

PROPOSAL FOR
NORTHWEST AIRLINES
HEAVY MAINTENANCE BASE



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HEAVY MAINTENANCE BASE



Minneapolis • Saint Paul

METROPOLITAN AIRPORTS COMMISSION

OFFICE OF THE CHAIRMAN

PHONE (612) 726-8181

January 12, 1990

Mr. Alfred Checchi
Chairman and Chief Executive Officer
Northwest Airlines, Inc.
MSP International Airport
St. Paul, MN 55111

Dear Mr. Checchi:

Enclosed please find the Metropolitan Airports Commission's proposal for the Northwest Airlines Heavy Maintenance Base.

We have identified three potential site alternatives of up to 130 acres and analyzed in detail the implications of each site. We have described an approach to facility construction which is to our mutual advantage and will be able to deliver the facility for your use by Spring 1992.

Recognizing the importance of this facility to the State of Minnesota, we are offering an extremely favorable financial package, including use of Commission general obligation revenue bonds which are rated AAA, creation of a State Enterprise Zone and the potential for creation of a tax increment district or equivalent property tax relief.

We are prepared to lease the property to Northwest Airlines for a period of 25 years, with appropriate covenants to provide Northwest access to the airport in order to carry out its business activities and a mechanism to provide replacement facilities in the event a decision is made to relocate to a new airport.

We have explained in considerable detail our plans for enhancing existing airfield and terminal capacity. Finally, at your request, we have addressed a number of broader issues of state policy which affect Northwest's business in the State of Minnesota.

Mr. Alfred Checchi
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We believe that MAC and the State of Minnesota are uniquely positioned so as to provide Northwest advantages and incentives which no one else can offer. We feel that we understand Northwest's needs and are confident that we can meet those needs. We believe that this proposal demonstrates both the commitment of our state to Northwest Airlines and the advantages to Northwest of expanding its facilities here.

Very truly yours,

A handwritten signature in cursive script, appearing to read "T E Holloran".

Thomas E. Holloran
Chairman

A handwritten signature in cursive script, appearing to read "Jeffrey W. Hamiel".

Jeffrey W. Hamiel
Executive Director

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INTRODUCTION

The choice of a location for Northwest Airlines' heavy maintenance base for the Airbus 320, 330 and 340 aircraft on order, as well as for its Boeing 757 aircraft, is exceedingly important to Northwest Airlines, the Metropolitan Airports Commission and the State of Minnesota.

The information and commitments contained in this proposal clearly demonstrate the significant mutual benefits to all three entities and, we believe, present a convincing case for Northwest Airlines to choose Minneapolis-St. Paul International Airport as the location for this facility. Such a choice would continue the longstanding cooperative partnership that has existed between the airlines, the State of Minnesota and the Airports Commission, within which NWA has grown and prospered.

I. FACILITIES

A. FACILITY DESCRIPTION

The proposed heavy maintenance base is intended to provide Northwest Airlines with an additional maintenance base for the new generation, glass cockpit aircraft currently coming into the fleet. These aircraft include the Boeing 757 and Airbus 320, 330 and 340. The concept of the base includes the full range of state of the art facilities and equipment to handle these new generation aircraft, and is intended to anticipate needs approximately ten years into the future based on Northwest Airlines fleet planning projections developed in late 1989.

The heavy maintenance base will include the full range of facilities necessary to support these aircraft. The maintenance base will provide airfield access, hangar positions, support facilities including shops, stores, offices and other miscellaneous facilities, automobile parking, and ground access.

The proposed development will include seven hangars, six of which are designed to accommodate A-320/Boeing 757 aircraft and one which is designed to accommodate A-330/340 aircraft. Additional facilities will include engine test cells, engine shops, sheet metal shops, fiberglass shops, paint shops, seat shops, wheel and brake shops, stores, shipping/receiving, plant maintenance and appropriate office areas to support the hangar and shop facilities. In addition, adequate locker room, cafeteria and parking facilities to support the anticipated number of employees will be required. Future shop development could include an electronics and avionics shop, tool calibration shop, machine shop and plating shop. Sufficient aircraft apron would be provided to allow up to six aircraft parking positions immediately adjacent to the hangar bays.

In order to accommodate this development, an area of up to 130 acres will be necessary; however, the specific configuration could change this requirement. The area should be of sufficient magnitude to allow the appropriate interrelationships of all facilities, in either traditional maintenance base configurations or to allow the application of new, innovative, and more flexible concepts in design. The latter approach could provide significant green area on the site, which would allow for an enhanced work environment and increased expansion flexibility.

Table 1 provides a summary of space requirements based on data provided by Northwest Airlines.

It is anticipated that the maintenance base would be developed in three phases between 1992 and 1996. The initial phase would consist of three hangars and appropriate support space to be completed by Spring, 1992. The three initial hangar bays would be designed to accommodate the A-320/Boeing 757 category aircraft. By 1993 it is anticipated that one additional A-320/B-757 bay would be provided and the A-330/340 bay would be completed. The two final A-320/B-757 bays would be completed by 1996. The site and facility requirements are of sufficient magnitude to allow one additional A-320/B-757 maintenance hangar and an A-320/B-757 paint hangar and an additional A-330/340 maintenance hangar and an A-330/340 paint hangar to be developed. It is anticipated that the general site should be appropriately located to allow expansion beyond this level to incorporate either additional facilities or relocated facilities from the Building B and/or Building C complexes currently located on the airport.

In summary, the approximate 130 acre site will provide a total of 7 A-320/B-757 maintenance hangars and two A-330/340 maintenance hangars, as well as an A-320/B-757 paint hangar and an A-330/340 paint hangar, with appropriate support facilities.

B. SITE LOCATION ALTERNATIVES

MAC is currently preparing a Long Term Comprehensive Plan for Minneapolis-St. Paul International Airport. The purpose of this plan is to look thirty years into the future in order to determine the level of facilities required to meet future aviation demands. Locations for a potential heavy maintenance facility at MSP should be developed with an awareness of the potential for development resulting from this plan. To this end, three potential locations have been identified on existing airport property which are of adequate size to accommodate the proposed maintenance base without constraining potential development. These areas are shown on Figure 1.

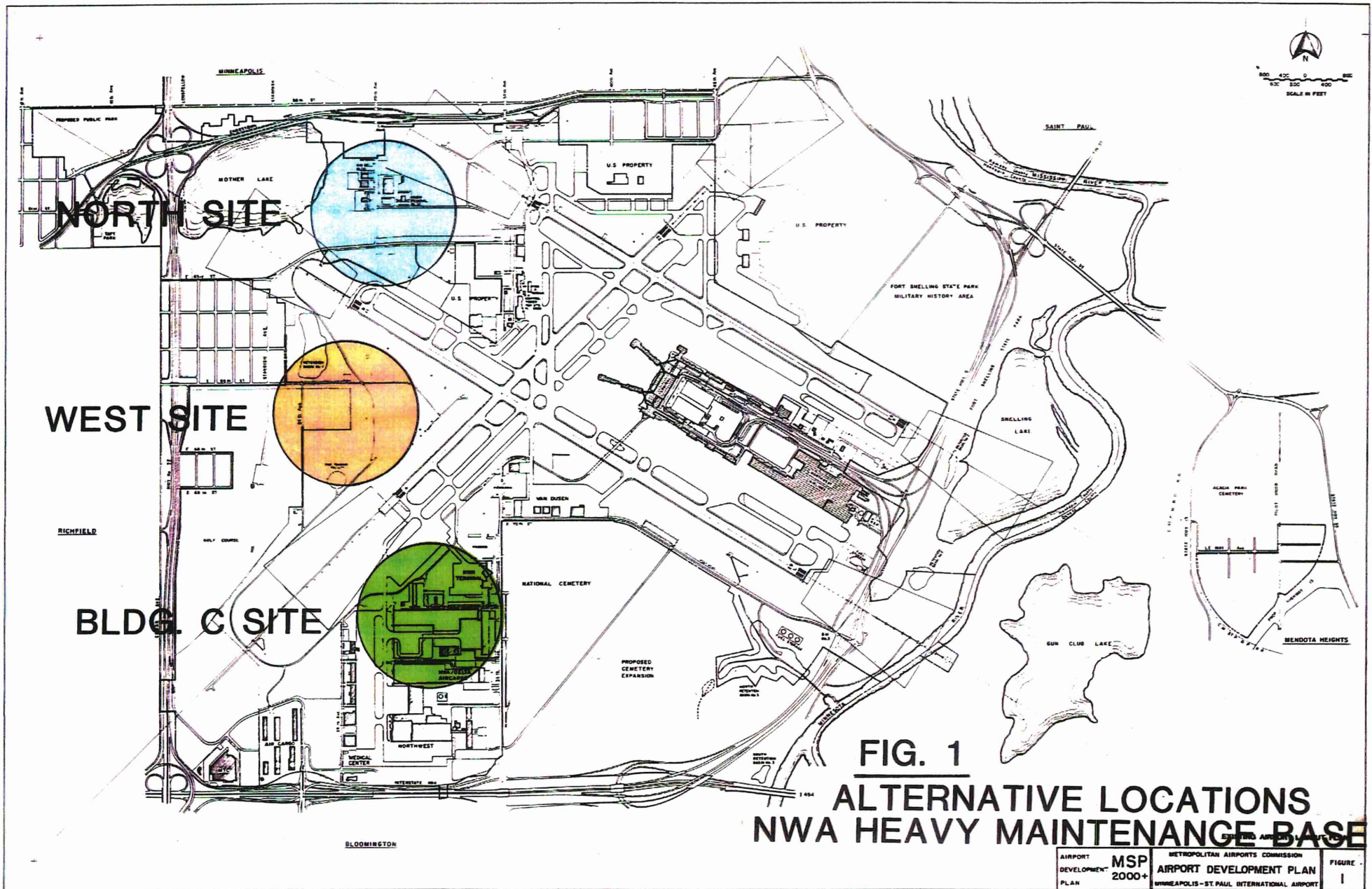
1. North Site

The North Site is located between the parallel runways and to the northwest of Runway 4/22. It is in an area currently occupied by MAC support facilities, FAA offices, an AT&T facility and undeveloped land. The site for the maintenance base has been moved far enough to the northwest to allow for additional terminal development on the northwest side of

TABLE 1

MAINTENANCE BASE SPACE REQUIREMENTS

	<u>Sq. Ft.</u>	
A320/B757 Hangar	202,800	
A330/340 Hangar	68,800	
Hangar Control & Support	65,700	
Shops	384,000	
Engine Shop and Test Cell	58,000	
Stores	100,000	
Shipping and Receiving & Truck Dock		
Parking	68,800	
Underground Tanks	93,800	
Plant Maintenance	24,000	
Offices	28,100	
Cafeteria	5,000	
Boiler Plant	10,000	
Auto Parking & Circulation	351,600	
Aircraft Parking, Taxi & Apron Area	<u>2,205,000</u>	
Subtotal	3,665,500	
Expansion Area		
Maintenance Hangars	102,600	
Paint Hangars	102,600	
Shops	140,000	
Apron	<u>537,500</u>	
Subtotal	882,700	
Contingency	659,800	
Green Area/Unusable	<u>505,800</u>	
Total	5,713,900	- 130 acres



Runway 4/22, providing for up to thirty to forty additional gates as may be required in the future.

Access to this site could be provided from both the Crosstown Highway via the 28th Avenue interchange and from Cedar Avenue via a revised interchange, currently being evaluated by the City of Richfield and the Minnesota Department of Transportation, generally in the vicinity of East 66th Street. This location would provide dual access for employees at the facility, and should significantly reduce traffic congestion and accessibility problems. Automobile parking could be designed to accommodate this dual direction flow.

In order to provide the most appropriate hangar configuration, a design could be developed where hangars would be oriented toward the south/southwest. This would allow direct access to the runway/taxiway system at the airport via Taxiway A, and would allow the possibility of a crossover taxiway to Taxiway E on the north side of the airport. This location would provide two-way taxi capability to and from the maintenance facility, and would provide by-pass capability should it be necessary to maneuver a number of aircraft concurrently.

This location would also provide ready access to Northwest's gates on the Red, Gold and Green Concourses. The potential for crossover taxiway capability could be integrated with future terminal development in this area, thereby minimizing additional cost and construction and maximizing use of facilities without creating constraints to either passenger or maintenance-related operations. Further, the maintenance facility could be configured so that if the need for additional terminal facilities does not materialize, expansion potential would be available toward either the southeast or toward the northwest.

In order to develop in this area, it would be necessary to relocate existing MAC, FAA and AT&T facilities, as well as the Airport Surveillance Radar operated by the Federal Aviation Administration.

The North Site provides the potential for a stand-alone facility, ready expansion capability to both the northwest and the southeast, close proximity to existing and potential terminal facilities, dual highway access and limited facilities relocation. Location at the North Site would not preclude any potential development currently being considered in the Long Term Comprehensive Plan. A total of 90 acres is immediately available for development at this site. Expansion potential is possible in both directions.

Figure 2 shows the area immediately available for development and a potential facility configuration designed around the space requirements provided by Northwest.

2. West Site

The West Site is located on the west side of the airport, generally in the area between Runways 11R and 4. The major constraints in this area relate to future development being considered in the Long Term Comprehensive Plan and involve the potential for a north/south runway on the west side of the airport and the potential for a parallel runway located to the southwest of Runway 29L. Preserving the options for these potential runways leaves a triangular parcel which would allow development of hangar facilities with a southerly/southeasterly exposure.

Access to the West Site can be provided from two directions: (1) from the west via Cedar Avenue and the reconfigured 66th Street interchange and (2) from the north via the Crosstown Highway and the 28th Avenue interchange. Employee parking would be designed to maximize the potential for use of each of these access routes.

The site is relatively undeveloped; the only airport facilities in this area are a VORTAC and the MAC Fire Training Facility. A portion of this area is currently used by the City of Richfield for baseball diamonds and gardens; therefore, relocations at this site would be minimal. Access to the airfield would be via taxiways to be constructed on the south side of Runway 29L and on the north side of Runway 4. The proposed parallel taxiway on the south side of Runway 29L is currently included in the MAC Capital Improvement Program for construction in 1993. A potential parallel taxiway on the north side of Runway 4 is not currently programmed for construction by MAC and would not be developed unless the maintenance base or a facility of similar magnitude were constructed in this general area.

The West Site provides ready access to the terminal area and is only slightly farther in distance than the North Site. It would, however, require aircraft moving from the maintenance base to the terminal to cross both Runway 4/22 and Runway 11R/29L, potentially leading to increased delays for aircraft moving between the maintenance facility and the terminal building, particularly during arrival or departure banks. The taxiways proposed parallel to Runways 29L and 4 would allow dual access to a maintenance base, however, essentially providing one route between the base and the terminal complex.

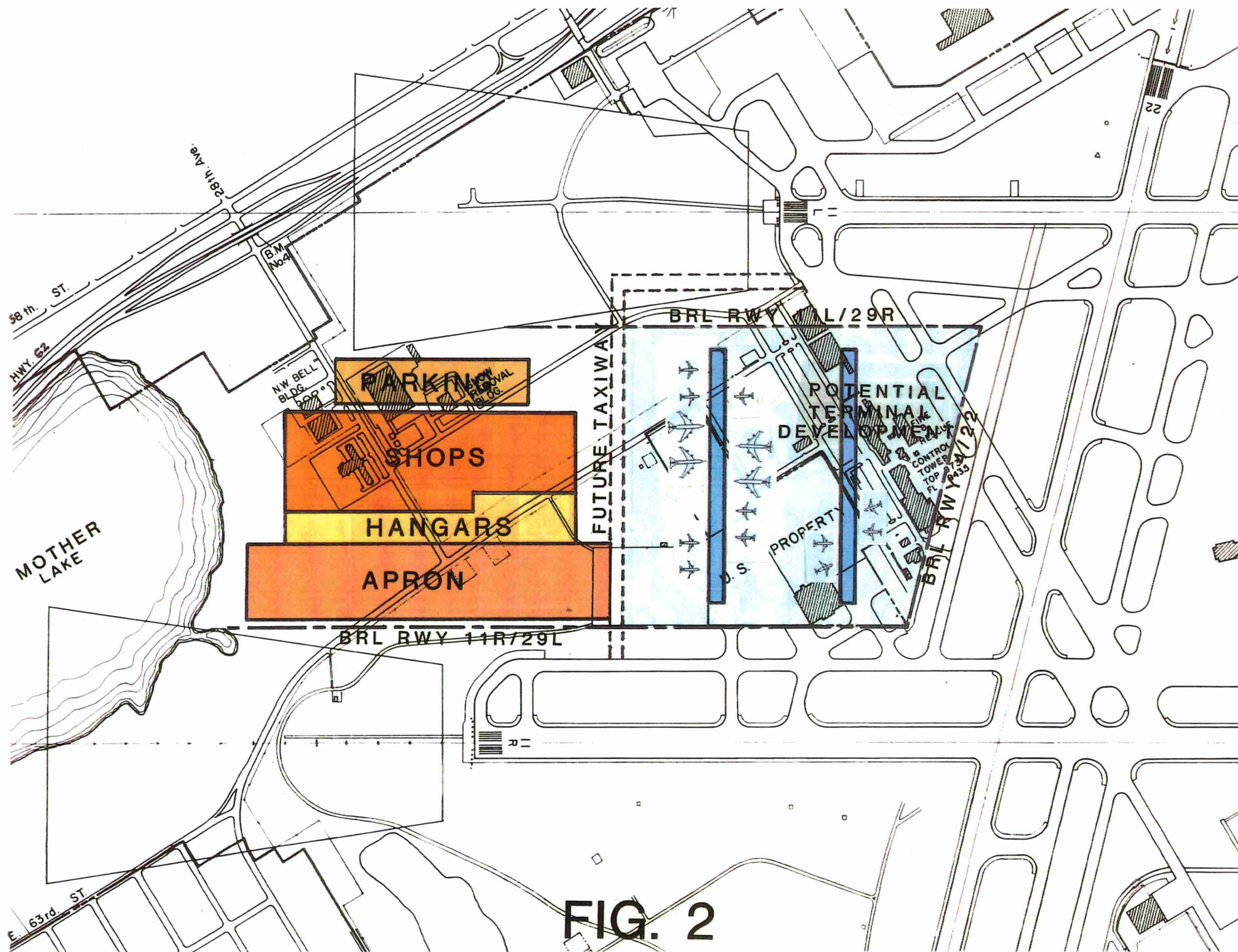


FIG. 2
NORTH SITE

SCALE: 1-800

In summary, the West Site provides many of the characteristics identified for the previous location in that a stand-alone facility could be developed, dual highway access could be provided, minimal facilities relocation would be necessary, and any proposals anticipated as part of the Long Term Comprehensive Plan would not be compromised. Further, should either of the potential runway development options not prove feasible, the maintenance facility could be expanded in that direction, further enhancing flexibility for the future. Access from the site to the terminal complex is slightly more difficult than for the previous location.

Figure 3 shows the West Site area in more detail, as well as one option for development. A site area of 125 acres is available if the option for both runways is retained; if the parallel runway to 29L is not developed, an additional 60 acres is available. If the north-south runway is not developed, a virtually unlimited site is available.

3. Building C Site

The third potential location for development of this maintenance facility is to the north of Building C. Development in this area would allow integration of the Airbus/B-757 maintenance facilities with the existing maintenance complex, and more particularly with the maintenance facilities associated with the Boeing 747-400. A substantial area to the north of the existing Building C complex would be available for main base development, and could lead to a concentrated facility in this area.

Development at this location could require relocation of a number of existing activities including parking associated with the Building C complex, the Northwest/Delta air cargo building, the Marriott flight kitchen, the engine run-up pad, the Northwest freight building and associated aircraft parking apron, and automobile parking and facilities in the vicinity of the Hubert H. Humphrey International/Charter Terminal. As can be seen from the above listing, this site has the most significant relocation issues of those considered, and would require an extended lead time to accomplish the relocations.

Access to the site from the airfield would be via Taxiways C, D and O, thereby integrating the maintenance base with the existing taxiway system at the airport. The only additional taxiway development would be that necessary to provide direct access to the aircraft parking positions and within the hangar complex itself.

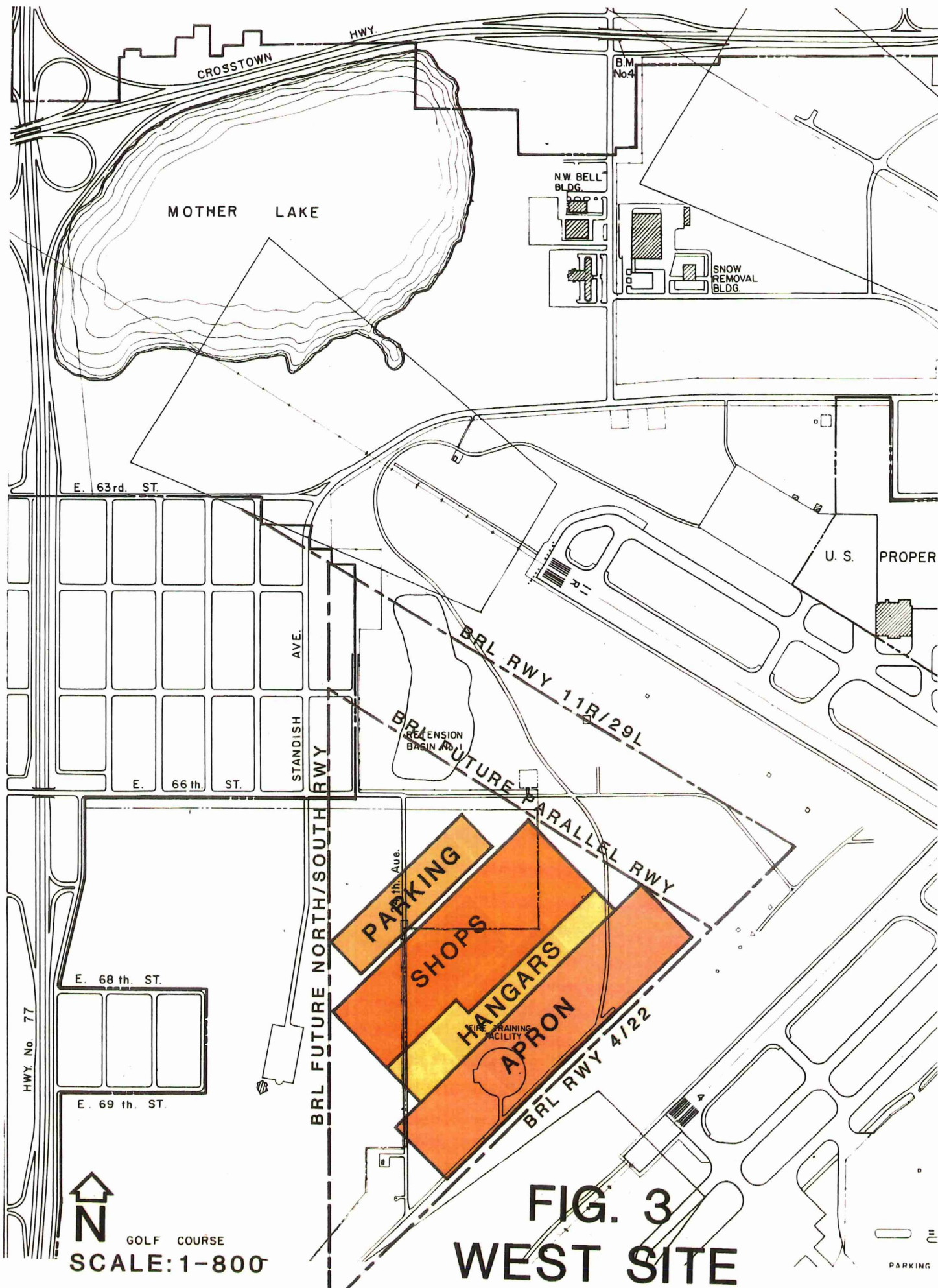


FIG. 3
WEST SITE

Ground access into this area would be provided via 34th Avenue, which is currently utilized for access to and from Building C, the freight building, the Humphrey Terminal, and employee and public parking to the north of the Humphrey Terminal. 34th Avenue is connected to the regional roadway system via the recently reconstructed interchange with I-494. Within the next year 24th Avenue, approximately 1/2 mile to the west, will have an upgraded interchange with Interstate 494. This interchange is connected to 34th Avenue via a frontage road located on airport property.

As previously indicated, additional development in this area would require the removal of a major portion of existing parking associated with Building C. Additional provisions must be made on the site for employee parking, and increased traffic would require upgrading of access to and from 34th Avenue (and potentially the I 494-34th Avenue interchange) to allow enhanced access into the maintenance complex.

Development at this site requires the longest taxi distance to and from the existing terminal complex and would also be farther from any future terminal development. Taxiways C and D provide bypass capability; however, access via Taxiway O is unidirectional and would require coordination between the maintenance complex and the Air Traffic Control Tower to ensure free flow of aircraft along this taxiway.

Future expansion at this location would be to the north, into the area currently occupied by the Hubert H. Humphrey Terminal.

In summary, development in the Building C area allows for a completely integrated facility with existing maintenance operations, particularly with the facilities developed for the new generation Boeing 747-400 aircraft. Access to the regional roadway system is currently in place, but may have to be upgraded to provide for additional traffic volumes. Access to the airfield is also in place; however, Taxiway O could impose limitations with its unidirectional flow. Further, this location is more distant from both the existing and any future terminal development on the airport.

Figure 4 shows this site in more detail. A total area of 130 acres would be available at this location.

C. FACILITY CONSTRUCTION

MAC has built and upgraded major maintenance facilities for Northwest Airlines and Republic Airlines over many years. During this time period, a close working relationship has developed

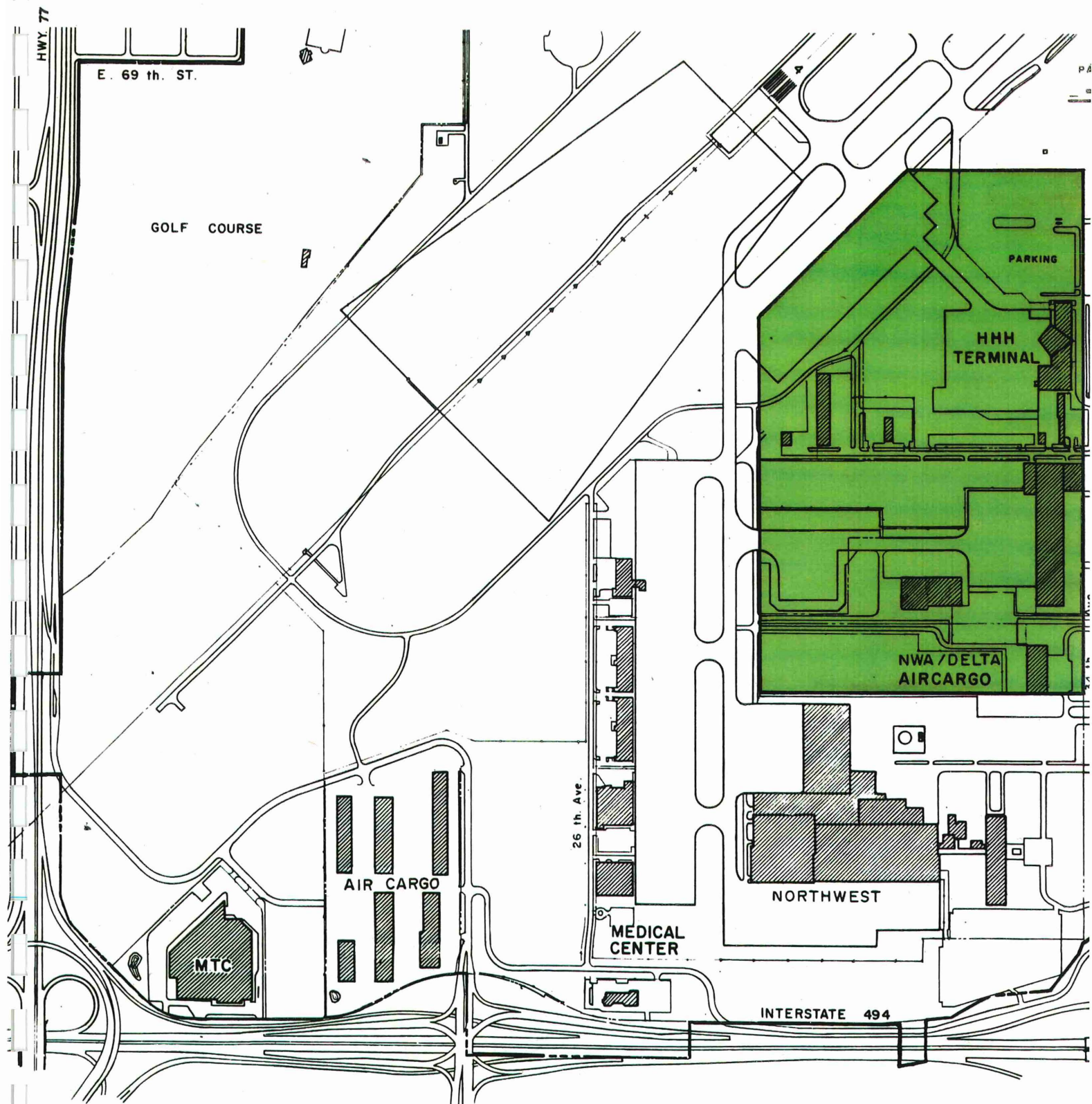


FIG. 4
BLDG. C SITE



SCALE: 1-800

between NWA and MAC, most recently exemplified by construction of the Boeing 747-400 Maintenance Hangar at MSP.

As a consequence of this working relationship, a number of procedures have been developed and agreed upon by both parties to enhance and expedite construction in the most cost effective manner. These lessons would be applied to construction of this maintenance base, although the approach must remain flexible enough to ensure that Northwest's interests are a primary consideration in overall facility design, construction, procedures and cost.

1. Consultant Selection

MAC has historically delegated its consultant selection authority to the proposer of a major single user facility at the airport. This procedure has been followed with both Northwest and Republic Airlines in the past and we would follow a similar procedure with regard to the heavy maintenance base. Delegation of this authority would allow Northwest Airlines to make the selection of the architect-engineer, as well as to select a construction management firm and to define the relationship between the construction manager and the architect-engineer during the design, bidding and construction phases of the project. This delegation of authority will ensure that Northwest is in a position to have the closest possible relationship with both the A&E firm and the construction manager, while remaining within MAC's general guidelines developed for consultant use.

2. Approach to Construction Contracts

During construction of the Boeing 747-400 Hangar, the efficiency of a multiple contract approach under the umbrella of a construction manager generated significant savings for Northwest Airlines. This approach could also be followed on development of the heavy maintenance base. The overall project would be broken down into its component parts, plans and specifications would be developed by the A&E firm in coordination with the construction manager, and the public bidding process would be followed. The multiple contract approach, without a general contractor, allows a savings equal to the mark-up a general contractor typically attaches to subcontractor bids. Further, this approach is typically more effective at generating competitive bidding for various components of the work, since the smaller contract packages allow more firms to meet the bidding requirements and thereby participate in the process. The net result of this approach is to provide a substantial level of savings in terms of overall construction costs, and maximum flexibility in contracting.

3. Contract Award Process

In order to ensure that bids are acted upon in a timely manner, MAC would hold special Commission meetings when necessary to award contracts. Special meetings would allow flexibility in the bidding process, and would minimize delays between the opening of bids and contract award. This step would eliminate the time period required to take bids on a project through the Commission's Planning and Environment Committee prior to award by the full Commission. Given a schedule calling for completion of the initial phase of the maintenance facility in early 1992, expediting the contract award process could play a significant role in ensuring that this target date is met.

4. MAC Construction Coordinator

A critical element in completion of the project in a timely and cost effective manner will be effective communication between Northwest Airlines and MAC. In order to ensure that this communication takes place, MAC will designate a point of contact within the Commission staff whose primary responsibility will be to ensure successful completion of this project. This contact will be within the Commission's Airport Development Department, but will have the ability to call on various disciplines within the staff structure to ensure completion of this project without the distractions inherent in completing other work assignments.

5. Environmental Process

While it will be necessary to complete a formal environmental analysis of the proposed project under state law, we are prepared to begin the environmental process immediately and are confident, based on preliminary study, that the project has no significant adverse environmental impacts.

II. FINANCIAL PACKAGE

One of the most significant elements for Northwest Airlines in making the location decision for this heavy maintenance base will be its ultimate cost. It is in this area where MAC is uniquely positioned and willing to assist Northwest Airlines.

Analysis by MAC and NWA has resulted in a preliminary cost estimate for this project of \$225 million, including costs for site preparation, relocation, construction, architects and engineering fees, financing costs, etc. See Table 2. Based upon two phases of construction, MAC has assumed that approximately \$100 million is needed in 1990 and \$125 million is needed in 1993. In general, these estimates are appropriate for any of the potential sites currently identified, although development at Building C would carry with it additional costs for relocation of facilities.

Using these basic assumptions, MAC is prepared to offer for NWA consideration the following financial proposal.

A. PROJECT FINANCING

MAC is prepared to finance the construction of this heavy maintenance base on one of the alternative sites at MSP through the use of our General Obligation Revenue Bonding authority. MAC will secure, during the 1990 Minnesota State Legislative Session, approval for increased bonding authority which will be adequate for the financing of this project. MAC is prepared to structure these serial bonds for a term of 25 years.

Currently MAC debt carries a AAA credit rating from both Moody's and Standard and Poors. MAC's ability to give Northwest Airlines access to the highest quality tax exempt financing will produce the lowest long-term interest rates currently available. Table 3 illustrates proposed annual debt service schedules for two bond issues designed to meet the needs for project financing as currently identified. This table also translates the repayment schedules into expected cash flows for Northwest Airlines.

B. ENTERPRISE ZONE

As a significant additional inducement, the Minnesota Department of Trade and Economic Development is proposing that an Enterprise Zone be created at the site of the maintenance base. The Enterprise Zone would enable the State to give NWA a five-year window in which a \$3,000 per year Minnesota State Income Tax

TABLE 2

A320/B757 Hangar	\$20,280,000
A330/340 Hangar	6,880,000
Hangar Control & Support	6,570,000
Shops	34,631,000
Engine Shop and Test Cell	5,220,000
Stores	9,000,000
Shipping and Receiving & Truck Dock	
Parking	1,350,000
Underground Tanks	2,345,000
Plant Maintenance	2,160,000
Offices	2,180,000
Cafeteria	500,000
Boiler Plant	1,000,000
Auto Parking & Circulation	1,125,000
Aircraft Parking, Taxi & Apron Area	<u>13,890,000</u>

Subtotal	\$107,131,000
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Expansion Area

Maintenance Hangars	\$11,286,000
Paint Hangars	12,825,000
Shops	17,500,000
Apron	<u>4,838,000</u>

Subtotal	\$46,449,000
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Site Preparation	\$ 5,714,000
Fees	15,992,000
Contingency	43,979,000

TOTAL	\$219,265,000
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TABLE 3A

METROPOLITAN AIRPORTS COMMISSION Northwest Airlines Maintenance Facility Series 1990 G.O. Bonds

Debt Service Schedule

Issue Date : 7/1/90
First Coupon : 1/1/91

Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
1/1/91	0.00	0.000%	4,098,523.75	4,098,523.75	4,098,523.75
7/1/91			4,098,523.75	4,098,523.75	
1/1/92	0.00	0.000%	4,098,523.75	4,098,523.75	8,197,047.50
7/1/92			4,098,523.75	4,098,523.75	
1/1/93	1,950,000.00	6.350%	4,098,523.75	6,048,523.75	10,147,047.50
7/1/93			4,036,611.25	4,036,611.25	
1/1/94	2,075,000.00	6.400%	4,036,611.25	6,111,611.25	10,148,222.50
7/1/94			3,970,211.25	3,970,211.25	
1/1/95	2,210,000.00	6.500%	3,970,211.25	6,180,211.25	10,150,422.50
7/1/95			3,898,386.25	3,898,386.25	
1/1/96	2,350,000.00	6.600%	3,898,386.25	6,248,386.25	10,146,772.50
7/1/96			3,820,836.25	3,820,836.25	
1/1/97	2,505,000.00	6.700%	3,820,836.25	6,325,836.25	10,146,672.50
7/1/97			3,736,918.75	3,736,918.75	
1/1/98	2,675,000.00	6.750%	3,736,918.75	6,411,918.75	10,148,837.50
7/1/98			3,646,637.50	3,646,637.50	
1/1/99	2,855,000.00	6.800%	3,646,637.50	6,501,637.50	10,148,275.00
7/1/99			3,549,567.50	3,549,567.50	
1/1/2000	3,050,000.00	6.900%	3,549,567.50	6,599,567.50	10,149,135.00
7/1/2000			3,444,342.50	3,444,342.50	
1/1/2001	3,260,000.00	7.000%	3,444,342.50	6,704,342.50	10,148,685.00
7/1/2001			3,330,242.50	3,330,242.50	
1/1/2002	3,490,000.00	7.100%	3,330,242.50	6,820,242.50	10,150,485.00
7/1/2002			3,206,347.50	3,206,347.50	
1/1/2003	3,735,000.00	7.150%	3,206,347.50	6,941,347.50	10,147,695.00
7/1/2003			3,072,821.25	3,072,821.25	
1/1/2004	4,000,000.00	7.200%	3,072,821.25	7,072,821.25	10,145,642.50
7/1/2004			2,928,821.25	2,928,821.25	
1/1/2005	4,290,000.00	7.250%	2,928,821.25	7,218,821.25	10,147,642.50
7/1/2005			2,773,308.75	2,773,308.75	
1/1/2006	4,600,000.00	7.300%	2,773,308.75	7,373,308.75	10,146,617.50
7/1/2006			2,605,408.75	2,605,408.75	
1/1/2007	4,940,000.00	7.350%	2,605,408.75	7,545,408.75	10,150,817.50
7/1/2007			2,423,863.75	2,423,863.75	
1/1/2008	5,300,000.00	7.400%	2,423,863.75	7,723,863.75	10,147,727.50
7/1/2008			2,227,763.75	2,227,763.75	
1/1/2009	5,695,000.00	7.450%	2,227,763.75	7,922,763.75	10,150,527.50
7/1/2009			2,015,625.00	2,015,625.00	
1/1/2010	6,115,000.00	7.500%	2,015,625.00	8,130,625.00	10,146,250.00
7/1/2010			1,786,312.50	1,786,312.50	
1/1/2011	6,575,000.00	7.500%	1,786,312.50	8,361,312.50	10,147,625.00
7/1/2011			1,539,750.00	1,539,750.00	
1/1/2012	7,070,000.00	7.500%	1,539,750.00	8,609,750.00	10,149,500.00
7/1/2012			1,274,625.00	1,274,625.00	
1/1/2013	7,600,000.00	7.500%	1,274,625.00	8,874,625.00	10,149,250.00
7/1/2013			989,625.00	989,625.00	
1/1/2014	8,170,000.00	7.500%	989,625.00	9,159,625.00	10,149,250.00
7/1/2014			683,250.00	683,250.00	
1/1/2015	8,780,000.00	7.500%	683,250.00	9,463,250.00	10,146,500.00
7/1/2015			354,000.00	354,000.00	
1/1/2016	9,440,000.00	7.500%	354,000.00	9,794,000.00	10,148,000.00
<hr/>			<hr/>		
	112,730,000.00		143,123,171.25	255,853,171.25	255,853,171.25

Total Bond Years 1,937,630.0
Gross Interest Cost 143,123,171.25
Average Coupon 7.387%
NIC 7.459%
Discount @ 1.250% 1,409,125.00

Prepared by Miller & Schroeder Financial, Inc. :
Financial Consulting Department

1/5/90
File...gol00

TABLE 3B

METROPOLITAN AIRPORTS COMMISSION Northwest Airlines Maintenance Facility Series 1993 G.O. Bonds

Debt Service Schedule

Issue Date : 7/1/93
First Coupon : 1/1/94

Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
1/1/94	0.00	0.000%	5,123,208.75	5,123,208.75	5,123,208.75
7/1/94			5,123,208.75	5,123,208.75	
1/1/95	0.00	0.000%	5,123,208.75	5,123,208.75	10,246,417.50
7/1/95			5,123,208.75	5,123,208.75	
1/1/96	2,440,000.00	6.350%	5,123,208.75	7,563,208.75	12,686,417.50
7/1/96			5,045,738.75	5,045,738.75	
1/1/97	2,595,000.00	6.400%	5,045,738.75	7,640,738.75	12,686,477.50
7/1/97			4,962,698.75	4,962,698.75	
1/1/98	2,760,000.00	6.500%	4,962,698.75	7,722,698.75	12,685,397.50
7/1/98			4,872,998.75	4,872,998.75	
1/1/99	2,940,000.00	6.600%	4,872,998.75	7,812,998.75	12,685,997.50
7/1/99			4,775,978.75	4,775,978.75	
1/1/2000	3,135,000.00	6.700%	4,775,978.75	7,910,978.75	12,686,957.50
7/1/2000			4,670,956.25	4,670,956.25	
1/1/2001	3,345,000.00	6.750%	4,670,956.25	8,015,956.25	12,686,912.50
7/1/2001			4,558,062.50	4,558,062.50	
1/1/2002	3,570,000.00	6.800%	4,558,062.50	8,128,062.50	12,686,125.00
7/1/2002			4,436,682.50	4,436,682.50	
1/1/2003	3,810,000.00	6.900%	4,436,682.50	8,246,682.50	12,683,365.00
7/1/2003			4,305,237.50	4,305,237.50	
1/1/2004	4,075,000.00	7.000%	4,305,237.50	8,380,237.50	12,685,475.00
7/1/2004			4,162,612.50	4,162,612.50	
1/1/2005	4,360,000.00	7.100%	4,162,612.50	8,522,612.50	12,685,225.00
7/1/2005			4,007,832.50	4,007,832.50	
1/1/2006	4,670,000.00	7.150%	4,007,832.50	8,677,832.50	12,685,665.00
7/1/2006			3,840,880.00	3,840,880.00	
1/1/2007	5,005,000.00	7.200%	3,840,880.00	8,845,880.00	12,686,760.00
7/1/2007			3,660,700.00	3,660,700.00	
1/1/2008	5,365,000.00	7.250%	3,660,700.00	9,025,700.00	12,686,400.00
7/1/2008			3,466,218.75	3,466,218.75	
1/1/2009	5,750,000.00	7.300%	3,466,218.75	9,216,218.75	12,682,437.50
7/1/2009			3,256,343.75	3,256,343.75	
1/1/2010	6,170,000.00	7.350%	3,256,343.75	9,426,343.75	12,682,687.50
7/1/2010			3,029,596.25	3,029,596.25	
1/1/2011	6,625,000.00	7.400%	3,029,596.25	9,654,596.25	12,684,192.50
7/1/2011			2,784,471.25	2,784,471.25	
1/1/2012	7,115,000.00	7.450%	2,784,471.25	9,899,471.25	12,683,942.50
7/1/2012			2,519,437.50	2,519,437.50	
1/1/2013	7,645,000.00	7.500%	2,519,437.50	10,164,437.50	12,683,875.00
7/1/2013			2,232,750.00	2,232,750.00	
1/1/2014	8,220,000.00	7.500%	2,232,750.00	10,452,750.00	12,685,500.00
7/1/2014			1,924,500.00	1,924,500.00	
1/1/2015	8,835,000.00	7.500%	1,924,500.00	10,759,500.00	12,684,000.00
7/1/2015			1,593,187.50	1,593,187.50	
1/1/2016	9,500,000.00	7.500%	1,593,187.50	11,093,187.50	12,686,375.00
7/1/2016			1,236,937.50	1,236,937.50	
1/1/2017	10,210,000.00	7.500%	1,236,937.50	11,446,937.50	12,683,875.00
7/1/2017			854,062.50	854,062.50	
1/1/2018	10,975,000.00	7.500%	854,062.50	11,829,062.50	12,683,125.00
7/1/2018			442,500.00	442,500.00	
1/1/2019	11,800,000.00	7.500%	442,500.00	12,242,500.00	12,685,000.00
	<hr/> 140,915,000.00		<hr/> 178,896,811.25	<hr/> 319,811,811.25	<hr/> 319,811,811.25

Total Bond Years 2421947.5
Gross Interest Cost 178,896,811.25
Average Coupon 7.386%
NIC 7.459%
Discount @ 1.250% 1,761,437.50

Prepared by Miller & Schroeder Financial, Inc. :
Financial Consulting Department

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METROPOLITAN AIRPORTS COMMISSION
Northwest Airlines Maintenance Facility
Calculation of NMA Net Cash Flow

TABLE 3C
P. 1 OF 2

	Beginning Balance Debt Service Fund	Debt Service Payment	Capitalized Interest	Tax Increment Receipts	Interest Earnings - 1	NMA Payment to MAC	Ending Balance Debt Service Fund	Required Balance Debt Service Fund - 2	Funds on Hand	NMA Payment to MAC	Job Credit	NMA Net Cashflow
07/01/90	0	0	16,394,096		600,434		16,994,530					
01/01/91	16,994,530	(4,098,524)			496,129	0	13,392,135	16,394,096	(16,994,530)	0		0
07/01/91	13,392,135	(4,098,524)			359,871		9,653,482					
01/01/92	9,653,482	(4,098,524)			217,429	8,628,701	14,401,088	18,282,183	(9,653,482)	8,628,701	(699,000)	7,929,701
07/01/92	14,401,088	(4,098,524)			386,715		10,689,279					
01/01/93	10,689,279	(6,048,524)			184,810	9,477,678	14,303,243	20,166,957	(10,689,279)	9,477,678	(1,098,000)	8,379,678
07/01/93	14,303,243	(4,036,611)	20,492,836		1,137,512		31,896,980					
01/01/94	31,896,980	(11,234,820)			801,356	8,756,275	30,219,791	40,653,255	(31,896,980)	8,756,275	(1,497,000)	7,259,275
07/01/94	30,219,791	(9,093,420)			806,063		21,932,434					
01/01/95	21,932,434	(11,303,420)		1,371,311	470,763	21,070,751	33,541,839	43,003,185	(21,932,434)	21,070,751	(1,902,000)	19,168,751
07/01/95	33,541,839	(9,021,595)			918,669		25,438,913					
01/01/96	25,438,913	(13,811,595)		1,371,311	511,600	19,905,450	33,415,679	45,344,363	(25,438,913)	19,905,450	(2,331,000)	17,574,450
07/01/96	33,415,679	(8,866,575)			921,231		25,470,335					
01/01/97	25,470,335	(13,966,575)		1,371,311	507,152	19,850,112	33,232,335	45,320,447	(25,470,335)	19,850,112	(1,632,000)	18,218,112
07/01/97	33,232,335	(8,699,618)			920,466		25,453,183					
01/01/98	25,453,183	(14,134,618)		3,085,449	563,328	19,841,253	34,808,595	45,294,436	(25,453,183)	19,841,253	(1,233,000)	18,608,253
07/01/98	34,808,595	(8,519,636)			987,090		27,276,049					
01/01/99	27,276,049	(14,314,636)		3,085,449	626,168	17,989,977	34,663,007	45,266,026	(27,276,049)	17,989,977	(834,000)	17,155,977
07/01/99	34,663,007	(8,325,546)			991,183		27,328,644					
01/01/00	27,328,644	(14,510,546)		3,085,449	621,050	17,905,802	34,430,399	45,234,446	(27,328,644)	17,905,802	(429,000)	17,476,802
07/01/00	34,430,399	(8,115,298)			990,173		27,305,274					
01/01/01	27,305,274	(14,720,298)		3,085,449	612,444	17,894,666	34,177,535	45,199,940	(27,305,274)	17,894,666		17,894,666
07/01/01	34,177,535	(7,888,304)			988,906		27,278,137					
01/01/02	27,278,137	(14,948,309)		1,714,138	552,608	17,879,288	32,475,862	45,157,425	(27,278,137)	17,879,288		17,879,288
07/01/02	32,475,862	(7,643,029)			933,169		25,766,002					
01/01/03	25,766,002	(15,188,029)		1,714,138	486,161	19,344,576	32,122,848	45,110,578	(25,766,002)	19,344,576		19,344,576
07/01/03	32,122,848	(7,378,058)			927,490		25,672,280					
01/01/04	25,672,280	(15,453,058)		1,714,138	472,765	19,394,785	31,800,910	45,067,065	(25,672,280)	19,394,785		19,394,785
07/01/04	31,800,910	(7,091,433)			925,699		25,635,176					
01/01/05	25,635,176	(15,741,433)			397,723	19,384,828	29,676,294	45,020,004	(25,635,176)	19,384,828		19,384,828
07/01/05	29,676,294	(6,781,141)			856,246		23,751,399					
01/01/06	23,751,399	(16,051,141)			314,537	21,221,884	29,236,679	44,973,283	(23,751,399)	21,221,884		21,221,884
07/01/06	29,236,679	(6,446,289)			849,337		23,639,727					

	Beginning Balance Debt Service Fund	Debt Service Payment	Capitalized Interest	Tax Increment Receipts	Interest Earnings - 1	NWA Payment to MAC	Ending Balance Debt Service Fund	Required Balance Debt Service Fund - 2	Funds on Hand	NWA Payment to MAC	Job Credit	NWA Net Cashflow
01/01/07	23,639,727	(16,391,289)			297,674	21,279,673	28,825,785	44,919,400	(23,639,727)	21,279,673		21,279,673
07/01/07	28,825,785	(6,084,564)			946,910		23,588,131					
01/01/08	23,588,131	(16,749,564)			282,518	21,266,368	28,387,453	44,854,499	(23,588,131)	21,266,368		21,266,368
07/01/08	28,387,453	(5,693,983)			844,597		23,538,067					
01/01/09	23,538,067	(17,138,983)			266,278	21,245,762	27,911,124	44,783,829	(23,538,067)	21,245,762		21,245,762
07/01/09	27,911,124	(5,271,969)			842,004		23,481,159					
01/01/10	23,481,159	(17,556,969)			248,725	21,231,847	27,404,762	44,713,006	(23,481,159)	21,231,847		21,231,847
07/01/10	27,404,762	(4,815,908)			839,509		23,428,363					
01/01/11	23,428,363	(18,015,908)			229,822	21,215,049	26,857,326	44,643,412	(23,428,363)	21,215,049		21,215,049
07/01/11	26,857,326	(4,324,221)			836,765		23,369,870					
01/01/12	23,369,870	(18,509,221)			209,437	21,194,850	26,266,936	44,564,720	(23,369,870)	21,194,850		21,194,850
07/01/12	26,266,936	(3,794,062)			833,728		23,304,602					
01/01/13	23,304,602	(19,039,062)			187,449	21,176,960	25,629,949	44,481,562	(23,304,602)	21,176,960		21,176,960
07/01/13	25,629,949	(3,222,375)			830,593		23,238,167					
01/01/14	23,238,167	(19,612,375)			163,817	21,151,895	24,941,504	44,390,062	(23,238,167)	21,151,895		21,151,895
07/01/14	24,941,504	(2,607,750)			827,011		23,160,765					
01/01/15	23,160,765	(20,222,750)			138,402	21,133,296	24,209,713	44,294,061	(23,160,765)	21,133,296		21,133,296
07/01/15	24,209,713	(1,947,187)			823,458		23,085,984					
01/01/16	23,085,984	(20,887,187)			111,098	11,339,139	13,649,034	34,425,123	(23,085,984)	11,339,139		11,339,139
07/01/16	13,649,034	(1,236,937)			460,353		12,872,450					
01/01/17	12,872,450	(11,446,937)			49,324	11,700,111	13,194,948	24,572,561	(12,872,450)	11,700,111		11,700,111
07/01/17	13,194,948	(854,062)			456,199		12,797,085					
01/01/18	12,797,085	(11,829,062)			32,354	11,716,977	12,737,354	24,514,062	(12,797,085)	11,716,977		11,716,977
07/01/18	12,737,354	(442,500)			453,883		12,748,737					
01/01/19	12,748,737	(12,242,500)			0	0	506,237					
	(575,664,976)	36,886,932	21,598,143	33,488,185	484,197,953					484,197,953	(11,655,000)	472,542,953

1 - Interest earnings were calculated at the yield on the bonds - 7.3521

2 - On Oct. 10 of each year, the Debt Service Fund must be brought up to a balance equal to the next 27 months debt service payments. For purposes of this analysis, the payment is shown as being made on Jan. 1 of the following year.

Credit could be given for each new job created and paid over a five year period. Based upon NWA's estimates of jobs to be created within five years, Table 4 illustrates the economic impact of this assistance.

The Enterprise Zone also carries with it elimination of state sales tax on construction materials for the project.

It should be noted that if the jobs actually created within the five year window are greater than currently projected, a significant increase in the value of this element of the proposal will result for Northwest Airlines.

C. TAX INCREMENT ASSISTANCE

In addition to the AAA financing and Enterprise Zone, the Commission will work with Hennepin County and/or the Minnesota Legislature to secure tax increment powers and create a Tax Increment District at the site of this maintenance base, (or create an equivalent Hennepin County property tax exemption) so that captured property tax revenues can be used to assist Northwest Airlines in this development. Generally, under the tax increment laws in Minnesota, increased property taxes created by new developments can be captured and applied to the payment of bonds or otherwise used to defray public costs associated with such new development. Public costs include the acquisition of land, demolition, site improvements, the furnishing of water and sewer facilities, lighting, parking and others.

In the case of new developments that occur for economic development purposes, tax increments can be collected for up to eight years. New property taxes generated by the construction of the facility can be captured and used to fund Northwest Airlines debt service reserve requirement, currently equal to 27 months debt service payments. Table 5 is an estimate of the total funds potentially generated through tax increment assistance.

D. FACILITY LEASES

Property leased by Northwest Airlines at Minneapolis-St. Paul International Airport is covered under several lease agreements. The Commission proposes that this new facility be leased to Northwest Airlines through a separate lease for term of 25 years, similar to leases previously negotiated between MAC and Northwest.

Concern has been expressed by NWA regarding the potential closing and relocation of MSP during the term of this agreement. In the event that the airport is closed as a result of Legislative

TABLE 4

METROPOLITAN AIRPORTS COMMISSION Northwest Airlines Maintenance Facility

Calculation of Job Credits

Number of Jobs Added by Year :						Total # of Jobs =====	Job Credit =====
Year =====	1992 =====	1993 =====	1994 =====	1995 =====	1996 =====		
1992	233					233	699,000
1993	233	133				366	1,098,000
1994	233	133	133			499	1,497,000
1995	233	133	133	135		634	1,902,000
1996	233	133	133	135	143	777	2,331,000
1997		133	133	135	143	544	1,632,000
1998			133	135	143	411	1,233,000
1999				135	143	278	834,000
2000					143	143	429,000
=====						Total Job Credits : \$ 11,655,000	

The job credit for each year's addition of new jobs lasts for five years. The chart shows each year's contribution to the total job credit and its five year duration. The yearly job credit is obtained by multiplying the total number of eligible jobs for that year by the \$3000 credit for each job.

METROPOLITAN AIRPORTS COMMISSION
Northwest Airlines Maintenance Facility
Calculation of Available Tax Increment

Northwest Maintenance Facility, Phase 1

T.I. Col. Year	D/S Date	Base Market Value	Original Tax Capacity	Future Market Value	Future Tax Capacity	Captured Tax Capacity	Tax Capacity Rate	Projected Tax Increment
	7/01/90							
1990	7/01/91	0.00	0.00					
1991	7/01/92	0.00	0.00					
1992	7/01/93	0.00	0.00					
1993	7/01/94	0.00	0.00	100,000,000.00	5,060,000.00	5,060,000.00	27.101%	1,371,310.60
1994	7/01/95	0.00	0.00	100,000,000.00	5,060,000.00	5,060,000.00	27.101%	1,371,310.60
1995	7/01/96	0.00	0.00	100,000,000.00	5,060,000.00	5,060,000.00	27.101%	1,371,310.60
1996	7/01/97	0.00	0.00	100,000,000.00	5,060,000.00	5,060,000.00	27.101%	1,371,310.60
1997	7/01/98	0.00	0.00	100,000,000.00	5,060,000.00	5,060,000.00	27.101%	1,371,310.60
1998	7/01/99	0.00	0.00	100,000,000.00	5,060,000.00	5,060,000.00	27.101%	1,371,310.60
1999	7/01/00	0.00	0.00	100,000,000.00	5,060,000.00	5,060,000.00	27.101%	1,371,310.60

Classification : Commercial/Industrial
Rate : 5.060%

* Base Value Adjustment Factor 5.000%
Inflation Factor 0.000%

Base Market Value : \$ 0
Future Market Value : \$ 100,000,000

* In accordance with the current state regulations, this factor would increase the base value when precise values for the site are obtained.

File...mac1

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1/9/90

METROPOLITAN AIRPORTS COMMISSION
Northwest Airlines Maintenance Facility
Calculation of Available Tax Increment

Northwest Maintenance Facility, Phase 2

T.I. Col. Year	D/S Date	Base Market Value	Original Tax Capacity	Future Market Value	Future Tax Capacity	Captured Tax Capacity	Tax Capacity Rate	Projected Tax Increment
<hr/>								
	7/01/93							
1993	7/01/94	0.00	0.00					
1994	7/01/95	0.00	0.00					
1995	7/01/96	0.00	0.00					
1996	7/01/97	0.00	0.00	125,000,000.00	6,325,000.00	6,325,000.00	27.101%	1,714,138.25
1997	7/01/98	0.00	0.00	125,000,000.00	6,325,000.00	6,325,000.00	27.101%	1,714,138.25
1998	7/01/99	0.00	0.00	125,000,000.00	6,325,000.00	6,325,000.00	27.101%	1,714,138.25
1999	7/01/00	0.00	0.00	125,000,000.00	6,325,000.00	6,325,000.00	27.101%	1,714,138.25
2000	7/01/01	0.00	0.00	125,000,000.00	6,325,000.00	6,325,000.00	27.101%	1,714,138.25
2001	7/01/02	0.00	0.00	125,000,000.00	6,325,000.00	6,325,000.00	27.101%	1,714,138.25
2002	7/01/03	0.00	0.00	125,000,000.00	6,325,000.00	6,325,000.00	27.101%	1,714,138.25
<hr/>								

Classification : Commercial/Industrial
Rate : 5.060%

* Base Value Adjustment Factor 5.000%
Inflation Factor 0.000%

Base Market Value : \$ 0.000%
Future Market Value : \$ 125,000,000

* This factor would increase the base value when precise figures are obtained for the actual site in accordance with the current state regulations.

File...mac1

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1/9/90

action before the expiration of this lease, MAC is prepared to offer an annual credit to Northwest equal to the annual debt service requirement on the maintenance base for the balance of the years covered by the lease, to be used to off-set any debt service obligation incurred by Northwest in recreating maintenance base facilities at the new airport.

Concern has also been expressed regarding long term use of existing terminal facilities. NWA facilities in the Lindbergh Terminal are covered by the Gold Concourse Lease, Green Concourse Lease and the recently renegotiated Terminal and Airfield Lease. In order to provide facilities from which to continue conducting its hub activities at MSP, the Commission is prepared to extend the existing Green Concourse Lease for a term of 20 years (i.e. to cover the remaining debt service obligations) and is ready to begin discussions immediately for this agreement.

E. FINANCIAL INFORMATION

In order to fulfill MAC's obligation to the public and to prepare testimony for the necessary legislation changes which are required to implement this proposal, MAC will need additional financial information and analysis from Northwest Airlines.

To complete this task MAC will need:

1. MAC and NWA agreement on the content and format of financial information that MAC can receive on a regular basis to stay abreast of the developments at NWA.
2. NWA agreement to work with an independent firm to review NWA projections related to earnings and cash flows necessary to secure repayment of the funds used to finance this maintenance base.

If information which is a part of these discussions is proprietary or of a sensitive nature, MAC is willing to utilize the provisions of the Minnesota Data Practices Act to provide adequate confidentiality to NWA.

By selecting Minneapolis-St. Paul International Airport as a site of this heavy maintenance base, the combination of access to AAA General Obligation Tax Exempt Financing, creation of a State Enterprise Zone, and potential for Tax Increment or equivalent financing will result in significant and immediate cost savings to Northwest Airlines.

III. ENVIRONMENTAL RESTRICTIONS

MAC is keenly aware of the importance to NWA of obtaining ready access to these facilities and to the airport generally, without unreasonable environmental restrictions.

While we are sensitive to these concerns, we are also aware of the important balance which must be maintained between economic development, air service, and environmental compatibility.

To date, MAC and NWA have been successful in separating business and financial transactions from environmental policy. We have been successful in establishing a long series of voluntary actions to deal with environmental issues:

- the creation of MASAC
- creation of the original MAC 17 Point Program (PRS, NWA quiet takeoff procedures, etc.
- early agreement on a voluntary nighttime restriction
- establishment of a voluntary noise agreement

This spirit of cooperation was most recently evidenced in the wake of Northwest's decision to lease European DC-9 aircraft, by MAC's and NWA's agreement to establish a Stage 2/Stage 3 Working Group to deal with a number of current noise issues.

If NWA's objective is the avoidance of future noise regulations at MSP, continuation of the voluntary, cooperative approach is critical.

As Northwest is aware, a broad spectrum of state and federal laws, regulations and FAA "grant assurances" restrict MAC's ability to regulate access to the airport. MAC may not "unjustly discriminate" between air carriers. MAC may not attempt to regulate an area preempted by federal law. No MAC regulation may impose an undue burden on interstate commerce. These substantive restrictions establish an extremely high burden for a major hub airport wishing to restrict access. FAA/DOT are in the process of re-examining federal policy related to local noise restrictions, with a likely outcome being increased federal review or approval to ensure access.

Conversely, any "guarantee" of access will of necessity be subject to certain legal constraints. A public body cannot contract away its right to exercise the police power in the future. Generally speaking, contracts purporting to do so are invalid and unenforceable as contrary to public policy.

In light of the above, we are fully prepared to guarantee through appropriate lease covenants that Northwest will have access to the airport in order to carry out its business activities. Specifically, we would propose the following:

1. Covenant of Quiet Enjoyment. MAC would provide access, subject to MAC's reasonable rules, regulations and ordinances, which will be adopted in compliance with all federal and state laws and regulations and federal grant assurances. MAC would agree that upon NWA's paying all rents and keeping and performing all the terms, covenants and conditions of the Lease, NWA could, except for reasons beyond MAC's control, peaceably and quietly have and hold the premises leased for the term stated.
2. MAC to Provide Access. MAC would agree to provide access from highways and the runway/taxiway system across the airport lands in a manner to be specified.
3. Compliance with Law. NWA would agree to comply with the laws and regulations of the United States, the State of Minnesota, and/or any of their subdivisions, including MAC, relating to the Demised Premises. Nothing contained in the agreement would in any way prohibit NWA from challenging the validity or applicability of any such law or regulation.

We believe that this approach is in the best interests of MAC, NWA and the communities surrounding the airport. It offers the best opportunity both for avoiding unnecessary regulation and legal confrontations and for creating a positive environment for all concerned.

IV. AIRPORT DEVELOPMENT - MINNEAPOLIS-ST. PAUL INTERNATIONAL AIRPORT

As mandated by the 1989 Legislature, MAC is currently preparing a Long Term Comprehensive Plan for Minneapolis-St. Paul International Airport. This plan is intended to provide a detailed development program for a 20 year time period and a conceptual plan for an additional 10 year period. The plan is intended to review the development potential of the airport at its existing location and must be developed to meet air transportation needs for a prospective 20 year period. It must be completed and submitted to the Minnesota Legislature by January 1, 1991. By statute the plan must describe:

1. Aviation demand and air transportation needs,
2. Airport capacity limits and potential,
3. Facilities requirements,
4. A plan for physical development, including financial estimates and a tentative development schedule,
5. Airport operational characteristics,
6. Compatibility with metropolitan and local physical facilities systems,
7. Environmental effects,
8. Safety,
9. The effect of the proposed development on neighboring communities.

The plan must be developed in a manner consistent with the Development Guide of the Metropolitan Council, and must be updated at least every five years.

The primary focus of the plan is to review the ability of the existing airport site to accommodate additional terminal and airfield development. Airfield development relates to the provision of both additional capacity as well as additional capability for the existing runway system.

A. ENHANCED EXISTING AIRFIELD CAPACITY

Airfield capacity is improved both by constructing new runways and by fine tuning the existing runway system by providing additional taxiways, exit taxiways, and revising operational procedures to allow increased aircraft activity at reduced delay levels.

The currently approved MAC Capital Improvement Program includes many of the taxiway refinements that would be necessary to

enhance capacity on the existing airfield. These improvements are programmed to be implemented in a consistent pattern over the next few years. In 1990-1991, Taxiway E will be realigned to provide an improved operational situation at the Runway 11L approach end, and an additional exit taxiway will be provided for Runway 11L to allow reduced runway occupancy time and more expeditious aircraft movement off the runway. In 1991, holding aprons will be developed at each end of Runway 11L-29R. The holding aprons will allow bypass capability for all aircraft thereby reducing delays for departing aircraft. In 1991-1992 substantial work will be undertaken on Taxiways C and D adjacent to the Red and Blue Concourses. This reconstruction and realignment will allow dual taxiway capability in this area and will enhance operational capability by eliminating the current limitation on use of Taxiway D to aircraft smaller than the B-757.

The Long Term Comprehensive Plan is a vehicle to review the currently proposed development. This review may lead to changes in timing, location, or even in the facilities themselves that would be incorporated into subsequent Capital Improvement Programs.

B. NEW RUNWAYS

Beyond these modifications to the existing runway system, the Long Term Comprehensive Plan will review the potential for development of additional runways at the airport. These runways would provide additional capacity during the peak arrival and departure periods associated with the operation of the Northwest Airlines hub. Alternative runways would be evaluated specifically in terms of their ability to meet the demands placed on the airport by operation of the hub, therefore the analysis will focus on peak arrival and peak departure periods. This analysis is just beginning, and is expected to continue during early 1990, with a final decision made in late 1990. As has been indicated earlier, the potential heavy maintenance base locations are being reviewed and evaluated in the context of potential runway/taxiway/terminal development options.

C. RUNWAY 4/22 EXTENSION

The issue of runway capability is also being reviewed as an integral element of the Long Term Comprehensive Plan. Northwest Airlines has indicated a need for additional runway length to allow non-stop reengined DC-10-40 capability to Europe. It is intended that this additional capability will be provided by the extension of Runway 4/22 a total of 2750 feet to the southwest. This will provide a physical length of 11,000 feet on Runway 4/22.

The proposed runway extension is currently being evaluated in a joint Federal/State Environmental Impact Statement; a revised schedule for completion of this document has been prepared indicating final FAA approval in January, 1991. The current schedule for runway construction calls for Runway 11L/29R being reconstructed in 1990 and Runway 11R/29L being rehabilitated in 1991. The Runway 4/22 extension is currently programmed for construction during 1992.

D. NEW FORD TOWN ACQUISITION

An integral component of discussions related to additional airfield capacity at the airport has been the concept of a north/south runway. This runway would require acquisition of the New Ford Town and Rich Acres areas of Richfield.

Separate from these discussions, the City of Richfield has initiated action toward the potential redevelopment of the New Ford Town area. The city has taken steps to redesignate the New Ford Town on its Comprehensive Plan as commercial, thereby paving the way for acquisition of existing residential areas and eventual conversion into commercial/industrial uses. It is anticipated that a joint Richfield/MAC project would be the basis of this acquisition, perhaps utilizing funding available through the Part 150 process following FAA approval of the MAC program.

The New Ford Town area consists of approximately 350 dwelling units with an anticipated acquisition cost on the order of \$60 million. This area would be acquired in a phased manner, and if not required for a north/south runway, would be redeveloped as a joint effort between the City of Richfield and the Metropolitan Airports Commission.

Timing on the acquisition is uncertain at present, and will depend upon a decision by Richfield and MAC to move ahead with the acquisition program and to develop a source of funding. The project is being actively developed by each party.

E. DELAY REDUCTION

1. Rapid-Scan Radar

In addition to physical modifications, MAC is pursuing with the Federal Aviation Administration early implementation of procedural changes that could significantly reduce airport flight delays. At present, FAA is testing a rapid-scan radar system at Memphis and Raleigh-Durham airports. Installation of this radar system at MSP will allow

simultaneous arrivals on the existing runway system under instrument weather conditions, thereby significantly reducing airborne delays during these periods. Arrival capacity on the parallel runways is estimated by FAA to increase from 35 to 49 operations per hour, leading to a year 2000 delay reduction of 35,135 hours valued at \$58.1 million.

Immediate benefits would be on the order of 6,461 hours of delay eliminated, ranking the airport as one of two primary candidates for the system. This delay reduction will result in direct benefit to Northwest Airlines by allowing more efficient operation of the hub during these time periods. MAC has initiated communication with the FAA with an aim toward ensuring that MSP is the first installation of this radar system once it has been approved for operation. Further, the Minnesota Congressional Delegation has indicated its support for the MAC position regarding installation of this facility and will be actively working with FAA toward achieving this end.

2. Category 3A and 3B Approaches

In addition to the rapid-scan radar system, MAC and Northwest Airlines are jointly initiating discussions with FAA regarding implementation of Category 3A and 3B approaches to Runway 29L. As the newer aircraft enter the Northwest fleet and as the capability of aircraft and flight crews to operate under these more restrictive weather conditions is enhanced, availability of this type of approach at the airport will also have significant benefits to the airline in terms of delay reduction and operation of the hub. The procedure will allow continued operations with lower visibilities than is currently possible, and although these conditions do not occur for a high number of hours each year, will have a significant benefit during those time periods of reduced visibility.

F. TERMINAL DEVELOPMENT

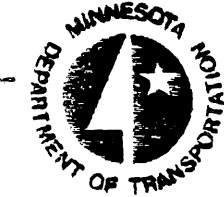
Terminal development is also a significant component of the Long Term Comprehensive Plan for the airport. It is recognized that the existing number of gates will be inadequate to accommodate demands over the next thirty years and that provision must be made for additional gates for both the hub carrier and for other airlines serving the airport.

Integral to discussions with regard to terminal development are the Northwest hub operation and those actions which can be taken to ensure enhanced efficiency of its operation. The role of the

existing passenger terminal must be carefully reviewed and evaluated for the future, walking distances within the terminal complex must be addressed, airline operational issues regarding the separation of gates must be evaluated, and ground access and curbside considerations must be given significant weight and evaluation during this process. Further, it will be necessary to review in detail with Northwest Airlines the impact of terminal development on the Building B maintenance complex, and to determine flexibility for relocation of these activities. In addition, the potential for additional terminal development on the northwest side of the airport should be evaluated and preserved to the extent feasible and practical.

V. STATE OF MINNESOTA ISSUES

In addition to the previously discussed issues, which fall within the primary responsibility of the Metropolitan Airports Commission, Northwest has identified other issues which are related to State and local responsibilities. Preliminary responses to these issues are attached. The Commission pledges to continue to work with NWA and the appropriate agency to resolve remaining items of concern.



Minnesota Department of Transportation
Transportation Building, St. Paul, MN 55155



January 5, 1990

Tim Thornton
Executive Vice President and General Counsel
Northwest Airlines

Dear Mr. Thornton:

The Minnesota Department of Transportation (Mn/DOT) is very supportive of economic development in this state and has appreciated the opportunity to respond to the proposal from Northwest Airlines. I have separated our response into the following areas.

NORTHWEST PROPOSAL IN EAGAN

The Northwest Proposal in Eagan has been investigated by our agency and we will aggressively pursue process development with the local community and other approval agencies (Met Council and the Federal Highway Administration).

An Environmental Impact Statement will be a necessary first step action by the City of Eagan. Mn/DOT will commit the expertise of its professional staff toward this process and the engineering development of the project.

RIGHT OF WAY SETTLEMENT NEAR 34TH AVENUE IN BLOOMINGTON

Regarding settlement of right of way acquisition issues associated with Northwest Airlines property near 34th Avenue in Bloomington, I can propose the following:

1. A settlement for a fair price that can be justified by professional appraisers. This is necessary to ensure that the State of Minnesota does not jeopardize its eligibility for federal participation in the cost of right of way acquisition (90%).
2. Direct negotiations with Northwest Airlines to be handled by Richard Dinneen, Mn/DOT's Director of Right of Way Operations and John Jeppesen, Special Assistant Attorney General.

Again, the Department of Transportation is supportive and will aggressively pursue these issues with the appropriate agencies.

Sincerely,


LEONARD W. LEVINE
Commissioner



STATE OF MINNESOTA

DEPARTMENT OF REVENUE

January 5, 1990

Mr. Tim Thornton
Executive Vice President and General Counsel
Northwest Airlines
Minneapolis/St. Paul International Airport
St. Paul, Minnesota 55111

Gentlemen:

I understand that you may have some concerns with Minnesota's airflight property tax. We at the Department of Revenue are always willing to discuss the structure of our tax system as it affects an industry with participants in that industry.

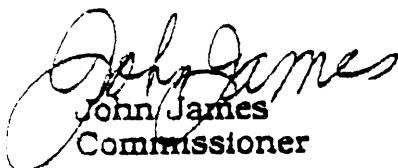
We have recently established an industry liaison group with the railroad industry and I would welcome a similar effort with the airline industry. Alternatively, I would be pleased to meet with representatives of Northwest alone to discuss Minnesota's taxation of airlines and what changes you believe we should consider.

A quick check of our laws in comparison with other states shows at least nine other states taxing airflight property. We suspect that there may be others as well taxing it under their general property tax provisions. We are not aware of just how our tax compares with those of the other states. In general, Minnesota does not tax the personal property of businesses, and I certainly would be open to similar treatment for airlines, subject to the condition that we continue to be able to finance the operations of the State Airports Fund out of airplane related tax revenues.

As you know, we also tax aviation fuel. At least 17 other states impose a tax on aviation fuel, and our quick check indicates that our tax is lower than any of the other 17. One possibility thus would be a decrease or elimination of the airflight property tax coupled with an increase in the aviation fuel tax and possibly aircraft registration fees as well.

I look forward to meeting with you to discuss Minnesota's taxation of the airline industry.

Sincerely,


John James
Commissioner