



date: 29 April 1997

to: Fred Stouder (Burien)  
Steve Dennis (Raytheon)  
Ron DeNadai (STV)  
Ted Lane (Thomas/Lane and Associates)  
Mike McCormick

re: SeaTac Area Mitigation Study (HOK Project #96-0154-802)

Gentlemen:

Attached is a draft copy of the PowerPoint presentation. (The screen version is full-color. Black & white copies were sent for expediency.) The benefit of preparing the presentation on computer will be the ability to make changes as needed (even on-the-spot changes). However, I wanted to share this with you prior to next week so you could review it and offer some preliminary revisions, if needed. I do not anticipate using this as a hand-out at the upcoming. The report and its executive summary should suffice. (I will, however, bring a reproducible copy with me should the need arise.)

Regarding the travel itinerary, Steve Dennis plans to be in Burien from 7-9 May. Ron's schedule is flexible, depending on the meeting schedule. I will be available both weeks. We've all received the draft schedule of meetings. I have the following suggestions:

- Compress the two Citizens Brown Bag meetings on Tuesday (May 6th, 7:00 AM and 12:00 noon) be compressed into one meeting (Tuesday at noon). There will be other opportunities for general public presentations (specifically Wednesday May 7th).
- Meet once with the Burien City Council (either May 5th or 12th), not both days.
- Conduct only one public meeting (either May 7th or 14th).
- The State and Federal Agencies Technical Group meeting probably does not need to go until 4:00 PM. Lunch will be from 12:30 until 1:15 PM, with the presentation likely winding up around 2:30 PM. I anticipate the rest of the session being a Q & A.
- Based on travel schedules, I suggest rescheduling the "debriefing" meeting from first thing Friday morning (May 16th) to the end of the day on Thursday (May 15th), perhaps from 4:00 to 6:00 PM.

Also enclosed is the Weekly Project Progress Report for the previous week. If there are any questions, please contact me at 214/720-6000.

Sincerely,

Joseph A. Pobiner, AICP

Atlanta  
Berlin  
Chicago  
Dallas  
Greenville, SC  
Hong Kong  
Houston  
Kansas City  
London  
Los Angeles  
Mexico City  
New York  
Orlando  
St. Louis  
San Francisco  
Seattle  
Shanghai  
Tampa  
Tokyo  
Warsaw  
Washington, DC



## Weekly Project Progress Report

*project:* Sea-Tac Impact Mitigation Study      *project no.:* 96-0154-802  
*date:* 25 April 1997      *period covered:* 21-25 April 1997  
*distribution:* Fred Stouder (City of Burien)      *from:* Joseph A. Pobiner  
Donal Simpson (HOK/Dallas)  
Joseph A. Pobiner (HOK/Dallas)  
Dennis Cope (HOK/Seattle)  
Gerry Tunnell (Raytheon)  
Steve Dennis (Raytheon)  
Ron DeNadai (STV)  
Ted Lane (Thomas/Lane)  
Mike McCormick  
Project File

---

### 1) **Task Activity:**

- ✓ **Task 1 - Projection Initiation (#96-0154-012)** - Complete.
- ✓ **Task 2 - Discovery and Documentation (#96-0154-202)** - Complete.
- ✓ **Task 3 - Meetings, Presentations and Reviews (#96-0154-302)** - Complete.
- ✓ **Task 4 - Define Mitigation "State of the Art" (#96-0154-402)** - Complete.
- ✓ **Task 5 - Environmental Analysis (#96-0154-502)** - Complete.
- ✓ **Task 6 - Traffic Analysis (#96-0154-602)** Complete.
- ✓ **Task 7 - Socio-Economic Analysis (#96-0154-702)** - (to be completed by Thomas/Lane Associates under separate contract with the City of Burien)
- Task 8 - Mitigation Plan (#96-154-802)** - JP continued drafting the final presentation.
- Task 9 - Project Expenses (#96-154-902)** - No expenses were incurred during this period.

2) **Project Meetings** - No meetings were held during this period

3) **Areas of Concern** - None at this time.

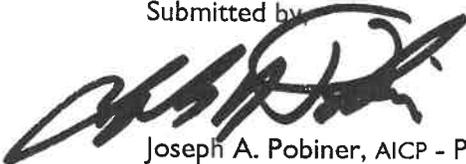
4) **Upcoming Project Requirements** - The following tasks are expected to be completed over the next few weeks:

- ✓ **Task 1 - Projection Initiation (#96-0154-012)** - Completed.
- ✓ **Task 2 - Discovery and Documentation (#96-0154-202)** - Completed.
- ✓ **Task 3 - Meetings, Presentations and Reviews (#96-0154-302)** - Completed.
- ✓ **Task 4 - Define Mitigation "State of the Art" (#96-0154-402)** - Completed.
- ✓ **Task 5 - Environmental Analysis (#96-0154-502)** - Completed (Raytheon staff to attend final series of meetings on 5-15 May 1997).
- ✓ **Task 6 - Traffic Analysis (#96-0154-602)** - Completed (Raytheon staff to attend final series of meetings on 5-15 May 1997).
- ✓ **Task 7 - Socio-Economic Analysis (#96-0154-702)** - (to be completed by Thomas/Lane Associates under separate contract with the City of Burien).
- Task 8 - Mitigation Plan (#96-0154-802)** - Consultant team to be in Burien 5-15 May 1997 for final series of meetings.
- Task 9 - Project Expenses (#96-0154-902)** - Expenses to be incurred for final meetings in Burien (5-15 May 1997).

5) **Project Progress:**

Task	% Complete
Task 1 - Projection Initiation	100%
Task 2 - Discovery and Documentation	100%
Task 3 - Meetings, Presentations and Reviews	100%
Task 4 - Define Mitigation "State of the Art"	100%
Task 5 - Environmental Analysis	100%
Task 6 - Traffic Analysis	100%
Task 7 - Socio-Economic Analysis	--
Task 8 - Mitigation Plan	99%
<b>PROJECT TOTAL</b>	<b>99%</b>

Submitted by



Joseph A. Pobiner, AICP - Project Director  
Hellmuth, Obata + Kassabaum, Inc.  
Dallas, Texas

---

# **INITIAL ASSESSMENT AND RECOMMENDATIONS**

**Sea-Tac International Airport  
Impact Mitigation Study**

# Consultants

---

- ◆ Hellmuth, Obata + Kassabaum (HOK) - project management and planning.
- ◆ Raytheon Infrastructure Services, Inc. - environmental and transportation analysis.
- ◆ Thomas/Lane and Associates - socio-economic analysis.
- ◆ Michael J. McCormick, AICP - intergovernmental analysis.

# Project Approach

---

- ◆ **State of Washington provided project funding.**
- ◆ **The study presumed that the Third Runway and its associated improvements will be built (not a “counter” EIS).**
- ◆ **The study analyzed impacts due to proposed expansion.**
- ◆ **The study utilized existing data.**

# Project Approach

---

- ◆ **The study investigated mitigation measures by other US airport projects and other major Washington State projects.**
- ◆ **The study area was analyzed on a neighborhood basis (“neighborhoods” as shown were defined by each city, consistent with local Comprehensive Plans).**

# Project Approach

---

- ◆ **“Neighborhoods” include residential areas, non-residential areas, and mixed-use areas.**
- ◆ **The study developed mitigation measures to minimize potential environmental, transportation, and socio-economic impacts on neighborhoods and communities.**

# Study Area

---

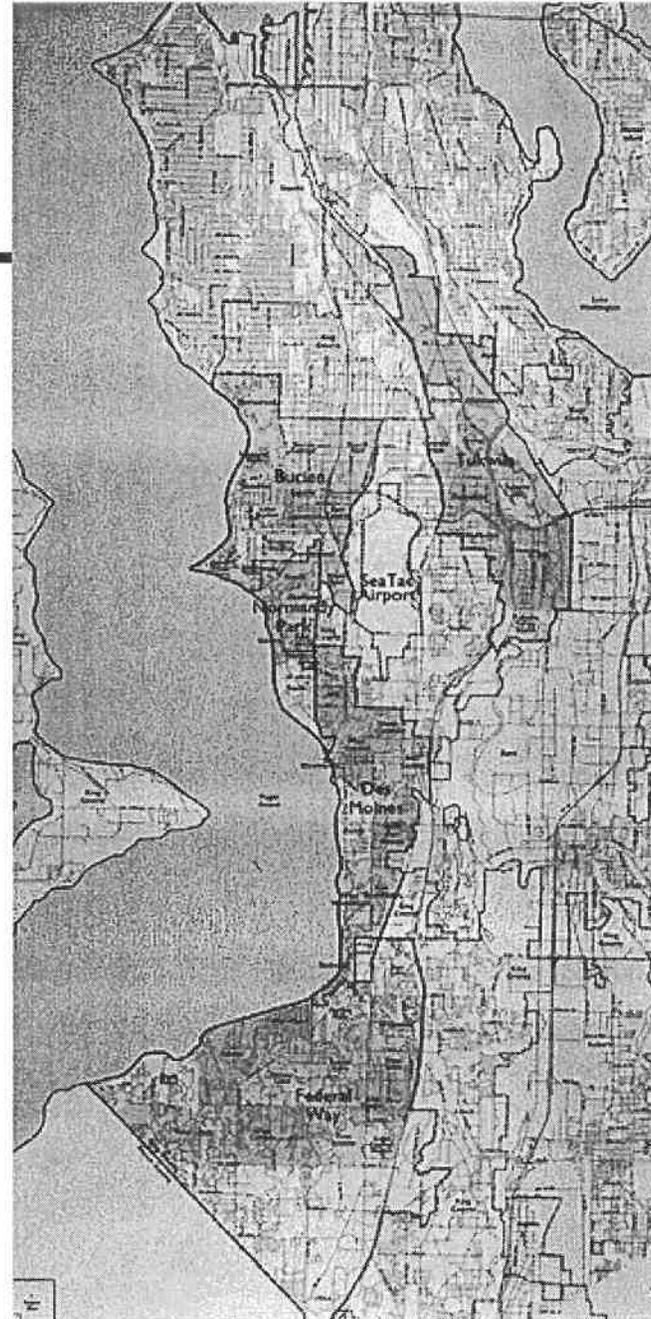
- ◆ **City of Burien**
- ◆ **City of Des Moines**
- ◆ **City of Federal Way**
- ◆ **City of Normandy Park**
- ◆ **City of Tukwila**
- ◆ **Highline School District**
- ◆ **Highline Community Hospital**



# Study Area

---

- ◆ Overall study area



# Study Area

---

- ◆ **12 Neighborhoods in Burien:**

- **Shorewood**
- **North Central**
- **North East**
- **Seahurst Park**
- **Seahurst**
- **Central**
- **Lake Burien**
- **East Central**
- **South West**
- **Gregory Heights**
- **South East**
- **Downtown**

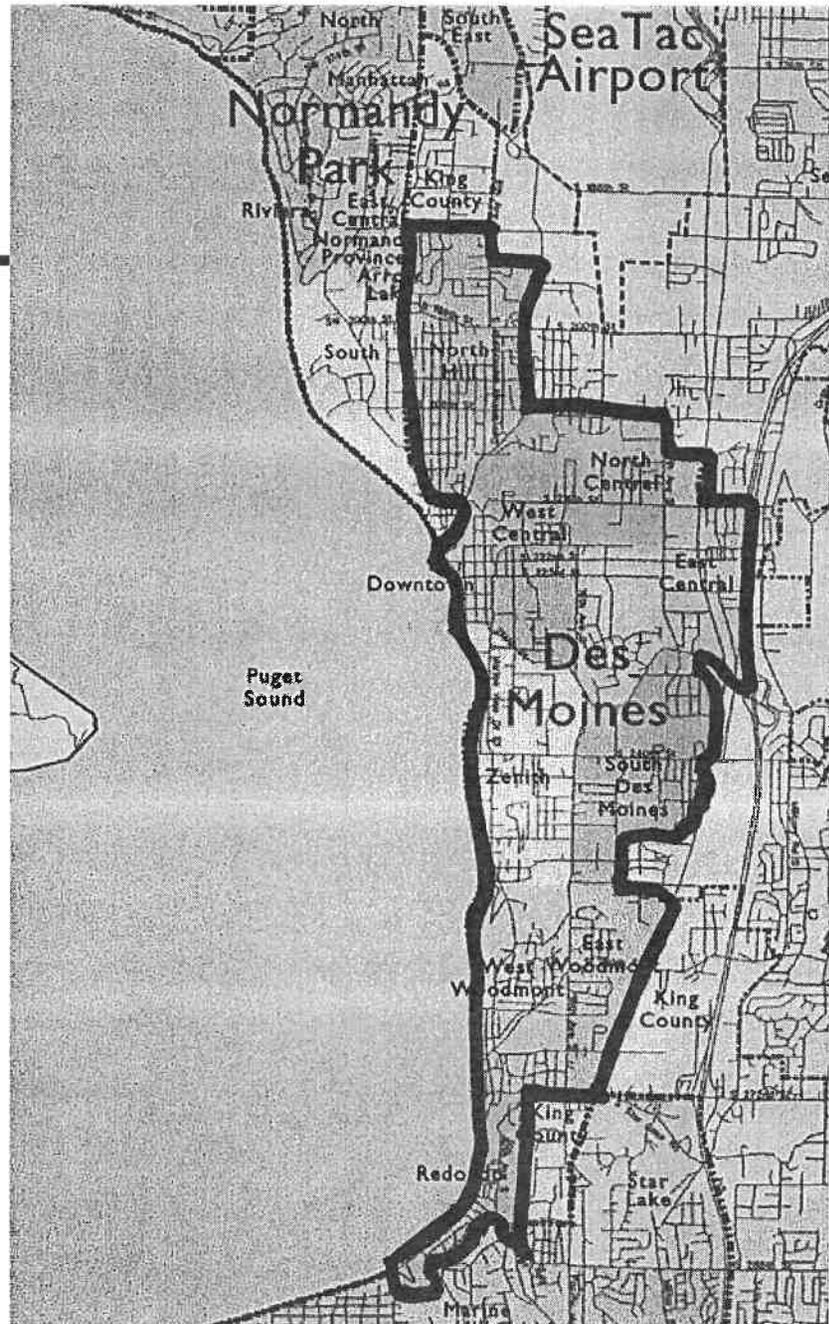


# Study Area

---

- ◆ **10 Neighborhoods in Des Moines:**

- North Hill
- West Central
- North Central
- East Central
- Zenith
- South Des Moines
- West Woodmont
- East Woodmont
- Redondo
- Downtown





# Study Area

---

- ◆ **9 Neighborhoods in Normandy Park:**
  - Bonniewood
  - Highlands
  - North
  - Riviera
  - Manhattan
  - East Central
  - Normandy Province
  - Arrow Lake
  - South



# Study Area

---

- ◆ **11 Neighborhoods in Tukwila:**
  - **Ryan**
  - **Allentown**
  - **Cascade View**
  - **Foster**
  - **Thorndyke**
  - **Tukwila Hill**
  - **McMicken**
  - **M.I.C.**
  - **Riverton**
  - **CBD**
  - **Tukwila Valley South**



# Study Area

---

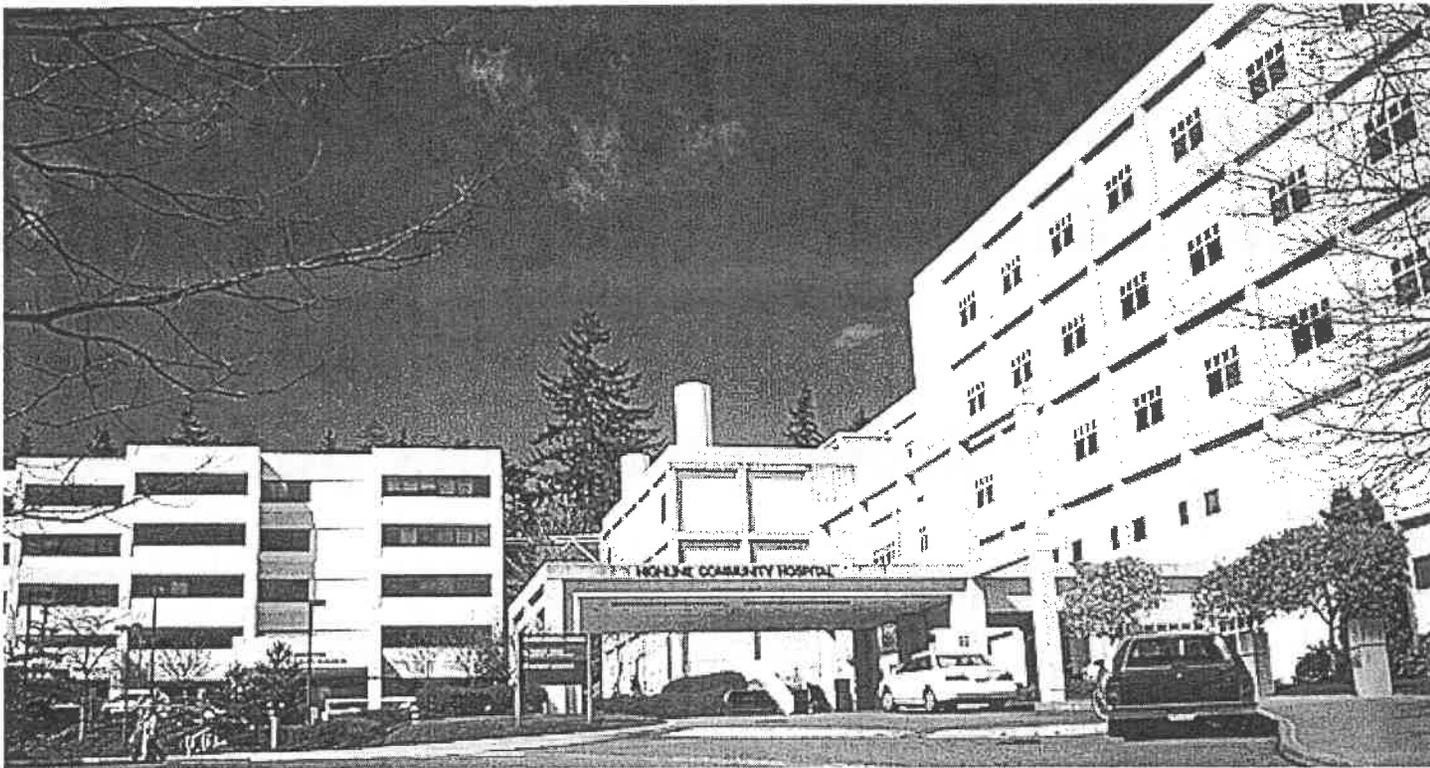
- ◆ All Highline Schools located in the study area were evaluated.
- ◆ Highline Schools outside the study area (Seattle, SeaTac, and King County) were also identified.
- ◆ Supplemental study needed to assess impacts on schools in other districts.



# Study Area

---

- ◆ **Highline Community Hospital (located in the City of Burien in the Gregory Heights neighborhood).**



# Environmental

---

- ◆ **Noise and vibration impacts.**
- ◆ **Air quality impacts.**
- ◆ **Surface water quality/hydrology impacts.**
- ◆ **Ground water quality/hydrology impacts.**
- ◆ **Wetland impacts.**
- ◆ **Floodplain impacts.**
- ◆ **Aesthetics and visual impacts.**
- ◆ **Other environmental impacts.**

# Environmental

---

- ◆ **\$2.435 B for environmental mitigation.**
- ◆ **Not calculated - Cost for supplemental studies (air quality, surface/ground water quality, wetland, floodplain, aesthetics & visual, and other potential environmental impacts).**

# Environmental

---

- ◆ **20% (\$501 M) identified for sound insulation and aviation easements in 11 neighborhoods:**
  - **Burien - East Central, South East, and Downtown neighborhoods.**
  - **Des Moines - North Hill, Zenith, West & East Woodmont neighborhoods.**
  - **Federal Way - Star Lake and Wildwood neighborhoods.**
  - **Normandy Park - Manhattan neighborhood.**
  - **Tukwila - M.I.C. neighborhood.**

# Environmental

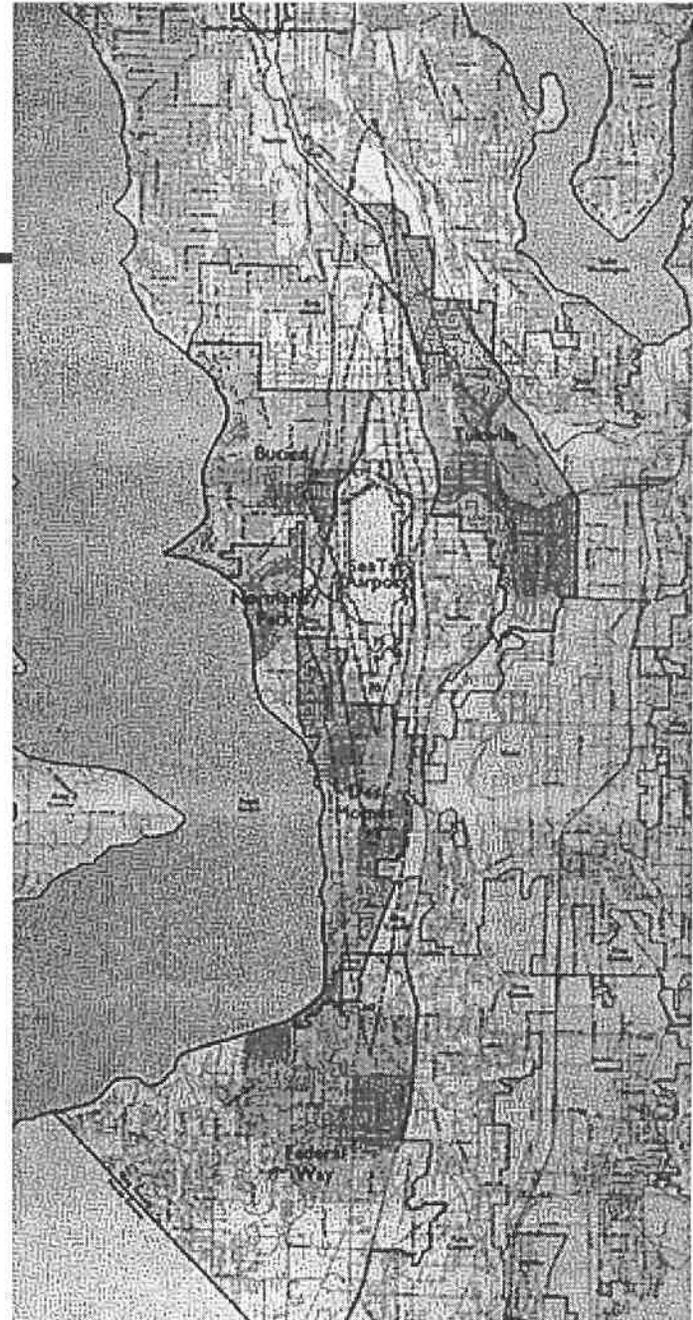
---

- ◆ **80% (\$1.934 B) identified for potential acquisition/redevelopment of 5 neighborhoods:**
  - **Burien - Northeast neighborhood:**
  - **Des Moines - West Central, North Central, East Central, and South Des Moines neighborhoods.**

# Noise & Vibration

---

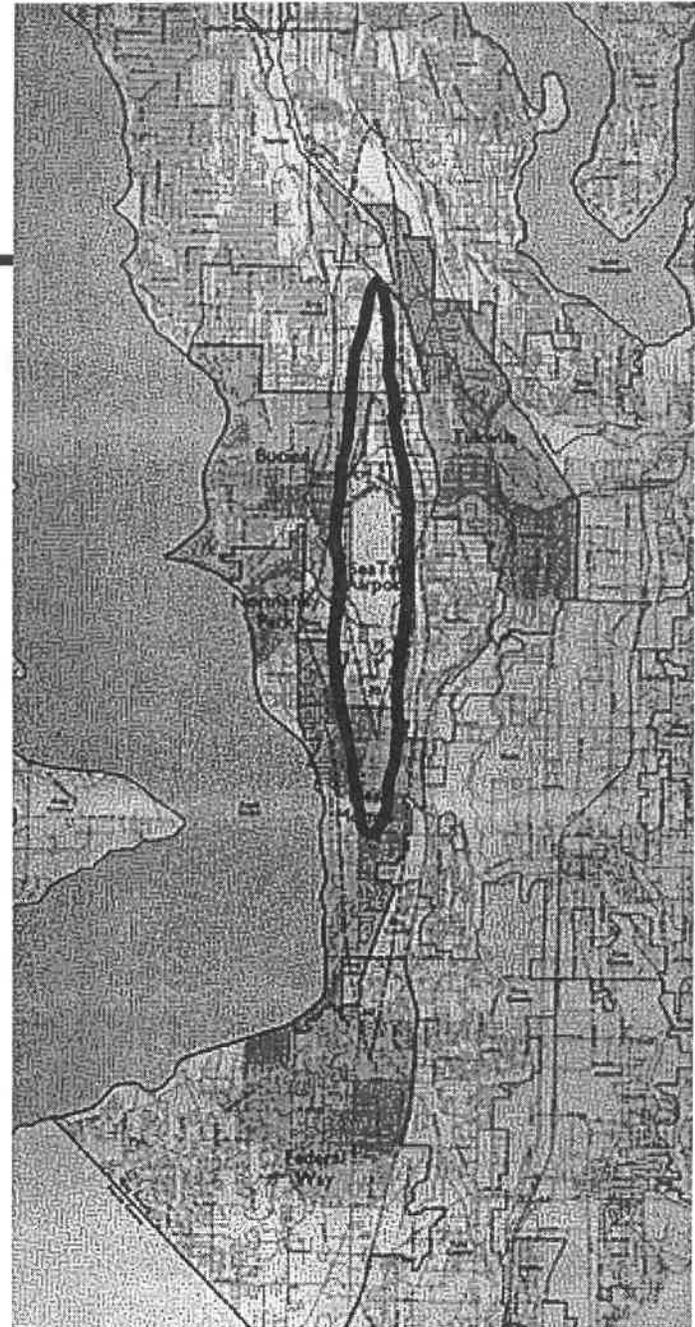
- ◆ Study used projected LDN contours from the EIS.
- ◆ Study recommends sound insulation and mitigation easements for neighborhoods from the 55 up to 64 LDN contours.



# Noise & Vibration

---

- ◆ Study recommends sound insulation, aviation easements, and potential acquisition and redevelopment for neighborhoods in the 65 LDN contour (and higher).



# Noise & Vibration

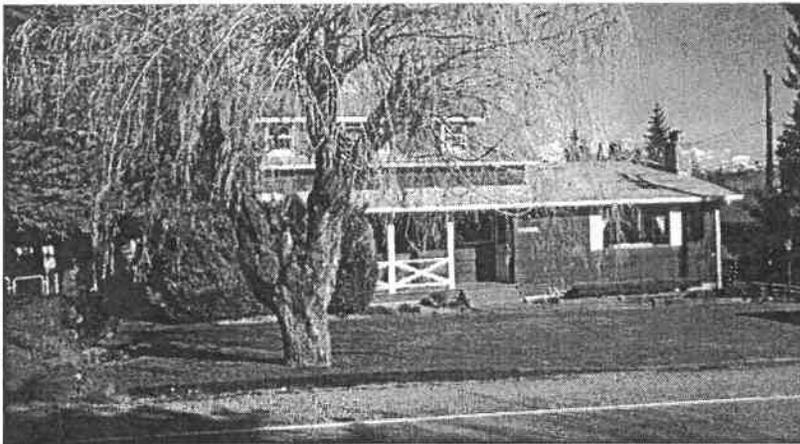
---

- ◆ Acquisition/redevelopment NOT appropriate for all areas. Need to develop neighborhood-specific plans before pursuing acquisition/redevelopment.
- ◆ There are existing established development patterns in neighborhoods identified for acquisition and redevelopment, including:

# Noise & Vibration

---

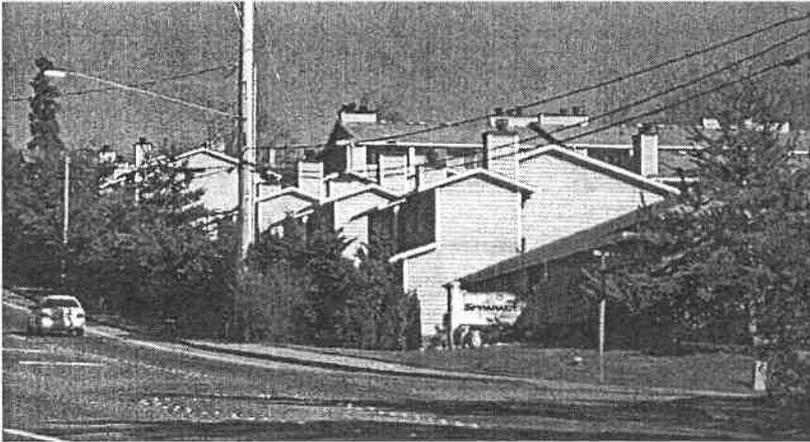
## ◆ Single Family Residential



# Noise & Vibration

---

## ◆ Multi-Family Residential



# Noise & Vibration

---

- ◆ Mixed Residential



# Noise & Vibration

---

- ◆ **Schools within 55 to 65 LDN contour and higher recommended for insulation and mitigation easements. Schools include:**
  - **Burien - Gregory Heights ES, Hazel Valley ES, Salmon Creek ES, Seahurst ES, Shorewood ES, Sylvester MS, Marine Tech Lab, Highline HS.**
  - **Des Moines - Des Moines ES, Olympic ES, North Hill ES, Parkside ES.**
  - **Normandy Park - Marvista ES.**
  - **Outside Study Area - Bow Lake ES, Hilltop ES, Madrona ES, McMicken ES, Mount View ES, Riverton Heights ES, Valley View ES, White Center ES, Cascade MS, Chinook MS, Evergreen HS, Tye HS, and the OSC.**

# Noise & Vibration

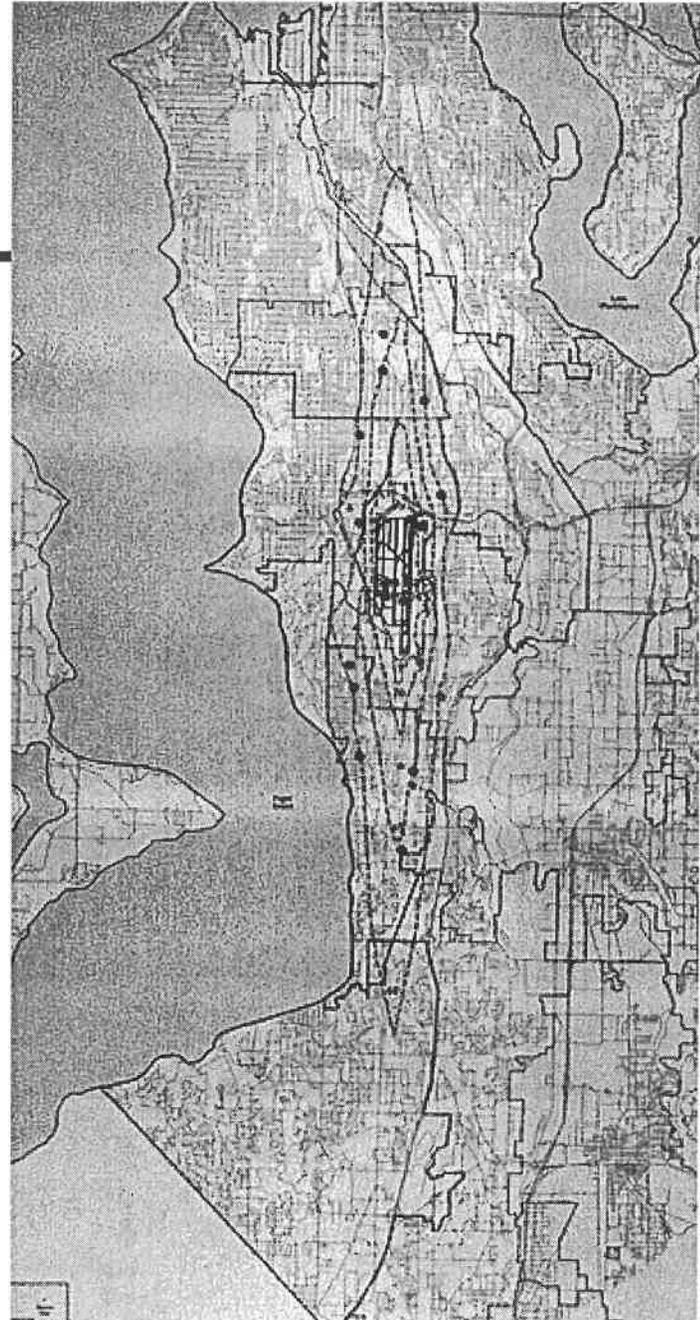
---

- ◆ **Further study is needed on all schools identified for sound insulation and avigation easements.**
- ◆ **Construction cost-estimates not yet calculated.**

# Noise & Vibration

---

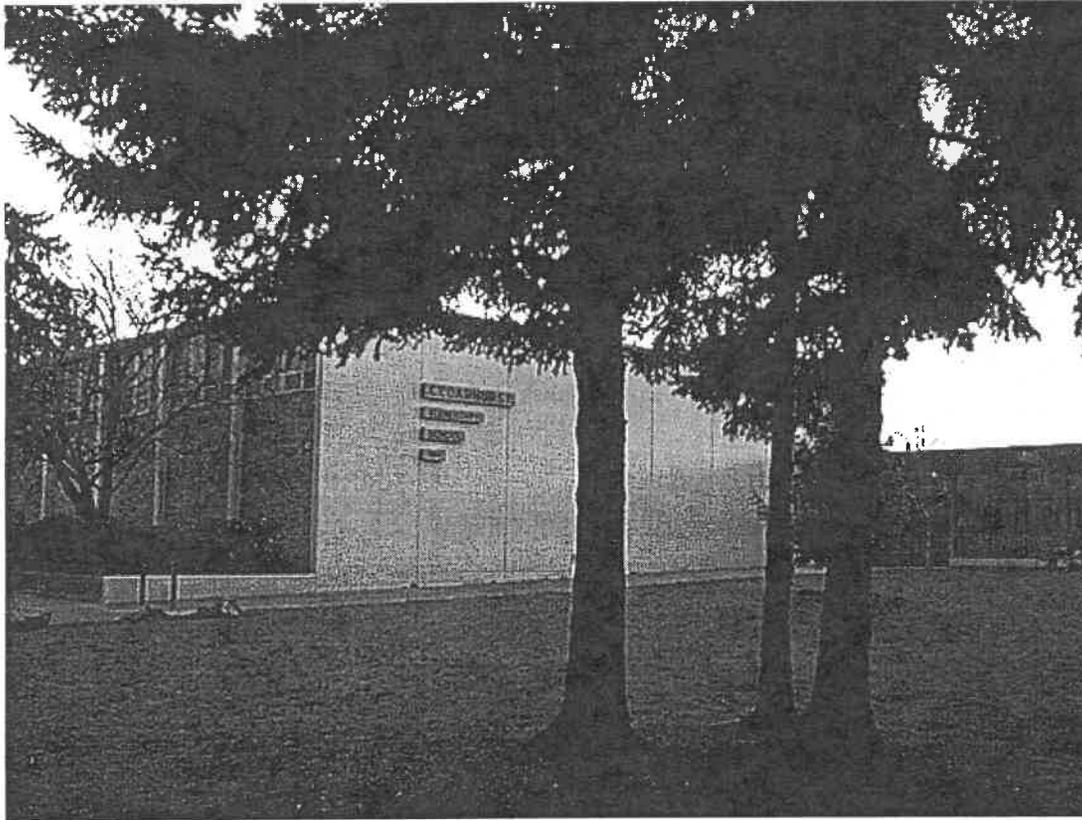
- ◆ **Schools above 65 LDN contours recommended for replacement or relocation. 8 schools identified for potential replacement/relocation.**



# Noise & Vibration

---

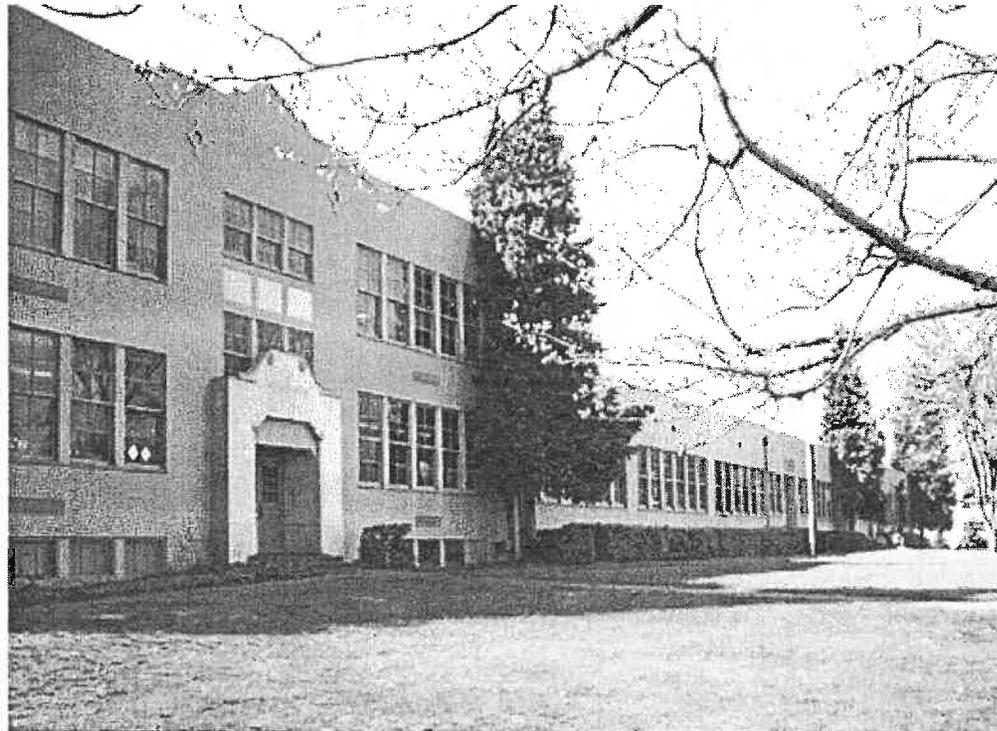
- ◆ Cedarhurst Elementary School (Burien)



# Noise & Vibration

---

- ◆ Sunnydale Elementary School (Burien)



# Noise & Vibration

---

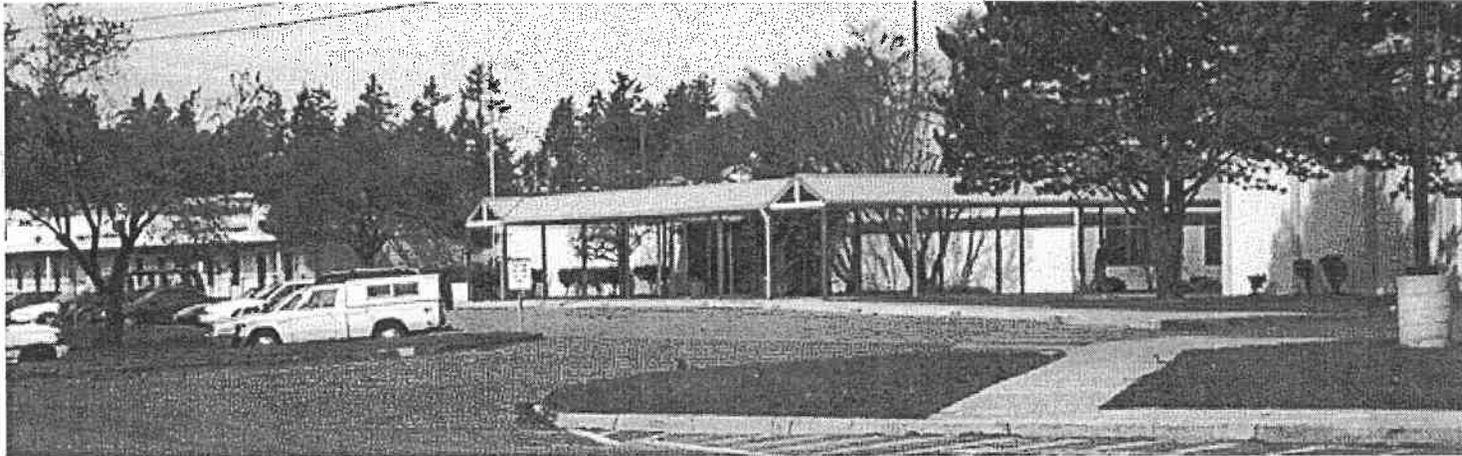
- ◆ **Midway Elementary School (Des Moines)**



# Noise & Vibration

---

- ◆ Pacific Middle School (Des Moines)



# Noise & Vibration

---

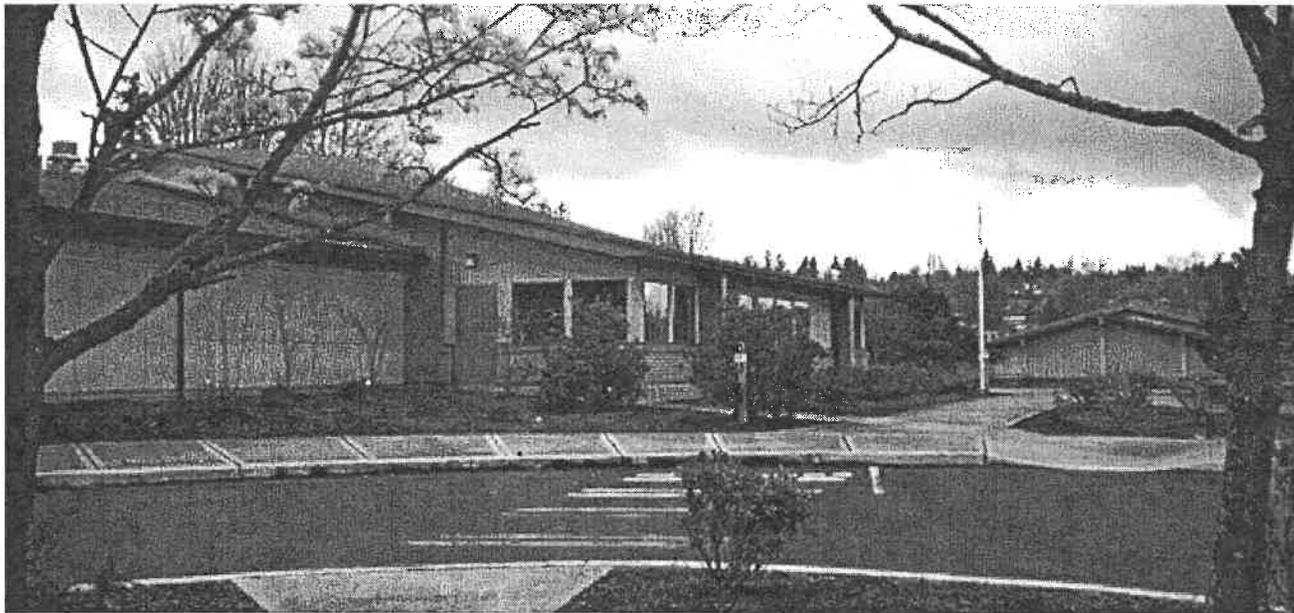
- ◆ Mount Rainier High School (Des Moines)



# Noise & Vibration

---

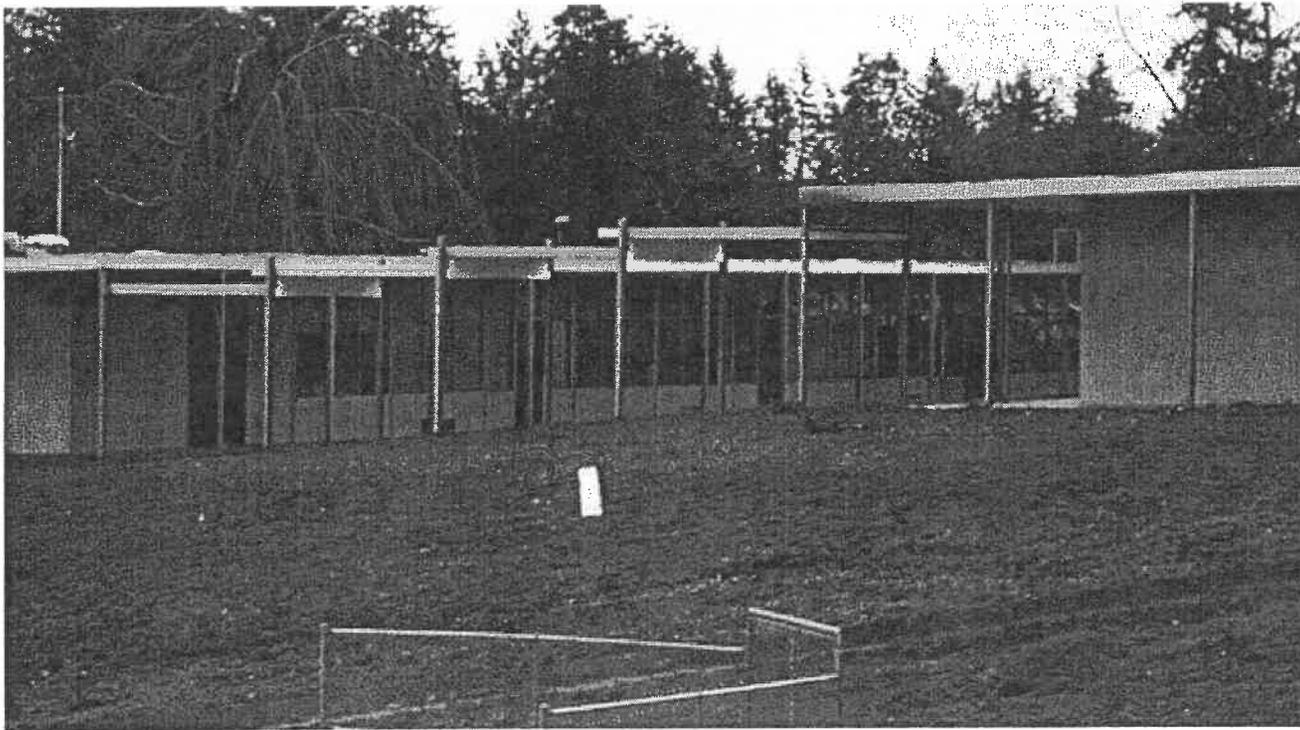
- ◆ **Southern Heights Elementary School and Beverly Park Elementary School (outside study area)**



# Noise & Vibration

---

- ◆ **Satellite Alternate High School (outside study area)**



# Noise & Vibration

---

- ◆ **Highline High School (Burien) is also a potential candidate due to landmark designation and age. Further study is needed.**



# Noise & Vibration

---

- ◆ **Further study is needed on all schools identified for replacement/relocation.**
- ◆ **Cost-estimates, impacts on other schools not yet calculated.**

# SEL Mitigation

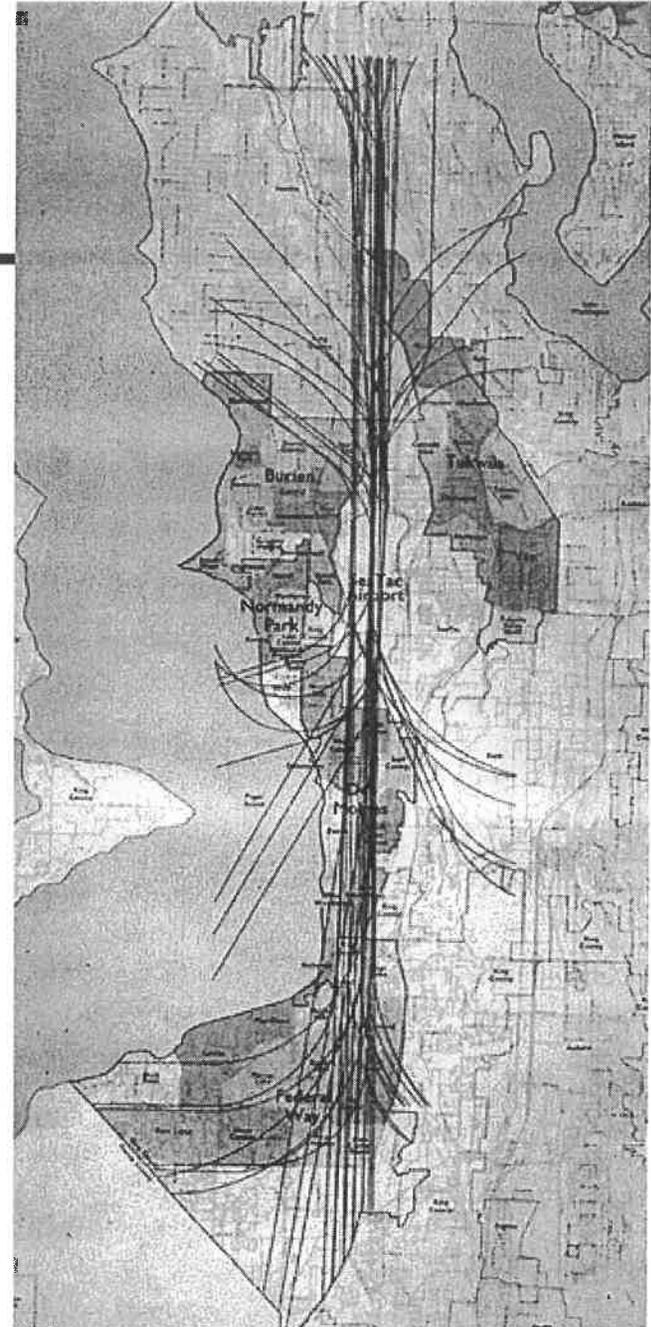
---

- ◆ **\$119.2 M (includes neighborhoods within 5 miles of airport and within 400-foot topographic contour line).**
- ◆ **SEL impacts also addressed by LDN measures. Other neighborhoods include:**
  - **Burien - North Central, Central, and Gregory Heights (including Highline Hospital) neighborhoods.**
  - **Des Moines - Redondo and Downtown neighborhoods.**
  - **Normandy Park - Bonniewood and North neighborhoods.**
  - **Tukwila - Allentown, Cascade View, Foster, Thorndyke, and Riverton neighborhoods.**

# Threshold Analysis

---

- ◆ **\$22.5 M for mitigation of neighborhoods under approach/departure tracks. (Not necessary to perform additional mitigation for neighborhoods mitigated by LDN measures.)**

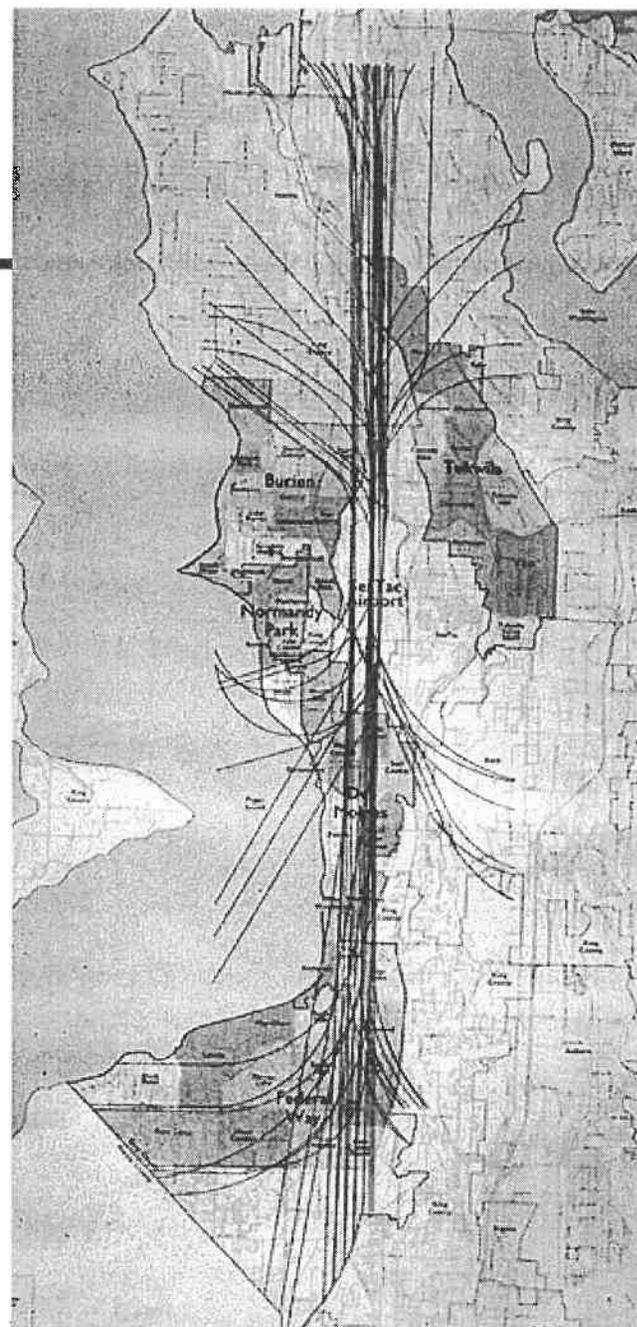


# Threshold Analysis

---

## ◆ Neighborhoods:

- Burien - Shorewood neighborhood.
- Federal Way - Marine Hills, Mar-Cheri, Dash Point, Lakota, Mirror Lake, Easter Lake, Steel Lake, Twin Lakes, West Campus, First Avenue, Kitts Corner North, and City Center neighborhoods.
- Normandy Park - Riviera, East Central, Normandy Province, Arrow Lake, and South neighborhoods.
- Tukwila - Ryan neighborhood.



# Vibration

---

- ◆ **No additional mitigation costs. Potential vibration impacts mitigated by LDN, SEL, and T/A mitigation measures.**
- ◆ **Supplemental studies needed to determine construction-related vibration impacts.**

# Noise & Vibration - Construction

---

- ◆ Evaluate interaction of aircraft and construction equipment.
- ◆ Re-evaluate roadway noise analysis for actual haul routes.
- ◆ Evaluate potential vibration impacts from construction activities.
- ◆ Limit operations:
  - Monday-Friday - 7:00 AM-9:00 PM
  - Saturday - 9:00AM-9:00 PM
  - No operations Sundays and holidays

# **Noise & Vibration - Construction**

---

- ◆ **Require noise control devices on equipment.**
- ◆ **Establish procedures for handling noise complaints.**

# Air Quality

---

- ◆ Regional impacts.
- ◆ Aircraft emissions - Runway utilization plan and eliminate Stage 2 aircraft.
- ◆ CO and HC pollution - Addressed by transportation measures.
- ◆ Air toxics - Modify flight tracks and eliminate Stage 2 aircraft.
- ◆ Fugitive emissions - Dust control plan.
- ◆ Point source pollution - On-site controls.

# Air Quality - Construction

---

- ◆ Re-evaluate construction vehicle air quality analysis for actual haul routes.
- ◆ Obtain  $PM_{10}$  data which is more representative of Puget Sound Region.
- ◆ Monitor  $PM_{10}$  and CO around fill sources, along haul routes and construction area.
- ◆ Minimize fugitive dust.
- ◆ Emission control devices on equipment and methods of operations.

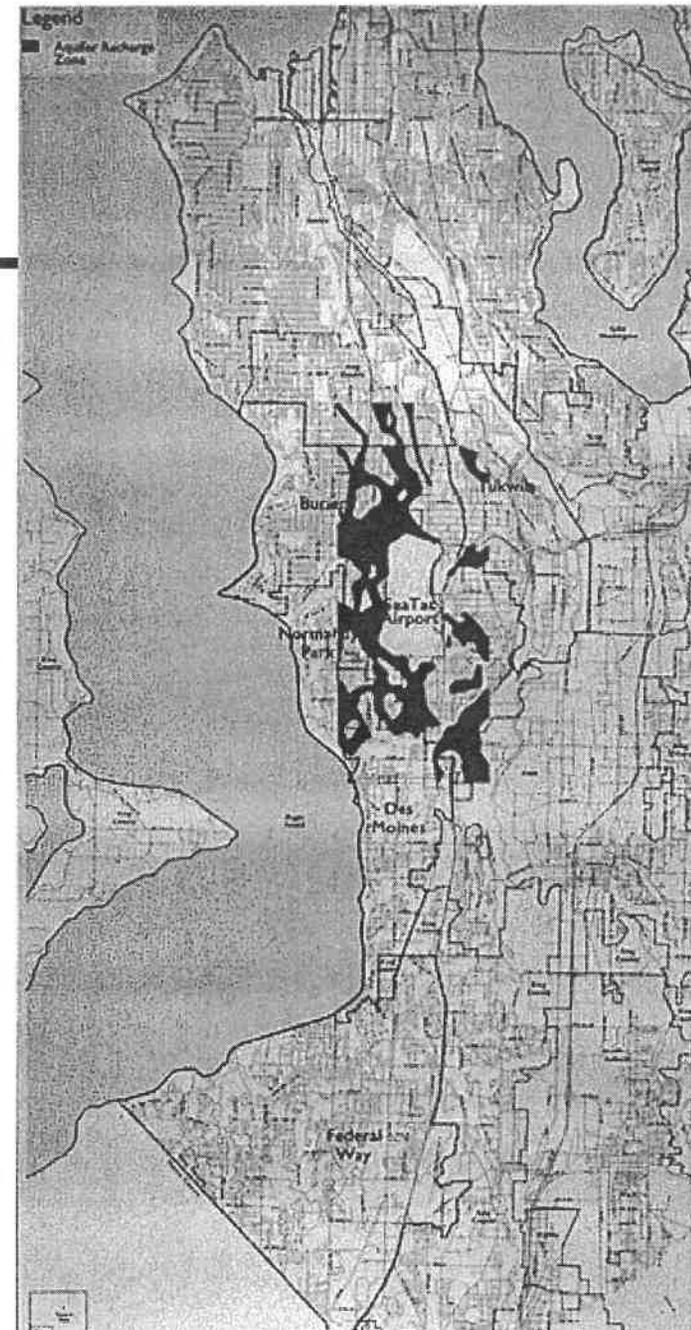
# Surface Water

---

- ◆ Runoff - Additional studies needed.
- ◆ Erosion & sedimentation - Additional studies needed.
- ◆ Spills - On-site controls/incident plan.

# Ground Water

- ◆ Potential to impact every community in the study area.
- ◆ Aquifer recharge - Additional studies needed.
- ◆ Aquifer contamination - Additional studies needed.



# **Water Impacts - Construction**

---

- ◆ **Geotechnical Engineer to monitor fill placement/compaction and areas of seismically unstable soils.**
- ◆ **Certification that fill is free of toxic and hazardous materials.**
- ◆ **Establish permanent long-term surface and ground water monitoring stations.**

# Water Impacts - Construction

---

- ◆ **Provide more detail on construction and operation of stormwater management facilities.**
- ◆ **Prior to construction, provide copies of:**
  - **Construction Stormwater Pollution Prevention Plan**
  - **Spill Prevention, Control and Countermeasures Plan**
  - **Construction Management Plan**
  - **Geotechnical Report**
  - **Reclamation Plan for Fill Sources**
  - **Earthwork Specifications and Drawings**
  - **Governor's Water Quality Certificate**

# Wetlands

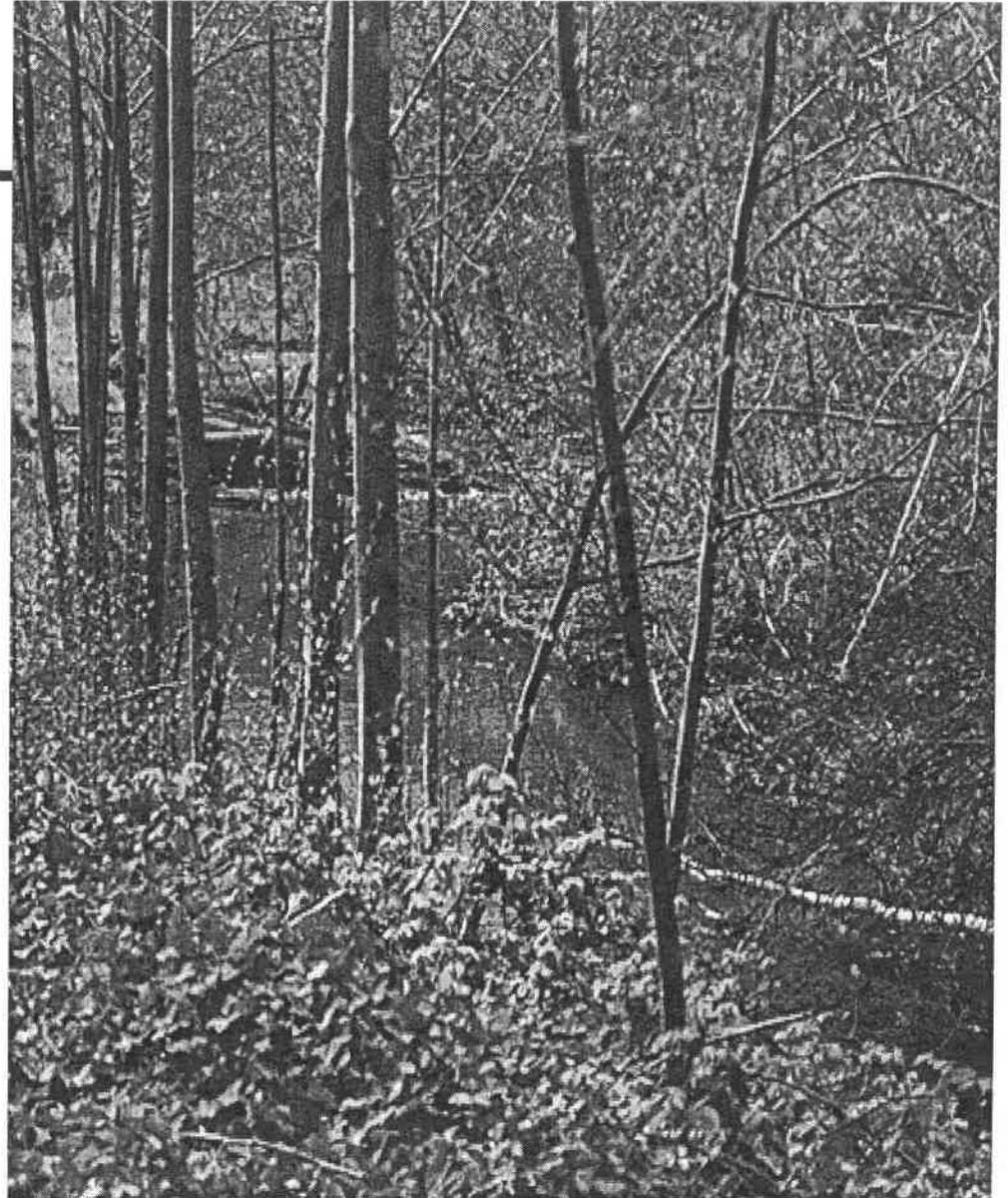
---

- ◆ **Provide additional justification for the Wetlands Mitigation Plan - Wetlands should be replaced within the same watershed.**
- ◆ **Provide information on how wetlands will be protected during construction.**

# Floodplains

---

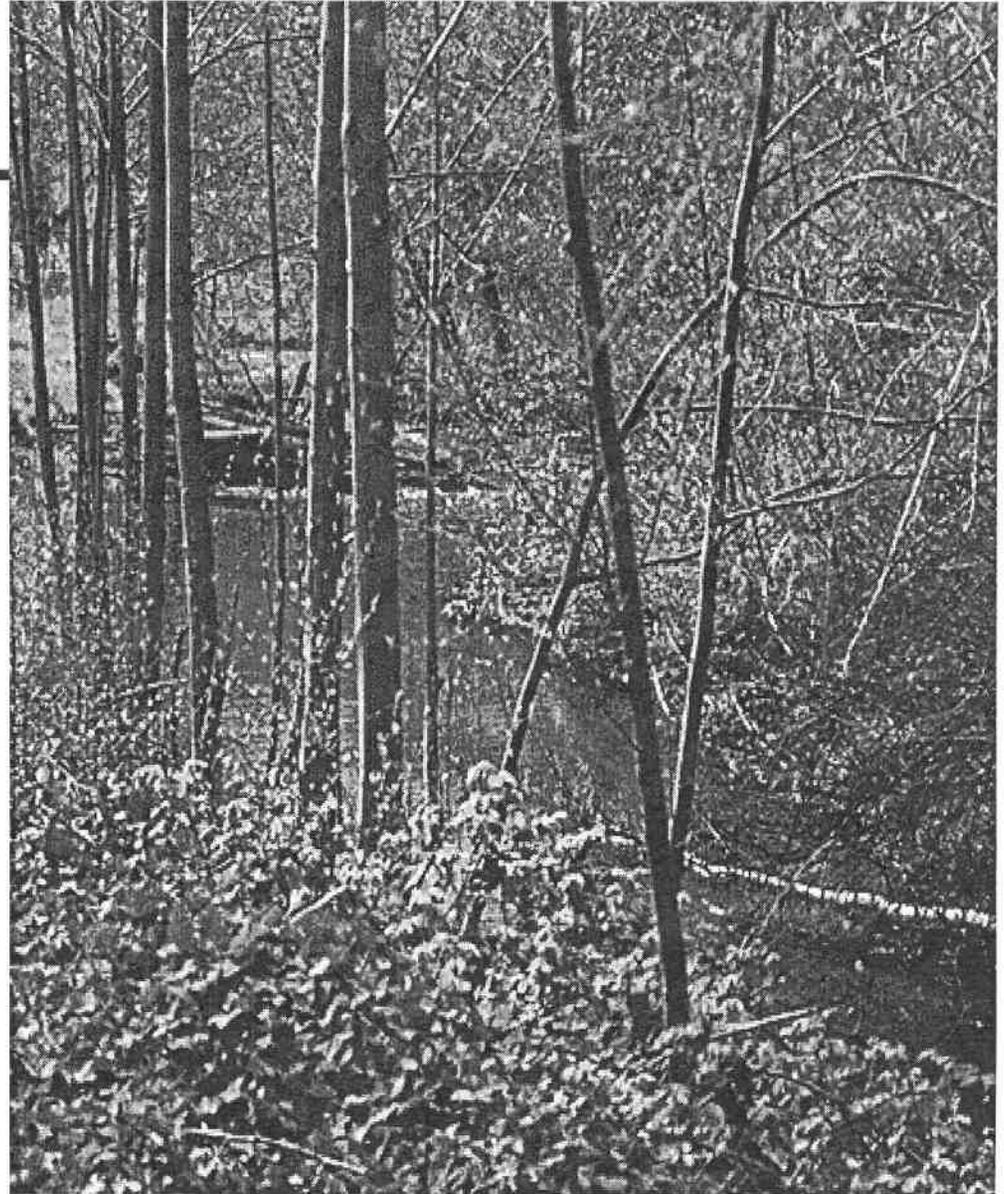
- ◆ **Stormwater management plan needed to address impacts from reduced flood storage capacity and increased flow rate/volume.**



# Floodplains

---

- ◆ **Additional information needed on relationship between 100-year and 500-year floodplains.**
- ◆ **Show final creek relocation specifications and drawings.**
- ◆ **Provide monitoring plan for evaluating effectiveness.**



# Aesthetics & Visual

---

- ◆ Ground shadow (fill) - “Visual inventory” study needed.
- ◆ Visibility (fill) - Added landscaping and improvements to Airport Landscape Plan.
- ◆ Visibility (aircraft) - Modify flight tracks.

# Other Environmental

---

- ◆ Special status species/habitats - Preservation and protection plan needed.
- ◆ Cultural resources - Preservation and protection plan needed.
- ◆ Coastal zones - Pollution control management plan needed.
- ◆ DOT Section 4(f) - Resources need to be identified and a preservation/protection plan developed.

# Additional Recommendations

---

- ◆ Oversight Commission - To assure that projected impacts are not exceeded and that agreed mitigation measures are implemented. Could be implemented via a “Special Purpose District” or a series of interlocal agreements between the Port of Seattle and affected communities/agencies.

# **Additional Recommendations**

---

- ◆ **Re-run INM with new model version and model to 55 LDN contour.**
- ◆ **Expand permanent noise and flight track monitoring programs.**
- ◆ **Use Third Runway for arrivals only, and only between 9:00 AM and 7:00 PM.**
- ◆ **Establish a “noise budget”, 24-hour noise information line, limit nighttime operations and maintenance run-ups.**

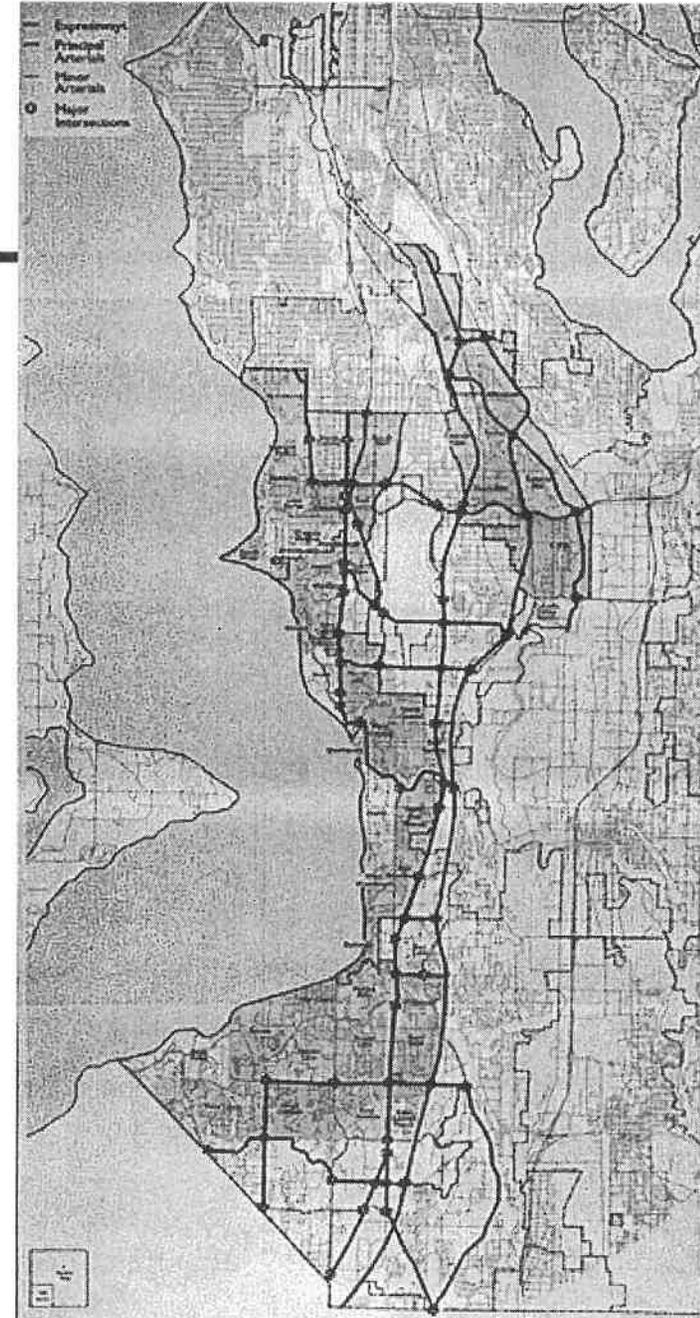
# Transportation

---

- ◆ **Congestion impacts.**
- ◆ **Physical damage impacts.**
- ◆ **Construction impacts.**
- ◆ **Post-construction impacts.**

# Transportation

- ◆ **\$478.9 M for mitigation, by area:**
  - 40.0% (\$191.7 M) - Tukwila
  - 24.4% (\$116.8 M) - Burien
  - 15.2% (\$72.8 M) - Des Moines
  - 10.6% (\$50.9 M) - Normandy Park
  - 9.8% (\$46.7 M) - Federal Way



# Transportation

---

- ◆ **Mitigation costs not assigned to any single agency. Multiple agencies, funding sources available.**
- ◆ **Need to develop cost-allocation model**
- ◆ **\$478.9 M for mitigation:**
  - **38.9% (\$186.5 M) - Physical damage.**
  - **36.5% (\$174.8 M) - Post-construction.**
  - **24.5% (\$117.6 M) - Congestion.**
  - **Not enough information to calculate total construction mitigation costs.**

# Congestion

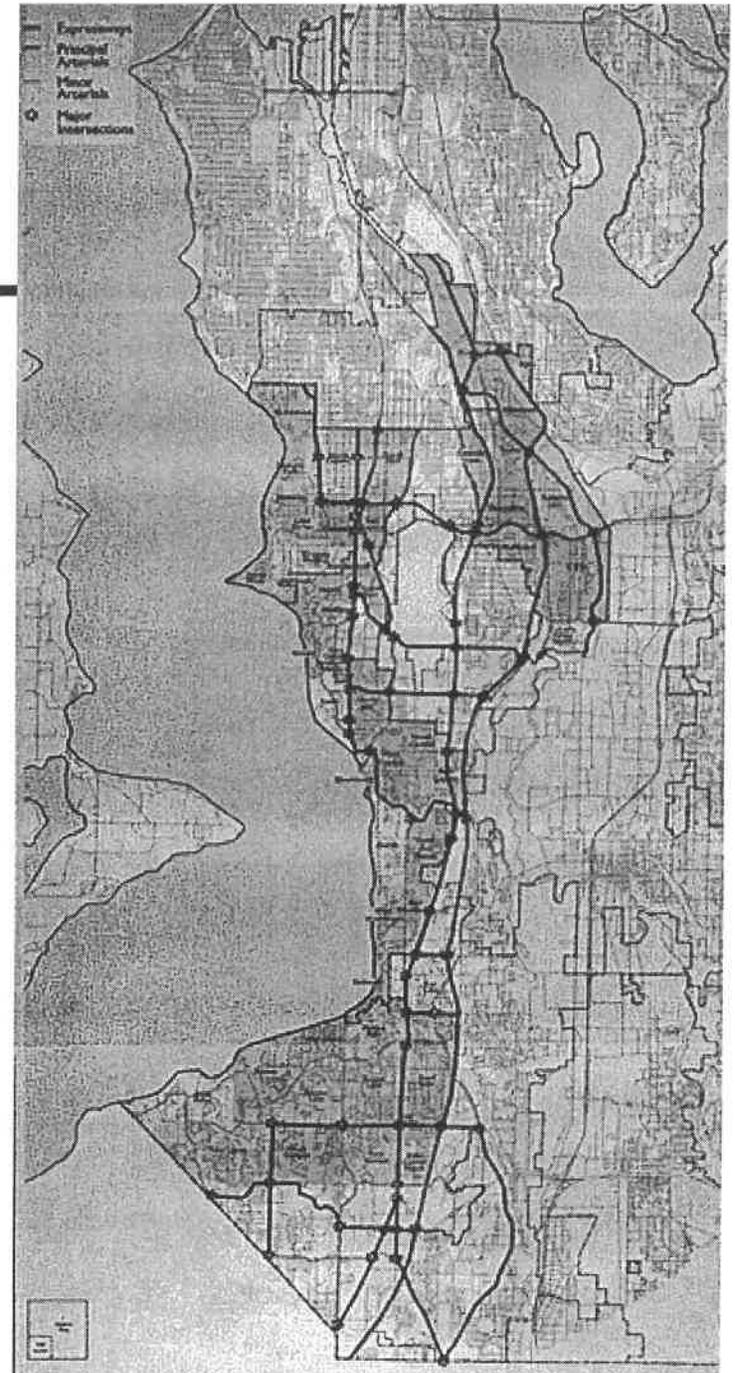
---

- ◆ All areas potentially impacted by congestion.
- ◆ Level of Service (LOS) improvements - \$117.6 M.
- ◆ Accidents - Addressed by LOS measures.
- ◆ Supplemental Studies Needed - School/transit bus operations, police/emergency vehicle response time, parking/pedestrian access. O-D and “select link” studies for cost allocation.

# Physical Damage

---

- ◆ **All areas potentially impacted (\$186.5 M total).**
  - Local system - \$103.2 M.
  - State system - \$28.0 M.
  - State bridges - \$54.4 M.
  - Maint/recon. - \$28.1 M.
- ◆ **Need additional studies to determine baseline conditions, decrease in road serviceability.**



# Construction

---

- ◆ All areas potentially impacted. While some construction impacts are mitigated by congestion improvement measures, others will require further study.
- ◆ Truck haul - \$50,000/year per location for traffic officer (traffic control).

# Construction

---

- ◆ **If barge/rail/conveyor alternative selected, more studies and plans required. Concerns regarding:**
  - **Creek integrity**
  - **Protection of neighboring properties**
  - **Safety**
  - **Creek corridor reconstruction**

# Construction

---

## ◆ Miller Creek



## ◆ Des Moines Creek



# Construction

---

- ◆ Traffic diversion - Diversion model needed.
- ◆ Traffic control - Upgrade signals.
- ◆ Staging/phasing - Mitigated by LOS measures.
- ◆ Work force - Minimal impact.
- ◆ Concurrent projects - Contingency plans (+25% for transportation planning).

# Post-Construction

---

- ◆ All areas potentially impacted (\$174.8 M).
- ◆ Additional traffic - Additional monitoring after runway is operational.
- ◆ Increased O&M - Mitigated by LOS measures.
- ◆ Master plan implementation - Need additional monitoring and studies.

# **Additional Recommendations**

---

- ◆ **Areawide traffic study.**
- ◆ **Origin-destination survey.**
- ◆ **Cost allocation model.**
- ◆ **Incident management plan.**
- ◆ **Surface transportation noise mitigation (construction limitations, noise control, remodeling, clarify INM's ground noise analysis).**

# **Socio-Economic Analysis**

---

- ◆ **Land value impacts.**
- ◆ **Local government revenue impacts.**
- ◆ **Land use and ownership impacts.**
- ◆ **Social service needs impacts.**

# Land Value

---

- ◆ Comparison with similar properties in metropolitan area.
- ◆ \$38.8 M depression of land values over 20 years (2000 to 2020):
  - Burien - \$14.2 M.
  - Des Moines - \$6.4 M.
  - Federal Way - \$11.6 M.
  - Normandy Park - \$2.8 M
  - Tukwila - \$3.7 M.

# Revenues

---

- ◆ **Direct relationship between property tax revenue loss and location to flight track.**
- ◆ **Reduction in tax revenue by city over 20 years of \$5.9 M (2000 to 2020):**
  - **Burien - \$1.0 M.**
  - **Des Moines - \$2.7 M.**
  - **Federal Way - \$1.8 M.**
  - **Normandy Park - \$0.4 M**
  - **Tukwila - \$0.0 M.**

# Revenues

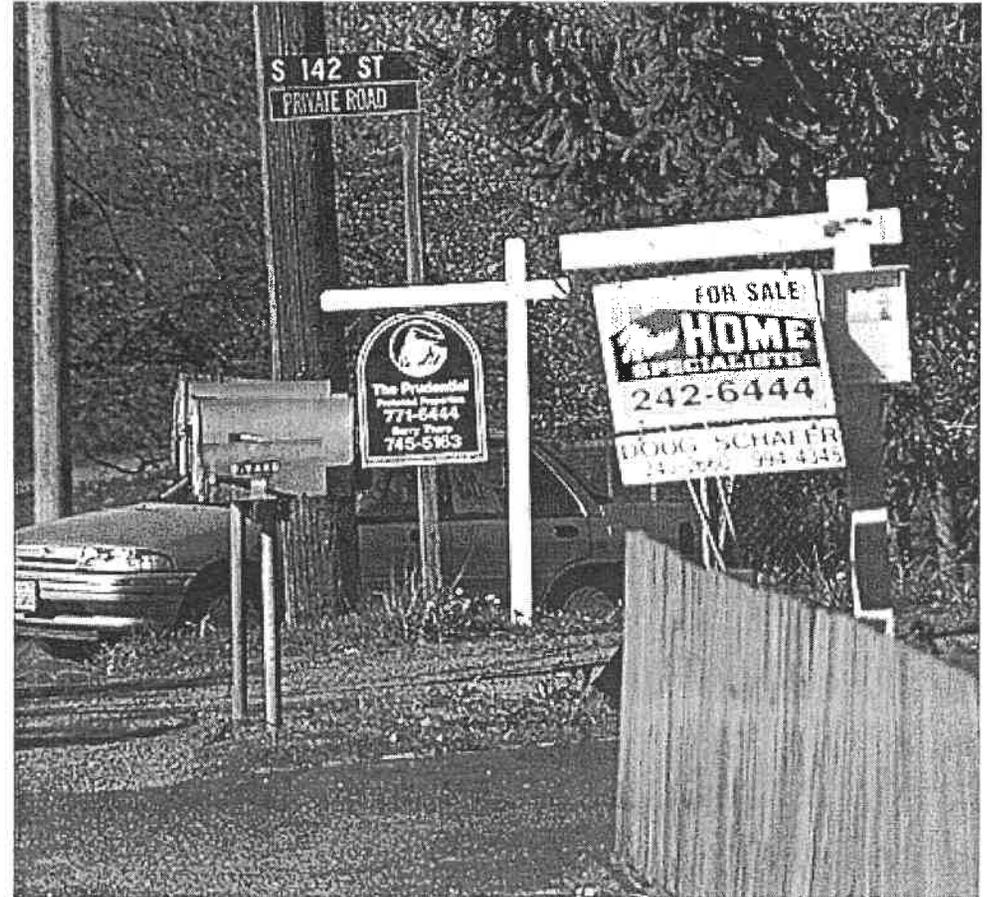
---

- ◆ Total impact projected to be \$39.9 M is lost property tax revenue over 20 years (reduction in value plus flight-track gradient induced losses):
  - Burien - \$15.3 M.
  - Des Moines - \$6.4 M.
  - Federal Way - \$11.6 M.
  - Normandy Park - \$2.8 M
  - Tukwila - \$3.7 M.

# Use & Ownership

---

- ◆ If homes fail to sell, ownership patterns will tend to change from owner to renter as land values are impacted.
- ◆ Study area is currently 16.6% renter - comparison area is 3.4% renters.



# Use & Ownership

---

- ◆ Renters tend to be younger, more mobile, with a lower income, and are a higher-service-need population.



# Social Service Needs

---

- ◆ Higher demand on community facilities at the same time local revenues are decreasing.
- ◆ Schools:
  - Test scores decrease.
  - Additional services/facilities needed.
  - Reduced school revenues due to depressed property values.
- ◆ Public safety - Local government revenue impacts.

# Local Government Revenues

---

- ◆ Land value impacts.
- ◆ Land use impacts.
- ◆ Home ownership impacts.
- ◆ Local government revenue impacts.
- ◆ Social service needs impacts.

# **Social Service Needs**

---

- ◆ **Schools - Test scores decrease, additional services and facilities needed.**
- ◆ **Land use impacts.**
- ◆ **Home ownership impacts.**
- ◆ **Local government revenue impacts.**
- ◆ **Social service needs impacts.**

# Study Summary

---

- ◆ **Study presumes construction of the Third Runway.**
- ◆ **Calculated mitigation costs total \$2.9 B. However, these mitigation costs are not assigned to one single agency.**
- ◆ **Additional supplemental studies needed to fully assess range of impacts and appropriate mitigation measures.**

# Study Summary

---

- ◆ **Study relies on mitigation experience of both airports and Washington State projects.**
- ◆ **A “mitigation team” approach is recommended to assure that interests of cities, impacted agencies, residents, businesses, and property owners are included in mitigation decisions.**

# For Further Information

---

- ◆ **Contact City of Burien at 206/248-5515.**
- ◆ **Contact HOK at:**
  - **Telephone      214/720-6000**
  - **Fax              214/720-6005**
  - **E-mail            joe.pobiner@hok.com**