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DATE REPLIED: APRIL 1999

REVIEWED BY: EPA

100 - 700 000 000

AID PROJECT NUMBER

888 207-8240-000

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11

FACILITIES

LAYOUT

PLAN

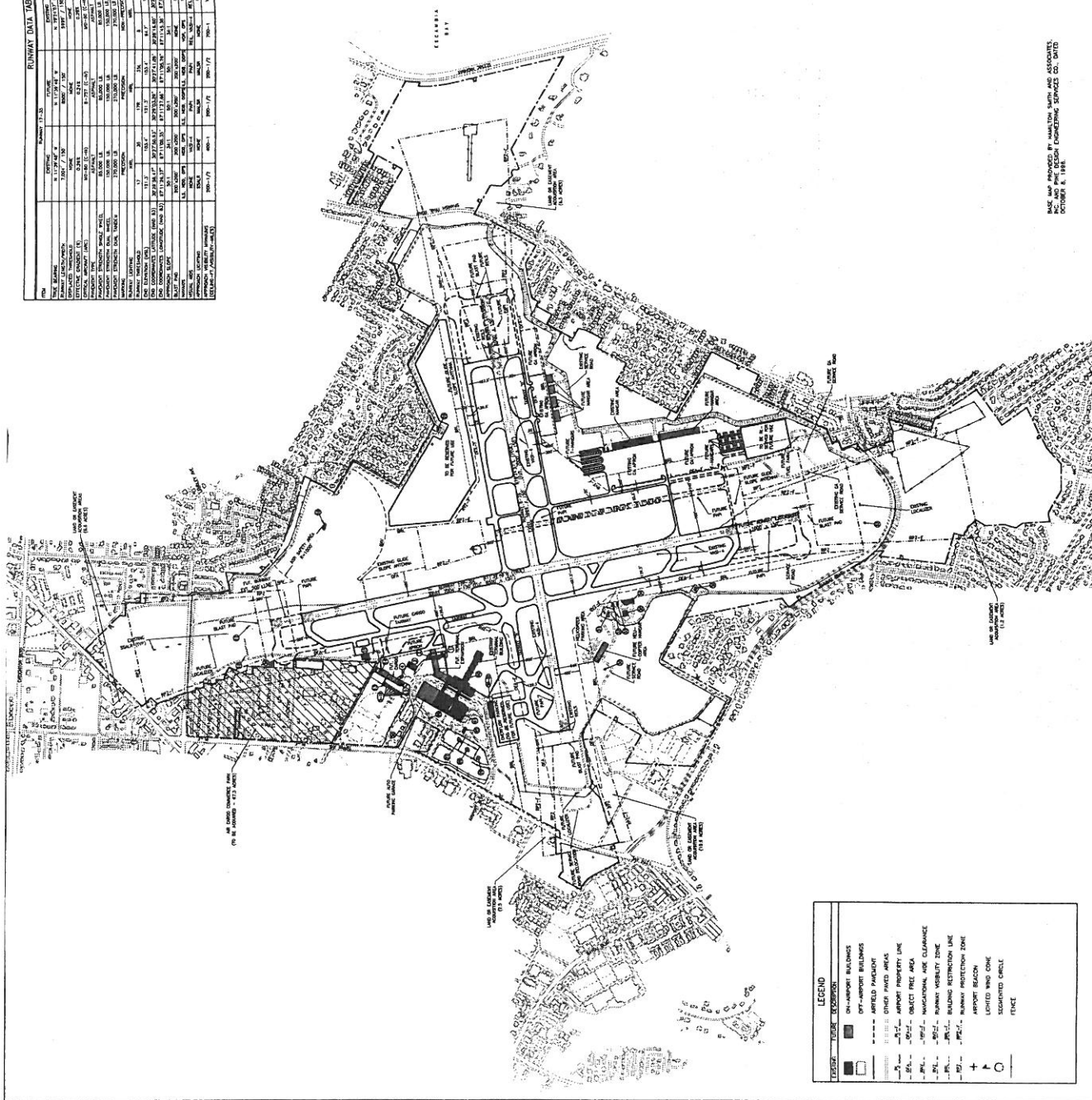
0 HEEZY MUMSTER

3 OE 18

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AIRPORT DATA TABLE			
ITEM		EXTENSION	FUTURE
COMMODAL		DATE	
AIRPORT ROLE	C-48	DATE	
AIRPORT REFERENCE CODE (ARC)	191	ARC	
ESTIMATED AIRPORT ELEVATION	3723.188'		
AIRPORT REFERENCE POINT	Layman		
AIRPORT AIRSPACE (ESTIMATED)	8791.188'		
TEMP. MEAN MAX. HIGHEST MONTH	1,474		
VISUAL AID	NOT AID		

#	NAME	
1	FA OFFICE BLDG	
2	FA UTILITY BLDG	
3	FA OFFICE WALK	
4	COSMET TAILOR	
5	POSTAL BLDG	
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100	POSTAL (POSTAL) BLDG	



BASE MAP PROVIDED BY HAMILTON SMITH AND ASSOCIATES, INC. AND PINE DESIGN ENGINEERING SERVICES CO., DATED OCTOBER 6, 1996.

SCALE: 1" = 500'



1. RUMBLE 17, AND 358 HAVE EXISTING OR PLANNED VEHICLE APPROACH SURFACES (SLOPE 20:1).

DISTRIBUTION TABLE		
DISTRIBUTION NUMBER	DESCRIPTION (EXPLANATION AND MS.)	AMOUNT OF PART 77 FORTIFICATION

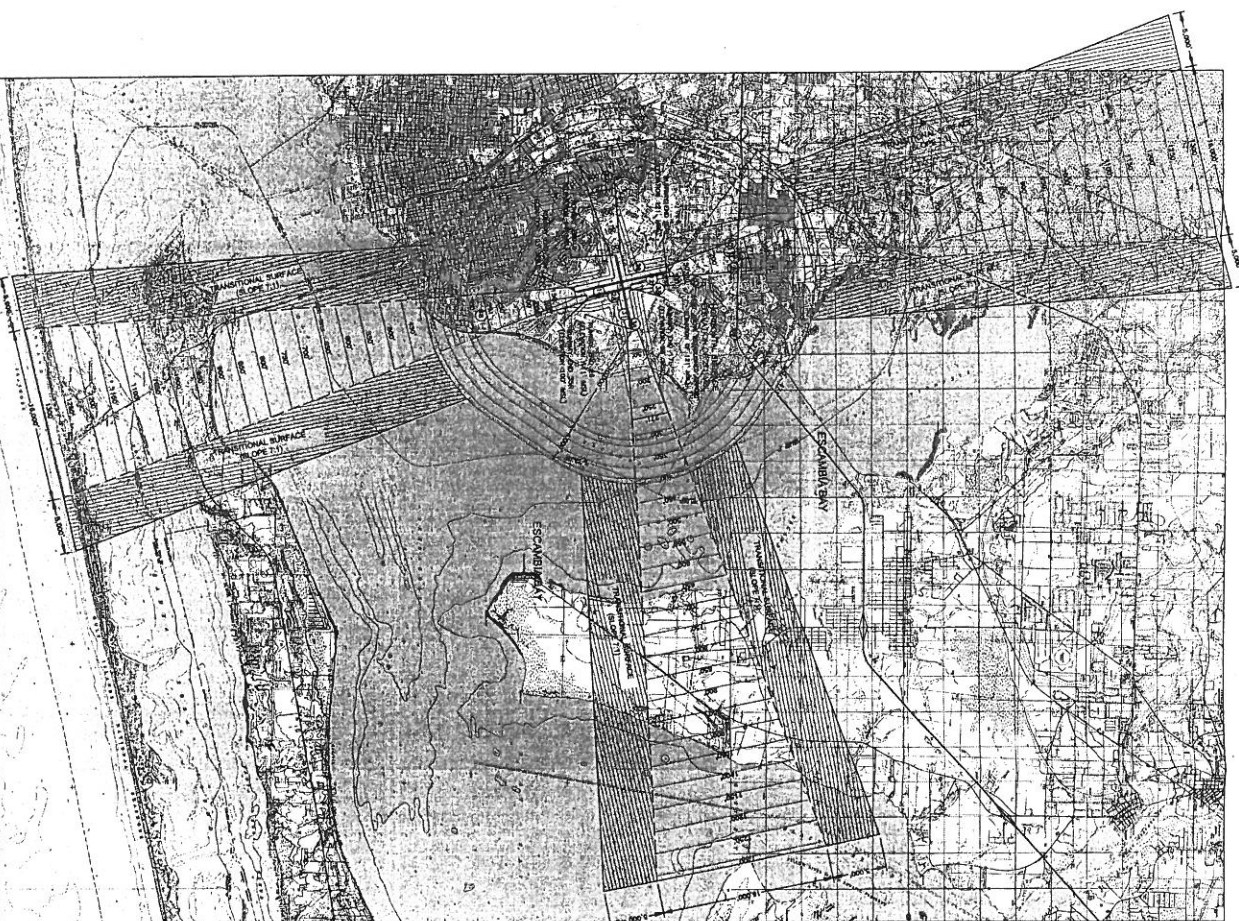
[illegible]

☐ destruction to FBI PART 77 SURFACES.

CLIMING CODE	WEIGHT CONTRIBUTION
A72	NO BUILD
	PERCENTAGE: 35 FEET
	COMING: 45 FEET
A72	AVAILABILITY FACTOR: 45 FEET

2-10000A	15 feet
2-2	45 feet
2A	45 feet
2B	40 to 50 feet
2C	15 feet

5. How are the following departments



**ACQUISITION, ENGINEERING, PROGRAM
and Environmental Services**

FLORIDA
REGIONAL
AIRPORT

UPDATE

1

10

1



PENSACOLA
REGIONAL
AIRPORT

AIRPORT
MASTER
PLAN
UPDATE

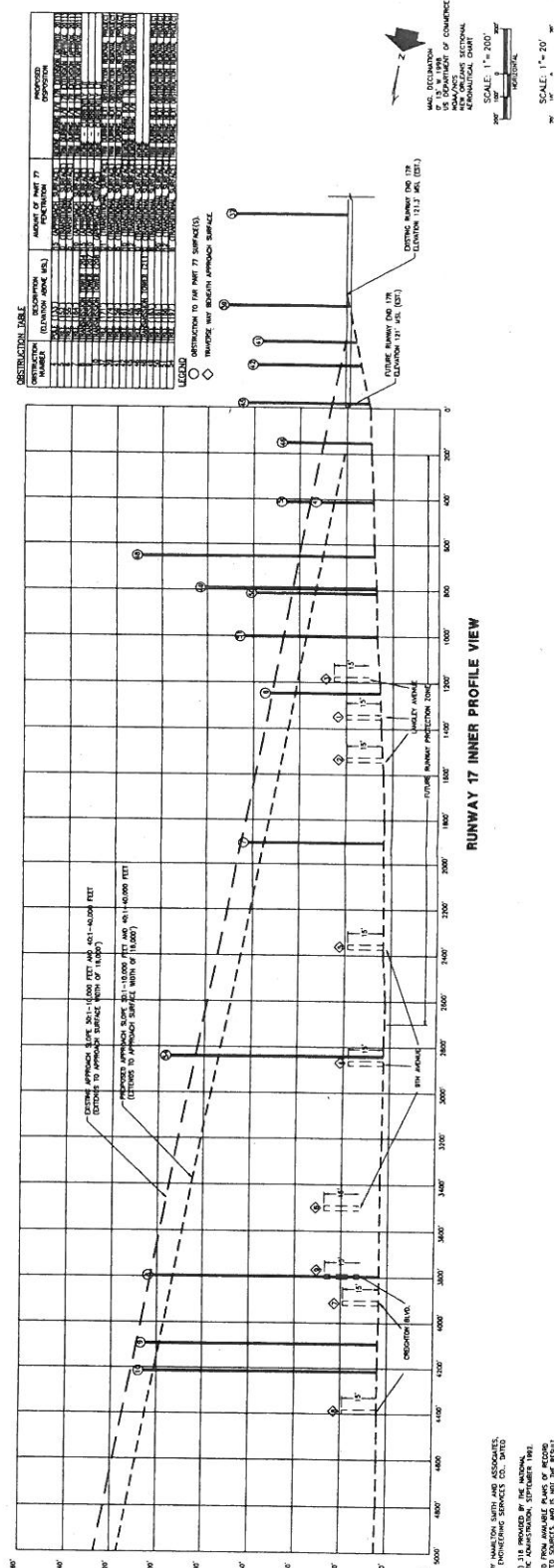
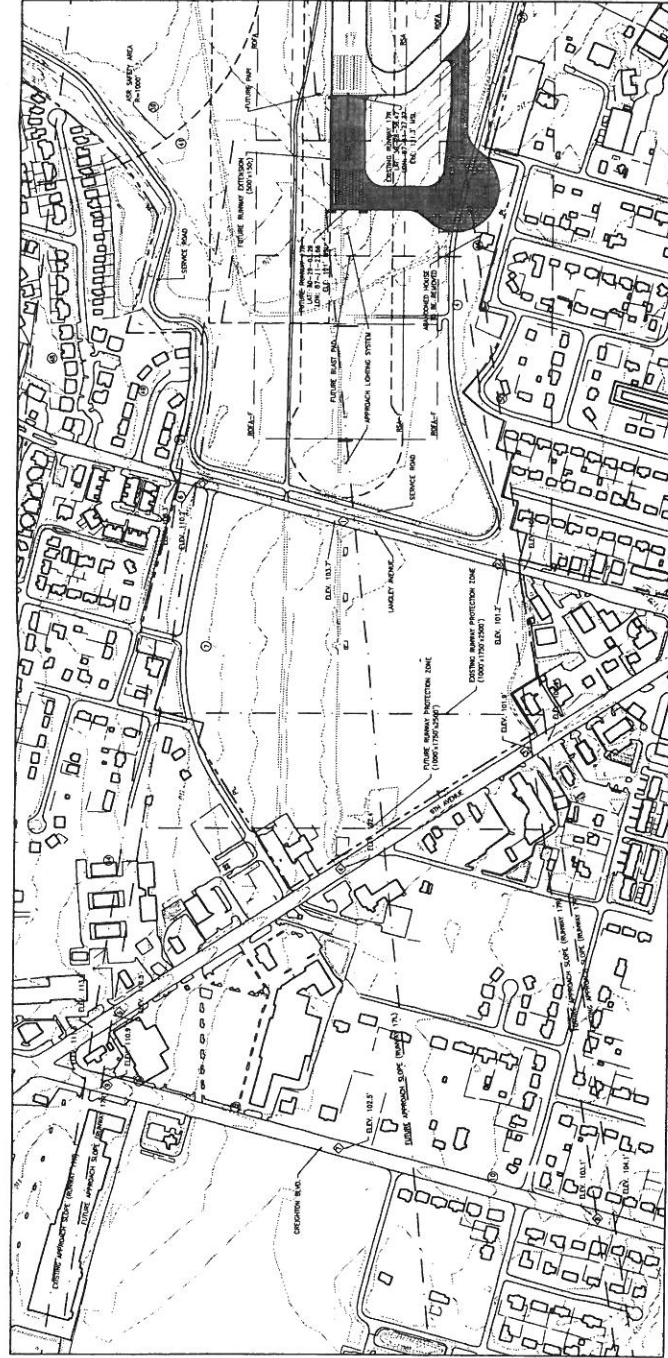
CONSULTANT

REVISIONS	BY	DATE
1. DESCRIPTION	BT	DA

DATE ISSUED: APRIL 1989
DESIGNED BY: BPE
CHECKED BY: BPE
DRAWN BY: BPE
RHS 101-5140-000
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SHEET TITLE
INNER PORTION
OF APPROACH
SURFACE PLAN
RUNWAY 17R

SHEET NUMBER
8 OF 16



THIS PLAN WAS PREPARED FROM AVAILABLE PLANS OF RECORD
AND FIELD SURVEY DATA. THE PLANS ARE NOT TO BE USED FOR
CONSTRUCTION WITHOUT THE APPROVAL OF THE ENGINEER.
THE ENGINEER ASSUMES NO LIABILITY FOR THE RESULTS
OBTAINED FROM THE USE OF THESE PLANS.

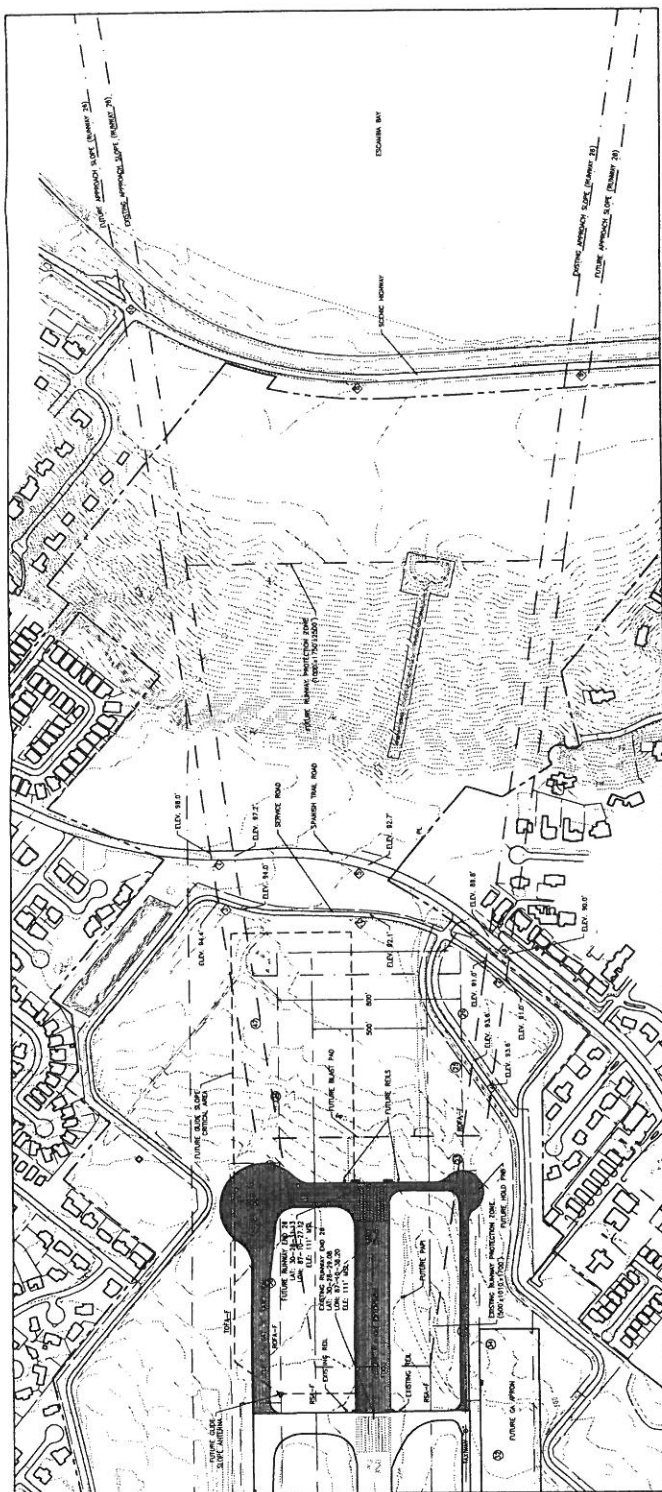


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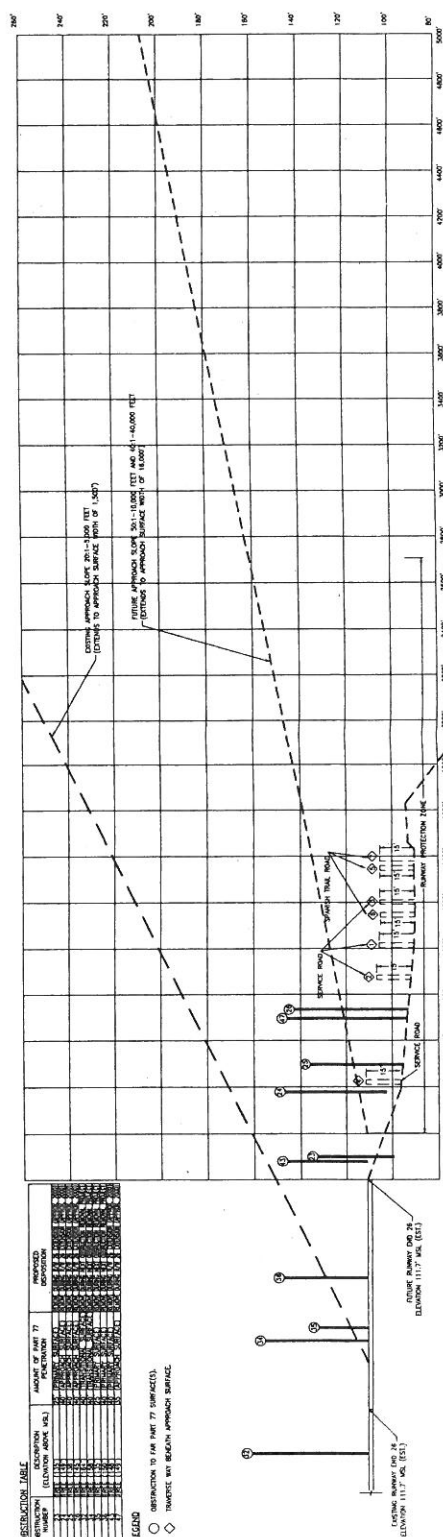
DATE ISSUED APRIL 1999
REVIEWED BY: SPR
DRAWN BY: RDO
DESIGNED BY: SPR
ALP PROJECT NUMBER
RSH 201-8240-000
© 1998 REYNOLDS, SMITH AND HALL INC.
ALUMINUM TOOL &

INNER PORTION
OF APPROACH
SURFACE PLAN
RUNWAY 28

SHEET NUMBER
11 OF 18

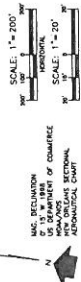


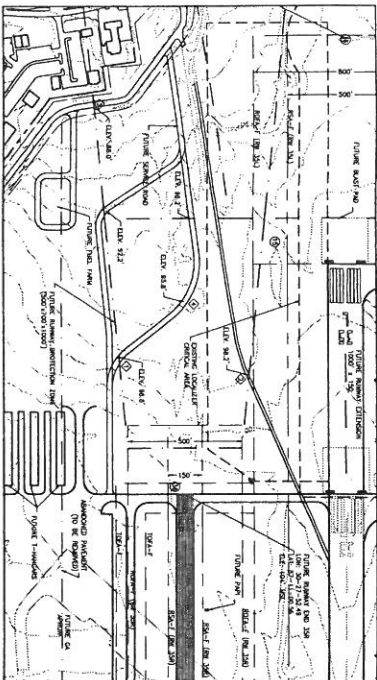
RUNWAY 26 INNER PLAN VIEW



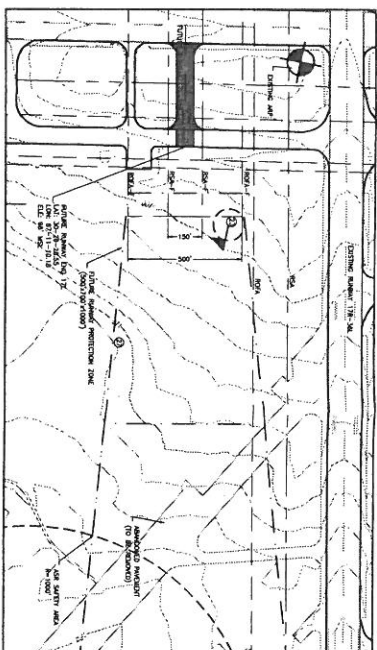
RUNWAY 28 INNER PROFILE VIEW

THIS PLAN WAS PREPARED FROM AVAILABLE PLANS OF RECORDS AND OTHER UNDOCUMENTED SOURCES, AND IS NOT THE RESULT OF A FIELD SURVEY.



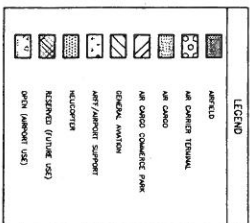


Runway 35R Inner Plan View



Runway 17L Inner Plan View

DESCRIPTION	AMOUNT OF PAVT 77	PROPOSED
Runway 35R (10,000 x 150 ft)	100,000 sq ft	100,000 sq ft
Taxiway 35A (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35B (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35C (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35D (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35E (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35F (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35G (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35H (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35I (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35J (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35K (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35L (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35M (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35N (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35O (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35P (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35Q (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35R (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35S (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35T (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35U (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35V (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35W (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35X (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35Y (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35Z (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35AA (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35AB (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35AC (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35AD (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35AE (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35AF (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35AG (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35AH (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft
Taxiway 35AI (1,000 x 100 ft)	10,000 sq ft	10,000 sq ft



BASE MAP PROVIDED BY HAMILTON SMITH AND ASSOCIATES INC. AND PINE DESIGN ENGINEERING SERVICES CO., DATED OCTOBER 9, 1984.

MAJ. DECLARATION
OF 15 JAN 1988
US DEPARTMENT OF COMMERCE
NOAA/7003
NEW ORLEANS SECTION
AERONAUTICAL CHART

SCALE: 1"=600'

400' 300' 0' 600'

REVISIONS	
NO.	DESCRIPTION
BY	DATE

CONCLUSIONS

AIRPORT
MASTER
PLAN
UPDATEPENSACOLA
REGIONAL
AIRPORT

PSH
Architectural, Engineering, Planning
and Environmental Services

Reynolds, Smith and Hills, Inc.
4651 Parkway Road
Jacksonville, FL 32216
904-280-3000 FAX 904-279-4491
www.rshh.com
R.S.Hill, AEC00788; B.Smith, AEC00975

ON-AIRPORT LAND USE PLAN

SHEET NUMBER
13 OF 16

REVISIONS	NO.	DESCRIPTION	BY	DATE
		DRAWN BY: DPA DESIGNED BY: BPS		
		INVESTED BY: DPA		
		DATE: MARCH, APRIL 1980		

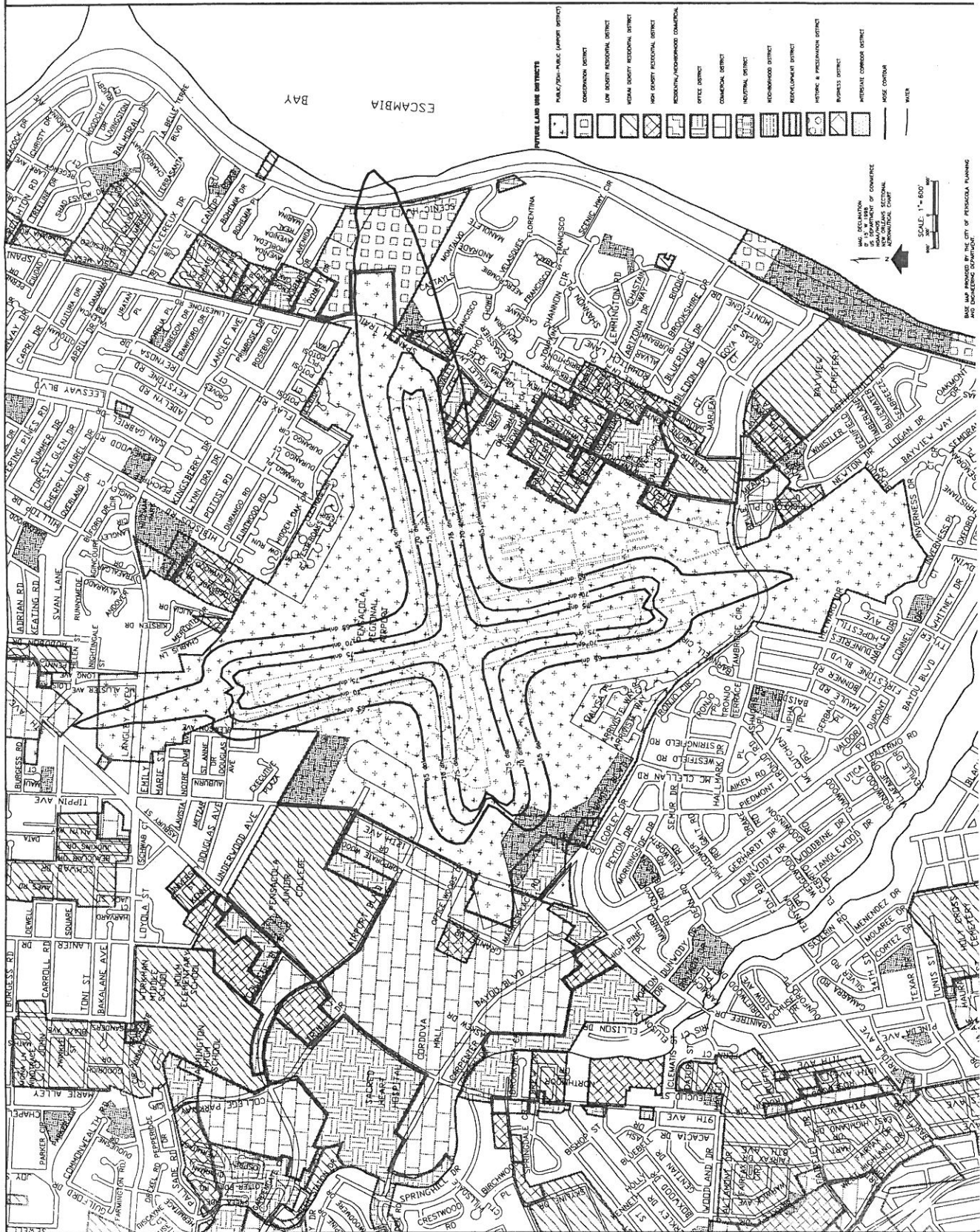
SHEET TITLE

**FUTURE OFF
AIRPORT LAND
USE AND
YEAR 2006
NOISE
CONTOURS**

SHEET NUMBER

14 OF 16

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AIRPORT
MASTER
PLAN
UPDATE

COMMUNITY ACTION

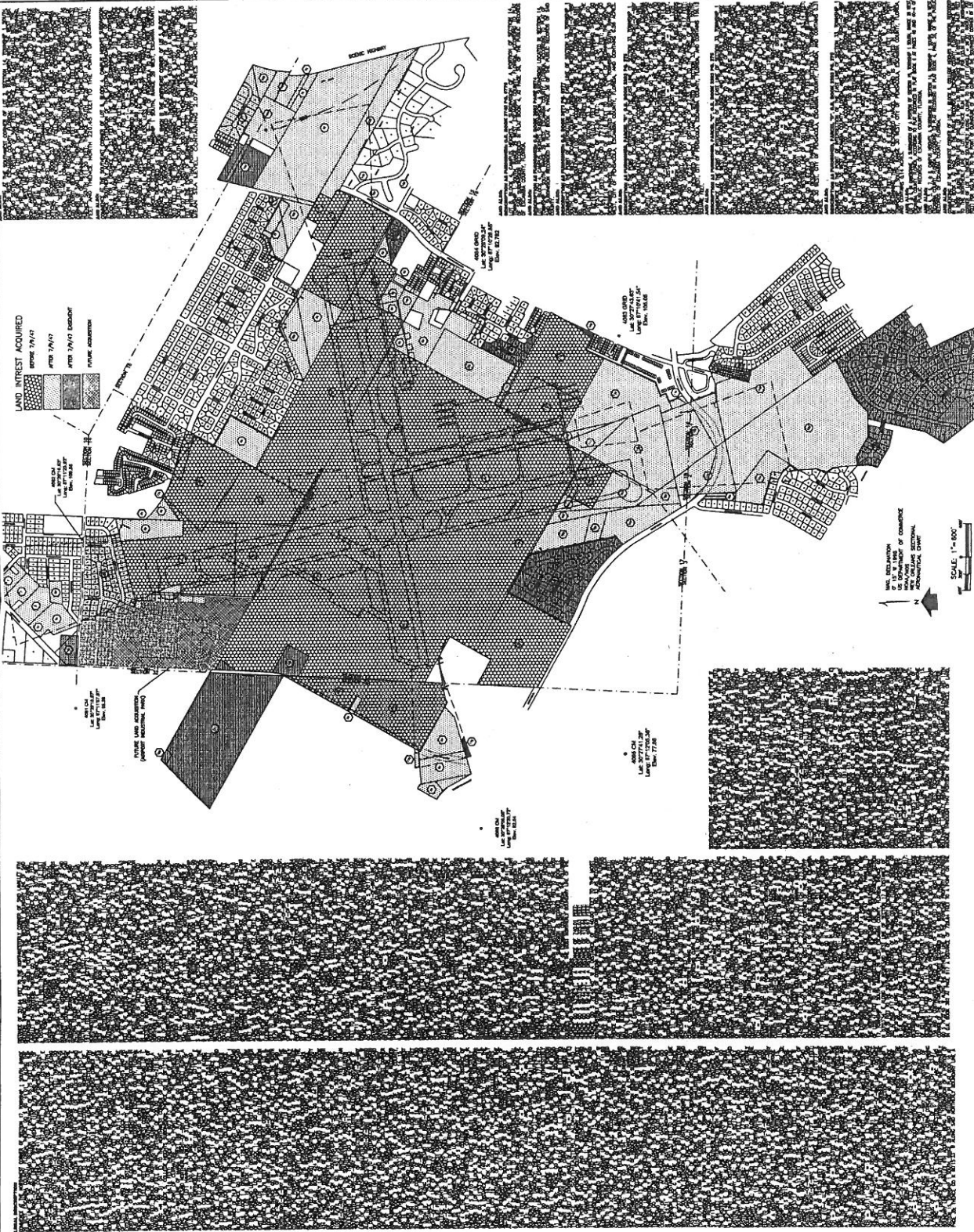
[illegible]

DATE ORDER: APRIL 1980
 ORDERED BY: BPR
 GRAVE #1: 800
 ORDERED BY: BPR

AIR PROJECT NUMBER
 RSH: 201-8240-000

© 1980 GENERAL BATH AND HALL INC.

**AIRPORT
PROPERTY**

15 OF 10
SECRET MESSAGES

PENSACOLA REGIONAL AIRPORT AIRPORT MASTER PLAN UPDATE

SECTION 7 PLAN IMPLEMENTATION

7.1 INTRODUCTION

This section of the Airport Master Plan Update presents the Capital Improvement Plan (CIP) and Development Phasing Plan for development recommended at the Pensacola Regional Airport (PNS). Each plan will consider the demand-driven need for facilities identified in Section 3, as well as the financial feasibility of projects so that a viable CIP may be developed.

7.2 DEVELOPMENT PHASING

Although the Airport Master Plan Update charts a course for planned development, it must be emphasized that the planning and development of an airport is a continuous process. The rehabilitation of existing facilities and the development of new facilities must be predicated on sustained demand which justify the costs of improvements. Therefore, periodic reviews of the CIP (or individual projects in any planning stage) must be undertaken to determine airport needs, project costs and financial viability. This will ensure that any change in aviation demand or the local area will be fully considered as the development of PNS continues.

Based on the facility requirements and alternatives developed in previous sections of this Airport Master Plan Update, a CIP and Development Phasing Plan have been recommended that incorporate the facility requirements during the 20-year planning period. Each project has been assigned to a particular planning period (i.e., short-term, intermediate-term or long-term). The short-term time period extends from 1999 to 2004. Each project in the short-term time period has been individually described in sufficient detail to identify the general nature and purpose of the project. The intermediate time frame extends from 2005 to 2009. The long-term time frame extends from 2010 to 2020. For both the intermediate and long-term time frames, a list of required projects and projected costs have been developed but without the level of implementation detail provided for short-term projects.

7.2.1 Short-Term (1999-2004) Airport Development. The initial period of development focuses upon improving the existing airside and landside conditions. Recommended development projects in the short-term time frame include runway pavement rehabilitations, taxiway pavement rehabilitations, airfield lighting rehabilitations, air cargo development, environmental assessments for runway extensions, general aviation fuel farm construction and construction of corporate hangars and T-hangars. A brief description of each project follows.

1. **Runway 26 Extension Environmental Assessment**—The Airport will need to prepare a federal-level environmental assessment for the proposed 1,000-foot by 150-foot runway extension in accordance with FAA Order 5050.4A *Airport Environmental Handbook*, the National Environmental Policy Act of 1969 (NEPA) and with state and local environmental review regulations.
2. **General Aviation Fuel Farm Construction, Phase I**—A permanent fuel farm facility is planned to be constructed in the new general aviation area which will provide fuel supply for general aviation aircraft.
3. **Reconstruct Taxiway "A" Pavement** — **Construction**—The reconstruction of Taxiway "A" will occur in accordance with the rehabilitation plan developed in the previous year. Taxiway "A" is the full-length parallel taxiway to Runway 17R-35L and is 75 feet in width. Taxiway "A" pavement has not been improved since the 1970s.
4. **Rehabilitate Runway 8-26** — **Design**—A pavement evaluation will be conducted and a rehabilitation plan will be developed for Runway 8-26. Runway 8-26 is currently 6,000 feet in length and 150 feet in width and the pavement has not been improved since the 1970s.
5. **Helicopter Operations Area Improvements, Phase 1**—Currently, six helicopter parking positions are provided. Phase I improvements will include improved automobile parking area and helicopter parking area pavement rehabilitation.
6. **Design and Construction of T-Hangars**—The Airport Master Plan Update anticipates a need for additional T-hangars during the short-term planning period. The design and construction of the T-hangars will be based on actual demand for these facilities.
7. **Design and Construction of Corporate Hangars**—The Airport Master Plan Update anticipates a need for additional corporate hangars during the short-term planning period. The design and construction of the corporate hangars will be based on actual demand for these facilities.
8. **Continuous Planning and Environmental Services**—Airport plans need to be continuously revised and updated based on actual demand, as well as continuous airport improvements. Additionally, environmental planning of recommended projects also will be monitored during the short-term planning period.

9. **Miscellaneous Projects**—Miscellaneous projects are programmed on an "as needed" basis.

Project Year 2000

1. **Runway 26 Extension – Design/Obstruction Study**—The design of an extension to Runway 26 will be undertaken in project Year 1999. Additionally, an obstruction study will be performed to identify any obstructions to FAR Part 77 surfaces. The obstruction study will also propose an obstruction treatment plan.

2. **Rehabilitate Runway 8-26 – Construction**—The construction of Runway 8-26 will commence in accordance with the rehabilitation plan identified in the previous year.

3. **Airport Access Road Improvements – Phase 1**—Internal access roads within PNS will be improved.

4. **Air Carrier Fuel Farm Improvements – Phase 1**—The air carrier fuel farm will be improved by increasing the capacity of the existing fuel farm, as well as remediating the existing site, as needed.

5. **Master Stormwater Drainage Plan**—The master stormwater drainage plan will be developed to accommodate future projects identified in the Airport Layout Plan (ALP) and to anticipate future drainage needs.

6. **Airport Industrial Park Acquisition Program – Phase 1**—As parcels become available, the Airport should plan for the acquisition of land for an aviation-related industrial park starting in the new air cargo area. Phase I of the project involves acquisition of land immediately adjacent to the existing air cargo area. Long-term development of the aviation-related industrial park may involve up to 65 acres.

7. **Airfield Pavement Rehabilitation**—The Airport should plan for continuous minor airfield pavement rehabilitation during the short-term planning period.

8. **Airfield Lighting Rehabilitation**—The Airport should plan for continuous airfield lighting rehabilitation during the short-term planning period.

9. **Road and Parking Pavement Rehabilitation**—A pavement evaluation of automobile parking and perimeter roads will be undertaken. Additionally, a pavement evaluation of all parking structures and lots will be undertaken. A rehabilitation plan for these areas will be created.

10. **Miscellaneous Projects**—Miscellaneous projects are programmed on an "as needed" basis.

Project Year 2001

1. **Runway 26 Extension - Construction**—The extension of Runway 26 will commence in accordance with the design plan identified in the previous year. Additionally, recommendations in the obstruction treatment plan will be applied to the identified FAR Part 77 obstructions.

2. **Runway 26 Extension - ILS/GPS Approach (Feasibility and Implementation)**—A precision instrument approach is planned for Runway 26. This project will determine the feasibility of implementing the instrument approach, as well as the actual method of navigation.

3. **Rehabilitate Runway 17-35-Design**—A pavement evaluation will be conducted and a rehabilitation plan will be developed for Runway 17-35. Runway 17-35 is currently 7,000 feet in length and 150 feet in width and the pavement has not been improved since the late 1970s.

4. **Airport Area Signage Improvements - Phase 1**—Signage along roads leading to the Airport will be replaced with improved signs. Additionally, some signs on airport property are planned to be updated.

5. **Air Cargo Area - Phase 1**—The Airport Master Plan Update anticipates a need for additional air cargo aircraft parking areas, additional air cargo building space and additional air cargo roadways and automobile parking space. The design and construction of the air cargo aircraft parking areas, air cargo roadways and building space and air cargo automobile parking space will be based on actual demand.

6. **Design and Construction of T-Hangars**—The Airport Master Plan Update anticipates a need for additional T-hangars during the short-term planning period. The design and construction of the T-hangars will be based on actual demand for these facilities.

7. **Design and Construction of Corporate Hangars**—The Airport Master Plan Update anticipates a need for additional corporate hangars during the short-term planning period. The design and construction of corporate hangars will be based on actual demand for these facilities.

8. **Continuous Planning and Environmental Services**—Airport plans need to be continuously revised and updated based on airport improvements each year. Additionally, environmental planning of recommended projects also need to be monitored during the short-term planning period.

9. **Miscellaneous Projects**—Miscellaneous projects are programmed on an "as needed" basis.

Project Year 2002

1. **Rehabilitate Taxiway "B" - Design**—A pavement evaluation will be conducted and rehabilitation plan will be developed for Taxiway "B". Taxiway "B" is currently 6,000 feet in length and 75 feet in width and the pavement has not been improved since the 1970s.

2. **Rehabilitate Runway 17-35 - Construction**—The reconstruction of Runway 17-35 pavement will commence in accordance with the rehabilitation plan identified in the previous year.

3. **Airport Access Road Improvements - Phase 2**—Ground access to PNS will be improved.

4. **G/A Fuel Farm - Phase 2**—The fuel farm facility is planned to be developed as actual demand dictates.

5. **Airfield Pavement Rehabilitation**—The Airport should plan for continuous airfield pavement rehabilitation during the short-term planning period.

6. **Airfield Lighting Rehabilitation**—The Airport should plan for continuous airfield lighting rehabilitation during the short-term planning period.

7. **Road and Parking Pavement Rehabilitation**—A pavement evaluation of automobile parking and perimeter roads will be undertaken. Additionally, a pavement evaluation of all parking structures and lots will be undertaken. A rehabilitation plan for these areas will be created.

8. **Miscellaneous Projects**—Miscellaneous projects are programmed on an "as needed" basis.

Project Year 2003

1. **Runway 35 Extension - Environmental Assessment**—The Airport will need to prepare a federal-level Environmental Assessment (EA) for the proposed 1,000-foot by 150-foot runway extension in accordance with FAA Order 5050.4A, *Airport Environmental Handbook*, the National Environmental Policy Act of 1969 (NEPA) and any state and local environmental review regulations.

2. **Rehabilitate Taxiway "B" – Construction**--The construction of Taxiway "B" will occur in accordance with the rehabilitation plan developed in the previous year. Taxiway "B" is the full-length parallel taxiway to Runway 8-26 and is 75 feet in width.

3. **Air Cargo – Phase 2**--The Airport Master Plan Update anticipates a need for additional air cargo aircraft parking areas, additional air cargo building space and additional air cargo roadways and automobile parking space. The design and construction of the air cargo aircraft parking areas, air cargo building space and air cargo roadways and automobile parking space will be based on actual demand.

4. **T-Hangars – Design and Construction**--The Airport Master Plan Update anticipates a need for additional T-hangars during the short-term planning period. The design and construction of the T-hangars will be based on actual demand for these facilities.

5. **Corporate Hangars – Design and Construction**--The Airport Master Plan Update anticipates a need for additional corporate hangars during the short-term planning period. The design and construction of the corporate hangars will be based on actual demand for these facilities.

6. **Continuous Planning and Environmental Services**--Airport plans need to be continuously updated. Additionally, environmental impacts of recommended construction projects need to be monitored during the short-term planning period.

7. **Miscellaneous Projects**--Miscellaneous projects are programmed on an "as needed" basis.

Project Year 2004

1. **Runway 35 Extension – Design/Obstruction Study**--The design of an extension to Runway 35 will be undertaken in project year 2004. Additionally, an obstruction study will be performed to identify any obstructions to FAR Part 77 surfaces. The obstruction study will also propose an obstruction treatment plan.

2. **Airport Access Road Improvements (Phase 3)**--Ground access to PNS will be improved.

3. **General Aviation Aircraft Wash Rack**--The design and construction of a general aviation aircraft wash rack is planned. The construction will be based on actual demand.

4. **Airport Industrial Park Acquisition Program – Phase 2**—As parcels become available, the Airport should plan for the acquisition of land for an aviation-related industrial park continuing in the new air cargo area.

5. **Air Carrier Fuel Farm Improvements – Phase 2**—The air carrier fuel farm will be improved by increasing the capacity of the existing fuel farm.

6. **Airfield Pavement Rehabilitation**—The Airport should plan for continuous airfield pavement rehabilitation during the short-term planning period.

7. **Airfield Lighting Rehabilitation**—The airport should plan for continuous airfield lighting rehabilitation during the short-term planning period.

8. **Road and Parking Pavement Rehabilitation**—A pavement evaluation of automobile parking and perimeter roads is planned to be undertaken. Additionally, a pavement evaluation of all parking structures and lots is planned to be undertaken. A rehabilitation plan for these areas will be created.

9. **Miscellaneous Projects**—Miscellaneous projects are programmed in case the need arises.

7.2.2 Intermediate-Term (2005-2009) Airport Development

The intermediate planning time frame of the Airport CIP concentrates on the continued improvement and upgrades to the existing facilities. These projects include the following.

1. **Runway 35 Extension – Construction**—The extension of Runway 35 will be in accordance to the design plan identified in the previous year. Additionally, recommendations in the obstruction treatment plan will be applied to the identified FAR Part 77 obstructions.

2. **Runway 35 Extension – ILS/GPS Approach (Feasibility and Implementation)**—A precision instrument approach is planned for Runway 35. This project will determine the feasibility of implementing the instrument approach, as well as the actual method of navigation.

3. **Airfield Lighting Replacement – Phase 1**—The replacement and upgrading of airfield lighting is planned.

4. **Airport Industrial Park Acquisition Program – Phase 3**—As parcels become available, the Airport should plan for the acquisition of land for an aviation-related industrial park.

5. **Air Cargo – Phase 3**–The Airport Master Plan Update anticipates a need for additional air cargo aircraft parking areas, additional air cargo building space and additional air cargo roadways and automobile parking space. The design and construction of the air cargo aircraft parking areas, air cargo building space and air cargo roadways and automobile parking space will be based on actual demand.

6. **Airport Master Plan/ALP Update**–The Airport will need to update the Airport Master Plan and the ALP to reflect changes in facility requirements due to likely increases in aviation demand.

7. **Terminal Building Expansion – Feasibility Study**–The Airport will need to conduct a feasibility study to determine if further development of the terminal building and structural parking garage is warranted.

8. **Terminal Building Expansion – Design and Construction**–If the feasibility study concludes that further expansion of the terminal facility is warranted, the design and construction of the new terminal concourse and associated aircraft parking apron will be needed. In addition, if warranted, an expansion to the structural parking garage will be designed and constructed.

9. **Airport Parking Improvements – Phase 2**–The Airport Master Plan Update anticipates an increase in the number of surface parking spaces. Design and construction of the surface parking spaces will be based on actual demand.

10. **Helicopter Operations Area Improvements – Phase 2**–As demand increases, helicopter parking spaces and improvements will be provided.

11. **Runway 17 Extension - Environmental Assessment**–The Airport will need to prepare a federal-level Environmental Assessment (EA) for the 500-foot by 150-foot extension of Runway 17 in accordance with FAA Order 5050.4A, *Airport Environmental Handbook*, the National Environmental Policy Act of 1969 (NEPA) and any state and local environmental review regulations.

12. **General Aviation Fuel Farm – Phase 3**–The Airport Master Plan Update anticipates an increase in demand for general aviation fuel. Design and construction of the expansion to the general aviation fuel farm will be based on actual demand.

13. **Air Carrier Fuel Farm Improvements – Phase 3**--The air carrier fuel farm will be improved by increasing the capacity of the existing fuel farm.

14. **Airport Area Signage Improvements – Phase 2**--Signage along roads leading to the Airport will be replaced with improved signs. Additionally, signs on airport property are planned to be updated.

15. **Airfield Pavement Rehabilitation/Reconstruction**--The Airport should plan for continuous airfield pavement rehabilitation during the intermediate-term planning period.

16. **Airfield Pavement Preventative Maintenance**--The Airport should plan for continuous preventative maintenance of airfield pavement in an effort to reduce future pavement rehabilitation.

17. **Road and Parking Pavement Maintenance**--A pavement evaluation of automobile parking and perimeter roads is planned to be undertaken. A rehabilitation plan for these areas will be created.

18. **Continuous Planning and Professional Services**--Airport plans need to be continuously revised and updated based on airport improvements each year.

7.2.3 Long-Term (2010-2020) Airport Development

The long-term planning horizon focuses on the continued improvement of the airside and landside facilities at PNS. These projects include:

1. **Runway 17 Extension – Design/Obstruction Study**--The design of an extension to Runway 17 is planned. Additionally, an obstruction study will be performed to identify any obstructions to FAR Part 77 surfaces. The obstruction study will also propose an obstruction treatment plan.

2. **Runway 17 Extension – Construction**--The extension of Runway 17 will be in accordance with the design plan identified in the previous year. Additionally, recommendations in the obstruction treatment plan will be applied to the identified FAR Part 77 obstructions.

3. **Terminal Building Expansion – Feasibility Study**--The Airport will need to conduct a feasibility study to determine if an expansion to the terminal building and structured parking garage is warranted.

4. **Terminal Building Expansion – Design/Construction**—If the feasibility study concludes that further expansion to the terminal facility is warranted, the design and construction of the terminal and associated aircraft parking apron will be needed. In addition, if warranted, an expansion to the structural parking garage will be designed and constructed.
5. **Airport Industrial Park Acquisition Program – Phase 4**—As parcels become available, the Airport should plan for the acquisition of land for an aviation-related industrial park.
6. **Air Cargo – Phase 4**—The Airport Master Plan Update anticipates a need for additional air cargo aircraft parking areas, additional air cargo building space and additional air cargo roadways and automobile parking space. The design and construction of the air cargo aircraft parking areas, air cargo building space and air cargo roadways and automobile parking space will be based on actual demand.
7. **Airfield Lighting Replacement – Phase 2**—The replacement and upgrading of airfield lighting is planned.
8. **Airport Parking Improvements – Phase 3**—The Airport Master Plan Update anticipates a need for additional surface parking spaces. Design and construction of the surface parking spaces will be based on actual demand.
9. **Helicopter Operations Area Improvements – Phase 3**—As demand increases, helicopter parking spaces and improvements will be provided.
10. **New General Aviation Runway – Environmental Assessment**—The Airport will need to prepare a federal-level Environmental Assessment (EA) for the construction of a 3,740-foot by 75-foot runway in accordance with FAA Order 5050.4A, *Airport Environmental Handbook*, the National Environmental Policy Act of 1969 (NEPA) and any state and local environmental review regulations.
11. **New General Aviation Runway (17L – 35R) – Design and Obstruction Study**—The design of the new general aviation runway is planned. An obstruction study will be performed to identify any obstructions to FAR Part 77 surfaces. The obstruction study will also propose an obstruction treatment plan.

12. **New General Aviation Runway – Construction**—The new general aviation runway will be approximately 3,740 feet long and 75 feet wide. Additionally, recommendations in the obstruction treatment plan will be applied to the identified FAR Part 77 obstructions.

13. **Airport Master Plan/ALP Update**—The Airport will need to update the Airport Master Plan and the ALP to reflect changes in facility requirements as a result of increased aviation demand.
14. **General Aviation Fuel Farm – Phase 4**—The Airport Master Plan Update anticipates an increase in demand for general aviation fuel. Design and construction of the expansion to the general aviation fuel farm will be based on actual demand.
15. **Air Carrier Fuel Farm Improvements – Phase 4**—The air carrier fuel farm will be improved by increasing the capacity of the existing fuel farm.

16. **Airport Area Signage Improvements – Phase 3**—Signage along roads leading to the Airport will be replaced with improved signs. Additionally, signs on Airport property are planned to be updated.

17. **Airfield Pavement Rehabilitation/Reconstruction**—The Airport should plan for continuous airfield pavement rehabilitation during the long-term planning period.
18. **Airfield Pavement Preventative Maintenance**—The Airport should plan for continuous preventative maintenance of airfield pavement in an effort to reduce future pavement rehabilitation.

19. **Road and Parking Pavement Maintenance**—A pavement evaluation of automobile parking and perimeter roads is planned to be undertaken. A rehabilitation plan for these areas will be created.
20. **Continuous Planning and Professional Services**—The need for continuous planning and professional consultation at the Airport is planned.

7.3 **CAPITAL IMPROVEMENT PLAN (CIP)**

The PNS CIP is presented in Tables 7.1 through 7.4. Table 7.1 presents a list of projects for each year of the short-term planning period (i.e., 1999 to 2004) with estimated project costs and likely funding sources. Probable costs were derived from various sources and are considered appropriate for planning purposes. Before construction of a specific project is commenced, detailed costs will be determined.

Table 7.1

Six Year Capital Improvement F
Pensacola Regional Airport - A

PROJECT YEAR	PROJECT DESCRIPTION	2002	2003	2004
1999	Runway 26 Extension - Environmental Assessment			
1999	G/A Fuel Farm - Phase 1			
1999	Rehabilitate Taxiway "A" - Construction			
1999	Rehabilitate Runway 8-26 - Design			
1999	Helicopter Operations Area Improvement			
1999	T-Hangars - Design/Construction			
1999	Corporate Hangars - Design/Construction			
1999	Misc. - 1			
1999	Misc. - 2			
1999	Misc. - 3			
1999	Misc. - 4			
TOTAL 1999				
2000	Runway 26 Extension - Design / Obstruction			
2000	Rehabilitate Runway 8-26 - Construction			
2000	Airport Access Road Improvements - Phase 1			
2000	Air Carrier Fuel Farm Improvements - Phase 1			
2000	Master Stormwater Drainage Plan			
2000	Airport Industrial Park Acquisition Program			
2000	Airfield Pavement Rehabilitation			
2000	Airfield Lighting Rehabilitation			
2000	Road and Parking Pavement Rehabilitation			
2000	Misc. - 1			
TOTAL 2000				
2001	Runway 26 Extension - Construction			
2001	Runway 26 Extension - ILIS/GPS Approach			
2001	Rehabilitate Runway 17-35 - Design			
2001	Airport Area Signage Improvements - Phase 1			
2001	Air Cargo (Phase 1) - Drainage Improvement			
2001	Air Cargo (Phase 1) - Utilities / Buildings / Parking			
2001	Air Cargo (Phase 1) - Roadways / Parking			
2001	T-Hangars - Design/Construction			
2001	Corporate Hangars - Design/Construction			
2001	Continuous Planning and Environmental Studies			
2001	Misc. - 1			
TOTAL 2001				
2002	Rehabilitate Taxiway "B" - Design			
2002	Rehabilitate Runway 17-35 - Construction			
2002	Airport Access Road Improvements - Phase 1			
2002	G/A Fuel Farm - Phase 2			
2002	Airfield Pavement Rehabilitation			
2002	Airfield Lighting Rehabilitation			
2002	Road and Parking Pavement Rehabilitation			
2002	Misc. - 1			
TOTAL 2002				
2003	Runway 35 Extension - Environmental Assessment			
2003	Rehabilitate Taxiway "B" - Construction			
2003	Air Cargo (Phase 2) - Drainage Improvement			
2003	Air Cargo (Phase 2) - Utilities / Buildings / Parking			
2003	Air Cargo (Phase 2) - Roadways / Parking			
2003	T-Hangars - Design/Construction			
2003	Corporate Hangars - Design/Construction			
2003	Continuous Planning and Environmental Studies			
2003	Misc. - 1			
TOTAL 2003				
2004	Runway 35 Extension - Design / Obstruction			
2004	Airport Access Road Improvements - Phase 1			
2004	G/A Aircraft Wash Rack			
2004	Airport Industrial Park Acquisition Program			
2004	Air Carrier Fuel Farm Improvements - Phase 1			
2004	Airfield Pavement Rehabilitation			
2004	Airfield Lighting Rehabilitation			
2004	Road and Parking Pavement Rehabilitation			
2004	Misc. - 1			
TOTAL 2004				
Total (1994-2004)				
59 Projects				
PROJECT COST				
	2002	2003	2004	

Source: Reynolds, Smith and Hills, Inc. 1998

Table 7.2

Intermediate-Term Capital Improvement Plan (2005-2009)
Pensacola Regional Airport - Airport Master Plan

FUNDING NOTES	PROJECT DESCRIPTION	TOTAL COST	FUNDING SOURCES				
			FAA	PFC	FDOT	CITY	OTHER
1	Runway 35 Extension - Construction	\$5,500,000	\$2,475,000	\$2,475,000	\$500,000	\$50,000	\$0
1	Runway 35 Extension - ILS/GPS Approach	\$1,000,000	\$450,000	\$450,000	\$50,000	\$50,000	\$0
1	Airfield Lighting Replacement - Phase 1	\$500,000	\$450,000	\$0	\$25,000	\$25,000	\$0
6	Airport Industrial Park Acquisition Program - Phase 3	\$8,200,000	\$0	\$0	\$4,100,000	\$4,100,000	\$0
3	Air Cargo (Phase 3) - Drainage	\$125,000	\$0	\$0	\$41,250	\$42,500	\$41,250
3	Air Cargo (Phase 3) - Utilities / Buildings / Apron	\$7,000,000	\$0	\$0	\$2,310,000	\$2,380,000	\$2,310,000
3	Air Cargo (Phase 3) - Roadway Access	\$700,000	\$0	\$0	\$231,000	\$238,000	\$231,000
1	Airport Master Plan/ALP Update	\$500,000	\$450,000	\$0	\$25,000	\$25,000	\$0
1	Terminal Building Expansion - Feasibility Study	\$500,000	\$450,000	\$0	\$25,000	\$25,000	\$0
6	Terminal Building Expansion - Design/Construction	\$15,000,000	\$4,950,000	\$2,475,000	\$2,475,000	\$5,100,000	\$0
1	Terminal Building Apron	\$3,000,000	\$2,700,000	\$0	\$150,000	\$150,000	\$0
2	Airport Parking Improvements - Phase 2	\$6,000,000	\$0	\$0	\$3,000,000	\$3,000,000	\$0
1	Helicopter Operations Area Improvements - Phase 2	\$100,000	\$90,000	\$0	\$5,000	\$5,000	\$0
1	Runway 17 Extension - Environmental Assessment	\$500,000	\$450,000	\$0	\$25,000	\$25,000	\$0
5	GA Fuel Farm - Phase 3	\$150,000	\$0	\$0	\$75,000	\$0	\$75,000
5	Air Carrier Fuel Farm Improvements - Phase 3	\$250,000	\$0	\$0	\$125,000	\$0	\$125,000
1	Airport Area Signage Improvements - Phase 2	\$60,000	\$0	\$0	\$30,000	\$30,000	\$0
Annual Projects for 5 Year Period							
1	Airfield Pavement Rehabilitation/Reconstruction	\$500,000	\$450,000	\$0	\$25,000	\$25,000	\$0
1	Airfield Pavement Preventative Maintenance	\$250,000	\$0	\$0	\$0	\$250,000	\$0
4	Road and Parking Pavement Maintenance	\$250,000	\$0	\$0	\$0	\$250,000	\$0
1	Continuous Planning and Professional Services	\$125,000	\$0	\$0	\$0	\$125,000	\$0
TOTAL (2005-2009)		\$50,210,000	\$12,915,000	\$5,400,000	\$13,217,250	\$15,895,500	\$2,782,250

Source: Reynolds, Smith and Hills, Inc. 1998

Funding Notes:

- 1 - AIP - 90%, FDOT - 5%, Local - 5%
- 2 - FDOT - 50%, Local - 50% (FDOT Economic Development)
- 3 - FDOT - 33%, Local - 33%, Private Developer - 33% (FDOT Economic Development)
- 4 - Locally Funded - 100%
- 5 - FDOT - 50%, Private Developer - 50% (FDOT Economic Development)
- 6 - Miscellaneous - As Indicated
- 7 - Locally Funded - 100% through PFC
- 8 - AIP - 45%, PFC - 45%, FDOT - 5%, Local - 5%

Table 7.3

Long-Term Capital Improvement Plan (2010-2020)
Pensacola Regional Airport - Airport Master Plan

FUNDING NOTES	PROJECT DESCRIPTION	TOTAL COST	FUNDING SOURCES					OTHER
			FAA	PFC	FDOT	CITY		
8	Runway 17 Extension - Design / Obstruction Study	\$300,000	\$135,000	\$135,000	\$37,500	-\$7,500	\$0	
8	Runway 17 Extension - Design/Construction	\$2,800,000	\$1,260,000	\$1,260,000	\$250,000	\$30,000	\$0	
1	Terminal Building Expansion - Feasibility Study	\$250,000	\$225,000	\$0	\$12,500	\$12,500	\$0	
6	Terminal Building Expansion - Construction	\$10,000,000	\$3,300,000	\$1,650,000	\$1,650,000	\$3,400,000	\$0	
1	Terminal Building Apron	\$2,000,000	\$1,800,000	\$0	\$100,000	\$100,000	\$0	
2	Airport Industrial Park Acquisition Program - Phase 4	\$8,200,000	\$0	\$0	\$4,100,000	\$4,100,000	\$0	
3	Air Cargo (Phase 4) - Drainage	\$125,000	\$0	\$0	\$41,250	\$42,500	\$41,250	
3	Air Cargo (Phase 4) - Utilities / Buildings / Apron	\$7,000,000	\$0	\$0	\$2,310,000	\$2,380,000	\$2,310,000	
3	Air Cargo (Phase 4) - Roadway Access	\$700,000	\$0	\$0	\$231,000	\$238,000	\$231,000	
1	Airfield Lighting Replacement - Phase 2	\$500,000	\$450,000	\$0	\$25,000	\$25,000	\$0	
2	Airport Parking Improvements - Phase 3	\$2,500,000	\$0	\$0	\$1,250,000	\$1,250,000	\$0	
1	Helicopter Operations Area Improvements - Phase 3	\$100,000	\$90,000	\$0	\$5,000	\$5,000	\$0	
1	New General Aviation Runway - Environmental Assessment	\$500,000	\$450,000	\$0	\$25,000	\$25,000	\$0	
1	New General Aviation Runway - Design / Obstruction Study	\$500,000	\$450,000	\$0	\$25,000	\$25,000	\$0	
8	New General Aviation Runway - Construction	\$4,250,000	\$1,912,500	\$1,912,500	\$212,500	\$212,500	\$0	
1	Airport Master Plan/ALP Update	\$500,000	\$450,000	\$0	\$25,000	\$25,000	\$0	
2	G/A Fuel Farm - Phase 4	\$150,000	\$0	\$0	\$75,000	\$75,000	\$0	
5	Air Carrier Fuel Farm Improvements - Phase 4	\$250,000	\$0	\$0	\$125,000	\$125,000	\$0	
1	Airport Area Signage Improvements - Phase 3	\$50,000	\$0	\$0	\$25,000	\$25,000		
Annual Projects for 10 Year Period								
1	Airfield Pavement Rehabilitation/Reconstruction	\$1,000,000	\$900,000	\$0	\$50,000	\$50,000	\$0	
1	Airfield Pavement Preventative Maintenance	\$500,000	\$0	\$0	\$0	\$500,000	\$0	
4	Road and Parking Pavement Maintenance	\$500,000	\$0	\$0	\$0	\$500,000	\$0	
1	Continuous Planning and Professional Services	\$250,000	\$0	\$0	\$0	\$250,000	\$0	
TOTAL (2010-2020)		\$42,925,000	\$11,422,500	\$4,957,500	\$10,574,750	\$13,388,000	\$2,582,250	
23 Projects								

Source: Reynolds, Smith and Hills, Inc. 1998

Funding Notes:

- 1 - AIP - 90%, FDOT - 5%, Local - 5%
- 2 - FDOT - 50%, Local - 50% (FDOT Economic Development)
- 3 - FDOT - 33%, Local - 33%, Private Developer - 33% (FDOT Economic Development)
- 4 - Locally Funded - 100%
- 5 - FDOT - 50%, Private Developer - 50% (FDOT Economic Development)
- 6 - Miscellaneous - As Indicated
- 7 - Locally Funded - 100% through PFC
- 8 - AIP - 45%, PFC - 45%, FDOT - 5%, Local - 5%

Table 7.4 Capital Improvement Program - Summary (1999-2020)
Pensacola Regional Airport - Airport Master Plan

PERIOD	PROJECTS	TOTAL PROJECT COST	FUNDING SOURCES					TOTAL
			FAA	PFC	FDOT	CITY	OTHER	
1999-2004	52 Projects	\$62,605,000	\$21,204,000	\$15,480,000	\$9,906,250	\$9,746,500	\$6,268,250	\$62,605,000
2005-2009	18 Projects	\$50,210,000	\$12,915,000	\$5,400,000	\$13,217,250	\$15,895,500	\$2,782,250	\$50,210,000
2010-2020	23 Projects	\$42,925,000	\$11,422,500	\$4,957,500	\$10,574,750	\$13,388,000	\$2,582,250	\$42,925,000
1999-2020	103 Projects	\$155,740,000	\$45,541,500	\$25,837,500	\$33,698,250	\$39,030,000	\$11,632,750	\$155,740,000

Source: Reynolds, Smith and Hills, Inc. 1998

7.3.1 CIP Funding Sources

The potential funding sources for the CIP include FAA grant funds, Passenger Facility Charge (PFC) revenue, FDOT grant funds, airport funds, local/city funds and other grants and funds. These sources are discussed in greater detail in the following sections.

FAA Funding—Under the current law, airport sponsors are eligible for FAA funding for specifically approved airport projects through the FAA's Airport Improvement Program (AIP). The Airport and Airway Improvement Act of 1982 established the current federal funding mechanism, known as AIP, which provides funding for eligible airport planning, development and noise compatibility projects at public-use airports included in the NPIAS since 1982.

The AIP provides "entitlement" funds for commercial service and cargo airports based on the number of annual enplaned passengers and landed cargo weight at a specific airport. Other appropriations of AIP funds go to states, general aviation airports, other commercial service airports, and noise compatibility planning and programs. Any funds which remain are designated as "discretionary" funds and may be used by the FAA for funding eligible projects which typically enhance airport capacity, safety or security. In some years, discretionary funding has been specifically directed to certain national priorities.

Since passage of the Airway Safety and Capacity Expansion Act of 1990, commercial service airports have been authorized to impose a PFC to finance eligible airport-related projects. The Act limited the maximum amount charged to \$3 per enplaning passenger. The Act also required large- and medium-hub airports that elected to charge PFC's to forego up to 50 percent of their annual entitlement funds. The returned entitlement funds would be reallocated to small hub, non-hub and general aviation airports. It should be noted that PNS is a small-hub airport. While the FAA is required to approve collection and use of PFC's, the program allows for local collection of funds through the airlines and local use of the funds for a greater range of projects than is available through the AIP.

FDOT Funding—The State of Florida also provides funding to public airport sponsors for eligible projects through the FDOT Aviation Office. Florida has enacted aviation user taxes that are used to support eligible aviation development at airports in the Florida Aviation System Plan (FASP). The strength of the Florida aviation community has afforded ample funding for these facilities over the years and is anticipated to continue throughout the planning period. FDOT can now fund up to 80 percent of eligible projects not supported by FAA and actually provides more total funding than is received from FAA for Florida's airports.

FDOT has its own funding priority system as follows:

1. Maximize federal funding by programming eligible projects that have or will soon receive federal funding. The State's share is one-half of the non-federal share.

2. For those eligible airside projects that have not nor will not be receiving federal funding, the State may fund up to the current statutory share, which currently is 80 percent of eligible project costs. These funds are prioritized as follows:

- a) Airside projects that increase the safety and security of the traveling public;
- b) Airside projects that preserve existing airfield infrastructure;
- c) Airside projects that increase the capacity of Florida's airports; and
- d) Airside projects of significant importance that cannot be fully funded by the FAA but are

eligible in accordance with current statutory requirements, if funds are available.

1. Other non-federally funded projects in the following order of priority:

- a) Planning projects;
- b) Land acquisition for airfield infrastructure;
- c) Terminal projects;
- d) Airport access projects; and
- e) Eligible NAVAIDS

4. Economic development funds in support of economic development up to the current rate of 50 percent.

Local/City Funds--The City of Pensacola may provide local funding for operation of PNS through direct appropriation of funds or through General Revenue Bonds. However, the Airport has historically operated as a self-supporting facility.

Airport Earnings and Reserves--The airline agreements currently in place at PNS include provisions regarding capital improvements for the airport. The airline agreements provide that a capital fund be divided into two separate accounts -- the capital improvement account and the prepaid revenue account. Monies are first to be deposited into the capital improvement account in an amount equal to 17.5 percent of non-airline revenues. These funds are to provide an ongoing source of equity capital for future expansion and improvement of airport facilities.

Monies in excess of this amount are to be deposited in the prepaid revenue account. The balance in the prepaid revenue account at the beginning of each fiscal year is to be transferred to the airport revenue fund and used as a credit against the calculation of airline landing fees for signatory airlines.

This type of agreement is referred to as a "residual" airline agreement. All residual "profits" are used to offset airline fees. However, any annual deficit is added to airline rates and charges for the next year. Therefore, an amount equal to 17.5 percent of non-airline revenues is set aside to use for matching funds for FAA/State grants and fulfill capital requirements at PNS.

Other Funding Options--The other funding options include other federal and state grant sources such as intermodal transportation funds and economic development funds.

For example, Intermodal Transportation funds can be used to connect highways with intermodal transportation facilities and for other intermodal projects that might include rail and highway access with airport facilities. Congress has recently reauthorized intermodal funding as a part of the Transportation Equity Act for the 21st Century (TEA21). This law guarantees \$198 billion in surface transportation investment including highways, transit and intermodal projects for the period FY 1998-2003.

The FAA is also developing proposals to encourage innovative approaches to airport financing that will increase the value of federal airport investment dollars. In a March 1996 report, *An Assessment of Innovative Financing Options for the Airport Improvement Program*, FAA identified four options that could increase the value of AIP directly available for airport development. These included:

- AIP Funded Debt Service Reserve
- Federal Guarantee for Airport Loans
- AIP Funded Bond Insurance
- Establishment of a Federal Airport Loan Fund

The use of innovative financing techniques for a limited number of airports is included in current proposals for the FAA Reauthorization Act now being considered by Congress.

Additional sources of revenue could include third party financing. One example of how this source of funding works is when a third party, usually a developer, is used to finance a construction project. Only projects with an appropriate cash flow can support this type of financing. The third-party leases the structure for a period of years to the tenant paying the airport ground rents. According to terms and conditions of the agreement, the airport receives ownership of the asset upon expiration of the lease. This method of financing reserves the airport's cash for higher priority projects including airside

improvements which are not usually fundable through third party financing. Projects which are particularly amenable to this type of funding include general aviation hangar development, corporate hangars and cargo facilities.

7.4 AIRPORT REVENUE

Table 7.5 provides five years of historical revenue and revenue forecasts for the planning period for PNS. 1994 through 1998 are actual figures derived from several sources including staff, the bond prospectus for the 1997 series A and B and 1998 series A bonds, and *Independent Auditor's Reports* prepared by Saltmarsh, Cleaveland & Gund for the City of Pensacola with various dates ranging from 1994 through 1998. 1999 is the budgeted figure derived from the *Rates and Charges Report* provided to the airlines dated August 1998.

Projected revenues for the period 2000 through 2020 were based on several factors. Each item was individually evaluated and discussed with staff. Terminal building rents were based on available counter space for expansion. Other items such as loading bridge fees, land fees and non-signatory airline surcharges were based on historical trends considering local rates of inflation.

Specific items such as concession revenues and terminal area fees were based on forecasted rates of increases in enplanements since these items are directly related to passenger usage of the facility. FBO fees were increased based on forecasted increases in general aviation activity. Most other revenue sources were increased based on a 2.5 percent rate of inflation.

7.5 OPERATING EXPENSES

Table 7.6 projects operating expenses through the year 2020 and provides a history of operating expenses at PNS for the period 1994 through 1998. The basis for the historical numbers and 1999 budget was the *Rates and Charges Report* provided to the airlines dated August 1995 through August 1999.

Forecasts for the period 2000 through 2020 were based on individual expense item trends, inflation rates, local and national trends and other factors. Each item was examined individually and forecast for the planning period. For debt service projections, each outstanding bond issue was examined, the bond prospectus and history reviewed and all bonds and notes included in the Bond Repayment Schedule as shown in Table 7.7.

As previously discussed, the airline agreement for the City of Pensacola provides for a capital improvement account which is calculated as 17.5 percent of non-airline revenues. The Airport uses these amounts to purchase capital items each year, defined by the City of Pensacola as any purchase

Table 7.5
Revenue History & Forecasts
Pensacola Regional Airport - Airport Master Plan

Actual	Forecasts										Forecasts										Forecasts																		
	Short-Term 1988 - 2004										Intermediate Term 2005 - 2009										Long-Term 2010 - 2020																		
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
Airline Revenues	\$ 1,645,000	\$ 1,674,000	\$ 1,690,000	\$ 1,628,000	\$ 1,699,000	\$ 1,778,000	\$ 1,873,000	\$ 1,970,000	\$ 1,979,000	\$ 1,976,000	\$ 1,974,000	\$ 2,015,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	\$ 2,051,000	
Terminal Building Revenues	154,000	178,000	65,000	45,000	48,000	97,000	84,000	133,000	135,000	135,000	134,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000	143,000
Passenger Building User Fees	419,000	348,000	405,000	317,000	327,000	330,000	335,000	351,000	347,000	347,000	347,000	357,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000	367,000
Non-Airline Revenues	2,145,000	1,930,000	1,207,000	1,197,000	1,607,000	2,773,000	2,598,000	2,554,000	2,427,000	2,417,000	2,417,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	2,374,000	
Congestion/Relief Airline Surcharges	4,383,000	3,120,000	3,287,000	3,060,000	3,911,000	5,024,000	5,093,000	4,945,000	5,074,000	5,101,375	5,230,844	5,347,078	5,431,301	5,516,708	5,604,251	5,692,882	5,781,357	5,871,857	5,915,201	6,012,682	6,111,958	6,213,451	6,317,462	6,424,154	6,530,448	6,637,454	6,745,462	6,854,470	6,963,478	7,072,486	7,181,494	7,290,502	7,399,510	7,508,518	7,617,526	7,726,534	7,835,542		
Other Airline Revenues	44,000	51,000	43,500	37,745	40,000	59,225	51,481	52,788	54,087	55,394	56,702	58,010	59,318	60,626	61,934	63,242	64,550	65,858	67,166	68,474	69,782	71,090	72,398	73,706	75,014	76,322	77,630	78,938	80,246	81,554	82,862	84,170	85,478	86,786	88,094	89,402	90,710	92,018	
Advertising	10,000	84,000	79,000	144,200	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	
Concessions	85,000	199,000	104,000	138,165	148,000	142,000	170,000	173,000	175,000	176,000	177,000	178,000	179,000	180,000	181,000	182,000	183,000	184,000	185,000	186,000	187,000	188,000	189,000	190,000	191,000	192,000	193,000	194,000	195,000	196,000	197,000	198,000	199,000	200,000	201,000	202,000	203,000	204,000	
Telephone commissions	81,000	42,000	45,000	40,885	25,000	30,000	31,273	32,488	33,840	35,421	38,023	38,486	40,120	41,827	43,594	45,432	47,330	49,276	51,272	53,364	55,529	58,300	60,722	63,348	66,035	68,803	71,644	74,568	77,542	80,566	83,639	86,762	89,935	93,157	96,429	99,751	103,123		
Subtotal	310,000	342,000	281,000	373,141	344,000	380,000	417,279	429,097	457,007	486,837	488,817	508,578	529,153	550,576	572,882	598,107	620,201	645,472	671,894	699,898	727,051	757,038	787,872	819,880	852,438	886,240	924,504	963,036	1,001,844	1,040,936	1,080,320	1,120,000	1,159,480	1,198,760	1,237,840	1,276,720	1,315,400		
Other Airlines	1,445,000	1,611,000	1,641,000	1,754,859	1,815,000	1,880,500	2,064,236	2,243,307	2,338,037	2,423,588	2,470,588	2,618,540	2,769,804	2,878,045	2,947,838	3,018,258	3,089,281	3,160,316	3,231,361	3,302,406	3,373,451	3,444,496	3,515,541	3,586,586	3,657,631	3,728,676	3,799,721	3,870,766	3,941,811	4,012,856	4,083,901	4,154,946	4,225,991	4,297,036	4,368,081	4,439,126	4,510,171		
Airline parking facility charge	1,168,000	1,218,000	1,407,000	1,415,859	1,450,000	1,700,000	1,772,000	1,975,000	2,097,145	2,092,285	2,108,984	2,274,473	2,398,688	2,523,903	2,649,118	2,774,333	2,899,548	3,024,763	3,149,978	3,275,193	3,400,408	3,525,623	3,650,838	3,776,053	3,901,268	4,026,483	4,151,698	4,276,913	4,402,128	4,527,343	4,652,558	4,777,773	4,902,988	5,028,203	5,153,418	5,278,633	5,403,848	5,529,063	
Total	2,400,000	2,803,000	3,184,000	3,280,844	3,370,000	3,870,000	4,339,124	4,503,243	4,684,384	4,873,348	5,068,838	5,274,448	5,487,454	5,702,298	5,940,128	6,160,541	6,420,882	6,681,903	6,942,924	7,245,454	7,539,240	7,845,248	8,165,217	8,491,274	8,843,470	9,203,778	9,578,984	9,954,190	10,329,396	10,704,602	11,079,808	11,455,014	11,830,220	12,205,426	12,580,632	12,955,838	13,331,044		
Miscellaneous	47,000	29,000	49,000	34,000	38,000	50,000	51,320	52,541	53,845	55,141	56,570	57,985	59,434	60,920	62,443	64,004	65,604	67,244	68,926	70,648	72,415	74,225	76,081	77,983	79,933	81,931	83,979	86,075	88,215	90,399	92,627	94,900	97,218	99,580	101,986	104,436	106,928		
Subtotal	47,000	29,000	49,000	34,000	38,000	50,000	51,320	52,541	53,845	55,141	56,570	57,985	59,434	60,920	62,443	64,004	65,604	67,244	68,926	70,648	72,415	74,225	76,081	77,983	79,933	81,931	83,979	86,075	88,215	90,399	92,627	94,900	97,218	99,580	101,986	104,436	106,928		
Other Buildings and Areas	4,000	4,000	4,000	5,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	
Cargo loading ground lease	78,000	50,000	45,000	87,531	86,000	85,000	87,125	89,320	91,380	93,284	95,104	96,834	98,470	100,014	101,566	103,126	104,692	106,264	107,842	109,426	111,016	112,612	114,214	115,822	117,436	119,056	120,682	122,314	123,952	125,596	127,246	128,902	130,564	132,232	133,906	135,586	137,272	138,964	
Flight base generators	12,000	13,000	8,000	6,000	6,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	
Hanger property lease	11,000	3,000	5,000	3,000	3,000	4,000	4,100	4,200	4,308	4,415	4,526	4,638	4,750	4,862	4,974	5,086	5,198	5,310	5,422	5,534	5,646	5,758	5,870	5,982	6,094	6,206	6,318	6,430	6,542	6,654	6,766	6,878	6,990	7,102	7,214	7,326	7,438	7,550	
Hanger rentals	494,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	484,000	
INACON Income Note	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	248,000	
Financing	10,000	12,000	13,000	11,000	11,000	13,000	14,000	15,000	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	15,715	
U.S. Government lease	78,000	108,000	99,000	27,000	28,000	27,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	
Other	25,000	33,000	605,000	881,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000
Subtotal	204,000	210,000	605,000	881,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000	883,000
Interest Income	384,000	200,000	324,000	480,000	483,000	483,000	483,000	483,000	483,000	483,000	483,000	483,000																											

Table 7.8 Expenses History & Forecasts
Pinalosa Regional Airport - Airport Master Plan

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
Operating and Maintenance Expenses																																							
Terminal Building																																							
Direct																																							
Salaries and benefits	137,452	141,000	125,000	182,000	140,000	8,000	6,500	9,481	6,525	6,786	6,968	7,132	7,318	7,483	7,641	7,823	8,009	8,271	8,478	8,690	8,907	9,130	9,368	9,620	9,887	10,167	10,460	10,767	11,088	11,424	11,775	12,141	12,524	12,915	13,314	13,721	14,135	14,557	
Supplies and materials	338,789	416,000	386,000	572,888	495,000	320,000	533,000	548,376	588,332	633,893	680,342	728,911	779,606	830,532	882,844	936,541	990,622	1,045,187	1,100,336	1,156,070	1,212,390	1,269,299	1,326,796	1,384,881	1,443,552	1,502,809	1,562,652	1,623,081	1,684,095	1,745,694	1,807,878	1,870,646	1,933,998	1,997,934	2,062,454	2,127,556	2,193,232	2,259,484	
Utilities	181,472	185,000	178,000	274,000	210,000	21,000	212,000	215,000	218,000	221,000	224,000	227,000	230,000	233,000	236,000	239,000	242,000	245,000	248,000	251,000	254,000	257,000	260,000	263,000	266,000	269,000	272,000	275,000	278,000	281,000	284,000	287,000	290,000	293,000	296,000	299,000	302,000	305,000	
Security	298,353	327,000	371,000	441,000	418,000	448,000	524,148	581,619	640,747	701,524	764,959	831,148	898,082	965,802	1,034,336	1,103,702	1,173,930	1,245,049	1,317,079	1,389,029	1,461,908	1,535,726	1,610,493	1,686,218	1,762,902	1,840,545	1,919,147	1,998,707	2,079,224	2,160,697	2,243,125	2,326,507	2,410,843	2,496,134	2,582,379	2,669,578	2,757,730		
Administration	329,387	416,000	370,000	548,000	442,000	388,000	631,000	687,544	745,279	804,207	864,336	925,665	988,194	1,051,922	1,116,849	1,182,974	1,250,298	1,318,821	1,388,543	1,459,464	1,530,584	1,601,903	1,674,421	1,748,138	1,823,054	1,898,169	1,974,484	2,050,999	2,128,714	2,207,628	2,287,741	2,369,052	2,450,561	2,533,268	2,617,172	2,702,273	2,788,567		
City Administration Charges	171,000	171,000	137,000	137,000	157,000	157,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000	196,000		
Maintenance																																							
Capital Improvements																																							
Debt Service																																							
Salaries and benefits	76,115	88,000	88,000	84,000	20,000	31,000	33,738	37,238	40,813	44,721	48,925	53,371	58,008	62,864	67,981	73,397	79,064	84,931	91,048	97,465	104,132	111,000	118,129	125,568	133,367	141,466	149,915	158,654	167,732	177,100	186,797	196,764	207,041	217,688	228,645	239,952	251,649		
Supplies and materials	181,137	118,000	181,000	153,888	296,000	253,000	259,256	262,248	272,453	273,295	282,248	292,427	302,727	308,256	315,882	325,861	337,361	350,437	364,143	378,533	393,661	409,581	426,346	443,911	462,332	481,564	501,664	522,584	544,364	567,044	590,664	615,264	640,864	667,504	695,224	724,044	754,004		
Utilities	18,485	25,000	18,000	23,850	23,850	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350	35,350		
Security	37,407	43,000	43,000	50,000	50,000	58,000	65,000	72,000	79,000	86,000	93,000	100,000	107,000	114,000	121,000	128,000	135,000	142,000	149,000	156,000	163,000	170,000	177,000	184,000	191,000	198,000	205,000	212,000	219,000	226,000	233,000	240,000	247,000	254,000	261,000	268,000	275,000		
Administration	424,674	448,000	448,000	498,000	498,000	497,000	530,000	562,000	594,000	626,000	658,000	690,000	722,000	754,000	786,000	818,000	850,000	882,000	914,000	946,000	978,000	1,010,000	1,042,000	1,074,000	1,106,000	1,138,000	1,170,000	1,202,000	1,234,000	1,266,000	1,298,000	1,330,000	1,362,000	1,394,000	1,426,000	1,458,000	1,490,000		
City Administration Charges	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000	197,000		
Maintenance	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000	104,000		
Capital Improvements																																							
Debt Service																																							
Salaries and benefits	1,264	7,000	1,000	1,403	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
Supplies and materials	7,270	16,000	11,000	4,045	14,000	7,000	25,225	26,248	26,822	27,586	28,265	29,117	30,066	31,104	32,232	33,450	34,758	36,156	37,644	39,222	40,890	42,648	44,496	46,434	48,462	50,580	52,788	55,086	57,474	60,000	62,664	65,466	68,406	71,482	74,694	78,042	81,526		
Utilities	23,423	21,000	23,000	22,885	28,000	29,000	30,250	30,448	31,250	32,011	32,813	33,665	34,567	35,519	36,521	37,573	38,675	39,827	41,029	42,281	43,583	44,935	46,337	47,789	49,291	50,843	52,445	54,097	55,800	57,552	59,354	61,206	63,108	65,060	67,062	69,114			
Security	293,116	288,000	245,000	312,000	288,000	335,000	340,800	351,139	363,180	375,944	389,464	403,874	419,184	435,394	452,504	470,514	489,424	509,234	529,944	551,554	574,064	597,474	621,784	647,094	673,404	700,714	729,024	758,334	788,644	819,954	852,264	885,574	919,884	955,194	991,504	1,028,814			
Administration	60,881	58,000	66,000	38,312	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000			
City Administration Charges	72,481	76,000	71,000	73,387	88,000	87,000	88,875	70,352	72,152	73,952	75,752	77,552	79,352	81,152	82,952	84,752	86,552	88,352	90,152	91,952	93,752	95,552	97,352	99,152	100,952	102,752	104,552	106,352	108,152	110,000	111,800	113,600	115,400	117,200	119,000	120,800			
Maintenance	13,686	15,000	15,000	13,822	17,000	18,000	18,450	18,910	19,384	19,868	20,354	20,844	21,338	21,836	22,338	22,840	23,346	23,856	24,370	24,888	25,410	25,936	26,466	26,998	27,534	28,074	28,618	29,166	29,718	30,274	30,834	31,398	31,966	32,538	33,114	33,694			
Capital Improvements	58,873	83,000	31,000	80,523	108,000	117,500	134,350	147,600	162,300	178,450	196,000	214,050	232,600	251,650	271,200	291,350	312,100	333,450	355,400	377,950	401,100	424,850	449,200	474,150	500,000	526,550	553,800	581,750	610,400	639,750	669,900	699,750	729,300	758,550	788,500	818,150			
Debt Service	35,000	35,000	28,000	27,000	22,000	22,000	24,000	25,000	26,000	27,000	28,000	29,000	30,000	31,000	32,000	33,000	34,000	35,000	36,000	37,000	38,000	39,000	40,000	41,000	42,000	43,000	44,000	45,000	46,000	47,000	48,000	49,000	50,000	51,000	52,000	53,000			
Capital Improvements	493,882	671,000	665,000	693,000	762,000	845,000	941,312	1,064,972	1,209,771	1,376,771	1,567,071	1,782,771	2,024,071	2,291,071	2,583,071	2,900,071	3,242,071	3,609,071	4,001,071	4,417,071	4,853,071	5,309,071	5,785,071	6,281,071	6,797,071	7,333,071	7,889,071	8,465,071	9,061,071	9,677,071	10,313,071	10,969,071	11,645,071	12,341,071	13,057,071	13,793,071			
Capital Improvements Account																																							
Total Operating Expenses	\$ 4,082,428	\$ 4,715,020	\$ 4,315,080	\$ 5,078,180	\$ 3,858,080	\$ 4,644,248	\$ 5,141,442	\$ 5,748,133	\$ 6,374,824	\$ 7,021,515	\$ 7,688,206	\$ 8,374,907																											

over \$750. This item is separately calculated each year in the expenses table. Based on recent history, 60 percent of this amount is added back into the Financial Plan and Cash Flow Calculation so as to use as a portion of local matching funds for AIP/FDOT grants.

7.6 FINANCIAL PLAN & CASH FLOW ANALYSIS

Table 7.8 presents the 20-year financial plan and cash flow analysis for PNS. Several assumptions were required in order to complete the Master Plan Update. Each assumption was based on the best possible information at this point in time.

Assumption #1

Authorization to collect a Passenger Facility Charge will be amended by Congress over the next two years to increase collection authority to \$5 per passenger. This assumption is based on current positions of the professional organizations representing airports, the fact that an increase in the PFC was not anticipated in the 1990 legislation, the need for an increase has been discussed during the past two reauthorizations of AIP legislation, and a number of members of Congress have expressed support for the increase. It should be noted that if Congress does increase the collection authority, any change in the current rate of collection (\$3 per passenger) must first be approved by the Pensacola City Council and the FAA.

If a change is made in PFC collection authority, it is further assumed that the additional \$2 per passenger in PFC funds will be spent on new projects and no requirement will be imposed to fund existing projects with the increase.

Assumption #2

The Airport will continue to dedicate approximately 60 percent of its capital improvement account to master plan improvements.

Assumption #3

The City of Pensacola will not dedicate funds to assist the Airport in master plan development. The Airport will continue to fund master plan development through internally generated funds.

Assumption #4

The Airport will use third-party developers for projects that are revenue generating and compatible with this method of financing. Such projects include general aviation hangar development, corporate hangar development and cargo development.

Table 7.8

Financial Plan and Cash Flow Analysis
Pensacola Regional Airport - Airport Master Plan

	Short Term 1999 - 2004				Intermediate Term 2005 - 2009				LongTerm 2010 - 2020													
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Annual Project Costs	\$ 6,625,000	\$ 9,510,000	\$ 20,545,000	\$ 9,200,000	\$ 13,250,000	\$ 3,475,000	\$ 10,042,000	\$ 10,042,000	\$ 10,042,000	\$ 10,042,000	\$ 10,042,000	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500
Less: Funded Through Current PFC	\$ 750,000	\$ 5,400,000	\$ 10,180,000	\$ 10,360,000	\$ 9,200,000	\$ 3,475,000	\$ 10,042,000	\$ 10,042,000	\$ 10,042,000	\$ 10,042,000	\$ 10,042,000	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500
Total Project Costs	\$ 5,875,000	\$ 4,110,000	\$ 10,365,000	\$ 9,200,000	\$ 13,250,000	\$ 3,475,000	\$ 10,042,000	\$ 10,042,000	\$ 10,042,000	\$ 10,042,000	\$ 10,042,000	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500	\$ 4,292,500
Sources of Contributions																						
Net Operating Profits/Loss																						
Portion of CIA used for Grant Match/CIP	429,100	564,727	586,599	609,439	632,983	657,466	682,926	709,403	736,937	765,573	795,346	826,332	859,550	892,061	926,919	963,177	1,000,895	1,040,131	1,080,949	1,123,413	1,167,590	1,213,552
Contributions from Related Earnings																						
Impact on Operating Revenue (+/-)																						
Net Operating Revenue Contribution	429,100	564,727	586,599	609,439	632,983	657,466	682,926	709,403	736,937	765,573	795,346	826,332	859,550	892,061	926,919	963,177	1,000,895	1,040,131	1,080,949	1,123,413	1,167,590	1,213,552
Additional Bonds Issued (Net Proceeds)																						
Additional Notes Issued																						
Bond/Note Payments		600,000	1,200,000		3,750,000			4,000,000		7,250,000			869,550	892,061	926,919	963,177	1,000,895	1,040,131	1,080,949	1,123,413	1,167,590	1,213,552
Advt Interest earned on Cash Flow																						
Subtotal	429,100	1,164,727	1,786,599	(590,561)	4,382,983	365,966	391,426	4,417,833	(616,415)	7,724,073	483,042	(205,982)	(1,005,764)	(1,402,253)	(1,053,395)	(69,137)	(31,419)	7,817	48,535	91,099	135,276	181,238
Passenger Facility Charge	1,605,674	1,673,795	2,807,870	3,031,163	3,159,665	3,293,655	3,423,306	3,578,919	3,720,623	3,888,801	4,053,897	4,225,563	4,404,726	4,591,487	4,786,466	4,988,099	5,197,544	5,414,599	5,640,899	5,877,000	6,122,555	6,388,111
Less: Committed PFC Funds	(1,605,674)	(1,673,795)	(2,807,870)	(3,031,163)	(3,159,665)	(3,293,655)	(3,423,306)	(3,578,919)	(3,720,623)	(3,888,801)	(4,053,897)	(4,225,563)	(4,404,726)	(4,591,487)	(4,786,466)	(4,988,099)	(5,197,544)	(5,414,599)	(5,640,899)	(5,877,000)	(6,122,555)	(6,388,111)
APR Discretionary Funds	1,763,513	1,780,410	1,798,023	1,816,384	1,835,522	1,855,472	1,876,268	1,897,946	1,920,543	1,944,098	1,968,602	1,994,247	2,020,042	2,045,887	2,071,781	2,097,725	2,123,719	2,149,763	2,175,857	2,201,999	2,228,191	2,254,433
FOOT 50% of Matching Grants	255,000	70,000	48,500	447,500	250,000	67,500	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350
FOOT 50% Grants (Aviation Ego. Dev.)	150,000	70,000	48,500	447,500	250,000	67,500	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350	190,350
Other State Grants (Ego. Dev. etc)																						
FOOT Loan Program		371,250			200,000	500,000	1,000,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000
FOOT 50% Grant w/rd Party - Developers			2,623,500	-	2,382,250		1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450	1,011,450
Previous Year Enhancement Funds	649,000																					
Bridge Note from Sponsor/Bank																						
Third Party Financing/Developer	400,000	125,000	2,741,000	75,000	2,782,250	187,500	531,450	531,450	531,450	531,450	531,450	531,450	531,450	531,450	531,450	531,450	531,450	531,450	531,450	531,450	531,450	531,450
Payback on FOOT Loan Program																						
Total Available Funds for CIP	5,895,613	4,136,387	10,360,770	9,255,786	13,298,880	4,852,651	8,682,267	10,120,650	9,669,630	13,586,942	6,446,418	4,423,690	4,163,722	4,367,684	4,274,721	4,313,913	4,285,689	4,246,412	4,316,086	4,298,152	4,292,091	4,288,404
Net Cash Flow Available	\$ 21,613	\$ 48,000	\$ 43,770	\$ 99,558	\$ 146,437	\$ 1,524,088	\$ 341,395	\$ 420,006	\$ 47,635	\$ 3,602,577	\$ 6,596	\$ 136,185	\$ 9,407	\$ 84,592	\$ 66,813	\$ 88,226	\$ 81,394	\$ 34,306	\$ 57,882	\$ 63,545	\$ 63,196	\$ 69,040
Matching Requirement for all Grants	630,600	195,000	2,872,000	1,144,500	3,032,250	255,000	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800	1,841,800
Available for Matching Funds	429,100	564,727	2,949,147	1,821,904	5,646,857	1,974,929	2,056,249	2,140,954	2,228,167	2,321,084	2,416,831	2,516,557	2,616,283	2,716,009	2,815,735	2,915,461	3,015,187	3,114,913	3,214,639	3,314,365	3,414,091	3,513,817
Uncommitted PFC Funds	-	-	1,163,148	1,212,465	1,263,874	1,317,462	1,373,373	1,431,551	1,492,249	1,555,521	1,621,475	1,689,225	1,758,975	1,829,725	1,899,475	1,969,225	2,038,975	2,108,725	2,178,475	2,248,225	2,317,975	2,387,725

Assumption #5

FDOT Loan Program – FDOT currently has a grant program that applies to land acquisition for airports. It is assumed \$371,250 in 2000 and 2004, and \$1,845,000 in 2005 are detained from this program.

Bonds/Notes. These amounts are programmed to be repaid during the period 2010 through 2014.

Assumption #6

The AIP program will change over the years and be phased out by the Year 2012. However, in 1999, it is assumed that the Airport will receive \$2,250,000 in discretionary funds, \$6,220,000 in 2002, and \$4,400,000 in 2007. Each project for which discretionary funding is proposed is a major airside program that will increase the capacity of the Airport. They include one major runway rehabilitation and two runway extensions. No discretionary funding is programmed after 2007 and AIP entitlement funds are phased out in 2012.

Assumption #7

In order to fund the CIP, two additional bond issues will be required and several short-term notes. In 2000 and 2001, short-term notes will be issued in the amounts of \$600,000 and \$1,200,000. A payment of \$1,200,000 will be made against this debt in 2002. In 2003, the Airport will issue bonds in the amount of \$4,525,000 to retire the remainder of the short-term debt and make a net contribution of \$3,750,000 to the master plan improvement program. In 2006, an additional short-term note of \$4,000,000 will be issued, a payment made in 2007, and the remaining debt retired in 2008 through a bond issue totaling \$11,500,000. This bond issue should net approximately \$7,250,000 for contribution to the master plan improvement program. One additional short-term note in the amount of \$720,000 will be required in 2009, which will be repaid in a lump sum in 2011. All bond issues were calculated with a 30-year period at 5 percent interest. Notes were calculated at five year periods at 7.5 percent interest.

7.7 SUMMARY

Considering the above assumptions, the Financial Plan included herein is considered reasonable for an airport the size of PNS.

Appendix A

Technical Advisory Committee (TAC) Members
Citizens Advisory Committee (CAC) Members

**Pensacola Regional Airport
Airport Master Plan Update
Technical Advisory Committee (TAC) Members**

1. Mr. Leo Doidge
Planning Director
City of Pensacola
P.O. Box 12910
Pensacola, FL 32521
2. Mr. Steve Pitkin
Planning Director
Escambia County
1190 Leonard Street
Pensacola, FL 32501
3. Lt. Ray Moffitt
Building 3963 Code 30200
NAS Pensacola, FL 32508
4. Vic Galloway
Air Traffic Control Tower Manager
Pensacola Regional Airport
2230 Airport Boulevard
Pensacola, FL 32504
5. Ms. Terry Joseph
West Florida Regional Planning Council
P.O. Box 486
Pensacola, FL 32593-0486
6. Nock Nickoloff
MPO Coordinator
Pensacola Metropolitan Planning Organization
P.O. Box 486
Pensacola, FL 32593-0486
7. Jim Wikstrom
Florida Department of Transportation
605 Suwannee Street M-46
Tallahassee, FL 32399
8. Bruce Bennett
Pensacola Aviation Center
2400 Airport Boulevard
Pensacola, FL 32504
9. Maria Taakas
Varona Enterprises
Pensacola Regional Airport
2430 Airport Boulevard
Pensacola, FL 32504

Technical Advisory Committee (TAC) Members (Continued)

10. Will Estes
FAA Administration
TRACON
Pensacola Regional Airport
Pensacola, FL 32504
11. Ms. Sandra Holliday/
Jack Buckman
FAA Orlando Airport District Office
5950 Hazeltine Drive, Suite 400
Orlando, FL 32822
12. Jim Devries
Planning Administration
Florida Department of Transportation
180 W. Government Street
Pensacola, FL 32501
13. Jeff Gifford
Airport and Corporate Affairs
Delta Airlines, Inc.
1030 Delta Boulevard, Dept. 880
Atlanta, GA 30320
14. Dick Ketcham
Properties
Hertz Rental A Car
4751 Best Road, Suite 400
Atlanta, GA 30337

**Pensacola Regional Airport
Airport Master Plan Update
Citizen Advisory Committee (CAC) Members**

1. Mr. Ronald Townsend
Appointed by Councilwoman Marie Young
1400 N. G Street
Pensacola, FL 32501
2. Mr. Samuel A. Horton
Appointed by Councilman Mike Wiggins
550 Wynnehurst
Pensacola, FL 32503-2312
3. Mr. Bob Jacobson
Appointed by Councilman Mike de Sorbo
4735 Abercrombie Circle
Pensacola, FL 32504
4. Capt. Randy Abschier
Appointed by Councilman J.D. Smith
1330 Ridgeway Drive
Cantonment, FL 32533
5. Jim Johnson
Appointed by Councilman Owen Eubanks
3900 Collingswood Road
Pensacola, FL 32514
6. Gene Davis
Appointed by John Pankyo
Executive Director
Team Santa Rosa County
Economic Development Council
7. Rose Maria Shelby
Appointed by Councilwoman Rita Jones
1222 E. Cross Street
Pensacola, FL 32503
8. Vice Admiral Tim Wright (Ret)
Appointed by Councilman Doug Halford
3260 San Piper Drive
Orange Beach, AL 36561
9. J. Nixon Daniel, III
Appointed by Councilman Paul Young
4540 Bohemia Drive
Pensacola, FL 32504
10. Mr. Doug Kinsinger
Appointed by City Manager
2328 Arrivista Way
Pensacola, FL 32504
11. Debbie Helm
Appointed by City Manager
1021 Great Oak Drive
Gulf Breeze, FL 32561

Citizen Advisory Committee (CAC) Members (Continued)

12. John H. Stein, Jr.
Appointed by City Manager
7919 Mobil Highway
Pensacola, FL 32526-4263

13. The Honorable Byrd Mapoles
Commissioner, District #2
Peter Prince Field
6865 Caroline Street, Suite J
Milton, FL 32570

Appendix B

List of Environmental Agencies Contacted

**Pensacola Regional Airport
Airport Master Plan Update
List of Environmental Agencies Contacted**

Mr. Robert Payne
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City of Pensacola
180 Governmental Center
Pensacola, Florida 32501

Mr. Leo Doidge
Director
Planning Department
City of Pensacola
180 Governmental Center
Pensacola, Florida 32501

Mr. Hans Felix
Director
Engineering Department
City of Pensacola
180 Governmental Center
Pensacola, Florida 32501

Mr. Bobby Cooley
Director
Florida Department of Environmental Protection
Northwest District
160 Government Center
Pensacola, Florida 32501-5794

Ms. Georgann Penson
Director
Public Information
Northwest Florida Water Management District
Route 1
Box 3100
Havana, Florida 32333-9700

Ms. Gail Carmoody
Team Leader
Northeast Gulf Watersheds Ecosystem
US Fish and Wildlife Service
1612 June Avenue
Panama City, Florida 32405
(904) 769-0552

List of Environmental Agencies Contacted (Continued)

Mr. Curtis Flakes
Division Chief
Planning and Environmental Division
United States Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628-0001

Mr. Walt Rewinski
Deputy State Director
Resources Planning, Use and Protection
United States Department of the Interior
Bureau of Land Management
Eastern States Office
7450 Boston Boulevard
Springfield, Virginia 22153

Mr. Norm Heintz
Regional NEPA Coordinator
United States Department of Agriculture
Forest Service
Southern Region (R8)
1720 Peachtree Road, NW
Atlanta, GA 30367

Mr. Kirk Cordell
Cultural Resources Stewardship Manager
National Park Service Southeast Support Office
Atlanta Federal Center
100 Alabama Street, SW
Atlanta, Georgia 30303

Ms. Laura Kammerer
Florida Department of State
Division of Historical Resources
R.A. Gray Building
500 South Bronough Street
Tallahassee, FL 32399-0250

Mr. Chuck Oravetz
National Marine Fisheries Service
Southeast Regional Office (SERO)
Protected Resources Division
9721 Executive Center Drive North
St. Petersburg, Florida 33702

List of Environmental Agencies Contacted (Continued)

Ms. Dee Stewart, Director
Public Affairs Office
United States Environmental Protection Agency
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61 Forsyth Street, SW
Atlanta, Georgia 30303-3104

Mr. William Straw
Regional Environmental Officer
Federal Emergency Management Agency
3003 Chamblee Tucker Road
Atlanta, Georgia 30341

Ms. Jasmin Raffington
Federal Consistency Coordinator
Florida Department of Community Affairs
Florida Coastal Zone Management Program
Sadowski Building
2555 Shumard Oak Boulevard
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Mr. Paul Miller
Planner
Escambia County Department of Growth Management
1190 West Leonard
Suite 3
Pensacola, Florida 32501

Ms. Cherie Trainor
State Clearinghouse Coordinator
Florida Department of Community Affairs
Florida Coastal Zone Management Program
Sadowski Building
2555 Shumard Oak Boulevard
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Ms. Terry Joseph
Director of Environmental Planning
West Florida Regional Planning Council
P.O. Box 486
Pensacola, Florida 32593-0486

Appendix C

Airfield Pavement Investigation

**PENSACOLA REGIONAL AIRPORT
MASTER PLAN UPDATE
DRAFT SECTION**

Appendix C -

Airfield Pavement Investigation

Prepared for:

The City of Pensacola



FAA AIP Number: 3-12-0063-2497

FDOT WPI Number: 3821477

FDOT Job Number: 48099-3840

RS&H Project Number: 2018240.000

Prepared by:

The RS&H Team

Reynolds, Smith and Hills, Inc.

ACSG, Inc.

AVCON, Inc.

Fabre Engineering, Inc.

Hamilton Smith & Associates, Inc.

SECTION 1 INTRODUCTION

1.1 INTRODUCTION

The City of Pensacola, Florida, owner and operator of Pensacola Regional Airport has retained Reynolds, Smith and Hills, Inc. (RS&H) to provide master plan update services for the Airport in the agreement between the City of Pensacola and RS&H dated November 12, 1997. In accordance with the Master Plan, RS&H has performed an Airfield Pavement Investigation at Pensacola Regional Airport.

The purpose of this analysis is several fold. First, it is to notify the airport and city engineering staff with the current condition of the Airport's largest asset, that being the extensive airfield pavements. Second, it is to establish and document the immediate needs of the airfield pavements and to provide the Airport with initial observations and recommendations. Third, it is to begin development of the Airport Alternatives section of the Master Plan Update and to establish the preliminary airfield pavement projects for the Capital Improvement Program (CIP). Finally, this report is intended to result in the establishment of a real and cost-effective capital improvement program for the airfield pavements.

It should be noted that the Airport has continuously performed necessary maintenance on the airfield pavements to facilitate their useful life to-date. However, for some 20 years there has been no major project involving the upgrade or rehabilitation of the strength or condition of the overall airfield pavements system.

1.2 PAVEMENT REPORT SUMMARY

RS&H performed an on-site airfield pavement evaluation on January 22 and 23, 1998. The conditions found on the pavements during that evaluation are as follows:

- There is severe "rutting" of the taxiway pavements, particularly where the air carrier aircraft perform their operations. This severe rutting will worsen as time passes, with the end result being significant pavement failures and major reconstruction requirements.
- There is medium to severe "ravelling" of much of the pavements. As pavements have been in place for 20 to 30 years, they have worn out their asphalt binder and/or the binder has become hardened. The result will be the potential for significant amounts of foreign object debris (FOD), which will require significant maintenance activity to protect the aircraft engines from ingesting the debris.

- The pavements, as a whole, appear to quickly be reaching their structural capacity. Immediate action is needed to identify and resolve the causes of the pavement distresses identified herein and to secure solutions that are sound from an engineering standpoint, as well as financially responsible and feasible for Pensacola Regional Airport.

SECTION 2

AIRPORT HISTORY/FIELD INVESTIGATION

2.1 INTRODUCTION

Mr. Michael Lynn Moore, PE (Senior Aviation Engineer with RS&H) along with Mr. Peter K. Bolton (Facilities Superintendent for Pensacola Regional Airport) performed a field investigation of the existing pavements on January 22 and 23, 1998. The field investigation was comprised of a visual survey of the airfield pavements, stopping and investigating specific problem areas, and performing straight-edge measurements in certain areas. The results of the various observations are presented in the photographs provided herein.

2.2 CONSTRUCTION HISTORY

When the Airport began its initial operations in 1936, it had two runways that were 3,500 feet long by 100 feet wide. During World War II, the U.S. Navy took control and operated the Airport as a U.S. Navy aviator training facility. The U.S. Navy added two additional runways and extended and widened the existing runways so that all four runways were 5,000 feet long and 200 feet wide. At the end of World War II, the U.S. Navy returned ownership of the Airport to the City of Pensacola. In 1964, two of the existing runways were decommissioned and in the period of 1966 to 1969 the two remaining runways, 17-35 and 8-26, and their associated parallel taxiways were extended and/or narrowed to the current lengths of 7,002 feet long by 150 feet wide and 6,001 feet long by 150 feet wide respectively. Also, up to the completion of the runway improvements in approximately 1969, the airfield pavements were enhanced with new lighting, navals, etc.

Runway 17-35

In 1977, the City installed an asphalt overlay to Runway 17-35. Since 1977, no major improvements have occurred to the runway other than standard maintenance and runway grooving.

Taxiway "A" and "B" and Associated Taxiway System

The initial runways 17-35 and 8-26 had parallel taxiways for the aircraft to exit each runway and taxi to the apron areas. As the runways were extended, the parallel taxiways were extended as well. When the U.S. Navy added the two additional runways, the parallel taxiways for those two runways were also installed. The associated stub taxiway system was also enhanced over time. When the City decommissioned the two runways described earlier, their parallel taxiways and associated stub taxiways were also decommissioned. There are areas of the existing decommissioned runways and taxiways

still in place. One of the proposals to be considered will be the recycling of the old runway and taxiway materials for reuse as base material for pavement elements such as perimeter and service roads and parking areas. The existing materials could potentially be a valuable and inexpensive resource for projects where funding is limited and for acting on a local in-kind share opportunity, which again could save the Airport capital improvement funds.

Pavement Improvements

As described above, the history of pavement improvements began in 1936 and essentially ended in 1977. The last pavement improvements in 1977 consisted of the following:

- Asphalt Overlay of Runway 17-35
- Asphalt Overlay of Runway 8-26 at Intersection of Runway 17-35 (2,100 Feet +/-)
- Widening and Asphalt Overlay of Taxiway "A"
- Widening and Asphalt Overlay of Taxiway "A-1"
- Asphalt Overlay of Taxiway "A-2"
- Construction of Taxiway "A-3"
- Widening and Asphalt Overlay of Taxiway "A-4"
- Asphalt Overlay of Taxiway "A-7"
- Asphalt Overlay of Taxiway "A-8"
- Widening and Asphalt Overlay of Taxiway "B" at Intersection of Runway 17-35 (1,200 Feet +/-)

To our knowledge, airfield pavement improvements since 1977 have been limited to general maintenance and patch reconstruction of failed areas. The age of the existing airfield pavements not included in the 1977 widening and overlay project is in excess of 30 years. The age of the existing airfield pavements included in the 1977 improvements project is in excess of 20 years.

2.3 EXISTING PAVEMENT DISTRESSES

The types of pavement distress encountered during the initial and limited field investigations are listed under the categories of flexible pavements. The descriptions will contain severity levels and measuring procedures.

Pavement Condition Indices

The following is a list of pavement condition indices utilized for pavement evaluations of asphalt pavements:

- Cracking. The pavements inspected are beginning to exhibit a significant amount of cracking. Longitudinal, transverse, block and alligator cracking were observed in several areas both on the runways as well as the taxiways. **Figures 2.4a through 2.4d** show some of the types of cracking encountered.
- Rutting at the Wheel Paths. The pavements inspected exhibited a serious deflection (rutting) along the wheel paths of Taxiways "A," "A-1," "A-2," "A-3," "A-4" and "B" in the area of the terminal apron. Runway 17-35 and 8-26 also are beginning to show signs of rutting in various areas. **Figures 2.4e through 2.4h** show the severity of the rutting encountered.
- Raveling of the pavements. Taxiway "A," "A-1," "A-2," "A-3," "A-4," "B" and miscellaneous other taxiways are also exhibiting significant raveling. **Figures 2.4i through 2.4j** show the severity of the raveling encountered.

On January 22, 1998 there was significant thunderstorm activity in the Pensacola area. The pavements observed after the rainstorm provided easy and pronounced definition of at least four very significant and most frequent issues facing the airfield pavements:

(Facilities Superintendent for Pensacola Regional Airport).

Mr. Michael Lynn Moore, PE (Senior Aviation Engineer with RS&H) performed an initial field investigation of the airfield pavements on January 22 and 23, 1998 along with Mr. Peter K. Bolton

2.4 INITIAL FIELD INVESTIGATIONS

which is included herein.

The above-referenced pavement condition indices are more thoroughly described in Attachment A,

1.	Alligator Cracking	9.	Oil Spillage
2.	Bleeding	10.	Patching
3.	Block Cracking	11.	Polished Aggregate
4.	Corrugation	12.	Raveling/Weathering
5.	Depression	13.	Rutting
6.	Jet Blast Erosion	14.	Shoving from PCC
7.	Joint Reflection Cracking	15.	Slippage Cracking
8.	Longitudinal and Transverse Cracking	16.	Swelling

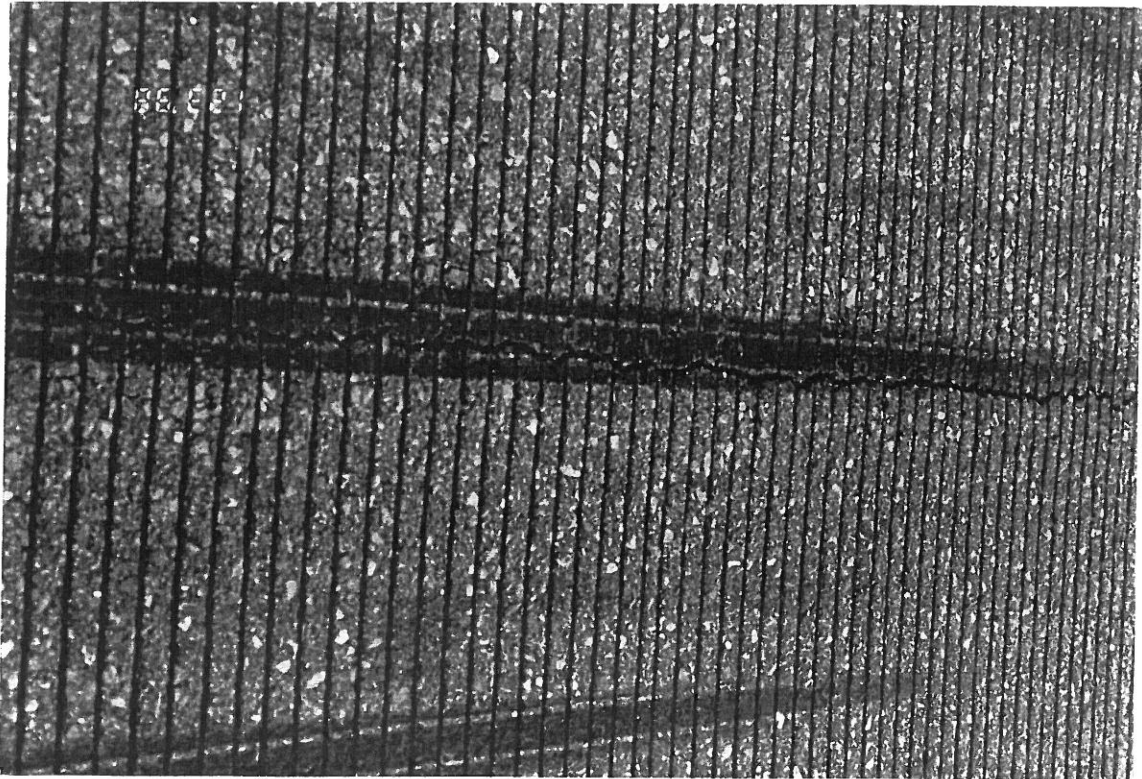


Figure 2.4a Runway 17-35 Longitudinal Cracking

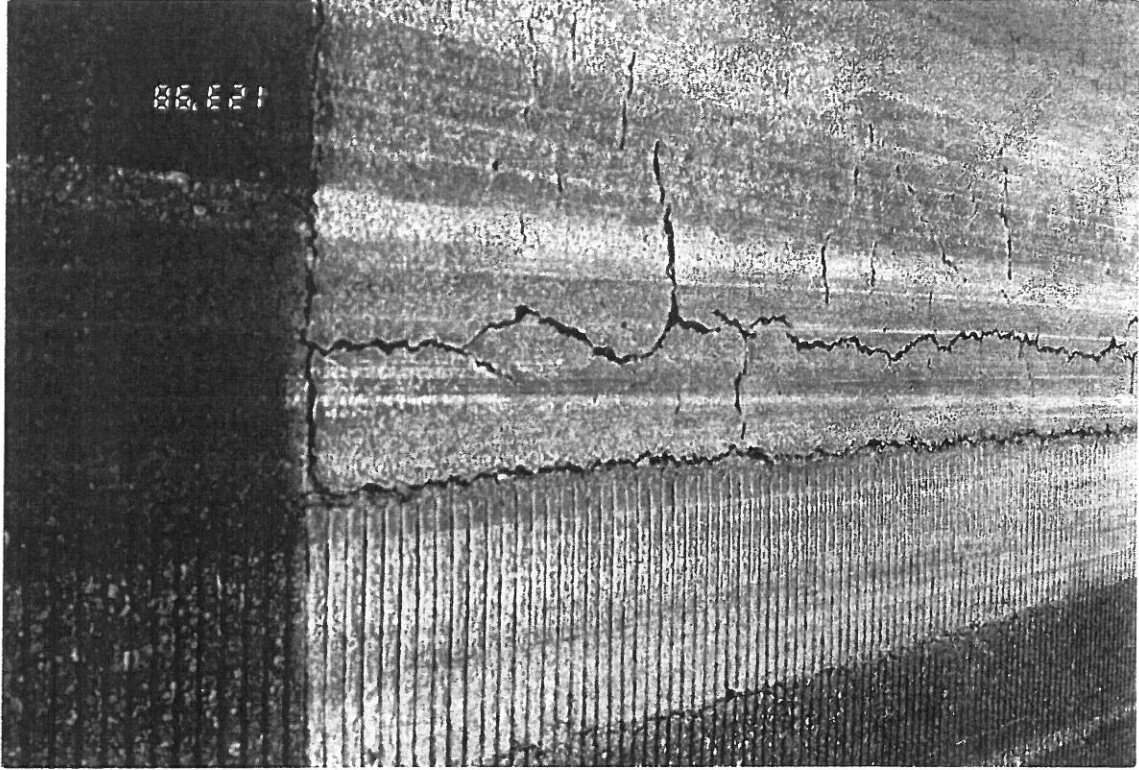


Figure 2.4b Runway 17-35 Longitudinal Cracking

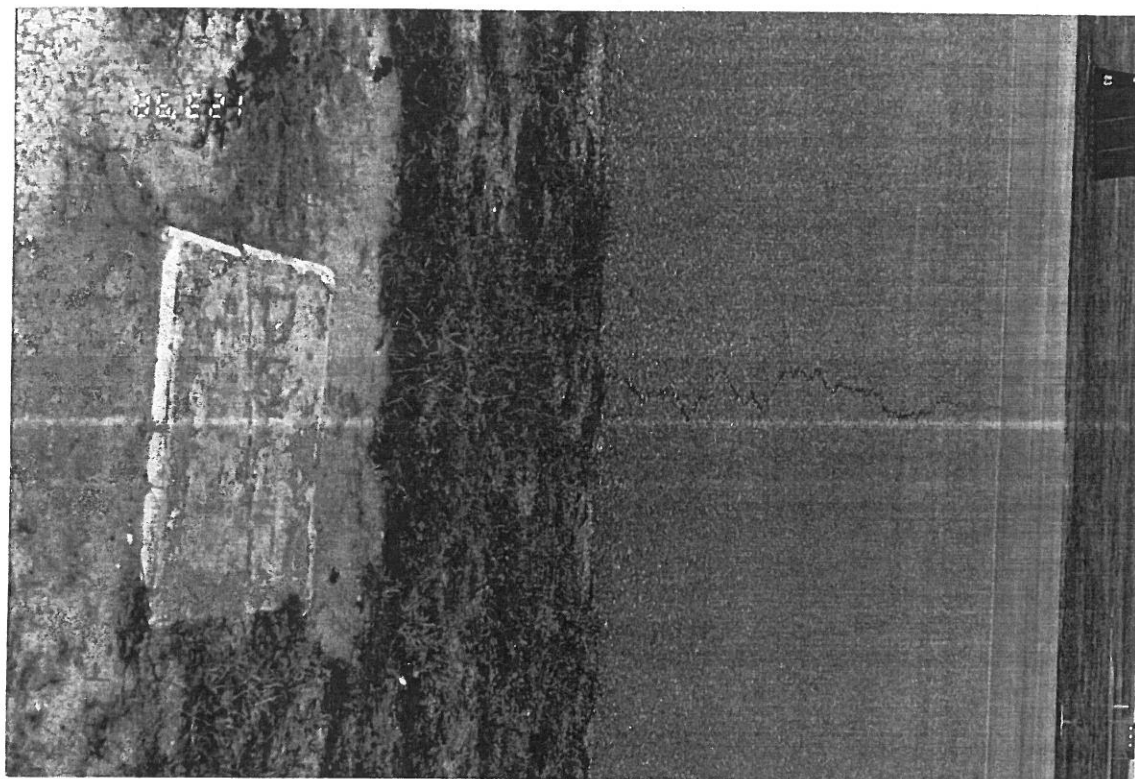


Figure 2.4d Taxiway "A" Between Runway 8-26 and Taxiway "B" Transverse Cracking

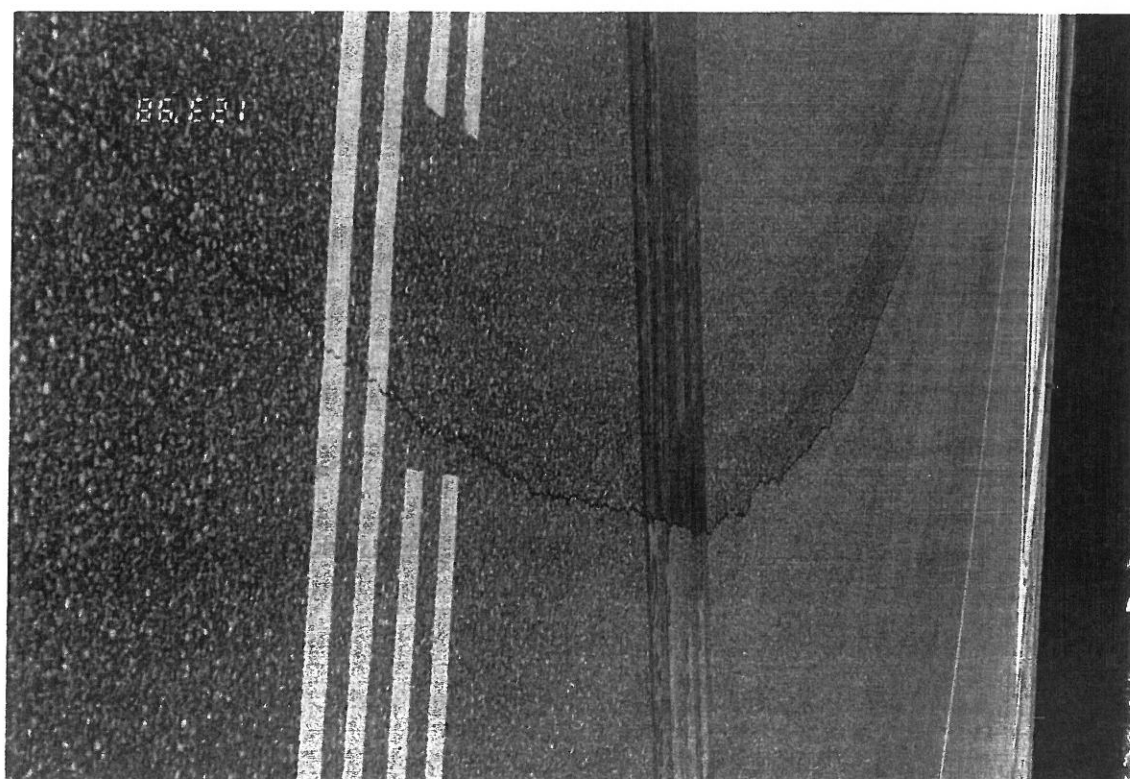


Figure 2.4c Taxiway "A" at Runway 35 End Longitudinal Cracking

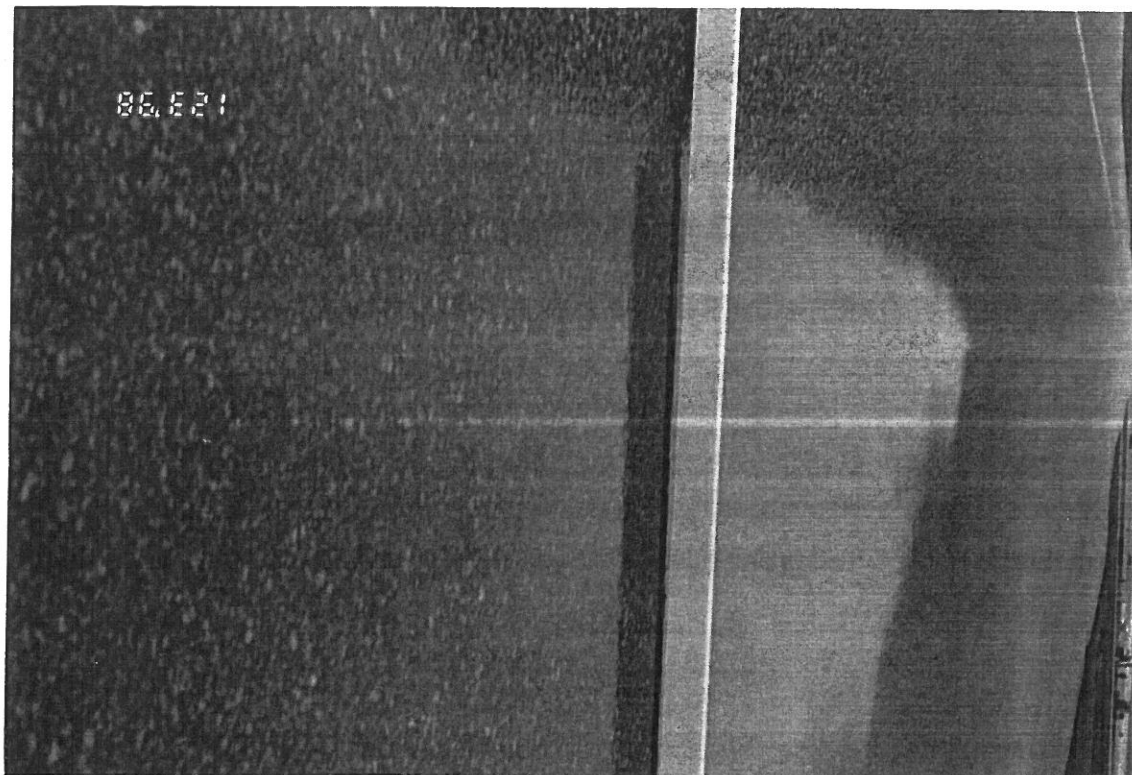


Figure 2.4e Taxiway "A" Rutting

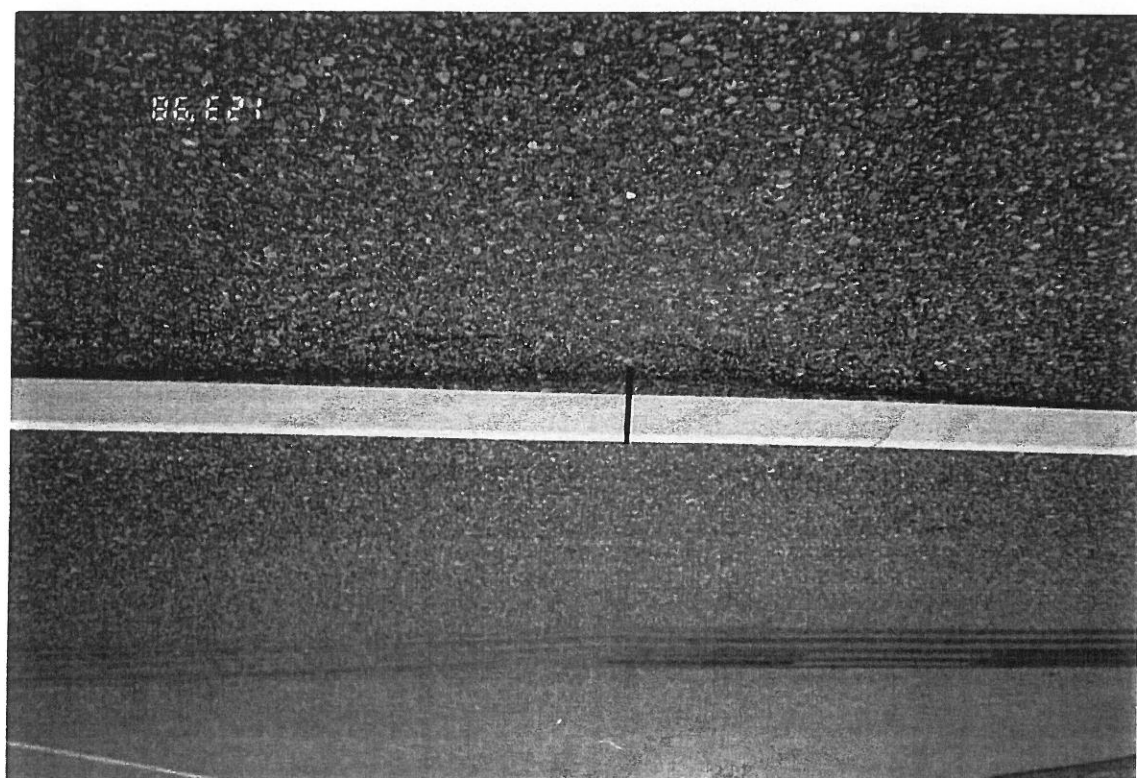


Figure 2.4f Taxiway "A" Rutting

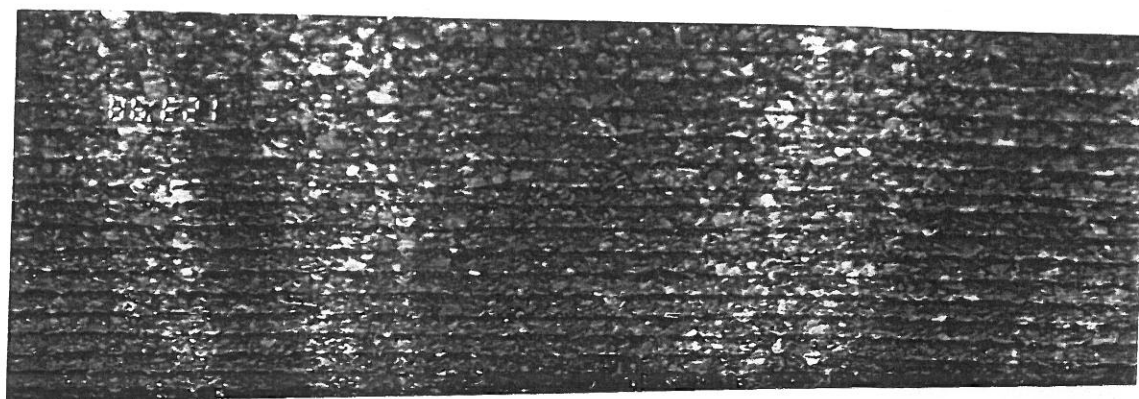


Figure 2.4h Runway 17-35 Beginning of Rutting

C-9

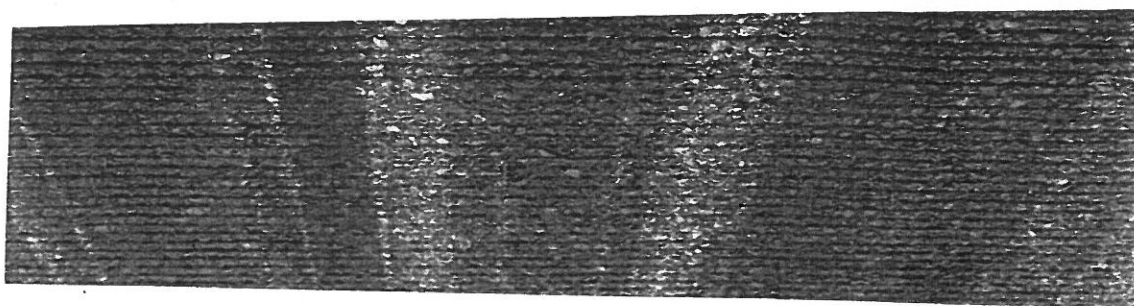
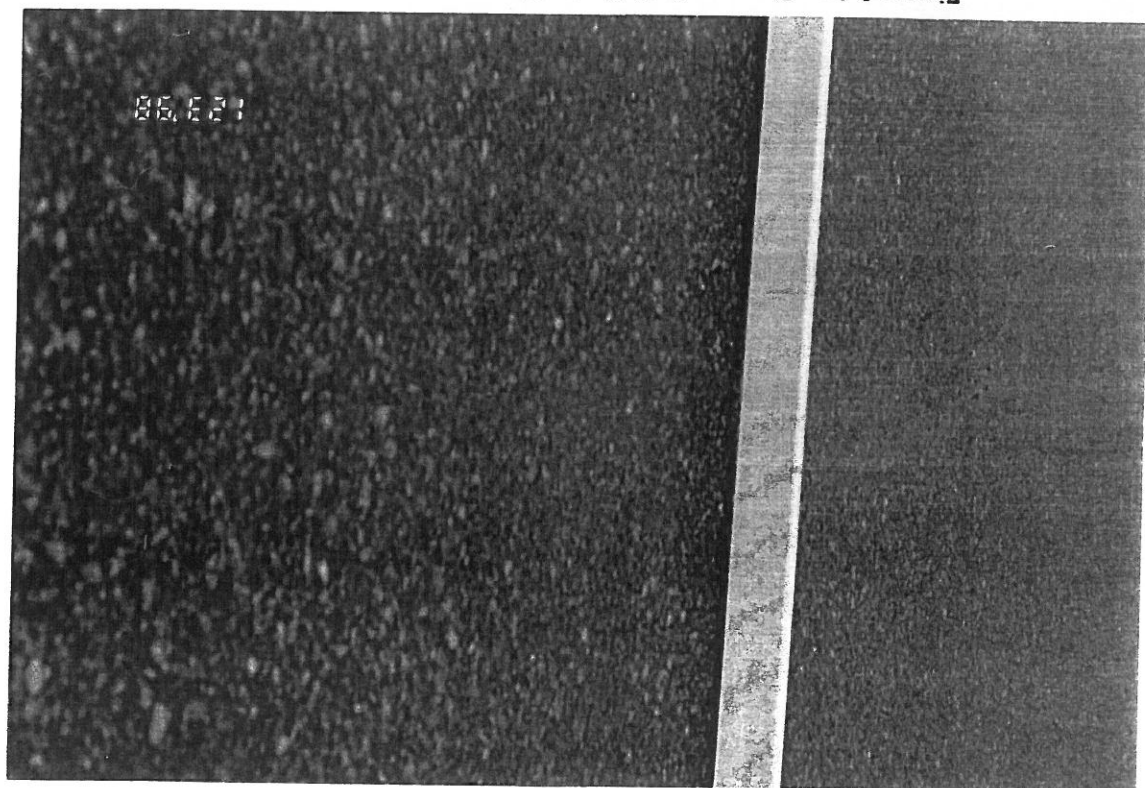


Figure 2.4g Runway 8-26 East of Runway 17-35 Rutting



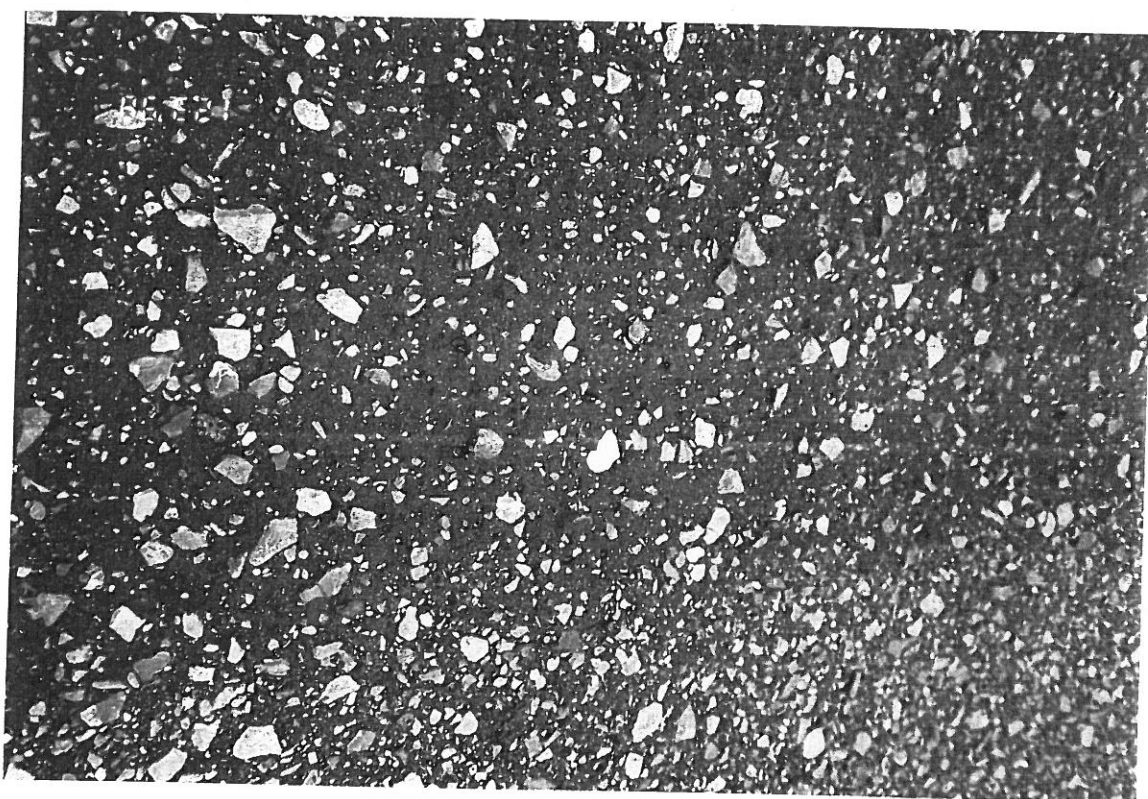


Figure 2.4j Taxiway "A" Raveling
C-10

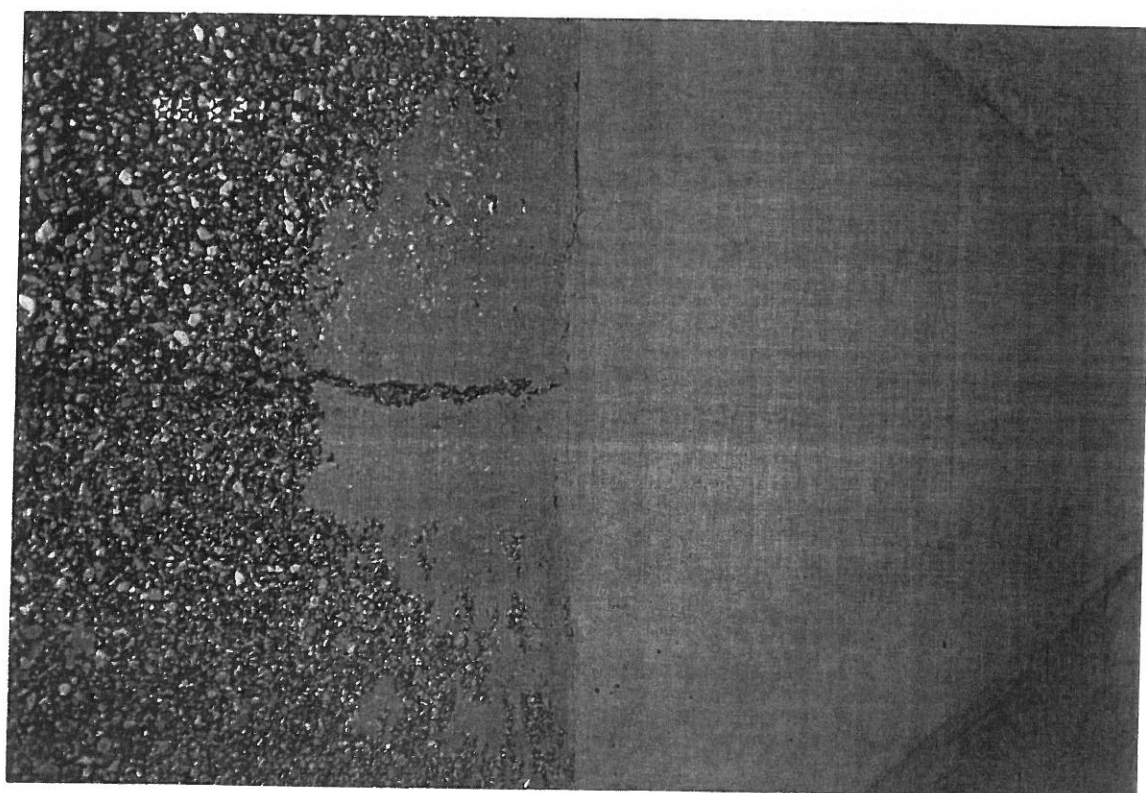


Figure 2.4i Taxiway "B" Raveling at Concrete Patch

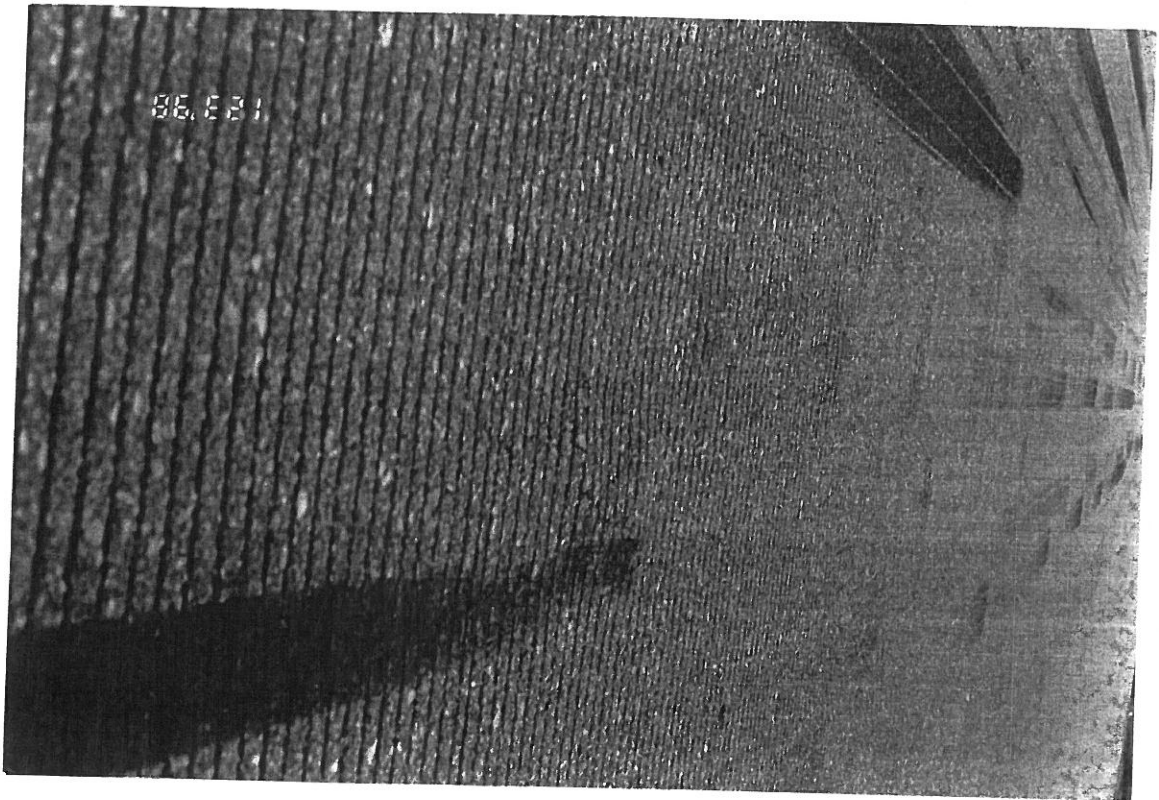


Figure 2.4k Runway 17 End Corrugation

C-11

- Corrugation of the Pavements. Taxiway "A," "B," Runways 17-35 and 8-26 are also exhibiting signs of corrugation. **Figure 2.4k** shows the presence of corrugation encountered.

All of the elements identified above demonstrate that it is time to begin significant upgrades and improvements to the airfield pavements.

On January 23, 1998, Mr. Moore and Mr. Bolton revisited the airfield pavements utilizing a straight edge to establish and define the extent of rutting of the referenced runways and taxiways. During the measurement process, it was determined that virtually all of Taxiway "A" and parts of Taxiway "B" are being seriously affected by the wheel loadings of the various types of aircraft frequenting the Airport. With Runway 17-35 beginning to show signs of rutting, it will not be long before this problem will likely affect the runway. The rutting is a clear sign of the pavements reaching their structural limits. The number of operations, types of aircraft and types of wheel configurations are straining the pavement capacity to withstand the loadings. This rutting will only grow more significant as time passes and will ultimately result in areas of pavement failures.

Another area of concern is the pavement at the connection between the original existing pavements and the widening constructed in 1977 for Taxiway "A," "A-1," "A-3," "A-4" and "B". There is cracking at the connection point between the two pavement sections which is widening over time. This separation, must be evaluated and resolved.

After the on-site pavement inspection, RS&H personnel reviewed the following documents:

- Florida Airport Pavement Evaluation Report, Pensacola Regional Airport, Eckroose/Green Associates, Inc., 1995
- "As-built" drawings of Runway 17-35, Runway 8-26, Taxiways "A," "A-1," "A-2," "A-3," "A-4," "A-7," "A-8," "B" and "C"
- Pensacola Regional Airport Field and Laboratory Testing, Pensacola Testing Laboratories, Inc., August, 1976
- Pensacola Regional Airport Report of Geotechnical Investigation of Existing Taxiway, Pensacola Testing Laboratories, Inc., December, 1997.

The ravelling of the pavements is becoming quite significant and is an indication that the pavements have lost their asphalt binder and that age has simply caught up with the pavement. Ravelling will

require one of several possible options: 1) rejuvenator, 2) seal coating, 3) asphalt overlay, 4) recycling of the pavement and overlay, or 5) reconstruction to eliminate the potential for foreign object debris (FOD) damage to aircraft engines. A detailed pavement evaluation and pavement-strength analysis can determine which of the options are best suited for resolution of the issues.

Corrugation was discovered in several areas along Taxiway "A" and miscellaneous other locations. Although it is not a serious issue at this time, the problem will persist and grow worse. The corrugation is caused by unstable pavement surface or base material. It should be noted that corrugation usually requires full pavement reconstruction.

2.5 EXISTING PAVEMENT DISTRESS TYPES AND PAVEMENT CONDITION INDICES (PCI)

In early 1994, FDOT performed a pavement evaluation of the airfield pavements at Pensacola Regional Airport. The findings of this report are attached in table form in Appendix. However, to fully describe the current conditions from the conditions existing in early 1994, the following table summarizing the pavements and the associated existing distress types are presented.

Pavement Area	Existing Distress Types
Taxiway "A"	5, 8, 11, 12, 13*
Taxiway "A-1"	1, 8, 15
Taxiway "A-2"	8, 15, 16
Taxiway "A-3"	8, 12
Taxiway "A-4"	8, 12, 15
Taxiway "A-7"	1, 8, 10, 12, 13*
Taxiway "B"	1, 5, 8, 10, 13*, 15, 16
Taxiway "B-1"	8
Taxiway "B-2"	8
Taxiway "B-3"	16
Taxiway "B-4"	8
Taxiway "B-5"	3, 8, 10, 13*
Taxiway "B-6"	1, 3, 8, 10, 13*
GA Ramps	7, 12, 13*
Runway 17-35	1, 8, 16
Runway 8-26	1, 8, 10, 13*, 16

*Indicates that a very small sampling of the pavements were experiencing rutting at the time of the FDOT evaluation and report.

The distress types encountered during this pavement evaluation have significantly increased since the FDOT Report was developed in the 1994 to 1995 time frame. The distresses, particularly rutting, have increased so significantly that their effect can be defined as severe. The severity of the rutting will increase and will result in significant pavement failures. The rutting issue must be addressed and the recommendations presented in Section 2.6, Conclusions and Recommendations, need to be aggressively pursued.

In addition, there are other distresses related to the airfield pavements which, although not as severe as the rutting, will result in significant and permanent damage to the pavements. The issues of cracking, corrugation and raveling need to be identified, quantified and resolved so that the cost of rehabilitation, overlay and/or reconstruction can be limited.

2.6 CONCLUSIONS AND RECOMMENDATIONS

In the performance of the preliminary pavement evaluation for the Pensacola Regional Airport airfield pavements, we have determined the following:

- Pensacola Regional Airport continues to grow and become an increasingly important transportation link in Northwest Florida.
- The airfield pavements airport-wide have been well maintained.
- The pavements have performed well, considering the amount of traffic they have served.
- The airfield pavements have not had any significant enhancement or improvements for some 20 or more years.
- Due to the increased frequency and volume of heavier aircraft traffic at the airport, the airfield pavements have begun to show the effects of loading beyond their current capacity. This increased traffic has begun to affect the pavements in the form of pavement depressions, rutting, corrugation, raveling and fatigue cracking to name a few. These distress types have increased significantly in just four short years and will continue to increase at a faster rate.

In order for the Pensacola Regional Airport to serve existing and further aviation demand several things need to be accomplished:

1. Knowing that the next FDOT pavement evaluation visit to the Airport is not planned until the fall of 1998 and the subsequent report not scheduled until mid-1999 (or later), RS&H recommends a detailed airfield pavements evaluation, including additional detailed visual inspections, core borings to determine the pavements structures airport-wide, nondestructive testing to help establish the pavements strengths and weaknesses, pavement design analysis to determine current capacities and strengths and a subsequent report defining the qualities and deficiencies of the airfield pavements.

2. Establish performance measures for prioritizing all of the pavements by the newly established Pavement Condition Indices (PCI), age, fleet mix usage, safety, areas of the airport accessed, etc. to rank all pavement areas for implementation of all rehabilitation, overlay and/or reconstruction projects.
3. Establish detailed cost estimates for all planned pavements rehabilitation, overlay and/or reconstruction projects and establish the needed funding for all projects, including, but not limited to, FDOT, FAA, local and any other nonstandard funding sources.
4. Establish detailed schedules for all prioritized projects and coordinate those schedules for implementation and funding.

The Pensacola Regional Airport has a great opportunity to identify all its pavements' strengths and weaknesses, establish a detailed plan for upgrading and improving the pavements for the next 20 years of airport development and establish and commit funding for all of the projects so that the Airport Staff can concentrate on other important issues.

ATTACHMENT A - FLEXIBLE PAVEMENT DISTRESSES

Distress No. 1-Alligator or Fatigue Cracking (From AC 150/5380-6)

Description. Alligator or fatigue cracking is a series of interconnecting cracks caused by fatigue failure of the asphalt concrete surface under repeated traffic loading. The cracking initiates at the bottom of the asphalt surface (or stabilized base) where tensile stress and strain is highest under the wheel load. The cracks propagate to the surface initially as a series of parallel cracks. After repeated traffic loading, the cracks connect, forming many-sided, sharp-angled pieces that develop a pattern resembling chicken wire or the skin of an alligator. The pieces are less than two feet on the longest side.

Alligator cracking occurs only in areas that are subject to repeated traffic loadings, such as wheel paths. Therefore, it would not occur over an entire area unless that area was subject to traffic loading. (Pattern-type cracking, which occurs over an entire area that is not subject to loading, is rated as block cracking, which is not a load-associated distress.)

Alligator cracking is considered a major structural distress.

Severity Levels

- a. **Low Severity Level (L).** Fine, longitudinal hairline cracks running parallel to each other with none or only a few interconnecting cracks. The cracks are not spalled.
- b. **Medium Severity Level (M).** Further development of light alligator cracking into a pattern or network of cracks that may be lightly spalled.
- c. **High Severity Level (H).** Network or pattern cracking has progressed so that the pieces are well defined and spalled at the edges; some of the pieces rock under traffic.

Measuring Procedure. Alligator cracking is measured in square feet of surface area. The major difficulty in measuring this type of distress is that many times two or three levels of severity exist within one distressed area. If these portions can be easily distinguished from each other, they shall be measured and recorded separately. However, if the different levels of severity cannot be easily divided, the entire area should be rated at the highest severity level present. If alligator cracking and rutting occur in the same area, each is recorded separately at its respective severity level.

Distress No. 3--Block Cracking (From AC 150/5380-6)

Description. Block cracks are interconnected cracks that divide the pavement into approximately rectangular pieces. The blocks may range in size from approximately one x one foot to ten x ten feet. When the blocks are larger than ten x ten feet, they are classified as longitudinal or transverse cracking. Block cracking is caused mainly by shrinkage of the asphaltic concrete and daily temperature cycling (which results in daily stress/strain cycling). It is not load-associated. The occurrence of block cracking usually indicates that the asphalt has hardened significantly. Block cracking normally occurs over a large portion of pavement area, but sometimes will occur only in nontraffic areas. This type of distress differs from alligator cracking in that the alligator cracks form smaller, many-sided pieces with sharp angles. Also, unlike block cracks, alligator cracks are caused by repeated traffic loadings and are, therefore, located only in traffic areas (e.g., wheel paths).

Severity Levels.

- a. **Low Severity Level (L).** Blocks are defined by cracks that are nonspalled (sides of the crack are vertical) or only lightly spalled with no loose particles. Nonfilled cracks have 1/4 inch or less mean width and filled cracks have a filler in satisfactory condition.
- b. **Medium Severity Level (M).**
- | | |
|-----|---|
| (1) | Filled or nonfilled cracks that are moderately spalled with some loose particles. |
| (2) | Nonfilled cracks that are not spalled or have only minor spalling with few loose particles but have a mean width greater than approximately 1/4 inch. |
| (3) | Filled cracks that are not spalled or have only minor spalling with a few loose particles but have filler in unsatisfactory condition. |
- c. **High Severity Level (H).** Blocks are well defined by cracks that are severely spalled with loose and missing particles.

Measuring Procedure. Block cracking is measured in square feet of surface area and usually occurs at one severity level in a given pavement section. Any areas of the pavement section having distinctly different levels of severity, however, should be measured and recorded separately.

Distress No. 4--Corrugation (From AC 150/5380-6)

Description. Corrugation is a series of closely spaced ridges and valleys (ripples) occurring at fairly regular intervals (usually less than five feet) along the pavement. The ridges are perpendicular to the traffic direction. Traffic action combined with an unstable pavement surface or base usually causes this type of distress.

- Severity Levels.**
- Low Severity Level (L).** Corrugations are minor and do not significantly affect ride quality (see measurement criteria below).
 - Medium Severity Level (M).** Corrugations are noticeable and significantly affect ride quality (see measurement criteria below).
 - High Severity Level (H).** Corrugations are easily noticed and severely affect ride quality (see measurement criteria below).

Measuring Procedure. Corrugation is measured in square feet of surface area. The mean elevation difference between the ridges and valleys of the corrugations indicates the level of severity. To determine the mean elevation difference, a 10-foot straightedge should be placed perpendicular to the corrugations so that the depth of the valleys can be measured in inches. The mean depth is calculated from five such measurements.

Severity	Runways and High Speed Taxiways	Aprons
L	< 1/4 in.	< 1/2 in.
M	1/4 - 1/2 in.	1/2 - 1 in.
H	> 1/2 in.	> 1 in.

Distress No. 5--Depression (From AC 150/5380-6)

Description. Depressions are localized pavement surface areas having elevations slightly lower than those of the surrounding pavement. In many instances, light depressions are not noticeable until after a rain, when ponding water creates "birdbath" areas, but the depressions can also be located without rain because of stains created by ponding of water. Depressions can be caused by settlement of the foundation soil or can be built during construction. Depressions cause roughness and, when filled with water of a sufficient depth, could cause hydroplaning of aircraft.

Severity Levels.

- Low Severity Level (L).** Depressions can be observed or located by stained areas, only slightly affects pavement riding quality and may cause hydroplaning potential on runways (see measuring procedure below).
- Medium Severity Level (M).** The depression can be observed, moderately affects pavement riding quality and causes hydroplaning potential on runways (see measuring procedure below).

c. High Severity Level (H). The depression can be readily observed, severely affects pavement riding quality and causes definite hydroplaning potential (see measuring procedure below).

Measuring Procedure. Depressions are measured in square feet of surface area. The maximum depth of the depression determines the level of severity. This depth can be measured by placing a 10-foot straightedge across the depressed area and measuring the maximum depth in inches. Depressions larger than ten feet across must be measured by either visual estimation or by direct measurement when filled with water.

Severity	Maximum Depth of Depression		
	Runways and High-Speed Taxiways	Taxiways and Aprons	
L	1/8 - 1/2 in.	1/2 - 1 in.	
M	1/2 - 1 in.	1 - 2 in.	
H	> 1 in.	> 2 in.	

Distress No. 8—Longitudinal and Transverse Cracking (Non-PCC Joint Reflective)
(From AC 150/5380-6)
Description. Longitudinal cracks are parallel to the pavement's centerline or lay-down direction. They may be caused by:

- A poorly constructed paving lane joint,
 - Shrinkage of the AC surface due to low temperatures or hardening of the asphalt, or
 - A reflective crack caused by cracks beneath the surface course, including cracks in PCC slabs (but not at PCC joints).
- Transverse cracks extend across the pavement at approximately right angles to the pavement's centerline or direction of lay down. They may be caused by items (b) or (c) above. These types of cracks are not usually load-associated. If the pavement is fragmented along cracks, the crack is said to be spalled.

Severity Levels.

- Low Severity Level (L). Cracks have either little or no spalling with no loose particles. The cracks can be filled or nonfilled. Nonfilled cracks have a mean width of 1/4 inch or less. Filled cracks are of any width, but their filler materials are in satisfactory condition.

- b. Medium Severity Level (M). One of the following conditions exists:
- (1) Cracks are moderately spalled with some loose particles and can be either filled or nonfilled of any width.
 - (2) Filled cracks are not spalled or are only lightly spalled, but the filler is in unsatisfactory condition.
 - (3) Nonfilled cracks are not spalled or are only lightly spalled, but the mean crack width is greater than 1/4 inch.
 - (4) Light random cracking exists near the crack or at the corners of intersecting cracks.
- c. High Severity Level (H). Cracks are severely spalled with loose and missing particles. They can be either filled or nonfilled of any width.
- Measuring Procedure. Longitudinal and transverse cracks are measured in linear feet. The length and severity of each crack should be identified and recorded. If the crack does not have the same severity level along its entire length, each portion of the crack having a different severity level should be recorded separately. For an example, see joint reflection cracking.

Distress No. 9--Oil Spillage (From AC 150/5380-6)

Description. Oil spillage is the deterioration or softening of the pavement surface caused by the spilling of oil, fuel, or other solvents.

Severity Levels. No degrees of severity are defined. It is sufficient to indicate that oil spillage exists.

Measuring Procedure. Oil spillage is measured in square feet of surface area.

Distress No. 10--Patching and Utility Cut Patch (From AC 150/5380-6)

Description. A patch is considered a defect, no matter how well it is performing.

Severity Levels.

- a. **Low Severity Level (L).** Patch is in good condition and is performing satisfactorily.
- b. **Medium Severity Level (M).** Patch is somewhat deteriorated and affects riding quality to some extent.
- c. **High Severity Level (H).** Patch is badly deteriorated and affects ride quality significantly. Patch soon needs replacement.

Measuring Procedure. Patching is measured in square feet of surface area. However, if a single patch has areas of differing severity levels, these areas should be measured and recorded separately. For example, a 25-square-foot patch may have ten square feet of medium severity and 15 square feet of light severity. These areas would be recorded separately.

Distress No. 12--Raveling and Weathering (From AC 150/5380-6)

Description. Raveling and weathering are the wearing away of pavement surface caused by the dislodging of aggregate particles and loss of asphalt or tar binder. They may indicate that the asphalt binder has hardened significantly.

Severity Levels.

- a. **Low Severity Level (L).** Aggregate or binder has started to wear away with few, if any, loose particles.
- b. **Medium Severity Level (M).** Aggregate and/or binder has worn away with some loose and missing particles. The surface texture is moderately rough and pitted. (No distresses of this severity level were found on this project.)

c. High Severity Level (H). Aggregate and/or binder has worn away with a large amount of loose and missing particles. The surface texture is severely rough and pitted.

Measuring Procedure. Raveling and weathering are measured in square feet of surface area.

Distress No. 13-Rutting (From AC 150/5380-6)

Description. A rut is a surface depression in the wheel path. Pavement uplift may occur along the sides of the rut; however, in many instances, ruts are noticeable only after a rainfall, when the wheel paths are filled with water. Rutting stems from a permanent deformation in any of the pavement layers or subgrade, usually caused by consolidation or lateral movement of the materials due to traffic loads. Significant rutting can lead to major structural failure of the pavement.

Severity Levels.	
Severity	Mean Rut Depth Criteria
L	All Pavement Sections
M	1/4 - 1/2 in.
H	> 1/2 - 1 in.
	> 1 in.

Measuring Procedure. Rutting is measured in square feet of surface area, and its severity is determined by the mean depth of the rut. To determine the mean rut depth, a straightedge should be laid across the rut and the depth measured. The mean depth in inches should be computed from measurements taken along the length of the rut.

Distress No. 16-Swell (From AC 150/5380-6)

Description. Swell is characterized by an upward bulge in the pavement surface. A swell may occur sharply over a small area or as a longer, gradual wave. Either type of swell can be accompanied by surface cracking. A swell is usually caused by frost action in the subgrade or by swelling soil, but a small swell can also occur on the surface of an asphalt overlay (over PCC) as a result of a blowup in the PCC slab.

Severity Levels.

a. Low Severity Level (L). Swell is barely visible and has a minor effect on the pavement's ride quality as determined at the normal aircraft speed for the pavement section under consideration. (Low severity swells may not always be observable, but

- their existence can be confirmed by driving a vehicle over the section at the normal aircraft speed. An upward acceleration will occur if the swell is present.)
- b. Medium Severity Level (M). Swell can be observed without difficulty and has a significant effect on the pavement's ride quality as determined at the normal aircraft speed for the pavement section under consideration.
- c. High Severity Level (H). Swell can be readily observed and severely affects the pavement's ride quality at the normal aircraft speed for the pavement section under consideration.

Measuring Procedure. The surface area of the swell is measured in square feet. The severity rating should consider the type of pavement section (e.g., runway, taxiway or apron). For example, a swell of sufficient magnitude to cause considerable roughness on a runway at high speeds would be rated as more severe than the same swell located on an apron or taxiway where the normal aircraft operating speeds are much lower. The following guidance is provided for runways:

Height Differential	
< 3/4 in.	L
3/4 - 1-1/2 in.	M
> 1-1/2 in.	H

Severity
L
M
H