUNWAY OBJECT FREE AREA DIMENSION	800' x 6200'	800' x 5800'	800' x 6200'		250' x 3000'		250' x 4000'
RUNWAY OBJECT FREE ZONE (OFZ)	400' x 5400'	400' x 5000'	400' x 5400'		120' x 2920'		120' x 4000'
RUNWAY LIGHTING	MIRL	MIRL	MIRL		MIRL		MIRL
RUNWAY MARKING	N-P INST	N-P INST	N-P INST		NONE		NONE
VISIBILITY MINIMUM	> 3/4 MILE	> 3/4 MILE	> 3/4 MILE		> 1 MILE		> 1 MILE
EFFECTIVE GRADIENT	0.03%	-0.04%	-0.01%		0.0%		0.0%
APPROACH CATEGORY AND DESIGN GROUP	B - III	B - III	B - III		A - I EXCLUSIVE		A - I EXCLUSIVE
PERCENT WIND COVERAGE (16 KTS)	99.9%	99.9%	99.9%		99.0%		99.0%
FAR PART 77 APPROACH SLOPE	34:1	34:1	34:1		20:1		20:1
APPROACH AIDS	REILS/ VASI/ NDB	REIL/ PAPI/ NDB/ GPS	REILS/ PAPI/ NDB/ GPS		NDB		NDB
RUNWAY SURFACE	ASPHALT CONCRETE	ASPHALT CONCRETE	ASPHALT CONCRETE		GRAVEL / SNOW		GRAVEL / SNOW
PAVEMENT STRENGTH	160 ST	160 ST	160 ST		N/A		N/A
TAXIWAY SAFETY AREA	118'	118'	118'		N/A		N/A
TAXIWAY OBJECT FREE AREA	186'	186'	186'		N/A		N/A

AIRPORT DATA TABLE

RUNWAY IDENTIFICATION	RUNWAY 3L-21R		
	EXISTING	PROPOSED	ULTIMATE
AIRPORT ELEVATION	362.1 MSL	362.1 MSL	362.1 MSL
AIRPORT REFERENCE POINT (A.R.P.) LAT.			64°32'50.12" N
AIRPORT REFERENCE POINT (A.R.P.) LONG.			149°04'28.15" W
MEAN MAX. TEMPERATURE, HOTTEST MONTH (JULY)	72° F	72° F	72° F
NAVIGATIONAL AIDS	REILS/ VASI/ NDB	REILS/ PAPI/ NDB/ GPS	REILS/ PAPI/ NDB/ GPS
TAXIWAY LIGHTING	MITL	MITL	MITL
RUNWAY MARKING	N-P INST.	N-P INST.	N-P INST.

NONSTANDARD CONDITIONS

ITEM	STANDARD	EXISTING	PROPOSED	ULTIMATE
RUNWAY 21R SAFETY AREA LENGTH BEYOND THRESHOLD	600'	200'	600'	600'
RUNWAY 21R OBJECT FREE AREA BEYOND THRESHOLD	600'	200'	600'	600'
PARALLEL RUNWAY SEPARATION (RUNWAY 3L-21R / 3L-21C)	700'	300'	300'	300'

LEGEND

ITEM	EXISTING	FUTURE
BUILDING RESTRICTION LINE	BRL - - - -	-BRL- - - -
AVIGATION & HAZARD EASEMENT		
AIRPORT REFERENCE POINT (A.R.P.)	⊙ ARP	⊙ ARP
WIND CONE AND SEGMENTED CIRCLE		
CONTOURS		
ROADWAYS		
ROTATING BEACON		
SHORELINE		
PROPERTY LINE		
PAPI		
STRUCTURE		
OPEN WATER		
SEGMENTED CIRCLE		
THRESHOLD LIGHTS		
MONUMENTS		
WIND CONE		

project:00\0511151\51151ap02, 1=1, 11/26/02 at 15:24 by mka
VIEW: ALO2
XREF: XREF1

DESIGN DJS
DRAWN PJB
CHECKED FDR

BY	DATE	REVISIONS

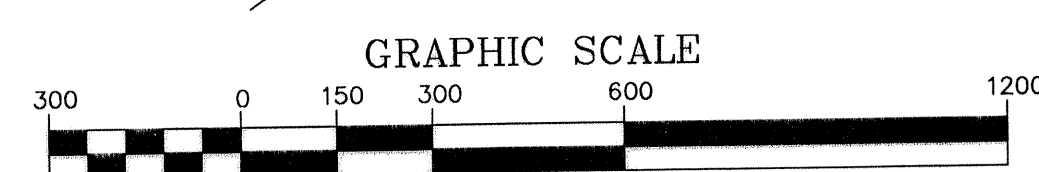
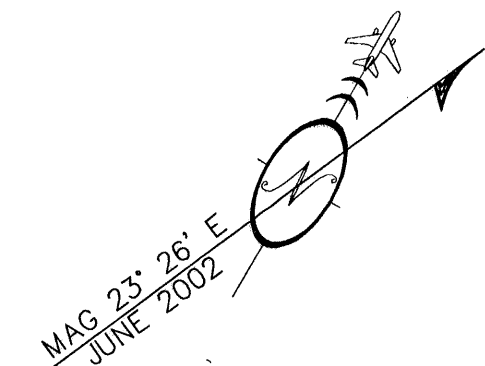
CITY OF NENANA
APPROVED Wayne Boedecker DATE 12/3/02
WAYNE BOEDECKER, P.E. PROJECT MANAGER

AIRPORT LAYOUT PLAN APPROVED
BY LETTER DATED:
John P. Hunt FOR
AIRPORTS DIVISION
ALASKAN REGION, AAL-601
12/5/02
F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

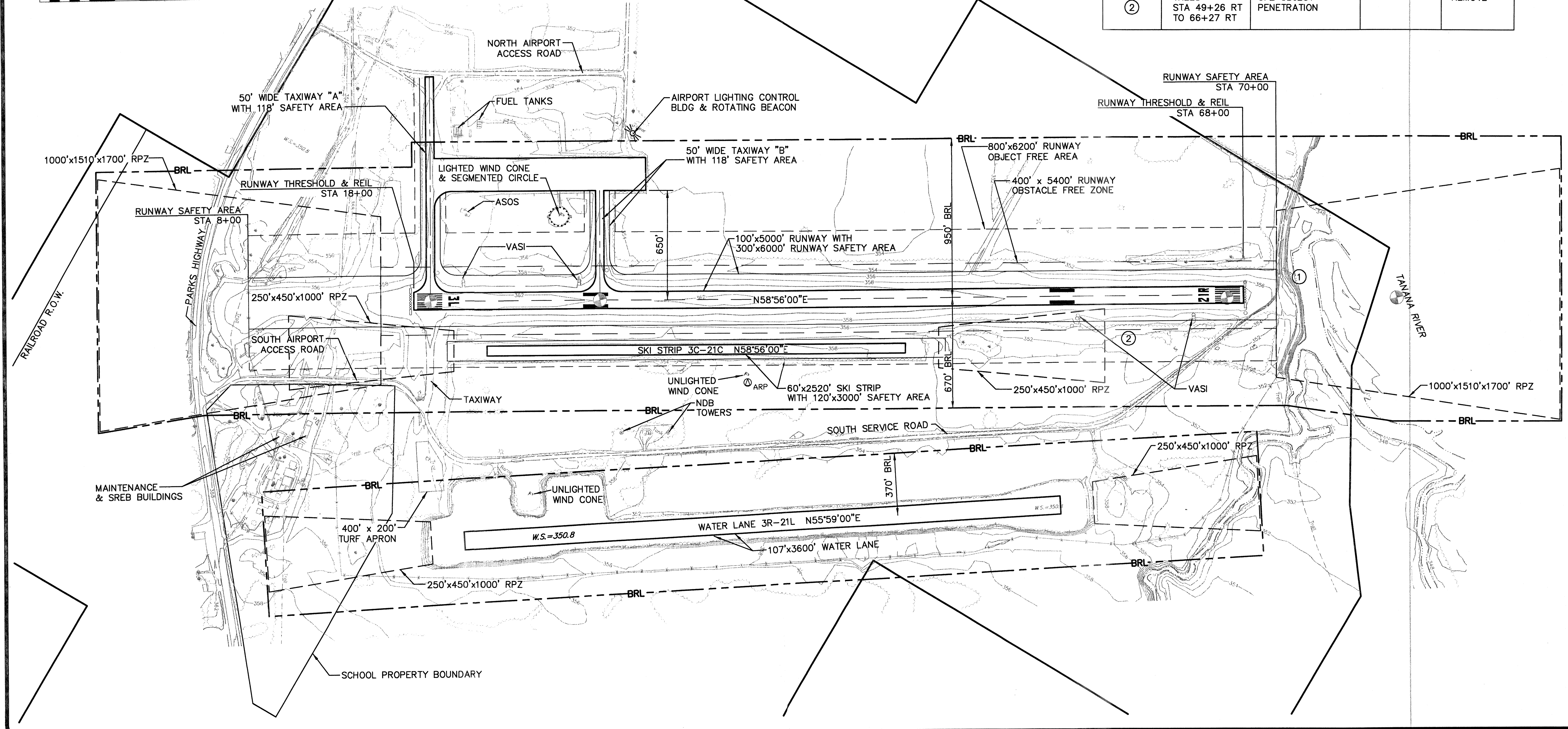
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PLANNERS COMPUTER SERVICES
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**NENANA AIRPORT
AIRPORT LAYOUT PLAN**
VICINITY MAP
AND DATA TABLES

SHEET
2 OF
14



NO.	DESCRIPTION	PENETRATION TYPE	PENETRATION	RESOLUTION
①	10' CLEARANCE ABOVE CL ACCESS ROAD	THRESHOLD SITING & APPROACH SURFACE	6'	RELOCATE THRESHOLD
②	TREES STA 49+26 RT TO 66+27 RT	OFZ OBJECT PENETRATION		REMOVE



Project: 00\091\51\51151\ap03_1=300_11/22/02 at 11:41 by djs
 VIEW: ALO3
 XREF: T15IDEST, T15IMAST, HANK, XREF1

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DRAWN	PJB	
CHECKED	FDR	
BY	DATE	REVISIONS

CITY OF NENANA

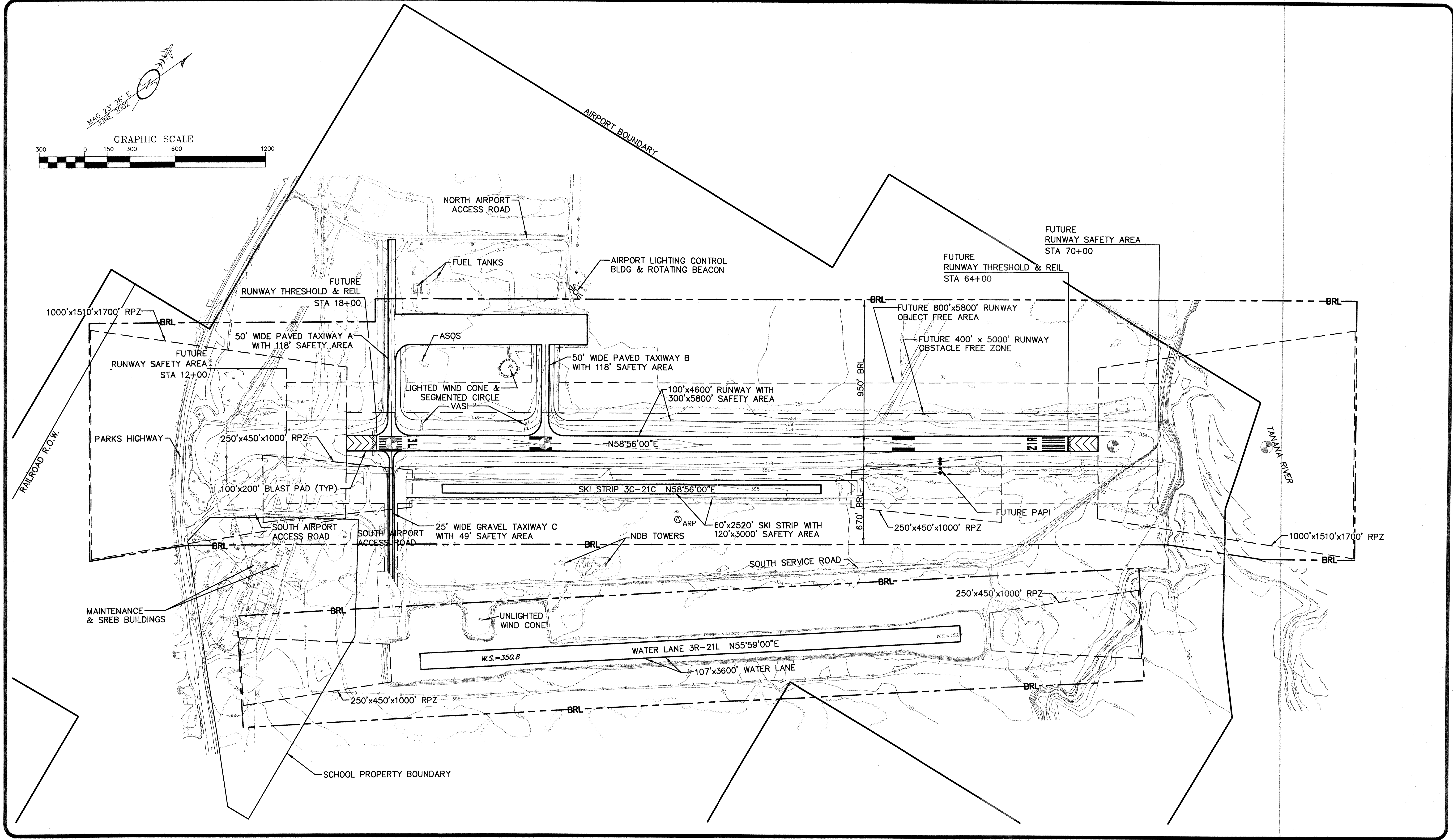
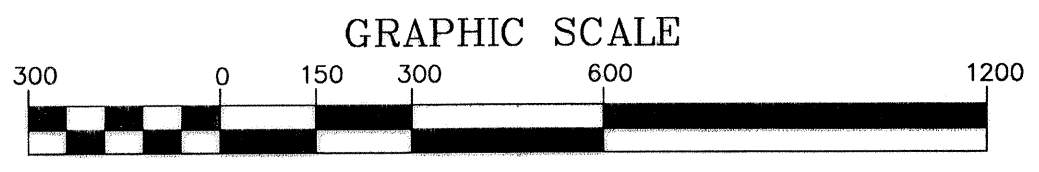
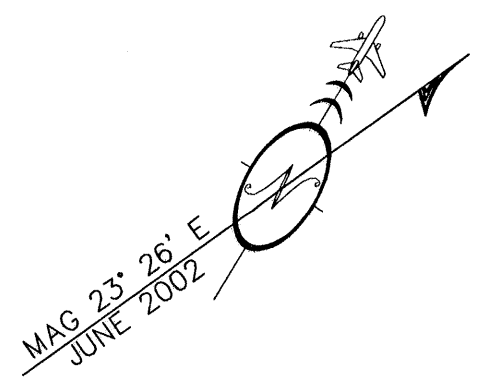
APPROVED *Wayne Boedecker* DATE 12/3/02
 WAYNE BOEDECKER, P.E. PROJECT MANAGER

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
[Signature]
 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601
 F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

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NENANA AIRPORT
 AIRPORT LAYOUT PLAN
**EXISTING AIRPORT
 LAYOUT PLAN**

SHEET
 3 OF
 14



Project: 00_051151\51151ap04_1=300_11/22/02 at 13:54 by djs
 Drawn: ALG
 XREF: 1151MAST, HANK, XREF1

DESIGN	DJS
DRAWN	PJB
CHECKED	FDR

BY	DATE	REVISIONS

CITY OF NENANA

APPROVED
Wayne Boedecker
 WAYNE BOEDECKER, P.E. PROJECT MANAGER

DATE 12/3/02

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
J.P. Smith
 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601
 12/5/02

F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

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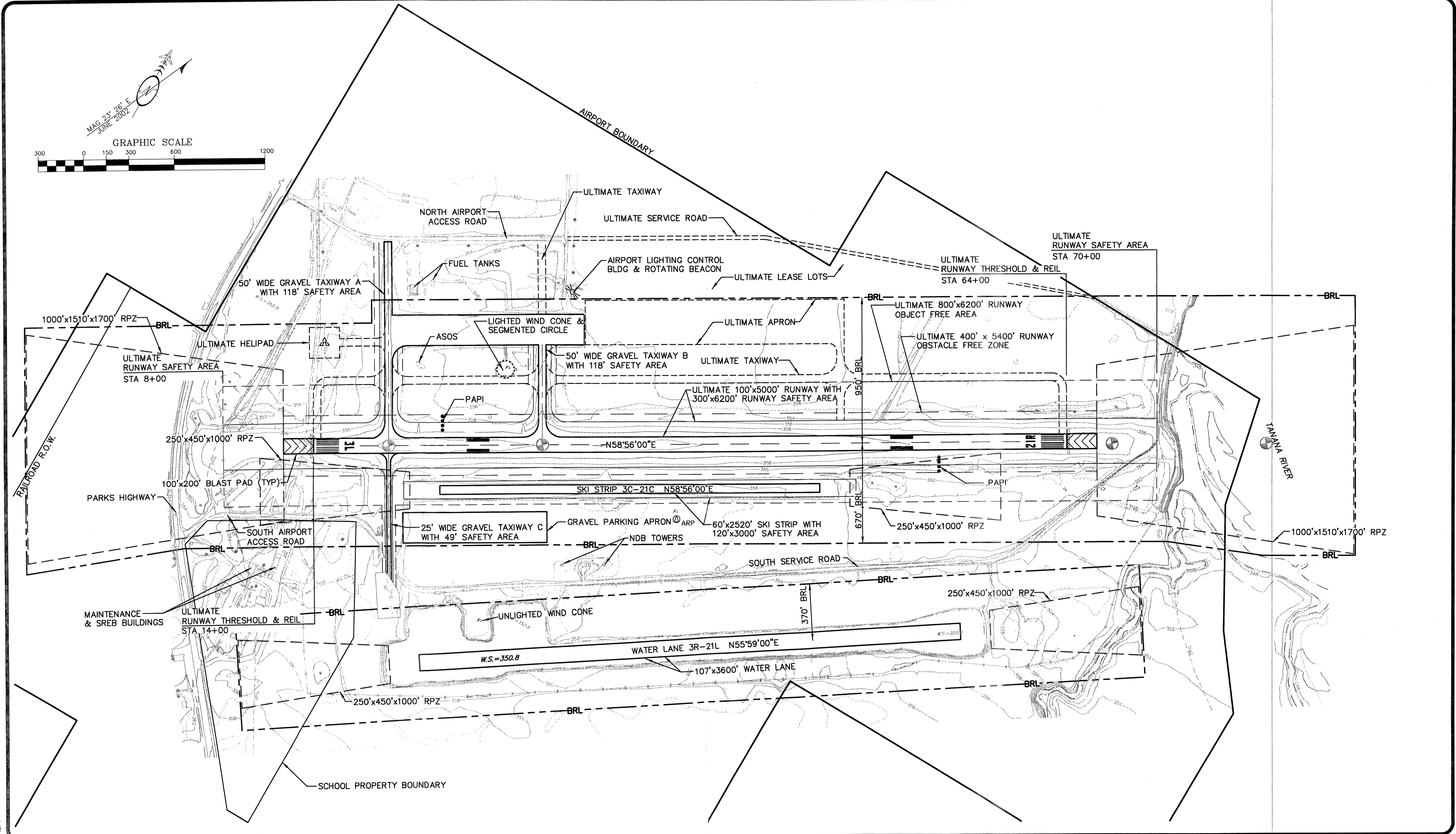
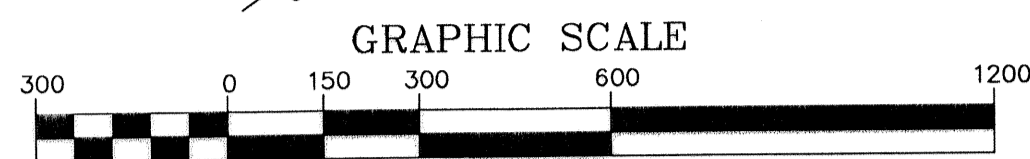
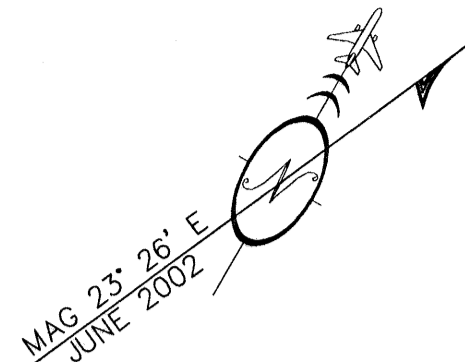
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NENANA AIRPORT
 AIRPORT LAYOUT PLAN

**FUTURE AIRPORT
 LAYOUT PLAN**

SHEET
 4
 OF
 14



Project: 00\05151\15151ap05_1=300_11/22/02 at 13:59 by ujs
 View: A05_AUG_15151AS1_HANK_XREF1

DESIGN	DJS	
DRAWN	PJB	
CHECKED	FDR	
BY	DATE	REVISIONS

CITY OF NENANA

APPROVED
Wayne Boedecker
 WAYNE BOEDECKER, P.E. PROJECT MANAGER

DATE 12/3/02

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
J.M. Smith
 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601

F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

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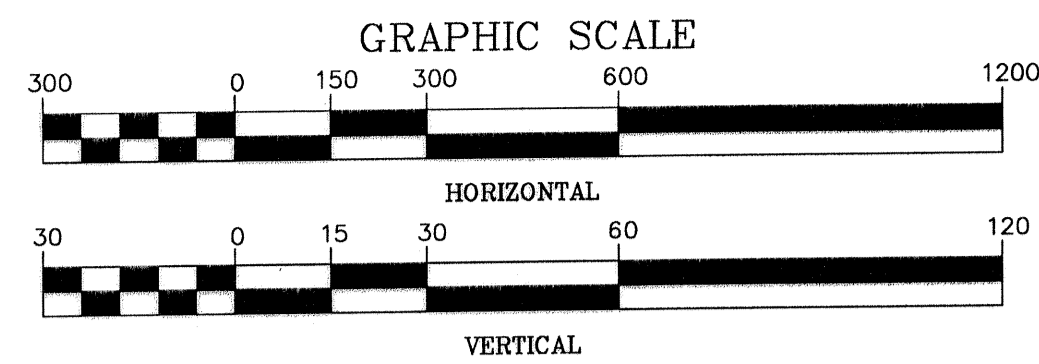
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NENANA AIRPORT
 AIRPORT LAYOUT PLAN

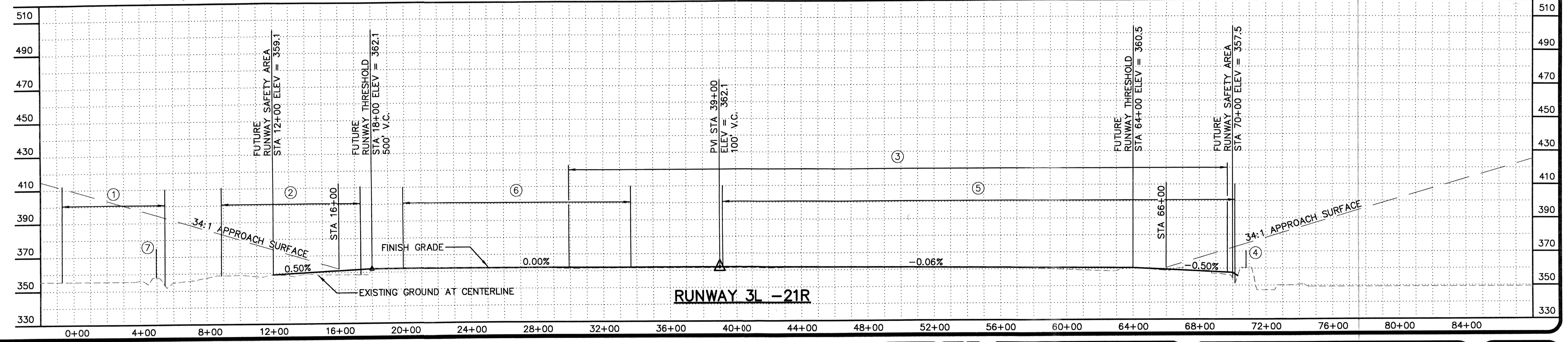
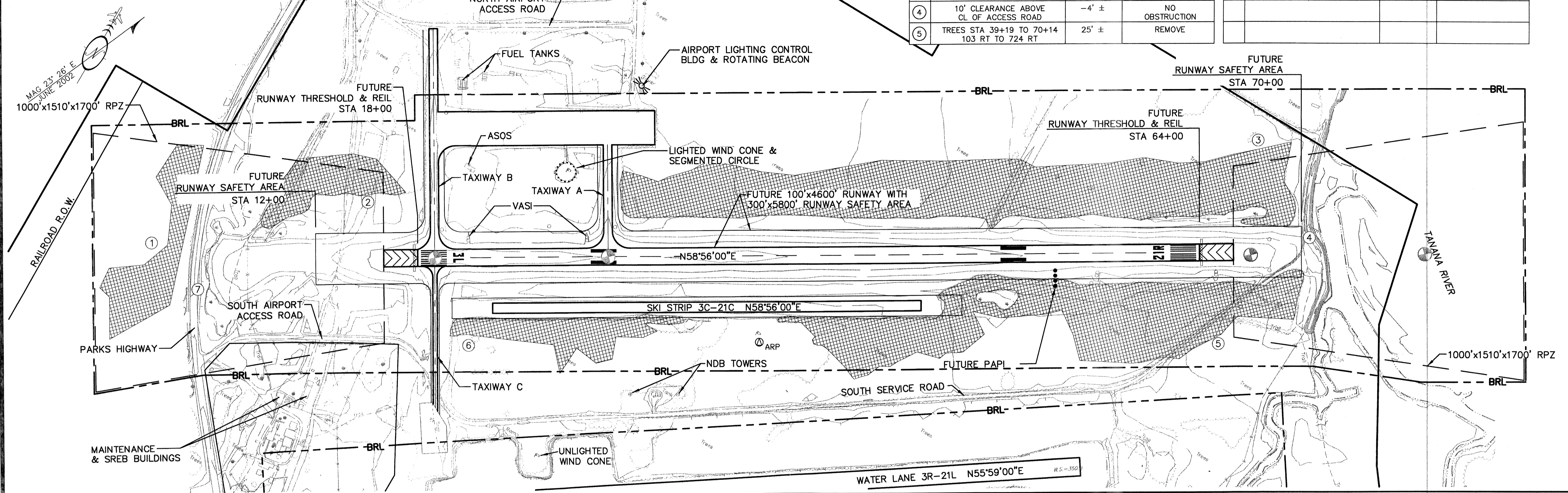
**ULTIMATE AIRPORT
 LAYOUT PLAN**

SHEET
 5 OF 14



NO.	DESCRIPTION	PENETRATION (FT)	RESOLUTION
①	TREES STA -0+69 TO 5+48 451 RT TO 682 LT	5' ±	REMOVE
②	TREES STA 8+88 TO 17+32 186 LT TO 609 LT	15' ±	REMOVE
③	TREES STA 29+92 TO 69+68 149 LT TO 640 LT	45' ±	REMOVE
④	10' CLEARANCE ABOVE CL OF ACCESS ROAD	-4' ±	NO OBSTRUCTION
⑤	TREES STA 39+19 TO 70+14 103 RT TO 724 RT	25' ±	REMOVE

NO.	DESCRIPTION	PENETRATION (FT)	RESOLUTION
⑥	TREES STA 19+89 TO 33+65 339 RT TO 681 RT	5' ±	REMOVE
⑦	17' ABOVE PARKS HWY	-20' ±	NO OBSTRUCTION



Project: 00\051151\51151aip06, 1=300, 11/22/02 at 14:02 by djs
 View: A06, ALO6
 XREF: 1151DEST, 1151MAST, BOUNDARY, XREF1

DESIGN: DJS
 DRAWN: PJB
 CHECKED: FDR

BY	DATE	REVISIONS

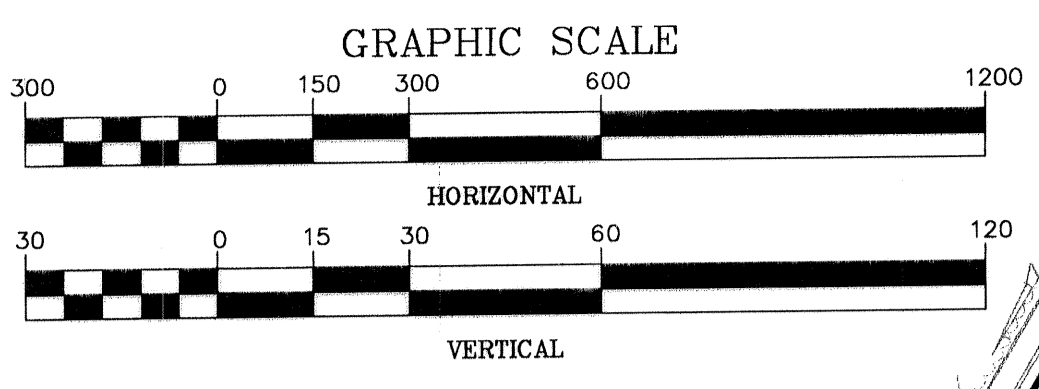
CITY OF NENANA
 APPROVED
Wayne Boedecker
 WAYNE BOEDECKER, P.E. PROJECT MANAGER
 DATE: 12/3/02

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
John Smith
 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601
 F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

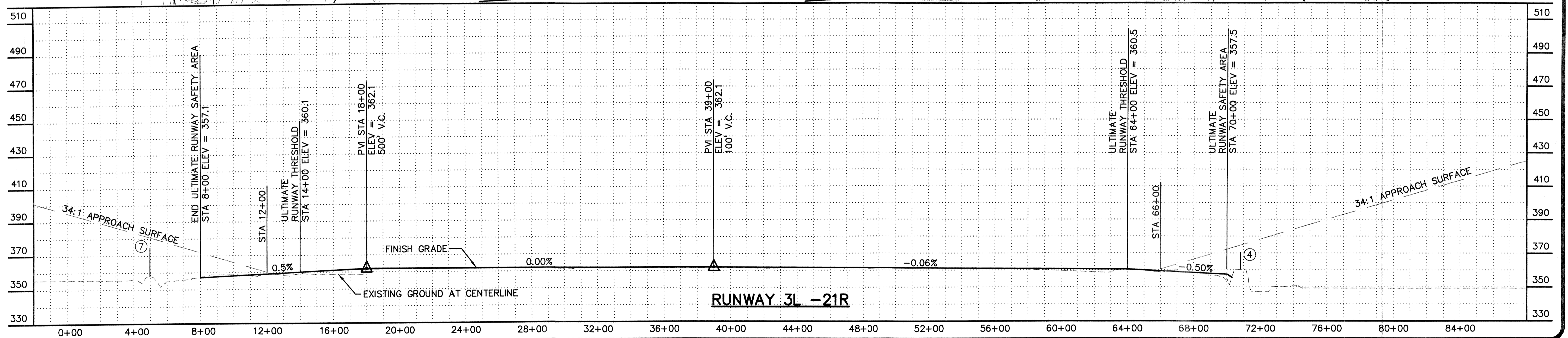
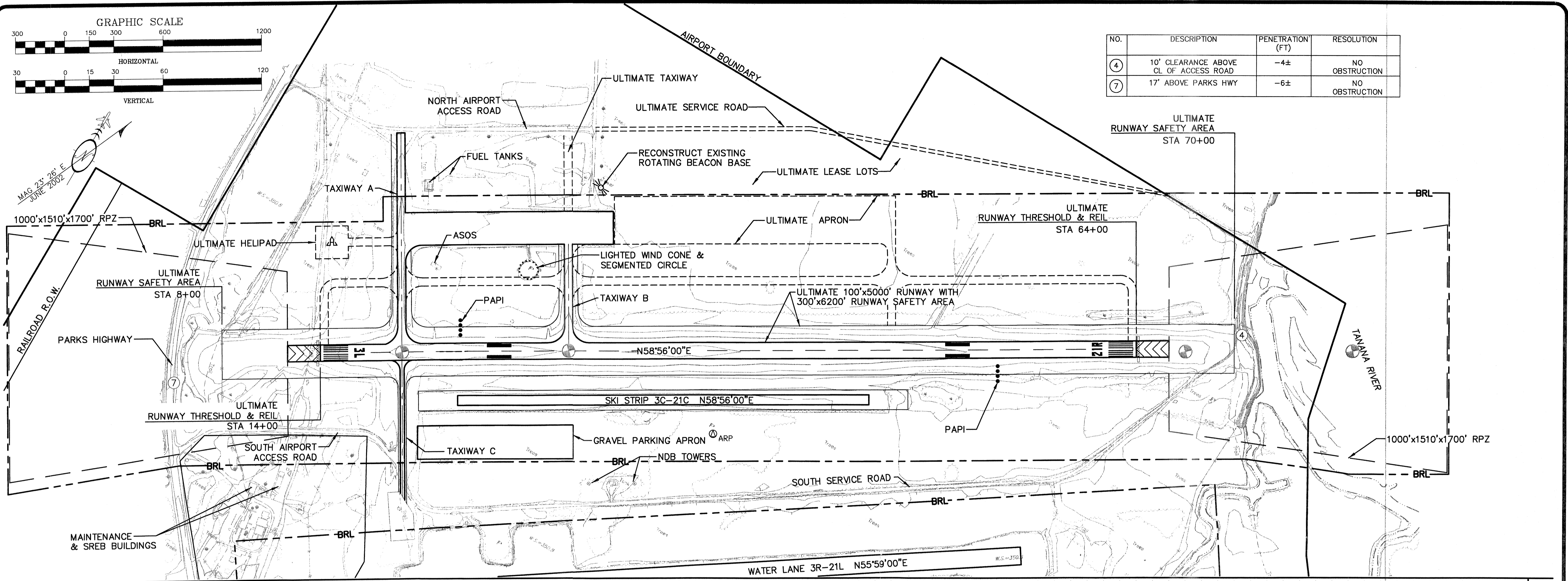
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NENANA AIRPORT
 AIRPORT LAYOUT PLAN
**RUNWAY 3L-21R FUTURE
 PLAN & PROFILE**

SHEET
6
 OF
14



NO.	DESCRIPTION	PENETRATION (FT)	RESOLUTION
④	10' CLEARANCE ABOVE CL OF ACCESS ROAD	-4±	NO OBSTRUCTION
⑦	17' ABOVE PARKS HWY	-6±	NO OBSTRUCTION



DESIGN	DJS	
DRAWN	PJB	
CHECKED	FDR	
BY	DATE	REVISIONS

CITY OF NENANA

APPROVED
Wayne Boedecker
 WAYNE BOEDECKER, P.E. PROJECT MANAGER

DATE *12/3/02*

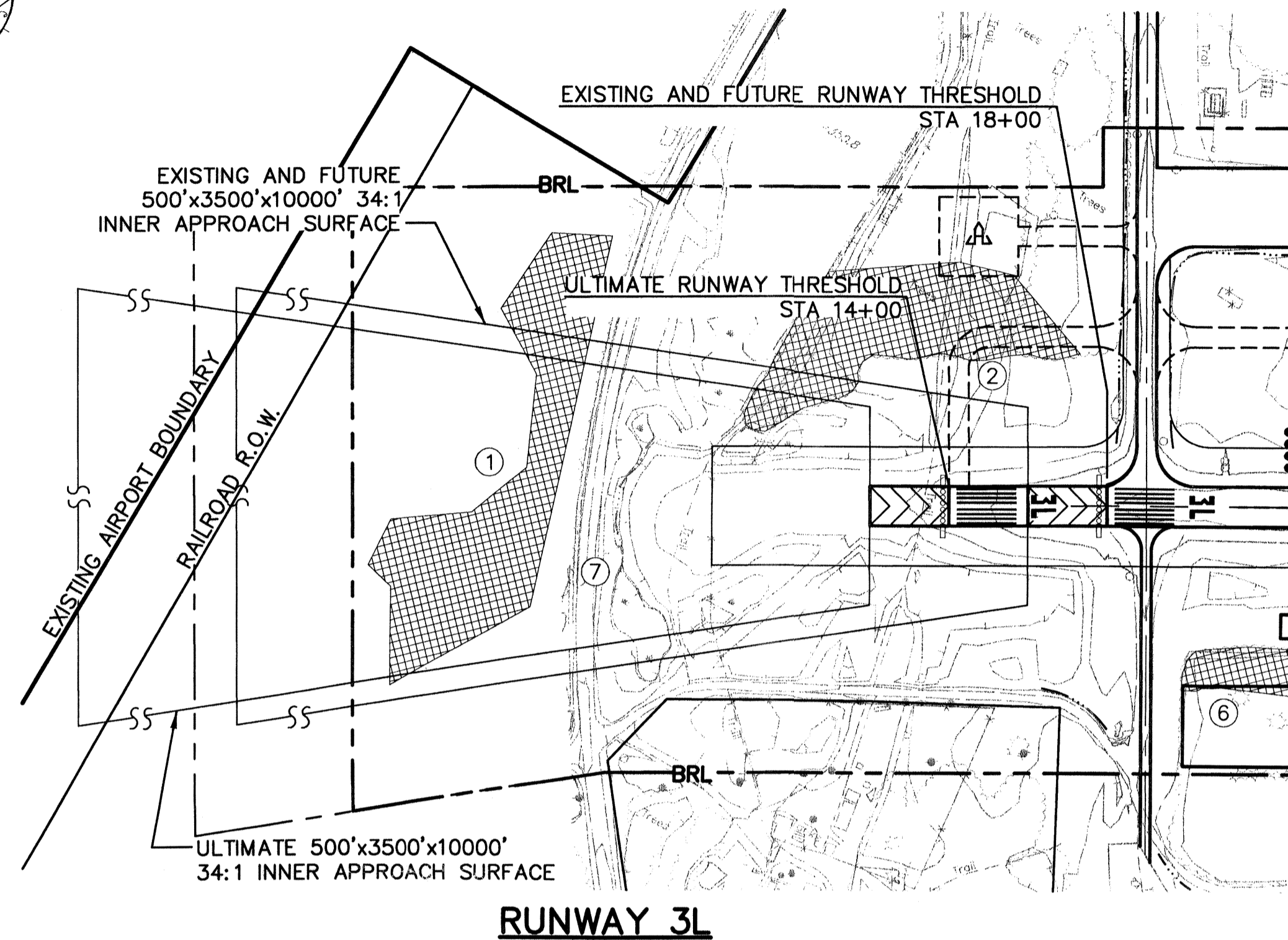
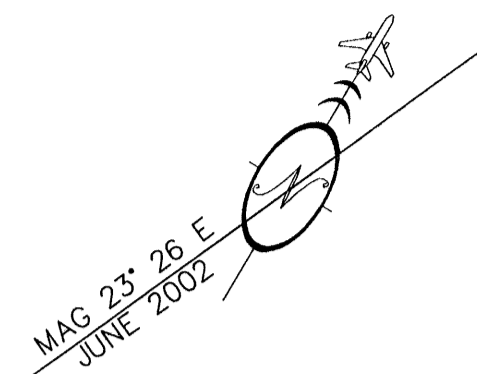
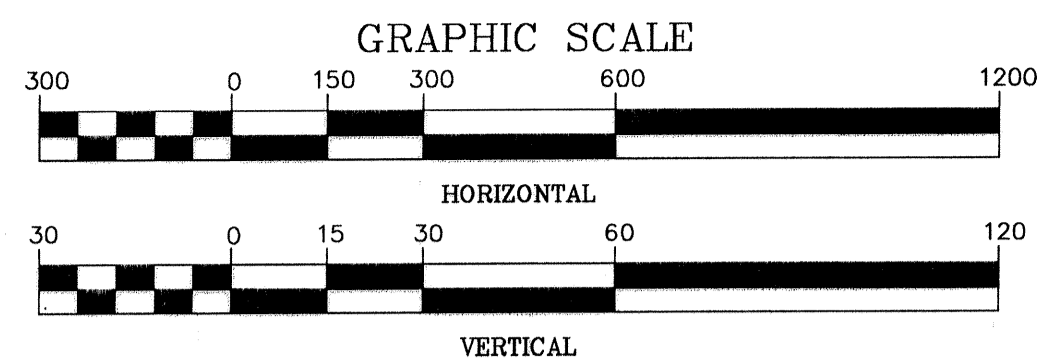
AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
John P. Smith
 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601 *12/5/02*

F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

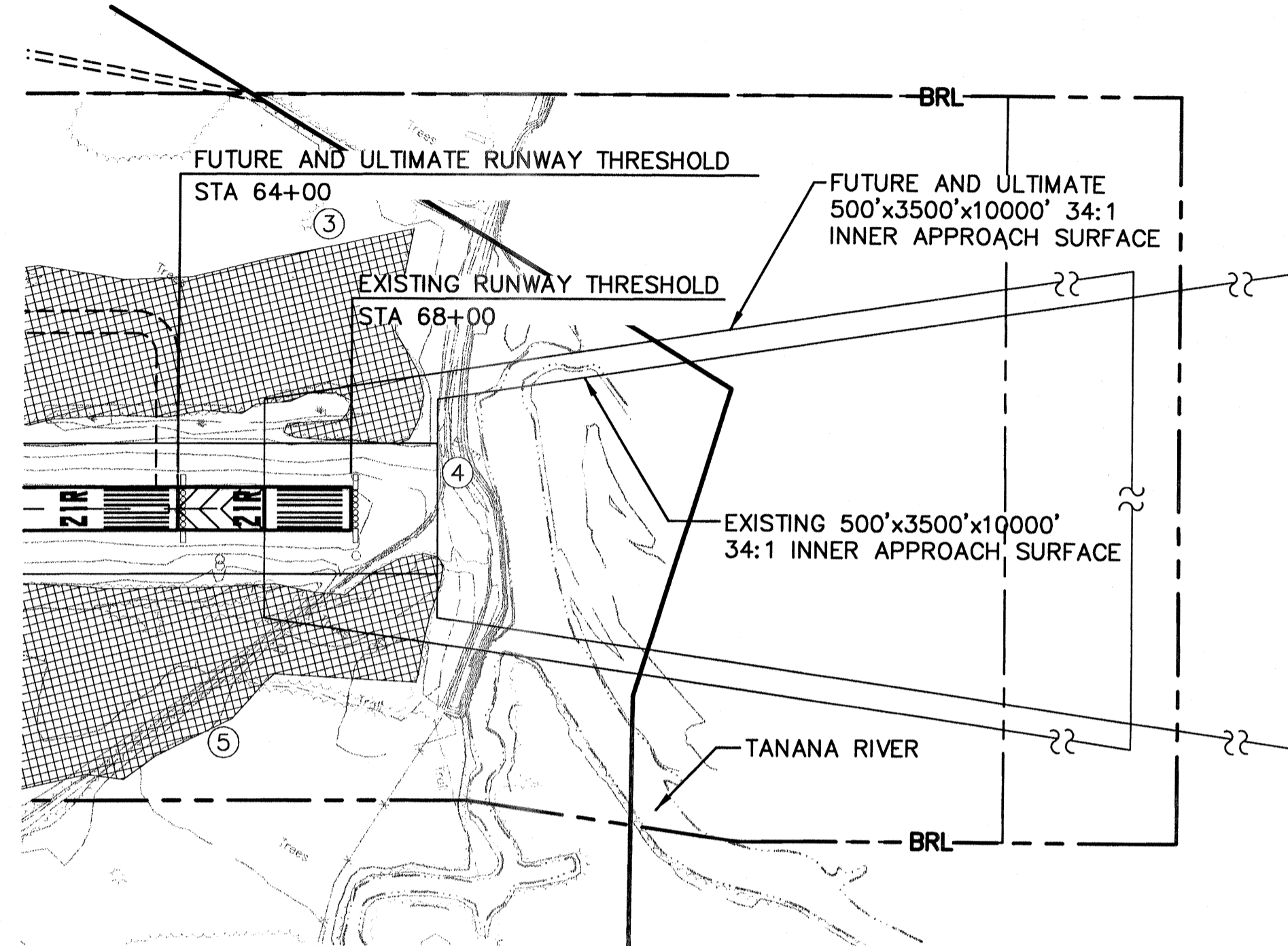
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 PH: (907) 522-1707, FAX: (907) 522-3403

NENANA AIRPORT
 AIRPORT LAYOUT PLAN
**RUNWAY 3L-21R ULTIMATE
 PLAN & PROFILE**

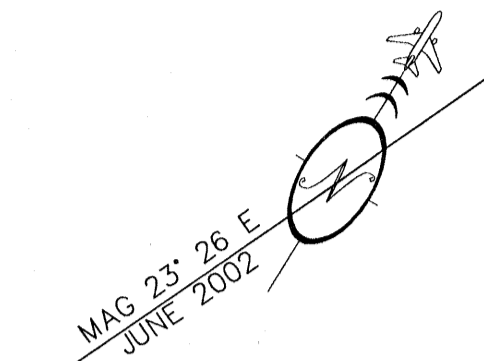
SHEET
 7 / OF
 14



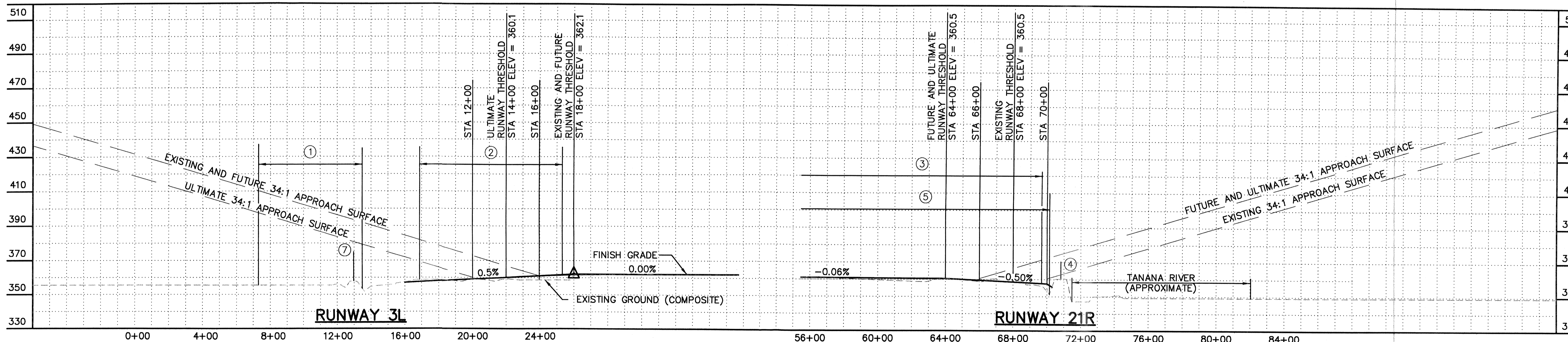
RUNWAY 3L



RUNWAY 21R



NO.	DESCRIPTION	PENETRATION (FT)	RESOLUTION
①	TREES STA -0+69 TO 5+48 451 RT TO 682 LT	5' ±	REMOVE
②	TREES STA 8+88 TO 17+32 186 LT TO 609 LT	15' ±	REMOVE
③	TREES STA 29+92 TO 69+68 149 LT TO 640 LT	45' ±	REMOVE
④	10' CLEARANCE ABOVE CL OF ACCESS ROAD	-4' ±	NO OBSTRUCTION
⑤	TREES STA 39+19 TO 70+14 103 RT TO 724 RT	25' ±	REMOVE
⑥	TREES STA 19+89 TO 33+65 339 RT TO 681 RT	5' ±	REMOVE
⑦	17' ABOVE PARKS HWY	-20' ±	NO OBSTRUCTION



RUNWAY 3L

RUNWAY 21R

Project: 00\051151\151151ap08, 1=300, 11/22/02 at 14:21 by djs
VIEW: A08, ALO8
XREF: 1151DES1, 1151MAST, BOUNDARY, XREF1

DESIGN	DJS
DRAWN	PJB
CHECKED	FDR

BY	DATE	REVISIONS

CITY OF NENANA

APPROVED

 WAYNE BOEDECKER, P.E. PROJECT MANAGER

DATE 12/3/02

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:

 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601

F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

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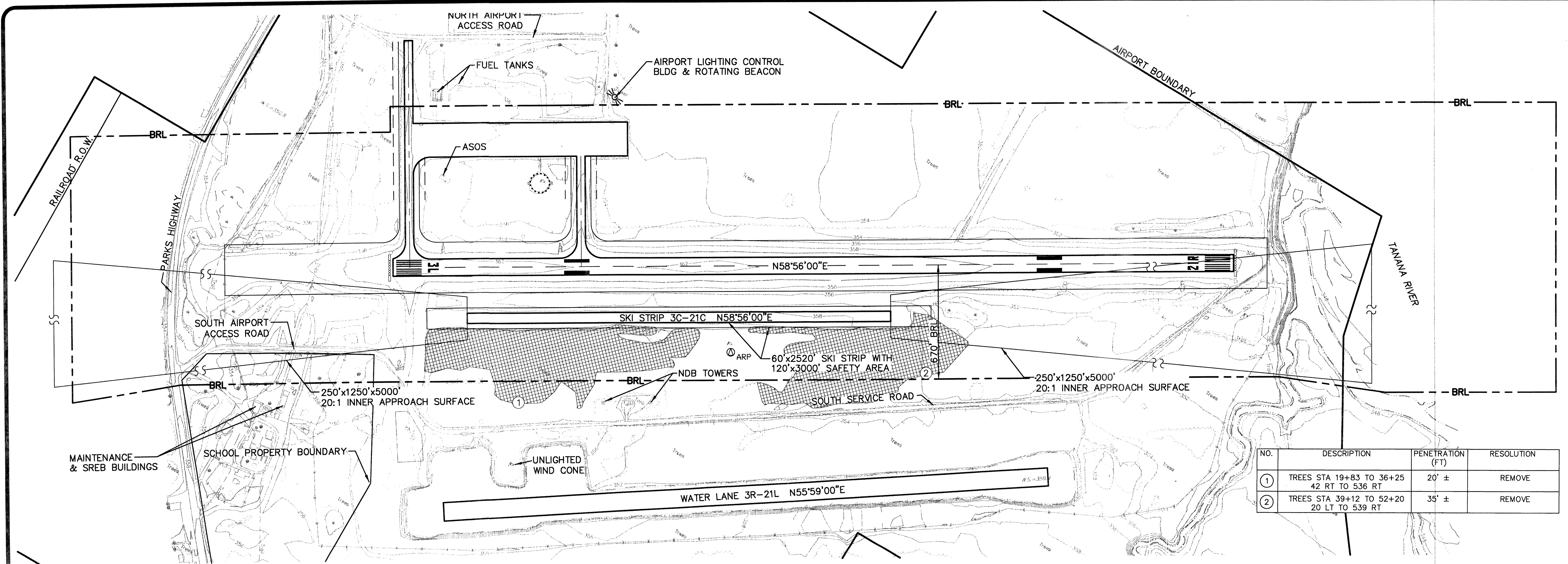
ENGINEERS GEOLGISTS SURVEYORS TESTLAB
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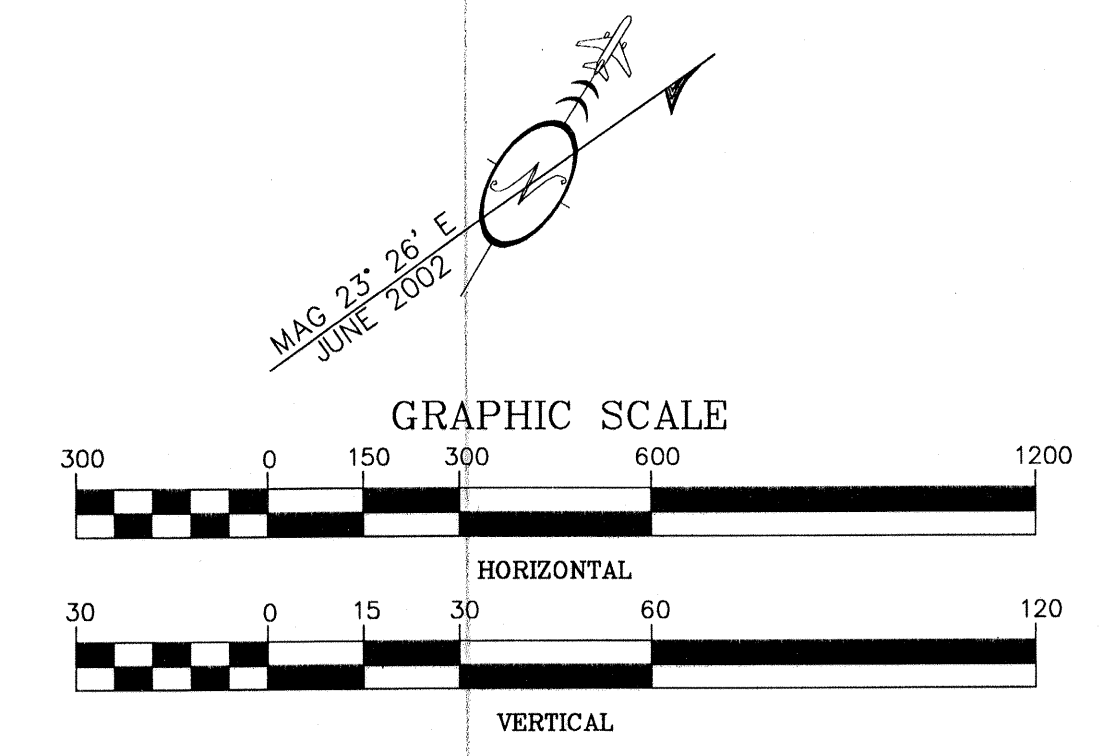
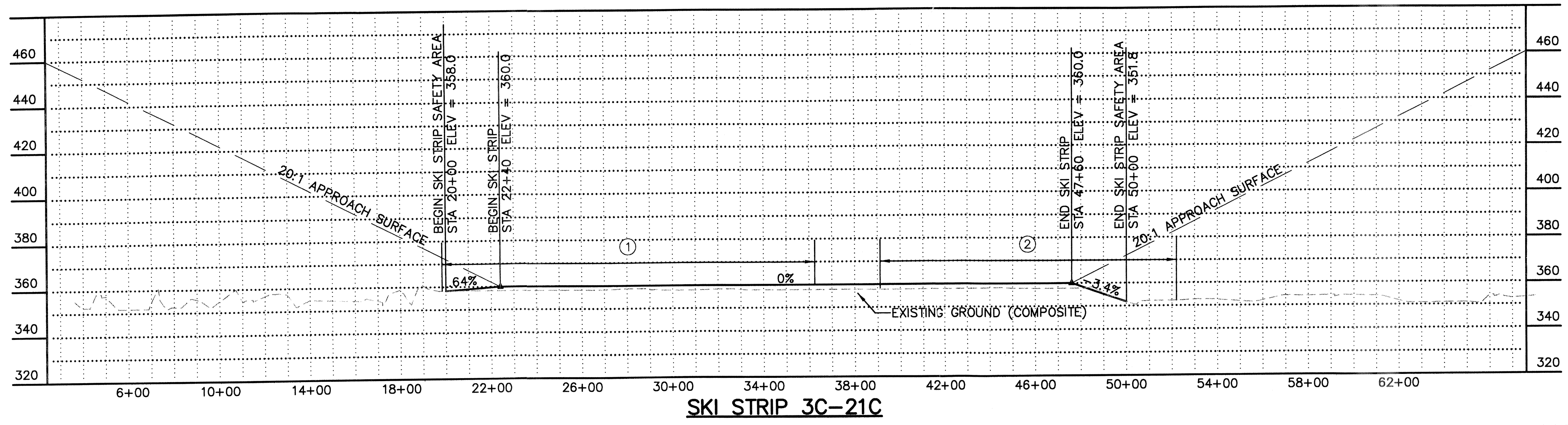
NENANA AIRPORT
 AIRPORT LAYOUT PLAN

**RUNWAY 3L-21R INNER
 PORTION OF APPROACH SURFACE**

SHEET
 8
 OF
 14



NO.	DESCRIPTION	PENETRATION (FT)	RESOLUTION
①	TREES STA 19+83 TO 36+25 42 RT TO 536 RT	20' ±	REMOVE
②	TREES STA 39+12 TO 52+20 20 LT TO 539 RT	35' ±	REMOVE



Project: 00\051151\1151aip09, 1=300, 11/22/02 at 14:09 by djs
 View: A09, AL09
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DESIGN DJS
 DRAWN PJB
 CHECKED FDR

BY	DATE	REVISIONS

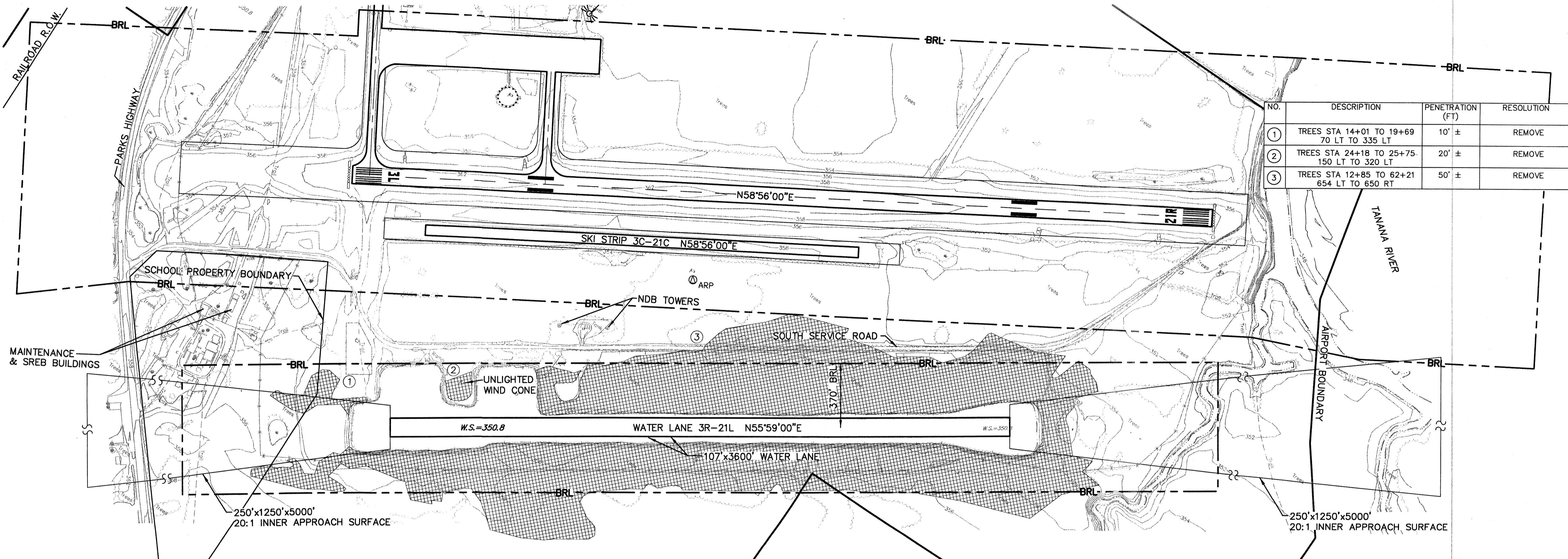
CITY OF NENANA
 APPROVED
Wayne Boedecker
 WAYNE BOEDECKER, P.E. PROJECT MANAGER
 DATE 12/3/02

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
John Smith
 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601
 12/5/02
 F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

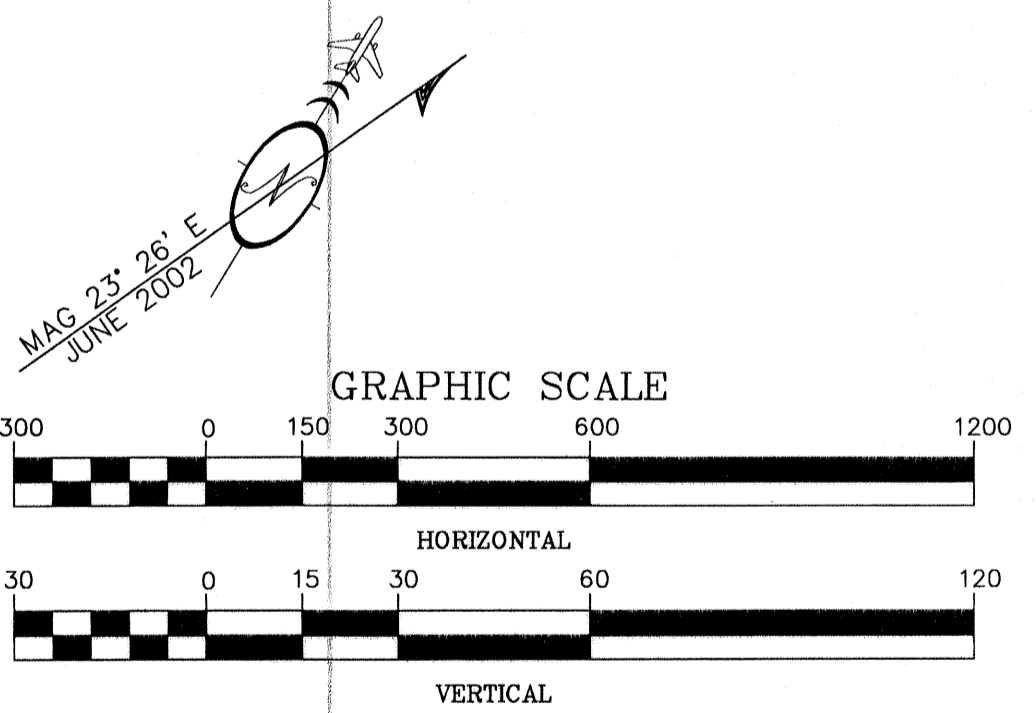
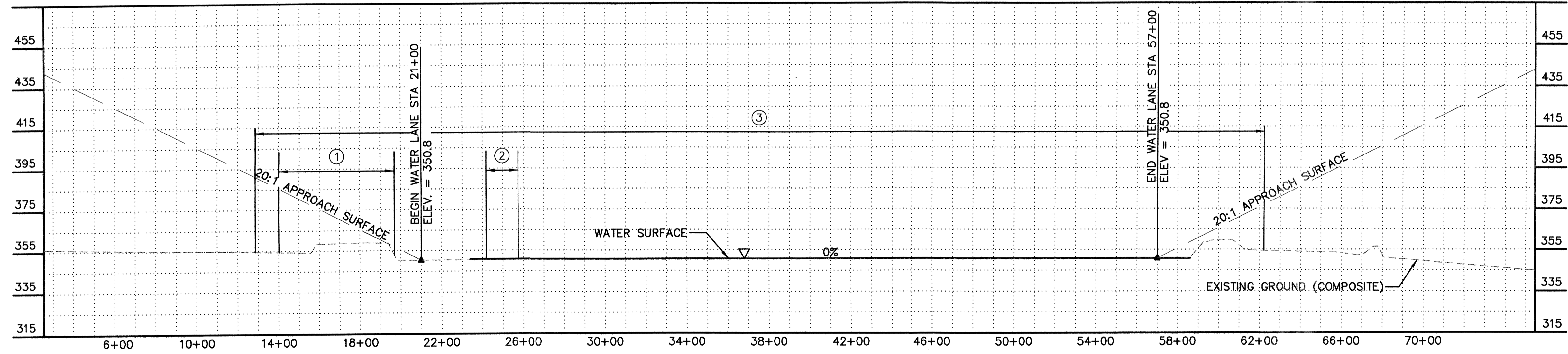
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 9101 VANGUARD DRIVE, ANCHORAGE, ALASKA 99507
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NENANA AIRPORT
 AIRPORT LAYOUT PLAN
**SKI STRIP 3C-21C EXISTING
 PLAN, PROFILE & INNER PORTION
 OF APPROACH SURFACE**

SHEET
9
 OF
14



NO.	DESCRIPTION	PENETRATION (FT)	RESOLUTION
①	TREES STA 14+01 TO 19+69 70 LT TO 335 LT	10' ±	REMOVE
②	TREES STA 24+18 TO 25+75 150 LT TO 320 LT	20' ±	REMOVE
③	TREES STA 12+85 TO 62+21 654 LT TO 650 RT	50' ±	REMOVE



WATER LANE 3R-21L

Project: 00\051151\51151.dwg, 1=300, 11/22/02 at 14:21 by djs
 View: A10, ALTO
 XREF: 1151WEST, 1151MAST, BOUNDARY, XREF1

DESIGN	DJS	
DRAWN	PJB	
CHECKED	FDR	
BY	DATE	REVISIONS

CITY OF NENANA

APPROVED

 WAYNE BOEDECKER, P.E. PROJECT MANAGER
 DATE 12/3/02

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:

 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601
 F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

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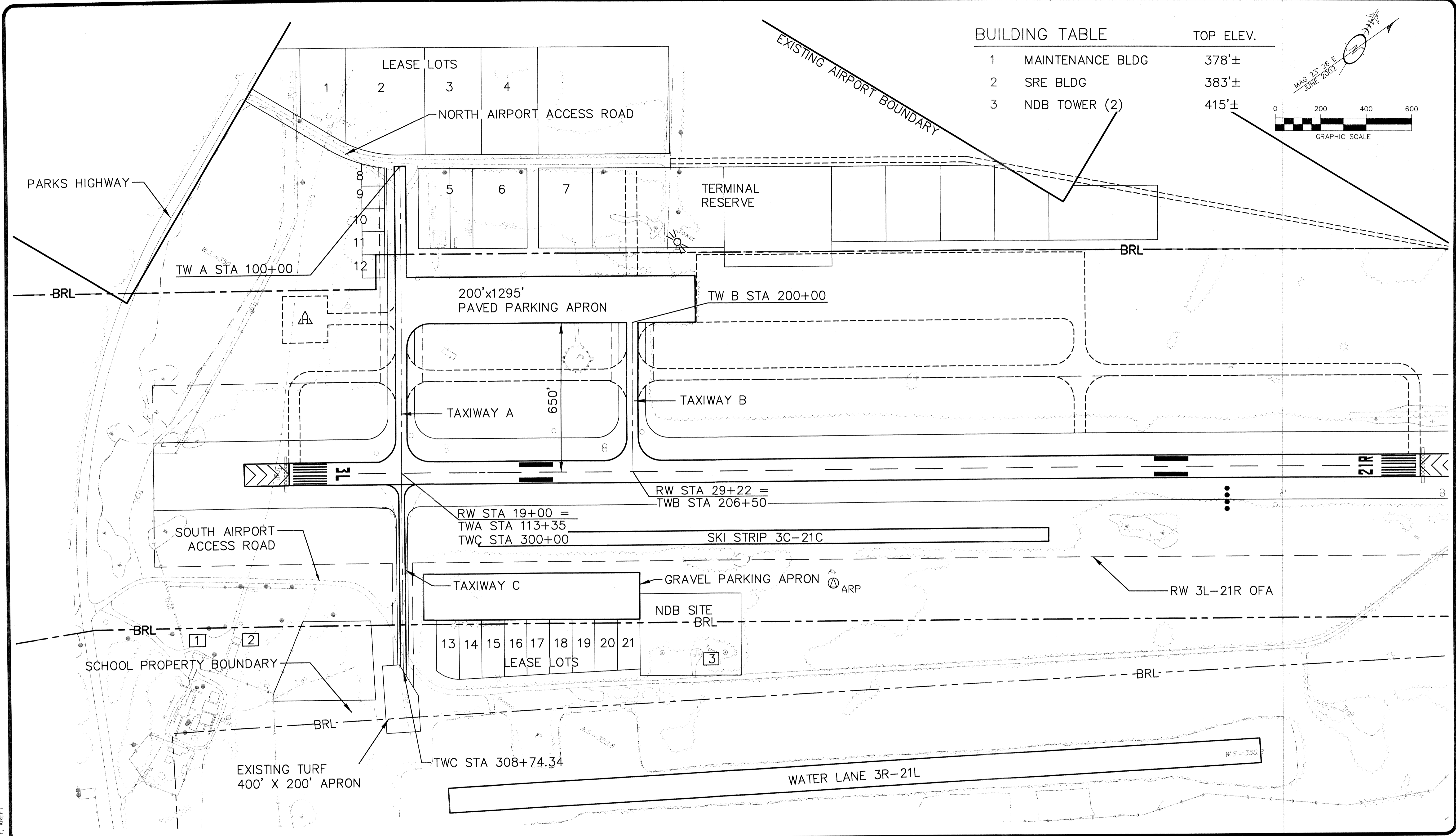
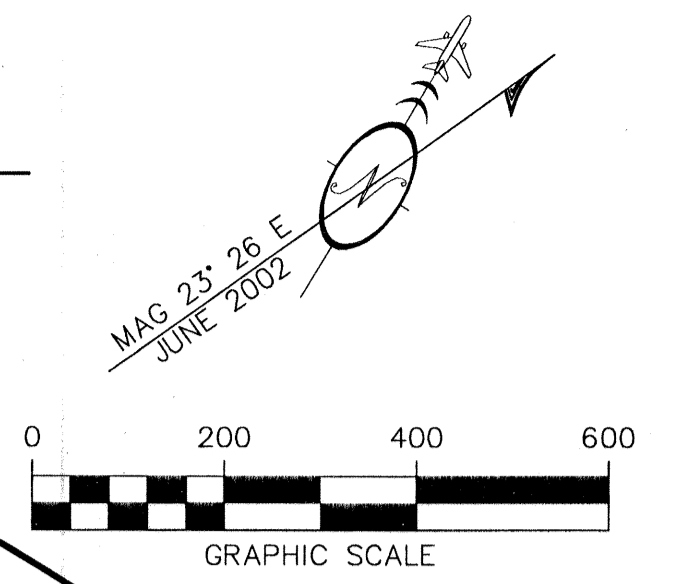
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NENANA AIRPORT
 AIRPORT LAYOUT PLAN

**WATER LANE 3R-21L EXISTING
 PLAN, PROFILE & INNER PORTION
 OF APPROACH SURFACE**

SHEET
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BUILDING TABLE		TOP ELEV.
1	MAINTENANCE BLDG	378'±
2	SRE BLDG	383'±
3	NDB TOWER (2)	415'±



Project 001051\51151ap11_1=200, 11/22/02 at 14:12 by djs
 View: A11, A11, A11, 1151MAST, BOUNDARY, XREF1
 XREF: 1151DES1

DESIGN	DJS
DRAWN	PJB
CHECKED	FDR

BY	DATE	REVISIONS

CITY OF NENANA

APPROVED
Wayne Boedecker
 WAYNE BOEDECKER, P.E. PROJECT MANAGER

DATE 12/3/02

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
J. K. Smith 12/15/02
 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601

F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-122-NRA

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NENANA AIRPORT
 AIRPORT LAYOUT PLAN

**TERMINAL AREA
 PLAN**



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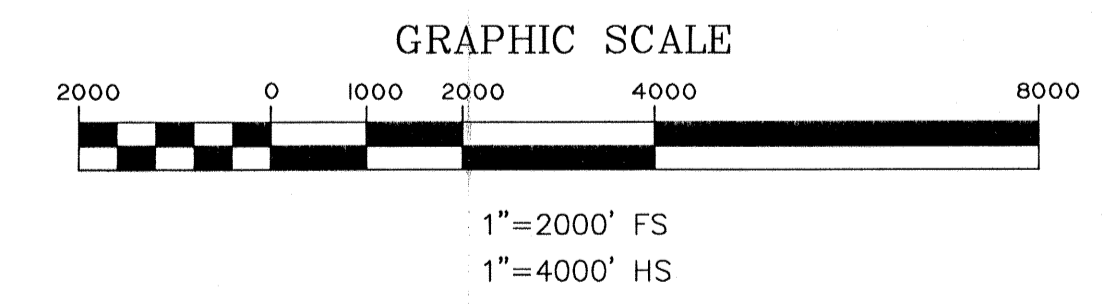
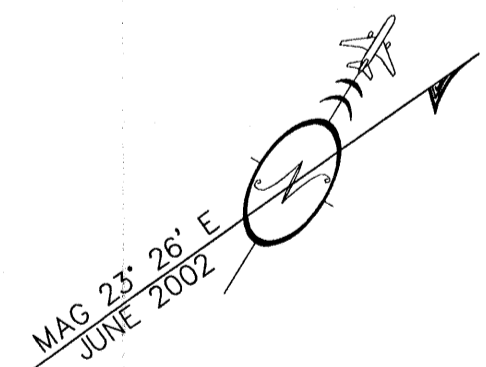
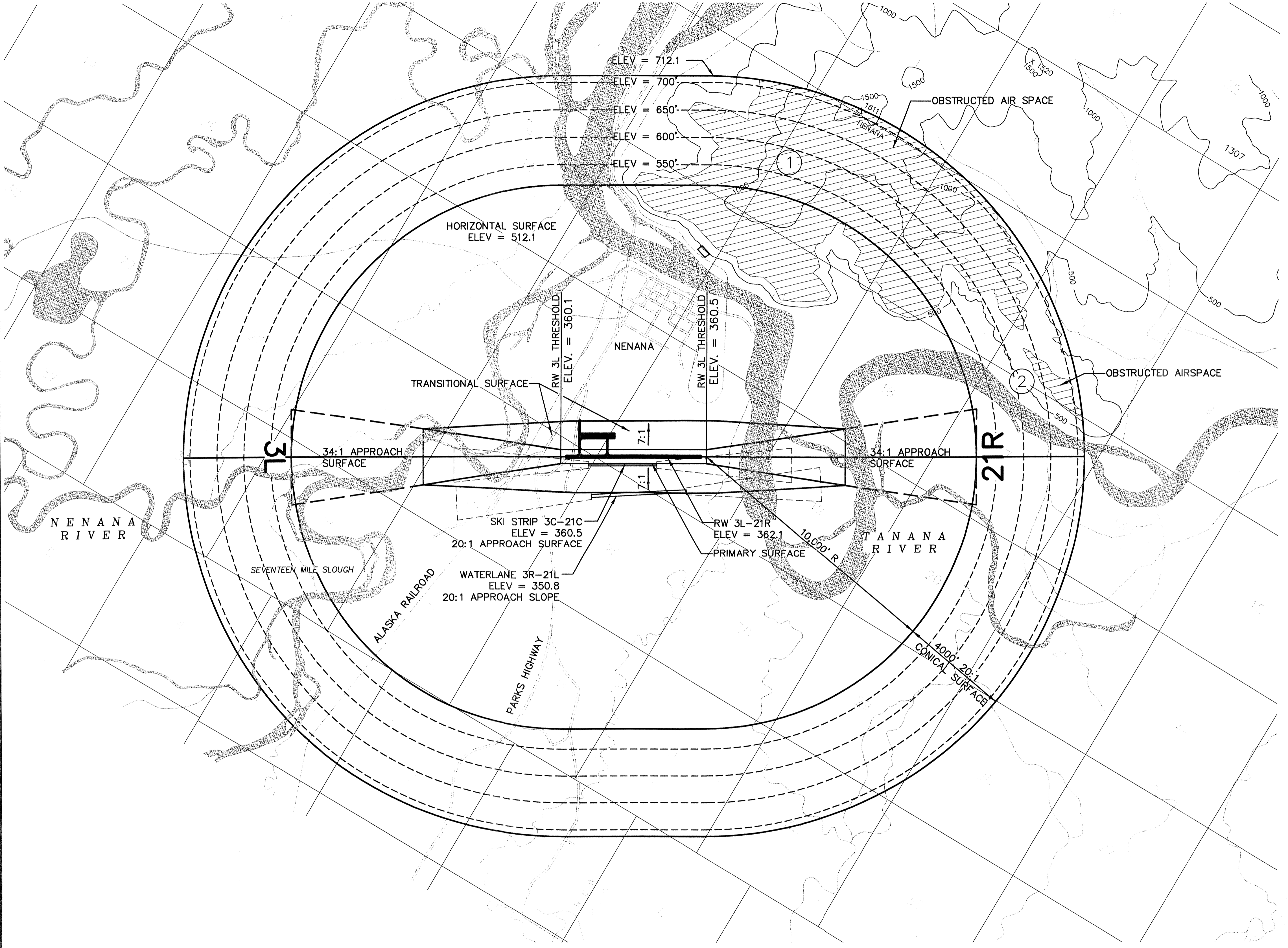
F.A.R. PART 77 OBSTRUCTION TABLE			
OBSTRUCTION	DESCRIPTION	HEIGHT OF PENETRATION	RECOMMENDATION
TREES	VEGETATION	VARIABLES	SEE NOTE 3
①	MOUNT NENANA	1,000 FT±	TO REMAIN
②	MOUNTAIN	100 FT±	TO REMAIN

NOTES:

- ALL ELEVATIONS AND CONTOURS ARE IN FEET BASED ON M.S.L.
- DESIGNATED AIRPORT ELEVATION IS 362.1
- SEE DRAWINGS 6, 8, & 9 FOR TREE OBSTRUCTIONS TO BE REMOVED

LEGEND

-  OPEN WATER
-  TERRAIN OBSTRUCTION

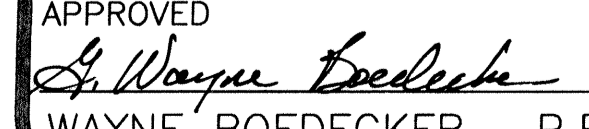


project:00\051151\51151aip12, 1=2000, 11/22/02 at 14:14 by djs
 VIEW: A12, A112
 XREF: XREF2

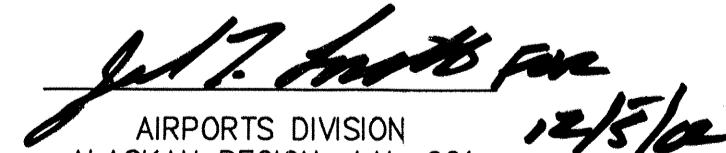
DESIGN	DJS
DRAWN	PJB
CHECKED	FDR

BY	DATE	REVISIONS

CITY OF NENANA

APPROVED

 WAYNE BOEDECKER, P.E. PROJECT MANAGER

DATE 12/3/02

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 BY LETTER DATED:

 AIRPORTS DIVISION
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**NENANA AIRPORT
 AIRPORT LAYOUT PLAN**

AIRSPACE DRAWING

SHEET
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 14

PURPOSE

This narrative report is included with the Airport Layout Plan for Nenana, Alaska in accordance with Federal Aviation Administration (FAA) Advisory Circular 150/5300-13, Appendix 7, Airport Design. The reasoning behind the development features of the airport, and pertinent information supporting the development plan are presented in this report.

INTRODUCTION

The City of Nenana is located in Interior Alaska on the south bank of the Tanana River, 55 road miles southwest of Fairbanks on the Parks Highway. Nenana has a cold, continental climate with an extreme temperature range, average precipitation is 11.4 inches, with 48.9 inches of snowfall annually. Nenana is located in the Nenana Recording District, has a population of 489 residents and is an incorporated home rule city.

Nenana is in the western most portion of the Tanana Athabascan Indian territory. The area has historically been a trading site/ roadhouse along the river. The population of Nenana is a mixture of non-Natives, and Athabascans, 47.8% of the population is represented by Alaska Natives.

The 2000 U.S. Census, reported 210 total housing units with 39 of these vacant. Nenana City Schools operates a local school (K-12), and a correspondence school. The local school has 189 students, with a capacity for over 500 students. The City is provided electricity by Golden Valley Electric Association. Most of the City is connected to a piped water and sewer system, with the remaining homes serviced by individual wells and septic systems.

Local hospitals or health clinics include Railbelt Mental Health Association and the Nenana Native Clinic. Additional health care is provided by Nenana Volunteer Fire/EMS Dept. or Fairbanks hospitals.

Nenana has excellent air, river, road and railroad access. The Parks Highway provides access to Fairbanks and Anchorage. The railroad provides daily freight service. The Nenana Airport offers a lighted paved runway, with float plane and ski plane landing areas. The Nenana Port Authority operates the dry cargo loading and unloading facilities, dock bulkhead and warehouse.

Over 50% of the year-round jobs are government funded, including the City, Nenana School District, Yukon-Koyukuk School District, and DOT highway maintenance. A strong private sector is supported by the rail-to-river, barge transportation for the Interior. The majority of Native households maintain a subsistence and commercial fishing way of life. Yutana Barge Lines is the major private employer in Nenana, supplying villages along the Tanana & Yukon Rivers with cargo and fuel. There are numerous villages on the Yukon and Tanana Rivers that require fuel shipment by air due to low water levels. Currently fuel to these villages are served from Fairbanks International Airport due to poor runway operating conditions in Nenana. Commercial air transport operators have indicated they would locate air fuel delivery service from Nenana with runway improvements.

INVENTORY

Airside Facilities

The airside facilities include the runways and taxiway system, aircraft parking aprons, lighting and navigational aids.

Nenana Airport has three runways, Runway 3L-21R, Ski Strip 3C-21C and Water Lane 3R-21L. Runway 3L-21R is 5,000 feet long, 100 feet wide and paved with asphaltic concrete. The safety area is 300 feet wide and extends 1,000 feet beyond the 3L threshold and 200 feet beyond the 21R threshold. The runway surface has experienced differential settlement in numerous areas from permafrost degradation and embankment settlement, as a result the runway is not being used by air carriers. In addition there are significant transverse cracks throughout the length of the runway. Both safety areas beyond the thresholds do not meet current gradient criteria, the safety area beyond the 21R threshold is deficient in length. Obstructions to navigable airspace include vegetation (trees) and a service road north of the Runway 21R threshold.

Ski Strip 3C-21C is 2,520 feet long, 60 feet wide and has a turf (grass) operating surface. The safety area is 120 feet wide and extends 240 feet beyond the runway ends. This runway is used for small aircraft wheeled operations in the summer and ski operations in the winter.

Water Lane 3R-21L is 3,120 feet long and 107 feet wide with a 120 foot wide by 3,600 foot long safety area.

Runway 3I-21R is served by two taxiways from the main apron. Taxiway A is 50 feet wide and extends from a service road east of the apron, along the south side of the apron and to the Runway 3I threshold. Taxiway B connects the apron to Runway 3L approximately 1,000 feet north of the Runway 3I threshold. The Taxiway A surface has experienced differential movement from permafrost thawing, and frost heave and is in poor condition. The Taxiway B surface is in fair condition. Both taxiways have transverse cracks.

A paved parking apron 1,275 feet by 200 feet is located west of Runway 3L-21R. The apron surface has settled resulting in ponding of surface water, and the pavement has numerous transverse cracks.

A 400' by 200' turf apron is located east of the ski strip. Two basins with approximately 1400 feet of shoreline to park floatplanes are adjacent to the waterlane.

Nenana Airport has a non-directional beacon (NDB), and a rotating beacon. Runway 3L-21R has a medium intensity runway lighting system (MIRL), runway end indicator lights (REILS), Visual Approach Slope indicators (VASI,'s) on both runways and a wind cone. The REILS are not functioning.

INVENTORY CONT'D

Ski Strip 3C-21C has a wind cone and is lighted with an MIRL system.

Landside Facilities

Nenana Airport has two blocks of land divided into 21 lease lots, a terminal reserve area and parcels set aside for FAA use and navigational aids.

Nenana Airport presently has no central terminal building. Access to the paved apron is by a service road from the Parks Highway. Maintenance and snow removal equipment buildings are located in the south end of the airport adjacent to the Parks Highway. There currently are no water or wastewater facilities at the airport.

AVIATION FORECASTS

Based Aircraft

There are no fixed based commercial operators currently operating out of Nenana. There are approximately fourteen local operators with single-engine A-I aircraft and one local operator with a twin engine B-I aircraft at Nenana Airport.

Commercial Operations

Past commercial activity at Nenana consisted of air taxi scheduled passenger service and air cargo service.

Fuel and cargo were delivered by barge to Nenana and transferred for air shipment to outlying villages not connected by roadways. Air taxi passenger service diminished when the road link (Parks Highway) to Fairbanks was completed, currently there is no scheduled air service to Nenana. Air cargo service relocated to Fairbanks International Airport with deteriorating Runway 3L-21R conditions. Air taxi operators indicate they do not plan scheduled service to Nenana in the future. Charter service to Nenana is anticipated to increase with opening of a boarding school for high school students. The FAA Master Record estimates approximately 40 air taxi operations weekly, this number appears high based on air taxi operator surveys. The air taxi operators utilize primarily B-I aircraft. One air cargo operator (Brooks Fuel) indicated they would relocate to Nenana for fuel haul operations with runway improvements, as landing fees are lower than in Fairbanks. Brooks Fuel currently maintains a lease area at Nenana Airport and operates DC-4 (B-III) aircraft. The following forecasts are based on air operator surveys with anticipated slight growth.

Total Operations	2001	2006	2011	2016	2021
Air Cargo	0	300	320	340	360
Air Taxi	50	80	85	90	95

General Aviation Operations

There is little historical data for local operations at Nenana Airport. The FAA Master Record estimates an average of 60 general aviation private operations weekly, this estimate appears reasonable based on the number of local aircraft. It could be anticipated there would be slight growth in the number of local aircraft and operations at Nenana Airport. The following forecasts are based on slight growth in local aircraft and operations.

Year	2001	2006	2011	2016	2021
Local Aircraft	15	17	19	21	23
Local Operations	3120	3400	3950	4370	4780

Demand/Capacity

There is no forecasted demand that would require construction of additional runways, taxiways, aprons or lease areas in the near term.

AIRPORT DESIGN STANDARDS

Runways

All of the runways at Nenana Airport have wind coverage in excess of 98%. Runway 3L-21R and Runway 3C-21C (Ski Strip) are parallel, with Runway 3R-21L (Waterlane) skewed approx. 3° NW.

Runway 3L-21R has been classified as a C-III runway with Non-Precision Instrument Approaches with visibility minimums greater than 3/4 miles. The design aircraft projected to use this runway is the Douglas DC-6, a B-III aircraft. The runway currently has a 300 foot safety area width meeting Approach Category B-III standards. No Approach Category C aircraft requiring a safety area width of 500 feet are projected to utilize Nenana Airport. Runway 3L has a 1,000 foot long safety area that does not meet surface gradient requirements. Runway 21R has a 200 foot safety area length, does not meet surface gradient requirements and is traversed by a service road. The current runway length is 5,000 feet. Extension of the runway is constrained by the Parks Highway to the south and the Tanana River to the north. Runway 3L-21R is proposed to be classified as a B-III runway which satisfies the projected Douglas DC-6 design aircraft.

AIRPORT DESIGN STANDARDS CONT'D

The Runway 21R threshold will be relocated 400 feet south in order to provide the needed 600-foot safety area length beyond the threshold; the proposed runway length will be 4,600 feet. The existing service road will not penetrate the approach surface for the relocated Runway 21-R threshold. Depending on the length of freight haul, temperature and wind, the DC-6 may require payload reductions with the 4,600-foot runway length. If air traffic demands increase in the future, the ultimate runway length will be 5,000 feet. A 400-foot runway extension to the south will leave the required 600-foot safety area length beyond the Runway 3L threshold.

Ski Strip 3C-21C is currently classified as a A-I exclusive runway with Visual Flight Rule Approaches. This runway currently meets all A-I dimensional standards and has a length adequate for the small aircraft projected to utilize this runway.

Waterlane 3L-21R is currently classified as a A-I exclusive runway with Visual Flight Rule Approaches. This runway currently meets all A-I dimensional standards and has a length adequate for the small aircraft projected to utilize this waterlane.

Pavement Strength

Runway 3I-21R pavement strength is adequate for the design aircraft (DC-6), 73,000 pound dual wheel gear loading.

Taxiways

The existing taxiways between the apron and Runway 3L-21R meet Group III standards. The future taxiway between Runway 3L-21R and the turf apron will meet Group I standards.

Navigational Aids

Nenana Airport currently has an NDB and a rotating beacon. Runway 3L-21R has a MIRL, with VASI's and REIL's on both runway ends; the REIL's are not operational and the MIRL system has reached the end of it's useful service life. The Phase I Runway 3R-21L improvements include replacing the Runway 21R VASI with a PAPI, reconstructing the REIL's and reconstructing the MIRL system. The Phase II improvements will include replacing the Runway 3L VASI with a PAPI. FAA plans on implementing GPS approaches in the near future.

Part 77 Surfaces and Obstructions

Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace prescribe imaginary surfaces around runways that must be clear of obstructions. The Airspace Drawing depicts the imaginary surfaces. Obstructions to navigable airspace at Nenana Airport are primarily vegetation (trees) and a service road in the Runway 21R approach. The service road in the Runway 21R approach will be mitigated by relocating the Runway 21R threshold 400 feet south.

Property Status

No property acquisition is required for the ultimate improvements at Nenana Airport.

PHASED DEVELOPMENT

Phase I - 2001 -2006

The following improvements are recommended at Nenana Airport to meet near term projected use at Nenana Airport:

Reconstruct Runway 3L-21R with new asphalt concrete pavement and crushed aggregate base course after removal of the existing pavement section. Improve the deep subgrade in selected settlement areas, and shallow subgrade in remaining settlement areas. Relocate the Runway 21R threshold 400 feet south to provide runway safety area length. Remove the Runway 21L VASI, install a PAPI, and reconstruct REIL's. Reconstruct the Runway 3R-21L, Taxiway A and Taxiway B edge lighting system. Reconstruct the beacon tower foundation and refurbish the rotating beacon. Regrade the Runway 3L-21R safety areas to meet gradient requirements.

Remove all tree obstructions to the Runway 3L-21R and 3C-21C FAR Part 77 imaginary surfaces. Overlay Taxiways A and B from the apron to Runway 3L-21R with new asphalt concrete pavement. Overlay the apron with new asphalt concrete pavement. In selected settlement areas of the apron remove the pavement section, improve the subgrade and construct new crushed aggregate base course and asphalt pavement. Reconstruct Taxiway C and the parallel service road with gravel surfacing.

The estimated cost for Phase I improvements is \$4,160,000.

Phase II - 2006-2021

Construct a 400-foot Runway 3L-21R extension to the south. Relocate the Runway 3L REIL's. Replace the Runway 3L VASI with a PAPI. Construct a new Snow Removal Equipment Building. Construct a gravel apron adjacent to Ski Strip 3C-21C and Taxiway C.

The estimated cost for Phase II improvements is \$2,100,000.

Property Status

No property acquisition is required for the future or ultimate improvements at Nenana Airport

DESIGN	DJS			
DRAWN	PJB			
CHECKED	FDR			
BY	DATE	REVISIONS		

CITY OF NENANA

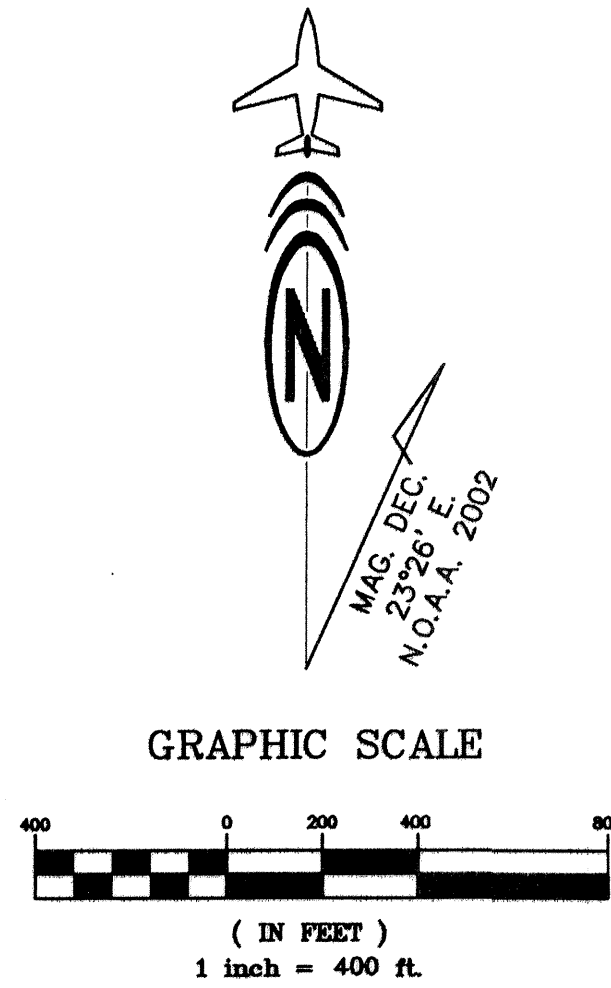
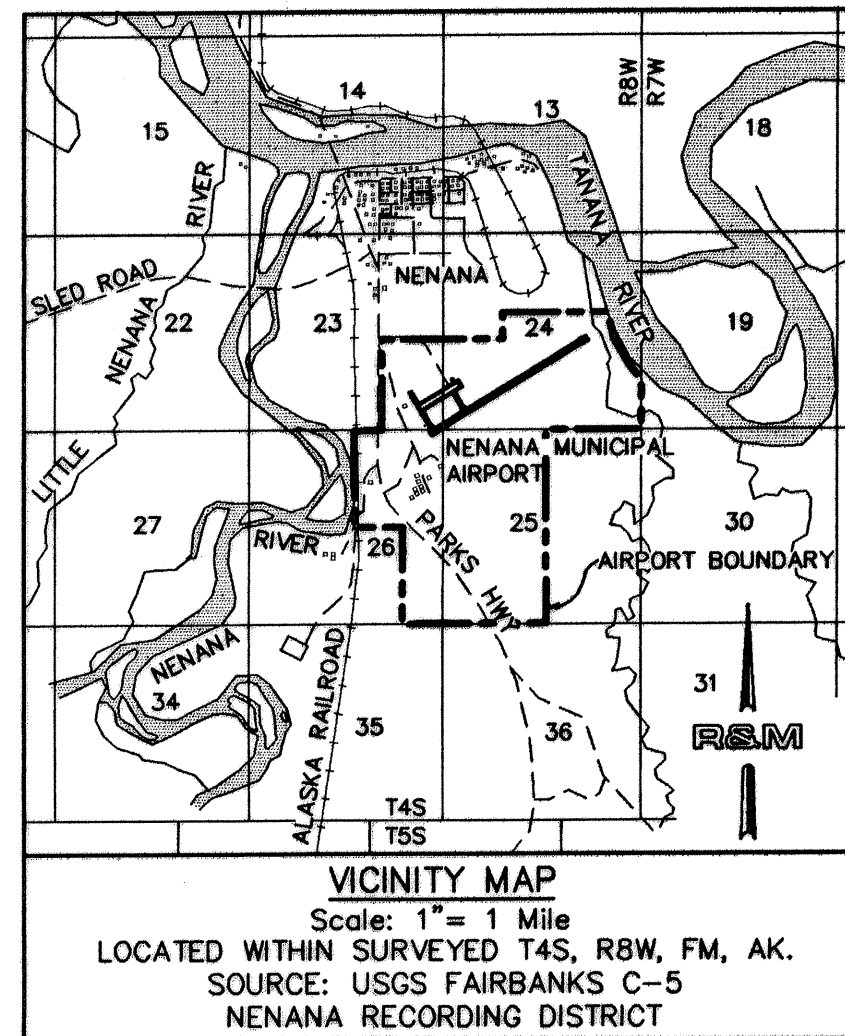
APPROVED: *Wayne Boedecker* DATE *12/3/02*
 WAYNE BOEDECKER, P.E. PROJECT MANAGER

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
J.M. Smith on 12/5/02
 AIRPORTS DIVISION
 ALASKAN REGION, AAL-601
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NENANA AIRPORT
AIRPORT LAYOUT PLAN
NARRATIVE REPORT

SHEET
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14



CITY OF NENANA LAND LEASE PARCELS			
TRACT	LESSEE	AREA	EXPIRES
LOT 1	AMERIGAS PROPANE CO.	1.917 ACRES	
LOT 2A		2.36± ACRES	
LOT 2B	ADAM WHITE	1.28± ACRES	
LOT 3		2.70± ACRES	
LOT 4		2.70± ACRES	
LOT 5A	YUKON FUEL	1.137 ACRES	
LOT 5B	BROOKS FUEL	0.81± ACRES	
LOT 6	BROOKS FUEL	1.93± ACRES	
LOT 7		1.93± ACRES	
LOT 8		0.20± ACRES	
LOT 9		0.23± ACRES	
LOT 10		0.23± ACRES	
LOT 11		0.23± ACRES	
LOT 12		0.23± ACRES	
LOT 13		0.58± ACRES	
LOT 14		0.61± ACRES	
LOT 15		0.59± ACRES	
LOT 16		0.58± ACRES	
LOT 17		0.57± ACRES	
LOT 18		0.56± ACRES	
LOT 19		0.55± ACRES	
LOT 20		0.54± ACRES	
LOT 21		0.61± ACRES	
LOT 22		0.92± ACRES	
LOT 23		3.094 ACRES	
PARCEL 2	GOLDEN VALLEY ELECTRIC ASSN.	6.520 ACRES	JUNE 30, 2025
PARCEL 3	GLACIER STATE TELEPHONE CO.	6.520 ACRES	AUG. 26, 1994
PARCEL 4	ROBERT BECK	2.575 ACRES	JUNE 30, 1994
NDB SITE	FAA	3.719 ACRES	SEPT. 30, 2005

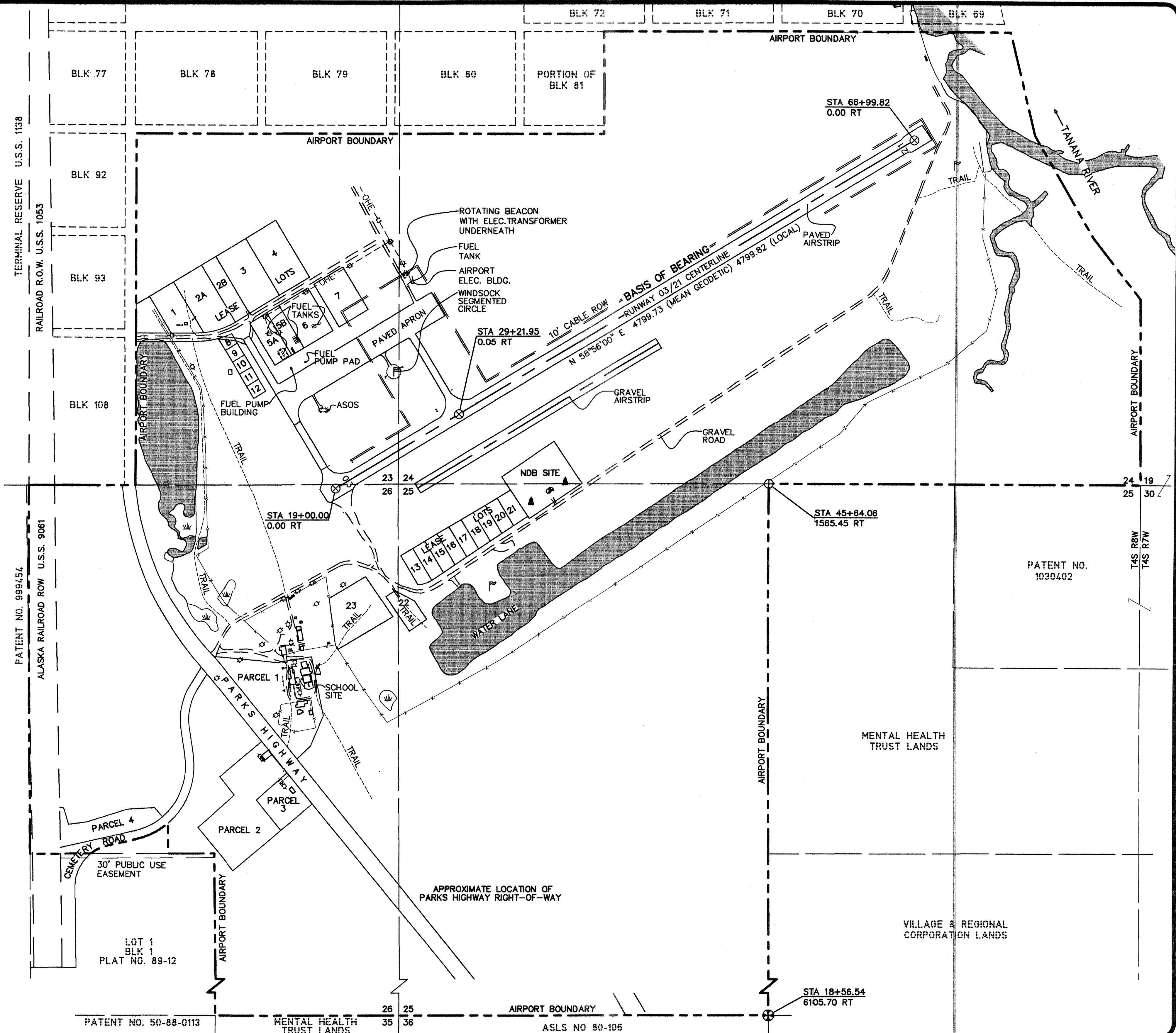
CITY OF NENANA LAND SALES			
PARCEL	REVERSIONARY STATUTORY QUIT CLAIM DEED TO:	AREA	EXPIRES
PARCEL 1	YUKON KOYUKUK SCHOOL DISTRICT SCHOOL USE ONLY	7.025 ACRES	SEPT. 22, 1983

EASEMENTS, RIGHTS-OF-WAY	
GRANTEE	PURPOSE
GOLDEN VALLEY ELECTRIC ASSN.	HEALY/ FAIRBANKS TRANSMISSION LINE
STATE OF ALASKA	PARKS HIGHWAY R.O.W.
CITY OF NENANA	CEMETERY ROAD R.O.W.

NOTES
1. The property information shown is based on The City of Nenana drawing titled "Property Plan, Exhibit A, AIP-06, City of Nenana, Alaska, Municipal Airport" by Wince-Corthell-Bryson, dated July 1992.
2. The property boundary lines and easements shown are based on record information.

MONUMENT LEGEND
 ⊕ FOUND 2 1/2" BRASS CAP MONUMENT (GLO)
 ⊕ FOUND 3 1/4" ALMON ('KALEN')
 ⊗ FOUND 2 1/2" BRASS CAP MONUMENT ('KALEN')

SYMBOL LEGEND
 P WINDSOCK
 ⊕ UTILITY POLE
 - - - - - FENCE LINE



DESIGN LCS
 DRAWN JJM
 CHECKED LCS

BY	DATE	REVISIONS

CITY OF NENANA
 APPROVED
Wayne Boedecker
 WAYNE BOEDECKER, P.E. PROJECT MANAGER
 DATE 12/3/02

AIRPORT LAYOUT PLAN APPROVED
 BY LETTER DATED:
[Signature]
 AIRPORTS DIVISION
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NENANA AIRPORT
 AIRPORT LAYOUT PLAN
PROPERTY PLAN

SHEET
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 14