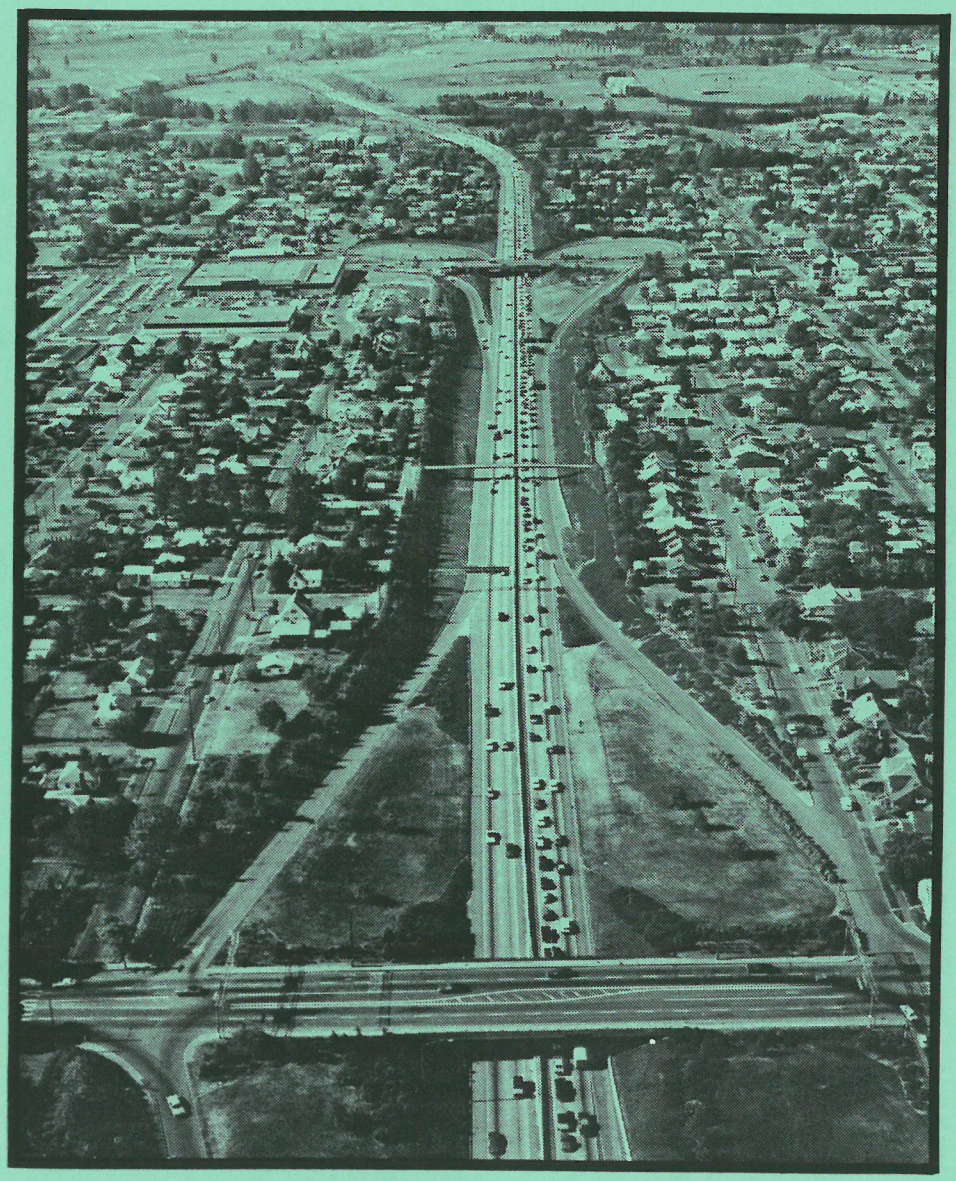
I-5

COLUMBIA BLVD. - PORTLAND BLVD.

CITY OF PORTLAND MULTNOMAH COUNTY

DRAFT ENVIRONMENTAL ASSESSMENT



OREGON DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

CITY OF
PORTLAND, OREGON
OFFICE OF TRANSPORTATION

Margaret D. Strachan, Commissioner
Transportation Planning & Finance
1120 S.W. Fifth Avenue
Room 702
Portland, Oregon 97204-1971
(503) 796-7001

17 December 1986

MEMORANDUM

TO: Commissioner Margaret Strachan

FROM: Cynthia Kurtz, Manager, Transportation Planning and Finance

SUBJECT: I-5 North Project - N. Columbia Boulevard to N. Portland Boulevard.

This project, described in the following overview, was developed and will be constructed by the Oregon Department of Transportation. City staff has reviewed all of the proposed designs, public involvement process and public testimony from hearings held on this project. Two issues surfaced during the public meeting and hearing process which have been resolved. The NE Bryant Street Pedestrian Bridge across I-5 was seen as an attractive nuisance by some residents because of burglaries which have occurred in that area. However, through a polling process the ODOT found that the majority of residents wanted the bridge to remain.

The second issue was that of noise barriers (walls) and their location adjacent to residences alongside the freeway. After polling each residence, the ODOT found that all but a very few home owners wanted to have the noise barriers constructed.

TO THE COUNCIL:

Your Commissioner of Public Utilities hereby transmits a Draft Environmental Assessment from the Oregon Department of Transportation on the I-5, Columbia Blvd. to Portland Blvd. project and recommends that the Build Alternative recommended be accepted and the following resolution be adopted by Council.

Respectfully submitted,

Margaret D. Strachan
Commissioner of Public Utilities

MDS:LW:db

N. COLUMBIA BOULEVARD TO N. PORTLAND BOULEVARD

I-5 NORTH PROJECT

This project is part of an overall program of improvements for the I-5 North Corridor. The program includes both major capital improvements, such as the Slough Bridge widening and reconfiguration of the ramping system between the Banfield and Greeley Ave., as well as systems management such as ramp metering. Once complete, traffic capacity, safety and management features will be added to the corridor making this segment of I-5 a more efficient Regional Trafficway.

The Oregon Department of Transportation is proposing to widen I-5 between Columbia Boulevard and Portland Boulevard. This section of I-5 currently experiences congestion during peak hours and a high accident rate.

The Build Alternative would increase the travel lanes to three in each direction through this section. The northbound lane would begin at Portland Boulevard and extend to the Lombard off-ramp. The southbound lane would begin at the Columbia Boulevard on-ramp, and match with the existing lane south of Portland Boulevard. The auxiliary lanes between the ramps would remain. The median would be narrowed where the freeway passes under structures carrying local streets so that these structures would not need to be modified or replaced. Some of the existing landscaping would be disturbed. The slopes would either be steepened or retaining walls added as needed to provide width for the additional lanes. No additional right-of-way would be required. Six noise walls would be constructed along the project area. The pedestrian bridge would be enclosed to prevent objects from being thrown onto the roadway below. Other improvements to increase safety of the pedestrian bridge include placing a post in the center of either end of the bridge to restrict usage of the bridge by motorized vehicles; addition of a sign stating that motorized vehicles are prohibited; addition of lighting at either end of the bridge; trimming of shrubbery; and extension of the fence along the residential side of the walkway leading to the bridge.

There are two main issues that have surfaced during citizen involvement for this project. One issue is the noise walls. Most residents want the walls but are concerned about the aesthetics of the walls. The other issue is the Bryant Street pedestrian bridge. Many people requested that the bridge be closed and eventually removed because of crime problems.

PUBLIC HEARING

A public hearing was held on June 17, 1986 at the Ockley Green Middle School. Approximately 40 people attended the hearing. Three main topics were voiced at the hearing: the Bryant Street Pedestrian Bridge, noise walls, and traffic concerns.

People at the hearing, as at the prior public meetings, stated that the Bryant Street Pedestrian Bridge was a crime problem. It has been used as an escape route for criminals and also as a site for muggings. The speakers suggested that the bridge be closed and removed. (See discussion below under "Public Involvement after the Hearing.")

People attending the hearing were concerned about the aesthetics of the proposed noise walls. A commitment was made to keep as much of the existing landscaping as possible by meandering the wall if necessary. Another speaker suggested that vines such as ivy be planted along the walls to soften them.

The third topic raised at the hearing was traffic. Three different items were mentioned. First, a two lane exit was suggested at Portland Boulevard from the southbound direction. This will be added to the project. Second, a signal was proposed at the end of the off ramp at Portland Boulevard. This signal already exists. A crosswalk will be painted to improve pedestrian safety. Third, one person thought that ODOT should consider improvements to Interstate Boulevard and Union Avenue to alleviate the congestion problem on I-5. These Major City Traffic Streets are good alternatives for traffic in the immediate area; however, most of the traffic on I-5 is regional through traffic and originates outside of the immediate area.

PUBLIC INVOLVEMENT AFTER THE HEARING

ODOT staff researched the questions raised about the Bryant Street Pedestrian Bridge, and found that the Portland Police agreed that the statements about crime associated with the bridge were correct. However, school officials stated that the bridge was used by school children in the area and they would not support its removal. Meetings were held with the Piedmont Neighborhood Association Board and with the membership at large. A flyer was hand delivered to residents on both sides of the freeway inviting them to the meeting. The situation was discussed and the people at the membership meeting voted 18 to 2 that the bridge should be removed. The hand-delivered flyer had a postage paid reply area for people to respond. Over 100 people did respond and more than half said that the bridge should remain. A sign was placed on the bridge to solicit further responses. Ten more people responded with all but one saying the bridge should remain. ODOT has decided to keep the bridge open and to work toward making the bridge safer.

The Fire Bureau commented that they use the existing inside shoulder to bypass congestion during peak hours. The new, narrower shoulder would not be wide enough for the fire trucks. This would increase response time during peak hours.

City Staff Recommendation

City of Portland staff has reviewed the project design and citizen complaints and recommends the Council adopt ODOT's project recommendations. We also recommend that to avoid significant impacts on traffic capacity during construction, that a phased and accelerated program for construction be implemented. We suggest that the construction of the noise walls proceed in an early phase of construction to protect adjacent residences from construction noise which may occur as part of the schedule acceleration.

VICTOR ATIYEH
GOVERNOR

Department of Transportation
HIGHWAY DIVISION
TRANSPORTATION BUILDING, SALEM, OREGON 97310

In Reply Refer to
File No.:

ENV 3

TO REVIEWERS of the Environmental Assessment
North Columbia Boulevard - North Portland Boulevard
Pacific Highway (I-5)
Multnomah County
IR-5-6(113)304

This environmental assessment is being circulated for public and agency review. All comments should be mailed or delivered within 30 days to:

Environmental Section
Oregon State Highway Division
324 Capitol Street N.E.
Salem, Oregon 97310

Sincerely,

Cam Gilmour

Cam Gilmour, Manager
Environmental Section

leb

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

NORTH COLUMBIA BOULEVARD - NORTH PORTLAND BOULEVARD
PACIFIC HIGHWAY
INTERSTATE 5
MULTNOMAH COUNTY
IR-5-6(113)304

ENVIRONMENTAL ASSESSMENT

Submitted pursuant to 42 U.S.C. 4332(2)(c)

U.S. Department of Transportation
Federal Highway Administration
and
Oregon Department of Transportation

3-21-86
Approval Date

Assistant State Highway Engineer

3-28-86
Approval Date

Federal Highway Administration Official

The following persons may be contacted for further information:

Dale E. Wilken
Division Administrator
Federal Highway Administration
530 Center Street N.E.
Salem, Oregon 97301
(503) 399-5749

Cam Gilmour
Manager, Environmental Section
Oregon State Highway Division
324 Capitol Street N.E.
Salem, Oregon 97310
(503) 378-8486

ENVIRONMENTAL ASSESSMENT
(Short Form)

A. Project Identification:

Date _____

City Portland Hwy No. 1

Section North Columbia Boulevard to North Portland Boulevard

Beginning M.P. 305.9. Length 1.22 mi.

Highway Pacific Highway (I-5)

Program Estimate $3,445,000

Funding Source FAI-4R

County Multnomah

Prefix C 626-1950

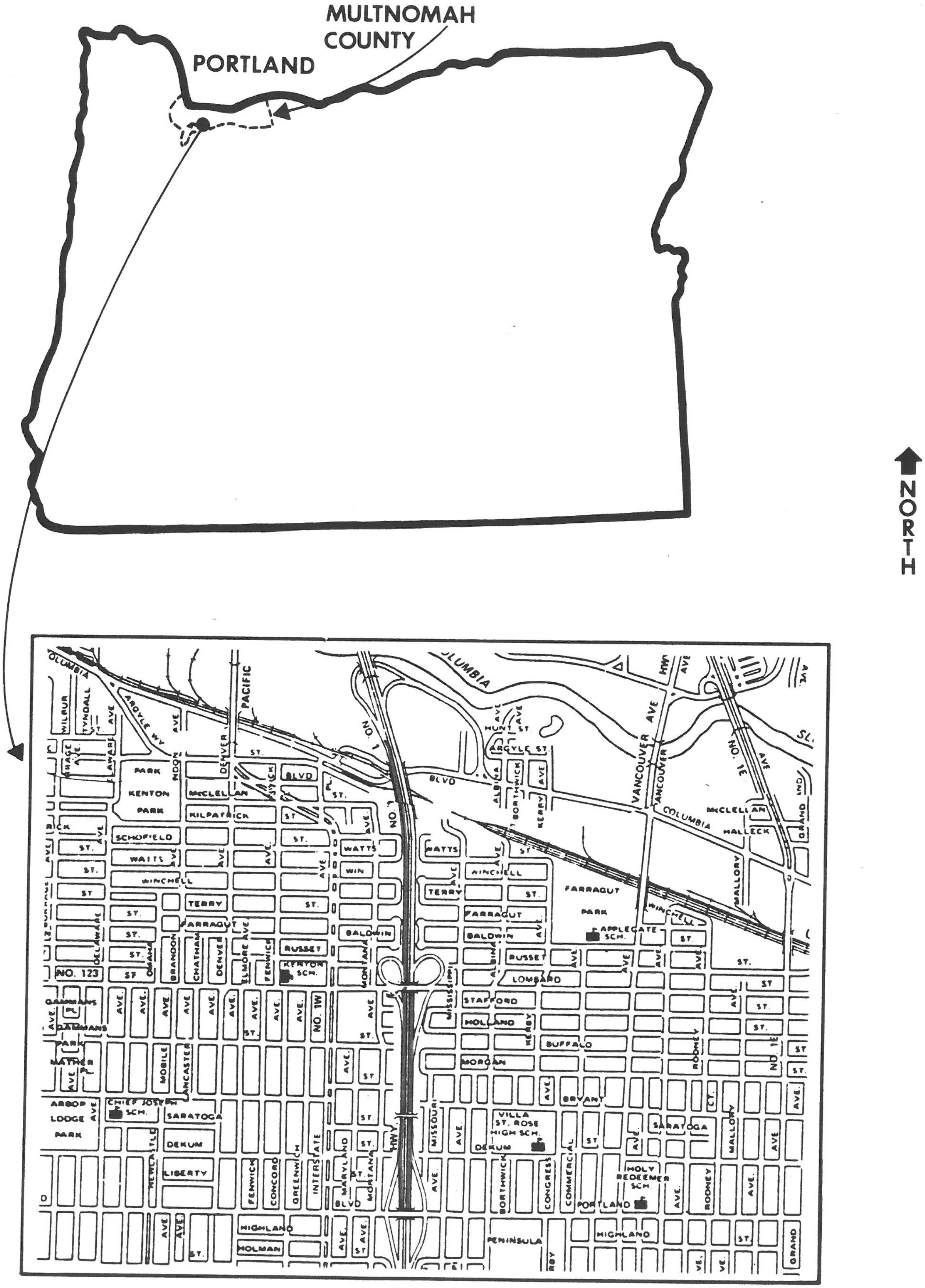
Region Metro

Map (Location, Please attach). See Figure 1.

B. Descriptions:

	Existing Facility	Proposed Facility
Right-of-Way Width	220 ft. expanding to a maximum of 800 ft. at interchanges	220 ft. expanding to a maximum of 800 ft. at interchanges
Number of Traffic Lanes	4	6
Median (Yes/No:Type)	concrete barrier	concrete barrier
Shoulders	10 ft.	6 ft.
ADT (Volume and Year) Northbound	38,150 (1985)	46,350 (2005)
Southbound	40,200 (1985)	48,200 (2005)
(See Table 1 for more complete data.)		
Alignment (New, Combined, Existing)	Existing	Existing
Access Control (Complete, limited, none):	Complete	Complete
Structures	2	2
Additional Facilities (Bikeways, curbs, sidewalks, signals, etc.)	On and off ramps at Portland Blvd. and Lombard Street. Pedestrian bridge over I-5 between Portland and Lombard streets.	On and off ramps maintained. Enclose the pedestrian bridge over I-5 between Portland and Lombard.

Figure 1


MULTNOMAH
COUNTY
PORTLAND
NORTH
COLUMBIA
PACIFIC
KENTON PARK
McCLELLAN
KILPATRICK
SCHOFIELD
WATTS
WINCHELL
TERRY
FARRAGUT
RUSSET
KENTON SCH.
BALDWIN
LOMBARD
STAFFORD
HOLLAND
BUFFALO
MORGAN
BRYANT
SARATOGA
DEKUM
LIBERTY
HIGHLAND
HOLMAN
PENINSULA
CHIEF JOSEPH SCH.
ARBOR LODGE PARK
FARRAGUT PARK
APPLEGATE SCH.
VILLA ST. ROSE HIGH SCH.
HOLY REDEEMER SCH.
PORTLAND
VANCOUVER AVE.
MALLORY
RODNEY
GRAND
INTERSTATE
GREENWICH
CONCORD
FENWICK
MARYLAND
MONTANA
MISSISSIPPI
MISSOURI
BORTHWICK
CONGRESS
COMMERCIAL
NEWCASTLE
MOBILE
LANCASTER
BRANDON
CHATHAM
DENVER
DELAWARE
ALBINA
KERBY
ARGYLE ST.
HUNT ST.
HALLECK

C. Project Purpose, Description, and Need:

The section of Interstate 5 (I-5) between North Columbia Boulevard and North Portland Boulevard experiences congestion each weekday during the a.m. and p.m. peak hours. The purpose of this project is to lessen this congestion and improve operational safety. This section of freeway is located in the City of Portland and in Multnomah County.

In the northbound direction, the third lane of the freeway is dropped at the Portland Boulevard off ramp. An auxiliary lane for weaving exists between the North Portland Boulevard on ramp and the North Lombard Street eastbound off ramp. There are large volumes of both through and merging traffic in this section.

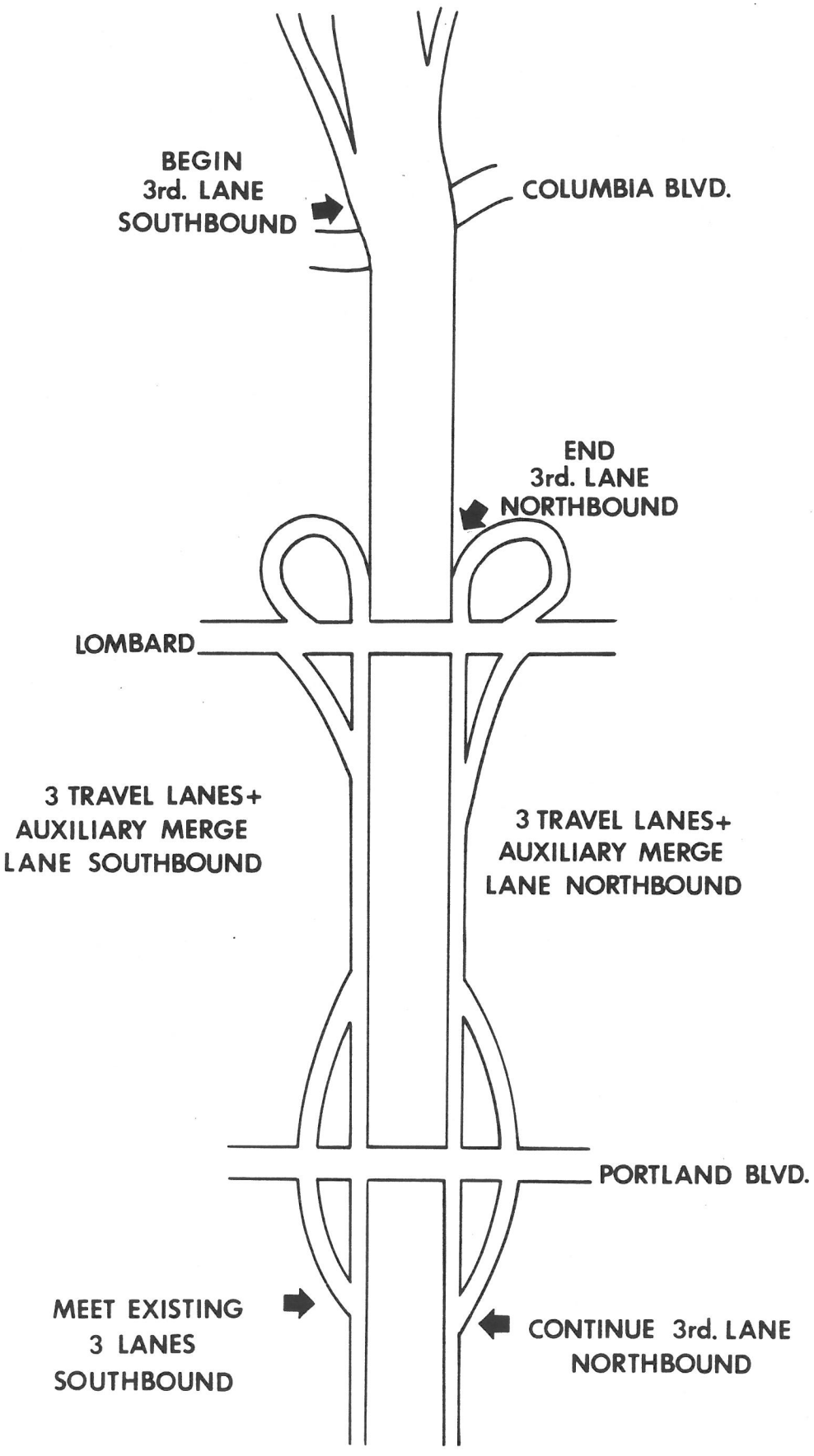
In the southbound direction, the two travel lanes are augmented by an auxiliary merge lane between the on ramp from North Lombard Street eastbound and the North Portland Boulevard off ramp. After the on ramp from North Portland Boulevard, there are three lanes southbound. Congestion is caused by traffic entering I-5 from North Columbia Boulevard and North Portland Boulevard. There are many heavy trucks entering from North Columbia Boulevard. These trucks have their speed constrained by the ramp meters and the uphill grade of the freeway, and often attain speeds of only 30 mph before being forced to enter the freeway.

The No-Build Alternative would continue the congested situation during peak hours. A review of a 2 1/2 year accident history (January 1982 through June 30, 1984) shows that 40 reported accidents were related to the lane drop at Portland Boulevard. Further investigation shows that these kinds of accidents are also related to the congestion due to the lane drop northbound at Portland Boulevard. A similar review of the accident history southbound shows that 21 reported accidents occurred in this section of the freeway. It was found that 12 of 21 reported accidents were rear-end type, while 5 accidents were side-swipe overtaking type. These 17 accidents are partially attributed to the stop and go conditions occurring during the peak periods of congestion. This situation would continue and worsen with the No-Build Alternative.

The proposed project would provide three travel lanes in both directions through the project area. (See Figure 2) The southbound lanes would begin at the North Columbia Boulevard on ramp and extend through the Lombard and Portland Boulevard interchanges to connect with the existing third lane at North Portland Boulevard on ramp. Northbound the third lane would extend through the North Portland Boulevard interchange to the North Lombard Street westbound off ramp. The auxiliary lanes for merging would also be available. All construction would be within existing right-of-way and existing structures would not be modified.

Minor realignments of ramp connections would be necessary. The existing storm sewer system would be maintained with new inlets and pipe runs built for the wider roadway section.

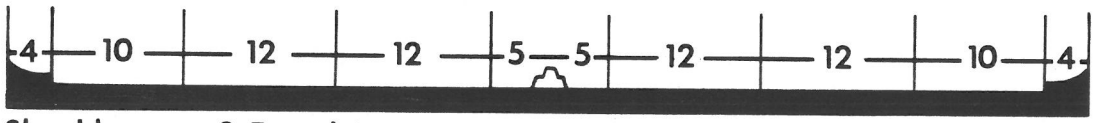
Figure 2



NO SCALE

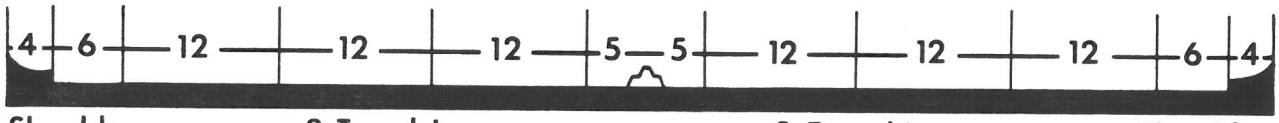
Figure 3

Cross Sections



Shoulder and Curb | 2 Travel Lanes | MEDIAN | 2 Travel Lanes | Shoulder and Curb

EXISTING



Shoulder and Curb | 3 Travel Lanes | MEDIAN | 3 Travel Lanes | Shoulder and Curb

PROPOSED

D. Project Alternatives:

A No-Build and a Build Alternative are considered for this project. (See Figure 3 for typical cross sections.)

The No-Build Alternative would allow the congested situation to continue. Accidents would increase as the traffic volumes increased.

The Build Alternative would increase the travel lanes to three in each direction through this section. The auxiliary lanes between the ramps would remain. The median would be narrowed where the freeway passes under structures carrying local streets so that these structures would not need to be modified or replaced. Some of the existing landscaping would be disturbed. The slopes would either be steepened or retaining walls added as needed to provide width for the additional lanes. No additional right-of-way would be required. The pedestrian bridge would be enclosed to prevent objects being thrown onto the roadway below.

E. Estimated Right-of-way Impacts:

Acres	0
Number of Parcels	0
Residential Relocation (No.)	0
Business Relocation (No.)	0
Economic Impact	None

Describe: Construction would be within existing right-of-way.

F. Type of Land Use, Zoning, etc. Impact on Land Use, Including Consistency With Comprehensive Plan, Prime or Unique Farmland:

I-5 is listed as a Regional Trafficway in the City of Portland's Arterial Streets Classification Policy. This is the transportation element of the City's Comprehensive Plan. The proposed improvement is consistent with the Comprehensive Plan.

The areas adjoining the project area are exclusively residential with the exception of commercial buildings along North Lombard Street and industrial property along North Columbia Boulevard. There is little vacant land in the area.

Interstate 5 is the borderline between the Inner Northeast and North sections of Portland. The Piedmont Neighborhood adjoins the project area on the east and the Arbor Lodge and Kenton neighborhoods adjoin it on the west. In comparison to the city as a whole, these neighborhoods have a greater percentage of owner occupied, single family residences in excellent condition. However, the blocks next to the freeway do not seem to be representative of the neighborhoods as a whole.

The project would not change existing land uses. The expected increase in capacity of the roadway is not expected to cause any change in existing land uses, other than accommodating traffic growth that is a by-product of regional population and employment growth. No prime or unique agricultural land would be affected since the project is already developed for urban uses.

Significant Impact: ___ Yes _X_ No ____ Maybe

G. Impact on Traffic Volumes, Flow Patterns and Safety:

Traffic volumes are expected to increase from between 60,650 to 95,800 average daily traffic (ADT) in the year 1985 to between 75,550 to 113,250 ADT in the year 2005 with or without the proposed improvement. See Table 1 below.

Traffic flow would be smoother with the proposed project, because less merging would need to occur. Traffic speeds would be greater in the peak hours with the Build Alternative, in many cases, increasing 10 miles per hour from below 30 mph to above 40 mph in 2005. See Table 1 below.

Safety would be improved with the proposed project. Northbound traffic would have more distance to merge. Southbound trucks entering from Columbia would have the third lane available, eliminating the need to merge at low speeds.

Significant Impact: _X_ Yes (Beneficial) ____ No ____ Maybe

Table 1
TRAFFIC VOLUMES AND SPEEDS

	1985		2005 No-Build		2005 Build	
	Volume (ADT)	Speed (peak hr)	Volume (ADT)	Speed (Peak hr)	Volume (ADT)	Speed (Peak hr.)
Northbound						
Alberta to Portland	46,500	40	55,650	34	55,650	38
Portland to Lombard	41,550	44	50,150	27	50,150	43
Lombard to Columbia	35,350	50	43,250	45	43,250	47
Columbia to Delta Park	29,350	51	36,900	48	36,900	48
Southbound						
Delta Park to Columbia	31,300	50	38,650	45	38,650	48
Columbia to Lombard	37,500	47	45,400	31	45,400	46
Lombard to Portland	45,200	30	53,450	26	53,450	40
Portland to Alberta	49,300	41	57,600	37	57,600	37

H. Impact on Rivers, Streams, Floodplains, Wetlands, Estuarine Lands, Threatened or Endangered Species, Habitat or Other Natural Ecological Resources:

Some of the existing landscaping will be removed to allow widening of the pavement in the proposed project. This is not expected to have an adverse impact on any water course. No endangered or threatened species are known in the area. Standard specifications will satisfactorily handle erosion control needs.

Significant Impact: ___ Yes _X_ No ____ Maybe

I. Impact on Parks, Historic Properties, Archeological Resources, or Other 4(f) Lands, or Scenic Resources:

There are no known cultural resources in the immediate project area. Since no additional right of way would be required, no impacts to cultural resources are foreseen and a Cultural Resources Survey was not considered necessary. Archeological resources are not expected in this previously disturbed area. In the unlikely event of a discovery of an archeological site, the provisions of section 105.13 of Standard Specifications for Highway Construction (Oregon State Highway Division, 1984) will be followed.

Significant Impact: ___ Yes _X_ No ____ Maybe

J. Construction Impacts:

Traffic congestion will increase during the construction phase. The contractor would be required to maintain two travel lanes in each direction during peak hours. Watering will be required to control dust generation.

Areas adjacent to the project will be exposed to construction noise. Although of a temporary nature, additional noise can be quite annoying. This is especially true during quieter periods. Therefore, construction will be limited to daytime hours with no work on Sundays or legal holidays. This restriction will be included in the contract specifications. In addition, the contract specifications will include items in compliance with U. S. Environmental Protection Agency equipment noise standards, muffled exhaust, and added restrictions for pile driving or blasting.

The following construction noise abatement measures will be included in the project specifications:

1. No construction shall be performed within 1,000 feet of an occupied dwelling unit on Sundays, legal holidays and between the hours of 10:00 p.m. and 6:00 a.m. on other days without the approval of the Project Manager.

2. All equipment used shall have sound control devices no less effective than those provided on the original equipment. No equipment shall have an unmuffled exhaust.

3. All equipment shall comply with pertinent equipment noise standards of the U. S. Environmental Protection Agency

4. No pile driving or blasting operations shall be performed within 3,000 feet of an occupied dwelling unit on Sundays, legal holidays and between the hours of 8:00 p.m. and 8:00 a.m. on other days, without the approval of the Project Manager.

5. The noise from rock crushing or screening operations performed within 3,000 feet of any occupied dwelling shall be mitigated by strategic placement of materials stockpiles between the operation and the affected dwelling or by other means approved by the Project Manager.

Should a specific noise impact complaint occur during the construction of the project, The contractor at his own expense may be required to implement one or more of the following noise mitigations as directed by the Project Manager:

1. Locate stationary construction equipment as far from nearby noise sensitive properties as possible.

2. Shut off idling equipment.

3. Reschedule construction operations to avoid periods of noise annoyance identified in the complaint.

4. Notify nearby residents whenever extremely noisy work will be occurring.

5. Install permanent or portable acoustic barriers around stationary construction noise sources.

In addition to the above listed measures, the sound walls recommended for mitigating traffic noise will be constructed in the early stages of project construction. This will allow the sound walls to reduce construction noise as well.

Significant Impact: ___ Yes _X_ No ____ Maybe

K. Preliminary Identification of Areas of Critical Concern and Controversial Issues:

Neighbors have complained about the existing traffic noise and are concerned about future noise levels. A petition from 15 residents of North Missouri Street and North Holman Street has been received expressing concern over existing noise levels and requesting installation of noise barriers.

L. Materials and Sources: Borrow and Waste Disposal (Including Quantities):

It is estimated that there would be 40,000 cubic yards of general excavation in addition to the removal of existing shoulders (approximately 30,000 square yards). Approximately 56,400 tons of new, treated base material would be needed. The new pavement would require about 3,100 tons of Portland cement. The new shoulders would require about 2,600 tons of asphalt mixture. Commercial sources of borrow will be used. These quantities will not have a significant impact on local sources.

Significant Impact: ___ Yes _X_ No ____ Maybe

M. Consistency of Project with:

1. Clean Air Implementation Plans:

An Air Quality Report has been prepared for this project. Areawide air quality will improve for carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NOx), Ozone and Lead. Total emissions will be lower in the year 2005 for both the Build and the No-Build Alternatives, with the Build Alternative producing about 1% less emissions than the No-Build for HC and NOx. Total Suspended Particulates (TSP) are directly related to vehicle miles traveled (VMT) in the project area. VMT is predicted to increase and be the same for both Alternatives, therefore TSP are also predicted to increase. Predicted 1-hour CO concentrations range from 2.5 to 8.6 mg/m^3 and predicted 8-hour CO concentrations range from 2.5 to 7.1 mg/m^3. The Build Alternative will not increase CO concentrations significantly as compared to the No-Build Alternative. All predicted CO concentrations are below the National Ambient Air Quality Standards (NAAQS).

This project is located in the Portland-Vancouver AQMA which is designated as being in non-attainment of the NAAQS for CO, Ozone and TSP. Project conformity with the State Implementation Plan (SIP) is based on the project being included in a Transportation Plan, and a Transportation Improvement Program, both of which conform to the SIP. Since this project is included in these documents, it conforms with the SIP.

An Indirect Source Permit will not be required because the project will not increase predicted traffic volumes over those predicted if the project were not built.

___ Attainment Area

_X_ Non-Attainment Area

2. Noise Abatement Criteria:

Measurements of existing noise levels were taken at five sites located throughout the project. Table 2 shows the measured sound levels. As shown, the measured noise levels vary from Leq 69 to 81 dBA.[1]

A computer model was used to predict future noise levels with both the No-Build and Build Alternatives. To check the validity of the computer model in relation to this project, noise levels were calculated with the traffic volumes and speeds observed during the measurements. As shown in table 2, the predicted levels agree with the measured levels within 3 dBA. This close agreement verified the accuracy of the prediction model.

Table 2

MEASUREMENT SITE DATA FOR EXISTING NOISE LEVELS

Site #	Site Description	Distance from Center of Road	Measured Leq Level	Calculated Leq level
MS-1	West of I-5 Mid-Block on Minnesota between Terry and Winchell Sts.	105 ft.	75 dBA	76 dBA
MS-2	East of I-5 North Side of Bryant	125 ft.	74 dBA	76 dBA
MS-3	West of I-5 on Bryant 22 ft. West of ROW fence	150 ft.	70 dBA	73 dBA
MS-4	East of I-5 corner of Watts and Missouri Ave.	140 ft.	69 dBA	69 dBA
MS-5	West of I-5 East side of Minnesota Ave. 375 ft N. of Ainsworth Ave. at access control fence	105 ft.	81 dBA	80 dBA

Noise levels were then predicted for the Year 2005 for both the Build and the No-Build Alternatives. The results are shown in Table 3. The predicted noise levels for the No-Build Alternative are within 1 dBA of those predicted for the Build Alternative. Both Alternatives have predicted noise levels that are 1 dBA higher than the existing noise levels. These predicted levels were

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1 The Leq descriptor is commonly used to measure or quantify sound. The Leq level is an energy-averaged sound level. The measured units are decibels with an A-weighted frequency response (dBA). This measurement unit closely matches the hearing characteristics of the human ear.

compared to the FHWA Noise Abatement Criteria of Leq 67 dBA for residences. A total of 150 residences are impacted by traffic noise for both the Build and No-Build Alternative. Figures 4a-4c show the impacted houses.

Noise barrier walls were considered and deemed a reasonable and feasible method of noise reduction. These walls could be placed at the location of the existing access control fence. The access control fence location was selected due to the limited right-of-way and a desire to provide minimal disturbance to the adjacent property owners . Due to the limited right-of-way and existing landscaping, precast concrete post and panel walls are recommended.

The walls proposed are shown in figures 4a-4c.The six walls range in length from 1,235 feet to 2,750 feet and in height from 10 feet to 16 feet. The estimated total cost for all six walls is approximately $1.6 million. (See Table 4 for a summary of the noise barrier costs.)

TABLE 3

PREDICTED NOISE LEVELS (Leq dBA)

Receiver Wall Site #- Receiver #	Existing	2005 No-Build	2005 Build W/O Barrier	2005 Build W/Barrier	Predicted Barrier Attenuation
1-1	67	67	67	62	5
1-2	70	70	70	59	11
2-1	67	67	67	62	5
2-2	68	68	68	59	9
2-3	67	67	67	58	9
3-1	73	73	73	65	8
3-2	73	73	73	65	8
4-1	68	68	68	63	5
4-2	73	73	73	66	7
4-3	67	67	67	62	5
5-1	76	76	76	66	10
5-2	76	76	76	67	9
5-3	74	74	74	66	8
6-1	70	70	70	64	6
6-2	73	73	73	67	6
6-3A (16 ft. wall @ fence)	70	70	70	66	4
6-3B (10 ft. wall @ shoulder)	70	70	70	66	4

FIGURE 4A

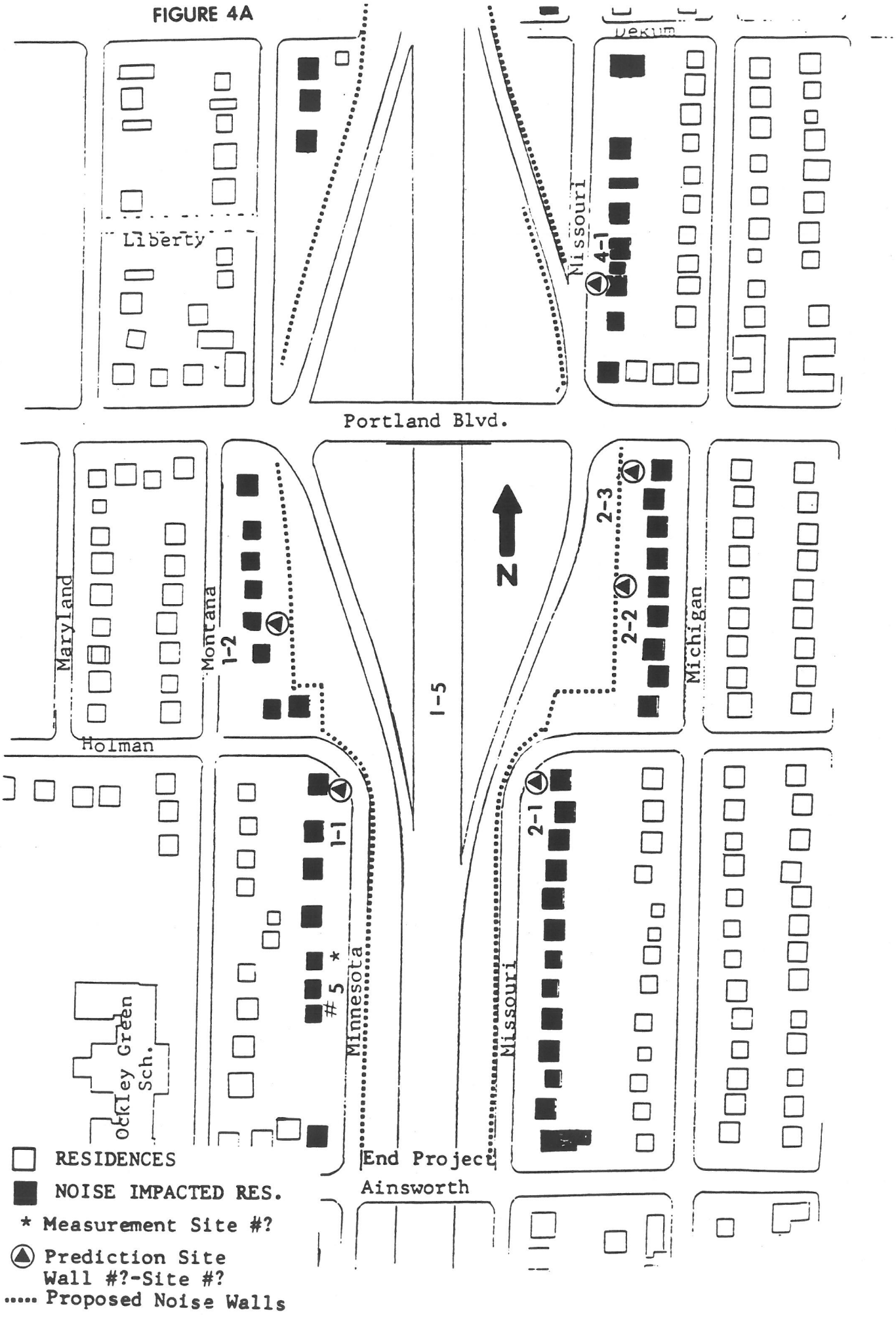

Liberty
Missouri
4-1
Portland Blvd.
Maryland
Montana
1-2
I-5
N
2-3
2-2
Michigan
Holman
1-1
2-1
5 *
Minnesota
Missouri
Ockley Green Sch.
End Project
Ainsworth
RESIDENCES
NOISE IMPACTED RES.
* Measurement Site #?
Prediction Site
Wall #?-Site #?
..... Proposed Noise Walls

FIGURE 4B

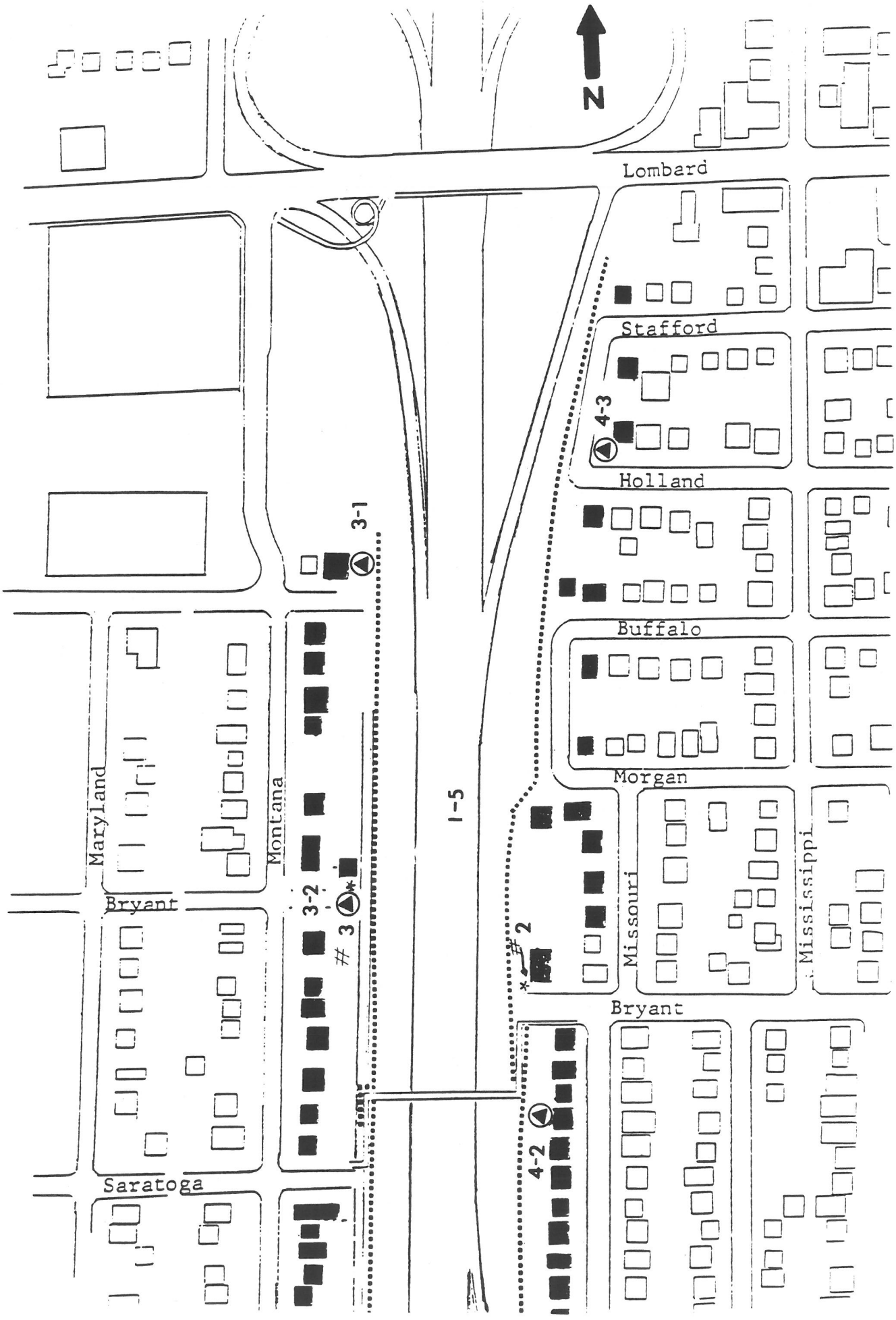
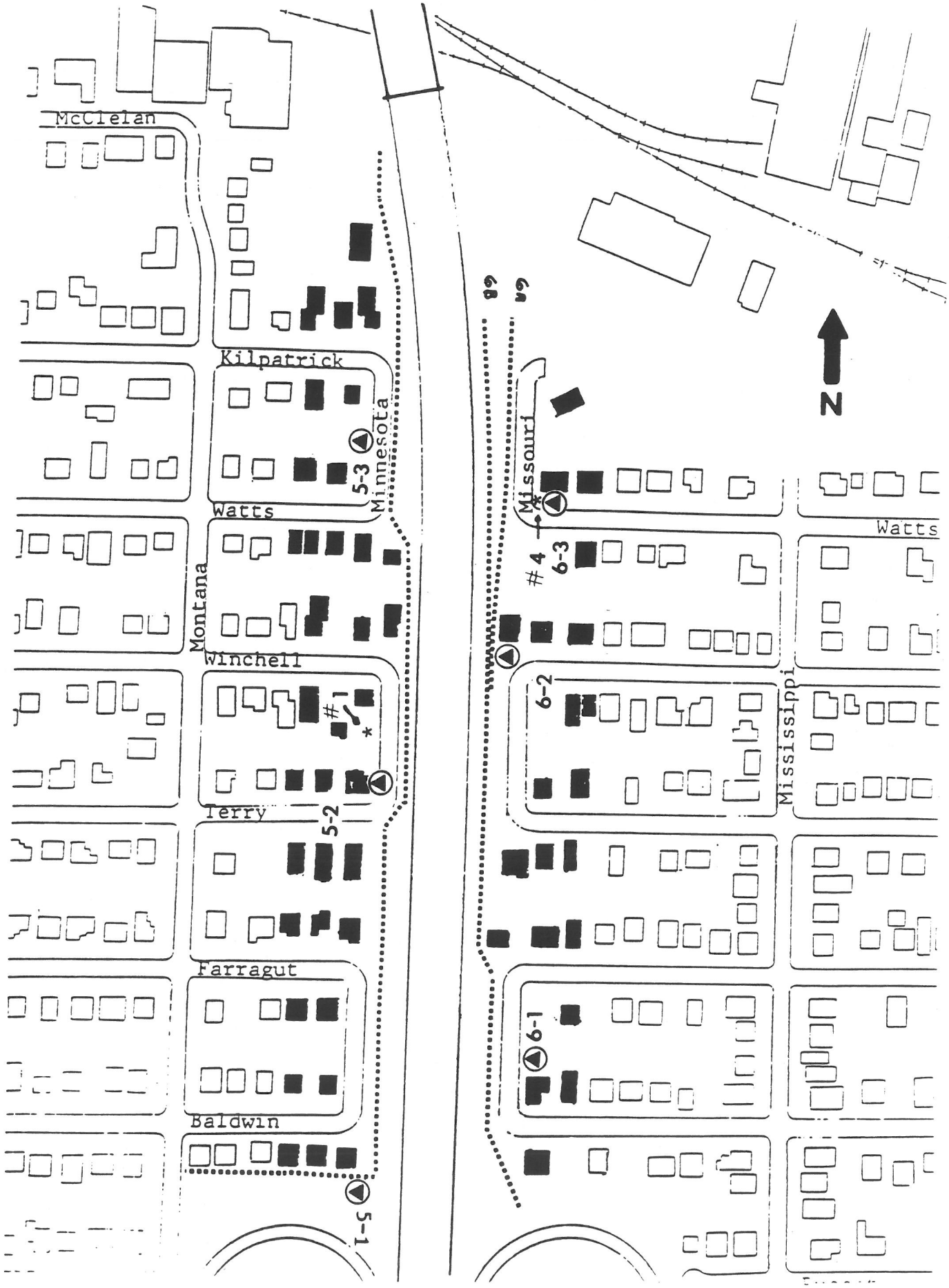

N
Lombard
Stafford
Holland
Buffalo
Morgan
Bryant
Saratoga
Maryland
Montana
Missouri
Mississippi
I-5
3-1
3-2
4-2
4-3
3
2

FIGURE 4C

Begin Project



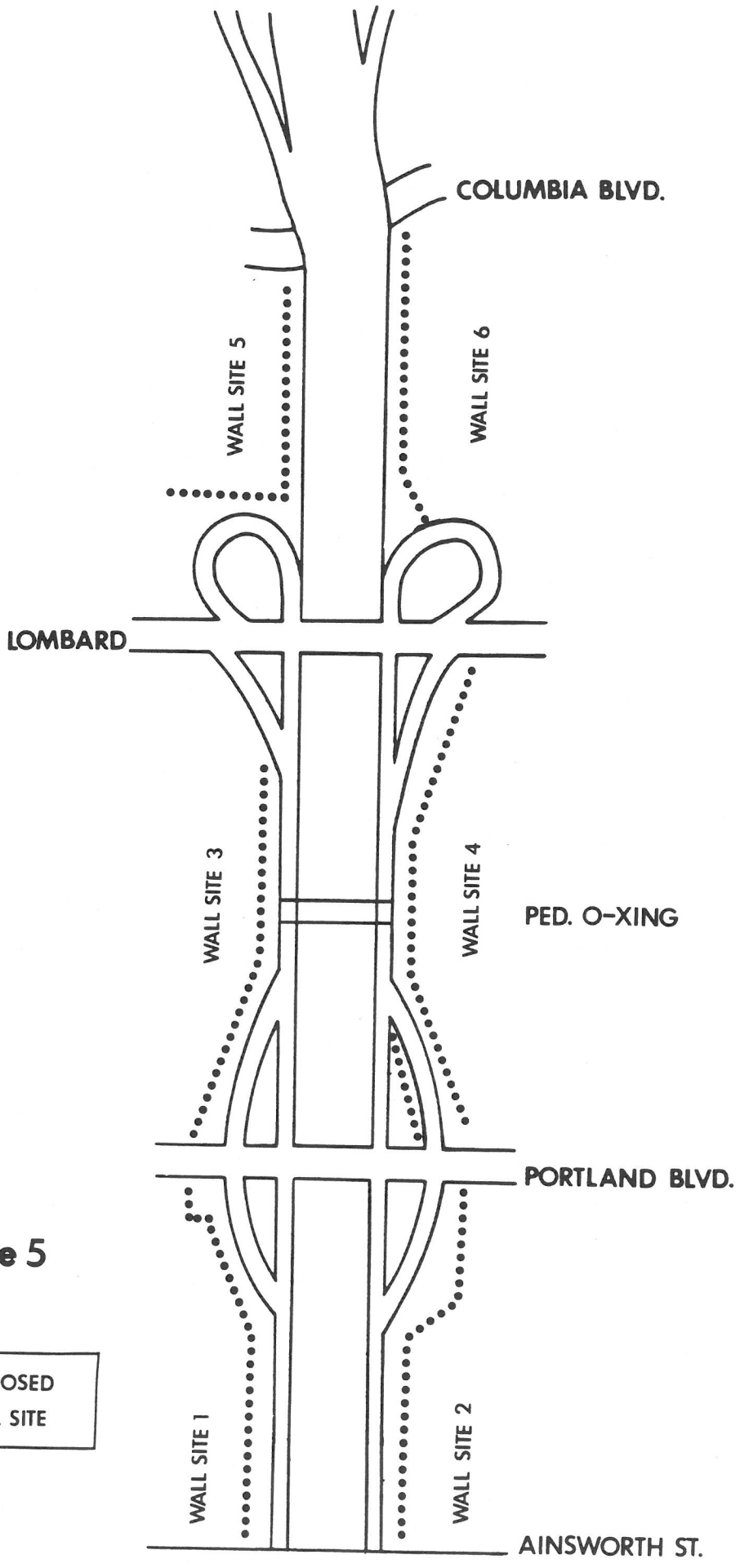


Figure 5

NO SCALE

Table 4

NOISE BARRIER COST SUMMARY

Wall #	Barrier Length (feet)	Height (feet)	Type	Estimated Total Cost	Cost per dBA Reduction per Residence	Build Recommendation (Yes/No)
1	1,235	10	Post and Panel	$164,000	$1,350	Yes
2	1,335	10	Post and Panel	$178,000	$1,200	Yes
3	2,350	10	Post and Panel	$313,000	$1,700	Yes
4	2,750	10	Post and Panel	$366,000	$1,800	Yes
5	1,720	12-14	Post and Panel	$329,000	$1,350	Yes
6A	1,490	12-16	Post and Panel	$269,000	$2,300	No
6B	1,490	12-16	Post and Panel	$248,000	$2,100	Yes

Note: Either of these walls (6A or 6B) is cost effective and worthy of recommendation. Wall 6B is recommended due to lower cost of construction and aesthetic consideration.

3. Water Quality Standards:

The Build Alternative would use the existing storm drainage system. The inlets would need to be relocated to the new shoulder. There would be a slight increase in the amount of storm drainage water because there would be more paved surface.

N. Permits Required:

1. Federal: None

2. State or County: None

O. Applicability of Special Interest Environmental Legislation to Project:

	Yes	Maybe	NO
1. Endangered Species Act	___	_____	X
2. Coastal Zone Management Act	___	_____	X
3. Executive Order 11988 (Flood Plains)	___	_____	X
4. Executive Order 11990 (Wetlands)	___	_____	X
5. National Historic Preservation Act, Section 106	___	_____	X
6. Farmland Protection Policy Act of 1982	___	_____	X
7. Section 4(f)	___	_____	X
8. Section 404	___	_____	X
9. LCDC Goal Exceptions	___	_____	X
10. Estuarine Lands	___	_____	X
11. Other _____	___	_____	___

P. Recommended Project Classification:

Project Class	Documentation
_____ I	Draft and Final EIS
_____ II	Categorical Exclusion
X III	Environmental Assessment

Reasons for Proposed Classification:
Addition of two travel lanes within existing ROW. Safety and capacity improvements to match capacity south of project.

Other Documentation

___ Wetlands Finding/Analysis
___ Endangered Species List
___ Biological Assessment
___ Cultural Resources Survey
___ Section 106 Procedures
___ Section 4(f) Evaluation
___ Section 6(f) Evaluation
___ Floodplain Finding/Analysis
X Noise Study Report
___ Indirect Source Permit

Q. Comments and Coordination:

A public meeting was held on January 9, 1986. The people attending confirmed that they were concerned about the existing noise levels and about the possibility of noise walls. Since the Noise study report was not yet complete, they were told that walls were being considered but that the cost/benefit analysis was not completed and no specifics about the walls (such as height at a particular location) were available. They were told that all owners who would be adjacent to a proposed wall would be contacted to discern their opinions for or against building such a wall.

Other topics raised at the meeting included the pedestrian bridge and problems caused by vibrations. Many people complained that the bridge was an escape route for burglars and thieves. When a show of hands was requested, eight people indicated that they would like the bridge to be removed while two wanted the bridge to remain. The citizen who suggested the removal of the bridge was encouraged to work further with the neighborhood group to investigate this further.

Some people also complained that vibrations from the freeway were causing cracks in their foundations and walls. One person said that the houses in the area of Missouri and Holman at the south end of the project were built on an old gravel pit that had been filled. They were concerned that replacing the retaining wall for the Portland Boulevard off ramp would undermine the street corner and possibly some homes. They asked if soil tests had been made along the shoulder near the retaining wall. ODOT personnel at the meeting did not have the information and said the concerns would be explored further. Residents who were concerned about further damage from the construction were encouraged to contact ODOT to have their residences photographed in a before condition, so that any damaged caused by the construction could be documented and adequately compensated.

A Public Hearing is planned in July, 1986.

When the City of Portland Police Department was questioned regarding the pedestrian bridge, they confirmed that it was used as an escape route. When Ockley Green Middle School was contacted, they stated that their students used the bridge and that they do not want the bridge to be removed. (See letter in Appendix A.) The neighborhood groups have not contacted ODOT further on this issue.

The State Clearinghouse review produced one comment from the Department of Environmental Quality concerning noise. DEQ recommends that FHWA noise criteria be complied with and that noise barriers be constructed along the right-of-way.

Appendix A

PORTLAND PUBLIC SCHOOLS
6031 N. Montana Ave. / Portland, Oregon 97217
Telephone: (503) 285-3601

OCKLEY GREEN MIDDLE SCHOOL

Office of the Principal

February 20, 1986

Oregon State Highway Division
9002 S.E. McLoughlin Blvd.
Milwaukie, Oregon 97222

Dear Ms. Kloos:

This letter is written in response to your question about student usage of the pedestrian overpass near Lombard Avenue and Interstate Fred Meyer store.

We do have students living in the Applegate School area (7650 N. Commercial) who use this bridge while in route to and from Ockley Green Middle School.

Sincerely,

Carolyn Davidson

Carolyn Davidson
Administrative Assistant
CD/s