

**FINDING OF NO SIGNIFICANT IMPACT**

on the  
**ENVIRONMENTAL ASSESSMENT**  
for

Project No. CM 0002(105)  
Brooks/South/Russell Intersection Project  
City of Missoula  
P.M.S. Control No. 2418

Submitted Pursuant to  
40 U.S.C. 4332(2)(c)  
and  
Section 2-3-104, 75-1-201 MCA

by the  
**State of Montana**  
**Department of Transportation**

and the  
**U.S. Department of Transportation**  
**Federal Highway Administration**  
**Region 8**



MR. ROBERT M. WEIKEL  
11140 MONROE ST.  
MISSOULA, MT. 59802

243-3581



NEW  
Light

CARFIELD L. T. FARMER  
LEFT OR RIGHT AT LIGHT  
AT LIGHT

NO LEFT

NO LEFT

BROOKS ST. SLOPS

PRESERVE LIGHT

NO LEFT TURNS

NO LEFT

NO LEFT

NO LEFT TURNS

NO LEFT

THREE PHASE LIGHT

FAIR GROUNDS

NEW  
Light

MR. ROBERT M. WEIKEL  
11140 MONROE ST.  
MISSOULA, MT. 59802

STEELE'S AVE.  
LEFT TURN FROM S.E.  
AT LIGHT

100-1-1-1  
Light

for  
93-000  
EA PULIN  
Connect





MR. ROBERT M. WEIKEL  
1140 MONROE ST.  
MISSOULA, MT. 59802  
543-3581

I believe this plan for the traffic problem at the B.S.R. intersection, which is a modification of the Interiom Option Plan, would better route the traffic thru the intersection and reduce congestion.

Allowing the South Ave, traffic to flow straight thru the intersection with right turns at all streets, including Brooks and Russell with addition of right turn islands.

No left turns from South Ave, between Stephens Ave. and Garfield St. Added turn barriers at the Intersections.

This would eliminate the need for a confusing and costley detour system, which would send the South Ave. traffic thru the intersection but from a different route.

The east bound South Ave. traffic could turn north at Stephens Ave. or continue east to Bancroft St. So. Higgins or Arthur Ave.

The west bound South Ave. traffic could turn south at Garfield St. or continue on to the Mall, Eaton St. or Reserve St.

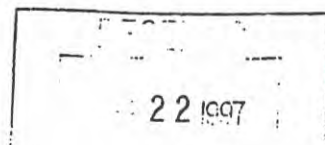
Traffic on Garfield St. could turn east at Dearborn for local access or at Fairview to access So. Brooks "93" or to Russell St. It could continue on South to join Brooks St. "93".

North bound traffic on Garfield would not have to be stopped at Fairview.

West bound traffic on Sussex would not be stopped at Stephens Ave.

This would allow for a three phase light at B.S.R. intersection and much smoother flow of traffic on all three of the B.S.R. streets.

Bob Weikel





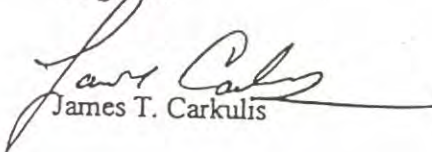
7] The failure to identify traffic flow interruptions, [i.e. the vast majority of traffic east on South attempting to go north on Russell or Brooks through Catlin, Washburn, etc.].

There is only one practical, low cost, solution which eliminates the vast majority of the problems incurred by the current proposal. This solution shall also allow vast increases in traffic flow for the future, while assuring smooth, traffic flow with ample opportunities to access both South and Russell via Brooks without impeding any traffic. This solution shall mitigate private property acquisition while providing exciting new opportunities for existing businesses to access customers. And this solution is simple. It does not require vast resources for rerouting traffic through side streets and creating avenues and barriers to accomplish the rerouting. In fact, this solution provides more smoother flow for side streets than currently available.

This solution shifts Brooks at Fairview towards Russell. Brooks then intersects Russell, passes to the Northwest of the Grandstands, turns north and intersects South at Regent, heading north on Regent until intersecting itself at Regent & Brooks. All traffic on Brooks can access either Russell or South at two right angle intersections. This proposal keeps the correct right angle intersection of Russell and South. This proposal allows easier access on all streets south of South Ave. For the 6 days of the fair each year, Brooks can reroute from Fairview north on Russell, east on South, then north on Regent. This proposal also allows virtually all customers to have equal if not increased and safer access to businesses within this district. This proposal does not compromise the integrity of South Ave., and it allows for a greatly increased volume of traffic with exceptional efficiency. While the citie's proposal projects the Russell/Brooks intersection at 20 seconds per cycle, my proposal shall allow cycles which emulate this cycle throughout the entire district.

Unfortunately, when most proposals come out of an intra agency, responsible public input and hearings turn into merely formalities. I hope in this particular case that this mind set is not true. I share your concerns for mitigating pollution, especially particulate levels, and to ease traffic flows at Malfunction, but the current proposal does little to address the problem of the future increase in vehicle daily use.

Regards:

  
James T. Carkulis



*Brumbyman*

## MYRIAD

The Myriad Group LLC / P. O. Box 249 / Missoula, Montana 59806 / 406/542-1450 / FAX: 406/542-1499

September 17th, 1997



Mike Kadas  
Mayor, City of Missoula  
435 Ryman  
Missoula, MT 59802

RE: Proposal for Malfunction Junction.

Mike:

To preface, we met at the fund raiser in your behalf at Tom and Lucy France's residence.

I have extreme reservations on the current solution as proposed by the city engineers to ameliorate the traffic and pollution dilemma for the future at Einstein's Intersection. The problems that shall incur, or fail to be solved, by this solution, the city can ill afford. This "solution" is shortsighted and short term. It does not address the inherent failures of the current intersection with an alternative that shall lead to a sustainable, smooth traffic flow which, in effect, shall mitigate or elimination the current failures. Some, but not all, of the shortcomings in the present proposal are:

- 1] The elimination of one of the major East/West arterials in this community, especially in light of the fact that South Ave. is a major facilitator off Reserve St. [which itself is severely limited in east/west thru connections].
- 2] The failure to allow traffic north on Brooks to turn to Russell St. with minimum disruption.
- 3] The failure to allow traffic south on Brooks to turn east onto South Ave. with minimum disruption.
- 4] The additional dilemma of a major intersection [non perpendicular] intersection at Stephens and the 'New South' Ave. north of the current Stephens/South intersection.
- 5] The utilization of Garfield for the 'New South' which leads to impossible angles at Brooks and Fairview.
- 6] The failure to allow traffic north on Russell to turn west on South Ave. with minimum disruption.



RECEIVED  
SEP 16 1997  
MAYOR'S OFFICE  
CITY OF MISSOULA

September 15, 1997

Mike Kadas - Mayor  
Office of the Mayor  
435 Rymann  
Missoula, MT 59802

Dear Sir,

I am writing this letter to express my opinion on the planned  
revisions to Madison Junction.

I am totally against spending the vast sums of money that  
are mentioned for the revisions, that in my opinion, are  
unnecessary. In addition, from a personal standpoint,  
this revision would result in a higher traffic flow through  
the area in which I live, and have lived for thirty four  
years. A considerable number of the cars that would be  
routed west on Fairview would turn south on Washburn, rather  
than going on to Russell. The traffic in my area is very  
heavy at present time, and this could result in an intolerable  
situation.

To illustrate my point, I would like very much for you to  
have a traffic study done on the 3200 block of Washburn and  
the 1600 block of Earnest, which is the intersection where  
my house is.

Sincerely,

*Del W. Cumley*  
Del W. Cumley  
3201 Washburn St  
Missoula, MT 59801





## Hi-Noon Petroleum

1101 South 6th St. West • Box 7578 • Missoula, Montana 59807  
(406) 542-0384 • FAX (406) 721-9948

SEP 17 1997

September 16, 1997

Bruce T. Bender  
Public Works Director  
435 Ryman Street  
Missoula, MT 59802-4291

Dear Mr. Bender:

The planned development by Carter/Burgess is a real threat to all business owners in this effected area. If this plan becomes reality, property will devalue, tax revenues, and jobs will be lost. Area W7 and E5 will be an area with vacant buildings, and lost motorists.

If this plan is not followed, business owners in the effected area will maintain the business revenues they now have. The public will find other ways to get around the intersection (assuming that they feel that an estimated three minutes wait is too long), and opportunity in other areas for commercial and residential development will increase.

Let the intersection stay the way it is now, and allow people to change.

Sincerely,

A handwritten signature in black ink, appearing to read "William R. Nooney". The signature is fluid and cursive, with a long horizontal stroke at the end.

William R. Nooney

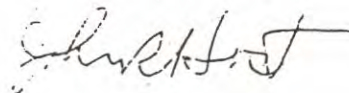
cc: William J. Nooney  
City Council 435 Ryman, Missoula, MT 59802



left for two-way traffic. What would be the impact on safety of school children, pedestrians, and vehicles when traffic is increased because of blocking off MF?

A simple solution exists. Install a traffic barrier to north-bound exit at South on Catlin! I feel this would be done regardless of the proposed project if the proper people looked at the present situation.

John R. Host  
1665 West Sussex Avenue





BRUCE BENNER

cc: Carl T.

File 93-40  
EA Comment

SEP 16 1997

COMMENTS ON BROOK/SOUTH/RUSSELL TRANSPORTATION IMPROVEMENT PROGRAM

This title is misnamed. This is not concerned with environmental issues or impacts! It does not treat alternatives but an alternative (only one).

My main objection to this alternative is that it does not consider the impact on traffic volume and type when South Avenue traffic flow is stopped at Malfunction Junction (MF).

SCENARIO 1. Assume East-West traffic count is constant. There will be a diversion with this plan, but the total traffic count through MF will vary very little.

SCENARIO 2. N-S traffic on Russell from South Avenue! Southbound traffic will proceed along the designayed Garfield route. Environmental impact will be negligible because this is not through a residential zone.

Northbound traffic poses an extremely serious impact on the McLeod residential neighborhood north of South Avenue! More specifically, this traffic will exit South Avenue at Catlin as it does now and turn east to Russell on Sussex, Central, Kent, and North Avenues.

My subsequent remarks are concerned with Catlin exit from South.

It is apparent that the current and project impact on traffic has not been adequately studied. For example, what is the traffic type (light vehicle and heavy truck) and amount through the busy traffic periods? -There is an overwhelming proportion of vehicles turning left at MF. -What is the current and projected accident rate at the South-Catlin intersection? (I suggest this is the highest for west South Avenue!) Since there is no readily available pertinent traffic information for Catlin Avenue, my observations can be as valid as anyone else's. I live on the corner of Catlin and Sussex..

100% of northbound traffic on Catlin from South turns east on Sussex 6:30 - 7:30 M-F; the percentage drops to about 20% at about 9:00 AM. The traffic barriers off Russell at Sussex and Kent prevent this from reversing in the late afternoon and evening.

Undoubtedly, this traffic volume will increase exponentially when it becomes necessary to traverse the circuitous Garfield-Fairview-Russell route. What are the estimates from the Engineer Corps in the Public and Planning Departments? What will be the impact on noise, safety, and pollution as well as the property values for this residential area?

I am sure adequate consideration has not been applied to the currently hazardous condition when schoolbuses are at Jefferson School. School personnel park at both curbsides of Catlin the full length of South-Sussex. This leaves only two narrow traffic lanes. School buses block one lane. The single lane is

Tim <del>ESSE</del> Plasmier	- 1601 W Central
Jodi Plasmier	- 1601 W Central
Annabel E. Hansen	1550 W. Central Ave
Ward E. Hansen	1550 W. Central Ave.
Sharon Jochensen	1626 W. CENTRAL
Jim Jochensen	1626 W. CENTRAL
Les. E. Jochensen	1623 W. Central
Ken McRae	1505 W. CENTRAL
Marybeth Kommer	1532 W. Sussex Ave.
Clara Miller	1526 W. Sussex
Lisa Mori	1644 W. SUSSEX
Paul Mori	1644 W. SUSSEX
Dwight Miller	1526 W SUSSEX
Dennisy Aman	1545 W. SUSSEX
Bob Allen	1545 W. Sussex



Signature

Hendell Barnes  
Carolyn Barnes  
John Phoenix  
Gynajorie m. Fox  
Christine M. Jeff  
Scott Jeff  
A.  
Scott Barrett  
Mark Bennett  
David Roy  
Marsha Rogers  
Clayton Gyle  
Harrow Day  
Kendall Benedict  
Bob Benedict  
Edna Knudson  
Walt Henry  
Martha Henry  
James W. S.  
Christine Fox  
Gary Mitchell  
Ann Moore  
Helga A. Schweitzer  
Ben A. Schweitzer  
Paula Peterson  
Erik A. Peterson  
Frances Phoenix

Address

1729 W. Sussex  
1729 W. Sussex  
1645 W. Sussex  
1465 W. Sussex  
1609 W. Sussex  
1609 W. Sussex  
Helen Carroll  
1575 W. Sussex  
1575 W. Sussex  
1531 W. Sussex  
1531 W. Sussex  
1508 W. Sussex  
1512 W. Sussex  
1520 W. Sussex  
1520 W. Sussex  
1540 W. Sussex  
2023 Catlin  
2023 Catlin  
1720 W. Kent.  
1720 W. Kent  
1721 W. Kent  
1645 W. Sussex  
2109 South 5th msa  
2109 South 5th West.  
2110 Pardoe Ct  
2110 Pardoe Ct.  
1645 W. Sussex



Recd. 9-16-97  
8:40 AM Clerk's office  
ed

CC

File 93-040

EA Comment

A PETITION TO AVOID A SERIOUS MISTAKE IN THE PROPOSED MAL-  
FUNCTION JUNCTION TRAFFIC PLAN

We, the undersigned, wish to go on record demanding blocking off access to Catlin Avenue from South Avenue.

The plat "APPROACH FROM SOUTH", in the informational packet shows a northbound exit from South Ave at Catlin!

A traffic count of the current situation will indicate an unduly large amount of traffic on Catlin for a residential area. This diversion from South Avenue will only exacerbate the situation when Malfunction Junction access is blocked.

We recognize that the proposed Traffic Plan will encourage using Catlin to access northbound Russell Street. The traffic control light at Catlin-Brooks-Fairview intersection will direct northbound Russell traffic on Catlin through the residential Mc Loed Park area. A barricade is now at this intersection but it can be removed easily with a little persuasion.

Leaving northbound Catlin Avenue open at South will add to serious safety problem at Jefferson School! School buses service Jefferson School waiting in the southbound traffic lane of Catlin because the school system personnel park at the street curb. This problem is neglected by the City traffic and police departments. The current Malfunction Junction mitigation plan will certainly worsen the situation!

NAME

ADDRESS

<u>John Host</u>	<u>1665 W. Sussex</u>
<u>Mary C. Clayton</u>	<u>1647 W. Central</u>
<u>Lynne Braden</u>	<u>1635 W. Sussex</u>
<u>John Walden</u>	<u>1435 W. Sussex</u>
<u>Hester Fulton</u>	<u>1612 W. Sussex</u>
<u>Ruby Fulton</u>	<u>1612 W. Sussex</u>
<u>David E. Lipp</u>	<u>1535 W. Kent Ave.</u>
<u>Krista A. Carter</u>	<u>1601 W. Kent Ave.</u>
<u>John E. Lipp</u>	<u>1600 W. Sussex</u>
<u>John E. Lipp</u>	<u>1600 W. Sussex</u>
<u>John E. Lipp</u>	<u>1630 W. Sussex</u>
<u>John E. Lipp</u>	<u>1630 W. Sussex</u>



## PUBLIC COMMENT FORM

For  
BROOKS/SOUTH/RUSSELL  
TRANSPORTATION IMPROVEMENT PROGRAM

Use This Form to Provide Your Comment on the  
Environmental Assessment Alternatives and Mail to:

Bruce Bender, P.E.  
City of Missoula  
435 Ryman  
Missoula, MT 59802

Name: Bruce Bender, P.E.  
Address: 1649 S. W. 1st St. Phone: 466-543-7581

As far as I know, your plan will  
not move traffic on the side streets  
near 93.

The side streets have been  
closed since moving on there. They don't  
need more traffic.

93 is the busy street. It probably doesn't  
need more traffic.

As for the business - they need  
exposure to service. Since they don't  
have walk-by traffic, we need the  
drive-by traffic.

Signature: Bruce Bender, P.E.

(Use reverse side if more comment space is required)



## PUBLIC COMMENT FORM

For  
BROOKS/SOUTH/RUSSELL  
TRANSPORTATION IMPROVEMENT PROGRAM

SEP 16 1997

Use This Form to Provide Your Comment on the  
Environmental Assessment Alternatives and Mail to:

Bruce Bender, P.E.  
City of Missoula  
435 Ryman  
Missoula, MT 59802

Name: HORACE S. Brown County Surveyor 721-570-2275  
Address: Iron Gate St Phone: 721-7251

THE CUL DE SAC ON SOUTH WORKS OKAY  
FOR TRAFFIC GOING EAST, THE TRAFFIC  
GOING WEST WILL HAVE TO CONTINUE ON  
SOUTH AVE, BECAUSE THERE IS NO LEFT TURN  
ONTO GARFIELD. THIS WILL FORCE MORE  
TRAFFIC INTO WASHINGTON AND CATLIN.

TRAFFIC GOING EAST ON SOUTH AND THEN  
NORTH WILL PROBABLY USE THE NEIGHBORHOOD STREETS  
CATLIN AND POSSIBLY WASHINGTON TO GO NORTH AND THEN  
DOWN I-5. THE MORE CIRCULATED ROUTE DOWN  
DOW FAIRVIEW AND NORTON PARKS.

ON THE EASTERN SIDE OF BROOKS THE ROUTE  
HAS LESS PROBLEMS, IT WILL STILL FORCE SOME  
TRAFFIC INTO THE NEIGHBORHOOD.

IN BOTH AREAS I SEE THE BUSINESSES  
LOSING BUSINESS FROM THE ISLAND EFFECT, THEY  
WILL BE HAD TO GET TO AND AVERAGE  
DAILY TRAFFIC WILL BE LOWERED, THUS EXPOSURE  
WILL BE LOWER. IN BUSINESS LOCATION  
IS IMPORTANT FOR EXPOSURE YOU HAVE PARTICULARLY  
IMPACTED THE BUSINESSES IN THIS AREA.

THIS IS NOT MUCH DIFFERENT THAN THE  
PROPOSAL I GAVE YOU DURING THE PUBLIC  
HEARING ON THE IMPROVEMENT, WHICH WAS NOT LOOKED AT.  
THAT PROPOSAL CLOSED RUSSELL ST.

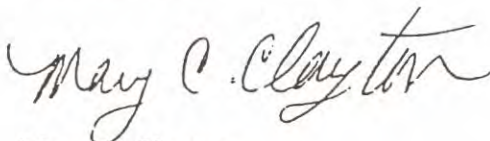
Signature: HORACE S. Brown

(Use reverse side if more comment space is required)



realize you have pollution considerations about this intersection, but the expense and disruption to area homes and businesses is more important. If you can't use the funds for any other road project, I'd suggest returning the money to whatever federal or state agency gave it to you. It is common knowledge that the hub of Missoula is moving out to the Reserve St.-Mullan Rd. area, and in a few years, Malfunction Junction traffic may not be nearly as heavy as it is now. Have you looked at or studied this likelihood at all? If not, I would suggest that you are not doing your jobs with the best interests of Missoula as your primary concern.

Sincerely yours,

A handwritten signature in cursive script, reading "Mary C. Clayton". The signature is fluid and elegant, with the first letters of each word being capitalized and prominent.

Mary C. Clayton

Mary C. Clayton  
1642 W. Central  
Missoula, MT 59801

15 1997

Attn: Bruce Bender  
Director of Public Works  
City of Missoula  
435 Ryman  
Missoula, MT 59802

Re: Proposed "Favored Alternative" to Malfunction Junction

Dear Mr. Bender,

I would like to voice my opinion about the 'favored alternative' to Malfunction Junction. I live in the small, residential neighborhood which includes Jefferson School, in fact I live on the corner of Catlin & Central.

Eastbound traffic on South Avenue will be asked to bear right and take a route to Brooks if you close off South to Malfunction Junction. I think it is apparent that many drivers will prefer to take a short cut up Catlin to North and over to Russell if in fact they are trying to get northbound on Russell. This is not just imagination on my or my neighbors' parts; this already goes on at an unbelievable rate. My neighborhood is full of old people and people with small children, it is strictly residential, and already there are tractor trailers coming through at all hours of the day and night, and many drivers who fail to stop at the stop signs, and speed at what I would guess is 35-45 miles per hour. It is appalling that this goes on in a neighborhood where the speed limit is 25mph. I propose that before any decisions are made regarding Malfunction Junction and this particular solution, a traffic analysis should be done by a qualified company. If in fact, an analysis shows that traffic through this residential area will increase considerably, solutions should be recommended, whether it be barriers from making a left into Catlin or a left out of Catlin, whether streets should be made one-way, or other solutions that fail me at this time.

Mr. John Host, a neighborhood resident, has spoken with you who apparently has the opinion that because the council never bothered to consider how this proposal affects the nearby residential neighborhoods, it is not a problem and will not be looked at. I take issue with this kind of thinking. Now that this matter has been brought to your attention, I expect you to consider the problem and propose solutions keeping in mind that the safety and happiness of your fellow Missoulians should be of the utmost concern to you and the entire council.

I don't think anything should be done with Malfunction Junction. Yes, it gets tied up at certain times of the day, but having to wait one change of lights doesn't bother me. I





DEPARTMENT OF PUBLIC WORKS

435 RYMAN • MISSOULA, MT 59802 - 4297 • (406) 523 4620

E-97-1301

August 29, 1997

*Building  
Engineering  
Streets*

*Transportation  
Vehicle Maintenance  
Wastewater*

TO BROOKS, SOUTH, RUSSELL PROPERTY & BUSINESS OWNERS

This letter is a follow up to the meeting of July 11, 1997 and the meetings with Carter/Burgess that were held throughout July.

Thirty-six meetings were held by Carter/Burgess to discuss this project. I have received the summaries of these meetings, reviewed them, and have found them very helpful in understanding your issues. Many of these issues can be addressed in the design phase of the project. I have requested Mike Worrall of Carter/Burgess to submit a general summary of issues and recommendations for changes at the public hearing. I am appreciative of the time you spent to attend these meetings.

Attached are drawings that were developed by Carter/Burgess in discussions with property owners and businesses. These drawings display the permitted traffic flows with the South Avenue Realignment Project. Hopefully, these drawings will assist you in understanding the proposed changes. Also, attached is a question and answer handout developed as a result of your questions.

The Environmental Assessment will be released for public comment on September 2, 1997. The Montana Department of Transportation has been amending and approving this document during the month of August.

**The public hearing before the City Council is scheduled for September 22, 1997 at 7:00 p.m. in the City Council Chambers.**

Sincerely,

Bruce T. Bender  
Director of Public Works

Cc: Mike Kadas, Mayor  
Janet Stevens, Chief Administrative Officer  
Mike Worrall, Carter/Burgess  
City Project No. 93-040

**Appendix B**

**Letter to Property Owners  
Written Comments Received**



Dan Poe Newman, Candidate of Justice of the Peace 1998. Mr. Newman gave a history of Malfunction-Junction. He announced a meeting of reporters at the Hyatt Regency on September 25<sup>th</sup> that will be on ethics in journalism.

COMMUNICATIONS FROM MAYOR - None

GENERAL COMMENTS OF CITY COUNCIL MEMBERS (3-MINUTE RULE WILL BE ENFORCED)

Alderman Harrison appreciated the public hearing tonight and that the comments were very well reasoned out.

Alderman Sweet thanked the representatives of Eagle Hardware for putting their proposal on hold until the Council gets a little bit more information as to when the North Reserve Street construction will be started and completed.

Alderwoman Gingerelli gave an update on the presentation that she, Mayor Kadas and Ron Klaphake gave at the Chamber of Commerce the other day where they talked about growth management and how it relates to business concerns.

Alderwoman Crowley appreciated the hearing tonight and the give-and-take situation which reflects on the Public Works Department that the folks had been involved in the process and were informed about the situation.

COMMITTEE REPORTS

Administration & Finance Committee

Alderwoman Tracy said, the first item we'll take up is on the second page of your Administration and Finance Committee minutes and it was an item that was returned from the consent agenda back to Committee Reports. The Committee recommends the Council approve the resolution granting exclusive rights for a limited time period to negotiate a development agreement for a project on City property known as the Fox Site and to authorize the Mayor to execute a letter granting exclusive rights to negotiate terms for the transfer of the Fox Site property to Russo Development. I would so move and I'd also like to speak to that issue.

RESOLUTION 6048

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MISSOULA GRANTING EXCLUSIVE RIGHTS FOR A LIMITED TIME PERIOD TO NEGOTIATE A DEVELOPMENT AGREEMENT FOR A PROJECT ON CITY PROPERTY KNOWN AS THE FOX SITE.

MOTION

Mayor Kadas said, okay, could we take public comment first?

Alderwoman Tracy said, happy to.

Mayor Kadas said, is there any public comment on this item?

Alderwoman Tracy said, I just wanted to draw my fellow Council Members' attention to a memo that I placed..., had the Acting City Clerk place on your desks this evening and you might not have found it in the large piles of paper that we were given this evening, but this refers to a proposal to solicit from us, as a Council, our comments with regard to the proposed Russo Development Company's project on the old Fox Theatre Site. And in this memo I've asked you to please take a look at the packet of information that you received from Chris Behan dated September 16<sup>th</sup> and to take a look also at the full development proposal which should be in your boxes tomorrow if not by Wednesday morning. And to, if you can give me those comments by Friday, October 10<sup>th</sup>, we'll consider them in the Administration and Finance Committee on Wednesday, October 15<sup>th</sup> so that we may then give the Missoula Redevelopment Agency the Committee's comments as opposed to individual Council Members giving comments, and I would further ask the four



however, there is nobody in the country, that I'm aware of at the present time that can give you good information about the effectiveness of an inspection and maintenance program for particulate control. So, its a good program. If we grow too fast or do a bad job of growing fast that may be something that we have to do at some point in time. However, at the present time, its a prescription for a disease that we don't have here in Missoula. The other problem with implementing it is that we don't have the state legislation that allows us to tie together vehicle registration and licensing and that sort of checking. But I think if we had a good reason for that kind of program we can sell it to the legislature.

Mayor Kadas said, Mr. Reidy.

Alderman Reidy said, how many actual violations have we had at malfunction junction in the last seven years?

Jim Carlson said, we haven't had a ...., I didn't bring my statistics but I believe you've all got them in your books here a few nights ago but its been ...., I believe we have not had a violation at the intersection since 1993. We have come ...., a year ago Thanksgiving, we came within 1.2 parts per million of violating the standard and the standard is 9 parts per million averaged over 8 hours. So that's somewhere on the order of 17-18% of violating that standard.

Mayor Kadas said, Ms. Gingerelli.

Alderwoman Gingerelli said, Jim, just as an aside, I would hope that we will approach our public health problems from a preventative viewpoint and not wait for the prescription for the disease but try to prevent it in the first place. But that's a topic for another day.

Jim Carlson said, absolutely. However, I should point out that there has been no one who has challenged the adequacy of the federal carbon monoxide standard with regard to protecting public health. That issue is a concern with regard to particular count.

Mayor Kadas said, any other questions? Okay. So the procedure, just for those of you who are left, and I appreciate your patience, Mr. Bennett is going to refer this back to committee. Then its up to the committee to take action and ultimately we come back to the full Council for a vote in one way or another. One of the options eventually has to be dealt with by the full Council. Ms. Tracy.

Alderwoman Tracy said, just one other request. If the resolution is going to be to recommend or support the environmental assessment, I'd like to have a copy of the environmental assessment so I could review that and make an informed decision.

Mayor Kadas said, okay. I will close the public hearing.

Mayor Kadas closed the public hearing.

Alderman Bennett said, I would ask to refer this back to committee.

Mayor Kadas said, okay. Let's allow the room to clear and take a ten minute break until 9:50 and we'll reconvene at that point. Thank you very much.

#### PUBLIC COMMENTS FROM CITIZENS (3-MINUTE RULE WILL BE ENFORCED)

Will Snodgrass, P.O. Box 2885. Mr. Snodgrass commented that oxy-fuels are the most expensive way to take care of air pollution. He also commented on other fuels that are used which can cause problems such as weakened heart beat. He said if a vehicle is not running properly, there will be an increase of hydron-carbons.



Alderman Anderson said, two questions since they were brought up several times in public comments and this is for you, Bruce, I guess. What was the impact of the modeling on connecting Stephens through to S. W. Higgins and also there's two horns on this dilemma. One is the vehicle movement and one is the air quality. And was an air quality, a vehicle registration and testing program considered as part of this? And what sort of reduction would that have? And what would be the costs associated with that? Maybe Jim, from the Health Department, has an answer. I'd appreciate an answer on those since they were brought up in the public comment.

Bruce Bender said, we seriously were interested in the Stephens Avenue particular idea and so that's why we requested Bell Walker now Earth Tech to look at that particular idea. They did model that. In other words again, they created a traffic model that matches the day's flows and then they went and said okay, what happens if we run Stephens through. And then also they looked at it and said it had no noticeable reduction at the junction. What it did do was it basically provided some traffic to come off of Bancroft. We asked Peccia because that was brought up again in the 1996 Transportation Plan. It was brought again to them. And so Peccia & Associates who was the consultant on that. Now they did a completely separate plan, completely separate model as part of the Transportation Plan and they went and modeled this same thing, the Stephens running all the way through. And they said it would carry about 1,000 to 1,500 cars and that they saw the reduction from Bancroft. That's where it was. But it did not have any effect on the traffic flow through the junction. And the primary reason for that is when you look at it is that the traffic volumes basically are heaviest on Brooks to the west. Everything when you look ...., okay Brooks is obviously where you've got the major volume. But the portion of Russell to the west of Brooks is the highest volume. But once you've crossed Brooks, all those volumes at Russell is almost half. Its almost half the volume when you go to the south of Brooks. I mean most of Russell wants to run to Brooks. And the same way with South Avenue. When you look at the volume of traffic to the east of Brooks on this side, its substantially lower than it is on the west side. The west side has the highest volume of traffic. Most of your motion is to the west of Brooks. And the traffic volumes aren't ...., so people are trying to seek to go southerly or westerly, from a traffic point of view. So its a run Stephens down. What it does is help Bancroft or Higgins. Those two are your arterials or collectors that are running already going due south in a southerly direction rather than a southwesterly. And that's what the modeling showed is that run through and you'll draw some traffic from Bancroft or Higgins but mostly Bancroft.

Mayor Kadas said, Mr. Carlson, do you want to take the second question?

Jim Carlson said, the question is why don't we have a section on maintenance program, basically?

Alderman Anderson said, well that as well as we've talked about air degradation, air quality continuing to go on. And will a vehicle inspection program help that out? Or could some of this money be spent on that, I guess would be another question.

Jim Carlson said, that particular thing was not evaluated as part of this project. However, I think I can give you some of the reasons why Missoula doesn't have an inspection and maintenance program for vehicles. I&M programs are a prescription for a problem. And the problem that they've been prescribed for in this country and elsewhere in the world are two things are two things. Ozone non-attainment, photochemical smog, which we do not have a problem with here in Missoula or severe carbon monoxide problems. Now Missoula has a problem with carbon monoxide and in the past we spent quite a bit of time looking at that problem because it was more ubiquitous or widespread. And we had violations downtown. In 1957 we had 55 8-hour violations at the intersection we're talking about tonight. Over the years, as the vehicles have improved, and our transportation system in Missoula has been upgraded, that problem has been relegated to this particular intersection. The less expensive drug for curing that disease is oxygenated fuels which we are required to put in the gasoline during the period of November through February. That results in a fleet wide average reduction of CO emissions of about 25 or 30%. And that's why we've seen that dramatic decrease in the past 40 years at this intersection. If, at some time in the future, we ...., and so we have a hot spot problem and an I&M Program will cost somewhere on the order of a half a million to two million dollars to set up and about \$30 a vehicle or, on the low side, or about 3 million dollars a year in Missoula County to operate every year. That's quite a lot of money to spend on a hot spot. Now if we were to get to a situation because of growth and VMT and that sort of thing where we have a widespread problem, a number of intersections or a more ubiquitous background problem, then that would be something to seriously consider. I think, as we move towards looking seriously as a nation, at the PM 2.5 standard, there may be some push to look at the value of inspection and maintenance programs for PM attainment,



comment on it and make a recommendation in that regard. And it is a recommendation but we've been assured by both the state and the federal agencies that they will certainly follow what the City recommends. That they are very much supportive of that and recognize our project. But we still have that legal obligation. I think we have a problem like on the air quality issue that it shows that we will have degradation of CO levels by the modeling in the future. And I don't know how we can ignore that with a no action alternative and how you work up an environmental assessment or document that says no action with that kind of information. I got a little long winded there but did I do it? The action for the Council is you go back to committee, you'll be asked to pass a resolution. And the resolution will basically ...., we'll be writing up and we'll be asking you if you recommend approval of the environmental assessment and the adoption basically of the preferred alternatives. That is what the staff will be presenting to you. You can condition that basically. I mean you've heard concerns from the public, we continue to hear them. And you can condition it within the concept because there are designed details here. We have not been able to communicate with every individual business here. I recognize that we have not totally contacted everybody here. A lot of what we did was we relied on the public record as far as property ownership in the Polk Directory. We sent out a flood of information and sometimes there was, for some reason, certain businesses did not get it. We relied on other businesses to inform them. This particular alternative has been out over a year and a half in some sort of context. So we have updated our information as we tried to. And intermittently we have missed some and we will recognize that. The information, the interviews that Carter Burgess did were based upon a letter I submitted to the people and said do you want to meet with them, call them. And that's how they ended up meeting with the 40-some people that they met with and their comments. And I also mentioned that in a public meeting that you could come and meet with Carter Burgess to voice your opinion. But I recognize that our system wasn't foolproof. We missed people and I apologize for that. I wished I would have known that. Some of those caught me by surprise. I thought we had communicated or talked or whatever.

Mayor Kadas said, Mrs. Herbig.

Alderwoman Herbig said, yes, I have a comment but I think I can frame it into a question for Mr. Bender also. I liked Mr. Spade's suggestion about a tour taking a test drive through all of that. I happen to do that very thing with Mr. Reigert on his plan and his plan called for remodeling Russell Street rather than South Street. But taking that ride really did open my eyes, vs. looking at charts and that. Is there a chance, possibly, a tour bus or something for the Council, those of us who would be interested, in running that route.

Bruce Bender said, if you want it we'll find it for you, by golly. We'll get that bus for you.

Alderwoman Herbig said, I would find that interesting.

Bruce Bender said, sure, you bet. And it does help. You do have some difficulty, you know, coming out on Sussex a little bit here and there. You know, one of the things is, you go out and view the cues of traffic on Brooks, yeah, they're there. They're really long. But the point of that is that's a two minute delay that you're waiting on right now. And the whole idea of this is we'll move the two minute delay. I mean two minutes of traffic, consistent traffic, is a long, long line of traffic. And what we're talking about is that you reduce that to 20 seconds, now you've got a short line of traffic and you coordinate your systems throughout Brooks. And now you can start at Reserve or Mount and you start running those small platoons of cars through in a coordinated system. You don't get that long cue. And as long as all the intersections act and behave similarly, in timing, if you can get them within the 20 to 30 seconds, then you can coordinate and have them work.

Mayor Kadas said, Ms. Tracy.

Alderwoman Tracy said, thank you. Just two requests. One that the business owners and anyone else who did not speak tonight who have not had the opportunity to give their input directly to Carter Burgess or to the Public Works Department, I hope that you will make sure that the folks have your names and telephone numbers and how to reach you and I hope that that connection will be made. The second request, is just simply to ask Sandie, I couldn't keep up with your long list of recommendations, if you could put them in writing that would be very helpful to us.

Mayor Kadas said, further questions from Council. Mr. Anderson.



Alderwoman Gingerelli said, okay, but we could potentially be looking at a longer wait. Is that possible? Without growth management, let's say.

Bruce Bender said, well, that modeling is based upon the average growth. We use a statistic that, you know, we all agree to in growth management that was based upon the last 30 years of history, that line of the 2% growth and we projected that out. I mean that modeling was all done under those premises, as you may recall in growth management, where we said look at the past 30 years and now we'll project out the population in the future the same way. And so that's how that model was derived and based upon that. And then you also may recall in the Transportation Plan that we focused on we would look for higher densities, in more of our central urban areas whatever in order to relieve some of those problems too. Its part of the growth management tactic.

Alderwoman Gingerelli said, okay. Then lastly, I had a constituent question on the right turns going north and south on both Brooks and Russell, will they be free right turns? So in other words, there are not going to be ...., you are not going to have to wait?

Bruce Bender said, that's right.

Alderwoman Gingerelli said, They will be able to turn right as soon as they stop and then continue?

Bruce Bender said, the right hand turns will be as they are right now on Brooks and Russell. As far as you stop, wait for a gap and then you can proceed right. And then you wait for the green.

Alderwoman Gingerelli said, okay, thank you.

Bruce Bender said, yes.

Mayor Kadas said, Mr. McGrath.

Alderman McGrath said, I have several questions that I will hold for committee. I did have one question Bruce on the process. Essentially what we're ...., although we didn't really get a copy of the environmental assessment, this is public hearing regarding the environmental assessment and I want you to maybe explain to the public exactly how that works in the process. And the point that is when we make a decision on it. Who makes the decision, where it goes from there. And also maybe you could comment on the role of public comment in the decision of the environmental assessment. Because you referred, in answering Mr. Reidy's question, about how we justify it and there's a number of things in the environmental assessment which are not necessarily subject to public comment like the degree to which it may or may not reduce air quality impacts and that sort of thing. Would you please enlighten the public in terms of what exactly we are doing here when we are reviewing this environmental assessment.

Bruce Bender said, hopefully I'll be able to respond to that. I'll try. The environmental assessment has categories in it and there is one copy for you and the Council to review in your office. I'm sorry we didn't have enough for all of you. I've got extras if you want one to review that specifically. But there are categories in the environmental assessment. There is noise and air is a significant requirement in the environmental assessment, the air quality. Part of the cost of this project was it had to do an air model that followed EPA Guidelines and we had to model what would be the result of this project. And there's a section in there on the air quality improvement. And so we're queried to have that modeling done. And for the no action it shows how the air quality will degrade and that we will actually exceed our CO limit at certain moments. There's two times in that section it talks about if we do not act so there is a problem right there because you have that section there talking about that. So there's a whole air quality section in there which has obligations to it. It talks about you are significantly improving with South Avenue realignment. We're reducing the CO by 40%. Again with that project that was modeled according to an EPA computer model that they have to approve. There is a whole economic impact section in there. There's a variety of sections. I just encourage people to review those and you will see those. The whole point of that is that we're guided by federal guidelines to evaluation in all of these areas. They are typical of all federal highway projects. And this assessment basically quantifies those particular issues. And our role right now is to comment on what we have brought together. And so its important to understand the document and if you want summaries or whatever we can talk about those particular areas. And so our role here, up to October 2nd, we are taking any comments from anybody in that regard. And then the role of the Council is also to



junction, is that you would have to reduce the ...., because of the amount of time that those signal phases take, simply reducing traffic does not solve the problem. I mean you can go back and look at ...., we've had a 40% traffic increase on Brooks from 1984 to 1994. And go back to 1984 and we still had high levels of COs there and that's the date that required us to get into oxygenated fuel. So what I'm trying to say, let's reduce the traffic flow by 40% and we still have a problem at the junction. That is a good goal for the community. That's what we're trying to do here is create an opportunity to not only deal with motor vehicle congestion there but to also permit access by pedestrians, bicycles, or that I can drive my car within the vicinity of the area and walk between stores and walk between areas. Right now you can go to Tremper's you get in your car you go around, you go to South Avenue or whatever. There's no really any ability to walk between these areas. So the goal of this was to tie into the bicycle pedestrian issue but it does not solve them because of the high volumes we have there right now.

Alderman Sponseller said, I guess my follow-up question is, do you see any way that system wide improvements, in other words the distribution of approximately 4.6 million dollars in a system wide fashion would or could conceivably help relieve the problem at the junction?

Bruce Bender said, all I can do is rely, again, on the traffic modeling. And when you look in the Transportation Plan there is a segment in there that talks about by the year 2015 if we are able to accomplish all the improvements that we propose to do, in other words, take your 4.6 million dollars and go and put them into the other segments of our system in the community, and what it shows is that there is a slight reduction in that area but it also shows that its dependent upon improvements at the junction too for the other systems not to be over congested or crowded. They are all interrelated. What it typically is saying is that North Reserve has to function, Brooks has to function, and 39th/S.W. Higgins has to function in order to deal with growth in our community from all perspectives, motorized vehicle, bicycling, and pedestrian and transit, that we need those three systems in our urban community to function well. And if you go and rely on one or the other then you create congestion on the remaining one that you don't deal with. You've got to improve Brooks, you've got to improve 39th/S.W. Higgins, you've got to improve North Reserve in order to have a functioning system that allows access throughout our whole community into the future. That's what the modeling says. You can take the money and shift it but it won't ....

Mayor Kadas said, Mr. Harrison.

Alderman Harrison said, yes, if we're going to hold our questions for Bruce, I'll defer to someone else.

Mayor Kadas said, thank you. Ms. Gingerelli.

Alderwoman Gingerelli said, well, I do have two approach questions that I will save for committee, one from Russell and one from Brooks, I'll save those. But I had some other questions. First on the list of specific comments from individual property owners that I guess it was Mr. Whurl referred to, when will we be getting a copy of those as Council Members?

Bruce Bender said, I have them in my office. Its a rather thick packet and we could pass those on to you, you bet. It always our intention to pass those on.

Alderwoman Gingerelli said, alright, that's great. Bruce, the next two are for you. When I heard you say that by the year 2015 the time wait at the junction would be increased 30 seconds approximately, from 2 1/2 minutes to 3 minutes. That seems short to me.

Bruce Bender said, no, two minutes to three minutes. Its currently right now like 110 seconds. Its about a two minute wait.

Alderwoman Gingerelli said, okay.

Bruce Bender said, and what we're saying is that it will go up to about 180. But it will increase, you know, approximately by 50%. The best way for you to relate to it is, the best way I can communicate to you, is whatever delay you experience now, the modeling says you will incrementally increase that amount of time you wait by 50% progressively as you move toward the year 2015.



Alderman Reidy said, the simple question is, would we have to pay any money back if we did nothing?

Bruce Bender said, if you choose no action and if we can't justify that then we would be obligated to pay back the money.

Alderman Reidy said, another question here. Has there been any consideration to how we can better it by when North Reserve Street is finished, will that relieve any of the traffic?

Bruce Bender said, yes, the traffic modeling has said that we would draw ....., North Reserve would draw away 8% of the traffic. I think we've already seen some results of that already. But that again, you have to put that in light of the projected 30% increase.

Alderman Reidy said, I'm having a hard time with that 30%.

Bruce Bender said, yes. Because the projected increase is based upon a fully completed North Reserve. And if you look at the numbers, North Reserve really picks up a lot of traffic. But there is still growth in the next 20 years on Brooks even with that improvement.

Alderman Reidy said, and has it taken into consideration on the move of Albertson's to 39th Street?

Bruce Bender said, well, the traffic modeling does not go in that kind of detail. It just looks at general commercial usages and property. It looks at a whole global thing of the City and it looks at usages in the particular block. So it would presume that there would be a commercial development of some sort. It doesn't even recognize necessarily that's a grocery store even under the current model. It just says that a high intensive shopping center, so much square foot.

Alderman Reidy said, okay, Bruce, thanks.

Bruce Bender said, you bet.

Mayor Kadas said, Mr. Sweet, Mr. Sponseller, Mr. Harrison, and then we'll go over to this side of the room.

Alderman Sweet said, well my question was one of procedure. I was wondering if the intent was to have the Council save their questions for the committee work that we'll be doing rather than continuing to take more time this evening to ask questions that could be asked in that meeting.

Mayor Kadas said, I think that's really up to the Council. If you have questions that you just have of Mr. Bender, I think that you could wait with those. If you have questions for the public who testified then certainly now is the best time to do that.

Alderman Sweet said, I think that would be good if we have questions of the public. But I think of our staff we should probably save those for our committee meetings and not take the time this evening.

Mayor Kadas said, I think that's a good suggestion. Mr. Sponseller.

Alderman Sponseller said, I'm tempted to restrain myself.

Mayor Kadas said, you can wait. We've got another line here.

Alderman Sponseller said, actually I had a question for Mr. Bender that several of the small business people here might be interested in.

Mayor Kadas said, okay.

Alderman Sponseller said, is reducing vehicle miles or vehicle trips a goal that might be worthwhile system wide to relieve the problem at the junction?

Bruce Bender said, well, the Transportation Plan recognizes that that's certainly a goal. And, you know, we're talking about goals of 5% or in that neighborhood or higher. But the problem, you know, with this



spent a lot of time and a lot of effort to keep traffic going towards the intersection. And we've done that by putting blocks in the Jefferson School area to keep traffic out of the neighborhood. It seems that there is a golden opportunity to divert traffic away from the intersection and that opportunity lies in extending Stephens to 39th Street. It seems that the parties who are least flexible are the government entities, Missoula County and the School District. We are asking private citizens and hard working business people to sacrifice their properties but we're not willing to put Missoula County and the School District to the task of explaining why we cannot extend Stephens to 39th Street. I think this is a golden opportunity. It is one that is going to be missed for years to come if this Council does not address that option in conjunction with the rerouting of the South Avenue corridor. It's something that has to be looked at very seriously. It's going to relieve traffic congestion and it's going to serve one of the fastest growing areas in the Missoula community which is the South Hills area. There are so many positive reasons to explore this option and very few reasons to oppose it. And I would ask the Council, in considering this proposal, look at the extension of Stephens Avenue to 39th Street as well. Thank you.

Mayor Kadas said, thank you.

Mike Fellows said, I guess some of the concerns I have is one that it could be a boondoggle to taxpayers. I see already we've spent over \$600,000 and some people say it's probably closer to \$700,000. I do have concerns about the businesses. I think that we might lose some and we'll have probably some impact on some others and I don't want to see that particularly because small business makes up the backbone of the Missoula economy and that's one thing we need to keep. And the third thing, in closing, would be that I feel as if we're spreading the problem out to other areas including the business areas and the neighborhoods. I think right now it's localized. If we spread it out we are probably still going to have the same problem it will just be in different places. Thank you very much.

Mayor Kadas said, thank you, Mr. Fellows. Other public comment.

Barbara Pulley, 1539 Kent right behind Buttrey's Tremper store. I actually like the interim alternative route with no left turn lanes and possibly diverting the left turn lanes onto Stephens and also onto Johnson. I have seen a lot of the traffic that does subvert or go around malfunction junction by going down Catlin and coming out on Sussex. I was wondering if there was any way that they could put to the County voters about extending Stephens if the local government will not do it so we can have a public input on extending Stephens. Most everything else that I have has already been expressed by other people and I commend everybody that has spoken so far. I also commend the planners, they've done a lot of work, but I think if anyone had been around the fair this summer and said I want to not go around malfunction junction, remember how you got from one end of town to the other by going around malfunction junction. Did you go down Mount to 14th, over to Eaton and over to Reserve? How did you do it? Because that's what is going to happen, I believe, with the present route plan. Thank you.

Mayor Kadas said, thank you. Further public comments? Any further public comments? Seeing no further public comments, we'll open it up to questions from the Council Members. Mr. Reidy.

Alderman Reidy said, I have several questions for Mr. Bender. On the finance, Bruce, if we go ahead and not do anything, do we have to repay any of the money that we have spent?

Bruce Bender said, the obligation to the City by contract with the state is basically that you have to follow proper process in dealing with this project. The City has an obligation to make certain that our environmental assessment is true to whatever we end up deciding. In other words, if you choose the preferred alternative, that the environmental assessment was done properly. That if you choose some other action like a no action or another alternative, that again the environmental assessment is true to that. We have the obligation that we have expended this large sum of money and we had to make certain that the decision that we made is true to true causes that had to come out of the assessment process. We don't have the simple ...., in some extent it almost has the subdivision type of obligation. We have to justify our actions because we have taken on this large sum of money and we've spent an extensive amount of time to look at these different options. So if we choose something beyond the preferred alternative, then we have to work hard to justify that choice.

Mayor Kadas said, Mr. Reidy.



Ray Tipp's law offices, increasing their parking, and hopefully increasing the landscaping there which is shown on the new parking concept on Regent Street is very attractive and makes everyone in that three or four block area happy and their concerns are alleviated. Modifications at Garfield and South which is the south westbound and then southbound traffic that is a new drawing that was presented a week ago Friday, helps a lot of us including all of the businesses on the 15, 16, and 1700 blocks. Their customers can now get back out of the cul-de-sac and that's important that that be followed through on. There is modification at Garfield and Fairview so that Missoula Nissan's customers can get their cars serviced. Those cars can get in and out of their lube bays. They can have delivery trucks deliver their parts and materials and BFI can pick up their garbage. Its important that that be followed through on. Also there is a little concern there as to the configuration of how that is going to be built for egress from First Bank parking lot off of Garfield. And I very much encourage Bruce to be working with the employees at First Bank and with those particular businesses there very carefully to make sure that that pork chop that's pictured there actually works. We want to make sure that there's no loss of any accesses by way of existing driveways into any of the businesses. I want to make sure that all of the lights in the plan will have left hand turn phases. I think that's terribly important for safety. This waiting for gaps in the traffic in order to turn left in a left turn bay is not a safe turn and creates cues that create even more problems. We want to make sure that it is correct that there will be right turns possible off of southbound from Brooks onto South and also southbound off of Russell onto South heading west and then their ability of those cars again to be able to turn left across the traffic that's heading east and access those businesses. We want to make sure that turns will accommodate semi's, school busses, and the Mountain Lines. We need reconfiguration and a light at South and Johnson and a light at North and Russell. Again, with left turn phases. And I think this will eliminate a lot of the concerns of the residents north of South Avenue and I what I call the Jefferson School area of traffic going through their neighborhoods. A light again at South and Johnson which is one block west of the light at the mall at the tracks and then a light at North and Russell by Montana Power so people can get that left hand turn onto Russell safely because that's the one that they're going to be running through neighborhoods on. So I think that's terribly important. We need the ability of customers of Montana Craft Connection and Pen Mobler which are located on the corner of South and Garfield to be able to turn left onto Garfield and park at those perpendicular parking that is on the west side of Washburn. I believe that it would be smart for us to allow Pen Mobler to remove the landscaping on the east side of Washburn, on that half block only, and put perpendicular parking there for their customers because their customers are now using the parking that is on the Montana Craft Connection side. That's a customer intensive two businesses there and they need the traffic. But at the same time, there needs to be a traffic modifier there at Washburn and the alley just north of South Avenue or at Washburn and Sussex, just north of South Avenue, to create a diversion from traffic going through that residential area, back to keep the traffic out of the residential area and away from that grade school. All alleys and streets in the area need to be paved. I just am tired of having to say that but I really think that's important. And then something was pointed out to me today, there's no light planned for the intersection of Stephens Avenue, going south, from say Albertson's to Sussex where the reconfiguration is and all this traffic is going to be going like this, there is no light planned there. And probably just a stop sign and a wait for a gap in traffic, and again, I think that's a dangerous situation there. They need to make sure that there's a light at Fairview and Russell with a left hand turn phase. And I've been asked to ask you for a guarantee that the lights will work. Many people think that the stack back on East Sussex will be so great that it will make it impossible to get through the junction in one phase. Guarantee that drawings that reduce parking at Caras Plaza is just preliminary and, for instance, some at Martial Arts will have their parking restored that has been lost on that preliminary drawing and also would be really good if we could figure out some way to work in a drop off place or location for the children for both Summit Martial Arts and for the play school, the daycare that's in that building. Right now its a pretty dangerous situation for those children. We also would like a guarantee that all street work, sewer work, water, utility, whatever, is all done at the same time and things aren't torn up twice or three times. Okay, so keeping in mind we are looking at eliminating an easy east to west primary route, there will be additional east to west traffic on Mount Street. We believe there needs to be a signal at Mount and Higgins to take some of this east west traffic load. So what I am saying to you is I believe we can live with this alternative if the City follows through on the changes and continues to work with us. My concerns have been and remain the viability of businesses in the area and the safety of the residences fin the neighborhoods. Thank you.

Mayor Kadas said, thank you. Further public comment.

Brad Dantic said, I live in the South Hills area. I'd like to commend Bruce and I know that these people have all worked hard in developing a plan to get through the intersection. But it seems to me that we have



neighborhood and it should reduce new people cutting through if it works. What I want to know though is if it doesn't work I want some guarantee and some protection that some other type of protection would be provided so our residents wouldn't have to suffer and we can remain safe and let our children play in the streets. Thank you.

Mayor Kadas said, thank you.

Will Snodgrass said, good evening. For the record, I am Will Snodgrass, Director of the Chemical Injury Communication Network here in Missoula and I have some comments about the plan. For the most part, the roadways of our industrialized system move vehicular traffic and drivers upon a huge petro-chemically driven labyrinthian treadmill serving one over arching purpose to move merchandise and people through an ill conceived yet highly advertised and monstrous system of consumption which marginalizes and minimizes the value of human life while lining the pockets of the businesses interest of course. In that arterial vein, I would refer to the 1980 Guinness Book of Records which lists fuel economy, at that time, at a record 1,520 miles per gallon for a gasoline propelled vehicle, experimental. A decade later that record had been upped to 5,000 miles on one gallon of gasoline in an experimental vehicle and the record has now been advanced a bit further and the Rosen Bros. have built a car that will run on anything, which pollutes very, very little. It has degenerative braking and a flywheel which will spin for six weeks after the car is shut off on bearings which require no oil. These transportation projects often involve large sums of money, both federal and local taxpayer monies. All of which eventually comes out of that taxpayer pockets. As such these projects may be perceived as massive pork barrels into which local and regional contractors are involved along with their bedfellow politicians at many levels. In order to more fully understand the magnitude of the monies involved and the obvious results of "traffic management plans" designed to move more traffic, we can simply look at Los Angeles, San Francisco, Seattle, Minneapolis, New York, and Chicago which has become a dead zone where people are choking on their own breath like folks do in Missoula. I heard talk earlier this evening about concrete sidewalks and bike lanes which are to be placed alongside of these highways which have become valleys of toxic gas and I would ask you if you think we're really doing the right thing to increase vehicular traffic given the technology available to us today and do we really want to take those toxic clouds of gas through the neighborhoods of others which are currently relatively free from those toxic clouds of gas. So in closing, I would say that if you want to do something meaningful here, to help the people of Missoula and their offspring, and those that would follow, you're going to have to reduce vehicular traffic, not put down more concrete. If you put concrete down, things die. Thank you.

Mayor Kadas said, thank you, Mr. Snodgrass. Further public comment. Is there any further public comment?

Sandie Sickels, 139 East Sussex. I own a building and a business at 1610 South Avenue West. When I'm talking with folks about this proposed alternative, the overwhelming reaction I hear from people is leave it alone. In absence of that they have several other comments. People want Stephens pushed through to 39th so it can hook up with 39th and hence out to South Hills. People want the fair grounds moved. They've said this is a dust bowl and that is true. And with PM 2.5 coming on, rather than PM 10 being a measurement of particulate matter this will be even more of an issue. I believe that we need to pave alleys all around the junction to reduce particulate matter. As a result of watching this issue for the last four years, and I've been actively monitoring it in the CMAQ prioritized list process for the last couple of years, I have some concerns and questions regarding this process and a lot of those questions and concerns still remain. I am not entirely understanding of all this even though I have worked hard to understand it. However, in light of the staff's new attitude regarding people's concerns and businesses' concerns and their new spirit of working with us, I can say now that if we can't just leave it alone, most business owners, not all of them, but most that I have talked with within the last week or ten days can now live with this plan if we are assured of several concessions being incorporated into the final plan. I am probably going to go over the three minutes so if you stop me maybe somebody will want to know what the rest of them are.

Mayor Kadas said, it's a risk you take.

Sandie Sickels said, that's right. We believe that the removal of traffic barrier on South and Washburn to allow left hand turns across the traffic into businesses into, for instance, the building known as Caras Plaza, into Mission Paint & Glass and also into Montana Printing, Bill Thibodeau's building, all of that is very important to have that ability. We believe the pork chop at Washburn, north of South Avenue to eliminate or to reduce turns into that residential area should stay. The reconfiguration on Regent between KPAX and



Mayor Kadas said, thank you, Mr. Thibodeau.

Bill Nooney said, the bank and I own the Burger King property and then where Dori Plansky's office is. I've had the property for about 20 years and I still have a sizeable mortgage I might add. I had all kinds of clever things I was going to say. Well, I thought they were clever. A lot of them have been addressed prior. But as a property owner directly involved, as are a lot of the people who have spoken prior to me, I believe that there will be property and business devaluation on the South Avenue portion that ends of in the dead end areas. The configuration, the preferred alternative, if you might, preferred alternative of course to my way of thinking after being at some of the meetings, is really the lesser of several evils is what that was. Nobody agreed with any of them but this one people had less problems with. And I do commend the Public Works Division and Bruce, the consultants. I was at a lot of these meetings years and years and years ago, and that's where the white hair came from. But it appears to me and this configuration will not eliminate or ease the pain a lot, its just creating new problems in different areas. It just spreads the problem around at a great cost and expense and inconvenience to those who are directly involved in the process. Those people who have a property adjoining the routes and the intersection. And I don't have all the answers. I sat in, like I say, most of these meetings. And God forbid I wouldn't want to be in their spot or yours. Being on the Fair Board for 33 years is enough problem for me. And as Mr. Thibodeau alluded to, I hope one of the motivating forces of this is not to get the money that has been budgeted and spent by the City reimbursed by CMAQ. Hopefully that is not a motivating force in this intersection. Correct me if I am wrong. I believe that you will be reimbursed is you do spend some CMAQ money and get CMAQ money then those monies will be reimbursed. Again, correct me if I am wrong on that issue. But the people affected, the small businesses that you are hearing from, sure we worry about change. We worry about the unknown, its human nature to do those things. But a lot of these people in their small business, its their livelihood today, it could conceivably be their life savings for all I know. And if this passes and it works swell. But if it passes and a lot of the small businesses and properties become devalued or are eliminated and the dead ends of South Avenue become what I would call a slum area, not worth much of anything because you can't get there from here, that's another problem. And those property owners and those people in business in those areas are the ones that pay the bill, nobody else. Thank you for your time and God bless.

Mayor Kadas said, thank you, Mr. Nooney.

Sammy Yewusiak said, I'm representing the Western Montana Fair Commission. Bruce, we just had a board meeting today so this is just getting to you now. The Western Montana Fair Commission wishes to go on record as being opposed to the South Avenue realignment and the in turn option of BSR Junction. Being responsible for about 1,600 to 1,800 lineal feet of South Avenue, we feel that it will greatly hurt our entrance and exiting from the fair grounds. Many people don't realize we have approximately 1,400 use days on the fair a year. At this precise moment, or this time, we have cars cutting though the fair grounds and there's not any place that cuts off a turn on Russell and 93, going very fast. We have to lock the gates because we have a school on the grounds and we have a daycare center and we're terribly afraid of kids getting hurt. This proposed plan would not help that. The Fair Commission does not feel it is necessary, the changes, and we are opposed to any proposed plan, as currently given. There are reasons which most have already been brought up and I won't bore you with them. As private citizen Sammy Yewusiak, 414 King, just south of Bancroft, I'm greatly concerned how much traffic will be pushed onto Bancroft. I have the same questions of Mr. Pruyn and that Thibodeau have about where the monies come. What's driving this thing? I've been a member of the citizens action committee since its inception. I question what preferred alternative, where that comes from, who prefers it? I do not know. Who prefers it? I do not know. Nobody I've talked to prefers it except over other plans. Thank you.

Mayor Kadas said, thank you. Further public comment?

Denise Chumreau said, I'm a resident at 1545 West Sussex. I'm in favor of the South Avenue realignment and I understand we must afford as much protection to small businesses in that area as we can. As a small business owner we use those businesses frequently because they're convenient. But I think for me, my priority is to guarantee protection of the residents in the area and the children with Jefferson School there. Right now its already like Mr. Host said, a very dangerous situation with the busses coming in, multiple traffic. Being a resident of that area right now its not a nice easy walk even to go down to the park. People are running through the stop signs as it is trying to get away from malfunction junction. I'd like to see it so that ...., I envision the plan working if it keeps people moving. I do think it should reduce the traffic to our



the length of a logging truck. Those three cars could probably get through the intersection as fast as a logging truck could. I'm not just saying logging trucks, I saying any kind of a commercial type of vehicle. Camp trailers, cars with trailers behind them, if they are going up the Blackfoot and so forth, if they went down Reserve Street, if that's going to be a big nice new road across there and everything. I don't know what that would do to relieve the pressure on the traffic we have right now. I have heard some comments of 8% reduction in traffic just by diverting Highway 12 and some of the commercial truck traffic that goes through right now. If that's the case, I'd like to know if that consideration module. More questions than anything else.

Mayor Kadas said, thank you, Mr. Crawford.

Margaret Langel said, I'm Margaret Langel, President of the Chamber of Commerce. And after a presentation to the full board and discussions with the Department of Public Works, the full Chamber endorsed the concept of the new Brooks/South/Russell interchange. We recognize the need for you to have continued dialog with the affected businesses. And as you've heard tonight there are lots of issues. But in general, the Chamber, as representing business, thinks that the concept is very good. We also would like to commend Bruce Bender and his group for the effort that they have put forth to make this an acceptable plan to the majority of people. But in general, the Chamber would like to offer their support of the concept.

Mayor Kadas said, thank you, Ms. Langel. Further public comment?

Bill Thibodeau said, I've lived in Missoula most of my life. I was born here. I own a piece of property on 1621 to 1631 South Avenue, its right behind Tidyman's in the middle of the block. I'd like to comment that Bruce Bender did get hold of me. I've had numerous conversations with him. Bruce has answered a lot of my questions. I think that the plan that they have before us now, with some reservations, I would support. I have some questions. When he talks about the delay that's going to occur in the future, I want to know if you've considered the fact that we're going to have four lanes on Reserve and the fact also of the possibility of resigning Highway 12 so that the truck route goes out on our four lane rather than this and if we have, there's a big difference there. I also would like to know how much money we've spent to date on all the different plans. Could you answer that? How much?

Bruce Bender said, \$600,000.

Bill Thibodeau said, we've spent \$600,000 to date. Is that included in the 4.6 million? Okay, where will that money come from?

Bruce Bender said, its already been budgeted.

Bill Thibodeau said, budgeted by who?

Mayor Kadas said, Mr. Thibodeau, the point of a public hearing is for you to give your input to the Council.

Bill Thibodeau said, I can't talk to Bruce, okay.

Mayor Kadas said, you can do that afterwards.

Bill Thibodeau said, I wasn't sure of the drill and I thought maybe somebody might like to hear some of these things. And I also wanted to ask Carter Burgess what percentage of the people were for and against in their comments, which I think is something that, as a public, we need to know that. We've heard a lot of people are for this and everybody and people speak for it. We need to know kind of where we are at as business people what percentage of people are for it and what percentage are against it. Its just like when you go out and vote for people in office if you don't have for and against nobody would get elected. I think the car checks that was brought up earlier is a very good idea. And the only thing I would be totally against would be the interim idea or plan they have that would allow no left turns north and south on South Avenue onto Brooks or on to Russell. I think at that point in time you are going to see a migration of traffic into the neighborhoods such as you have never, ever seen before. And I think that would be an absolutely unacceptable plan and I would fight hard to not have that happen. Otherwise I think Bruce and his staff have done a good job and I'd like to commend them. Thank you.



decreasing improvements and we've got to do a lot to pick ourselves up by the straps and make the area improve. A lot of us, if we get into this kind of environment, will be probably not considering new construction and there might be a much needed remodeling of the many buildings that can go astray and those improvements delayed. And I also get excited when I hear about the total plan when I think of the side benefits of this project which includes sidewalks for pedestrians and trees which would be planted along the Brooks Street and South Avenue corridor. And I think this is the most important part of the issue. Under the caption of what I believe is in the best interest of our community, the global picture is the one that doesn't solve each and every one of our objections. Whether it be the objection of the ever so important small business owner that we've heard some of tonight or the objection of a bigger player like Southgate Mall. What do our professional engineers and experts in the field tell us if we do nothing? Travel time for the community will increase because drivers will take alternative routes to avoid the increasing congestion. Delays will increase and the increased delays create an environment that is less healthy and it really increases tension on those of us who drive that area as customers and business people. 4) There will be more carbon monoxide; and 5) Increase in travel time will increase dust and road particulate which is the major environmental problem and continues to increase the negative impact on our community and its air quality. From a business and investment ownership point of view, better traffic, more inviting. Better customer relation attitudes about traffic in an area means more satisfied customers and more customers coming to our place of business. And let's face it, those of us who are on the Brooks Street corridor face a tremendous amount of increase in competition and other good values that are being created in other parts of this community. And just for our self interest, let alone the global picture of the environment of our community which seem to me that those of us who are in business will realize that what's good for our customers and good for our traffic is good for business.

Mayor Kadas said, you're at about six minutes.

George Lambros said, in conclusion, after many years of planning and various suggestions for fixes, after a focused study that has cost approximately \$500,000 to \$750,000 to provide us with alternatives, we have a plan before us this evening which is not perfect for each property owner but the plan does give the community and the Council a choice which has important benefits. This proposal before us this evening has been professional designed and the planning officials indicate they will cut the average stop light at the malfunction junction from almost two minutes to 20 seconds, less idle time at the intersection means less pollution to the City. South Avenue improvements, synchronized signals will make it easier for our customers. There will be less travel time for the community who drives and less dust and road particulate and lastly this benefit could easily be overlooked if we visualize today's Brooks Street corridor, the improvements in malfunction junction with sidewalks and trees would make it easier and more friendly for the pedestrian to travel in the Brooks Street area. Thank you very much.

Mayor Kadas said, thank you, Mr. Lambros. Further public comment?

Earl Pruyn said, I'm Earl Pruyn from the Pruyn Veterinary Hospital. I have been to every one of the meetings, I think George. It think it has been fully discussed and I will say Bruce you have done a remarkable job of putting up with some of us. We can be cantankerous. I am concerned about the east-west traffic in Missoula. To go from the eastern portion of the town to the western portion of the town is very restricted. I think we should consider that. I think we should consider that there is a lot of money available for you to spend and I think that's what is driving the whole issue. It's only money. I think we need it. I think it should be spent. We should do something. I'm not saying I'm satisfied with what we are doing but I'd give it a lot of thought. Thank you.

Mayor Kadas said, thank you, Mr. Pruyn. You're welcome to move on up closer to the microphone if you are anticipating speaking soon. Decreased drive time here.

Chris Crawford said, I've got a couple of concerns. One is the availability of making left hand turns on South to Russell, not being able to do that, I think that is a concern. Another consideration I'd like to see made or maybe it has been made, and I didn't realize it, which is quite possible, is diverting some of Highway 12 traffic going right through town. Out there coming in from Lolo, right here at the sign at Reserve Street and Brooks, have it turn on a left hand turn on Reserve Street where you are making the new bridge and diverting the traffic off that way. Maybe there could be a truck route specified on a sign out there that stated that Highway 12 would be a truck route or a truck by-pass or something like that. If you pulled the logging trucks off of the intersection you could park three or four cars, or three cars or four cars in



onto Brooks again. It seems like that is going to have to be done if there's any construction done on the intersection .....

George Lake said, ....., we are in a position where the turnaround would be at the close of South Avenue and Russell. Its a primary location, I think we should have at lease been talked to considering there would be some loss of property there, be a number of concerns with the establishment of that turnaround. I'm also concerned, I had spoken at an earlier meeting, we're concerned about the pollution but yet we don't really do anything about the pollution of the automobiles in this town. Most larger cities have pollution requirements or limitations on the exhaust system of an automobile. We do not have anything like that in this town. I happened to be sitting at that intersection two days ago when there was a vehicle directly in front of me that even with the air conditioning running on my vehicle it almost gagged you it was polluting so bad. It was a real oil burner. Those types of vehicles should not be allowed to operate on our streets. I'm a little concerned that the alternatives that we have that were discussed using some of these other streets haven't been utilized you know as much as possible. We talk about 'em but we actually, I don't think, have done much about it. My route home, I travel down 14th and we put up a stop light in the middle of that so that slows up traffic considerably. I've talked to traffic people and they're trying to say well, it improves the traffic flow. Well, all they've got to do is drive it and find out that it doesn't improve it a bit. I think we need to also look at rather than running our bike routes through our busiest intersections. If you look at cities like Denver, Colorado, Colorado Springs, I happen to visit them last winter and had an opportunity to talk to one of the individuals who is responsible for the traffic flow in Colorado Springs and their approach is to route foot traffic and bicycle traffic around their busy intersections. Because for someone to walk across a busy intersection takes almost a full minute. And if they are routed so that they are not involved with those busy intersections it doesn't hold up traffic at all. And I think we ought to look at some alternative routes for our pedestrian traffic and bicycle traffic. Sure there is going to be some that have to pass through that intersection. But it should be set so that other routes are encouraged. I'm not totally against what you have but I think you need to do some more planning. I think you need to look at the alternatives that are available and utilize everything. And I am really concerned that these people are saying that they've talked to everyone. I think that's a felony. I don't think they should be standing up here and saying that they have. I think there are a number of other people that I have talked to that have had no conversation at all with these people. If they say they talked to people they ought to be out there doing it. Appreciate your time. Thank you.

Mayor Kadas said, thank you, Mr. Lake.

George Lambros said, I am George Lambros. We are the owners or partner owners of the old Bob Ward building and Southgate Mall. And I hope if I run a little bit over the three minutes, I hope that you can consider the fact that I am trying to represent the majority of about 100 tenants. The solutions for those of us who own properties at Brooks Streets district are not very complimentary in every case, as you have already heard. Some of us, including the Bob Ward's store including Southgate Mall, have problems with access, ingress and egress. There is an uncomfortable feeling when you look at the very narrow scope of your own building and your own property. Regarding the invitation to be interviewed by the gentlemen that have been doing this, I too have not been interviewed as an individual to have been interviewed, but I don't think that's been the case. I think its been the most open opportunity to hear plans and to have individual expression if you wanted to. Bruce Bender and staff are to be complimented for bending over backwards to help solve individual problems and he and his staff have commented and pledged that they will help any of us who want individual solutions should the future of this plan be approved. Maybe there is a misunderstanding on how the interviews were conducted. Several alternatives have been presented and I guess the plan has cost between \$500,000 and \$750,000 with many, many hours involved. The overpass, the underpass, the roundabout, the urban interchange, the combination of the above. This plan has been presented, although not perfect, to each of us owners attending the various meetings which have been many and there seems to be a representation of a censuses which is increasing in support of this the more we listen to the alternatives that are involved. If we do nothing, the problem increases considerably in the next ten year period. The problem doesn't go away. It gets worse, according to expert testimony, and solutions will become more expensive in the future. I too believe in location, location, location, is where the value of real estate is all about. As a real estate practitioner for the past 37 years, I feel I can reasonably and professionally predict that when traffic congestion increases, 1) Customers will avoid the area where the businesses are located; 2) If that happens, property values can predictably decrease; 3) Property owners in a declining retail environment will be forced to put off new construction. I think Craig Sweet was at one of our meetings and he indicated that. We are in an area that's kind of on an edge of borderline



getting used to and there may be some confusion at first. Its human nature, we don't like change. But change oftentimes is for the good. I say that we have a little bit of faith.

Mayor Kadas said, you have about three minutes there, so think about winding her up, that's all.

Stewart Weiss said, okay. I ask everybody to have a little bit of faith in the engineers, in the people that are trained to design this stuff. That they've done the best job, that it will work. And once we all get used to it, I think we're all going to say, you know something, this intersection flows and its going to work. And so I just, in conclusion, ask you to focus on the fact that the intersection will flow and it won't be a congested mess. And it will be good for everybody including the businesses on South Avenue. Thank you.

Mayor Kadas said, thank you, Mr. Weiss.

Kent Spade said, my name is Kent Spade. I own the Village Cleaners on South Avenue. The one thing I'd like to ask each and every one of you before you make a decision on this is to go through this plan. Don't look at it on the paper. Don't look at it on the screen. I'd like each and every one of you to drive down South Avenue and imagine that you are going to make the turn, turn as you are going east a block early, go over, go down Sussex, and come out at the old Bob Ward's. And do this at the 4:00 or 5:00 hour or evening hour and try to imagine all the traffic that you've just seen on South Avenue adjoining with all the traffic you're now seeing on Brooks Street and in less than a one block area. When this plan was originally started, Bruce Bender told us himself that the intersection had to come in through the Savings & Loan, it had to be as close to the center of Stephens Avenue and the junction to make it work, to fit all the traffic in. Well we moved it up less than a block from the intersection. Try to imagine that traffic. When you're done with that, please go to the other end and drive the other route, the new route, as close as possible, take your right hand turn at H & H Meat, go up, go through across from the Heidelberg, go over to Russell, make a left hand turn and try and imagine the new light that will be on the intersection there on Russell behind the Heidelberg because you'll have a new light there so you can get on to Russell. Imagine yourself going through three or four stop lights now ...., to Russell, you want to make a left hand turn on to Russell that I now make when I go home at night. Please turn at Bancroft because that will be the only direction you'd be able to go through there. And weave you way through that neighborhood and see how it will affect that neighborhood. I'm telling each and every one of you to do this before you make a plan. Before you vote on this try every direction. Don't look at it on the map because it looks real smooth because traffic will flow through here and back and forth. But you have to imagine a new light. You have to imagine how you're going to get to this direction and once you get into that direction, go to the "Y", come down South Avenue from the university, go to the "Y" and then try to get back onto Brooks to go to K-Mart. Or are you going to have to go all the way back to 39th Street and go all the way down there? Go through it and drive it, I have. Do this plan before you accept it. Imagine yourself sitting there with all the traffic converging from South Avenue onto Brooks at the old Bob Wards. That would be my concern. Try that before you make any decision. And then try and think if Stephens Avenue were open, would I go that direction? If there was big major detour from Johnson down to 14th, over to the Mount intersection, would I bypass the junction? I think you need to check those out. Those by-passes, I think make the big difference. I think you're going to eliminate a lot of traffic. Thank you.

Mayor Kadas said, thank you, Mr. Spade.

Art Anderson, 429 Livingston which is down by Sentinel High School. And I really want to compliment the engineers, and Bruce Bender and his consultants on the job that they've done. I think its been very thorough and very painstaking and is well thought out. However, I would like to go back to the overpass situation. If you remember the pictures that were shown up here, besides the bridge overpass, there was a bunch of confusion up around Kent Street which effectively destroyed Ruby's Cafe and the Asia Gardens and a few other businesses in that area. And I think that that led to some of the ire that was raised against this overpass. So I would like to have that revisited and reconsidered. I think its the best solution in the long run. And it disturbs the businesses the fewest that are involved. And another alternative that I would like to see considered, but it will have to be applied if any construction takes place on that intersection, is to reroute the Brooks Street traffic around and through, by way of coming up from Brooks from the south, you'd go over to Fairview over to Russell. And then from Russell to South Avenue, from South Avenue up to Stephens and then from Stephens on to Brooks or continue up Stephens to Orange Street and that would be the rerouting of Brooks Street from the south. Rerouting it from the north, you'd come down to Stephens and take Stephens down to South Avenue and then continue down to Russell up to Fairview out



Right now, there are places that are being built that are \$15 a square foot and I don't know of anybody that can really afford that and be in a small business. I see on the east side of South Avenue you have made all sorts of entries into those businesses. They are still going to be impacted during the construction. There is no allocation of funds to help those people pay their bills through that time. And what I've seen of the construction crews in Missoula, Montana, this could take anywhere from three to six months. My business will no longer be there when you're done. So I think that you better ...., in all good faith make every possible ...., I can't even find the word, consideration, for those people that have small businesses and their concerns on South Avenue. And maybe do something for the future but ...., well for my future. Its their future, my kid's future, their kid's future. So I just really, really hope that when you make these decisions that there will be some, if not compensation to help these people get through this time, at least ways to get in and out of their businesses where their customers will want to still come. When you went over South Avenue, did the repairs on South Avenue, I literally had a customer go through the barriers, park on the sidewalk in front of my business. I thought she was coming through my windows actually, get out and yell at the construction workers that she felt that it was very unfair for them to cut off a business that she needed to get into. And there's other opportunities to be had on South Avenue for small business. And I hope that, as your main concern, toward the future, your traffic future and your people future, that you consider this. Thank you.

Mayor Kadas said, thank you. Keep coming, I know you're out there. Come right on up, don't wait.

John Host said, my name is John Host, H-O-S-T. I just have a couple of comments. There's been a lot of talk of visiting all the business people but what about the residential? I live in the McLeod area neighborhood and at this time there is an excessive amount of traffic on Catlin Avenue. Actually its an arterial. And Jefferson School is right there off of Catlin. The school personnel park on the curb, both sides of the street, when you have a school bus in there it blocks one of the two lanes, and even right now you have awfully dangerous situation. My suggestion is that they put some barrier off of South going north. People in Missoula may be kind of dumb but if you look at the layout, if you want to go north on Russell and you're coming east on South Avenue, you're not going to go up Garfield and Fairview and all the way around. What you're going to do is take a short-cut, go right through, right now its off of Catlin. There's no truck traffic allowed on Garfield so that's going to run the traffic on Catlin. So I suggest that you give a little bit more thought to that part.

Mayor Kadas said, thank you. Further comment.

Stewart Weiss said, my name is Stewart Weiss and I'm the owner of Missoula Ace Hardware. As a business located right on the junction I believe that I have as much to lose or gain as anybody. Certainly the access to Tremper's Shopping Center coming from the east, it would be hard to deny that it wouldn't be improved by this project. But I have my concerns about the approach from the west. Many people today will make a left turn off of South Avenue, make a left turn onto Brooks and then another left into the front of our shopping center. Or they'll make a left turn onto Russell and then a right turn into our shopping right by Western Outfitters and so I have a risk here too. But I think that this plan is a good one and I really think that it is an exceptional plan in terms of all things being considered. Three years ago, a little less than three years ago, an overpass was squashed, I mean really squashed hard. There was no denying that it was not acceptable to this community. And while it was, from an engineering standpoint, purely a traffic engineering standpoint, probably the best solution for the intersection. We, as a community made it clear that this was not an acceptable alternative to the community. And in my perspective that was a wake up call to Bruce Bender and all the engineers involved in this. They went back to their drawing board and this time they said, okay, guys, this time we have to take into account what the business people and the residents of the area say. And I think that has been done. I've watched the South Avenue realignment project evolve over the last couple of years. I've seen it go from E-1 and W-1 to E-5 and W-7. And I watched it because I was at most of the meetings, every one that I was invited to anyway. And I saw the City responding to the needs and the concerns of businesses. I think what's really important to focus on here is that the intersection will flow, traffic will flow, it won't be the congested mess that it is now. And because it will flow, people will not try and avoid it. The concern about people diverting through the neighborhood that's right behind our shopping center. I don't think that's going to happen. Now they do that because their only choice is to either do that or sit at South Avenue through a two minute delay average before you can make that left turn onto Russell or Brooks. Well, the South Avenue realignment will have traffic flowing. And yes, it means a diversion a couple of blocks to the south down Garfield and then back east on Fairview but you'll have a net savings of time. And I think the people will make that move. Certainly its going to take some



reducing delay times and emissions all along the corridor. 2) There are significant numbers of people who drive extra miles to avoid the intersection. Reductions in delay should reduce VMT and emissions by encouraging people to use the shortest route through the new intersections. Shortest and quickest, I should say. 3) Some of those intersection avoidance miles are through residential areas which results in safety issues. The project should pull these people back onto the arterials where travel of this nature is intended. For these reasons I urge you to support the selection and construction of this project. We have spent a lot of time and money evaluating options for this intersection. We need to move forward and build the solution to the congestion and air quality problems that it creates.

Bruce Bender said, just one brief note to the Council. I tried to give you copies of the written comments I have received. So, for your record, there is like 14 written comments that you have in your packet from various people that I have received to date. We will obviously continue to receive written comments all the way up to October 2nd.

Mayor Kadas said, okay, why don't we open it up to the public part of this hearing. I do ask that you try to keep it to three minutes. I know that will be difficult but try and see how well we do. So any public comment? Don't be shy.

Candy Mathews Jenkins said, I own the Montana Craft Connection. The whole presentation just got my hair up totally as a business owner person ....

Mayor Kadas said, Candy, if you could turn around, you're trying to explain this to these folks.

Candy Mathews Jenkins said, yeah, but also it was told that everybody was approached on South Avenue. With the way this works right out my front door is where this change is going to be. I have leased that building since June of 1995. Not one person has talked to me. Not one person has sent any literature to me until, I think I talked to Mr. Bender at the beginning of September, and that's the first piece of literature I have had sent to my business since this is going on. I was not contacted. My business is totally impacted by this turn. Totally. As far as most of the businesses on South Avenue from the mall to Tidyman's where you turn off to Tidyman's, I probably have some of the most traffic. My customer traffic base there is probably the highest. I was never talked to at all any time any reason. And if hadn't of been for my realtor, Sandie Sickels, telling me that this is going on I would not have known anything until these papers are sent out in the first of September. You have a no-left hand turn right out my front door. When you take out H & H Meats and you take out Mr. Rich's you totally take my traffic lane toward the junction away from my business, they can't turn left. But basically when this gentleman said he contacted and talked to every person on South Avenue, I've never seen this man before in my life. And I am one of the higher impact businesses on this deal here with Brooks and South and Russell. Thanks. I have to say that I'm probably in more agreement with no action. I have had four locations in Missoula which is really highly unusual, I think, for most small businesses. I've been in business ten years. Its been extremely hard business, hard ten years to stay in business for many different reasons. I have been at the ...., by Les Schwab on Brooks, I started there. I went to the Pepper Mill Mall which is now Paradise Falls. I lived through that building project at Reserve and Brooks that I think had to be one of the most hazardedly done. I saw hundreds of people almost get into head-on crashes through that detour. I lost a tremendous amount of business. I lost renters in my business. When that intersection was done not less than a week later Mountain Water came in and tore it up again. I was on Stephens and I know the traffic patterns on Stephens and Mount. And I know the traffic patterns in front of my shop. Garfield is used as a cut-across between South Avenue and North Avenue. And there's not anything that anybody is going to do that's going to lessen the impact there. And I have a feeling its going to create a greater impact on the streets before and after my location. I think that, as a small business owner, that possibly there has been not as much consideration to those small businesses on South Avenue. Some of the gentlemen on the Council and some of the ladies on the Council own small businesses and if you do you know how hard it is to make a living 'cause you just create a job for yourself. With my business it is totally based on my customer coming to me. Because I'd had to see what they call location, location, location, it has been very expensive to run my business and stay alive. And there are very few locations in Missoula for small businesses as it is. Whatever you decide to do, whatever is decided to be done, I don't have a large impact because I don't have a lot of money and I don't have a lot of pull and there's a lot of us out there that don't have that, that if you don't consider us, you will be telling small business in Missoula and from what I've seen throughout the country and from travels I've been on recently, and in my lifetime is that when you start metropolizing an area, you kill off the small businesses, all the franchises take over and you have lots of empty small business accessible locations.



Mayor Kadas said, okay, let's try to push through the rest of the staff presentation here so we can get on to the public comments.

Mike Whurl said, we went out, Bruce asked us to go out and meet with the land owners and the business owners in the area. We met with those folks in the middle of July. I've just got a board here, I'll talk through these real quickly of some of the general comments. We collected a stack an inch or so thick of comments that were very specific to each individual property and those will be looked at as the project goes into a more detailed design. Some of the more general comments, there was a general concern among businesses along South that are in the area of the diversion that there would be less exposure from traffic, less business exposures, those areas are in the gray. Then there was concerns from the neighborhood to the north and west of the intersection that routing the traffic in the fashion would encourage people to cut through the neighborhood to the north to go north on Russell or reach those destinations to the north. There was also likewise concerns about the loss of the left turn from South onto Russell and that the businesses in this area, it would be more difficult for people from the north and east parts of town to access those businesses to the southwest of the intersection. There was also concern about the traffic flow up into the South Hills that losing that left turn would encourage people to use other routes such as Bancroft or Higgins. There was a number of concerns we heard from business owners along the east side of Garfield that were very concerned about potential right-of-way impacts and encroachments onto their property. Those we are not able to quantify at this point. And likewise around the corner at Jack's Masonry Supply. There was a number of comments that we heard about congestion in a number of areas, one at Dearborn and Garfield with the increased traffic on Garfield that the traffic that now cuts from Brooks over to the mall, there would be a congestion point there. Likewise, another congestion point, at Stephens and Sussex that doesn't occur now, with the increased traffic on Stephens. And then there was concern for congestion in this area where the traffic from South Avenue would join traffic from Brooks to the north of the intersection on Brooks. We heard a number of comments about the lack of left turns from South back to Garfield because once people go to the east of Garfield it would be difficult to come back to get back on the system. And I believe that is the major comments. Like I said there is a whole, quite a list of others, very specific comments to each individual property and I'm sure we'll hear some more tonight. Those are some of the general ones.

Mayor Kadas said, thank you, Mr. Whurl. Anything else Mr. Bender?

Bruce Bender said, I did ask Jim Carlson to come and just give a brief statement about the air quality issues if we could tolerate that.

Mayor Kadas said, okay.

Jim Carlson said, for the record, my name is Jim Carlson. I'm the Director of Environmental Health for the City-County Health Department. The Missoula City County Health Department supports the selection and construction of a project to terminate South at its current intersection with Brooks and which reroutes South Avenue to new intersections along Brooks. Missoula should insure that this intersection be improved to bring it into a level of service (lack of congestion) on par with other intersections in town. The carbon monoxide levels at this intersection have caused us to receive the twenty five million in CMAQ funds. It is appropriate to invest a portion of that money to solve the specific problem that caused us to receive it. City wide carbon monoxide sampling in December of 1992 showed that this is our worst intersection from a carbon monoxide standpoint. Because of our non-attainment status, the oxy-fuels program was implemented in November of 1992 and oxygenates are added to our fuel November-February of each year at an estimated cost of \$750,000 per year. Except for last winter which had no significant periods of stagnation, we have been running just under one-and-one half to two parts per million below the standard at this intersection. This is not an adequate buffer to insure continued compliance with the standard. We could violate the standard at this intersection under a couple different sets of circumstances: 1) An interruption in the supply of oxygenate to Missoula and that violation would count; or 2) The coincidence of every poor dispersion (a long inversion), a high traffic day (Friday or Saturday), and higher than normal wood burning (a holiday). Our margin of error is very small and in my opinion could, with coincident conditions, result in a violation. Growth in average daily traffic (ADT) will also have an adverse impact on congestion and air quality at the intersection. If we violate a standard, the status of our conforming Transportation Plan will come to a screeching halt and the funding status of other projects would be subject to re-prioritization. There are also significant off site advantages to building this project: 1) By removing the five phase signal on Brooks it will be possible to run all of the signals along Brooks in a progression thus



dropping down to three phases that would improve the air quality. Its on a long term solution, its not meant to be but it is considered as part of the EA as it stands right now, if we are constrained to budget. Our basic approach is that we will go after the money to get the money and that it will come forward in some sort of means in order for us to proceed with the preferred alternative. Basically, we're faced with an issue here that ...., our delays, the amount of time we have to sit here at this junction will continue to get worse. And we can argue about how accurate this model is but both this engineering firm and then Peccia talked about this growth will occur. But the big thing that we have to look at is that what we're doing here with the preferred alternative ...., we can jump from today's near two minute delays to 20 seconds delay at the junction with the South Avenue realignment project. It seems like an almost unbelievable improvement and I think people will say how could you have such a big improvement. Well, it isn't that big of an improvement. What it is is a typical intersection, because basically when you look at the typical intersections in the adjacent area, 20 seconds isn't that significantly far off. Brooks/Reserve is the worst intersection in all of our system in the City. It has a delay of 35.7 seconds and it is our worst performing one. So you can see the huge jump. We're at almost 120 down to here's our next worst performing intersection. But more typical of the City are these kind of ones that are running in a 20 section ...., and then Brooks, Brooks and Fairview and then also there was the infamous Brooks/South/Russell plus the 100 Stephens and Brooks which comes in at 20 seconds. These are typical delays that you see in an intersection and you can see why we had such a big problem at Brooks/South/Russell. Brooks and Mount also comes in at 20 seconds. So basically what we have here are we talked about the problems and the solution but the other aspect that we had to deal with is what are our opportunities to improve it. And we had to look at the federal funding obviously as a significant opportunity as I talked about that because of our air quality problems and it has been budget that way. It is their next ranked project. And then a significant project that's also part of the CMAQ project is our area-wide signalization project. This is really our best opportunity of the future to improve Brooks. Is to upgrade and coordinate the signals on Brooks, it would be completed next year. And then with allowing ...., if we can improve the South Avenue and implement the South Avenue realignment then Brooks could be a coordinated system. If we aren't able to do the junction, then you can see that having all the coordinated signals at 20 second delays and it hits at a 100 plus, a 120 second at the junction, there's not going to be any coordination. Its not going to work. But if we can make Brooks/South/Russell typical of the other intersections then we can coordinate and have cues of traffic coming in in the morning and cues the traffic going out on Brooks. We'll make our arterial function it will take away the traffic that wants to deviate from this area and make this function as a way to get across our community and get it out of the side streets that we tend to look at right now. The other aspect, another project that we're working on right now, our sidewalk project on Brooks. This is another CMAQ project and the opportunity we're talking about here is that basically we're looking at putting sidewalks all the way down Brooks and all the way out to Reserve. We're also looking at sidewalks down 39th and up Higgins and then also the portion of South Avenue. Basically by connecting the Brooks/South/Russell with this system we can make it a sidewalk friendly, pedestrian friendly environment, because the biggest problem at the junction is that the massive size of it. The South Avenue realignment allow us to narrow the size of the junction, allows better access. You have a typical two-phase signal across as a pedestrian. I think any of us who has ever tried to walk across Brooks/South/ Russell right now, as a pedestrian, you could be there for 15 minutes to try to go across the various ...., because of the number of intersections you have to go across. The other one that this project ties into is our CMAQ bike lane project that's under consideration and again this one would bring a painted, striped, bike lane from the university area downtown, all the way out South Avenue. And then we could create that through the junction. Right now it will just basically stop at Stephens. We could run it through the junction and then interconnect it and then with another project, in the future, with a bike lane sidewalk project, South Avenue to the west, connect it into the current lane on Reserve and then the future lane that will go all the way to the intersection. You will have a continuous system. Also we would see, in the future, doing 39th/S.W. Higgins as a bike lane sidewalk project. Now I have just a brief comment up from basically Carter Burgess, our consultant on this project who has basically met with a lot of the property owners. We tried to portray to you this has been an involved project. Involved in a sense that we tried to go to the businesses and tried to deal with their issues and tried to listen to them. We admittedly do not have the foolproof, the non-problematic solution. We do believe it is the best one we can work with, with the circumstances we are in. We recognize the business' concerns and so for that purpose, we did ask Carter Burgess to go out to the businesses and ask the businesses to participate. And I'd like to Mike Whurl to make a brief presentation on the comments he received about the preferred alternative. And again his whole function was to ask people of concerns and to deal with those issues.



impacts. Now what I'd like to do to begin is to talk about the different sections of it to give you an idea of what the realignment is. This is the eastern leg, as Bruce pointed out. The only movements on South Avenue that remain in this area are the right turning traffic that comes off of Brooks or off of Russell in this area here. That's the right turning traffic and then there's circulation traffic that is allowed in a lane to circulate for the existing businesses along South. There will be a turn lane in there so they can access the parcels. There's also a bike lane along here, its the green lane, its long. Its a continuation from bike facilities through the intersection. There is also sidewalks which will be constructed on both sides of the section. The diversion of South begins down Holborn where we take two lanes of traffic off of South and carry it on up to the intersection of Brooks. There is again a circulation lane here for the businesses circulation around to provide access to the businesses and residences still in the area. There is a bike lane for the westbound traffic and sidewalks on both sides. There will be a signal at the intersection and then the bike lane will be carried through and sidewalks carried through on this section of Brooks. On the west side we removed the westbound leg of South by diverting it onto Garfield southbound to Fairview, and then you'd have options of traffic going off of Brooks or going on over to Russell at this point. Again the cross section is two lanes southbound and one lane circulation northbound with turn bay in the middle to allow turning in and out of the businesses. There is a bike lane. Sidewalk that will be installed in this section also. The section that remains on South will be jug-handled here to turn the traffic around. In other words the circulation traffic for the businesses along here will be able to continue down, jug-handle around and continue back to either go down to the south to get back into the network or to head back into the west. Again, there will be continuation of the bicycle facilities in the area, sidewalks on both sides. There will be a right turn lane installed on Russell, at this point, to take care of that volume there. There will be modifications to the signal at this intersection. Movements here, you'll be able to still go straight on this street here or they can turn left or right off of Fairview in this area here. Now our discussion of what you used to be able to do at South and now how will you make those moves. During the peak PM hours, people made this movement from eastbound South to southbound Russell. Now they will take off, go down Garfield, on across Fairview and turn south on Russell at that point. There were 180 during the peak hour making the left turn from eastbound South to northbound Russell. They will again continue down through Garfield on across the Fairview, over to Russell and then proceed northbound. The 250 vehicles, during the peak hour, that turned left and went northbound on Brooks. Again, they will be taking a similar path that the Russell Street traffic took, coming down Garfield onto Fairview and then turn left and proceed on up through the intersection. And again, the six that made the turn heading south on Brooks, they will just come on down, make the right at the intersection and head south on Brooks. On the east side, there's 79 during the peak hour making a left turn from westbound South to southbound Russell. They will take the diversion, go up through the signalized intersection and continue down to the Fairview intersection. There will be a turn bay there, and they'll turn on Fairview, and then head south on Russell. The 326, one of the major moves at the intersection, the 326 that went from westbound South to southbound Brooks will now again take the diversion, go through the signalized intersection, then proceed through the intersection. I'll turn it back to Bruce.

Mayor Kadas said, you're at about a half an hour, Bruce. Can you finish it up in ten more minutes?

Bruce Bender said, sure. The cost for the preferred alternative is 4.6 million dollars. Our current budget in our tip right now is .9 million dollars is available so basically we are short 3.7 million dollars to complete this particular project. The aspects of receiving future CMAQ monies is in the hands basically of congress and right now the current transportation plan says that Brooks/South/Russell will receive the future CMAQ monies that would be allocated to Missoula. If we were to receive this the current allocations that we're receiving right now of near 4 million dollars, this would be adequate to fund this for this project. And there may be other alternatives too to look at our funding to make up that. But in that light of that we have carried forward in the EA, that if we are in a cost containment issue, if we do have problem with receiving monies in the future, the delays, us moving ahead with this project then we do retain what we call the interim alternative which is basically an on-the-road improvement. Basically, what you'd do is at the junction you take away the left hand turn phases for South Avenue and make it a green just like Brooks is currently right now and Russell. So you'd have a simple green going back and forth here on South. So what has to happen is if you were going westbound, you would go through this section, and you wanted to take a left down to Brooks, you'd have to go through it, and basically follow the existing street system with a signal light intersection at Garfield and South and then head down that way to get to Brooks. And the same way if you were heading eastbound and wanted to take a left turn that you would have to go through it and then go up Stephens, and there would be a signalized intersection at Stephens. So this was basically left there because its a low cost way to deal with it. It does have some short term improvements here. You're



long term and the short term. That its compatible with your land use planning goals. That it takes the fair grounds into consideration and it looks at alternative modes of transportation and would help develop business opportunities within the area. Now the number of alternatives that we went through was to look at and optimize the signals, get better use out of the signal timing that's there. Restrict left turns or through movements. We can relocate streets. We can relocate legs of the intersection. We could widen the streets. We could use jug handles. We could close a leg or legs and we could look at those system-wide improvements again. And then one was thrown out there variable message signing to warn people of the conditions at the intersection. The valuation criteria that would be used to evaluate the alternatives is level of service. The existing peak hour counts, we're not going to go out and count any new traffic, we're going to use the existing counts that we started the projects with. The level of service improvement with equal air quality improvement and that was a given. We wanted to look at costs and the funds available to finance. We wanted to look at constructability, whatever we come up with that you can build it. And that its compatible and that its accessible.

Bruce Bender said, Bruce Bender, Director of Public Works. Basically in this period of time after we'd had the meetings with Kathleen Kreiger, this happened in February of 1995 and then we had further meetings in March with property owners, business interests, CAC, the City Council, to meet with and to go over these concepts and basically review the idea of taking South Avenue into realignment. And then we had continuous meetings in 1995 looking at the different alternatives of the South Avenue realignment, and I'll be going over those in a minute. And then in 1996 we continued meeting with the property owners and businesses looking at additional alternatives. In July of 1996 we started looking at the Missoula Transportation Plan and there was a lot of discussion about Brooks/South/Russell all the way up through October. And then this current year we finally were able to resolve ourselves to the current preferred alternative. Basically we looked at the west approaches here and we looked into these criteria. First off we looked at the traffic function, we looked at storage distance to the junction, access to northbound Russell, street system impacts in the South Avenue realignment as far as Dearborn, Garfield and Fairview. The business impacts about access and then business impacts as far as acquisition, kind of the statement was if you're going to affect me take me. We also project costs. These are basically the criteria that we used in going through all of these alternatives. We started on obviously the closest to the junction on each side and in the workshops we'd go out and we'd come to the conclusion it was going to be some sort of relocation of realignment of South Avenue. We began with basically going in the vicinity of Burger King in that area and ran it through the criteria. We had a lot of problems on business impacts on that particular one so it ranked pretty low. Then we continued further west and went by Tidyman's to the west of that. And again the impact to Tidyman's, we were clipping their parking lot and we'd basically have to take out the whole business or leave it partially hurt in that sense and so the business impacts then again was a problem and as far as impacts and acquisition. And we continued further west and came to Garfield and went through ...., had the same problem basically at the First Security Bank, we were hitting portions of their lot and so we didn't meet our criteria of the acquisition issues. We had again a low on that one. Another thing was we started into how we were using Garfield there. And then we started moving into continuing down on to Fairview and again going through the two properties on the property, a beauty salon and then H & H Meats there, Jack's Masonry and that was the beginning of looking at this preferred alternative. It did receive a high rating but then we did started looking at our costs and continued on. This one here was another alternative that we looked at going through the mall. It had problems with mainly again in the areas of the acquisition issues and also the street impacts. And finally we move to the one, our preferred alternative, which we'll go over in detail, and it had received the highest score. On the east side we had similar criteria again looking at the traffic function and the storage distance of Brooks/South/ Russell impacts and acquisition and project costs. We started there going through with Bob Ward's. We had similar problems with the fact that we were impacting that whole block leaving portions of the block left. And so it did not rate very well. Then we started going through the next block and had similar problems with the acquisition of the property and it ranked pretty low. Then we started moving to the west and the empty lot which is part of the preferred and going down Sussex and then we were going through the middle of another bank. And so the cost of acquiring this whole tract here, basically moved us to the preferred alternative of E-5. We looked at E-4 up here and it also had big impacts on the property and came back to the Sussex one as far as our preferred alternative of E-5. Now I'll turn it back to Gary.

Gary Funkhauser said, [inaudible]...., to the maximum extent. Routing of traffic away from South to avoid crossing Brooks and Russell, the Brooks/Russell intersection would continue to operate as it currently does. An extensive impact analysis was conducted for noise, air, cultural resources, ground water, hazardous materials, land use, social economics and other resources and the preferred alternative had no adverse



use of alternative transportation and cleaner burning vehicles, congestion will worsen and air quality problems will persist with the no action alternative. Now because of the intense interest in looking at the roundabout alternative, Earth Tech and the citizen's action committee that was created by the City to oversee and act as a sounding board to us didn't want to give this just a cursory look. So Earth Tech hired the premier roundabout planner and designer on the west coast. His name was Leif Howerston to look at a roundabout at this intersection. His analysis show that the only roundabout that would work at this intersection was one that was in conjunction with an overpass or an underpass with the intersection that remained after you took one of the streets over or under. And to show you the length that he went to look at a roundabout, this thing here he termed "das brute", its the biggest, most powerful, most complicated roundabout on earth. And that was a triple roundabout. He went into the analysis trying to prove that a roundabout would work at this intersection and he could not do it. He gave up and sent us a report and said the only thing that would work there is a roundabout conjunction with an overpass or underpass. The next thing we looked at are system improvements. These improvements are to surface streets outside of the intersection area. A number of suggestions were received from the public at scoping meeting and they were added to our list to look at and this is just a partial list. Extension of Stephens was looked at. An extension of Pattee Creek for an east-west movement was also looked at. Adding a connection to the Southgate Mall off of Dearborn. The extension of 5th-6th Street couplet. Improve South 14th Avenue and Mount Avenue. These are intersection improvements. Bancroft and Pattee Creek Drive to Mount and intersection improvements in there. The extension of Johnson and Schilling from Brooks to Mount. Higgins and S. W. Higgins, 39th from South to Reserve, a widening project there. And then a Reserve Street project itself. The only ones out of this that even helped the intersection at all was the Higgins and Reserve Street and we're only able to show that it took about 8% of the traffic out of the intersection. The next thing that was looked at was travel demand management. This attempts to reduce congestion through the intersection by changing the modes of transportation used by the public. More people would use buses, car pools, van pools, walk or ride bicycles through the intersection. Now this alternative was integrated into your 1996 Missoula Transportation Plan. What we found on this one was that by itself it would not relieve the problems at the intersection but as an overall goal for the community it was a great thing to pursue. Another one was an urban interchange. An urban interchange combined with an overpass would put in ramps to handle the existing moves that are at the intersection. In other words, to handle the left turning moves and the right turning moves were on the Brooks intersection, if it was over or under, again, this one was rejected. And there was a combination alternative. This one here is a combination of overpass underpass system improvements in various combinations. Again, no matter which way we combined them they still didn't relieve the congestion at the intersection. Then there was the overpass. This alternative met the level of service criteria and had positive results in relieving the air quality impact. This alternative was eliminated because the longer structure overall was required to accommodate the higher span which would affect access and rope closures along Brooks and the cost for extensive right-of-way. And finally at the December '94 public meeting, there was strong public opposition due to the economic impacts and visual intrusion that the overpass would have in the area. The underpass was another alternative that we looked at and again it was eliminated for similar reasons to those for the overpass. After the December '94 meeting we went back to the drawing boards. A transportation facilitator was hired, Kathleen Kreiger and she was brought in to redefine the problem statement, identify ways to solve the problem. We re-identified goals, what are other alternatives that weren't looked at and come up with some evaluation criteria. Again the problem statement, the signalized intersection provides limited amount of green time for each of the traffic movements at the intersection. The available green time, at the Brooks/South/Russell is further limited by excessive yellow time, due to the phases, the extra phases, and the excessive all clear time due to the intersection skew. The width of the intersection is so great that you have to have excessive clear time. The ways to solve the problem and decrease the number of vehicles in the intersection, increase the capacity of one or more of the phases, decrease the number of phases, decrease the all clear time required. Now when we were looking at the solution as to why we were looking at South, the first pie chart here shows the average daily traffic at the intersection. This is a 24-hour traffic volume and the numbers are kind of tough to see. What it is, Russell has 29% of the average daily traffic, there's 44% on Brooks, and roughly, I think it was right around 20% on South. So on a daily basis South has the least amount of traffic. Oh, that's 31, okay. 31, 29, 44 on the ADT. Okay, peak hour was 29, 21, and 50%. So your peak period is your peak hours and what this is showing is that 21% of the traffic during the peak hours is on South, 29% on Russell, and 50% on Brooks. So that's why we were looking at South. It has two of the phases in the intersection. There's four phases there now. Two of 'em are dedicated to South. And if we looked at removing South out of the intersection it would be able to get rid of two of those phases. Some of the goals that were looked at, improved traffic flow, improved air quality, adhere to community goals, minimize business impacts, whatever comes up, whatever we come up with make sure it really works in the



the junction. In 1992, by congressional action, a new form of federal highway tax monies was approved and instituted for new milestone to the five year program. It created a funding category of CMAQ and its kind of what we hear about the 30 million dollar pause that was allocated to Missoula because Missoula was the only city in Montana that had a non-attainment designation. In 1993, in response to CMAQ monies, because Brooks/South/Russell was the project that basically required or that basically had us designated as non-attainment, it was Brooks /South/Russell that basically enabled the City to receive the 30 million so Brooks/ South/Russell project was started in September of 1993 with a consultant initiating this project at that time. In November of that year, we had a public scoping meeting where a lot of ideas were created. We also instituted a citizen's advisory committee. We started having monthly meetings with the citizen's advisory committee in 1994, looking at the various alternatives. And then in June we had a City-wide neighborhood meeting where we reviewed all the alternatives of that date. And then in December, more of an infamous date on Brooks/South/Russell is where we had the public forum to present the preferred alternative, the overpass. So basically that kind of summarizes the activity to that point. The rest of what I want to talk about is basically what's happened since that period of time in December when the City and the community basically rejected the overpass as a concept. We have to continue looking at what are the future problems for Missoula in regards to Brooks/South/ Russell. Obviously what's driven all of our air quality issues is the continuing problem is longer vehicle delays at the junction. The forecast for the traffic at Brooks/ South/ Russell is that we will have an increase of over 30% by the year 2015. The traffic has already increased on Brooks 40% from 1984 to 1994. The time spent at the junction, in the future, will increase 20% for every 10% increase in traffic. The current average delay at the junction is two minutes and with this growth of traffic forecasted in the future we will grow toward a three minute delay by the year 2015, according to the model. Basically this graph is showing here the current delay in 1993 near two minutes and we will grow, by the year 2015, to a three minute delay. The other aspect of our problem is not only the delays but our latest transportation plan talks about the total vehicle miles traveled as being our kind of our new problem for Missoula. In total, Missoulians are traveling one million miles per day and by the year 2015 we will increase to 1.5 million dollars per day. And when you look at our urban system, the Brooks arterial is our shortest distance across the Missoula urban area. Obviously we are all very much away of the problems that the air quality of Brooks/ South/Russell, the carbon monoxide issue has been there and we've talked about that is what gave us the designation and then we were required to begin oxygenated fuel in 1992 at nearly a million dollars, somewhere in the neighborhood of three-quarters of a million dollars we're spending on oxygenated fuel to lower the CO. And we have been able to successfully lower the CO to one part for being below the EPA limit. In the future, the CO at the junction could increase. Jim Carlson from the Health Department will speak to that later. It only allows us a 15% increase in the future before we'll be out of it again. And obviously the vehicle delays, that with the growth that we talked about up above, with more delays there more vehicle emissions at the intersection, we could be above the limit again within the next ten years dependent on circumstances of weather and those other issues. The other issue of air quality, of course, is the PM-10. And the PM-10 is your particulate and I think everyone is aware PM-10 has been primarily centered on the wood stoves. But we've also, in the last five to ten years, been talking about sanding. We've gone from the usage of sand in the winter to a de-icer in order to reduce our particulate. But the aspect that's going to be another problem is that the vehicle miles traveled we talked about up here will become a problem for our PM-10 as we increase by 40% by the year 2015, according to the modeling of the Transportation Plan. The other problem we have at the junction is we have very, very poor pedestrian and bicycle access at the junction. Its very obvious to the size of it, all of the movement, the traffic movement there, there are no sidewalks in the area and the difficulty of crossing at multiple intersections and there's no room for a bicycle. At this point we're going to talk a little bit about the South Avenue realignment and how we got there. Gary Funkhauser of the previous consulting firm of Bell Walker now Earth Tech will talk about how we have moved through all the alternatives previously to the South Avenue realignment and talk about all these alternatives that we considered.

Gary Funkhauser said, I am a Vice President with Earth Tech, addressed at 827 La Casha in Boise, Idaho. As Bruce mentioned, we came on board in September of 1993 to begin the process of looking at alternatives for a solution to the congestion problem at the intersection. A number of alternatives were considered during the course of the project and these alternatives came from the public at a scoping meeting. They came from the state and local agencies and from engineers. An area study showed that most of the preliminary alternatives would not relieve the traffic congestion or improve the air quality or they were not acceptable to the public and were removed from further consideration. The first thing I'd like to talk about is the "no action." The no action was not one of the alternatives that we rejected. This one is always carried forward to the end. Its always a decision that the Council has to do nothing at that intersection. The no action alternative would leave the intersection at its current state even with increased



A RESOLUTION LEVYING AND ASSESSING A SPECIAL ASSESSMENT AND TAX ON THE LOTS, PIECES AND PARCELS OF LAND SITUATED WITHIN SPECIAL LIGHTING DISTRICTS OF THE CITY OF MISSOULA, MONTANA, TO DEFRAY THE COST OF LIGHTING IN SPECIAL LIGHTING DISTRICTS DURING THE CALENDAR YEAR 1998 IN ACCORDANCE WITH SECTIONS 7-12-4301 THROUGH 4354, MONTANA CODE ANNOTATED.

**MOTION**

Mayor Kadas said, is there any discussion? Seeing none, we'll have a roll call vote.

Upon a roll call vote, the vote on Resolution 6036 was as follows:

AYES: Anderson, Bennett, Crowley, Gingerelli, Harrison, Herbig, McGrath, Morgan, Reidy, Sponseller, Sweet, Tracy

NAYES: None

ABSTAIN: None

ABSENT: None

Resolution 6036 passed, 12 Ayes, 0 Naves, 0 Abstain and 0 Absent.

Public Hearing on the Brooks/South/Russell Intersection Project. (Public Works)

Mayor Kadas opened the public hearing.

Mayor Kadas said, well, we're about half way through the agenda and its only taken 15 minutes. I'll open the public hearing on the Brooks/ South/ Russell Intersection Project. We're going to have staff report first. I know most of you are here for this. The way we do the process is we'll have a staff report and I'd like to ask Mr. Bender and his crew to try to get through that in about a half an hour. Then we'll take public comment. And I'll ask you all to try to limit yourselves to three minutes each since there are so many of you and try not to repeat things. Now I know some of you will go beyond that and that's okay up to a point and I'll be the judge of that point. Just remember that we're all going to be listening and paying close attention and we'll do our best to hear what everyone has to hear. Then Council will have time to ask questions and I'm sure they will have a number of questions for Mr. Bender and they'll have a number of questions for people who have presented testimony. And then at that point, the Council has the choice of sending back to committee or acting on it tonight. So, Mr. Bender, if you'd like to proceed. Mr. Bennett.

Alderman Bennett said, I just wanted to inform the audience that this will be going back for consideration and review so we won't be having a vote tonight.

Mayor Kadas said, I suspected as much. Thank you for telling us though, Michael.

Bruce Bender, Director of Public Works. I'd like to have you appreciate we're going to try to summarize four years of effort in 30 minutes. So bear with us as we go through four years and maybe even before that. Some of these copies we're going to be presenting aren't going to be totally clear to all of you in the back so if you could tolerate not seeing them very clearly but I'll try to articulate it very clearly for you. The Brooks/South/Russell time, I'm basically, when you look back at the record outside the original subdivisions that were platted in the late 1800s early 1900s, we started looking at the problem in 1967 with a 1967 Transportation and also Comprehensive Plan. Interestingly enough is that particular plan that actually shows a relocation of alignment of Brooks at that intersection trying to deal with this particular problem. In 1978, due to the carbon monoxide problems at the junction, ...., the City of Missoula, that area was designated as non-attainment for air quality. In 1985 to '86 the Brooks Street improvements were instituted which basically were the medians and curbs in order to control access to streamline the traffic flow. Basically this project had been prioritized due to the non-attainment status that we had received in '78. In 1985, Transportation Plan, an overpass was recommended to look at in order to help solve the problem at



# WEST APPROACH ALTERNATIVE

## South Avenue Realignment

	W 1	W 2	W 3	W 4	W 6	W 7
SOUTH AVENUE RELOCATION TRAFFIC FUNCTION	+	+	+	++ Traffic Signal Coordination	+	++
STORAGE DISTANCE TO JUNCTION (B / S / R)	-	+	+	++ Most Distance	+	++
ACCESS TO NORTHBOUND RUSSELL STREET	-	+	+	++ Fairview distance to Junction	+	++
STREET SYSTEM IMPACT (Dearborn, Garfield, Fairview)	+	-	---	-- Fairview Signal Removed	--	-
BUSINESS IMPACTS ACCESS	-	--	+	+	++	+
BUSINESS IMPACTS AQUISITION	-	--	--	++ No Partial Properties Remainder	-	+
PROJECT COSTS	- \$ 2.4	+ \$ 1.7	0 \$ 2.0	0 \$ 2.2	0 \$ 2.0	+ \$ 1.9
SCORE	- 3	- 1	- 1	6	2	8



# EAST APPROACH ALTERNATIVE

## South Avenue Realignment

	E 1	E 2	E 3	E 4	E 5
SOUTH AVENUE RELOCATION TRAFFIC FUNCTION	- - -	+	+	+	+
STORAGE DISTANCE TO JUNCTION (B / S / R)	- - -	+	+	+	0
BUSINESS IMPACTS ACCESS	-	- -	+	+	+
BUSINESS IMPACTS AQUISITION	-	- -	- -	+	+ +
PROJECT COSTS	?	- - \$ 3.9	- - \$ 3.9	++ \$ 2.9	+++ \$ 1.5
SCORE	- 9	- 4	- 1	6	7



## **Appendix A**

### **Ranking of Alternatives Transcript of the Public Hearing**



35. Comment: If the City does nothing, will money spent have to be repaid?

*Response: If the No Action Alternative cannot be justified, the City would be obligated to repay the money.*



*design phase. Traffic barriers/diverters will be considered as a means of calming traffic in affected neighborhoods.*

29. Comment: Pave alleys around the junction to reduce particulates.

*Response: The City requires alleys to be paved as new commercial development occurs within the block. As additional CMAQ funds become available, paving alleys will be considered as a separate project.*

30. Comment: Concern was expressed that the realignment will lead to future changes in traffic patterns (one-way streets) and loss of parking.

*Response: The Preferred Alternative does not include any one-way streets. Parking spaces on Garfield, Sussex and Fairview at the South Avenue realignment will be removed to accommodate the increased traffic.*

31. Comment: What percentage of people were for and against the proposed plan?

*Response: Unknown. Many comments involved specific suggestions or concerns to be addressed in design rather than opposition to the proposed plan.*

32. Comment: How many air quality violations were there at the junction in past 7 years?

*Response: Between February 1987 and November 1991, there were 14 exceedances for CO at this intersection, 9 of which resulted in a violation of the Federal Standard. There have been no measured exceedances since 1991.*

33. Comment: Will right turns from Brooks and Russell be free right turns?

*Response: No, right hand turns from Brooks and Russell will be handled as they currently are.*

34. Comment: What was the impact of connecting Stephens to Higgins in terms of vehicle movement and air quality?

*Response: Modeling indicated that extending Stephens to Higgins would carry 1000-1500 vehicles, drawing most from Bancroft and some from Higgins. It provides no noticeable reduction at Brooks/South/Russell.*



24. Comment: Realigning Brooks instead of South will provide smooth traffic flow and easier access to businesses at lower cost than proposed solution.

*Response: All approaches were considered in alternative development. Relocation of South Avenue provided the greatest benefit in reducing congestion at the Brooks/South/Russell intersection.*

25. Comment: Modification of the Interim Option Plan (to include right turns from South to all streets, and no left turns from South between Stephens and Garfield) would better route traffic through the intersection and reduce congestion.

*Response: The Interim Alternative is a stopgap measure that will temporarily reduce congestion at current traffic levels until funds are available for a long-term solution. The Preferred Alternative provides a long-term solution for projected traffic at the junction.*

26. Comment: Consider revised overpass alternative.

*Response: When an overpass alternative was presented at a public information meeting in 1994, concerns were expressed about the economic impact and the visual intrusion of an overpass structure on the character of the community. Over 500 comments against the grade separation alternatives in general were received, and several petitions specifically opposed to an overpass were submitted to the City. An overpass alternative was eliminated from further consideration due to this strong public opposition.*

27. Comment: Provide light rail and bus system to reduce vehicular traffic.

*Response: Increased mass transit usage was considered, but the level that would be necessary to relieve congestion at the intersection was not feasible. A 5% increase in transit use was recommended as a realistic goal, and is now included as part of the City's updated Transportation Plan.*

28. Comment: Several comments were received regarding specifics on configuration at various intersections, traffic signal locations/phasing (provide signals at intersections of South/Johnson, North/Russell, Stephens, Fairview/Russell, Mount/Higgins, and South/Dearborn), and traffic barriers/diverters.

*Response: Intersection configurations and application of traffic signals at South/Johnson, North/Russell and Fairview/Russell will be analyzed in the*



19. Comment: Reduce traffic at the junction by diverting truck traffic to Highway 12.

*Response: The percentage of truck traffic at the Brooks/South/Russell intersection is not significant enough that diversion will relieve the congestion at the intersection.*

20. Comment: Won't completion of North Reserve (and shift of Missoula hub to Reserve/Mullan area) relieve the traffic at Brooks/South/Russell?

*Response: A fully completed North Reserve was included in the traffic projections in the Environmental Assessment. Traffic modeling indicates Reserve will draw away 8% of the traffic from the junction. A 31% increase on traffic at the Brooks/South/Russell intersection is projected in the next 20 years even with the improvement of Reserve.*

21. Comment: Would reducing vehicle miles or trips relieve the problem at the junction?

*Response: Traffic Demand Management (TDM) scenarios to reduce vehicle demand at the junction are discussed in the Environmental Assessment. A realistically achievable 5% reduction in vehicle demand by itself does little to resolve traffic congestion or air quality problems at the intersection. Even a TDM strategy providing a vehicle reduction of 20% would not by itself adequately reduce congestion or vehicle emissions at the junction, and would be prohibitively expensive to implement.*

22. Comment: Would systemwide improvements relieve the problem at the junction?

*Response: Numerous system improvements outside the Brooks/South/Russell intersection were evaluated, as discussed in the Environmental Assessment. None of these improvements, as stand alone alternatives, significantly improve traffic congestion or air quality problems at Brooks/South/Russell.*

23. Comment: Rerouting Russell Street and changing North Avenue would be less harmful to businesses and accommodate increased traffic demands more readily than the South Avenue realignment.

*Response: All approaches were considered in alternative development. Relocation of South Avenue provided the greatest benefit in reducing congestion at the Brooks/South/Russell intersection.*



14. Comment: New traffic patterns to circumvent the South Avenue reconfiguration, such as vehicles crossing Russell at Kent, Central or North Avenue present safety concerns for school children.

*Response: Traffic is already circumventing the Brooks/South/Russell intersection because of the congestion. Improved capacity at the intersection will attract traffic back to the arterial roadways of Brooks, South and Russell, thus improving safety on the alternate routes currently being used.*

15. Comment: Leave the intersection as is (No Action Alternative).

*Response: The No Action Alternative does not address air quality, traffic flow, or bicycle/pedestrian traffic problems at the intersection.*

16. Comment: Reconsider the overpass proposal.

*Response: An overpass alternative was considered in detail and presented at a public information meeting in December 1994. This alternative was eliminated from further consideration because: 1) the longer structure required to accommodate the higher span would affect access along Brooks, 2) the amount of right-of-way acquisition would be prohibitive, and 3) technical difficulties were foreseen in placing the massive support members. In addition, public opposition was substantial with nearly 86% of the 594 comments received opposed to both grade separation alternatives (overpass or underpass).*

17. Comment: Use a roundabout.

*Response: A number of roundabout sizes and configurations were analyzed. None could adequately handle the volume of traffic going through Brooks/South/Russell without taking significant amounts of property for right-of way from both private owners and the fairgrounds. It was not possible to incorporate all of the necessary turning movements in the roundabout design for it to function effectively.*

18. Comment: Address air quality issue with vehicle exhaust limits.

*Response: Use of oxygenated fuels from November-February has reduced CO emissions systemwide, and limited violations to the Brooks/South/Russell junction only. A vehicle inspection and maintenance (I&M) program would be a more costly solution to address this single area. If the problem becomes more widespread, an I&M program may be considered.*



8. Comment: Several comments and suggestions were received for providing safe, convenient bicycle and pedestrian traffic routes through or around intersection.

*Response: Bicycle lanes and sidewalk improvements are part of the Preferred Alternative. Better pedestrian signal timing will be provided at the Brooks/South/Russell intersection.*

9. Comment: The South Ave. realignment and in turn option of Brooks/South/Russell will hurt entrance/exit from the fairgrounds.

*Response: Access to the fairgrounds will not be modified under the Preferred Alternative. Reduced congestion at the Brooks/South/Russell intersection would result in better access.*

10. Comment: Splitting Homevale property owned by school district will make it unusable for school facilities.

*Response: The property will still have economical remnant once the roadway is constructed, but it will not be usable as a contiguous development. The District will be compensated for the property taken based on an appraisal of the value.*

11. Comment: Will the South Ave. reroute impact access to Sentinel High School?

*Response: The project will not change access to Sentinel High School.*

12. Comment: How will Stephens Ave. traffic be managed in relation to new westerly flow of Sussex traffic?

*Response: Control at this intersection will be changed under the east realignment of the Preferred Alternative. South Ave. realigned on Sussex will be a through street with Stephens regulated by stop signs.*

13. Comment: There are increased safety concerns at the Bancroft/South Ave. intersection if traffic increases there due to the project.

*Response: Traffic at Bancroft/South Ave. will not change because of the Preferred Alternative.*



3. Comment: Traffic routed west onto Fairview would turn into Washburn (through the neighborhood) rather than going on to Russell.

*Response: Diverters and other traffic demand management measures will be considered during final design to mitigate impacts on the neighborhood.*

4. Comment: Leave the intersection of Brooks and North Ave. as is (unsignalized) to prevent diversion of traffic from South through the neighborhood.

*Response: No changes are proposed at the Brooks/North Ave. intersection in the Preferred Alternative. The need for a signalized intersection at Russell/North will be evaluated in final design.*

5. Comment: Several comments were received from businesses along South Avenue concerning potential negative impacts of less business exposure due to reduced drive-by traffic.

*Response: There will be less traffic driving past businesses on South Avenue between Garfield and Stephens since traffic approaching the Brooks/South/Russell intersection is diverted to other streets. However, traffic leaving the intersection will still travel South Avenue. There will be less congestion on South Avenue, allowing more turns to access businesses.*

6. Comment: Lack of access to Brooks and Garfield from the area west of Russell and east of Garfield will create a "dead zone", deterring customers from patronizing businesses in that area.

*Response: The preferred West Realignment alternative (Figure 2-3) provides access to Garfield from this area on Dearborn Ave. The configuration of the preferred West Realignment alternative as presented at the hearing also includes access to Garfield from South westbound, and to Fairview from Garfield northbound.*

7. Comment: Several comments were received suggesting extending Stephens to 39<sup>th</sup> as an alternative to the proposed Brooks/South/Russell modifications.

*Response: Traffic modeling was done for this improvement as an individual alternative to making improvements to Brooks/South/Russell. It was eliminated from further consideration as it did not significantly improve traffic congestion at the junction.*



is included in Figure 3. The traffic calming improvements noted in Condition No. 1 of the Resolution would be developed in final design of the project. Proposed traffic calming improvements would be traffic island diverters and traffic island circles placed within strategic locations of the adjacent neighborhood street intersections in order to slow or deter traffic into certain neighborhood streets.

**SELECTED PREFERRED ALTERNATIVE.** The Selected Preferred Alternative is the South Ave. Realignment including Alternate E5(Figure 1) and Alternate W7(Figure 2) inclusive of Traffic Demand Management(TDM). Alternate E5(Figure 1) is a new route that allows traffic westbound on South Ave. to access Brooks St. southbound via new right-of-way. Alternate W7(Figure 2) takes the eastbound traffic on South Ave. along a new route that uses Garfield St. south and then accesses Brooks St. northbound. The Preferred Alternative(Alternate W7) in the Environmental Assessment (Figure 2-3: South Avenue West Realignment) was modified to provide access to Brooks Street from the area north of South Avenue/east of Garfield, and the area south of Fairview Avenue/west of Garfield. As shown on Figure 2 for the modified west realignment, connections were made to allow access to Brooks Street from westbound South Avenue via Garfield, and from northbound Garfield via Fairview.

## **Response to Comments and Questions on the Environmental Assessment**

1. Comment: Numerous comments were received expressing concern about the likelihood (and related adverse impacts) of increased diversion of northbound traffic through neighborhoods northwest of the junction. A petition (signed by 53 people) was received, requesting provisions to block access from South Ave. to Catlin, Washburn and Garfield.

*Response: Traffic control devices (diverters) which limit access to neighborhood area or which direct traffic from the neighborhood will be incorporated in the final design to prevent potential northbound traffic from entering the neighborhood.*

2. Comment: A petition, signed by 9 people, requested barriers at the intersections of Washburn, Catlin and Garfield with Kent, Central and Sussex; and speed bumps at the intersections of North with Washburn, Catlin and Garfield to protect neighborhoods.

*Response: Diverters and other traffic demand management measures will be considered during final design to mitigate impacts on the neighborhoods.*



ATTEST:

/s/ Martha L. Rehbein

Martha L. Rehbein  
City Clerk

(SEAL)

APPROVED:

/s/ Mike Kadas

Mike Kadas  
Mayor



RESOLUTION NUMBER 6051

A RESOLUTION OF THE MISSOULA CITY COUNCIL EXPRESSING SUPPORT AND AGREEMENT WITH THE ENVIRONMENTAL ASSESSMENT OF THE BROOKS/SOUTH/RUSSELL INTERSECTION PROJECT.

WHEREAS, Missoula urban area has been designated since 1978 as nonattainment due to the carbon monoxide levels at the Brooks/South/Russell Intersection; and

WHEREAS, due to this nonattainment designation, the Missoula urban area became eligible for CMAQ federal funds under the ISTEA Congressional legislation; and

WHEREAS, projected future traffic growths will increase traffic delays and congestion at the Brooks/South/Russell Intersection and worsen air quality; and

WHEREAS, in accordance with air and traffic models, the proposed Brooks/South/Russell Intersection Project would reduce the carbon monoxide levels up to 40%, and reduce traffic delay time up to 80%; and

WHEREAS, the proposed Brooks/South/Russell project will improve access by pedestrians and bicyclists and provide connections to other proposed bicycle/pedestrian facilities.

WHEREAS, public review and meetings have been held to consider alternatives and make recommendations; and

WHEREAS, the Environmental Assessment states the preferred Alternative is the South Avenue East Realignment, E5, and South Avenue West Realignment, W7.

WHEREAS, Brooks Street is designated as U.S. Highway 93 Business Route and Highway 12; and

NOW THEREFORE, be it resolved that the Missoula City Council supports and agrees with the Environmental Assessment of the Brooks/South/Russell Intersection Project with the following conditions:

1. Mitigate impacts of bypass traffic into the northwestern neighborhood called McCleod Addition by implementing the usage of traffic calming improvements within the neighborhood streets and analyzing the usage of traffic signals on the Johnson - North route.
2. Minimize construction impacts upon businesses by staging construction activity to minimize disruption of access.
3. Minimize impacts of access control and removal of parking on South Avenue, Garfield, and Sussex improvements by developing design options that create additional accesses and additional parking.
4. Enhance aesthetics and livability of the area by maximizing opportunities in the design for landscaping.
5. Continue providing opportunities for business and property owners to review and input on the design details in the design phase of the project.
6. Require additional approval by the City Council if funding for this project will reduce or delay funding from the Urban Fund of the Transportation Improvement Program (TIP) for other planned transportation projects.

PASSED AND ADOPTED this 20<sup>th</sup> day of October, 1997.



# South Avenue West Realignment - W7

## PREFERRED ALTERNATIVE

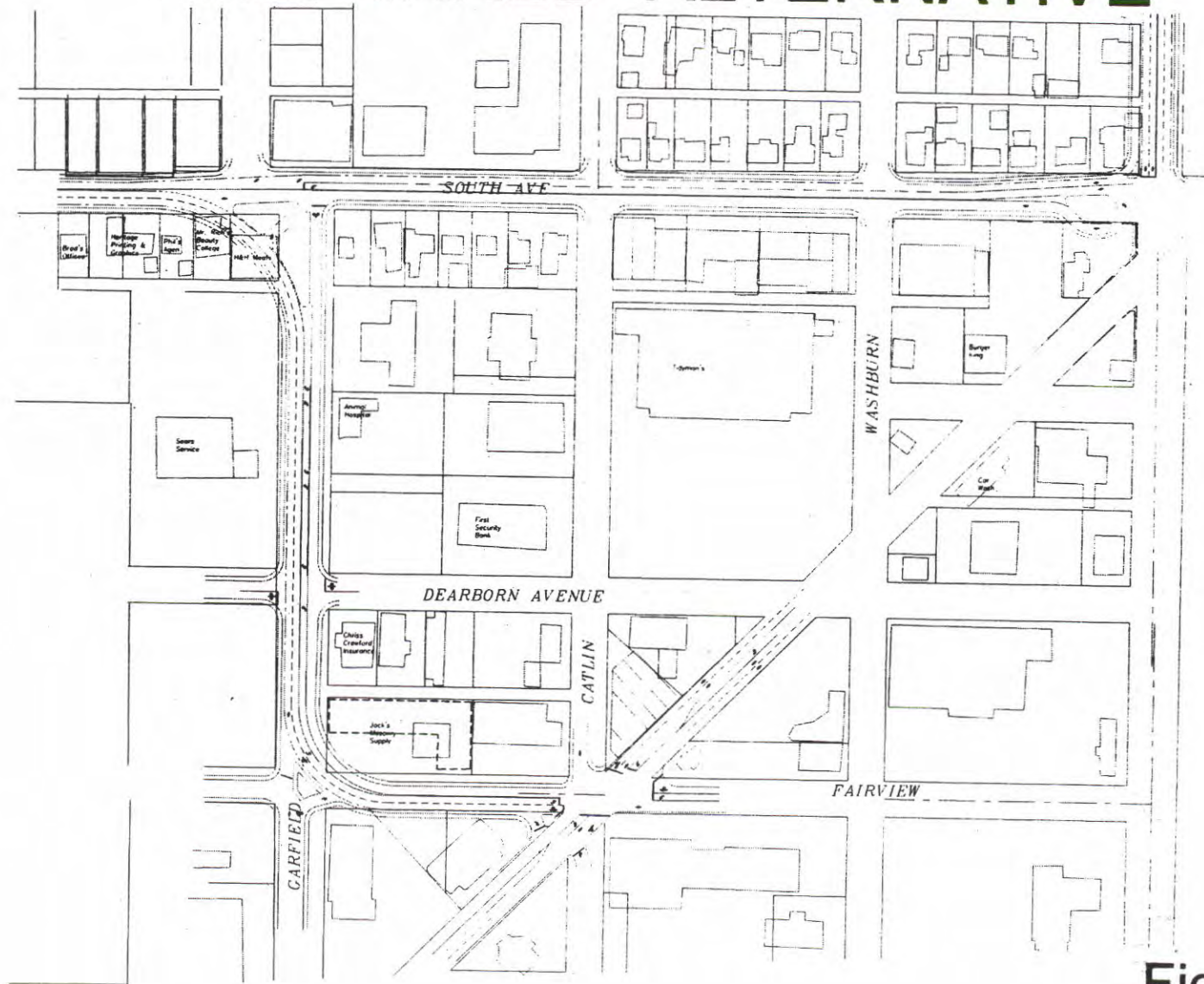
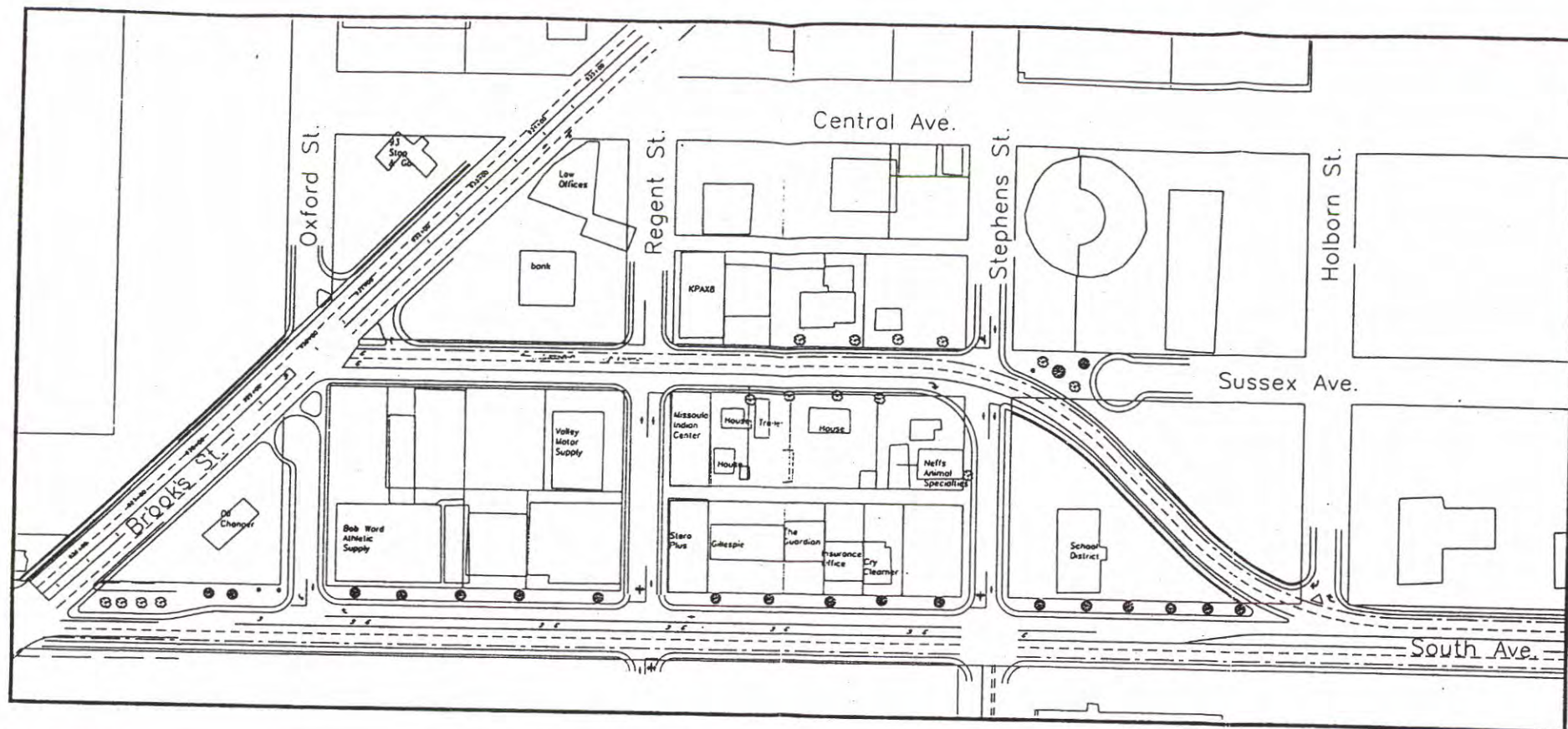


Figure 2





# SOUTH AVENUE EAST REALIGNMENT (E5) PREFERRED ALTERNATIVE

0 100 200 300 400 500

FEET

0 25 50 75 100

200

METERS

SCALE

Figure 1



## **Coordination Process**

The proposed action has been coordinated with all the appropriate federal, state and local agencies to comply with the National Environmental Policy Act and the Montana Environmental Policy Act. The notice of availability of the Environmental Assessment was published in the Missoulian on August 31, 1997. It was also sent to the project mailing list of interested parties. Copies of the Environmental Assessment were made available at three public locations, and were sent to the Montana Department of Transportation and Federal Highway Administration.

A public hearing was held on Monday, September 22, 1997 at the Missoula City Council meeting at City Hall, 435 Ryman Street, Missoula, Montana. Access issues that had been raised after publication of the Environmental Assessment were addressed in the hearing presentation.

Additional information presented at the hearing included the rating of various alternatives by the Technical Advisory Committee. The issues and ranking used in determining the preferred alternative for both west and east approaches are shown in Appendix A.

A transcript of the hearing is included in Appendix A. Public comments were received from 19 people at that hearing. Thirty (30) public comment letters and 2 petitions were also received. Appendix B includes comment sheets, public letters, and agency letters received about the project after publication of the Environmental Assessment. A synopsis of comments with responses is provided in the section entitled "Responses to Comments and Questions on the Environmental Assessment" on page 2 of this FONSI.

Three of the comments were in support of the proposed plan. Six expressed opposition without favoring any alternatives. Ten individual comments plus 2 petitions (see comments 1 and 2 in the following section) involved concerns about potential impacts of the proposed plan on residential areas. Twenty-three suggested other measures (e.g. alternate roadways, signals, vehicle emission limits, traffic reduction), or reconsideration of alternatives previously considered and eliminated. The remainder offered design suggestions to ensure that the preferred alternative prevented shortcuts through residential areas, and provided access to businesses and safe bicycle/pedestrian traffic.

## **Selection of the Preferred Alternative**

Based on the Environmental Assessment, comments from various public information meetings and the public hearing, the City of Missoula has determined that the alternative described on page 2-1 of the Environmental Assessment, with modifications to the west approach (Alternate W7) as shown at the hearing (Figure 2 of this FONSI) is the Preferred Alternative. A City Council resolution (Resolution 6051) expressing support and agreement with the findings of the Environmental Assessment, with conditions as noted,



## Table of Contents

<u>Section</u>	<u>Page</u>
Coordination Process	1
Selection of the Preferred Alternative	1
Response to Comments and Questions on the Environmental Assessment	2
Appendix A: Ranking of Alternatives Transcript of the Public Hearing	
Appendix B: Written Comments Received	
Appendix C: Environmental Assessment	

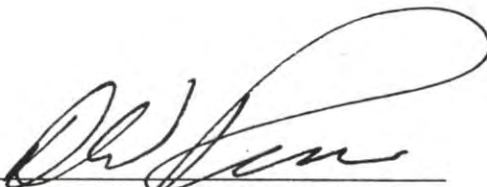


FINDING OF NO SIGNIFICANT IMPACT

for

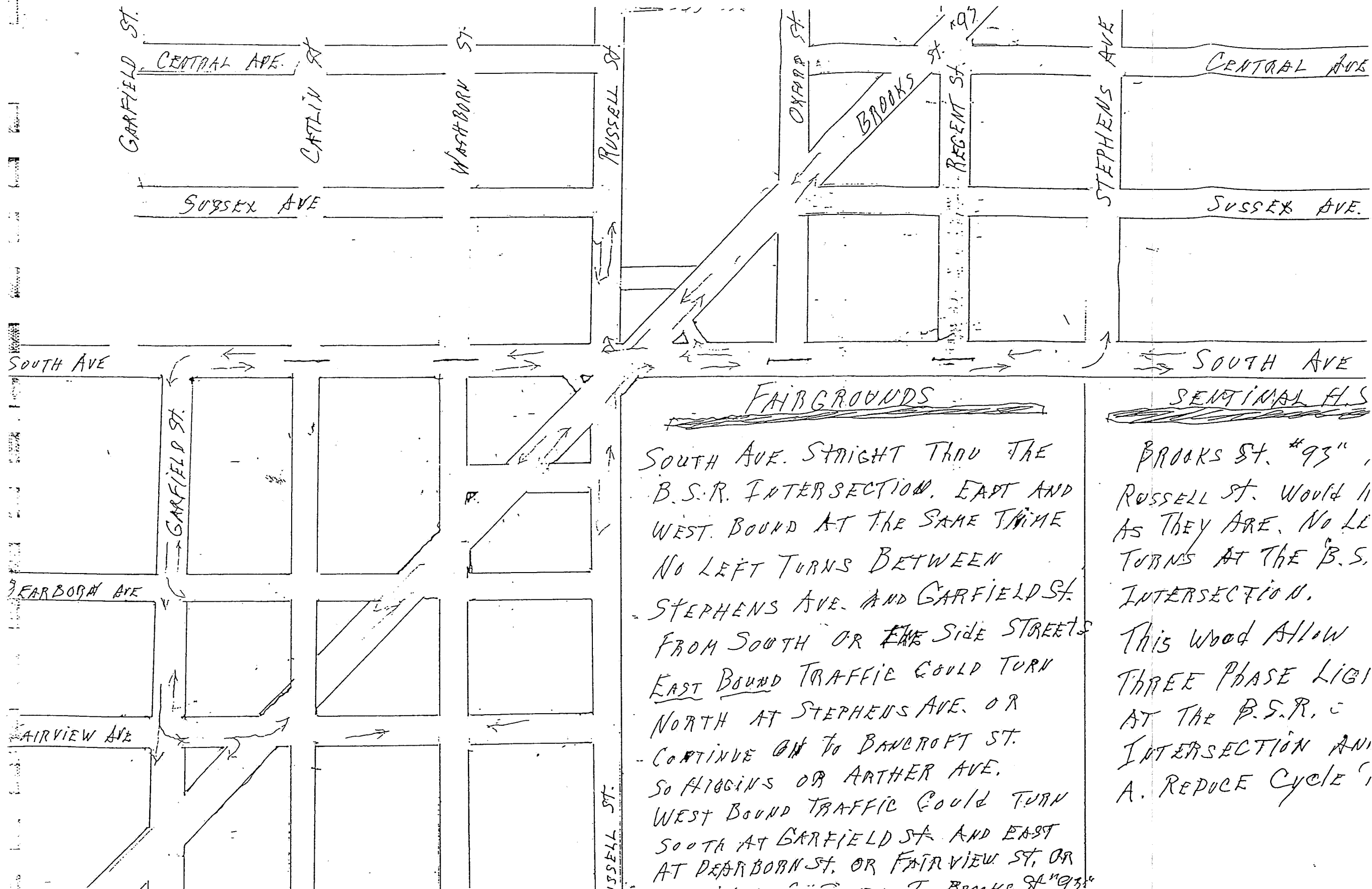
Project No. CM 0002(105)  
Brooks/South/Russell Intersection Project  
Control No. 2418

The Federal Highway Administration has determined that this proposed project will have no significant impact on the human environment. This FINDING OF NO SIGNIFICANT IMPACT is based on the attached Environmental Assessment which has been independently evaluated by the Federal Highway Administration and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The Federal Highway Administration takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment.

  
Federal Highway Administration

6-11-98  
Date

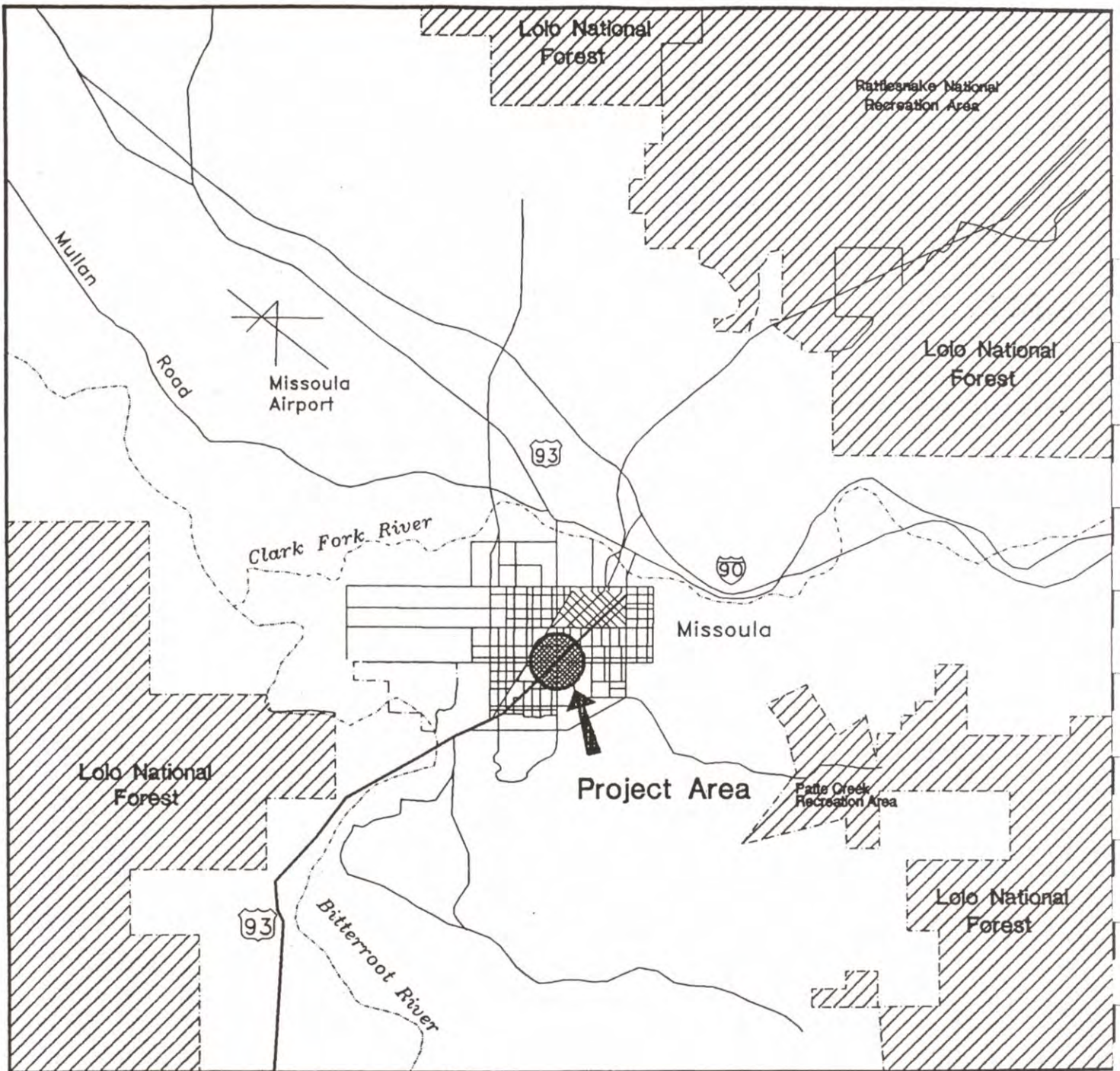




SOUTH AVE. STRAIGHT THRU THE B.S.R. INTERSECTION. EAST AND WEST BOUND AT THE SAME TIME NO LEFT TURNS BETWEEN STEPHENS AVE. AND GARFIELD ST. FROM SOUTH OR THE SIDE STREETS EAST BOUND TRAFFIC COULD TURN NORTH AT STEPHENS AVE. OR CONTINUE ON TO BANCROFT ST. SO HIGGINS OR ARTHUR AVE. WEST BOUND TRAFFIC COULD TURN SOUTH AT GARFIELD ST. AND EAST AT DEARBORN ST. OR FAIRVIEW ST. OR

BROOKS ST. "93", RUSSELL ST. WOULD 11 AS THEY ARE. NO LEFT TURNS AT THE B.S. INTERSECTION. THIS WOULD ALLOW THREE PHASE LIGHT AT THE B.S.R. INTERSECTION AND A. REDUCE CYCLE





VICINITY MAP

# PROJECT LOCATION

## Figure 1-1



## **CHAPTER 1 - PURPOSE AND NEED FOR ACTION**

### **OVERVIEW OF THE PROJECT AREA**

The proposed project is located at the intersection of three arterial roadways in the City of Missoula, Montana (Figures 1-1 and 1-2). Brooks Street, South Avenue, and Russell St. intersect at the northwest corner of the Missoula County Fairgrounds in south central Missoula. The location of this intersection, which for purposes of this Environmental Assessment (EA) is referred to as Brooks/South/Russell, is shown on Figure 1-2.

Brooks St., a business route of U.S. 93(A) and U.S. 12, is a major connecting link through Missoula and it runs southwest-northeast from Reserve St. (U.S. 93) to Higgins Ave. South Ave. is a connecting link east to west through the City from its west terminus near McCauley Butte to its east terminus at Bannack Court at the University Golf Course. Russell St. is a major connecting link north-south from the Burlington Northern railroad tracks south of I-90 to 39<sup>th</sup> St.

### **PROJECT DESCRIPTION**

Preliminary design would be completed if the proposed action is approved. Final design decisions have not been made, and engineered locations of design features described in this section have not been determined. Constructing these improvements would use both state and federal funding. The federal contribution to the funding of the Brooks/South/Russell Intersection Project (Project) would be administered through the Federal Highway Administration (FHWA), with the Montana Department of Transportation (MDT) overseeing selection of final alternative and construction. The impact analysis presented in Chapter 3 is based on the proposed action and alternatives and the no-action alternative described below.

#### **Project Components**

The Project, depending on the alternative selected, would include the construction of new road surface and reconstruction of existing streets to effectively realign South Ave. so that eastbound traffic is diverted via a new route that is south of the existing intersection to access Brooks St. (or Russell St.). Those vehicles east of the intersection westbound on South Ave. likewise may access Brooks St. via a new route north of the existing intersection. The project design is intended to improve traffic flow and reduce carbon monoxide levels in the vicinity of the Brooks/South/Russell intersection and to improve traffic circulation and access to businesses within downtown Missoula. For further detail on the proposed South Ave. Realignment alternatives, please refer to Chapter 2, Project Alternatives and Appendix A. Other project components include road widening, several new traffic signals, free right turns southbound and northbound from Russell St. to South Ave., bicycle and pedestrian access, and landscaping.



3-2	Current Zoning .....	3-7
3-3	Brooks/South/Russell Noise Model .....	3-23
3-4	Air Quality Modeling Sites .....	3-39



## LIST OF FIGURES

1-1	Project Location .....	1-2
1-2	Project Study Area .....	1-3
1-3	Proposed Typical Cross Section - Russell Street North of the Intersection .....	1-6
1-4	Proposed Typical Cross Section - Russell Street South of the Intersection .....	1-7
1-5	Proposed Typical Cross Section - South Avenue East Realignment .....	1-8
1-6	Proposed Typical Cross Section - South Avenue West Realignment .....	1-9
1-7	Proposed Typical Cross Section - Brooks Street, Fairview to Intersection .....	1-10
1-8	Proposed Typical Cross Section - Brooks Street, Intersection to East Relocation ...	1-11
2-1	Overview of South Avenue Realignment .....	2-3
2-2	South Avenue East Realignment (E5) - Preferred Alternative .....	2-5
2-3	South Avenue West Realignment (W7) - Preferred Alternative .....	2-7
2-4	South Avenue Realignment - Minimize Right-of-Way Impacts .....	2-9
2-5	South Avenue West Realignment W3 .....	2-11
2-6	South Avenue West Realignment W4 .....	2-13
2-7	South Avenue West Realignment W6 .....	2-16
2-8	South Avenue East Realignment E3 .....	2-17
2-9	South Avenue East Realignment E4 .....	2-19
2-10	Roundabout Alternative .....	2-22
2-11	Urban Interchange Alternative .....	2-24
2-12	Grade Separation Alternative Overpass .....	2-26
2-13	Grade Separation Alternative Underpass .....	2-27
3-1	Existing Land Use .....	3-3



## LIST OF APPENDICES

Appendix A - Alternatives Development and Screening Process

Appendix B - Hazardous Materials Survey

## LIST OF TABLES

1-1	Current and Projected Traffic Volumes at Brooks/South/Russell Intersection .....	1-15
1-2	Comparison of Intersection Capacity at Outlying Intersections .....	1-15
1-3	Existing Street System and Traffic Volumes .....	1-16
1-4	1993 P.M. Peak Hour Level of Service .....	1-18
3-1	Properties Partially or Wholly Affected by Each Alternative .....	3-10
3-2	Relocation Impacts .....	3-15
3-3	FHWA Design Noise Level/Land Use Relationships .....	3-22
3-4	Field Noise Sampling Results .....	3-22
3-5	Calibration of the Brooks/South/Russell Model .....	3-25
3-6	Locations of Sites of Environmental Concern from Sanborn Map Review .....	3-27
3-7	Locations of Sites of Environmental Concern from VISTA Report .....	3-29
3-8	Peak Hour Maximum Carbon Monoxide Concentrations, ppm .....	3-40
3-9	Peak Eight Hour Maximum Carbon Monoxide Concentrations, ppm .....	3-41
4-1	Brooks/South/Russell Intersection Project Consultation Summary .....	4-10
A-1	Transportation Mode Assumptions .....	A-3



## **CHAPTER 5 - LIST OF PREPARERS AND CONTRIBUTORS**

BELL-WALKER ENGINEERS (Earth Tech) .....	5-1
SUBCONTRACTOR .....	5-1
DAMES & MOORE .....	5-1
SUBCONTRACTORS .....	5-1
CAC MEMBERS .....	5-1
TAC MEMBERS .....	5-2
CITY OF MISSOULA .....	5-2
FEDERAL HIGHWAY ADMINISTRATION .....	5-2
MONTANA DEPARTMENT OF TRANSPORTATION .....	5-2

## **CHAPTER 6 - REFERENCES**



<b>SURFACE AND GROUND WATER RESOURCES</b> .....	3-46
Affected Environment .....	3-46
Environmental Consequences .....	3-48
Mitigation .....	3-49
<b>CONSTRUCTION RELATED IMPACTS</b> .....	3-50
Soils .....	3-50
Air Quality .....	3-50
Noise .....	3-51
Public Safety .....	3-51
Population and Employment .....	3-51
Construction Traffic Control .....	3-52
Traffic Flow and Circulation .....	3-52
Economic and Fiscal Impacts .....	3-52
Regional Economy .....	3-52
<b>CUMULATIVE IMPACTS</b> .....	3-53
Human Environment .....	3-53
Natural Environment .....	3-54
<b>PERMITS AND APPROVALS</b> .....	3-54

## **CHAPTER 4 - COMMENTS AND COORDINATION**

<b>INTRODUCTION</b> .....	4-1
<b>PUBLIC INVOLVEMENT PROGRAM</b> .....	4-1
Citizen's Action Committee .....	4-1
Technical Advisory Committee .....	4-3
Public Meetings and Media Events .....	4-3
Major Issues, Concerns and Opportunities Raised by the Public .....	4-5
<b>AGENCY CONTACTS</b> .....	4-7
Local Agencies .....	4-8
Local Organizations .....	4-8
State Agencies .....	4-8
Federal Agencies .....	4-9



## CHAPTER 3 - AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

LAND JURISDICTION AND USE .....	3-1
Affected Environment .....	3-1
Environmental Consequences .....	3-9
Mitigation .....	3-11
SOCIOECONOMICS .....	3-11
Affected Environment .....	3-11
Environmental Consequences .....	3-14
NOISE .....	3-20
Introduction .....	3-20
Affected Environment .....	3-21
Environmental Consequences .....	3-25
Mitigation .....	3-25
HAZARDOUS MATERIALS .....	3-26
Affected Environment .....	3-26
Environmental Consequences .....	3-30
Mitigation .....	3-31
VISUAL RESOURCES .....	3-31
Affected Environment .....	3-31
Environmental Consequences .....	3-33
CULTURAL RESOURCES .....	3-34
Affected Environment .....	3-34
Environmental Consequences .....	3-35
AIR QUALITY .....	3-36
Introduction .....	3-36
Affected Environment .....	3-36
Environmental Consequences .....	3-40
BIOLOGICAL RESOURCES .....	3-42
Affected Environment .....	3-42
Environmental Consequences .....	3-43
EARTH RESOURCES .....	3-44
Affected Environment .....	3-44
Environmental Consequences .....	3-45



## TABLE OF CONTENTS

### DISTRIBUTION LIST

### SUMMARY

### CHAPTER 1 - PURPOSE AND NEED FOR ACTION

OVERVIEW OF THE PROJECT AREA .....	1-1
PROJECT DESCRIPTION .....	1-1
Project Components .....	1-1
Major Design Features .....	1-5
Project Schedule .....	1-12
Project Costs and Funding .....	1-12
PURPOSE AND NEED FOR THE PROJECT .....	1-13
Air Quality .....	1-13
Condition of the Existing Roadways and Turning Movements .....	1-14
Current and Projected Traffic Volumes .....	1-14
Accident Rates .....	1-19
Transportation Plan .....	1-19
Local Planned Developments .....	1-19
PROJECT BACKGROUND .....	1-20

### CHAPTER 2 - PROJECT ALTERNATIVES

PREFERRED ALTERNATIVE .....	2-1
Alternate E5 .....	2-1
Alternate W7 .....	2-1
Interim Alternative .....	2-2
ALTERNATIVES CONSIDERED .....	2-2
No Action .....	2-2
South Avenue Realignment .....	2-10
ALTERNATIVES CONSIDERED BUT REJECTED .....	2-21
Traffic Demand Management Alternative .....	2-21
Roundabout Alternative .....	2-21
System Improvements to Surrounding Arterials .....	2-23
Urban Interchange Alternative .....	2-23
Grade Separation Alternatives .....	2-25
Combination Alternative .....	2-28
Relocate South Avenue Alternatives .....	2-28



intersection. Federal air quality standards at the Brooks/South/Russell intersection have been achieved for the past year through traffic demand management which has been implemented by the City of Missoula for the past several years.

The following impacts to environmental resources have been identified through the EA for Brooks/South/Russell intersection:

- minor surface disturbance due to construction
- displacement of two commercial properties
- right-of-way acquisition along several other properties, and
- new traffic signals and circulation in the surface streets surrounding the intersection.

The City of Missoula shall approve plans and specifications and monitor construction. MDT, with input from the City of Missoula, shall direct all activities performed by the construction contractor(s). Within these measures, references to MDT include either MDT representative(s) or MDT's engineering and construction contractor(s). Following construction, landscaping and sidewalks would be constructed along the entire route.



## SUMMARY

The proposed Brooks/South/Russell Intersection Project is located within the City and County of Missoula, Montana. Brooks Street, which serves as a city arterial and business route of U.S. 93, bisects the intersection of Russell and South from the southwest to the northeast, creating a six-way approach configuration with restricted turning movements. This intersection has been a source of frustration for area commuters, pedestrians and bicyclists for many years, creating delays and bottlenecks, particularly during peak traffic periods. Localized vehicle emissions produced from engine idling, historically often exceeded federal air quality standards for carbon monoxide (CO) and particulate matter (PM<sub>10</sub>) at this intersection.

This Environmental Assessment (EA) has been prepared to address the proposal to make improvements to the Brooks/South/Russell Intersection. The Montana Department of Transportation (MDT) is administering the project and the Federal Highway Administration (FHWA) is the lead agency.

The need for the proposed project is to improve traffic flow, relieve congestion, and reduce idling times at the intersection and to maintain federal air quality standards in the vicinity of the intersection. An extensive alternatives development and evaluation process was conducted between October 1993 and May 1997 to identify the alternative that would best meet the project purpose and balance environmental, engineering and economic factors. Numerous alternatives were formulated, evaluated, and rejected on the basis of limited public acceptance. These included: (1) roundabout; (2) overpass along Brooks Street, with changes in traffic configuration at Kent/Regent/Brooks and Catlin/Fairview/Brooks; (3) underpass along Brooks Street, with the same changes in traffic configuration as indicated for the overpass; and (4) at grade realignment of South Avenue options that widen rights-of-way and routes traffic across existing properties. The alternatives that are evaluated in detail within this EA include a range of options to realign South Avenue, at-grade, with varying amounts of new right-of-way (i.e., range = 0.36 - 1.37 hectares or 0.89 - 3.4 acres), traffic signals, and property impacts.

The Preferred Alternative is the South Avenue Realignment that uses existing rights-of-way to the maximum extent routing traffic away from South Avenue to avoid crossing the Brooks and Russell intersection. The Brooks and Russell Streets intersection would continue to function as it does now. South Avenue eastbound traffic would be routed along Garfield Street to Fairview Avenue and then east to the existing Fairview-South Brooks Street intersection. Westbound traffic on South Avenue would be routed to Sussex Avenue and could access Brooks Street southbound north of the existing intersection.

An extensive impact analysis was conducted for noise, air, cultural, groundwater, hazardous materials, land use, socioeconomics, and other resources. The preferred alternative would have no adverse effect on noise, air quality, biological resources, water resources, soil and geology, or cultural resources. Benefits of the project include a reduction of congestion and delays at the



## DISTRIBUTION LIST

Bruce Bender, P.E.  
City of Missoula  
Department of Public Works  
435 Ryman  
Missoula, MT 59802

City of Missoula Bicycle/Pedestrian Advisory Board  
c/o Missoula Bicycle/Pedestrian Office  
435 Ryman Street  
Missoula, MT 59802-4297

City of Missoula Non-Motorized Transportation Committee  
c/o Feet First  
123 West Spruce Street  
Missoula, MT 59802

City of Missoula City Council  
435 Ryman Street  
Missoula, MT 59802-4297



## DISTRIBUTION LIST

— Dale Paulson  
Federal Highway Administration  
301 S. Park, Drawer 10056  
— Helena, MT 59626

John Wardell  
US EPA Region 8  
301 S. Park, Drawer 10096  
Helena, MT 59626

— Mike Kress  
— Mountain Line - Missoula Urban Transportation District  
1221 Shakespeare  
Missoula, MT 59802  
—

Bill Monheiser  
Ground Water Unit  
8 P2-W-GW  
U.S. EPA Region VIII  
Denver, CO 80202

— Todd Everts  
Environmental Quality Council  
Capitol Building, Room 106  
— Helena, MT 59620-1001

Montana Dept. of Transportation  
2701 Prospect Ave.  
P.O. Box 201001  
Helena, MT 59620-1001

— Montana Dept. of Transportation  
c/o Jim Weaver  
— P.O. Box 7039  
Helena, MT 59807-7039  
—

Horace S. Brown  
Missoula County Surveyor's Office  
Missoula County Courthouse  
200 West Broadway  
Missoula, MT 59802

— Harold L. Chambers  
— Montana State Library  
1515 East 6th Avenue  
Helena, MT 59602-8100  
—

Missoula Board of County Commissioners  
200 West Broadway  
Missoula, MT 59802  
The Honorable Fern Hart  
The Honorable Barbara Evans  
The Honorable M. Kennedy

— Mayor's Office  
City of Missoula  
435 Ryman Street  
— Missoula, MT 59802-4297  
—  
—  
—

Missoula City/County Health Department  
301 West Alder Street  
Missoula, MT 59802



Project No. CM 0002(105)  
P.M.S. Control No. 2418

**BROOKS/SOUTH/RUSSELL INTERSECTION**  
**MISSOULA, MONTANA**

**ENVIRONMENTAL ASSESSMENT**

Submitted Pursuant to 42 U.S.C. 4332 (2)(c)  
and  
Section 2-3-104, 75-1-201 MCA

by the

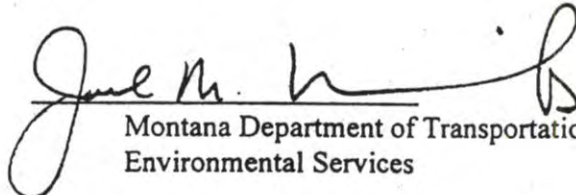
State of Montana  
Department of Transportation  
Environmental Services

and the

U.S. Department of Transportation  
Federal Highway Administration, Region 8


Submitted by:

8/25/97  
Date

  
Montana Department of Transportation  
Environmental Services

Reviewed and Approved for Distribution:

8-25-97  
Date

  
U.S. Department of Transportation  
Federal Highway Administration

The following persons may be contacted for additional information concerning this document:

Dale Paulson  
Environmental Coordinator  
U.S. Department of Transportation  
FHWA, Region 8  
301 S. Park  
Helena, MT 59626  
(406) 441-1222

Joel M. Marshik  
Manager, Environmental Services  
State of Montana  
Department of Transportation  
2701 Prospect Avenue  
Helena, MT 59620-1001  
(406) 444-7228

RECEIVED

AUG 27 1997

MISSOULA, MONTANA  
PUBLIC WORKS DEPARTMENT



**ENVIRONMENTAL ASSESSMENT  
CM 0002(105)  
P.M.S. Control No. 2418**

**for**

**Brooks/South/Russell Intersection, City of Missoula, Montana**

**Submitted Pursuant to 42 U.S.C. 4332 (2)(c)  
and  
Section 2-3-104, 75-1-201 MCA**

**by the**

**State of Montana  
Department of Transportation  
Environmental Services**

**and the**

**U.S. Department of Transportation  
Federal Highway Administration, Region 8**

**August 1997**

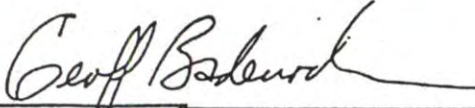


## **Appendix C**

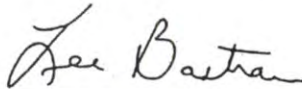
### **Environmental Assessment**



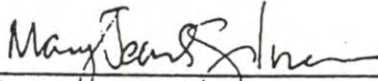
The Missoula Non-motorized Transportation Steering Committee



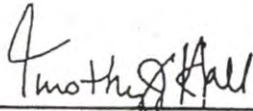
Geoff Badenoch, Director  
Missoula Redevelopment Agency



Lee Bastian, Regional Parks Director  
Montana Department of Fish, Wildlife and Parks



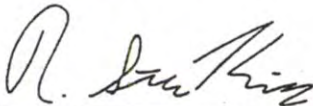
Mary Jean Gilman, Program Manager  
Feet First Non-motorized Transportation/Parks and Recreation



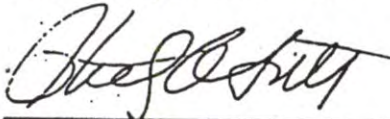
Timothy J. Hall, Planner  
Office of Planning and Grants

*not available for signature*

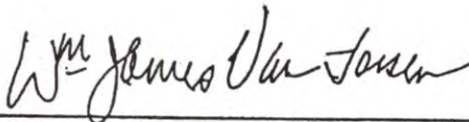
Gary Garthwait, P.E.  
Lolo National Forest



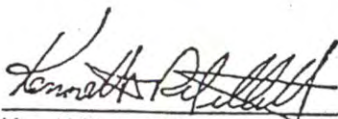
Steve King, City Engineer  
Missoula Department of Public Works



Phil Smith, Bicycle/Pedestrian Program Manager  
Missoula Department of Public Works



Jim Van Fossen, Director  
Missoula Department of Parks and Recreation



Ken Willett, Office of Campus Security  
The University of Montana

How will lane demarcations direct the flow of traffic at South/Garfield, where two lanes of vehicular traffic cross bicyclists heading east on South Avenue?

What are the locations and configuration of traffic signals and crosswalks at intersections, including the location of walk signals or bicycle-only signals?

What are the proposed access routes through the Brooks/South/Russell intersection for pedestrians or bicycles travelling east or west on South Avenue? How is non-motorized access configured across each cul-de-sac street shown in the project area, to a continuing street?

Where are the existing as well as proposed sidewalks? Where are existing or preferred bicycle circulation routes in or near the project area?

Bicycle lanes are only on the westbound side of street on South Ave. East, and on the eastbound lanes on South Ave. West. Some bicyclists may prefer to travel directly through the intersection rather than use the detour route. Is there an opportunity for a refuge between Russell Street and Brooks Street traffic flow, to assist the bicyclist in crossing the intersection in stages?

If Brooks is the preferred north/south bicycle route between the detours at Sussex and Fairview, bicycle lanes should be considered. An alternative south of South Avenue might be to use Russell Street as part of the bicyclists' north/south detour route around the major intersection.

Currently, there is no access to the bike lanes on northbound Russell from eastbound South (no left turns are allowed from South). Can northbound cyclists be allowed to turn north on Russell from eastbound South?

The Non-motorized Transportation Steering Committee appreciates the substantial study and synthesis represented by the concepts in the Environmental Assessment. The Steering Committee encourages further exploitation of opportunities to streamline bicycle and pedestrian travel through the project area, confident that this will engender a final design that provides the safest and most convenient travel environment for all users.

Sincerely,

THE MISSOULA NON-MOTORIZED TRANSPORTATION STEERING COMMITTEE





MISSOULA

## PARKS AND RECREATION DEPARTMENT

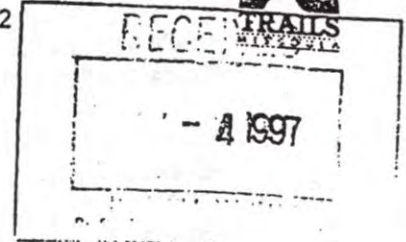
Feet First Non-motorized Transportation Program  
123 W. Spruce St. • Missoula, MT 59802 • 406-523-4762



October 28, 1997

Bruce Bender, Director  
Department of Public Works  
City of Missoula  
435 Ryman Street  
Missoula, Montana 59802

*File*  
*EA Public Comment*  
*93-040*



RE: Brooks/South/Russell Intersection Project CM0002(105)  
Environmental Assessment

Dear Bruce:

The Non-motorized Transportation Steering Committee appreciates the opportunity to review the Environmental Assessment for the Brooks/South/Russell Intersection Project. The Committee members have reviewed the EA individually and would like to offer the following comments based on their subsequent meetings devoted to discussion of the document.

The project area, with its complex vehicular and pedestrian interactions, is one of the most challenging locations in Missoula for roadway improvements. The intersection of three arterials, the County Fairgrounds site, and many commercial developments create significant constraints for the design. The Missoula Public Works Department, its consultants and the general public have struggled mightily with the concept in hopes of addressing projected traffic volumes at the intersection. The Steering Committee acknowledges and appreciates both the nature of the intersection and the efforts to improve it.

Additions of pedestrian or bicycle-oriented improvements are part of the anticipated project. The Steering Committee's focus of interest is the non-motorized circulation in and throughout the area. The comments submitted below reflect the group's focus. They are not intended to be a comprehensive review of the overall project.

As stated under the Environmental Assessment, "The purpose of the proposed project is to improve traffic, bicycle, and pedestrian flow through the intersection... (p1-13)." The EA also acknowledges the importance of the area to the 1994 Non-motorized Transportation Plan. The EA, at this conceptual level of development, does not illustrate or describe in detail all of the provisions made for bicyclists and pedestrians. A more highly developed plan for non-motorized circulation, showing the existing and proposed signalization, crosswalks, sidewalks and bicycle lanes, is anticipated in the final design stage. The Steering Committee is interested in assisting however possible with design review, to facilitate the best possible accommodations for bicyclists and pedestrians.

The following is a synopsis of the suggestions from the Committee that may be considered in the final design. These remarks might serve as an index for assessment of the design, in terms of how bicyclists and pedestrians are being served:

Considerations for Final Design:

What are the recommended routes for cyclist crossings of intersections at Brooks/Sussex, Brooks/South/Russell, and Brooks/Fairview?





JOSEPH W. THOMPSON, D.V.M.

RECEIVED

OCT - 7 1997

MISSOULA, MONTANA  
PUBLIC WORKS DEPARTMENT

2700 Farson

Missoula, Montana 59801

Telephone: (406) 543-3785

*fil*  
*93-040 - BSA*  
*FEA Comment*

10/3/97

Bruce,

I have reviewed the updated version of the South Avenue realignment. As we have discussed in the past, overall I'm supporting the plan. However I do have a concern that Dearborn remain a 2 way functional street. I proposed at the summer individual meeting that a stoplight be installed at this intersection. The signal could be synchronized with the Brooks street light to facilitate the efficient flow of traffic along the bypass.

Sincerely,  
*Joe Thompson*



Joh  
PUBLIC COMMENT FORMFor  
BROOKS/SOUTH/RUSSELL  
TRANSPORTATION IMPROVEMENT PROGRAMUse This Form to Provide Your Comment on the  
Environmental Assessment Alternatives and Mail to:Bruce Bender, P.E.  
City of Missoula  
435 Ryman  
Missoula, MT 59802Name: Bilene Harris  
Address: 2045 S. 7 Phone: 543-5319

Leave malfunction Junction  
as it is. I have found no  
inordinate amount of delay  
in driving thru this Intersection  
even at Rush hours. Can't  
see what all the bellyaching  
is about. Too much money  
has already been spent with  
no results. Just leave the  
intersection alone!

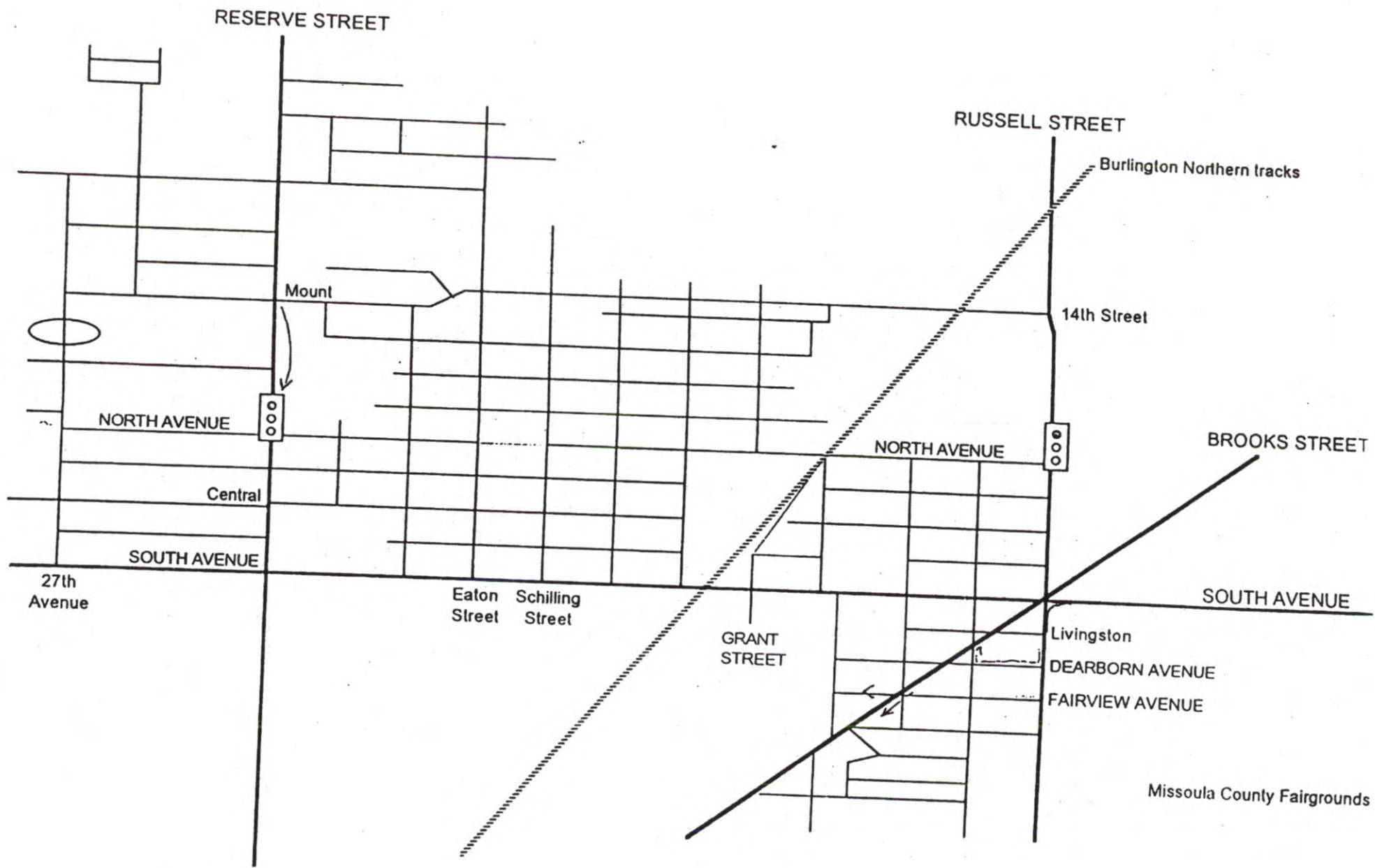
Signature: Bilene Harris

(Use reverse side if more comment space is required)

RECEIVED

OCT - 6 1997

MISSOULA, MONTANA  
PUBLIC WORKS DEPARTMENT





2. Connect North Avenue to the section of Grant Street that crosses South Avenue.  
*Traffic moving between north Missoula and Southgate Mall via Russell would be diverted from the Brooks/South intersection area, further lessening wait times and pollution.*
3. Make North Avenue a link between Reserve Street and Russell Streets.
  - A. moving the Reserve Street stoplight from Mount Avenue to North Avenue
  - B. installing a stoplight or overpass at the intersection of North Avenue and the Burlington Northern tracks
  - C. making North Avenue bisect the double-size block between Eaton and Schilling Streets (if cost-effective—I am not familiar with the buildings there)*North Avenue would be an easy-to-remember alternative to the bottleneck two-lane section of South Avenue between Reserve and Southgate Mall and would save taxpayers the expense of moving businesses away from South Avenue in order to add more lanes there. Moving the stoplight on Reserve Street from Mount Avenue to North Avenue would improve safety three additional ways: (1) it would reduce the heavy traffic currently on the narrow, winding Mount/14th Street through-way (2) pedestrians could cross directly at Meadow Hill Elementary School 24 hours a day, and (3) Big Sky High School drivers would have protected access to Reserve Street via Central/27th/North, thus eliminating the need for left-hand turns onto South Avenue in competition with Community Hospital traffic.*

Thank you for your consideration in this matter.

Sincerely,



Sarah Edelman

Missoula Public Works Department  
Bruce Bender, Director  
Missoula, MT 59801

1050 Spring Creek Road  
Ronan, MT 59864  
September 30, 1997

RECEIVED

OCT - 2 1997

MISSOULA, MONTANA  
PUBLIC WORKS DEPARTMENT

Dear Mr. Bender:

I was a Missoula resident for several years and continue to visit the city regularly, therefore I would like to comment on the proposed plan to change "Malfunction Junction." On the south side of the river, the only street that proceeds uninterrupted from the extreme east to the extreme west side of Missoula is South Avenue, so rerouting it in an attempt to "unsnarl" traffic seems counterproductive, offering a short-term fix with many undesirable consequences to area businesses.

In my opinion changing Russell Street instead of South Avenue would prove far less harmful to businesses, would give better results for the taxpayers' money and would accommodate increased traffic demands more readily than the South Avenue plan. Complementary changes to North Avenue would ameliorate problems during the Russell construction phase and into the future. Please consider the following suggestions.

1. Route Russell Street under South Avenue and Brooks Street.

*An underpass would be in keeping with Russell Street historically and would not be as unsightly as an overpass. No impact would be felt by the businesses on the north side of the underpass because only the back of Tremper's shopping center faces Russell. Businesses on the south side would be only minimally impacted because they are already currently accessed via Brooks or Livingston. Wide pedestrian walkways with plantings and artwork could be installed along South Avenue atop the underpass structure to lessen noise and pollution.*

A. Access off Russell south of the intersection

- a. Southbound Russell motorists would access northeast-bound Brooks via Dearborn Avenue.
- b. Southbound Russell motorists would access southwest-bound Brooks, as well as a direct route to Southgate Mall, via Fairview Avenue which already has a stoplight in place on Brooks to facilitate the process.
- c. Northbound motorists would access eastbound South Avenue via a street-level, "free right" turn-only lane that would merge into South Avenue somewhere west of Oxford Street, necessitating the allocation of a minimal portion of the extreme northwest corner of the Missoula County Fairgrounds (in order to improve the safety of the curve.)

B. Access off Russell north of the intersection

- a. Northbound and southbound Russell motorists access westbound South Avenue via westbound North Avenue and an improved Grant Street, necessitating a center turn-lane on Russell and/or a stoplight at the intersection of North and Russell.



[illegible]

PHONE

542-2044

542-2044

MISSOULA MONTANA  
PUBLIC WORKS DEPARTMENT

NAME	ADDRESS	PHONE
MATT MOREAN	1540 W. Kent Ave	542-5615
BRENDA FURS	1525 W. Kent Ave	728-2517
LARRY MANSCH	1609 W. SUSSEX	728-8945
Sally Knoll	1524 W. Kent	549-6038
1221 MOREAN	1540 W. Kent	542-5615
Lennie Lichls	1610 So Ave W	721-8689
600 W. Montgomery	1641 W. KENT	542-3925

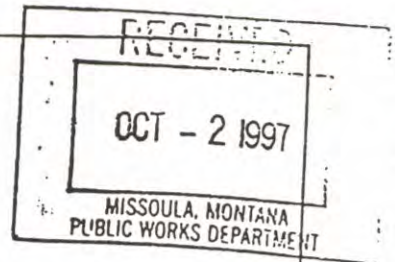


## PUBLIC COMMENT FORM

For  
BROOKS/SOUTH/RUSSELL  
TRANSPORTATION IMPROVEMENT PROGRAM

Use This Form to Provide Your Comment on the  
Environmental Assessment Alternatives and Mail to:

Bruce Bender, P.E.  
City of Missoula  
435 Ryman  
Missoula, MT 59802



Name: Ted Catton

Address: 160 W. Kent St.

Phone: 549-5896

As a resident of the neighborhood directly NW of the junction, I support efforts to reduce the congestion there. I am concerned about elevated carbon-monoxide levels in the air from idling traffic. I also think the intersection is a terrible hazard for pedestrian and bicycle traffic.

My main concern with the proposed plan is that traffic going east on South Avenue and desiring to go west or northwest will be tempted to shortcut through the residential neighborhood rather than take the intended route via Garfield. To counteract this, I suggest that the ~~left~~ left hand turns off South Avenue onto Catlin and Washburn be prohibited. Traffic that needs to reach these residential blocks can approach via Garfield.

My second concern is that people who are used to crossing Missoula via South Avenue will look for a less awkward through street so the problem will migrate elsewhere. Mount Street should be able to accommodate more east-west traffic but streets to the south of South Avenue are harder to find. I would definitely NOT want to see North Avenue receive more traffic because this would lead to much more traffic on all streets through our neighborhood by people trying to avoid the junction. Therefore, I would request assurance that the proposed plan leave the intersection of Brooks and North Ave as it is - i.e. don't put a light across Brooks at North to signal traffic away from South Avenue.

Our neighborhood is changing - younger families are moving in - and lots of bicyclists and skateboarders are all over the place.

Signature: Ted Catton

(Use reverse side if more comment space is required)



OCT - 2 1997

MISSOULA, MONTANA  
PUBLIC WORKS DEPARTMENT

The purpose of this letter is to voice my concern over the proposed reconfiguration of Malfunction Junction. I live in the McCleod Park neighborhood directly affected by this proposal and am raising my family here. Already we have problems with traffic that refuses to wait for the light at the junction to take their right turn from Russell Street onto South Avenue, or in reverse refuses to wait for a light allowing them to turn left from South Avenue onto Russell Street going north. Cars speed through our neighborhood to save a minute or two, often ignoring speed limits and stop signs, and we are fortunate that no one has been injured yet.

I am extremely concerned that the effect of eliminating the South Ave. to Russell Street connection at the intersection will drastically increase the cars cutting through our neighborhood. I understand that cars will ideally take the Garfield/Fairview route to be able to head north on Russell, but certainly they will attempt again to shave time off their commute by shortcuts through our residential neighborhood.

I would like to see barriers placed in the intersections that serve two purposes:

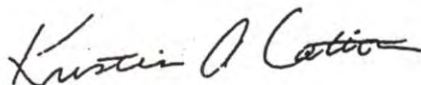
1. To inconvenience traffic enough that it is undesirable to cut through this residential area.
2. To slow down traffic that insists on cutting through this neighborhood so that a margin of safety for all children who live in this area is maintained.

I would suggest that these barriers be placed at the intersections of Washburn with Kent, Central, and Sussex; at Catlin where it intersects with Kent, Central, and Sussex; and at Garfield where it in also intersects with Kent, Central and Sussex. Also needed are some slowdown barriers for traffic turning off North Ave. onto Washburn, Catlin, and Garfield.

I realize that these barriers would also inconvenience residents, but feel it would be worthwhile as this neighborhood is again becoming alive with young children.

Please implement these changes in your plans as you finalize details and be sure they are worked into the financing so that they happen at the same time as the major changes in the project occur.

Thank you.



Kristi Catton  
1601 W. Kent Avenue  
Missoula, MT 59801  
549-5896



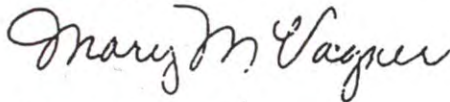
MAYOR KADAS  
MISSOULA CITY COUNCIL  
Page 3

such as Kent, Central or North Avenue. Any of these new traffic patterns may present safety concerns for children.

6. Traffic patterns between Brooks and Higgins and Mount and South Avenues. The Board is concerned about current traffic in these areas rerouting itself around the reconfiguration, thus darting through the residential streets which, for the most part, are unsigned at intersections. This could present new safety concerns.

Thank you for taking the concerns of the Board into consideration in your decision making process. Please contact me if you have any questions with respect to the Board's concerns regarding the Malfunction Junction reconfiguration.

Sincerely,



Mary M. Vagner  
Superintendent of Schools

MMV/tmg

the property is divided in half by the reconfiguration of Malfunction Junction. Consequently, if the proposed reconfiguration is carried out, the District may end up selling the two triangular pieces of property left by the configuration. In a few years, the District may need to expand its facilities and be unable to find appropriate land in this area. This concerns the Board.

If this intersection project proceeds, the Board is very concerned that the District receive fair compensation for the taking of a right-of-way across the Homevale Property. The Board would expect the Montana Department of Transportation to compensate the District for the full amount that the right-of-way and the division of the Homevale Property would reduce the value of the property.

2. **Egress and access to Sentinel High School.** Sentinel's major egress and access point is located on the south side of South Avenue, nearly directly across from Holborn Street. This drive way handles all bus traffic, faculty traffic and parking, commercial food service deliveries, commercial and in-district maintenance traffic, student traffic, parent traffic, other service traffic and College of Technology traffic and parking. This opening to South Avenue is used heavily at various times throughout the day. The Board is concerned about any negative impact that the South Avenue reroute may have on the access and egress traffic at Sentinel.
3. **Stephens and Sussex intersections.** With new traffic patterns developing at this intersection, there are safety concerns about this intersection and how north/south Stephens Avenue traffic will be managed in relationship to the new westerly flow of Sussex traffic. Currently, Stephens is a through street with Sussex regulated by stop signs. The Board's concerns are specific to how this major intersection will be controlled to handle multi-directional traffic.
4. **Bancroft and South Avenue intersection.** Currently, there is a four way stop sign intersection posted at Bancroft and South Avenue. Already, the traffic load at this intersection is quite heavy with significant lines of cars waiting to enter the intersection at peak hours of the day. Those peak hours include the times that school commences and ends at Washington, Sentinel, and Lewis & Clark Schools. If the reconfiguration at Malfunction Junction reduces the delays in getting through that intersection, more traffic may use South Avenue, which in turn may further impact the congestion at Bancroft and South Avenue. This intersection is already a safety concern for the Board and increased traffic only enhances the concern.
5. **Traffic patterns in the Jefferson School neighborhood to circumvent the South Avenue reconfiguration.** The Board is concerned about current South Avenue traffic and Jefferson School residential traffic circumventing the South Avenue reconfiguration by traffic routing itself north on Catlin to reroute onto Russell or to cross Russell at streets



# Missoula County Public Schools #1

Missoula Elementary District

Missoula High School District

Mary M. Vagner, Superintendent

15 South Sixth West

Missoula, MT 59801

406/728-2400 Fax 406/542-4009

September 29, 1997

RECEIVED

SEP 30 1997

MAYOR'S OFFICE  
CITY OF MISSOULA

Mayor Mike Kadas  
Missoula City Council  
435 West Ryman Avenue  
Missoula, MT 59802

Dear Mayor Kadas & Missoula City Council:

RE: Brooks Street/Russell Street/South Avenue Reconfiguration

This letter is submitted as input from the Finance & Operations Committee of the Board of Trustees for Missoula County Public Schools in response to the City's request for input into the proposed reconfiguration of the intersection of Brooks Street, Russell Street and South Avenue.

The Finance & Operations Committee of the Board of Trustees discussed the issue and impacts of reconfiguration of the intersection at a special meeting on September 24, 1997. The Committee is understanding of the complexities of this matter and appreciates the many divergent viewpoints that must be taken into consideration by the City regarding "Malfunction Junction."

The Committee of the Board of Trustees sets forth the following concerns with respect to the proposed intersection reconfiguration:

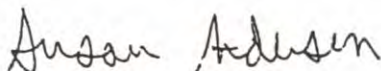
1. **Effect on the Homevale property.** The High School District owns the city block which is bounded by South, Stephens, Sussex and Holborn. This piece of property, which is referred to as the "Homevale Property," is located across South Avenue from Sentinel High School, and currently houses a building which the District uses for storage. The proposed reconfiguration diverts west bound traffic diagonally across the middle of the Homevale Property to Sussex Avenue. This would require the District to sell a substantial portion of the middle of the Homevale Property to the Montana Department of Transportation, leaving two triangular parcels on either side of the street.

The District's plans for the Homevale Property have been for the long-term perspective, that is planning for growth and future expansion needs. Undeveloped parcels of this size are difficult to find in developed areas of Missoula. Due to the size of most of the District's secondary facilities, it will probably not be able to use the Homevale Property if

2. Add push-button activated lights to Russell, Brooks and South at other intersections to allow bicycles and pedestrians to cross these streets safely. Having motorists stop on occasion on Brooks will help keep them from becoming inattentive.
3. Build a paved bicycle/pedestrian path through or just south of the fairgrounds, the College of Technology campus and the Sentinel High campus connecting to Fairview or another street in that area. This would improve bicycle/pedestrian access to Southgate Mall and to businesses along Brooks as well as providing a new recreation path. It could be connected to the path in Playfair Park if desired.
4. Buy property and build bicycle lanes and pedestrian walkways on Brooks and Russell through this area.
5. Create a pedestrian/bicycle overpass or underpass at the BSR intersection. Such an overpass/underpass would be smaller, less of a visual obstruction and cheaper than an automotive overpass or underpass.

Just because bicyclists and pedestrians tend to avoid this intersection now does not mean there isn't a need for east/west bicycle and pedestrian traffic through this area. Let's use this opportunity and look for a solution to the BSR intersection problem that encourages alternative means of transportation, not discourages it. Please feel free to call me at 543-4321 if you have any questions. I would be happy to provide further input into and support for this decision process.

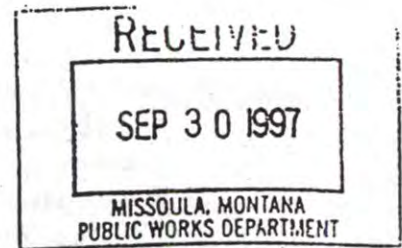
Thank you for your consideration,



Susan Anderson



534 Fairview Ave.  
Missoula, Montana 59801  
September 26, 1997



Bruce Bender  
Public Works Director  
City of Missoula  
435 Ryman  
Missoula, Montana 59802

Dear Mr. Bender,

I am writing to express my concern over the proposed plan for the Brooks/South/Russell intersection (BSR intersection). The current plan does not appear to provide any safe methods for bicycle and pedestrian traffic to move in east/west directions through the BSR intersection. This situation will tend to discourage pedestrians and cyclists from traveling through the area and encourage them to use a car. To truly reduce air pollution and traffic congestion, not just move it around, I believe we need to discourage motor traffic and encourage alternative means of travel.

I see four hazards that would be added to a bicycle journey through this area if bicyclists follow the traffic pattern proposed in the current plan. Bicyclists would have to:

1. cross a lane of traffic on Sussex or Fairview and possibly Garfield to prepare for a left turn,
2. make a left turn onto Brooks,
3. ride on Brooks, one of the least bicycle friendly arterials in Missoula,
4. and, deal with traffic using the traffic circle on South, that may not be able to see a cyclist heading west trying to enter South from Brooks.

Similar concerns face pedestrians who would now have to deal with lights timed to ensure cars can travel on Brooks without stopping and motorists who would become less observant because they do not usually have to make stops.

One relatively inexpensive and simple way to deal with these problems would be to make the temporary solution, prohibiting left hand turns off South at the BSR intersection, the permanent one. Some of the funds allocated to the current plan could then be used to remove the turn lanes on South and install bicycle lanes and, as needed, pedestrian walkways on South and Russell to encourage these modes of travel. Some funds could also be used to add Park and Ride lots for people who use Brooks for daily commuting and to provide incentives to encourage bus usage. If traffic patterns indicate that a lot of commuting traffic on Brooks is related to a few large employers or locations, express busses to these locations during commuting hours would also encourage bus usage.

If the current proposal is chosen as the final solution, I encourage you to consider ways to make this plan safer for bicycle and pedestrian traffic. The following is a partial list of ideas that may be used independently or together.

1. Find and mark safe bicycle routes around this area. For example, you could build a bike lane on Garfield and Fairview running all the way to Russell and add a light at the Fairview/Russell intersection with bicycle and pedestrian activation buttons.



534 Fairview Avenue  
Missoula, MT 59801  
September 25, 1997

Bruce Bender, Public Works Director  
City of Missoula  
435 Ryman  
Missoula, MT 59802

Dear Mr. Bender:

I am writing to comment on the proposed solution to the Brooks/South/Russell intersection.

My primary interest is getting through or around the intersection on a bicycle. The plans that I have seen include bicycle paths that get as close as Sussex and Brooks to the north and Fairview and Brooks to the south. However, the plans do not show how bike riders are to actually get through the intersection.

Since one of the top four problems to be addressed by the project is "Bicycle/Pedestrian Access in BSR area", one would hope that the final solution includes a component that allows cyclists to easily and safely get through or around the intersection. Getting cyclists to within a block or two of the intersection and then having them merge with traffic to move through the intersection is certainly not a desirable option for either the cyclist or for motorized traffic.

I hope that as the remaining details of the plan are worked out, a complete set of safe and convenient routes are provided for cyclists for each of the various directions they may be traveling. I would be happy to provide whatever input and assistance I can to the project team to make whatever solution is finally reached as bicycle friendly as possible.

Thank you for this opportunity to comment on the proposal.

Sincerely,

John S. Anderson



What to do? . . . I don't believe there is a real solution. Bulldoze the whole damned thing and, . . . No. We can spread the problem, diluting the pollution and traffic but, . . . it's still there.

As a very experienced Missoulian I liked the plan our former Mayor Craig promoted. Open Stevens Ave. from South Ave. to 39th. St. Fence it and control access through the school and park section. This would remove a huge amount of traffic from Malfunction Junction allowing a shorter time sequence on the traffic control lights.

I have driven the streets of Missoula all of my life both professionally and privately. I know Missoula as well as anyone can. And repairing Malfunction Junction by moving some of it's traffic north a block will be little help, in my opinion. Reserve St and it's boom town have already eased the traffic along the 93 Strip, noticeably. And I think we were silly in not putting Stevens Ave through back when Mayor Craig wanted to.

I would like to further suggest that you take a poll of people who drive all over Missoula every day. The U.P.S. drivers, Business delivery drivers, pizza man, office supply delivery, auto parts runner, the telephone/cable tv/power Co. service people. These people could offer a far more informed opinion than daily commuters who only travel from point X to point Y each day.

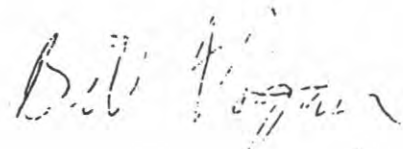
Consider driving from 3200 Spurgin Rd to U.M. or from Stone Street to Leisure Highlands Golf course, or from Pleasant Drive to E. Broadway, . . . Nightmares. And from my house on North Ave to North Reserve or Mullan Rd; I'd rather not go.

Please! Get us from east to west and back somehow. Broadway and a lumpy bumpy, two lane, stop go, congested South Ave aren't enough. It would be interesting to know how much of the Malfunction traffic is really east or west bound but lacking cross streets they must face the mess.

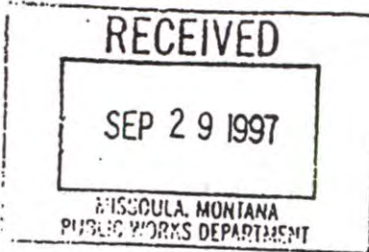
Thank you for considering my opinion.

Sincerely,

William O. Vogan

A handwritten signature in dark ink, appearing to read "Bill Vogan", is written over the typed name.





William O. Vogan  
123 North Ave. W.  
Missoula, MT 59801  
(406) 549-0628

Attn; Public Works  
435 Ryman St.  
Missoula, MT 59802

Dear City Planner,

MALFUNCTION JUNCTION. Pollution problem! Traffic snarl! Mess! Yep, it's all of these and more. But, could it be that the best that can be done has already been done? We have to consider access to the fairgrounds, access to local business'. These and many more concerns have been voiced about Missoula's most controversial intersection.

MALFUNCTION JUNCTION is the legacy, and result, of an ego clash of Missoula's past nabobs. Some said, "Line the streets up with the compass."

"No, follow the river!" Insisted others.

"No! Along the railroads are where future people will settle."

No one won.

Let's consider Malfunction in the grand scheme of things. Three main Missoula traffic arteries cross here. Northeast to Southwest is Brooks St. Northwest to Southeast is Russell St. forming an X. Now add South Ave, which crosses the X from East to West.

Missoula has several good routes to get from North Anyplace to South Anyplace. Consider what streets Missoulians must use to drive from East to West. From Mount Sentinel, or Jumbo, to the west edge of the city we have only two main arteries that go all the way across Missoula. Broadway, and South Ave, and South Ave is a two lane mess but adequate.

Third St. isn't too bad but only runs from Higgins west. It's a narrow two lane and you can't get go north on Higgins from it.

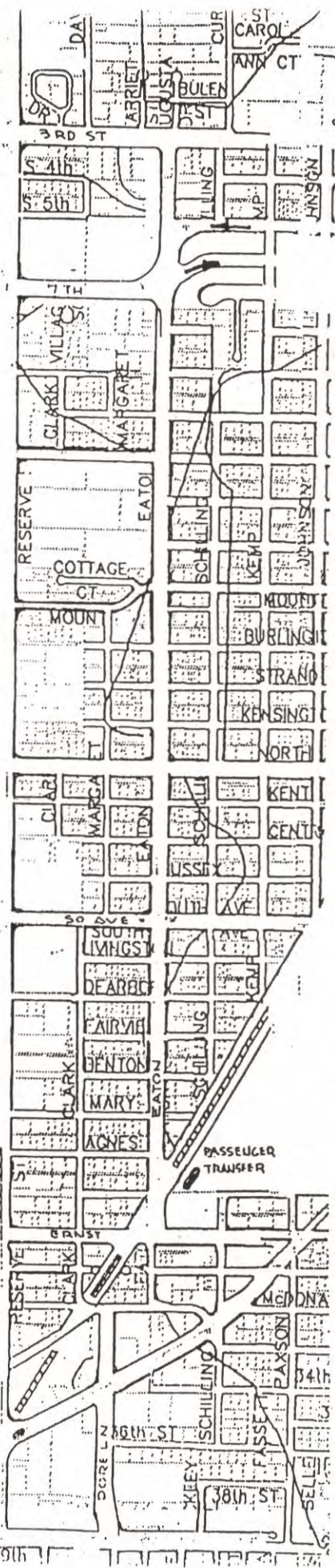
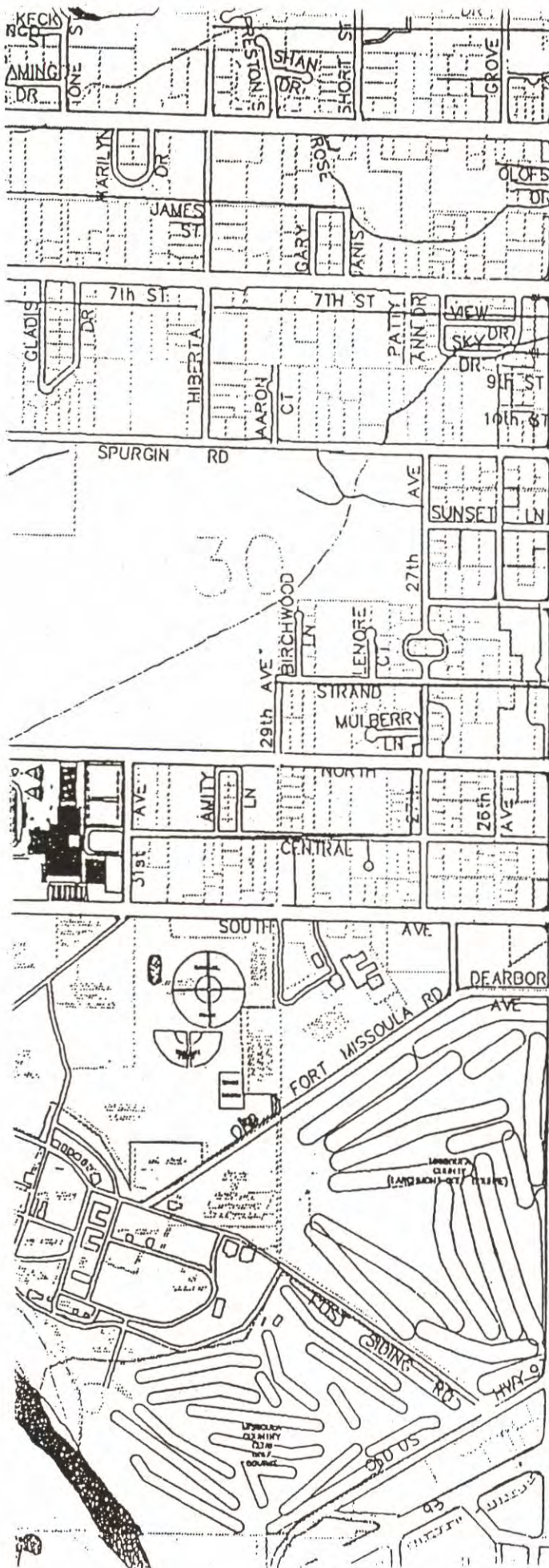
Seventh St. runs from Ronan St. to the western edge of town but you'd wear out a set of brake pads just stopping at all of the stop signs. Mount, runs from Higgins to Reserve and a few blocks west of that. A car recently crashed into a house which says more than I can about that.

That's it! Now, do we really want to further muddle up South Ave by detouring it around Malfunction. As I see it, all that does is move the problem, spreading it out a bit. It doesn't really solve anything.

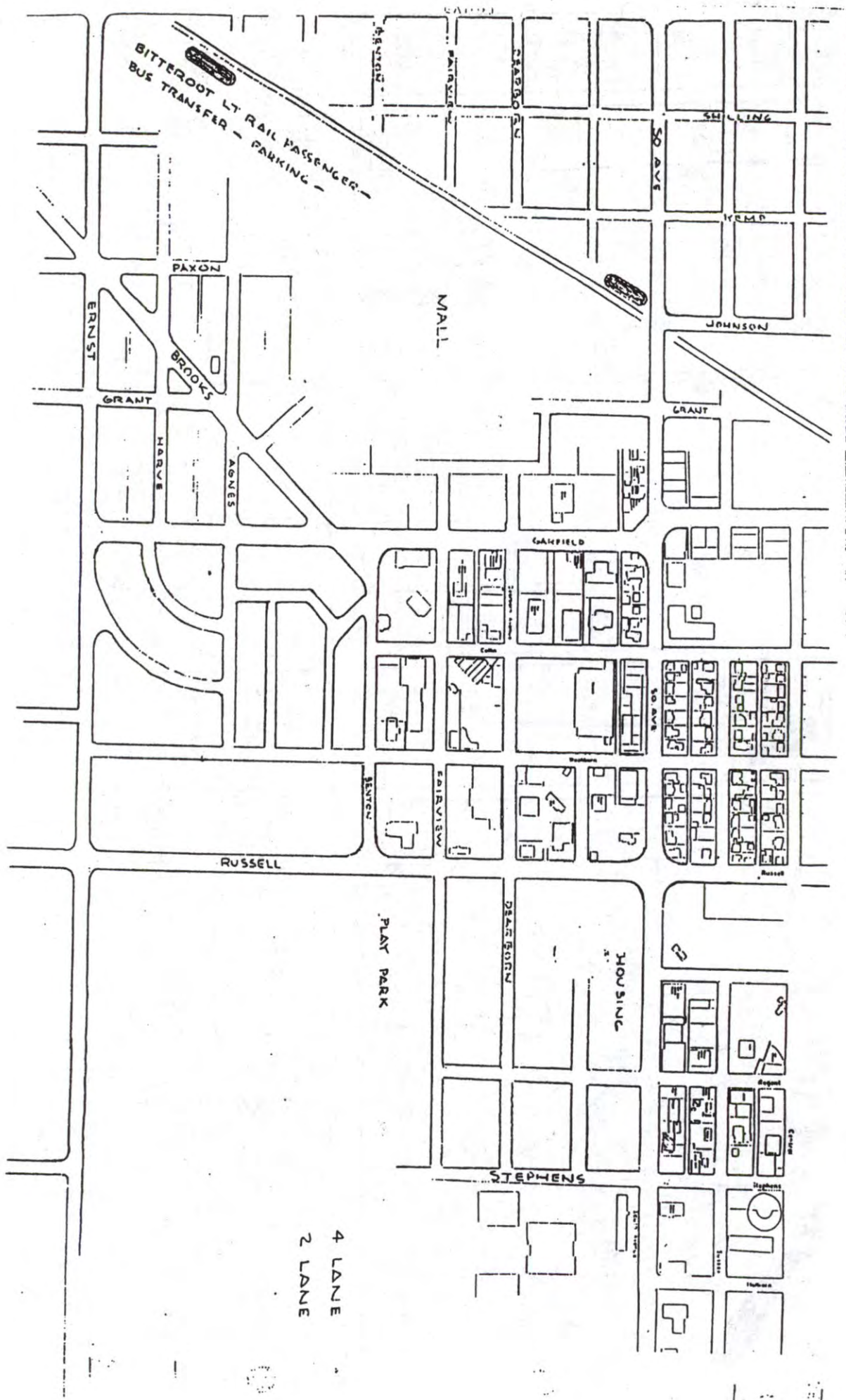












BITTERROOT LT RAIL PASSENGER -  
BUS TRANSFER - PARKING -

MALL

RUSSELL

PLAY PARK

HOUSING

STEPHENS

4 LANE  
2 LANE

RESIDENCE.  
OREGON  
WASHINGTON  
MONTANA



ED. E. JUNKERT.

1-206-537-3474

MAILING ADDRESS

512-161-ST. CT. E.  
TACOMA WA  
98445

*E. Junkert.*



RECEIVED

Dear Sir  
I remember when walking and the use of streetcars was the major mode of transportation, of course people had cars, and a few still had horses, but cars were not in daily use as they are today.

In order to date my years of youth living in Lewis and Daly addition I will only say I attended Franklin School starting in 1925.

I could tell you many stories of the changes of the South Side, from the Encampment of the Indians harvesting Bitterroot in the spring; the disappearance of the Birds and Wild Flowers; the Army Parading with their Mules; the early flights of Planes from Hale Field; to the present confection due to the Autos.

The original intent of the extension of Brooks was for the shortest route

from Main Ave to the Post Siding Road for the traffic leaving Missoula for the Bitterroot Valley and Selkirk. It is still serving that purpose today.

My intent is to change the traffic pattern to best serve the people residing and shopping in the Southside.

Outside traffic traveling thru the Valley do not necessarily deserve the shortest route, there are other alternatives.

A comment about moving the Fair the present property is far too valuable for just occasional use. Locating to the Fort property would also aid in developing the Museum.

Yours Sincerely  
P.S. There may be other alternatives but consider the whole Southside in your plans and not just one intersection.



cc: C. Conrad

B.

John

## PUBLIC COMMENT FORM

SEP 24 1988

For  
BROOKS/SOUTH/RUSSELL  
TRANSPORTATION IMPROVEMENT PROGRAM

Use This Form to Provide Your Comment on the  
Environmental Assessment Alternatives and Mail to:

Bruce Bender, P.E.  
City of Missoula  
435 Ryman  
Missoula, MT 59802

Name: Karen Luke - The Sunshine Factory  
Address: 1533 South Ave. W Phone: 721-7722

I would like to see us try harder to move the fair grounds first. Why spend \$5,000,000 on this project & then turn around in the next few years and move the fair grounds anyway? Traffic should be lessened there the junction by punching & widening Stephens class through to 39th.

Or what about turning the junction into a rotary? It works back east and in Europe.

The fair grounds needs to be moved. They should be able to sell the property for top commercial dollars. If the school wants it, then they should have to pay the same as anyone else.

With the plan the way it is, I pity the poor out-of-towners trying to find a way to get to our businesses. I lost my clients come from the University and they are from other cities.

Signature: Karen Luke

(Use reverse side if more comment space is required)



## BUSY ELVES BRIDAL SHOP

1609 SOUTH AVE WEST ♦ MISSOULA, MONTANA 59801  
Phone 406 543-7581 ♦ Fax 406 543-7581

cc: City Council  
25 1997

September 14, 1997

Linda Tracy  
723 Defoe  
Missoula, Montana

Re: 9/22/97 City Council meeting on South Ave. "preferred alternative" plan

Dear Ms. Tracy:

I will be out of town on a buying trip that week. But I would appreciate it if you would introduce this letter into the meeting.

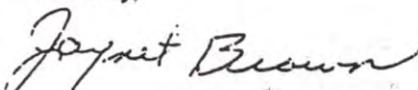
The first thing you learn about business is location, location, location. You either have to have walk-by traffic or drive-by traffic. South Ave. is drive-by. Mr. Bender seems to think that because he leaves the building intact my business, and my neighbors businesses, won't be hurt by his plan. But I think it will. We will be sitting there by ourselves with out walk-by or drive-by traffic.

I am not only thinking of myself, but the surrounding neighborhoods that will be effected. I think the traffic will be diverted to those surrounding neighborhoods. Those side streets have families with small children in them. I also see older people walking over to Tidyman's from these side streets. I don't think they need more traffic, noise, or car fumes in their neighborhood just so traffic can be eliminated on South Ave. And anyone who has driven on Garfield Street knows it doesn't need any more traffic. I crawl along hoping not to hit, or be hit, by anyone coming or going from all those driveways and entrances now.

I have had my business on South Ave. for 19 yrs. and I feel that traffic isn't as bad now as it was when I first started. At Christmas time the traffic would be so backed up people would be honking their horns for people to get going and get out of their way. I don't see that anymore. And I don't think it's as hard to get into and out of our businesses as it used to be. Sometimes I have to run errands or make deliveries during the day. I don't have trouble on South, but I will encounter lots of traffic on 93. And that's the other problem I see with this, or any other plans Mr. Bender has for South Ave. It will put more traffic on 93. I don't think it can stand more traffic. 93 will become a bigger nightmare then South Ave. ever was. Then what? Will they make 93 a six lane highway?

Thank you for taking the time to read this and introducing it into the minutes of the council meeting.

Yours truly,



Jaynet Brown.  
Owner, Busy Elves Bridal Shop

MODIFICATION  
#2

Animal  
Hospital

GARFIELD

MODIFICATION  
#2

First  
Security  
Bank

• TWO WAY  
TRAFFIC

TO ACCESS GARFIELD

Dearborn Avenue

Chriss  
Crawford  
Insurance

Jack's  
Masonry  
Supply

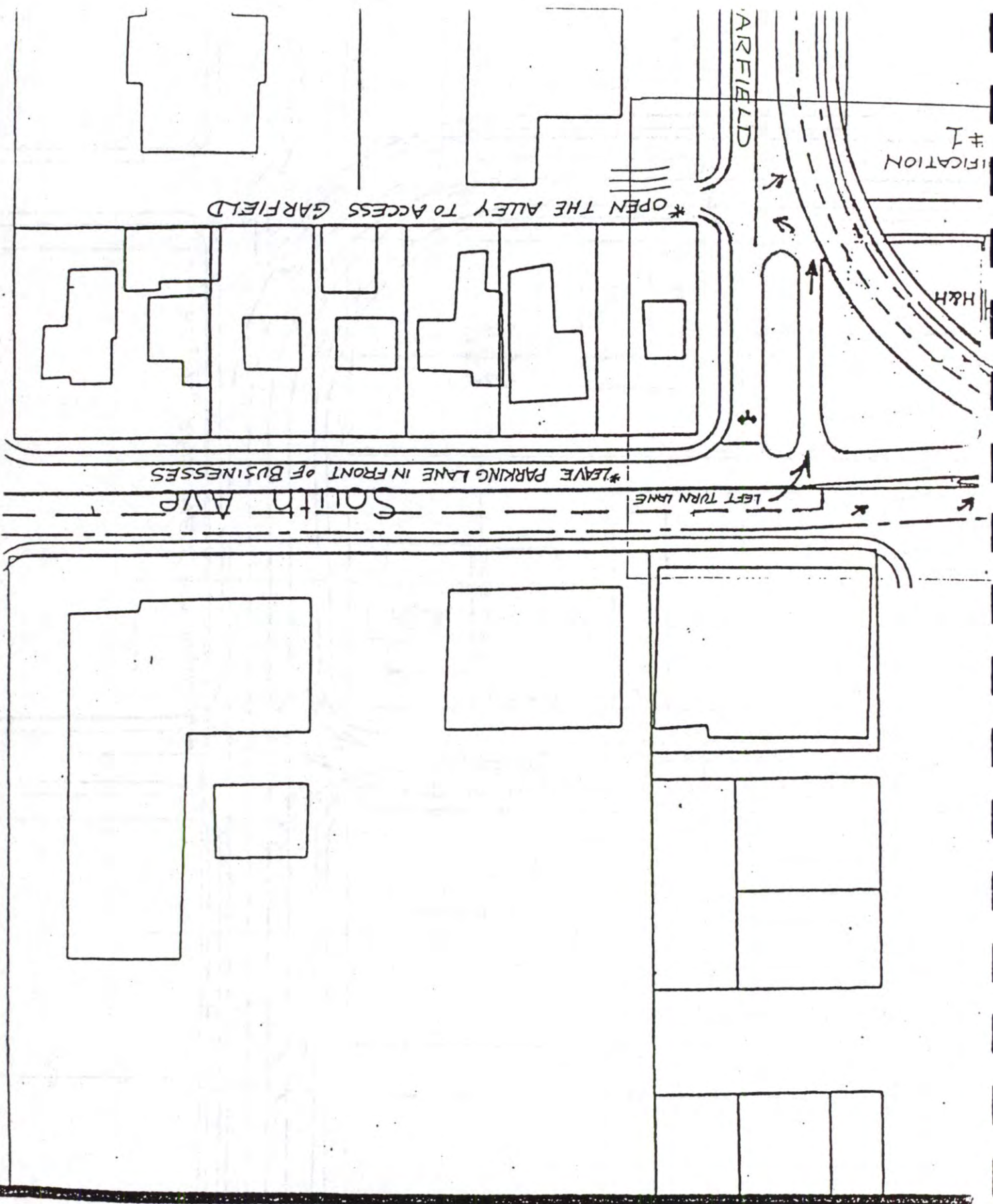
← THE ONLY ROUTE N.E. TO OLD MISSAULA

FAIRVIEW



# GARFIELD INTERSECTION MODIFICATION #1

FIG. 3





\* TW NECESSARY MODIFICATIONS \*

FIG. 2

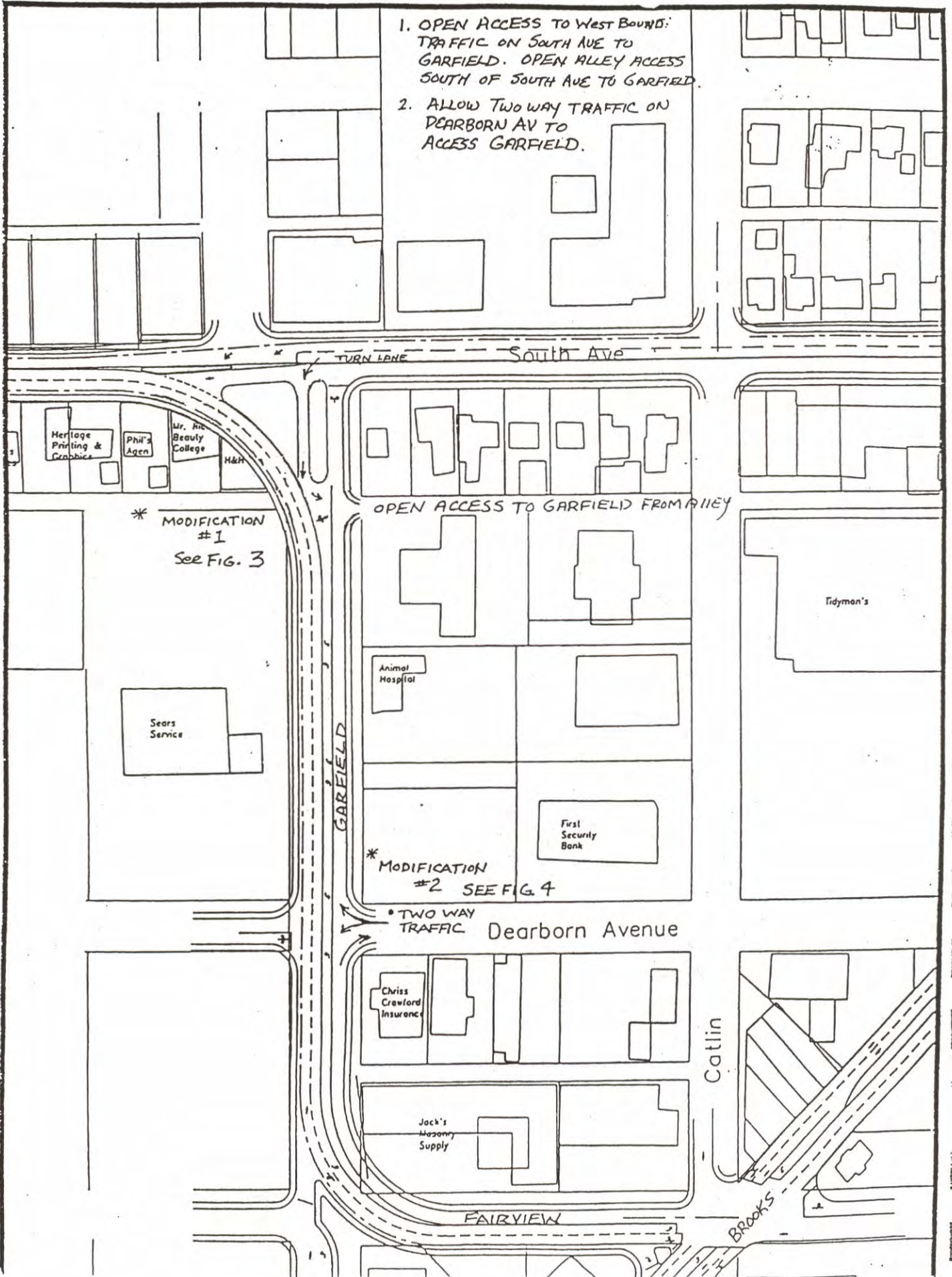
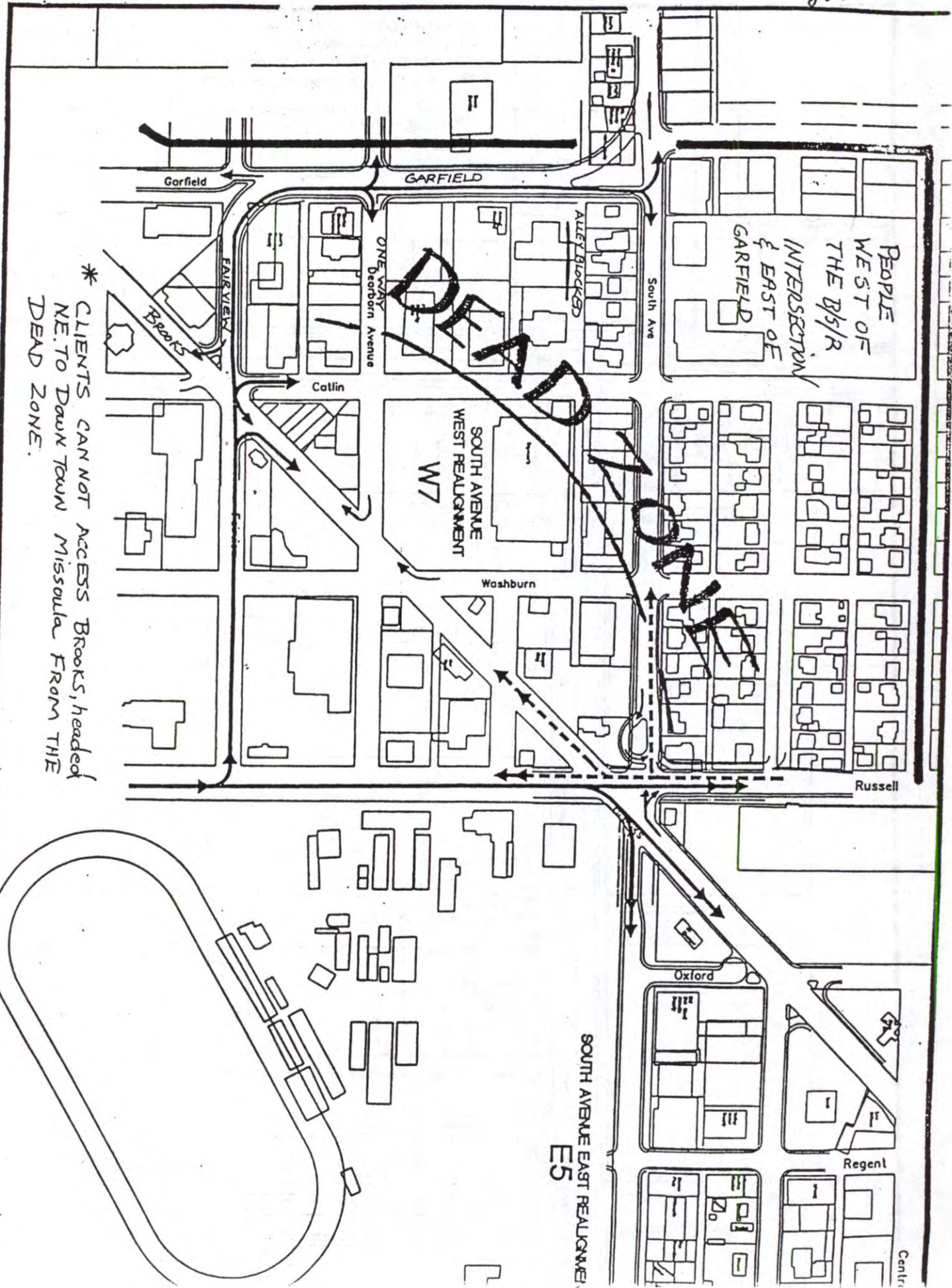




Fig. 1



NOTE THE FOLLOWING: EVERYONE LOCATED WEST OF THE B/S/R WILL BE IN THE DEAD END



Missoula and areas East of Russell. Also, there is NO WAY TO ACCESS Garfield, which is the ONLY Route leading to this Fairview/Brooks intersection, by the business personnel, patrons and/or residents located in the "Dead Zone" West of Russell and East of Garfield.

Possible Solutions:

Allow access to Garfield from Westbound traffic on South Avenue. A left-turn from westbound South Avenue to Southbound Garfield is very much needed. Also, provide access to Garfield by way of the alley south of South Avenue. (See Fig. 2 & 3).

The Patrons of businesses located on the first block of South Avenue east of Garfield cannot make a U-turn to access the intersection of South/Garfield (should there be one). It's also very inconvenient and certainly not reasonable to travel the length of South to access the westbound lanes. Please consider leaving access to Garfield for southbound traffic at the intersection of Dearborn Avenue. (See Fig. 2 & 4).

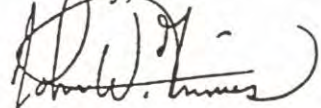
Another Possible Problem to Consider:

I'm not certain of the configuration of traffic lanes being considered on the realignment of South Avenue, however, if the parking lanes on South Avenue in front of businesses are to be forfeited to accommodate modifications concerning lane changes for improved traffic flow, then many businesses without private parking could likely suffer fatally by not having access to street parking.

To be quite frank about this, all of the proposed modifications to the streets surrounding Malfunction Junction will cause major hindrances to already well-designed and fully functional streets. Why make people suffer with an imperfect street design just to remedy some of the problems connected with Malfunction Junction? This proposed plan doesn't solve the problem, it just adds to it by spreading it out over other streets in the surrounding area that currently accommodate the traffic flow.

In my opinion, the overpass solution that was proposed was an outstanding design. This would have provided an eye-catching landmark that would have dominated the South Side of Missoula, the computer modeling done to sell this design was an achievement that further distinguished this solution. I would suggest reconsideration of the overpass proposal as the most viable solution for the final plan.

Sincerely,



John W. Grimes  
Christian Resource Center



# Christian Resource Center

1733 South Avenue West

Missoula, MT 59801

(406) 721-6772

SEP 23 1997

September 21, 1997

Mr. Bruce Bender, P.E.  
Public Works Director  
City of Missoula  
435 Ryman  
Missoula, MT 59802

*File: BSR - Public Comment EA  
cc: City Council  
BMB*

Dear Mr. Bender:

In my extensive review of your most recent plans for realignment of South Avenue to solve the perplexing problems of the Brooks/South/Russell intersection known as "Malfunction Junction", I took special note of several problems which will directly affect my business, as well as others located in the South Avenue/Garfield area.

## Problem #1

As I see it, the greatest problem facing businesses and residents in the area extending from the Brooks/South/Russell intersection to Garfield, is that there is NO POSSIBLE ACCESS ONTO BROOKS FOR TRAFFIC GOING IN A NORTHEAST DIRECTION toward downtown Missoula and surrounding areas EAST of the intersection. This inconvenience will deter customers residing in those areas from patronizing the businesses located in the "Dead Zone" (See Fig. #1). In the Comments and Responses on the Brooks/South/Russell Project Sheet, this issue was poorly addressed by the Missoula City Council, as noted below:

Comment: I shop at Tidyman's and I want to go north either to Russell or Brooks. How will I get there?

Response: By going to the Fairview/Brooks signalized intersection which will allow you to go north on Brooks or to travel Fairview to Russell.

There also seems to be much concern about the lack of access to Garfield from the "Dead Zone".

Comment: Numerous comments were expressed about the configuration of the proposed intersection at Garfield and South. Many people believe that a left-turn from westbound South Avenue to southbound Garfield is needed. Numerous comments were also heard that a left-turn into the alley south of South Avenue is needed.

Response: The geometry of the intersection of South Avenue and Garfield will be evaluated in final design to determine if a left-turn is possible from westbound South Avenue to Garfield. A left-turn into the alley will also be evaluated in final design.

This response cannot be accurate, in view of the existing plans. I repeat...THERE IS NO OTHER ROUTE to travel other than the Fairview/Brooks intersection to access Brooks in a Northeast direction toward downtown







① cc: City Council  
: Mayor Kales  
: BIG

② fil 93-040

RECEIVED

OCT - 1 1997

COMMENTS: BROOKS, SOUTH, RUSSELL INTERSECTION

September 29, 1997 MISSOULA, MONTANA  
PUBLIC WORKS DEPARTMENT

Bruce Bender  
Public Works Director  
City of Missoula

These comments supplement my letter of September 19, 1997 and follow up on the very good September 22 public hearing. I still strongly support the construction of a bridge to carry Brooks Street traffic above the intersection of South Avenue and Russell Street. Discussing this solution with Gary Funkhouser of Earth Tech, I learned alignment has to be bent to make the bridge clear county property. I also learned certain revisions to Regent and Kent Streets north of the bridge approach were considered essential to a bridge project, or overpass, as it was originally conceived. It appears the bridge would span around 250 feet with approaches of around 650 feet. This offers a unique opportunity to create an impressive and beautiful gateway to our "Garden City".

The attached drawing shows my current concept of how a bridge solution could be successful. Some ideas and comments follow, beginning at the Brooks-Fairview intersection and going north.

Road signs at this intersection should show that Tremper's Shopping Center (list of all shops included) may be reached via Fairview and Russell. I live east of Sentinel High School and go by Russell to Tremper's, now.

Access to Tidyman's and other businesses north and west of Brooks would be via Catlin or Garfield, much as it is now. Washburn could have a south bound exit onto Dearborn, alongside the bridge approach. On the other side, there would be room for a north-going access to the Car Wash and other shops east of the bridge approach.

As the under-structure for the bridge approach reached a proper height above grade, pedestrian and bicycle traffic could be moving from one side to the other under Brooks. This pedestrian/bike pattern under Brooks could be carried out north of the South-Russell intersection also.

Coming off the bridge a left-turn lane and road signs could direct traffic onto Central towards Tremper's. Access to 93 Stop-and-Go would be maintained. To the east, traffic could move alongside of the bridge approach at Sussex and Regent. There is no compelling reason to change configurations of other streets from the end of the approach on northwesterly up Brooks.

This bridge solution is, to my mind, vastly different from the overpass rejected earlier and deserves a new presentation in the Environmental Assessment as a thoroughly viable Alternative.

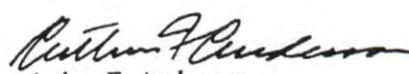
One other comment is more a question. Is it worth sacrificing businesses and crossing currently undeveloped property just to establish sweeping curves at various intersections affected by the Brooks/South/Russell traffic problems?

Following the public hearing with many negatives expressed regarding the South Avenue Realignment and having given the whole situation more thought, my vote now is:

First - Bridge over trouble

Next - Do nothing

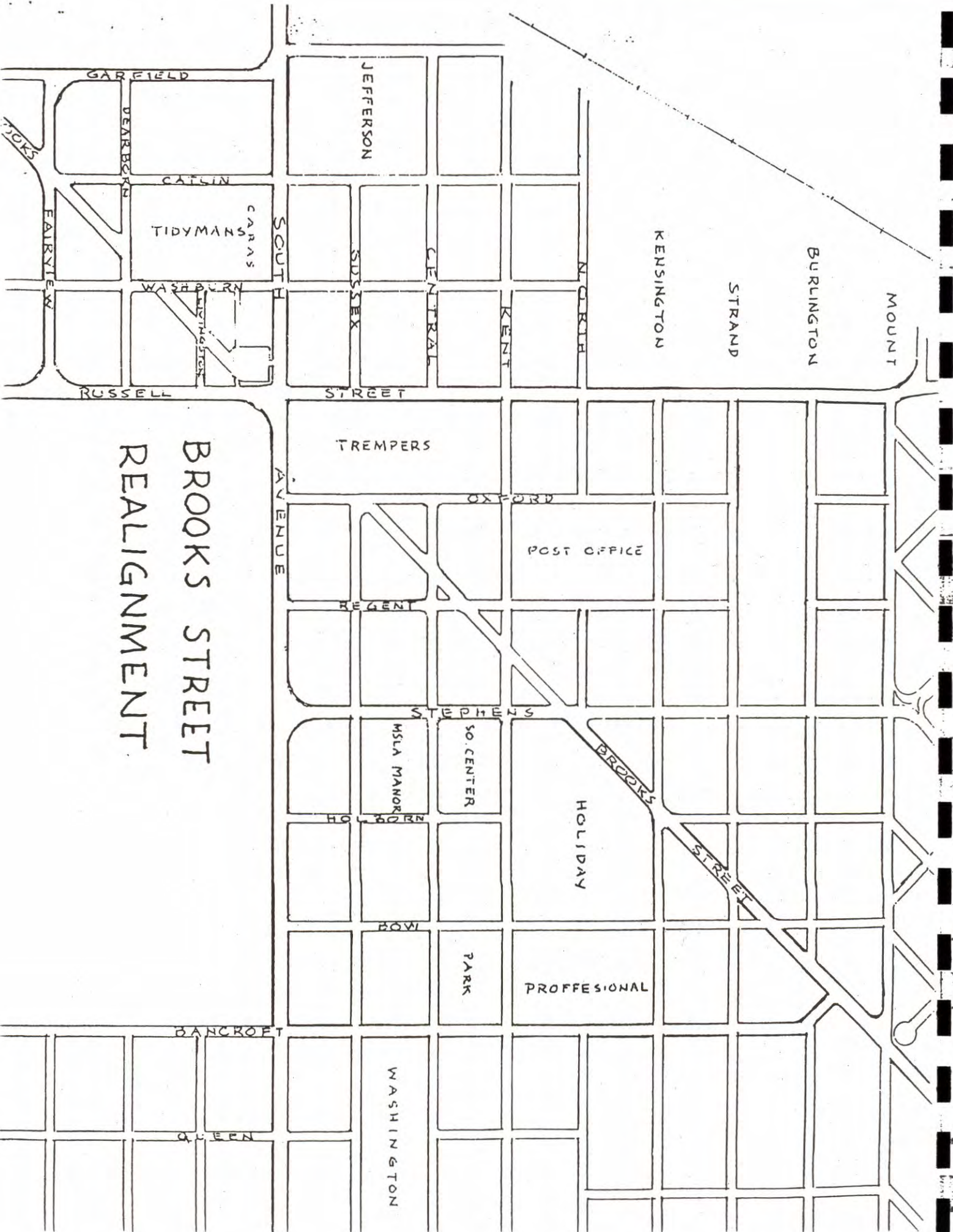
I understand City Council members and other concerned parties will be given a copy of these supplemental remarks. Thanks for your consideration.



Arthur F. Anderson  
429 Livingston Avenue  
Missoula MT 59801

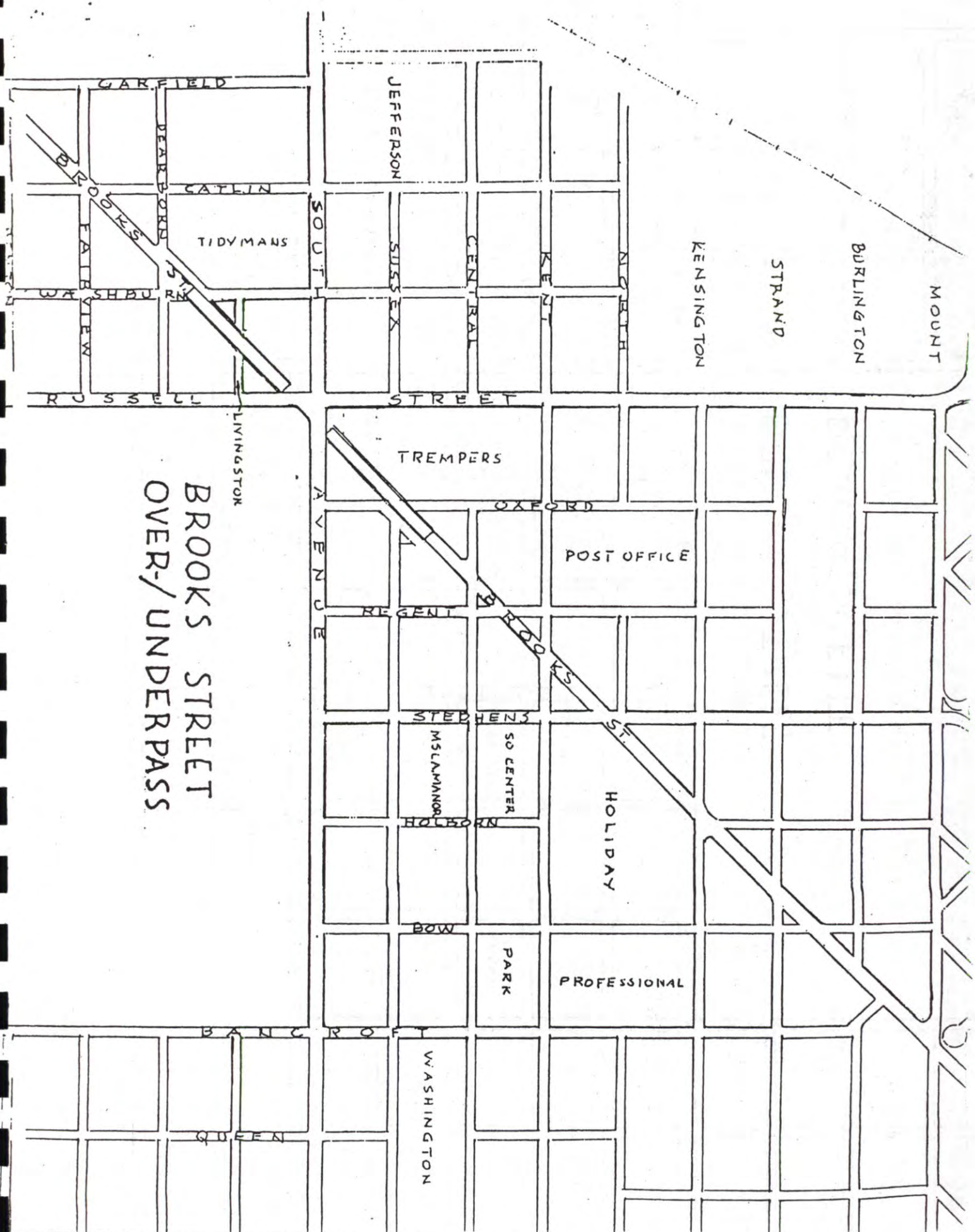


BROOKS STREET  
REALIGNMENT





BROOKS STREET  
OVER-/UNDERPASS





COMMENTS ON MALFUNCTION JUNCTION PLAN

September 19, 1997

To City, County and State Officials concerned:

I have looked at the proposal to solve problems at "Malfunction Junction" by redirecting South Avenue traffic. As a regular user of streets and shops in this area my vote is against this proposal. It appears that westbound South Avenue traffic would have to negotiate two traffic lights, one going at 90 degrees from the other....average delay only 20 seconds?? Pardon me for doubting that. Eastbound South Avenue traffic would negotiate a lengthy detour and two traffic lights. Brooks Street traffic would face two lights in one block, three lights from Sussex to Fairview. Complex and time consuming.

Interestingly, there is a simple solution among the alternatives set aside in the proposal. The solution is illustrated in Figure 2-11 Urban Interchange. It involves a bridge or overpass lifting Brooks Street traffic above the intersection of South and Russell. For some unexplained reason the designers put ramps off the bridge onto South Avenue heading west and from Russell Street onto the bridge. These two ramps appear to block South Avenue and Russell Street through the intersection on the north and east sides. Without the ramps the bridge does an excellent job of reducing the junction to two streets crossing at right angles which couldn't be simpler for traffic management. Actually, an underpass could easily be substituted for the bridge if people prefer traffic to go at or below grade. The attached drawing titled "Brooks Street Over-/Underpass" shows how this alternative solution might work.

I would like to see consideration given to taking Brooks Street around the junction. One idea on this is illustrated in the attached drawing titled "Brooks Street Realignment". Some eastbound South Avenue traffic could be routed by way of Garfield and Fairview to Brooks Street or Russell Street, south of the junction. Northeast bound Brooks Street traffic would turn off of Brooks Street at Fairview. East of the junction Stephens Avenue could be designated the primary route for traffic reconnecting to Brooks or continuing on Stephens to Orange Street.

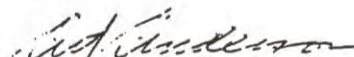
In summary, my endorsement would go for:

First - Urban Interchange (without any extraneous ramps)

Second - Brooks Street Realignment

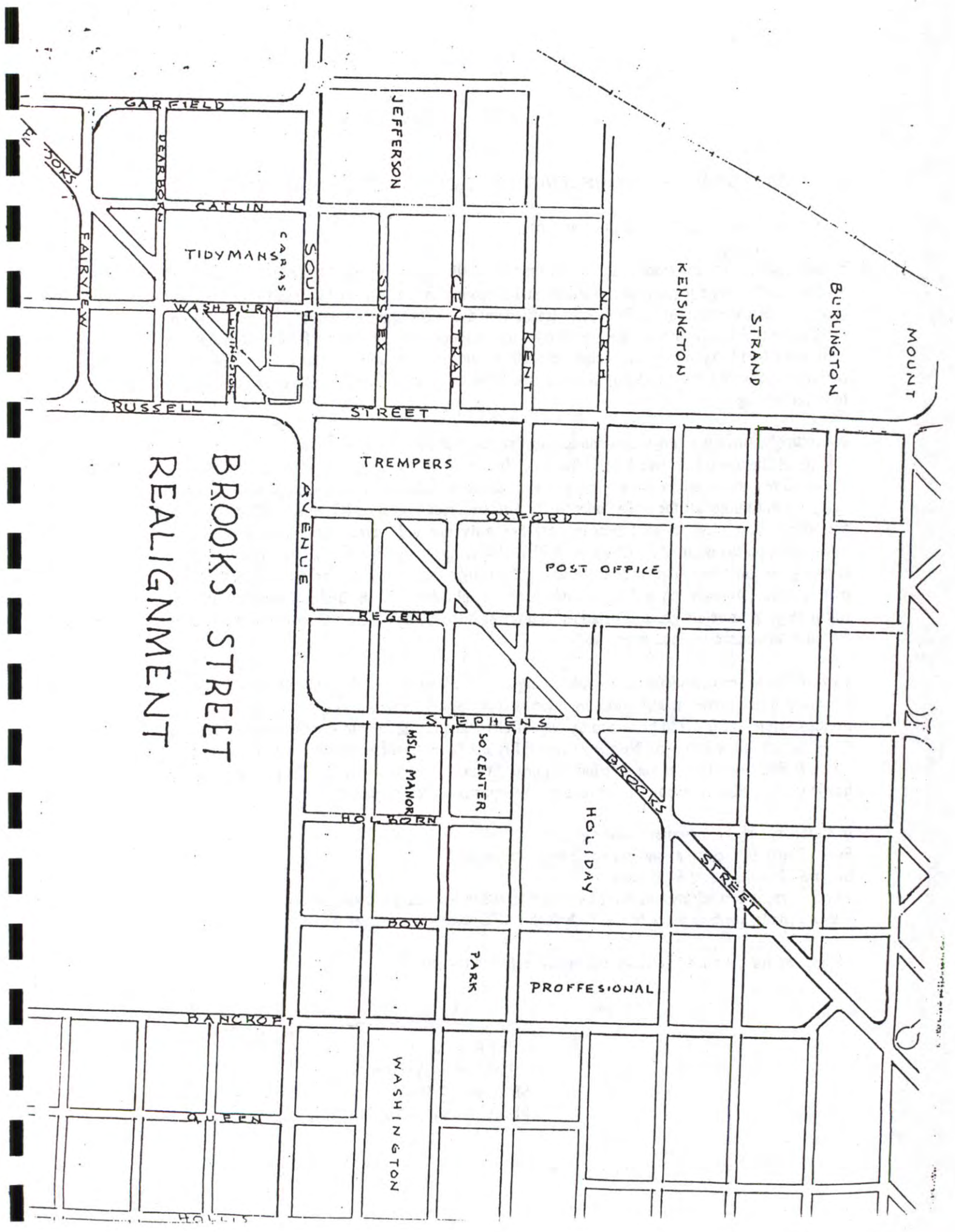
Third - Traffic Roundelay (the ones I've experienced in New England and Europe, on some primary roads, seem to work fine at fairly high traffic volumes and speeds)

Thank you for the public hearings and opportunities to comment.

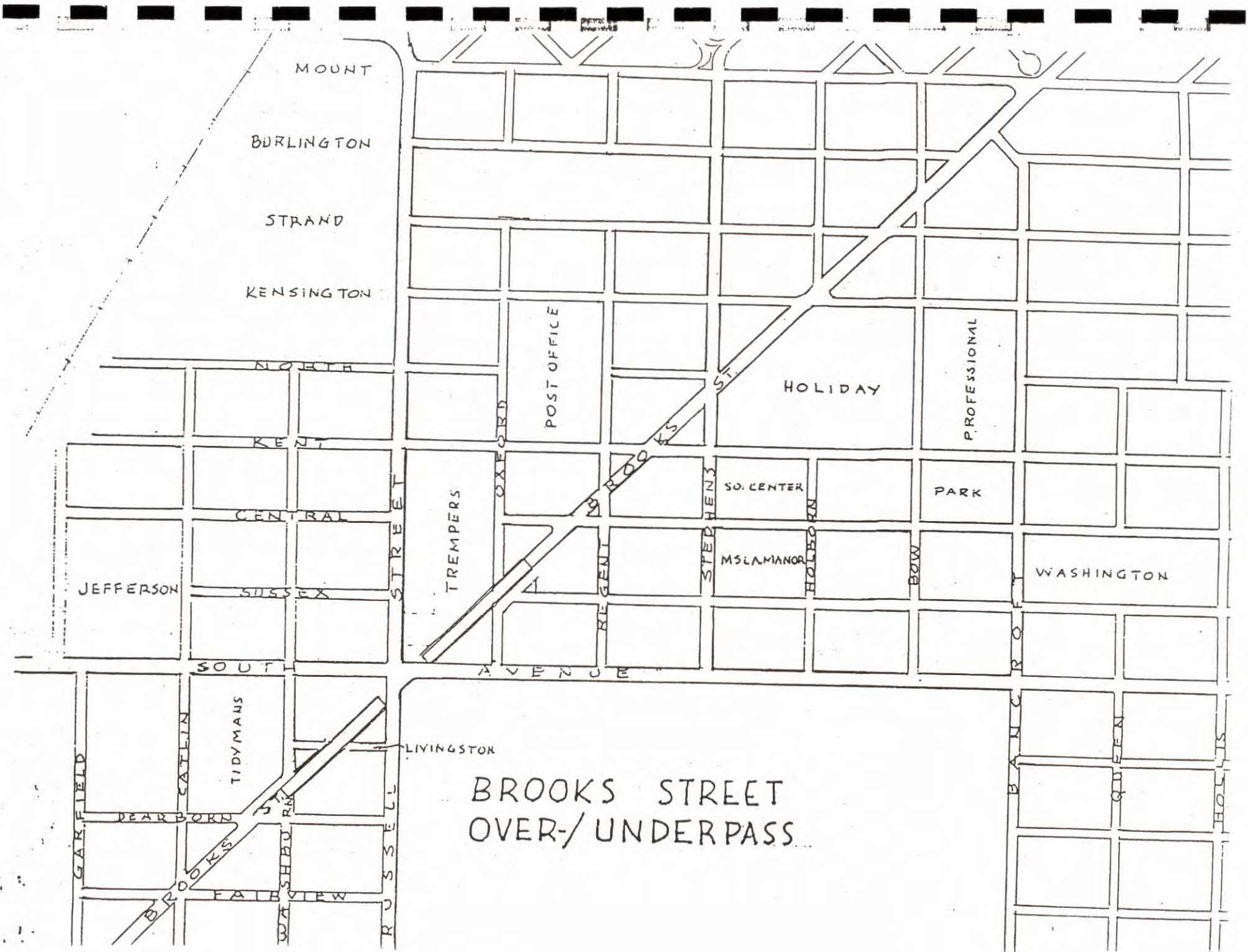


Arthur F. Anderson  
429 Livingston Avenue  
Missoula MT 59801  
Phone 406-543-8728

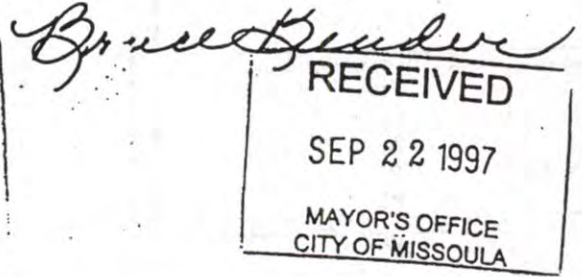
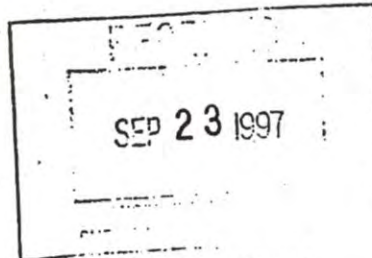












## COMMENTS ON MALFUNCTION JUNCTION PLAN

September 19, 1997

To City, County and State Officials concerned:

I have looked at the proposal to solve problems at "Malfunction Junction" by redirecting South Avenue traffic. As a regular user of streets and shops in this area my vote is against this proposal. It appears that westbound South Avenue traffic would have to negotiate two traffic lights, one going at 90 degrees from the other....average delay only 20 seconds?? Pardon me for doubting that. Eastbound South Avenue traffic would negotiate a lengthy detour and two traffic lights. Brooks Street traffic would face two lights in one block, three lights from Sussex to Fairview. Complex and time consuming.

Interestingly, there is a simple solution among the alternatives set aside in the proposal. The solution is illustrated in Figure 2-11 Urban Interchange. It involves a bridge or overpass lifting Brooks Street traffic above the intersection of South and Russell. For some unexplained reason the designers put ramps off the bridge onto South Avenue heading west and from Russell Street onto the bridge. These two ramps appear to block South Avenue and Russell Street through the intersection on the north and east sides. Without the ramps the bridge does an excellent job of reducing the junction to two streets crossing at right angles which couldn't be simpler for traffic management. Actually, an underpass could easily be substituted for the bridge if people prefer traffic to go at or below grade. The attached drawing titled "Brooks Street Over-/Underpass" shows how this alternative solution might work.

I would like to see consideration given to taking Brooks Street around the junction. One idea on this is illustrated in the attached drawing titled "Brooks Street Realignment". Some eastbound South Avenue traffic could be routed by way of Garfield and Fairview to Brooks Street or Russell Street, south of the junction. Northeast bound Brooks Street traffic would turn off of Brooks Street at Fairview. East of the junction Stephens Avenue could be designated the primary route for traffic reconnecting to Brooks or continuing on Stephens to Orange Street.

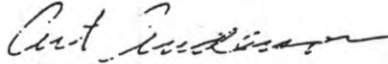
In summary, my endorsement would go for:

First - Urban Interchange (without any extraneous ramps)

Second - Brooks Street Realignment

Third - Traffic Roundelay (the ones I've experienced in New England and Europe, on some primary roads, seem to work fine at fairly high traffic volumes and speeds)

Thank you for the public hearings and opportunities to comment.

  
 Arthur F. Anderson  
 429 Livingston Avenue  
 Missoula MT 59801  
 Phone 406-543-8728



# PUBLIC COMMENT FORM

SEP 22 1997

## For BROOKS/SOUTH/RUSSELL TRANSPORTATION IMPROVEMENT PROGRAM

Use This Form to Provide Your Comment on the  
Environmental Assessment Alternatives and Mail to:

Bruce Bender, P.E.  
City of Missoula  
435 Ryman  
Missoula, MT 59802

Name: KURT F. INGOLD  
Address: 830 W. CENTRAL MISSOULA Phone: 723-3134

I AM A CO-OWNER OF THE BUILDING ON THE CORNER OF  
WEST CENTRAL AND HOLBOURN AND WILL BE UNABLE TO ATTEND THE  
SEPT 22 MEETING.

1. ALTERNATIVES. WE BELIEVE THE MOST ECONOMIC ALTERNATIVE  
IS TO RUN STEPHEN'S SOUTH AND FARKIS EAST TO  
INTERSECT IN A BYPASS ON THE FAIRGROUNDS PROPERTY.

2. OTHER ISSUES. IF THE PREFERRED ALTERNATIVE IS SELECTED,  
WE ARE CONCERNED THAT TRAFFIC PATTERNS IN THE  
AREAS ADJACENT TO THE NEW ROUTE WILL BE ALTERED.  
POSSIBLY, STREETS SUCH AS HOLBOURN WILL BE LATER MADE  
ONE-WAY AND PARKING MAY BE ELIMINATED TO MAKE  
ROOM FOR INCREASED TRAFFIC.

WE HOPE ANY CHANGES WILL HAVE NO IMPACT  
ON TRAFFIC PATTERNS AND CONGESTION/NOISE IN AREAS  
ADJACENT TO THE PROPOSED NEW ROUTE AND THAT ON-STREET  
PARKING WILL BE UNCHANGED.

THANK YOU

Signature: Kurt F. Ingold 9/19/97

(Use reverse side if more comment space is required)



cc: City Council  
BDB

## PUBLIC COMMENT FORM

For  
BROOKS/SOUTH/RUSSELL  
TRANSPORTATION IMPROVEMENT PROGRAM

SEP 22 1997

Use This Form to Provide Your Comment on the  
Environmental Assessment Alternatives and Mail to:

Bruce Bender, P.E.  
City of Missoula  
435 Ryman  
Missoula, MT 59802

Name: \_\_\_\_\_  
Address: 1004 N. ITA St. + neighbor Phone: 548-7600

We have no problem with "millage rate  
increase". People need to have patience  
for 2 min. in fact cruising in their  
lane. 2 minute delay means that cars  
only wait waiting for a traffic light.

A solution has to be made. I would  
love the right suggestion. This is  
the best solution. we found for  
such corner in Europe.

Signature: M. Schaller

(Use reverse side if more comment space is required)



## PUBLIC COMMENT FORM

58-19

For  
BROOKS/SOUTH/RUSSELL  
TRANSPORTATION IMPROVEMENT PROGRAM

Use This Form to Provide Your Comment on the  
Environmental Assessment Alternatives and Mail to:

Bruce Bender, P.E.  
City of Missoula  
435 Ryman  
Missoula, MT 59802

Name: Everett Woodgerd  
Address: 611 Livingston Ave Phone: 543-5819

ALL the TRAFFIC light synchronizing in the  
world will not equip Brooks to absorb the west  
bound south AVENUE TRAFFIC, so the project is  
doomed to failure. However, by utilizing the  
wide STEPHENS AVENUE now in place, and  
extending it to 39th, you can close RUSSELL  
at BSR - keep South and Brooks as is -  
and have a feasible solution. Stephens  
is much better suited to handle  
North-South local TRAFFIC than Russell  
ever will be.

IT MAKES NO SENSE TO MERELY  
SHIFT TRAFFIC DELAYS AND CONGESTION  
TO OTHER AREAS.

Signature: Everett Woodgerd

(Use reverse side if more comment space is required)

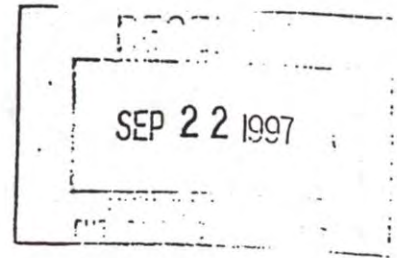




# First Bank

Southside Office  
2801 Brooks Street  
P.O. Box 4787  
Missoula, Montana 59806  
406 523-2300

Downtown Office  
209 East Spruce  
P.O. Box 4787  
Missoula, Montana 59806  
406 523-2300



September 19, 1997

Mr. Bruce Bender  
Director of Public Works  
435 Ryman  
Missoula, MT 59802

Hand Delivered

RE: Brooks, South, Russell Junction

Dear Mr. Bender:

We want to acknowledge the tremendous effort your department has undertaken in responding to numerous concerns and questions raised by our bank and other property owners in the area affected by realignment of the Brooks, South, Russell junction. In particular, we appreciate the assurances from your department that you have incorporated two modifications that specifically mitigate an adverse impact on traffic patterns to First Bank:

- 1) For traffic southbound on Brooks, a widening of the turn off Brooks onto Garfield
- 2) A cut-away on the corner of Garfield and Fairview that allows traffic northbound on Garfield to enter Fairview and connect with Brooks for northbound travel

We also expressed concerns about access if increased volume on Garfield results in blockage of our main parking lot. You conveyed a willingness to work on alternative solutions if our customers experience difficulty in entering or exiting the bank.

The realignment of the junction is needed to reduce traffic congestion and meet Air Quality Requirements. It also contributes to continued viability of the businesses in the area by improving traffic flow and wait times. First Bank recommends approval of the Preferred Alternative.

Sincerely,

A handwritten signature in cursive script, appearing to read "Faye Hanson Warren".

Faye Hanson Warren  
President



Sept.  
Bruce Dunder

Mayor Kadas.

RECEIVED

SEP 18 1997

MAYOR'S OFFICE  
CITY OF MISSOULA

I read your comments in the Missoulian and I must disagree with your time that it takes to get through some intersection stop lights. I checked Third Street and Reserve. It takes longer than a minute as there are three turns of the light instead of two. Also, at Reserve and Brooks it takes over a minute and a half as there are left lane turns on all streets.

This is just a ~~mass~~ minor detail. What bothers me the most is the South Avenue deal so I went to the library and looked at the plans. I see it is already decided as far as I could tell to closing South and the diverting of all cars off of South so no cars can go through the Brooks intersection.

There is no provision to prevent cars from turning left off South and going north through the residential area. Do you actually think people won't find a way so they won't have to go to the present light on 93. Even now we have so many cars zipping past us. You had meetings with residential area people as the plans say and the one thing that stood out was concerns for residential areas. There are no provisions even mentioned in the plans. Take a look, do something.





# KPAX

Communications, Inc.

Montana's NEWS Stations



September 17, 1997

Bruce Bender  
Public Works Director/City of Missoula  
435 Ryman  
Missoula, MT 59802

Dear Bruce,

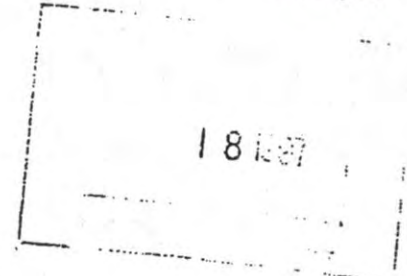
I have reviewed the plan that the City is proposing for Regent Street in conjunction with the redesign of Malfunction Junction. This seems to be a good redesign given the fact that KPAX will lose all of its parking on Sussex.

I would like to endorse your redesign as an excellent solution to our parking situation. Thanks to both you and Doug Harby for all of your work on this project. It looks like it will solve the problems we were going to have with our parking. Please inform me of any further changes on this situation.

Sincerely,

A handwritten signature in cursive script that reads "Bob Hermes".

Bob Hermes  
KPAX President/General Manager







## **Major Design Features**

### **Roadway**

The proposed action would include constructing a new road surface on South Ave. west of the intersection from Garfield St. to Brooks St., and reconstructing portions of South Ave., Brooks St., Russell St., and the other side streets that would be variously affected depending on the selected alternatives. A continuous curb, gutter, sidewalks and associated drainage improvements would be provided around the intersection and along the new roads and pedestrian walkways and bicycle lanes.

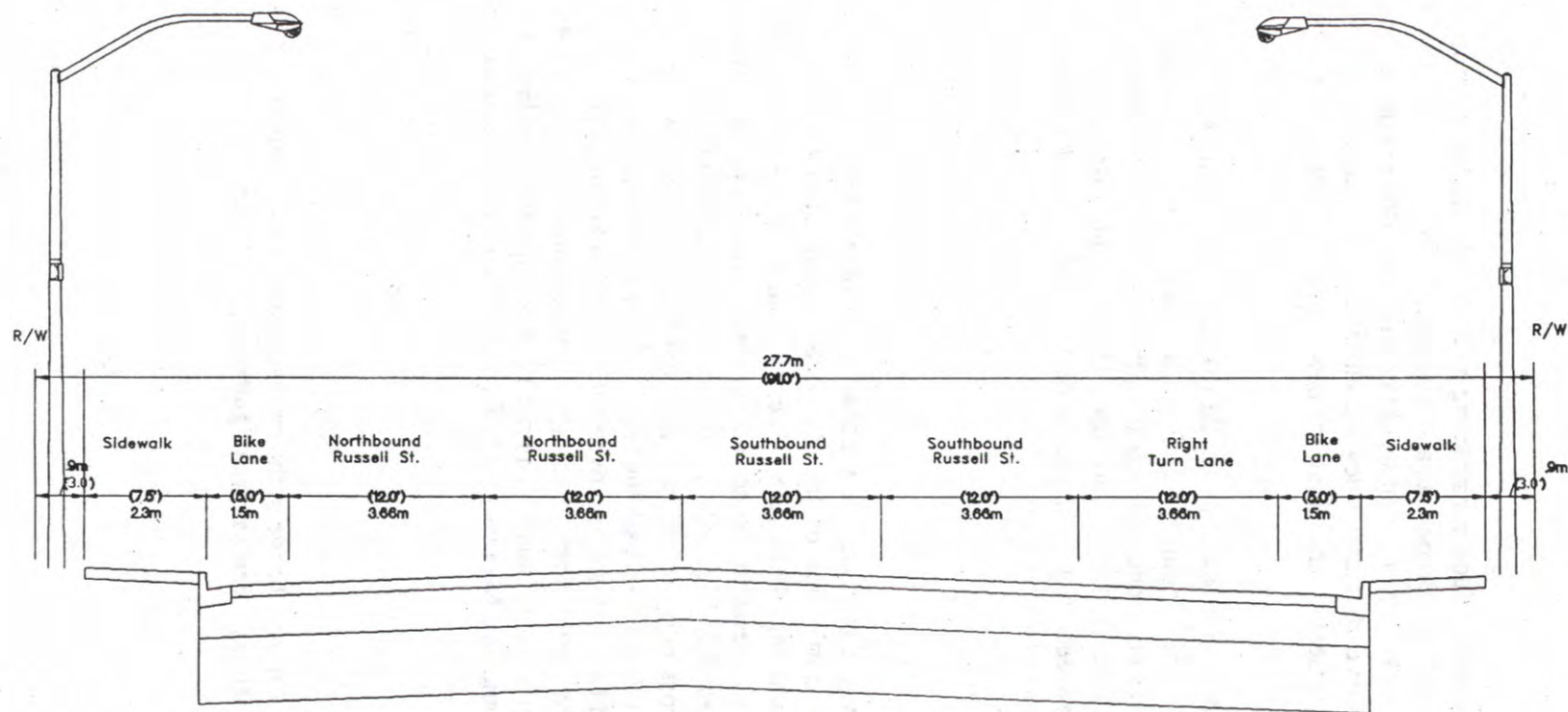
The existing road grade and alignments would generally remain the same throughout the road widening. The realignment of both legs of South to Brooks would utilize mostly existing street rights-of-way, and is a key component to improving the traffic flow through the intersection. Minor right-of-way shifts may occur to avoid land uses, improve sight distances, and to avoid parks or historic properties. The speed limit is expected to be 40 to 56 kph (25 to 35 mph) on the 3 improved streets.

### **Right-of-way**

The proposed right-of-way for Russell St. is shown on Figures 1-3 and 1-4. A new right turn lane will be added on the north side of the Brooks/South/Russell intersection to accommodate southbound traffic turning onto South Ave.. The new roadway proposed between South Ave. and Brooks St. in both the northeast and southwest quadrant of the intersection would utilize existing right-of-way where feasible. Right-of-way would need to be acquired for the new South Ave. reroutes that would cross existing commercial properties. Figures 1-5 and 1-6 show proposed typical cross sections of South Ave. east and west of Brooks St., respectively. Figures 1-7 and 1-8 show the proposed right-of-way for improvements to Brooks St. between Fairview Ave. and the intersection and between the intersection north to the East Relocation of South Ave., respectively. Final designs will meet requirements of American Association for State Highway Transportation Officials (AASHTO) and the Manual on Uniform Traffic Control Devices (MUTCD) Design guidelines

### **Drainage**

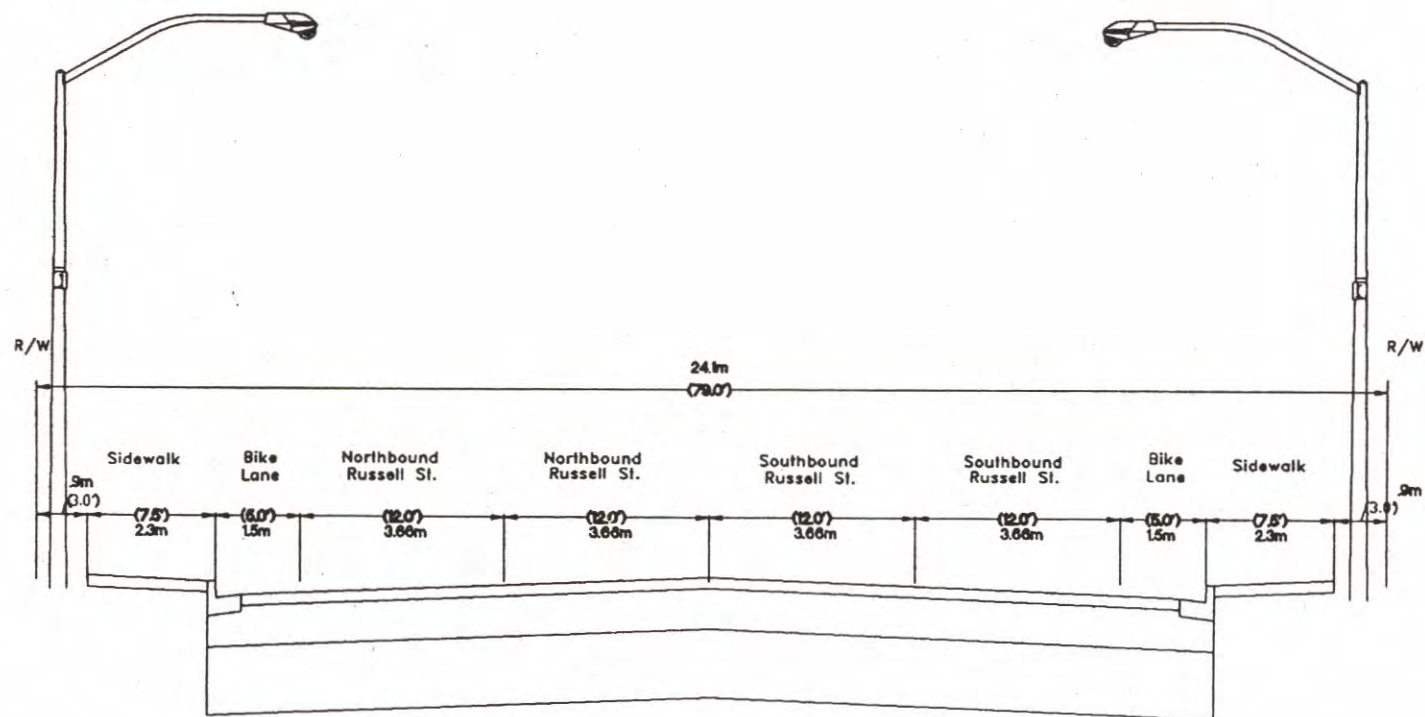
There would be no significant change in the drainage pattern as a result of the Project. Drainage would generally follow the existing pattern of gutters and storm drains.



RUSSELL STREET  
North of the Intersection

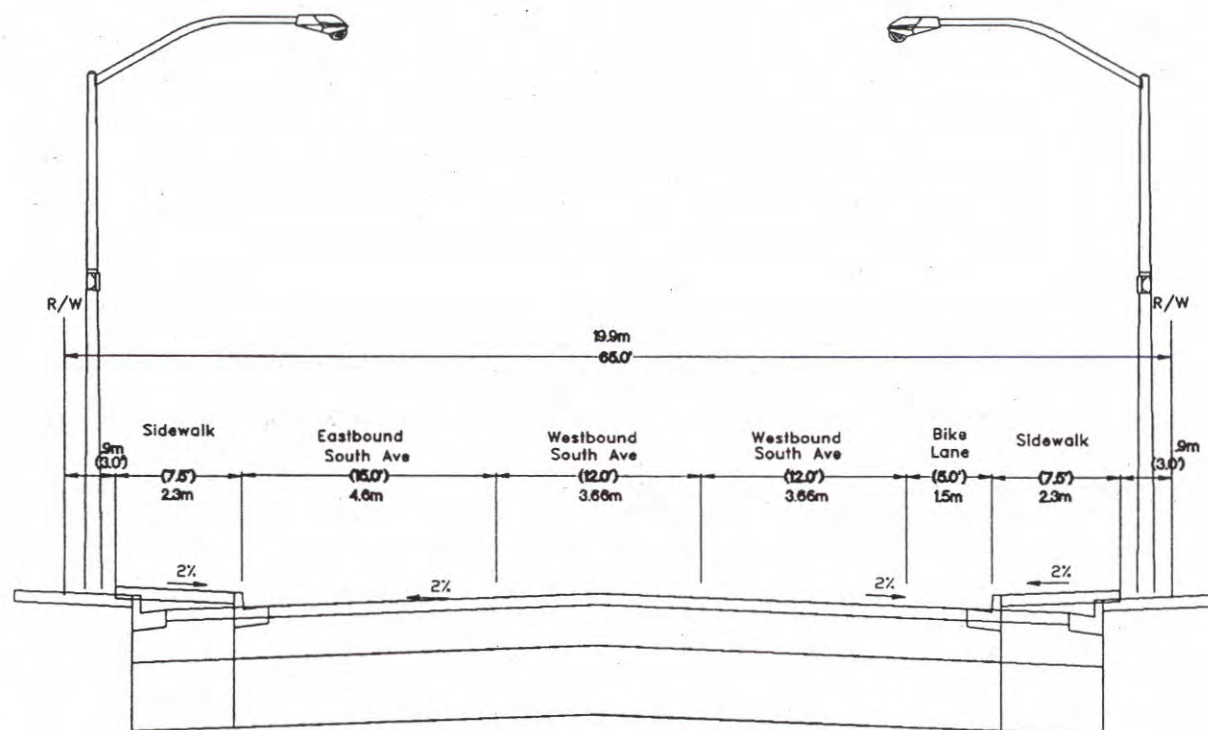
PROPOSED TYPICAL CROSS SECTION  
Figure 1-3





RUSSELL STREET  
South of the Intersection

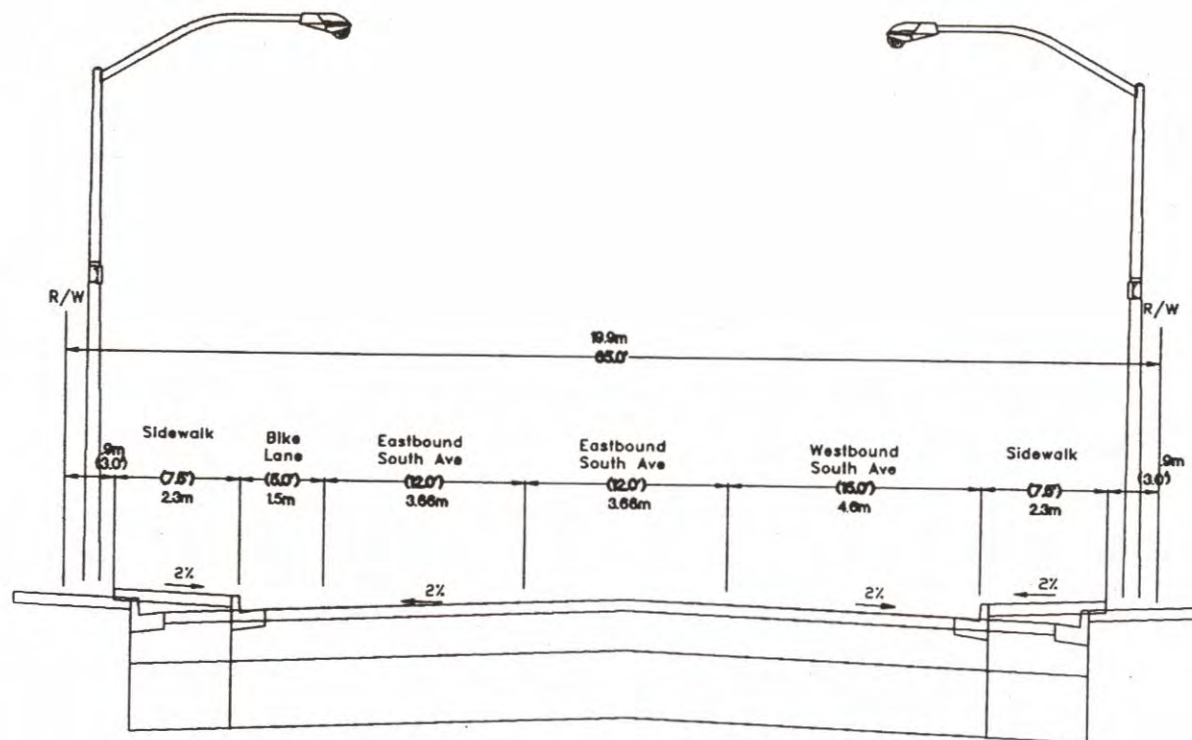
PROPOSED TYPICAL CROSS SECTION  
Figure 1-4



SOUTH AVENUE EAST REALIGNMENT

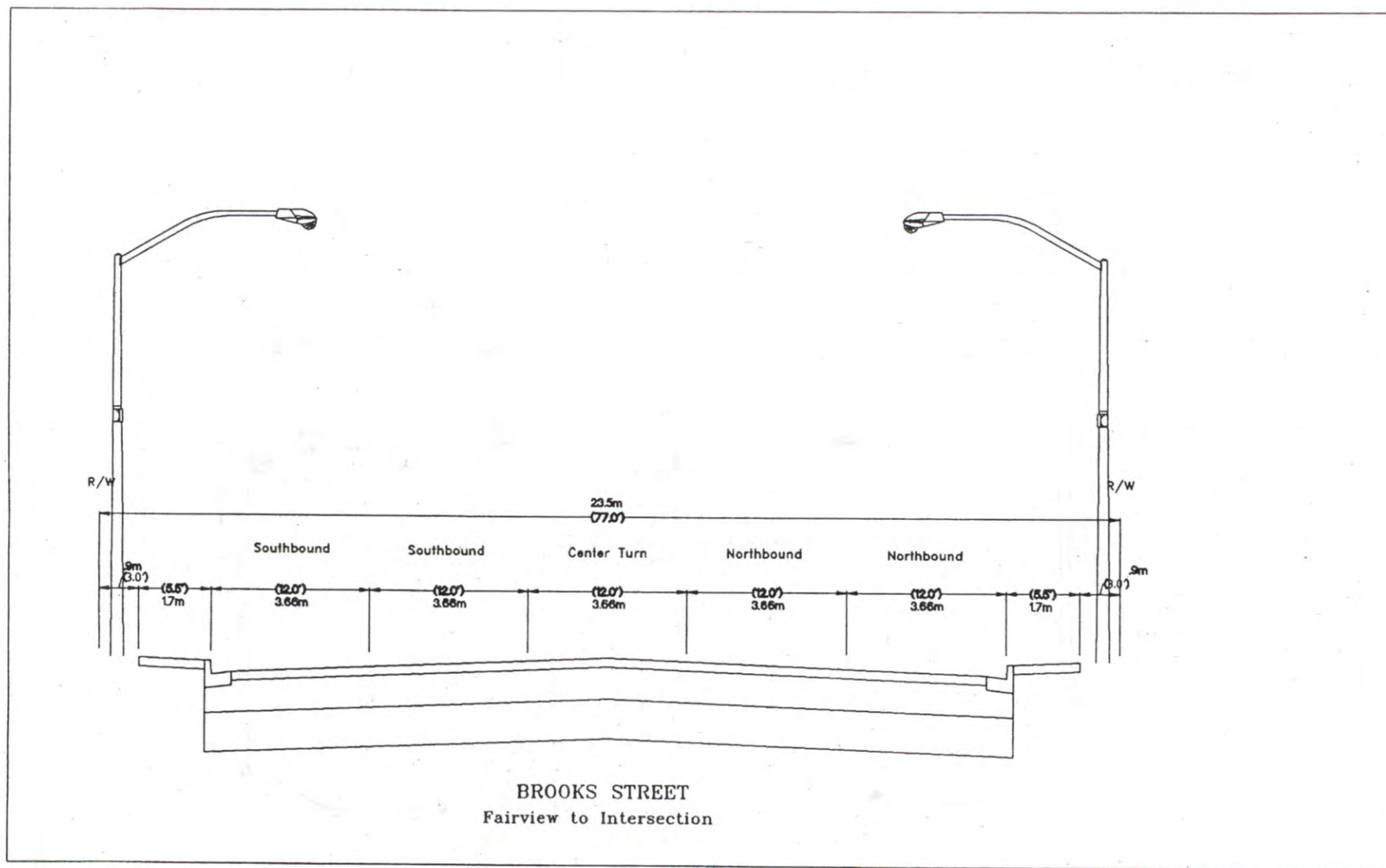
PROPOSED TYPICAL CROSS SECTION  
Figure 1-5





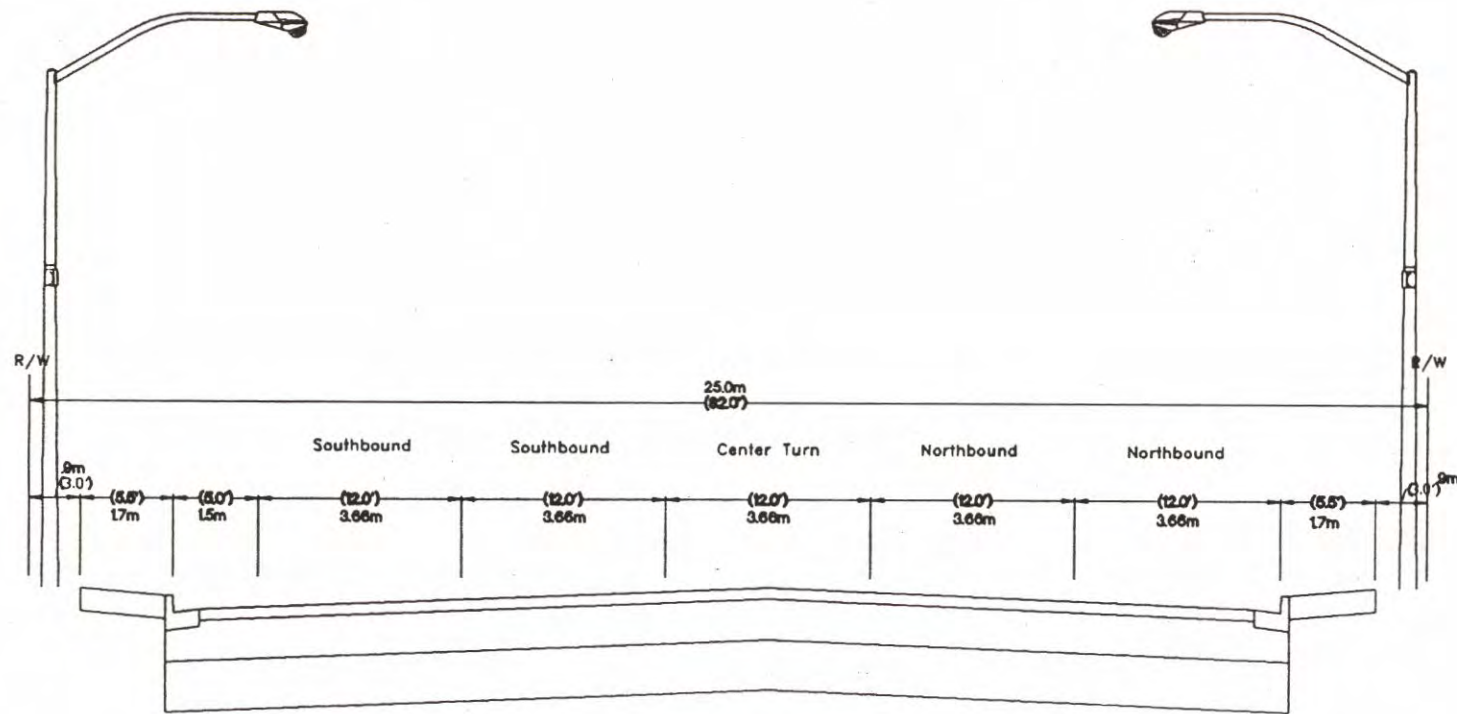
SOUTH AVENUE WEST REALIGNMENT

PROPOSED TYPICAL CROSS SECTION  
Figure 1-6



PROPOSED TYPICAL CROSS SECTION  
Figure 1-7





BROOKS STREET  
Intersection to East Relocation

PROPOSED TYPICAL CROSS SECTION  
Figure 1-8

## **Intersections and Traffic Signals**

Northeast of the Brooks/South/Russell intersection, a new traffic signal may be installed at the intersection of Brooks St. with the proposed realignment of South at Sussex. Signals would be realigned and upgraded at Brooks and Russell, as well as Brooks and Fairview.

New intersections would be designed or improved in accordance with MDT standards. Traffic signals would be added or changed according to a determination of need and warrants to be conducted in consideration of the guidelines presented in the *Manual on Uniform Traffic Control Devices* (FHWA, 1988).

## **Project Schedule**

Preliminary engineering evaluation of the Brooks/South/Russell Intersection began in September 1994. Many alternatives were considered and eliminated from further consideration since that time (also refer to Chapter 2). If approved, final design phase of the selected alternative would start in January 1998 and be completed in July 1998. If adequate funding is available, project construction could begin as early as late summer of 1999.

## **Project Costs and Funding**

Project costs would include construction costs, right-of-way and engineering costs, mitigation costs, and the cost of consuming non-renewable resources. Non-renewable resources include the energy required to construct the project and the materials used that become unavailable for other needs.

Construction costs are discussed further for each alternative in Chapter 2 - Project Alternatives. The estimates include the costs associated with mobilization, excavation, aggregate base course, asphaltic concrete pavement, drainage structures, bridges, guard rails, traffic control, clearing, landscaping, sidewalks, striping and signing, dust palliative, and construction engineering. The total estimated cost for construction (\$2.78 million), right-of-way (\$1.22 million), and engineering (\$0.69 million) for the preferred alternative is \$4.69 million which represents a mid-range cost among the considered alternatives. Total cost for the West Approach is \$1.90M, the East approach is \$1.50M, and the improvements at Brooks/South/Russell is \$1.2M. (See Chapter 2 for more detail).

If approved, federal funding under the Congestion, Mitigation, and Air Quality program (CMAQ); Section 109(f) of the Clean Air Act (1970) and amendments, 1990) would be used. CMAQ, a program under the Intermodal Surface Transportation Efficiency Act (ISTEA) passed by Congress in 1991, allows funds for roadways, rail and trail projects, and bicycle projects in metropolitan areas that help alleviate congestion and meet clean air objectives. The CMAQ program is administered by the MDT. The City of Missoula may receive further funding in the future depending upon conformity with the standards for carbon monoxide (CO) and particulate matter (PM<sub>10</sub>).



## PURPOSE AND NEED FOR THE PROJECT

The intersection of Brooks St., South Ave., and Russell St. has been a source of frustration for area commuters, pedestrians, and bicyclists for many years. Because it is a complex intersection, each phase of the signal cycle is lengthy. The amount of time it takes to drive, ride, or walk through the intersection creates congestion, delays, and bottlenecks, particularly during morning and evening commutes and other peak traffic periods. Vehicle emissions, produced from lengthy engine idling times at this intersection, have often in the past exceeded federal air quality standards for carbon monoxide (CO).

The purpose of the proposed project is to improve traffic, bicycle, and pedestrian flow through the intersection and to relieve congestion to an acceptable level of service. The proposed action would reduce idling time, minimize impacts to area businesses, and would further improve air quality at the intersection.

### Air Quality

The congestion and lengthy vehicle idling times at the Brooks/South/Russell intersection has caused in the past localized vehicle emissions that have exceeded National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO). Between February 1987 and November 1991, Missoula had fourteen exceedances for CO at this intersection, nine of which resulted in a violation of the Federal Standard (Schmidt, 1994).

According to the U.S. Environmental Protection Agency (EPA) Aerometric Information Retrieval System (AIRS), the CO monitor at Brooks/South/Russell has not measured an exceedance of NAAQS for CO since 1991. The City of Missoula may reapply to the Environmental Protection Agency (EPA) for attainment after 8 quarters of attainment. The application takes approximately 3 to 4 years to process and the City must demonstrate that it can continue to meet federal air quality standards during a 10-year maintenance period. Given the expected increases in traffic volume through the intersection and the associated congestion-induced idling times, the City is unsure it will be able to meet continuous attainment during the maintenance period unless improvements are made to the intersection.

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) set aside funds through the CMAQ Program to fund eligible transportation projects or programs which are likely to contribute to the attainment of a national ambient air quality standards. Brooks/South/Russell is the only location in Montana that has not consistently met air quality standards for CO and is proposed through a decision on this document to receive CMAQ funding<sup>1</sup>.

---

<sup>1</sup>The cities of Billings and Great Falls, Montana have CO nonattainment areas; however, those locations did not reach secondary designation as specified in the CMAQ program and thus are not eligible for funds.



### Condition of the Existing Roadways and Turning Movements

Missoula's existing street system consists of principal and minor arterials, as well as collector and local streets. Brooks and Russell St. are principal arterials that have a primary function of carrying traffic to and from major traffic generators in the community. South Ave. is a minor arterial that provides through trips and local neighborhood access, and connects neighborhoods.

Brooks St. is approximately a 18.3 meter (60 feet) wide right-of-way (ROW). The travel way is a four-lane, divided highway. Russell St. is a two lane, 24.4 meter (80 feet) wide ROW. South Ave. is a two lane, 21.3 meter (70 feet) wide ROW. All three roadways are surfaced with asphaltic concrete pavement. Russell and South conform to conventional traffic engineering standards of four approach street segments crossing at or near 90 degree angles. However, Brooks St. bisects the intersection of Russell and South from the southwest to the northeast, creating a six-way approach configuration with restricted turning movements. The existing intersection does not have developed sidewalks, although curbs and gutters have previously been installed.

Current signalization allows all turning movements except:

- no left turns from Brooks St.
- no left turns from Russell St.
- no right turns from Brooks St. to Russell St.
- no right turns from South Ave. to northbound Brooks St.

Recent system improvements in the City of Missoula include the completion of the road widening project on Reserve St. from South 3<sup>rd</sup> St. to Brooks. This project, completed in 1993, expanded Reserve St. to four lanes and added or upgraded signals at South 3<sup>rd</sup> St., South Ave., Mount Ave., and Brooks St.

### Current and Projected Traffic Volumes

The vehicle capacity problems at the existing Brooks/South/Russell intersection were evaluated using standard traffic engineering criteria:

- approach volume-capacity (v/c) ratio
- critical v/c ratio
- approach stopped delay
- intersection stopped delay
- approach level of service
- intersection level of service

Stopped delay is related to the vehicle idling hours. Congestion for this intersection was determined based on the level of effectiveness of the proposed action and alternatives to reducing stopped delay (i.e., level of service and intersection v/c ratio).



To supplement the 1992 AADT traffic volumes counted by the city of Missoula, traffic volumes entering the intersection were counted during the a.m. and p.m. peak hours on November 5, 1993. Traffic volumes at the same location were also obtained for the No Action alternative from the QRS-II traffic model used for the *Missoula Transportation Plan* (Table 1-1). The model yielded projected traffic volume results for a projected 20 year design period (estimated as the year 2015).

Table 1-1 shows that southbound Brooks St. has the heaviest traffic volume and is the worst leg in all the three scenarios. Eastbound South Ave. is the best in the current and all of the alternative scenarios. However, the traffic on South Ave. would not enter directly into the intersection in any of the alternative scenarios.

**TABLE 1-1**  
**Current and Projected Traffic Volumes at Brooks/South/Russell Intersection**

PM Peak Traffic	Existing Traffic 1993	Projected Traffic Volumes (for build year estimated 2015)	
		No Action	South Ave Realign
Northbound Russell	599	727	893
Southbound Russell	754	903	903
Northbound Brooks	755	1016	1445
Southbound Brooks	1562	1635	2557
Eastbound South	657	607	n/a
Westbound South	718	1037	n/a

Source: Bell-Walker

The intersections of Brooks at Southgate Mall, Brooks and Fairview, and Brooks and Stephens were also analyzed for any possible impacts that would result from realigning South Ave.. The results of the capacity analysis at these intersections with and without the South Ave. realignment are compared in Table 1-2.

**TABLE 1-2**  
**Comparison of Intersection Capacity at Outlying Intersections**

Intersection:	Intersection Capacity	
	No Action	South Ave Realign
Brooks/Southgate Mall	under capacity	under capacity
Brooks/Fairview	under capacity	under capacity
Brooks/Stephens	under capacity	under capacity



A summary of Missoula's arterial roadway system by functional classifications (principal arterials, minor arterials, and collector streets) and 1992 annual average daily traffic (AADT) is presented in Table 1-3 (City of Missoula). The street with the highest AADT in 1992 were Brooks, Broadway, and Russell St. Not surprising, Brooks St. had the highest AADT in the City, occurring at the intersection of Brooks, South, and Russell.

**TABLE 1-3**  
**Existing Street System and Traffic Volumes**

Functional Classification/ Street Name	Location	1992 AADT
<b>PRINCIPAL ARTERIALS</b>		
Reserve St.	South of Brooks St.	16,750
	Between South Ave. and Central Ave.	17,850
	South of South 3 <sup>rd</sup> St. West	17,740
Broadway St.	East of Reserve St.	10,690
	South of Mullan Rd.	21,760
	West of Orange St.	12,360
Brooks St.	Northeast of Reserve St.	17,530
	Southwest of Russell St.	22,660
	Northeast of South Ave.	23,630
	Southwest of Higgins Ave.	13,220
Russell St.	South of Broadway	21,530
	North of South 3 <sup>rd</sup> St.	20,300
	North of Brooks St.	13,150
Orange St.	Bridge	19,300
	South of 3 <sup>rd</sup> St.	16,800
	North of Broadway	14,250
Stephens Ave.	South of 6 <sup>th</sup> St.	17,740
	North of Brooks St.	14,980
Madison Ave.	At Fork River Bridge	17,200
<b>MINOR ARTERIALS</b>		
South Ave.	West of Reserve St.	11,610
	East of Reserve St.	12,000
	West of Brooks St.	12,990
	East of Brooks St.	10,270
Russell St.	South of Brooks St.	12,830
	North of Higgins Ave.	9,580
Higgins Ave.	West of Russell St.	13,950
	South of South Ave.	12,370
	North of South Ave.	10,420
	South of Brooks St.	12,390
	South of South 3 <sup>rd</sup>	17,850
	North of Front St.	13,690



**TABLE 1-3**  
**Existing Street System and Traffic Volumes**

Functional Classification/ Street Name	Location	1992 AADT
Front St.	West of Higgins Ave.	6,020
	West of Madison Ave.	1,880
Arthur Ave.	North of South Ave.	8,470
	South of South 6 <sup>th</sup> St.	9,820
South 5 <sup>th</sup> St.	West of Russell St.	1,090
	East of Russell St.	3,690
	West of Higgins Ave.	3,090
South 6 <sup>th</sup> St.	West of Russell St.	180
	East of Russell St.	1,760
	West of Higgins Ave.	2,460
Mount Ave.	West of Stephens Ave.	9,660
	West of Brooks St.	6,780
	East of Brooks St.	5,290
South 3 <sup>rd</sup> St.	West of Reserve St.	5,700
	East of Reserve St.	12,270
	West of Russell St.	15,680
	East of Russell St.	6,830
	West of Orange St.	8,030
	East of Orange St.	2,110

Source: City of Missoula, 1992

The intersection of Brooks St., Russell St., and South Ave. has become increasingly congested over the past decade. Missoula's 4% population growth rate has also contributed to the chronic traffic problems at this intersection. The intersection currently handles over 48,000 vehicle trips per day and delays at the intersection can be as long as six minutes if it takes more than one cycle of the lights to get through the intersection. Traffic volumes for the estimated build year, 2015, are projected to increase to over 63,000 vehicles per day in the 20-year planning period (BWE, 1994).

Level of Service (LOS) describes the quality of traffic flow at an intersection or on a roadway. The *Highway Capacity Manual (HCM)* denotes six LOS definitions:

**Level of Service A:** Light traffic on approach; short, stable queues existing during red signal phase; little or no delay at unsignalized intersections.

**Level of Service B:** Moderate traffic approach; stable queues; little additional delay for signalized intersections; short delay at unsignalized intersections.

**Level of Service C:** Moderately heavy traffic approach; moderately long but stable queues; moderately but acceptable delay at signalized intersections; average 10 to 20 seconds delay at unsignalized intersections.

**Level of Service D:** Heavy traffic on approach; long, unstable queues; delays sometimes become excessive at signal; long delay to minor street traffic at unsignalized intersections.

**Level of Service E:** Heavy flow (capacity) on approach; long queues at signal suffering long delays; very long traffic delay at unsignalized intersections.

**Level of Service F:** Heavy, congested traffic conditions; more traffic demand than capacity; queues may cause congestion that affects other traffic movements at unsignalized intersections.

In urban settings, LOS-C is a desirable design objective.

The p.m. peak hour LOS determined for each of the major intersections in the study area is summarized in Table 1-4. Analysis procedures were based on the 1985 *Highway Capacity Manual*, existing traffic counts, and existing lane configurations (Transportation Research Board, 1985). Since these calculations were made, new procedures were developed and published in the October, 1994 Highway Capacity Manual. Spot checks of intersections utilizing updated methodology didn't change conclusions.

**TABLE 1-4**  
**1993 P.M. Peak Hour Level of Service**

Intersection	Delay (seconds/vehicle)	PM Peak Hour LOS
Brooks/Fairview	14.6	B
Brooks/Mount	18.6	C
Brooks/South/Russell	>100	F
Brooks/Reserve	35.7	D
Mount/Stephens	17.9	C
Paxson/Brooks	20.8	C
Reserve/Mount	6.9	B
Reserve/South 3 <sup>rd</sup> St.	21.5	C
Russell/Mount	23.4	C
Russell/South 3 <sup>rd</sup> St.	34.7	D
Russell/South 5 <sup>th</sup> St.	7.1	B
Russell/39 <sup>th</sup> St.	22.6	C
Stephens/Brooks	21.8	C
South/Grant	21.5	C
39 <sup>th</sup> St./Dore Lane	7.2	B

Source: BWE, 1994



### **Accident Rates**

During the 6-year period from 1988 to 1993, the accident rate ranged from 1.0 to 4.8 per million vehicle kilometers (1.72 to 7.75 per million vehicle miles) traveled at specific sections of Brooks/South/Russell (City of Missoula, 1994). This accident range is comparable to the statewide average for urban intersections from the State of Idaho (i.e., 0.45 - 3.17 per million vehicle kilometers or 0.73 - 5.1 per million vehicle miles).<sup>2</sup> With the exception of the intersection of Brooks and Stephens, twice as many accidents occurred at the Brooks/South/Russell intersection than at any other intersection along Brooks St., South Ave. or Russell St. The proposed project would help reduce accidents by removing the through traffic on South Ave., and providing protected left turn lanes, additional traffic lanes, striping, and upgraded signals. If the proposed action is approved, the fewer cars routed directly through the intersection would improve the high traffic flow and reduce the congestion that can lead to traffic accidents.

### **Transportation Plan**

The Missoula Transportation Plan (MTP), adopted in 1985, discussed the traffic congestion problems at the Brooks/South/Russell intersection. A proposal overpass to relieve congestion was included in the long term planning as the number eight recommended improvement. At that time, the proposed overpass was to "allow Brooks Street traffic to travel over the remaining at-grade intersection of South and Russell." The MTP discussed the recommended overpass structure dimensions, capacity, and cost and potential funding sources.

The MTP was reviewed and updated in 1996 (adopted in October, 1996). The proposed overpass was dropped from the list of recommended projects. The current preferred alternative project (the South Avenue Realignment) has not been previously discussed in the MTP or any other statewide transportation plan. The present MTP labeled the preferred alternative as "Brooks/South/Russell Traffic Improvements including geometric changes to improve congestion." This project was listed as the number 13 and 14 recommended improvement. The MTP also included a discussion of the improvements, costs, and potential funding sources.

### **Local Planned Developments**

The study area is heavily developed with commercial, office, and some residential property. Brooks St. is predominantly commercial from Reserve St. to Mount Ave. and residential from Mount Ave. to Higgins Ave.. South Ave. and Russell St. are mixed commercial and residential. Commercial development that could impact traffic at Brooks/South/Russell includes Walmart on south U.S. Highway 93 just south of Reserve St. New residential developments in the Fort Missoula area, along Upper Miller Creek Rd., in the South Hills area and in the nearby City of Lolo (south of Missoula

---

<sup>2</sup>The State of Idaho average was used for comparison since a statewide average for Montana at urban intersections was not available during the traffic studies 1993.



along U.S. Highway 93) could also increase traffic volumes along Brooks St., South Ave. and Russell St.

## PROJECT BACKGROUND

The need for the project was first formally identified through the City of Missoula's transportation planning efforts, as documented in the adopted 1985 *Missoula Urban Transportation Plan* (MTP). In early 1993, the City requested proposals from engineering consulting firms to conduct surveys, preliminary engineering, traffic modeling, environmental assessment, and related services for the Brooks/South/Russell Intersection Traffic Improvement Project.

An engineering team led by Bell-Walker Engineers was selected to conduct the work. During the preliminary alternatives development and traffic modeling, several grade separation and at-grade alternatives were evaluated and dismissed either because they did not meet the project purpose and need or they were technically undesirable and infeasible.

The team began the current and ongoing public involvement process. A public scoping meeting was held in Missoula in November 1993. During the engineering analysis of alternatives, the public involvement process included regular meetings with two advisory committees, one comprised of members of the public, known as the Citizen Action Committee (CAC), and the Technical Advisory Committee (TAC), comprised of technical experts. The meetings were held in Missoula to encourage public interest, foster new ideas, and identify issues and concerns with the project alternatives. Each of the feasible alternatives was evaluated by the engineers and environmental team, and the results were presented to both the public CAC and TAC meetings.

In mid-1994, a neighborhood meeting was held where the public was invited to provide their input for the issues to be evaluated and considered in the development of alternatives and the preparation of the EA.

A public workshop was held in December 1994 to discuss the various alternatives with interested members of the community. Many members of the public were not in favor of the grade separation alternatives (i.e., overpass or underpass), and subsequently additional at-grade alternatives were explored. The engineering team identified and evaluated these new alternatives during 1995. A series of at-grade alternatives were individually evaluated and traffic modeling was conducted for each. Each was also screened using environmental criteria. Please refer to the Alternatives Development and Screening Process in Appendix A for more detail.

In February 1996, the South Avenue Realignment was identified by the members of the Technical Advisory Committee and the City of Missoula (see Chapter 4 for descriptions of TAC) as the proposed action to reduce congestion and traffic delays, and to continue to improve air quality at the intersection. This alternative has the added benefit of not substantially changing the urban character near the intersection. Also in 1996, the Missoula Transportation Plan underwent revision and updating. The formal adoption of the MTP revision in October, 1996 included two projects for traffic improvements to improve congestion at the Brooks/South/Russell intersection.



Additional meetings were held with business owners between February 1995 and April 1996 to discuss the potential impacts to local businesses and residents. Input received in meetings with the City Council, the CAC, and TAC was used to arrive at the preferred alternative. In May 1997, the City of Missoula selected a preferred alternative that is further evaluated within this document.

## CHAPTER 2 - PROJECT ALTERNATIVES

### **PREFERRED ALTERNATIVE**

The alternative selected as the preferred by the City of Missoula was announced in late May 1997. The preferred alternative, illustrated on Figure 2-1 is the South Ave. Realignment including Alternate E5, improvements to the Brooks/South/Russell intersection, the Interim South Avenue Realignment alternative, Alternate W7 and Traffic Demand Management (TDM).

#### Alternate E5

Alternate E5 (Figure 2-2) is a new route that allows traffic westbound on South Ave. to access Brooks St. northbound via new right-of-way and Sussex Ave. The new route would traverse the open field on new Right-of Way (ROW) behind the School District building and feed into Sussex Ave. at Stephens Ave. The new route would continue west on Sussex Ave. to its intersection with Brooks St. using the existing ROW alignment of Sussex Avenue. Provision for a free right turn onto Brooks St. would be incorporated into the modified intersection. Stephens Ave. traffic would remain as the existing, except that the new route would allow a left turning lane and a free right turn northbound to Stephens. The cost for construction (\$1.1M), right-of-way (\$0.12M), and engineering (\$0.28M) for this alternate is estimated at \$1.5M.

#### Alternate W7

Alternate W7 (Figure 2-3) takes eastbound traffic on South Ave. along a new route that uses Garfield St. south and then accesses Brooks St. southbound. The new route would require relocation of two commercial properties to create a free right turn onto Garfield St. It would continue south on Garfield using the existing right-of-way to approximately Fairview Ave. Additional right-of-way from one commercial property is required to make the engineered turn from Garfield onto Fairview Ave. The route would access Brooks St. at Fairview Ave. and Catlin St. Landscaping and sidewalks would be constructed along the entire new route. Traffic moving south along Garfield from South Ave. could access Brooks St. or Catlin St. or continue on through to Russell St. The cost for construction (\$0.9M), right-of-way (\$0.8M), and engineering (\$0.2M) for this alternate is estimated at \$1.9M.

Some of the additional project components for the preferred alternative include improvements at the intersection of Brooks/South/Russell. The components as described in Chapter 1, Project Description, would require \$0.74M for construction, \$0.31M for right-of-way and \$0.15M for engineering, for a total estimated cost at \$1.2M.



### Interim Alternative

The Interim South Avenue Realignment is an interim stage of construction of the preferred alternative. This alternative will be installed if budget limitations prevent implementation of Alternates E5 and W7.

The Interim South Avenue Realignment would improve the intersection of Brooks/South/Russell by removing all left turns from the intersection. No additional right-of-way would be required. If warranted, signals would be installed at the intersection of South Avenue and Garfield Street and the intersection of South Avenue and Stephens Street. The improvements would begin the process of acquainting the people with the new anticipated traffic pattern before the construction and associated disruptions begin. Improvements, including the cost of new signals, would require approximately \$0.6M for construction and \$0.08M for engineering, for a total estimated cost at \$0.68M.

TDM has been identified as a desirable strategy within the City of Missoula's Transportation Plan Update. However, the TDM strategy as a stand-alone alternative was not a suitable solution to the problem of reducing air pollution or congestion at the intersection. TDM strategy with a 5% modal split is made part of the preferred alternative. Please refer to the "Alternatives Considered but Rejected" for a complete description of the TDM program.

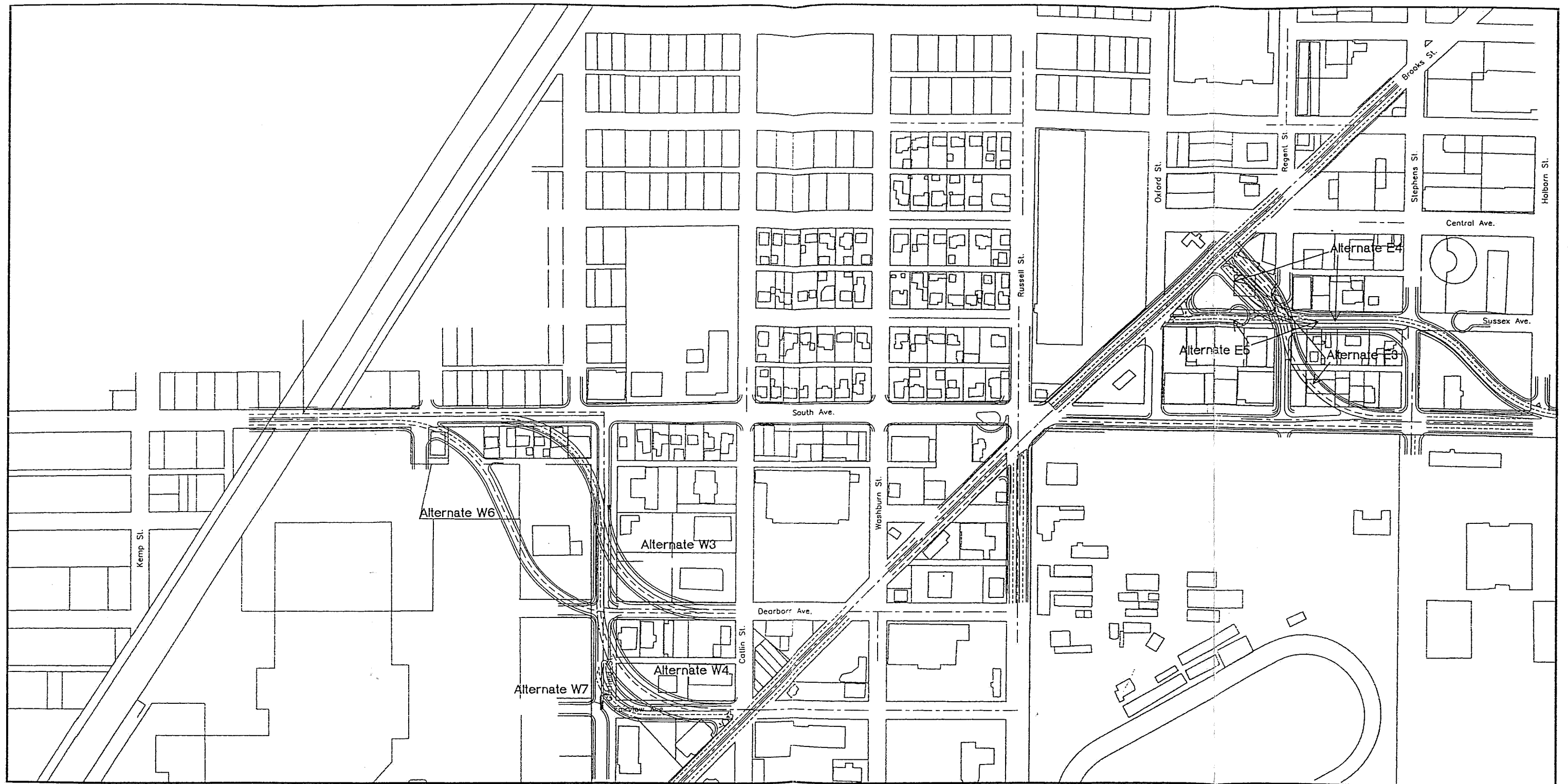
### **ALTERNATIVES CONSIDERED**

Several of the South Ave. Realignment alternatives were retained for further analysis and discussion among the TAC, CAC, business owners, and the City Council.

The final alternatives were evaluated and compared using engineering, traffic, public input, transportation planning, costs, and general environmental considerations. Appendix A discusses in more detail the alternatives development and screening process. Since TDM is identified in the Transportation Plan Update as a desirable objective for Missoula, it is assumed to be a part of the alternatives described below.

### No Action

The No Action Alternative would result in no improvements at the intersection or other key streets and intersections and is not considered viable in helping to meet air quality standards, improve safety, increase traffic flow, and encourage local participation in TDM. TDM and a continually upgraded vehicle fleet (e.g., cleaner-burning cars) offer some promise in improving the air quality. However, with no physical improvement to Brooks/South/Russell, traffic volumes would continue to increase thus making major delays at the intersection inevitable. Carbon monoxide (CO) levels would increase in proportion to the number of vehicles and the length of the delays at the intersection. Thus, air quality problems (excessive CO concentrations) would be expected to persist. No provisions for bicyclists or pedestrians would be made.



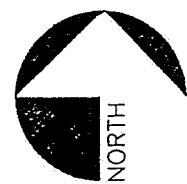
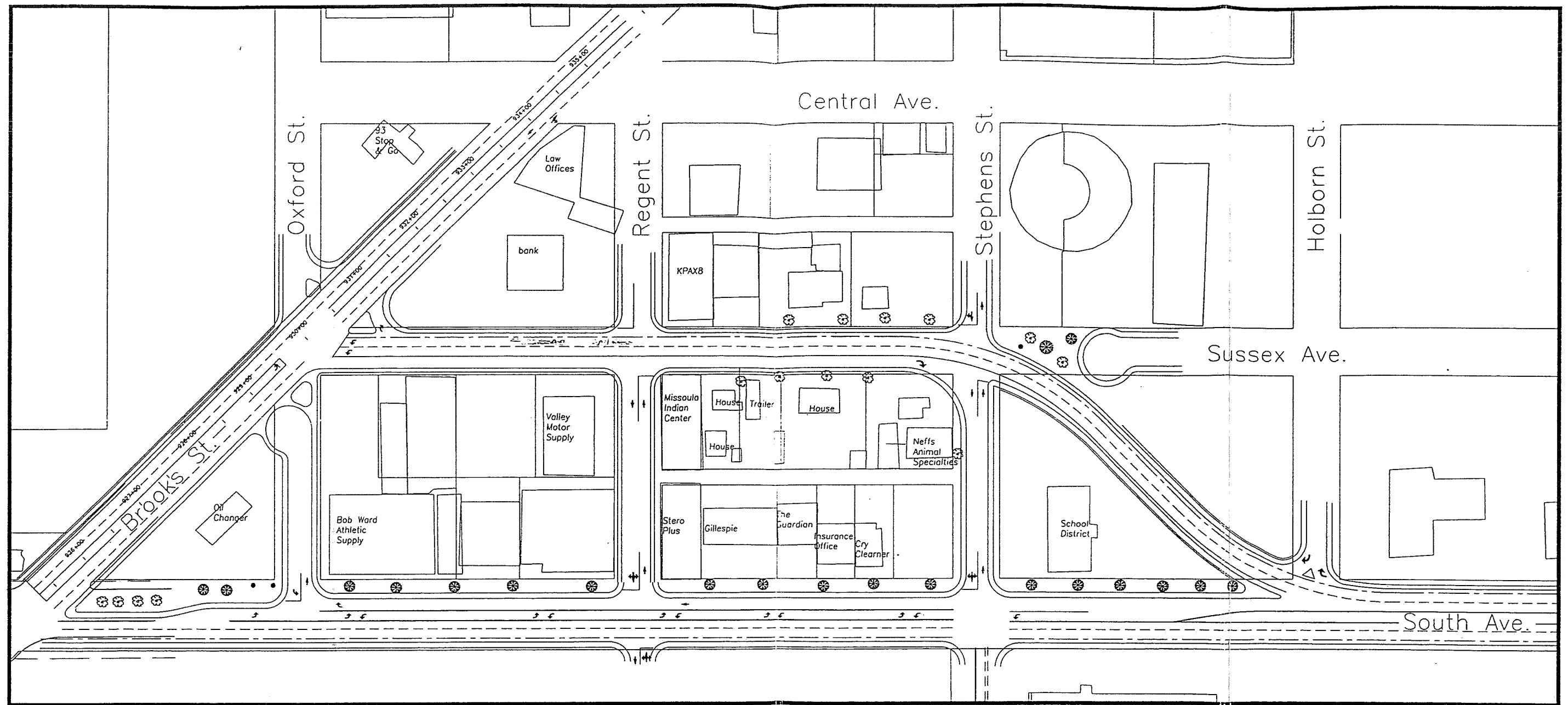
0 100 200 300 400 500 750  
FEET

0 25 50 75 100 200  
METERS  
SCALE

# OVERVIEW OF SOUTH AVENUE REALIGNMENT

Figure 2-1





# SOUTH AVENUE EAST REALIGNMENT (E5) PREFERRED ALTERNATIVE

0 100 200 300 400 500

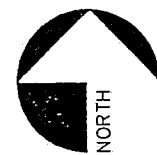
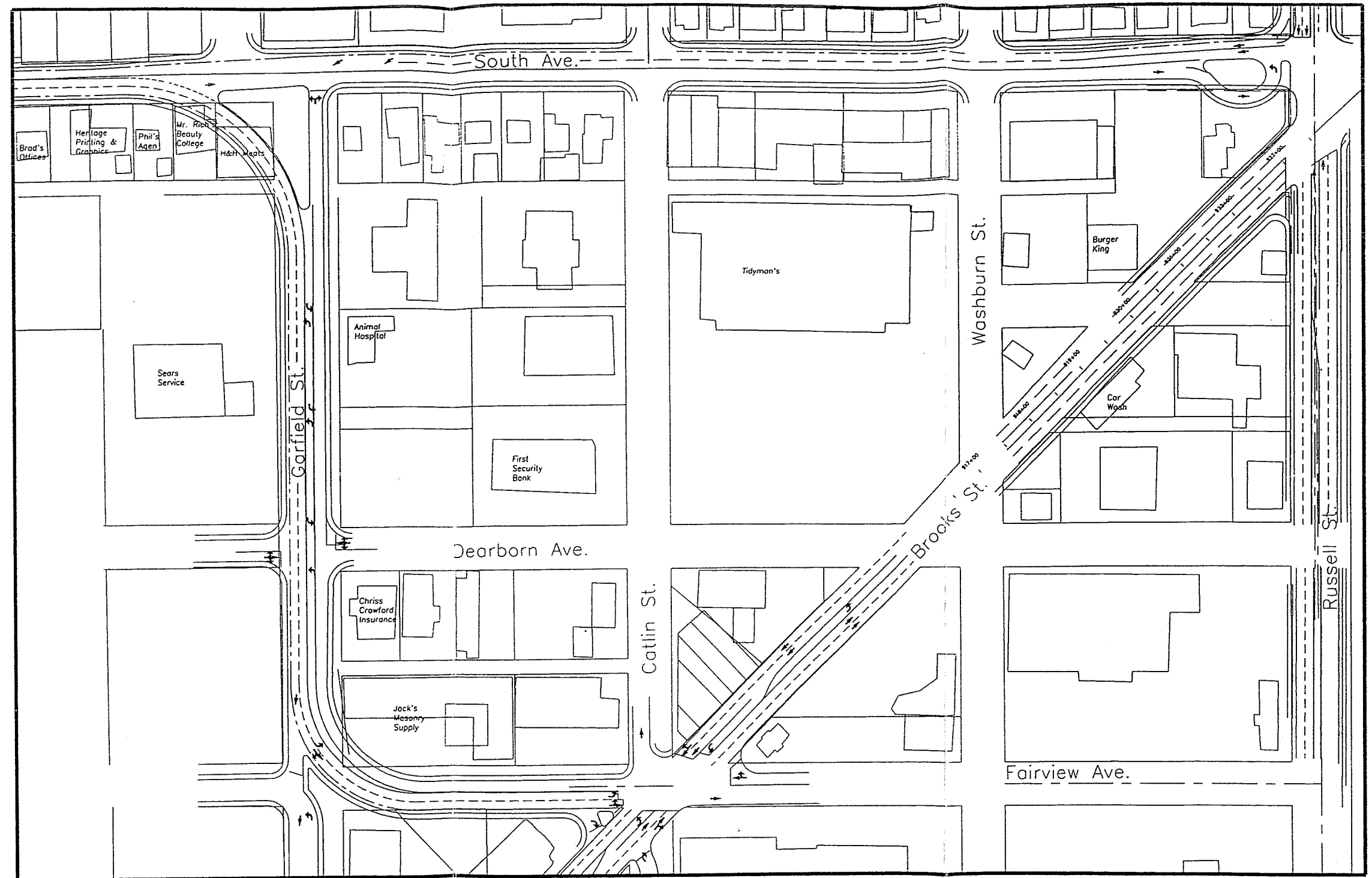
FEET

0 25 50 75 100 200

METERS

SCALE

Figure 2-2



# SOUTH AVENUE WEST REALIGNMENT (W7) PREFERRED ALTERNATIVE

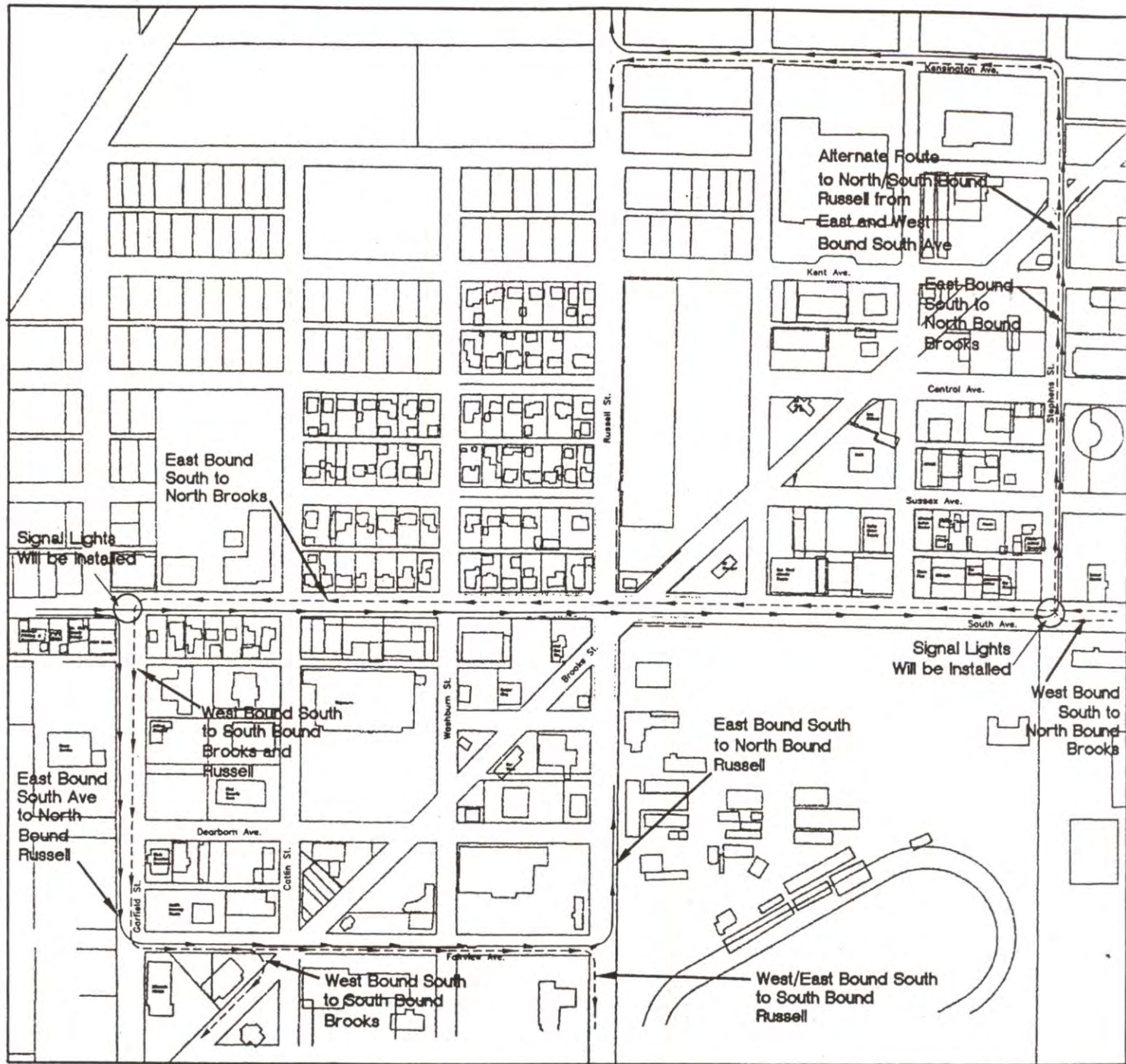
0 100 200 300 400 500  
FEET

0 25 50 75 100 200  
METERS

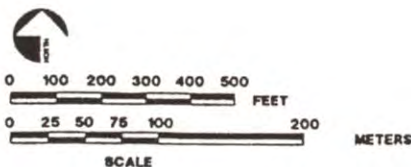
SCALE

Figure 2-3





## SOUTH AVENUE REALIGNMENT INTERIM ALTERNATIVE



West Bound Traffic ———→  
East Bound Traffic ———→

Figure 2-4



## South Avenue Realignment

Each of these at grade alternatives involves a common action of improving the Brooks/South/Russell intersection as shown on Figure 2-1. Sidewalks and bikeways will be added on each leg of the intersection, properties affected by the new right-of-way will be rehabilitated and landscaped.

### Interim Alternative

Currently at the intersection of Brooks/South/Russell left turns are only allowed on east- and westbound South Avenue to Brooks and to Russell Avenue. This alternative preferred action, described in Figure 2-4, would establish the approximate traffic pattern in the other Alternates by removing all left turns from the intersection of Brooks/South/Russell. Traffic signals would be installed at the intersections of South Avenue and Garfield Street and the intersection of South Avenue and Stephens Street. The left turning vehicles from South Avenue for northbound Brooks Street would now utilize the existing street systems as described in the following paragraphs.

Eastbound South Avenue, left turning traffic for northbound Brooks will continue East through the intersection of Brooks/South/Russell and make a left turn at Stephens Street. They will then proceed northbound on Stephens to Brooks and make a right turn to proceed North on Brooks Street.

Eastbound South Avenue, left turning vehicles for northbound Russell will turn right at Garfield Street, go southbound to Fairview Avenue, go eastbound on Fairview to Russell and then make a left turn to proceed northbound on Russell.

Left turning vehicles from westbound South Avenue to southbound Brooks will proceed westbound through the intersection of Brooks/South/Russell to Garfield, turn left at Garfield and South Avenue, proceed South on Garfield to Fairview, turn left on Fairview and turn right at the Fairview and Brooks intersection and proceed South on Brooks.

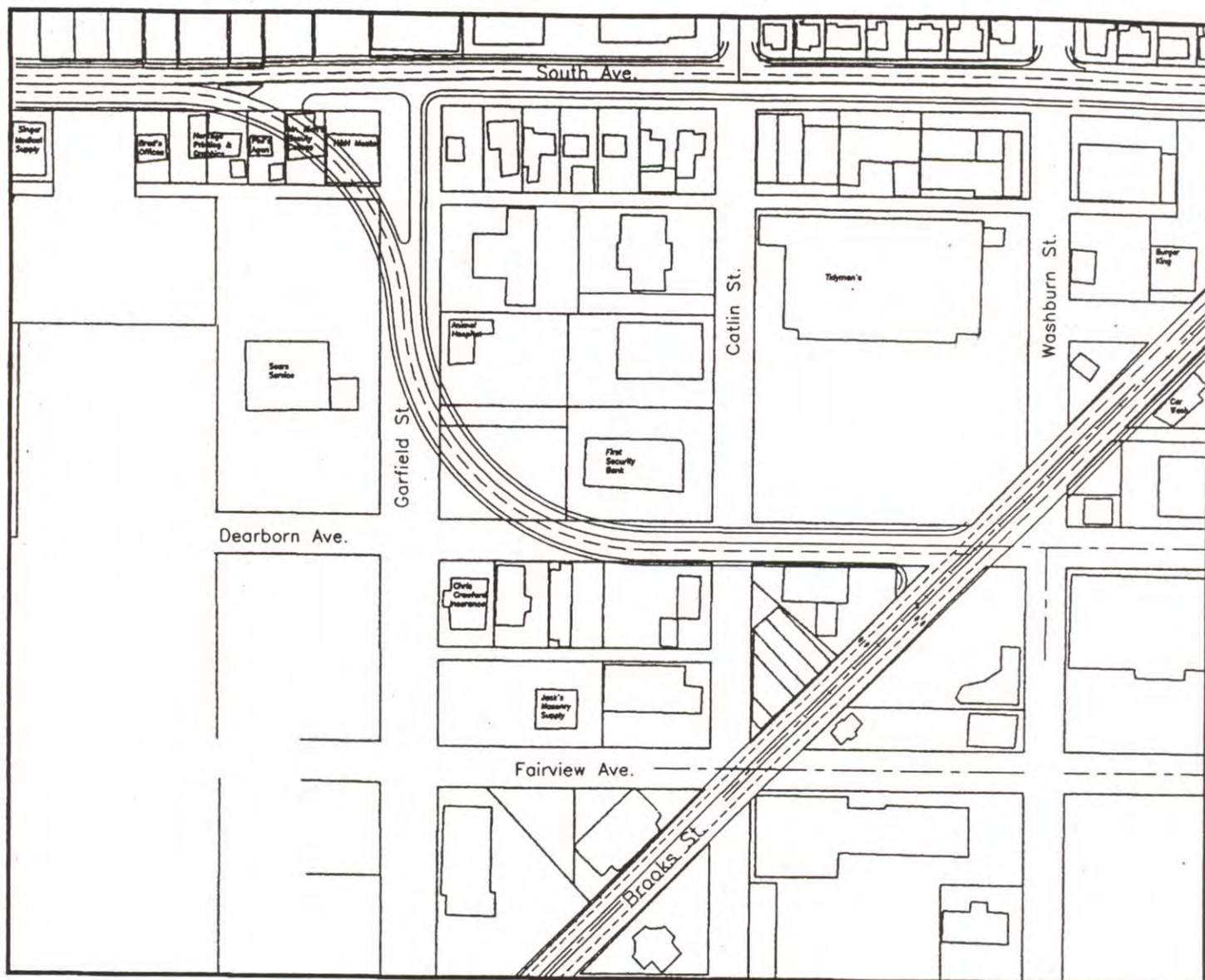
The left turning traffic from westbound South Avenue that wants to go South on Russell would take the same route as mentioned previously for southbound Brooks, but instead of turning South on Brooks at the Fairview/Brooks Street intersection they would proceed eastbound on Fairview through the intersection of Fairview and Brooks to Russell Street then turn right at Fairview and Russell Street for southbound Russell.

The cost for construction (\$0.6M), and engineering (\$0.08M) for this interim alternate is estimated at \$0.68M.

### Alternate W3

Alternate W3 for the South Ave. West Realignment utilizes Garfield St. and Dearborn Ave. between South Ave. and Brooks St. (Figures 2-5 and 1-6 for cross section). Four or five





# SOUTH AVENUE WEST REALIGNMENT (W3)

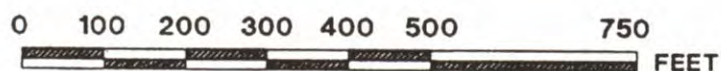


Figure 2-5

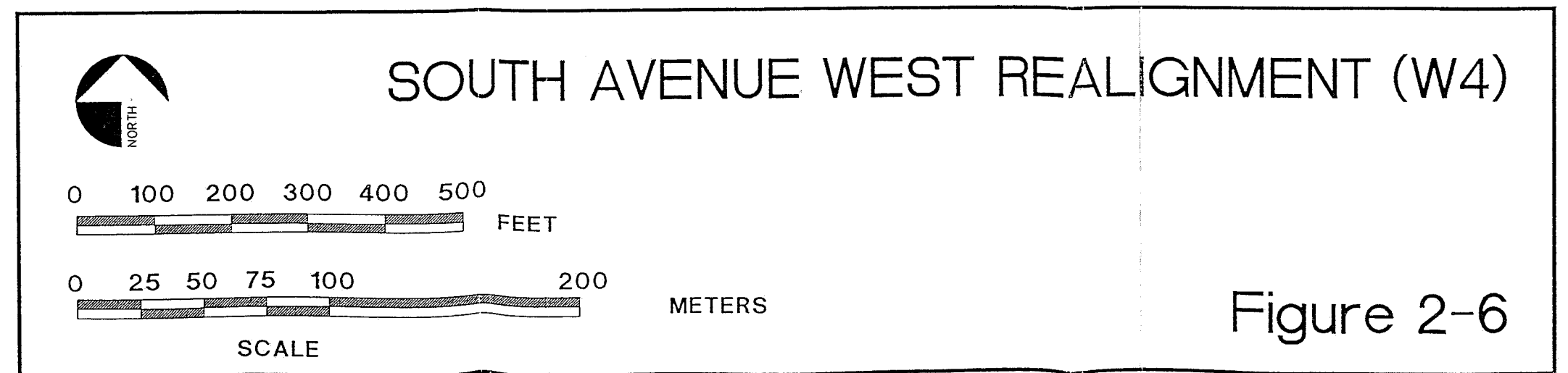
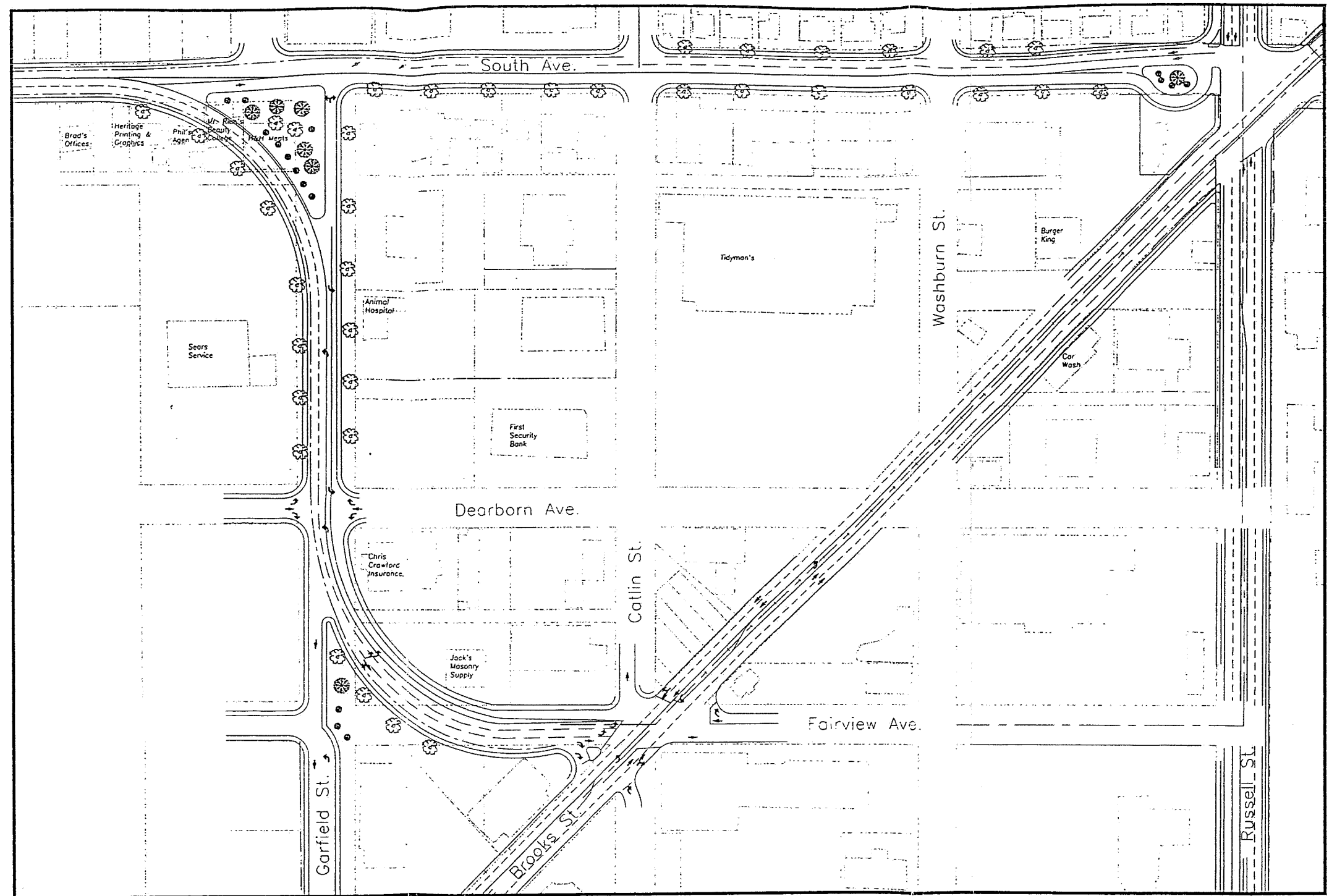


Figure 2-6



commercial properties would need to be relocated. A new intersection of Dearborn and Brooks would occur midblock between Catlin and Washburn. The cost for construction (\$0.8M), right-of-way (\$0.9M), and engineering (\$0.17M) for this alternate is estimated at \$1.87M.

#### Alternate W4

Alternate W4 for the South Ave. West Realignment takes westbound traffic on South Ave. along a new route that uses Garfield St. south and then accesses Brooks St. southbound (Figures 2-6 and 1-6 for cross section). The new route would require relocation of four commercial properties to create a free right turn onto Garfield St. It would continue south on Garfield using the existing right-of-way to approximately Fairview Ave. It would access Brooks at Fairview Ave. And Catlin St. Landscaping and sidewalks would be constructed along the entire new route. Traffic moving from South Ave. could access Brooks St. or Catlin St. or continue on to Russell St. The cost for construction (\$0.9M), right-of-way (\$1.1M), and engineering (\$0.2M) for this alternative is estimated at \$2.2M.

#### Alternate W6

Alternate W6 for the South Ave. West Realignment primarily utilizes Dearborn Ave. between South and Brooks (Figures 2-7 and 1-6 for cross section). New right-of-way would be acquired in a northwest to southeast diagonal path between South Ave. and Dearborn Ave. which would affect primarily open commercial yards. A new intersection of Dearborn and Brooks would occur on Dearborn at the east end of the Catlin and Washburn block. The cost for construction (\$1.2M), right-of-way (\$0.5M), and engineering (\$0.23M) for this alternate is estimated at \$1.93M.

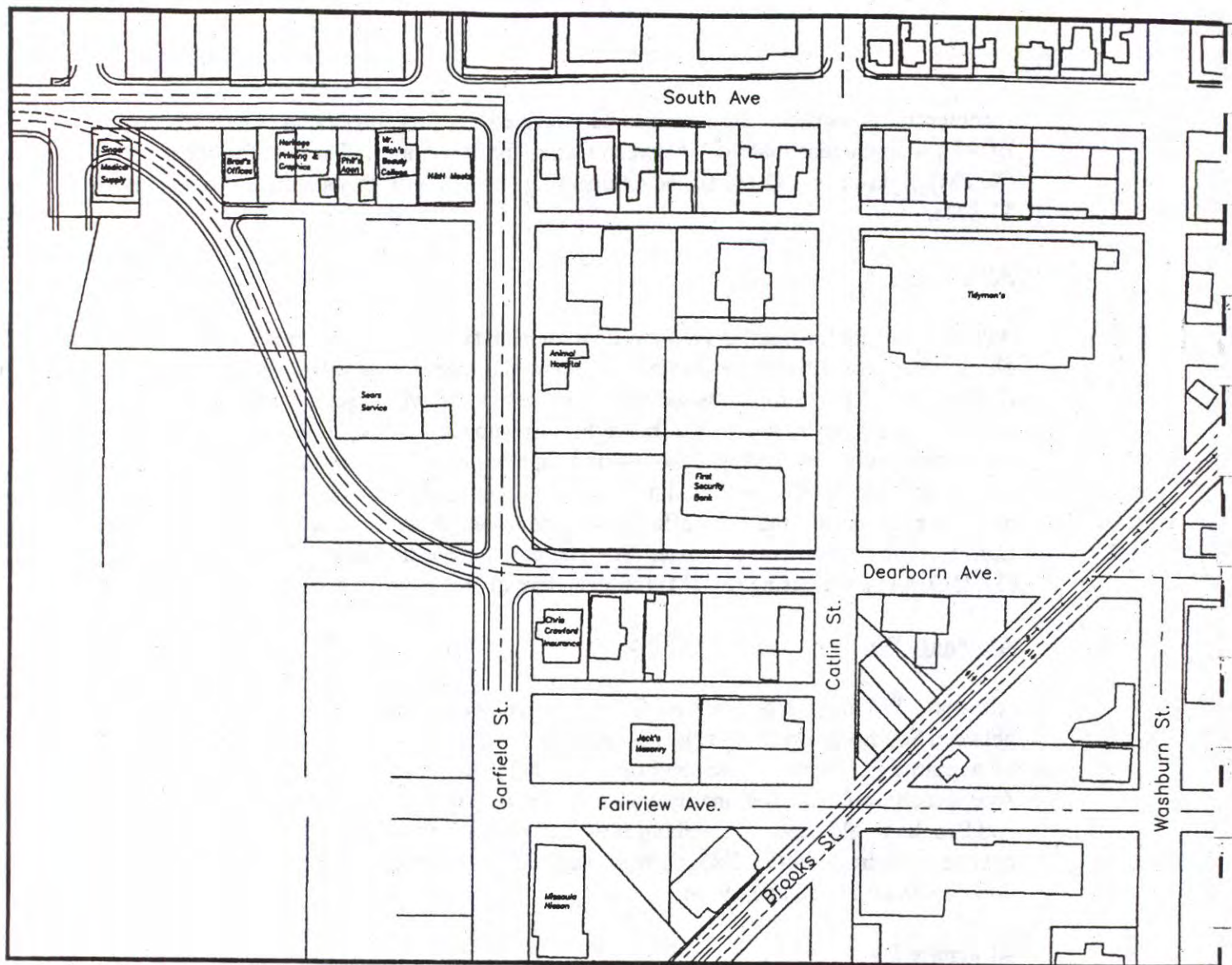
#### Alternate E3

Alternate E3 for the South Ave. East Realignment diverts from South Ave. between Stephens Ave. and Regent St., crossing commercial properties before it connects with Brooks St (Figures 2-8 and 1-6 for cross section). A new signaled intersection is proposed on Brooks St. between Central Ave. and Sussex Ave. similar to the alternative E4. Regent St. is utilized for a small central portion of the new route. A new intersection is proposed with Brooks would occur midblock between Catlin and Washburn. The cost for construction (\$0.7M), right-of-way (\$2.9M), and engineering (\$0.15M) for this alternate is estimated at \$3.75M.

#### Alternate E4

Alternate E4 (Figure 2-9) for the South Ave. East Realignment allows traffic eastbound on South Ave. to access Brooks St. northbound via new right-of-way and Sussex Ave. The new route would traverse the open field behind the School District building and feed into Sussex Ave. at Stephens Ave.. The right-of-way widening along Sussex may require relocation of residences and commercial property. At Regent St. the new route would cross an





# SOUTH AVENUE WEST REALIGNMENT (W6)

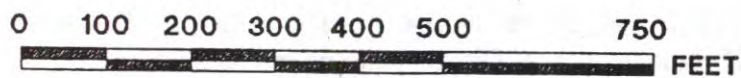
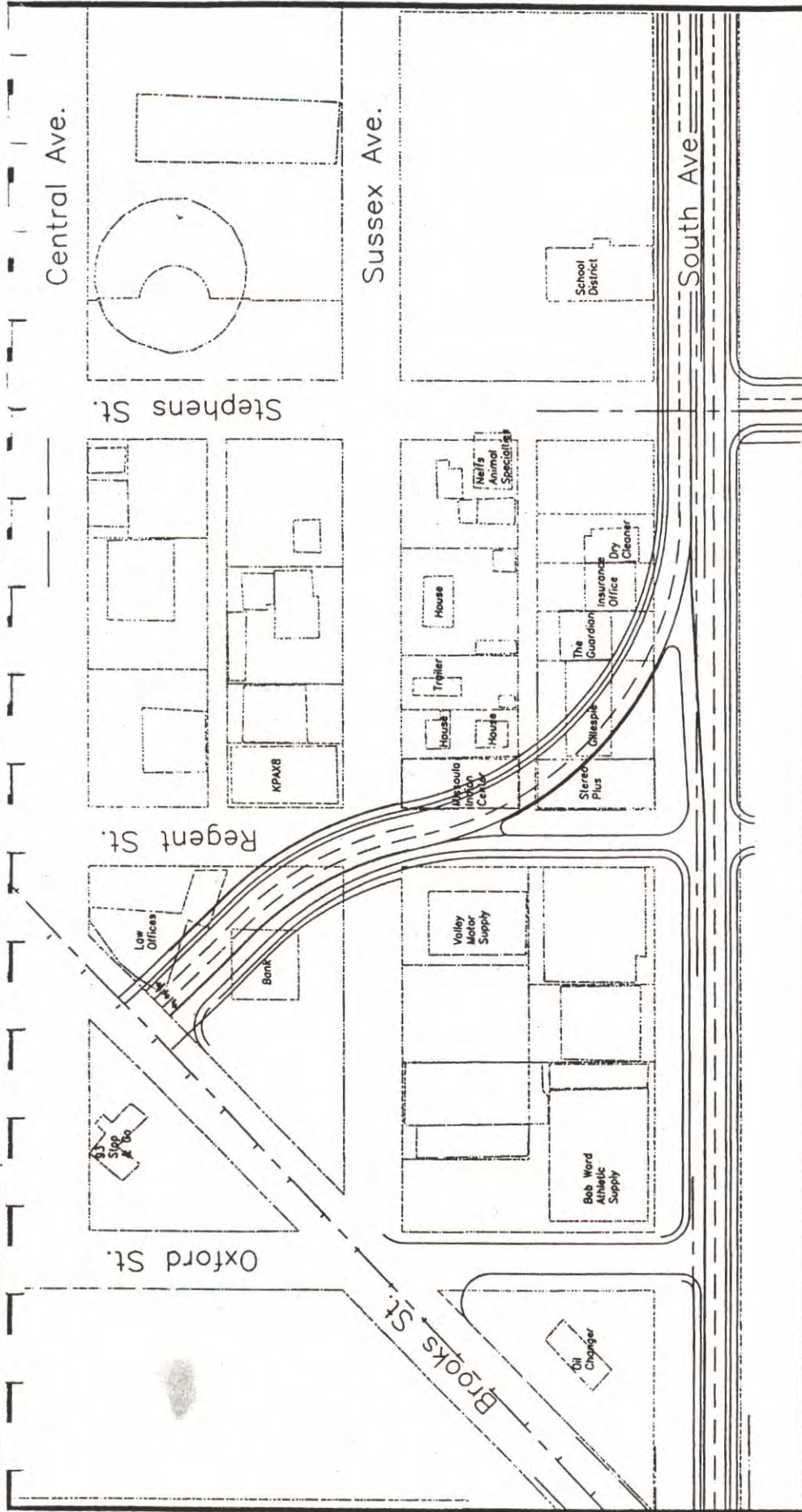
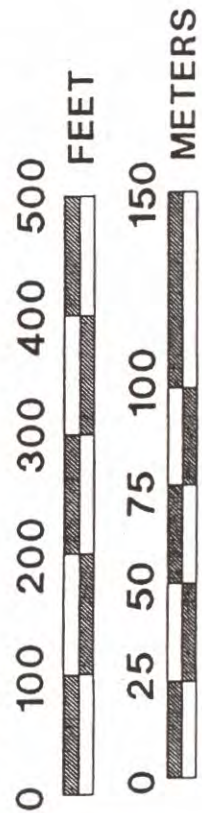


Figure 2-7



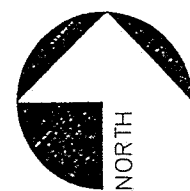
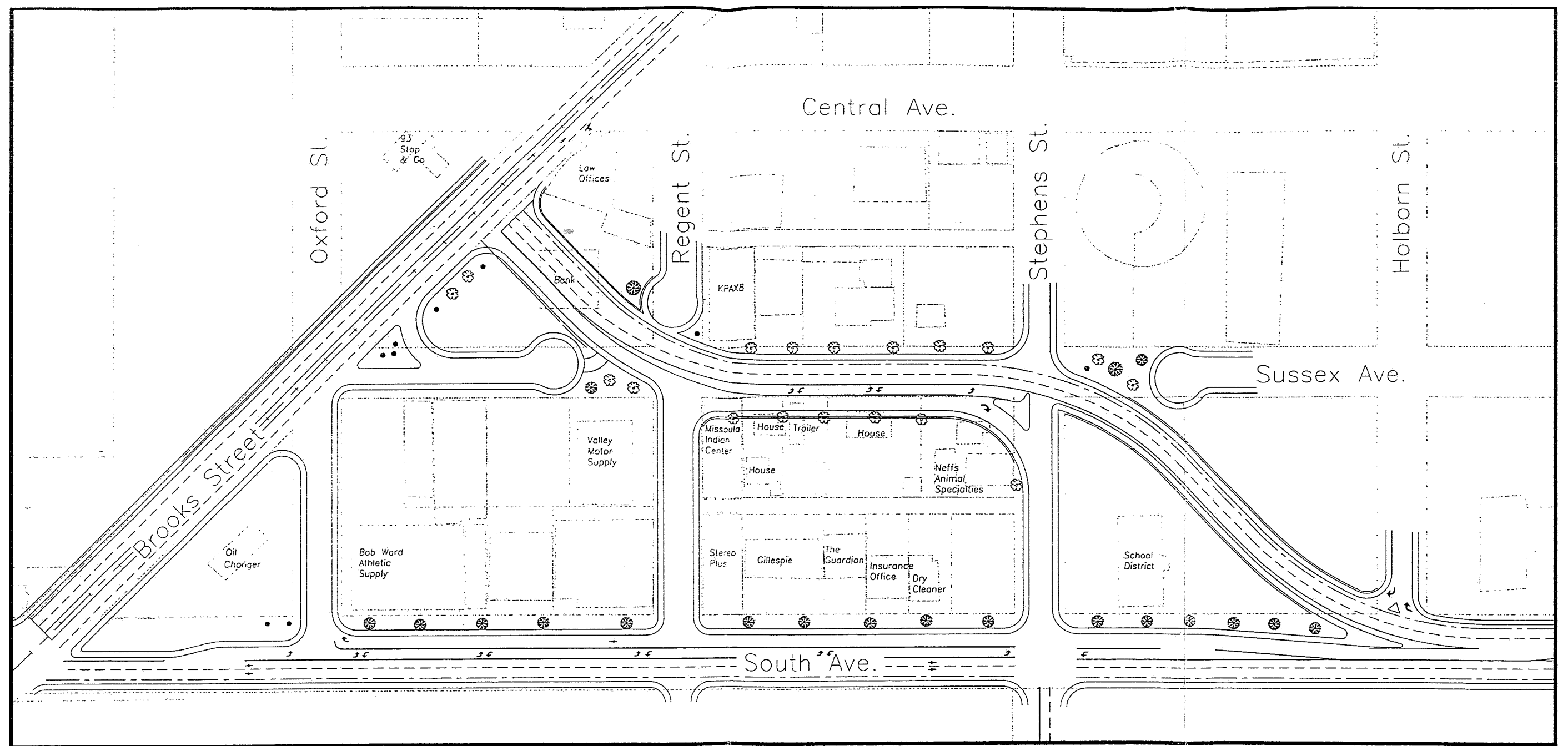


# SOUTH AVENUE EAST REALIGNMENT (E3)



SCALE

Figure 2-8



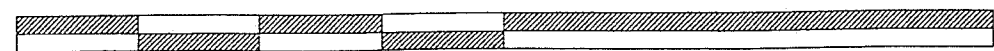
# SOUTH AVENUE EAST REALIGNMENT (E4)

0 100 200 300 400 500



FEET

0 25 50 75 100 200



METERS

SCALE

Figure 2-9



additional commercial property to form a new intersection with Brooks St. midblock between Central and Sussex. Local traffic using Sussex Ave. or Regent at both the east and west or north sides of the new route would be provided a wider right-of-way with a cul-de-sac, landscaping and walking paths and sidewalk. Stephens Ave. traffic would remain as the existing, except that the new route would allow a left turning lane and a free right turn southbound to Stephens. The cost for construction (\$1.4M), right-of-way (\$1.2M), and engineering (\$0.2M) for this alternate is estimated at \$2.8M.

## **ALTERNATIVES CONSIDERED BUT REJECTED**

A description of the process used to develop and screen alternatives is provided as Appendix A of this report.

### **Traffic Demand Management Alternative**

Traffic Demand Management (TDM) attempts to reduce traffic congestion and vehicle emissions through Brooks/South/Russell by changing modes of transportation used by the public city-wide. More people would use buses, carpool, or ride bicycles which would decrease the number of single occupancy vehicles (SOVs) moving through the intersection.

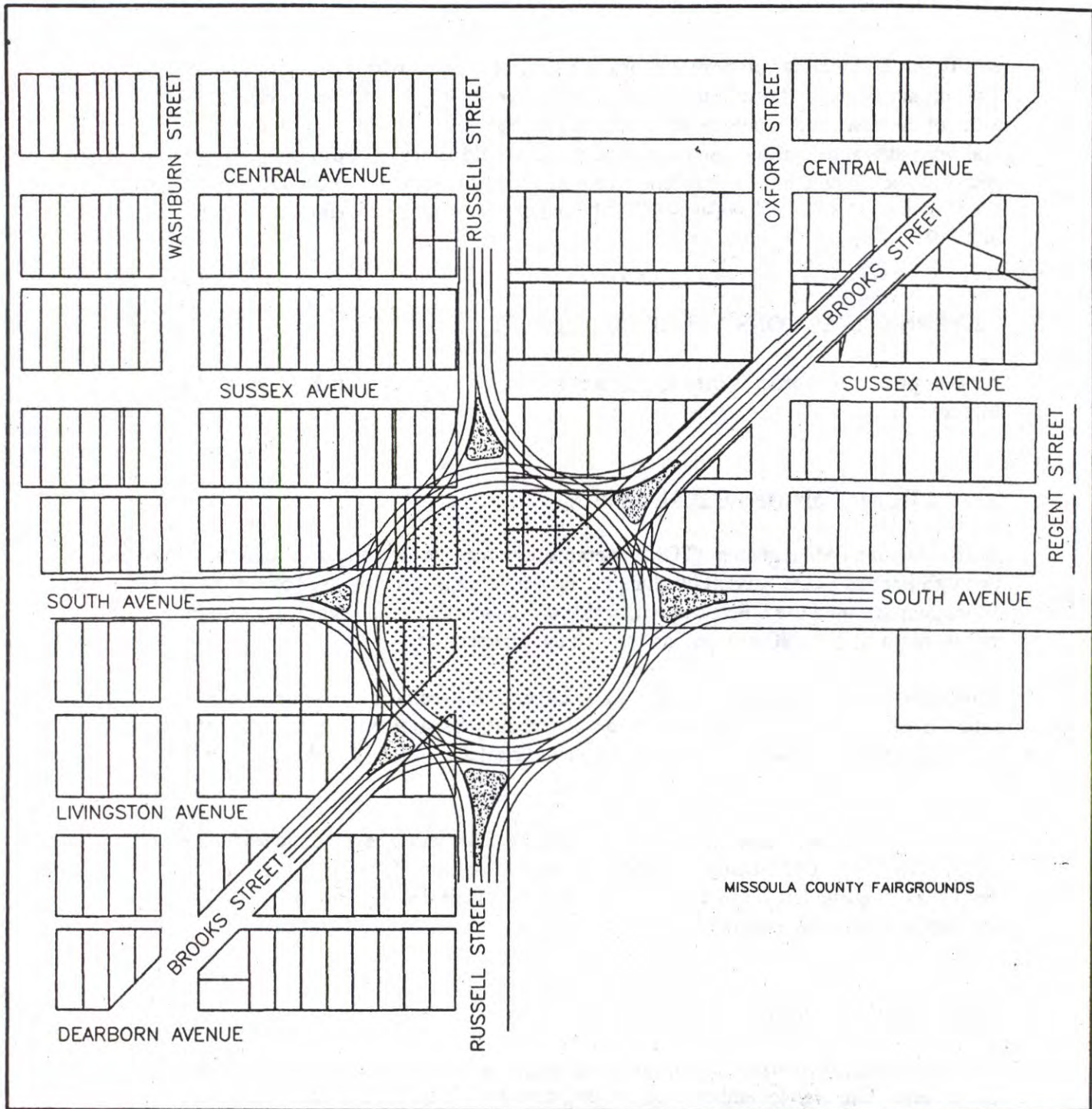
Traffic modeling results indicated that under either TDM scenario congestion would remain at the intersection, thus current air quality conditions would persist; therefore, this alternative would not meet the project's purpose and need. See the additional discussion of TDM in Appendix A, page A-2.

The TDM alternative was eliminated as a stand alone alternative because it does nothing to resolve traffic congestion or air quality problems at the intersection. Other potential impacts would also need to be evaluated associated with constructing new facilities (e.g., bus barns, etc.) or subsidizing the bus program (i.e., taxes to cover local costs).

### **Roundabout Alternative**

The roundabout alternative (Figure 2-10) was considered an important option by the members of the public attending the November 1993 scoping meeting in Missoula. This alternative offers an "at-grade" solution, which most of the public agreed was most compatible with the visual image of Missoula. A number of roundabout sizes and configurations were analyzed. The roundabout was eliminated from consideration because it did not provide adequate capacity for projected traffic volumes and meet the objectives of the purpose and need for the project.





0 100 200 300 400 500 750 FEET

0 25 50 75 100 200 METERS  
SCALE

# ROUNDAABOUT ALTERNATIVE

Figure 2-10



### **System Improvements to Surrounding Arterials**

Improvements to the surface street system outside of the intersection was suggested by the public in the November 1993 scoping meeting as having potential to reduce traffic at the intersection. The system improvements considered were:

- Extension of Stephens from S.W. Higgins to South Ave. - construct new road.
- Pattee Creek Drive and Ernest Ave. from Higgins to Reserve - roadway extension.
- Add west connection to Southgate Mall on Dearborn St. - roadway extension.
- Extension of 5<sup>th</sup>/6<sup>th</sup> couplet to Reserve St. - roadway extension.
- Improve South 14<sup>th</sup> Ave. and Mount Ave. from Higgins to Reserve - realignment.
- Bancroft from Pattee Creek Drive to Mount Ave. - intersection improvements.
- Extension of Johnson and Schilling from Brooks to Mount
- Higgins, S.W. Higgins and 39<sup>th</sup> St. from South Ave. to Reserve St. - widening.

After conducting traffic modeling for each of these proposals, most of these suggestions were eliminated because they were operationally infeasible or did not meet the purpose and need of the project. The only alternatives that had any appreciable benefit to the intersection were improvements specific to the intersection such as grade separation of Brooks St. Ninety percent (%) of the benefits were gained from improvements at Brooks/South/Russell whereas only 10% were derived from system improvements.

As an extension of the system-wide modeling, improvements at Higgins and Reserve were combined with an overpass or underpass into a new "combination alternative."

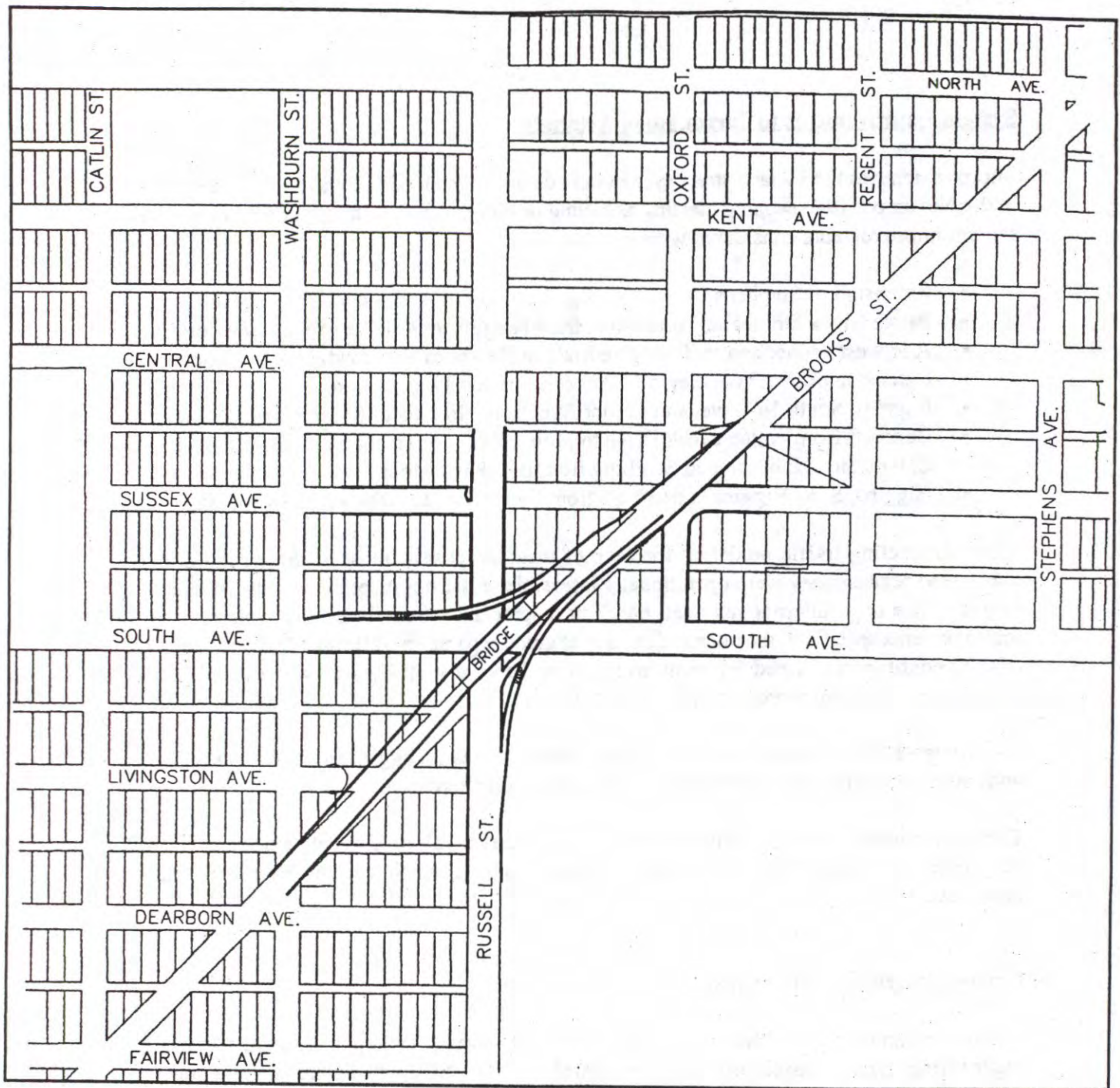
The system improvements alternative was rejected as a stand alone alternative because it could not be projected to meet the project purpose of relieving congestion at the Brooks/South/Russell intersection.

### **Urban Interchange Alternative**

The idea of an urban interchange evolved from the November 1993 public scoping meeting. The engineering team developed and evaluated many different interchange concepts for Brooks/South/Russell (Figure 2-11). The design concepts were to have the same turning movements as the existing intersection, to provide partial access from South Ave. to Brooks St., and close Russell St. to traffic either north or south of South Ave. Closure of Russell to through traffic would be required in the vicinity of Brooks/South/Russell due to conflicts with entry/exit ramps to Brooks St.

This alternative was rejected because of 1) the high costs, 2) failure to improve air quality (due to stopping and starting), 3) poor traffic flow (LOS D), 4) extensive right-of-way requirements, 5) visual impacts of the structures (i.e., overpass and ramps), and 6) high social and economic effects on adjacent property values.





## URBAN INTERCHANGE ALTERNATIVE



0 100 200 300 400 500 750  
FEET

0 25 50 75 100 200  
METERS  
SCALE

Figure 2-11



## **Grade Separation Alternatives**

Two major grade separation alternatives with various design options to try and avoid some of the identified environmental effects evolved from the original suggestion of an overpass in the 1980 Missoula Transportation Plan and the public scoping meeting in November 1993. Each alternative was developed to a conceptual level and was subjected to traffic, air quality and noise modeling.

A public information meeting was held in December 1994 to present and discuss the overpass and underpass as those that best met the project purpose and need. Public opposition to the overpass and underpass alternatives was substantial, with over 76% of the 273 commentors preferring no action. An additional 321 comments were received in the mail, with 94% preferring an overpass and underpass never be constructed.

### **Overpass Alternatives Grade Separation**

This alternative consisted of constructing an overpass on Brooks St. over a conventional four-way approach intersection of Russell St. and South Ave. (Figure 2-12). The overpass would be a through street with no turning movements at the intersection. The intersection below the overpass would require that the traffic signals be upgraded and realigned for Russell St. and South Ave. only. The original concept was to construct the overpass in the existing Brooks St. right-of-way immediately adjacent to the County fairgrounds.

To avoid the potential for high impact on parkland, and historical and Section 4(f) issues, a second design concept was evaluated that shifted the centerline of the overpass toward the north away from County fairgrounds.

Although this alternative met the LOS criteria and had positive results in relieving air quality impacts, this alternative was eliminated from further consideration because 1) a longer structure overall was required to accommodate the higher span which would affect access and road closure along Brooks, 2) the cost for extensive right-of-way acquisition would be prohibitive, and 3) technical difficulties in the placement of the massive support members.

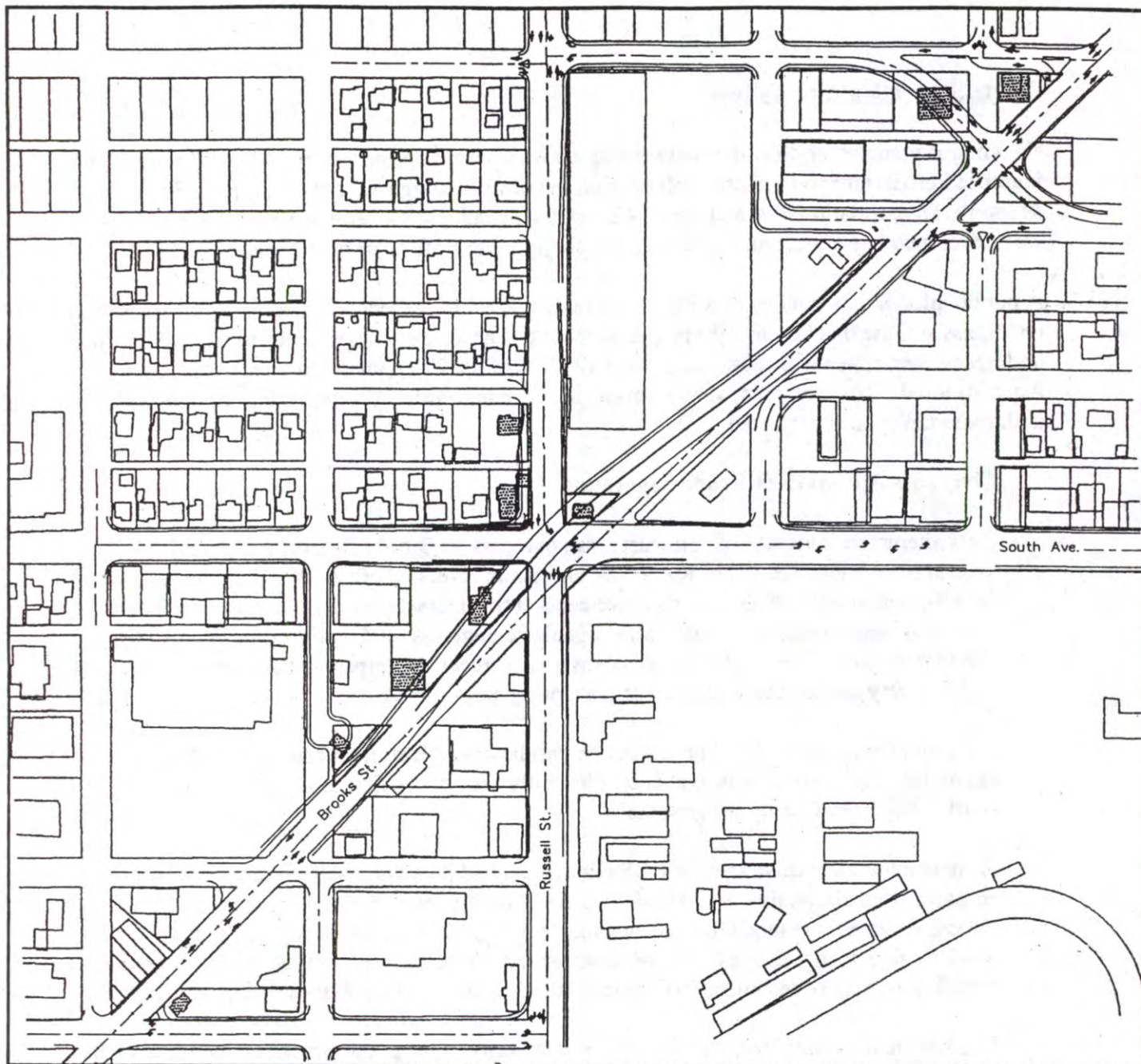
In addition, this alternative was opposed by a majority of the public attending an informational meeting in December 1994.

### **Underpass Alternative Grade Separation**

This alternative involved an underpass on Brooks St. using the existing easement. Traffic flows on Reserve St. and South Ave. would continue above the underpass with a four way signal at the intersection (Figure 2-13).

The benefits of the underpass would be similar to the overpass, except for less improvement to air quality. Environmental concerns were somewhat greater in that substantial excavation had the potential to affect the groundwater and waste material and sediment control would be necessary to protect the Missoula Aquifer.





# GRADE SEPARATION ALTERNATIVE OVERPASS



Building to  
be Demolished

0 100 200 300 400 500



FEET

0 25 50 75 100 150

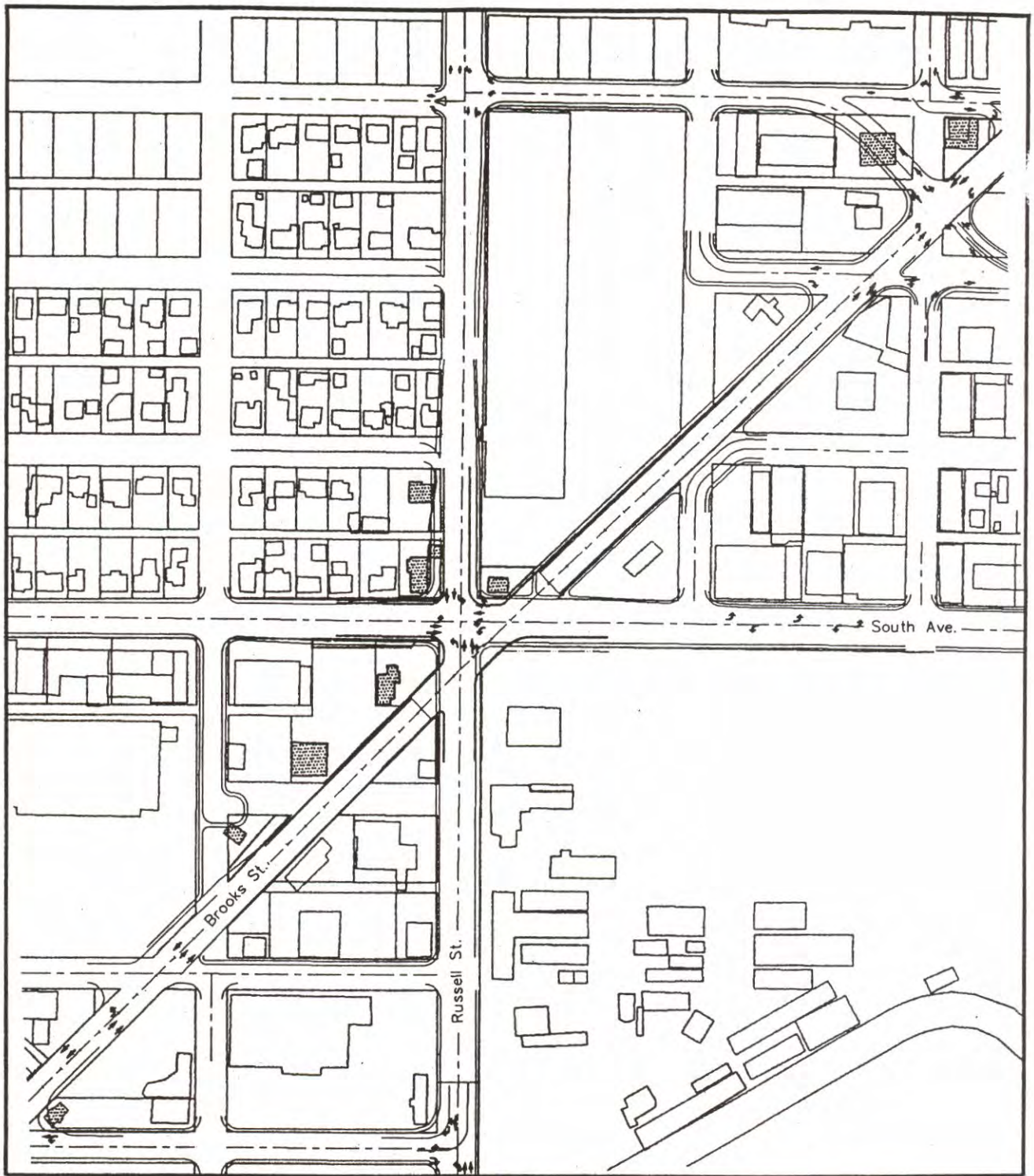


METERS

SCALE

Figure 2-12





# GRADE SEPARATION ALTERNATIVE UNDERPASS Figure 2-13



Building to  
be Demolished

0 100 200 300 400 500  
FEET

0 25 50 75 100 150  
METERS

SCALE



As stated above, this alternative was presented as a viable alternative in the public workshop on December 15, 1994; however, it was rejected by the City due to public opposition.

### **Combination Alternative**

As discussed in the System Improvements Alternative section, this alternative was derived from the traffic modeling performed for the system improvements at Higgins and Reserve Sts. It involves combining an overpass or underpass at the Brooks/South/Russell intersection with improvements of Higgins St./39<sup>th</sup> St. from South 5<sup>th</sup> St. to U.S. 93 and North Reserve St. from South 3<sup>rd</sup> St. to I-90. Traffic signals would be installed where appropriate to meter the flow of traffic and gain maximum effectiveness. This alternative was eliminated from further consideration because 1) costs were considerably higher than any other alternatives considered and 2) carbon monoxide (CO) concentrations for Brooks/South/Russell showed little to no improvement when the combination improvements were modeled with the overpass and underpass.

### **Relocate South Avenue Alternatives**

After the City's grade separation alternatives were no longer viable, the Design Consultant retained a transportation planning firm to evaluate other alternatives involving South Ave. The South Ave. Realignment alternatives that were considered and eliminated include:

- Relocate East Bound Movements from South Ave. Alternative
- Relocate South Ave. Left Turns Alternative (1)
- Relocate South Ave. Left Turns Alternative (2)
- South Ave. West Realignment - Alternate W1
- South Ave. West Realignment - Alternate W2
- South Ave. West Realignment - Alternate W5
- South Ave. East Realignment - Alternate E1
- South Ave. East Realignment - Alternate E2

After a series of traffic evaluation exercises and CAC and TAC meetings, these alternatives were rejected for both technical design difficulties and because of opposition from the citizen and technical advisory groups. Please refer to Chapter 4, Comments and Coordination and Appendix A, Alternatives Development and Screening for further detail.



## **CHAPTER 3 - AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

### **LAND JURISDICTION AND USE**

The land use inventory identified current land jurisdiction, existing land uses, and future land uses within a kilometer (half mile) of the intersection. The inventory was compiled by reviewing published public documents, studying available maps, and verifying information with ground reconnaissance and aerial photography. The key agencies and organizations that were contacted are listed in Chapter 4, under Agency Contacts.

### **Affected Environment**

#### **Land Jurisdiction and Ownership**

Land jurisdiction depicts the limits of administrative or jurisdictional control maintained by the major landowners within the study area.

The majority of the land is private, comprised of residences, commercial businesses, and undeveloped parcels. The remainder of the property is owned by the City of Missoula (parks and schools), the U.S. Government (Main Post Office), and the County of Missoula (Western Montana Fairgrounds).

#### **Existing Land Use**

##### **Residential**

Residential areas near Brooks/South/Russell include single family homes, multi-family dwellings, apartments, and established subdivisions. Residences are primarily located northwest of the intersection and includes 12 houses per block.

##### **Commercial**

Commercial development is concentrated northeast and southwest of the intersection consisting of shopping malls, strip development and storefront businesses. Commercial enterprises include small retail businesses, automotive repair shops, restaurants, bars, a dentist, hair stylist, bowling alley, a bank, a mortgage company, convenience stores, gas stations, retail office spaces, two car washes, a video store, two TV stations, two pet supply stores, two supermarkets, and a furniture store. Most of these businesses can be found in one of the six malls near the intersection, which includes Caras Plaza, Trempers Shopping Center, South Center, Holiday Village Shopping Center, Fairway Shopping Center, and Southgate Mall (Figure 3-1). Parking areas are primarily located in front of these enterprises and are accessed from Brooks, South, Russell, Kent, Stephens, and off Catlin.



### Industrial/Business Parks

No large industrial facilities, processing plants, or manufacturing plants are located in the project vicinity. Montana Power Company has general offices and a construction yard off of Russell St., which is a kilometer (one half mile) to the north of the intersection. Conlins Furniture at 1600 W. North Ave also has a warehouse near this location.

### Farmland/Vacant Land

No agricultural or State Important Farmlands are located in the project area.

Vacant land is located behind the First Christian Church-Disciples of Christ at 2701 S. Russell and across South Ave. in front of the Missoula Vocational Technical School (Figure 3-1), and behind the Missoula School District building.

### Public and Quasi-Public Facilities

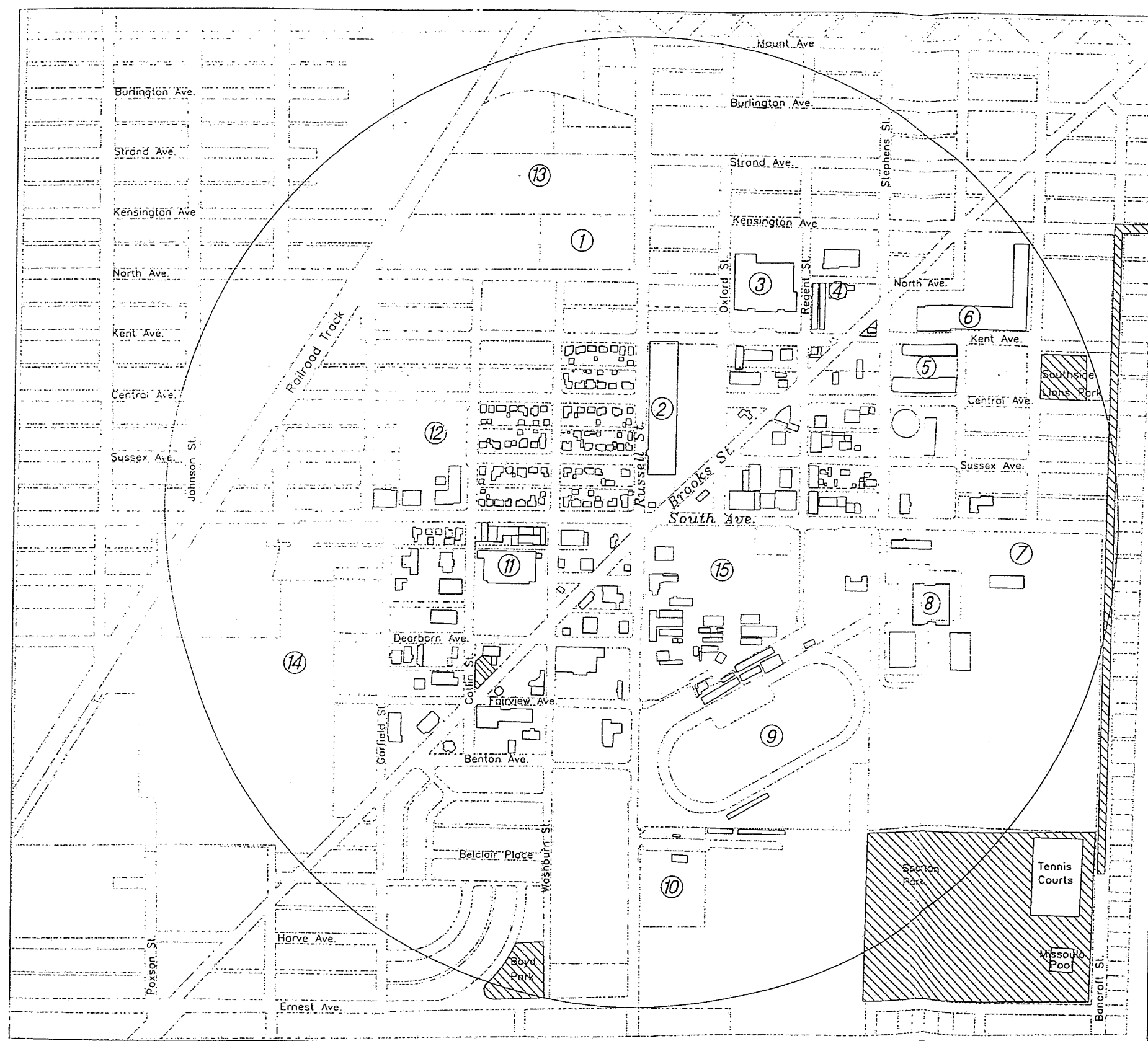
Public and quasi-public facilities include governmental operations and functions or facilities that are open to the public such as police or fire stations, churches or schools.

The Missoula Police and Missoula City Fire departments service the Brooks/South/Russell Intersection. Missoula Fire Stations #3 services south of South Ave.; Station #2 services northeast of South/Russell Intersection. Station #4 services the northwest quadrant of the Brooks/South/Russell Intersection between Russell and South. However, these service vehicles do cross district boundaries including the Brooks/South/Russell Intersection. Ambulances are located at both hospitals and service all of the city of Missoula. Any calls southeast of the Trempers Shopping Center would require emergency vehicles to cross the Brooks/South/Russell Intersection.

Medical Facilities include two large hospitals, Community Medical Center (2827 Fort Missoula Rd.) and St. Patrick Hospital (500 West Broadway). Community Medical Center is located 2.4 kilometers (1.5 miles) west of the Brooks/South/Russell intersection. The hospital is a full-service emergency medical service facility with 123 patient beds, specializing in obstetrics facilities and rehabilitation. St. Patrick Hospital, located at 500 West Broadway, is 3.2 kilometers (2 miles) from the intersection. This hospital is a full service and acute care facility with 215 patient beds, specializing in cardiology and orthopaedic surgery.

Brooks/South/Russell intersection falls within the Missoula County Public School District #1. Schools in the project area include Russell Elementary School (with 527 students), Jefferson Elementary School, Washington Middle School (556 enrollment), and Sentinel High School (1,105 enrollment). Jefferson is a school for the specially gifted and talented and is temporarily housing 6<sup>th</sup> graders and the music department from Porter School.





## EXISTING LAND USE

Legend:



- ① McLeod Park
- ② Trempers Shopping Center
- ③ Main Post Office
- ④ Fairway Shopping Center
- ⑤ South Center
- ⑥ Holiday Village Shopping Center
- ⑦ Sentinel High School
- ⑧ Missoula Vocational Technical School
- ⑨ Race Track
- ⑩ YMCA
- ⑪ Caras Plaza
- ⑫ Jefferson Grade School
- ⑬ Industrial Land
- ⑭ Southgate Mall
- ⑮ Fairgrounds

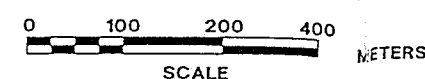
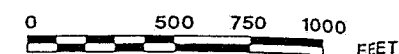


Figure 3-1

The Missoula School District has passed a bond issue to add a new grade school, Chief Charlo, near the South Hills Area. The construction of the school was subsequently completed and is currently in use. The school houses kindergarten through 5<sup>th</sup> grade and reduces attendance levels at Russell Elementary. No other schools are planned for any closures, expansion, or remodeling.

Four churches within the study area include the Open Door Baptist Church (2801 S. Russell), First Christian Church-Disciples of Christ (2701 S. Russell), Immanuel Lutheran Church (830 South Ave. W.), and the Seventh Day Adventist Church (800 South Ave. W.). Vine Life Free Methodist Fellowship also meets at Sentinel High School.

The Missoula Manor Retirement Home, located at 909 W. Central Ave., provides one bedroom apartments, dining room facilities, housekeeping and other retirement services.

Other public buildings include the YMCA (3000 S. Russell), Missoula Vocational - Technical School (909 South Ave. W), and the Missoula Main Post Office (between Oxford and Regent on 1100 West Kent Ave).

### Utilities

Brooks St. is a major route for underground and surface utilities. A detailed description of the utilities potentially affected at the proposed Brooks/South/Russell intersection is outlined in the January 1986, "Widening and Overlay of Brooks Street" (MDT, 1986), which is available for review at the MDT Missoula District Headquarters, Missoula, Montana. The primary utilities located in the project area are owned and operated by the following companies:

- Montana Power Company - gas and transmission lines
- Missoula Electrical Cooperative - transmission lines
- U.S. West Communication - telephone lines and buried cable
- TCI Cablevision of Missoula - buried cable lines
- Mountain Water Company - water lines
- Missoula County Residential Sewer Improvement District #1 - sanitary sewers

Specific locations of utilities will need to be determined after the selection of the preferred alternative from individual property ownership maps.

### Parks and Recreation

Park and recreation sites include existing parks, recreation areas, bicycle routes and the county fairgrounds. Neighborhood and City parks include Boyd, Playfair, Southside Lions, McLeod, and Spartan Park. Playground equipment and ballfields are also located at the schools identified in the Public/Quasi-Public category. The parks are used for baseball, soccer, horseshoes, volleyball, and other various recreational sports. None of the listed parks are adjacent to the intersection or proposed alternatives. The Missoula County Fairgrounds are adjacent to the Brooks/South/Russell intersection



and are open to the public for the annual county fair and special events. There are no designated bicycle routes within the project area, although roads like Russell, South, Stephens, and Bancroft receive high use by bicycles.

There are sidewalks in place along one or both sides of approximately 55% of the project area. The majority of these sidewalks, including curb and gutter, are in the residential area, on the north side of the fairgrounds, around the Tidymans store, and around the Bowling Alley on Washburn St. and Dearborn Ave..

### Zoning

Zoning is a method for local municipalities and counties to control land uses. Land use controls include the specification of land uses allowed, the intensity or density of the uses, and standards placed on built structures.

The zoning classifications for the Brooks/South/Russell study area were reviewed and combined into common categories as shown in Figure 3-2. The designations are generally compatible with those of the existing land use.

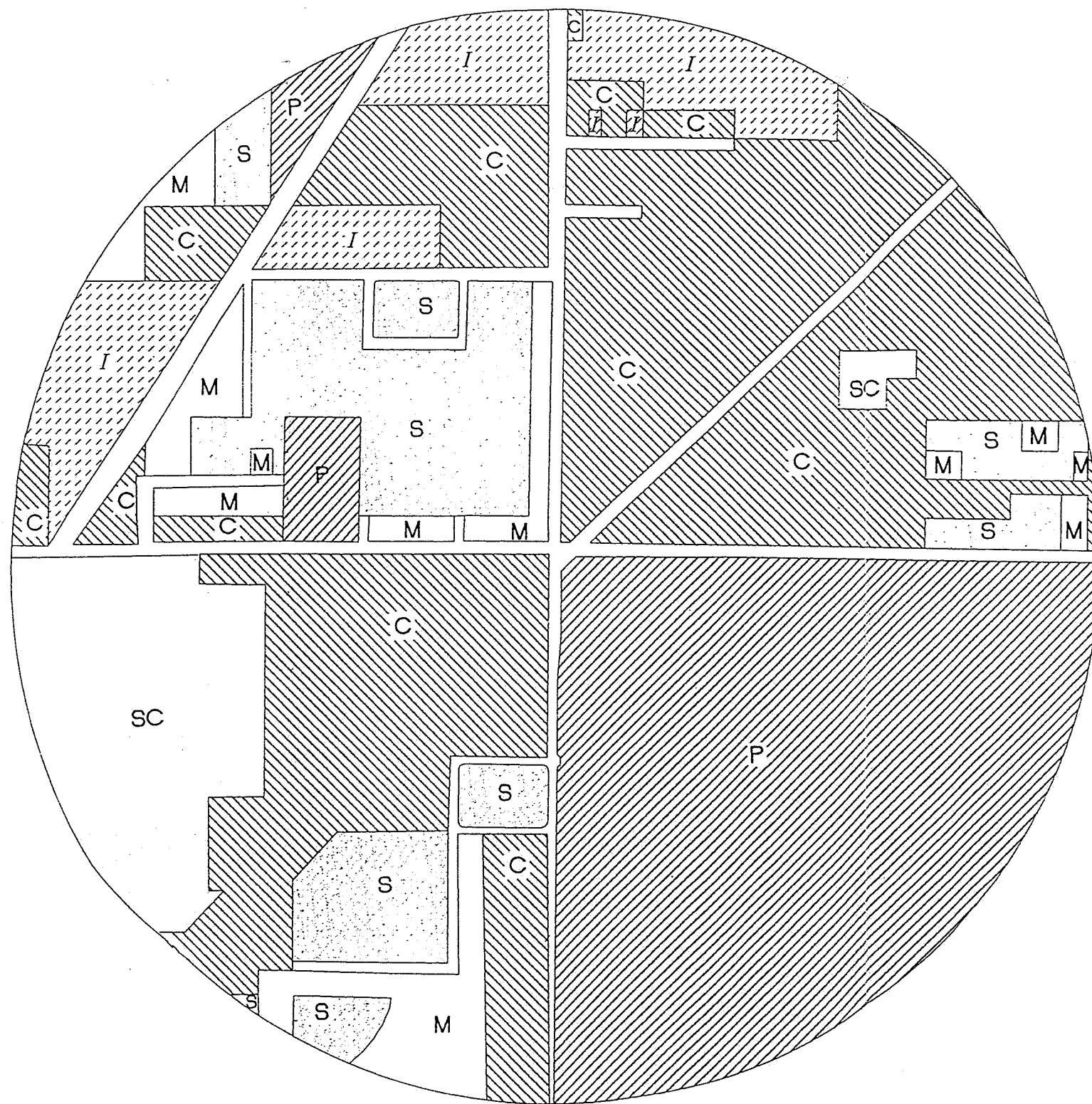
### **Future Land Use**

Missoula County adopted the Updated *Missoula Urban Comprehensive Plan* in (1990). Since the original Plan *Missoula: A Policy Guide for Urban Growth* (1975) land uses have changed, population has increased, and goals and policies have changed.

No new residential, commercial, or public developments are proposed within the project study area at this time.

The *Missoula Urban Transportation Plan* (1985 Update) designates broad land use categories for some roads/intersections around the Brooks/South/Russell Intersection. A grade separation was recommended for the Brooks/South/Russell Intersection with possible funding through federal aid and local funds. This revised Plan was subsequently updated and adopted in October, 1996.

Missoula has produced guidelines to promote bicycle commuting as an alternative mode of transportation. The *Guidelines For Creating a Non-Motorized Travel Network in the Greater Missoula Area* encourages the use of bicycles as a part of the transportation system. Bicycle recreation would continue to be hindered throughout the intersection and cause more safety problems. According to the "Missoula Non-Motorized Transportation Plan" formulated in January of 1994, a planning process was initiated to help implement non-motorized travel. The inventory identified Brooks St. as a major north-south arterial for Missoula and a formidable barrier by impeding the travel of bicyclists and pedestrians.



## CURRENT ZONING

### Legend:

-  Commercial/Office
-  Public Lands & Institutions
-  Industrial/Business Park
-  Shopping Centers
-  Single Family Residential
-  Multi-Family Residential/Townhomes

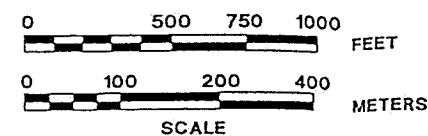


Figure 3-2



The Missoula Urban Area Open Space Plan was updated and adopted in August 1995 by the County of Missoula Parks and Recreation, Office of Planning and Program Development, Office of Community Development, and the Citizen's Advisory Committee. There are no proposals for new open space within the project study area.

#### **Section 6(f) Land, Water and Conservation Fund Properties**

Section 6(f) of the Land Water and Conservation Fund (LWCF) Act stipulates that "no property acquired or developed with LWCF assistance shall be converted to other than public outdoor recreation uses without the approval of the Secretary of the Interior and the substitution in accordance with the 1993 Montana Statewide Comprehensive Outdoor Recreation Plan (SCORP) of other recreation properties of at least equal fair market value and reasonable equivalent usefulness and location." No lands within designated parks will be used for this project. Federally assisted LWCF sites include Boyd Park (#219), Spartan Park (#159), Southside Lions Park (#259), and the Missoula Bikeway System (#269). All sites are less than a half kilometer (1/4 mile) away from the intersection and are shown in Figure 3-1. No Section 6(f) LWCF properties would be affected under any of the considered alternatives.

#### **Environmental Consequences**

Direct impacts to land use may include the acquisition of land within the proposed alternative right-of-way, which may result in the relocation of residences, access points, and utilities.

Temporary impacts are described under Construction Related Impacts.

#### **No-Action Alternative**

Under the No-Action Alternative, land uses in the study area would not change. No private, commercial, or state land would be acquired for the right-of-way purposes.

Potential negative impacts to existing land uses would be caused by increasing traffic volumes through the Brooks/South/Russell Intersection and related congestion of access to adjacent land uses would continue. Future expansion of commercial and quasi-public land uses could limit the use of adequate high volume roadway and access points between Missoula and the Bitterroot Valley.

Planned and proposed improvements on the sidewalk improvements needed for creating a non-motorized travel network could be delayed and funds would be forfeited.

#### **South Avenue Realignment**

The potential impacts to existing land uses are outlined in Table 3-1.



**TABLE 3-1**  
**Properties Partially or Wholly Affected by Each Alternative**

South Avenue East Realignment			
East Alternate E3	East Alternate E4	Preferred East Alternate E5	
<u>Partially Affected</u> Stop and Go Parking for KPAX8 <u>Wholly Affected</u> Law Offices Stereo Plus Gillespie Realty Company Missoula Indian Center Bank The Guardian	<u>Partially Affected</u> School District Property (Open Space) Stop and Go Parking for KPAX8 <u>Wholly Affected</u> Bank Old School Building Mobile Home Missoula Indian Center 3 Residences on Sussex St. (south side)	<u>Partially Affected</u> School District Property (Open Space) Stop and Go <u>Wholly Affected</u> Old School Building	
South Avenue West Realignment			
West Alternate W3	West Alternate W4	West Alternate W6	Preferred West Alternate W7
<u>Partially Affected</u> Printing and Graphics Insurance Agency Sears Service Yard Animal Hospital Yard <u>Wholly Affected</u> Beauty College Butcher	<u>Partially Affected</u> Insurance Agency <u>Wholly Affected</u> Insurance Agency Beauty College Butcher Masonry Supply	<u>Partially Affected</u> Sears Service Yard <u>Wholly Affected</u> Medical Supply	<u>Partially Affected</u> Masonry Supply Yard Insurance Agency <u>Wholly Affected</u> Beauty College Butcher
Intersection Improvements			
4 Commercial Establishments			

Right-of-way and new roads would require that commercial, residential and quasi-public facilities be relocated. Utilities within the existing right-of-ways would be relocated as necessary. These potentially



include US West Communications, Montana Power Company gas lines and distribution powerlines, Missoula County Residential Sewer Improvement District #1, Mountain Water Company, and TCI cablevision. Existing permitted signs would also be relocated.

The sidewalks, if built as proposed, would provide a safe, efficient, and properly designed non-motorized circulation system for pedestrian use. With the proposed Brooks/South/Russell Intersection improvements, new sidewalks and bike lanes would be incorporated into any new design as stated within this amendment to the Missoula Urban Comprehensive Plan. This would provide a bikeway, safe sidewalks, and lighting for pedestrians and non-motorized travel in the project area.

#### Section 4(f) Evaluations

A Department of Transportation Act of 1966 section 4(f) evaluation is not required for this project as no public park, recreation area, wildlife or waterfowl refuge or any listed or eligible historic sites will be affected.

#### Mitigation

Each of the displaced business owners would be compensated according to the FHWA guidelines. Please refer to the Socioeconomics, Relocation Impacts discussion.

Upon completion, the right-of-way would appear clean and aesthetically pleasing. Low-water use vegetation and other landscaping would be provided around the intersection area. All materials and debris from the constructed improvements would be removed.

### **SOCIOECONOMICS**

#### Affected Environment

##### **Overview**

The City of Missoula and its surrounding communities comprise a dynamic urban center with a wide diversity of economic, social, cultural and natural resources. The population of the county exceeds 82,400 (1992 estimate--Census Bureau, 1995), and although its growth rate was slower during the 1980s and early 90s compared to earlier periods, it has not escaped the growth problems of many larger urban areas. Growth, particularly in Missoula's surrounding suburbs, has led to the daily traffic jams at the Brooks/South/Russell intersection. This is evidence of the city's transportation infrastructure not keeping pace with the region's requirements for access to and from its shopping, education, employment and administrative centers.



Many people will be affected by improvements to the Brooks/South/Russell intersection. Commuters will save time, energy and money through reduction in waiting times. Downtown merchants and other businesses may be able to attract more shoppers because of reduced traffic delays, which could lead to enhanced property values. On the other hand, residents adjacent to the intersection may experience increased neighborhood traffic due to rerouting of some components of the intersection's flows. Finally, in the short term there will be disruptions to traffic and pedestrian flows during construction of improvements that may inconvenience businesses and residents in the vicinity.

It is difficult to estimate changes in a region's macroeconomic magnitudes like employment, income, and industry output resulting from improvements in a street's traffic capacity. The effects are too widely diffused due to the widespread location of people and activities benefitting from the improvement. A reduction of peak hour travel time of, say, 1.5 minutes per day per vehicle multiplied by the average number of riders multiplied by the average value of time savings per rider multiplied by the average number of peak hour vehicles per day multiplied by the number of workdays in a year will yield a large aggregate saving in value of time and vehicle operating costs to society. Together with improvements in air quality, the benefits should justify the project's costs.

### Neighborhood Characteristics

To assess how the neighborhoods in the vicinity of the Brooks/South/Russell intersection may be affected we first must describe them in economic and social terms. Then the project's physical and operational characteristics can be overlaid on the baseline to reveal how they will likely impact the project vicinity. Identification of the area to be studied in detail is based on descriptions of the project alternatives involving redirection of traffic on South Ave. via realignments of various streets feeding into Brooks in order to eliminate left turns and reduce traffic moving through the Brooks/South/Russell intersection. These alternatives will require displacing a number of commercial and residential structures and altering circulation patterns on such streets as (depending on the alternative) Grant, Garfield, Catlin, Washburn, Dearborn, and Fairview (on the southwestern side of the intersection), and Oxford, Regent, Stephens, Holborn, Sussex and Central (on the northeastern side).

Of interest are the impacts of 1) displacement and/or frontage changes on homes and businesses due to construction of diversions; 2) traffic diversions on homes and businesses on the above mentioned sidestreets; and, 3) related changes in traffic on South and Russell on either side of the intersection with Brooks. These potential impacts thus define the boundaries of the analysis. Two principal areas may delineated, separated by the intersection of South and Russell: an eight block quadrant on the southwestern side of the Brooks/South/Russell intersection, bisected by Brooks and bounded by South, Russell, Fairview and Grant; and a seven block quadrant on the northeastern side, also bisected by Brooks and bounded by Central, Holborn, South and Russell.

The southwestern quadrant is almost entirely commercial, with several restaurants, automotive service facilities, a shopping mall (Caras Plaza), warehouses and parking areas. A number of mixed commercial/residential parcels are located along the north side of South Ave. between Grant, Garfield and Catlin.



The northeastern quadrant, bounded by Central and Holborn, is primarily commercial. There are a few residences on Sussex Ave. between Regent and Stephens, but the rest of the quadrant is shopping facilities (dominated by Tremper's Shopping Center between Russell and Brooks), service stations, financial, real estate and insurance offices, restaurants, warehouses and parking lots. Most structures are one-story tall. KTMV-TV 23 television station, in a larger circular structure, is located between Sussex and Central Ave. and shares the block with the Missoula Manor Home, a multistory senior citizen facility.

### **Economic Characteristics of the Neighborhood**

Based on aerial photography, there are approximately 20 dwellings in the socioeconomic study area. Assuming a typical ratio of 2.5 persons per household, there are probably about 50 permanent residents living in the study area. The average income per person in Missoula County in 1991 was \$15,703 (BEA, 1993); assuming the study area residents were representative of the countywide average income, their total personal income in that year was about \$785,000. Countywide, the employed workforce represented 60 percent of the resident population in 1991, which suggests that around 30 of the study area's residents were employed. The average wage for non-farm occupations in that year was \$19,410.

Residences in the study area are being offered for sale in the mid-\$50 thousand-low \$60 thousand range for the typical two bedroom, one bath bungalow (*Home Buyer's Guide*, 1994), which indicates an aggregate market value for the 20 dwellings of approximately \$1.1 million. For property tax assessment purposes, these homes would have a taxable value of approximately \$42,500 (at 3.86% of market value), upon which annual property taxes would amount to about \$23,500 (or approximately \$1,175 per lot per year). The point of reciting these statistics is to provide a baseline description of the area's socioeconomic attributes that might be affected by changes in traffic patterns in the neighborhood.

Regarding the commercial activities that characterize the two quadrants, inspection of the aerial photography of the area reveals approximately 80 separate structures ranging in size from a few 30 square meters (100 square feet) to over 30,480 square meters (100,000 square feet). Many buildings house several businesses, so the total number of businesses probably exceeds 100. A rough guess of the total employment generated by these enterprises would be on the order of 1,100-1,200 workers, based on the countywide ratios of workers per establishment in retailing and services (13.5 and 9.5, respectively; Census Bureau, 1993).

The County Assessor's Office produced a summary of property tax information for commercial properties more or less coterminous with the socioeconomic study area (Missoula County Assessor, 1994). It listed 106 commercial properties with an aggregate market value (as of 1/1/92) of \$32 million, a taxable value of \$1.24 million, and projected 1993 property taxes of about \$714,000. These values provide a basis for estimating individual properties' market and tax values within the study area. The average parcel size in the Assessor's list was approximately 5060 sq. m. (16,600 sq. ft.), with structures averaging about 2,164 square meters (7,100 square feet) in area. Average market value per property was \$300,000 (\$11,650 taxable value), and 1993 property taxes averaged about \$6,735 per parcel.

Notable for the businesses along Brooks St. is the large amount of offstreet parking provided. It is not surprising that traffic congestion is so prevalent at the Brooks/South/Russell intersection, given its dual



purpose of conveying through traffic to and from downtown on Business 93 and providing circulation for the local merchants' trade. Improvements to Brooks may eliminate frontage for a number of establishments and force traffic to enter and exit parking areas from side streets. This could affect the economic health of some establishments. Similarly the rerouting of non-through traffic on South Ave. to various sidestreets may impact establishments on these streets relying on sidestreet parking. Increased traffic levels may make such onstreet parking hazardous, necessitating proprietors to open up offstreet facilities.

The specific project description for the Proposed Action alternatives will provide the basis for more precise estimates of property takings, displacements and disruptions due to traffic rerouting. Consequences of the project will be examined in the next section.

### **Environmental Consequences**

#### **No-Action Alternative**

The No-Action alternative would foster the continuation and worsening of existing conditions of congestion due to increasing population trends and traffic.

#### **Overview of Impacts of South Avenue Realignment Alternatives: Gross Dollars and Land**

The kinds of socioeconomic impacts that the alternative proposals for improving traffic through the Brooks/South/Russell intersection will generate are essentially identical, involving diverting of traffic on South desiring to turn left onto Brooks via connectors to sidestreets feeding into Brooks. Differences in effects among them depend essentially on which sidestreets are modified as connectors from South to Brooks. The project consists of implementing one of the West and one of the East alternatives. Aggregate right-of-way area that would be required ranges from approximately 0.36 hectares (0.89 acres) Preferred (West Alternate 7 plus Preferred East Alternate 5) to 1.37 hectares (3.4 acres) (West 4 plus East 3). (See Table 3-2).

Socioeconomic impacts come in a number of forms. Besides the income and expense effects sketched above there are a variety of others, including displacement of households and businesses, losses in local government revenues, and alterations in traffic circulation patterns.

#### **Relocation Impacts**

The descriptions of the various alternatives identify land parcels that would be occupied by realigned rights-of-way; several structures would have to be removed to clear the routes. Table 3-2 summarizes the dislocations (see Land Use for details).



**TABLE 3-2**  
**Relocation Impacts**

Alternative	Total No. of Parcels Affected	ROW Take (square meters)	ROW Take (square feet)	No. of Structures Displaced
West Alternate W3	8	4,357	46,900	4 Commercial
West Alternate W4	10	6,257	67,355	4 Commercial
West Alternate W6	4	3,335	35,900	1 Commercial
Preferred West Alternate W7	4	1,579	17,000	2 Commercial
East Alternate E3	7	7,413	79,800	6 Commercial
East Alternate E4	6 <sup>a</sup>	4,909	52,840	7 (3 Commercial/quasi-public; 4 Residential)
Preferred East Alternate E5	1	2,007	21,600	None

Source: Bell-Walker Engineers (file 93-BMI1.511, 04/16/96)

<sup>a</sup> Indicates there are more than one residences on a single parcel southside of Sussex Avenue.

The Federal Highway Administration's guidelines for preparing environmental documents (FHWA, 1987) state in Section 4, *Relocation Impacts*, that relocation information should be summarized in the environmental document from "project relocation documents." These documents would be prepared after the preferred alternative has been identified, and would involve collection of both primary data (direct interviews and surveys of affected property owners) and secondary information (census and other published information on socioeconomic characteristics of the neighborhoods involved). Information to be compiled would include numbers and characteristics of residences and businesses to be displaced, assessment of relocation alternatives (quality and cost of replacement structures), consideration of special concerns (impacts of relocation on minority, elderly or handicapped persons and special institutions like rest, nursing and convalescent homes), and, in the case of businesses, identification of sites available in the area to which affected businesses may relocate and assessment of the impacts on those businesses caused by displacement or proximity to the proposed transportation facility. Specific financial and incentive programs or opportunities for residential and business relocatees need to be identified, which at a minimum must meet the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) and the Uniform Relocation Act Amendments of 1987 (P.L. 100-17).

These documents have not yet been prepared because the proposed right-of-way takes have not been finalized. That is one purpose of the Draft Environmental Assessment, namely to give potentially affected property owners the opportunity to provide the project's sponsors input on the specific impacts of the proposed action. At that time, the properties to be acquired can be appraised for their fair market values, relocation opportunities for dislocatees can be assessed, and owners of businesses adjacent to



the right-of-way alignments who may lose access or parking (thus affecting the economic vitality of their properties) may present their cases for compensation.

### **Social Impacts**

Only one alternative--East Alternate 4--would directly impact social values in the study area through dislocation of four dwellings on Sussex between Stephens and Regent. Comparable quality housing for the displaced residents would have to be provided by the project sponsors. The specific socioeconomic characteristics of these households have not been determined, pending preparation of the relocation documents. A generic description of the dwellings found in the project area was provided in the Affected Environment section of the report, however, and it gives a general idea of the types of households that would be affected by the project, i.e., one-story bungalow-type dwellings of less than 92.9 sq.m. (1,000 sq.ft.) area, with a average occupancy of 2.5 persons.

Indirectly, several tens of thousands of people per day are going to experience improvements in the quality of their lives due to the reduction of traffic congestion and air pollution at the Brooks/South/Russell intersection. The dollar value of these benefits cannot be estimated with any precision. However, the political process that generated approval of the laws and taxes underlying the project indicates that the benefits are at least equal to its costs, assuming that the alternative chosen is the most cost-effective one.

### **Environmental Justice**

With federal or federally-funded projects, consideration of impacts on minority populations and low-income groups is required by Presidential Executive Order 12898 (11 February 1994). Examination of "environmental justice" issues is implemented by U.S. Department of Energy procedures. Any potentially unequal environmental effects or "burdens" that might result from the proposed action, the need for special information or education programs concerning the action, and opportunities to increase benefits to low-income and minority communities impacted by the project must be assessed. The project does not discriminate as to who would be directly affected and it will not create any disproportionately high and adverse human health or environmental effects on minority and low income populations.

### **Economic and Fiscal Impacts**

Construction activities at the Brooks/South/Russell intersection area may cause some short-term reduction in local business' trade due to interruption of circulation, but this can be mitigated by the contractor to some extent through detour routing and work scheduling measures. Proper handling of these problems can be included in the terms of reference and bid specifications for the job. Displacement of businesses may reduce local employment, but this can be mitigated through relocation assistance, which may find alternative locations within the same market area. Improvements in local circulation, once the project is completed, may, because of reduced commuter congestion at the intersection, lead to increased local trade. The project can be viewed as an opportunity for local



merchants to take steps to capture a larger market because of improved traffic conditions. A campaign of upgraded facilities and services could be initiated by the local merchants' association to promote development of a unifying theme among stores and businesses that would attract a broader segment of the Missoula area market. Ultimately, the Brooks/South/Russell intersection merchants could gain market share that would more than offset the direct loss of establishments to the project. And, ideally, the businesses displaced from the right-of-way would have been able to relocate to sites within the project area, thus retaining their accustomed clientele, with the result that the overall levels of trade, employment and income for the area would increase.

Displacement and removal of taxable properties by the project would eliminate some property, sales and business tax revenues to the city, county and state. The amounts of these losses have not been estimated because the affected properties have not yet been delineated or appraised. Regarding residential property taxes, based on a sample of Assessor's records for properties in the general vicinity of the Brooks/South/Russell intersection the typical residential parcel had an average market value (as of 1 January 1992) of about \$54,100, which for Class 4 residential property carrying an assessment ratio of 3.86 percent yielded an assessed taxable value of about \$2,090. The property tax levied in 1993 on such property averaged \$1,155. Only one alternative (East Alternate 4) would displace any houses (four), in which case the city's residential property tax loss would be on the order of \$5,700 (assuming no change in market value or tax rate).

Regarding commercial property taxes, on a generic basis the average commercial parcel in the project area occupied approximately 4877 sq. m. (16,000 sq. ft.) of land upon which the average structure occupied about 2164 sq. m. (7,100 sq. ft.) (Montana Department of Revenue, 1994). The recorded market value for these commercial parcels averaged about \$302,000 (as of 1 January 1992), which with an assessment ratio of 3.86 percent (for Class 4 commercial property) gave an average tax value of \$11,650 per parcel. Property taxes in 1993 yielded an average revenue per business parcel in the project area of approximately \$6,450.

The worst case scenario in terms of loss of commercial parcel property tax revenues would be a combination of West Alternate 3 or 4 with East Alternate 3, which would displace ten commercial structures. Based on the above averages, the city's commercial property tax loss would be on the order of \$64,500 per year. Additional property tax revenue losses would also result from conversion of undeveloped parcels from private to public ownership. The amount of land in the various alternatives' undeveloped right-of-way parcels ranges between 2,926 and 3,298 sq.m. (31,500 and 35,500 sq.ft.) among the four West alternatives, and between 214 and 2,531 sq.m. (2,300 and 27,240 sq.ft.) for the three East alternatives. A review of the Assessor's records for vacant properties in the study area indicates that at current market values property taxes average around \$0.0215 per square meter (\$0.20 per square foot), which suggests that the city's tax loss on vacant lots taken up by project right-of-way could amount to, in the worst case, around \$12,750 per year.

Definitive estimates of losses of sales and employment have not been developed. A hypothetical projection could be developed by assuming that the current average market value of commercial properties represents the capital value of the business and deriving a gross value of sales on the basis of assumed rates of capital turnover and operating margins. Referring back to the section on the Affected Socioeconomic Environment, the average market value per commercial property was found to be



approximately \$300,000, per the Assessor's records. Assuming a conservative capital turnover rate of, say, two to three times, gross sales per commercial property would amount to \$600 thousand to \$900 thousand per year. Assuming further that owners marked up their merchandise or services by 100 percent of direct variable costs and derived a before-tax return on capital of 20 percent, this volume of business would support around nine to thirteen employees per establishment (depending on wage and salary rates).<sup>1</sup>

Depending on the combination of West and East alternatives, the number of commercial properties that might be displaced range from a minimum of one (the combination of West Alt. 6 [1 structure] and Preferred East Alt. 5 [no structures]) to a maximum of ten (West Alt. 4 [4 structures] and East Alt. 3 [6 structures]). Using the hypothetical values from the preceding paragraph, the theoretical losses of business and jobs could range from a minimum of \$0.6 million in annual sales supporting approximately 9 employees to a maximum of \$9 million in gross sales supporting a maximum of about 130 employees (or a mean value of \$4.8 million in gross lost sales and 70 jobs). The actual values, again, have yet to be determined, based on which pair of alternatives is selected and direct appraisals of the impacted properties. These would, at any rate, be a short-term impact, assuming that viable replacement locations would be obtained for the displaced businesses.

### **Traffic Circulation Impacts**

The proposed action will reduce interference of local traffic movements on South and Russell with through traffic on Brooks by eliminating left turns through the Brooks/South/Russell intersection. This will be accomplished at the expense of realigning segments of one or another of South's sidestreets to deliver South-to-Brooks (and vice-versa) left-turning traffic to junctions upstream and downstream of the Brooks/South/Russell intersection. The sidestreet realignments will alter circulation patterns in the vicinity of the intersection, which may affect some businesses for better or for worse, depending on whether their access or parking are enhanced or not. Please refer to maps of the alternatives (Figure 2-1) in Chapter 2 for this discussion of circulation impacts.

#### **West Alternate 3 (W3)**

W3 (Figure 2-5) consists of diverting east-bound South Ave. traffic desiring to turn left onto Brooks or Russell down to Dearborn Ave. and thence to Brooks. The link is made via a "S"-shaped connector beginning about Grant, cutting down and across Garfield and merging onto Dearborn between Garfield and Catlin. Four commercial structures and four vacant parcels would be displaced. Local circulation patterns would not likely be affected.

---

<sup>1</sup> These values are probably high for the affected establishments because the Assessor's records inspected include several large properties like Tremper's Shopping Center, Caras Plaza and South Center, which bias the study area averages upward. The project alternatives would affect only smaller individual commercial parcels, so the actual impacts on business properties are more likely to be at the lower end of the hypothetical estimates.



#### **West Alternate 4 (W4)**

This alternative (Figure 2-6) consists of diverting east-bound South Ave. traffic desiring to turn left onto Brooks or Russell down Garfield to Fairview Ave. and thence to Brooks. Curved segments in an elongated "S" would transition eastbound traffic flows from South to Garfield and then from Garfield to Fairview, which would deliver traffic to Brooks. Four commercial structures (three on South and one on Garfield and Fairview) and six additional vacant parcels would be displaced. Traffic on Catlin would be limited to northbound only in and out of its intersection with Brooks and Fairview, and westbound traffic on Fairview east of the Brooks intersection would only be allowed to turn right onto northeast-bound Brooks. This alternative would impact existing traffic patterns in the immediate neighborhood of Catlin and Fairview, but access to local businesses would probably not be impacted seriously.

#### **West Alternate 6 (W6)**

W6 (Figure 2-7) would divert eastbound traffic on South to Brooks via a "S" connector running from the SE corner of Grant and South to the intersection of Garfield and Dearborn and thence to Brooks. This alternative would displace one commercial structure at the SE corner of Grant and South plus three vacant parcels. Local circulation patterns would remain essentially unaffected.

#### **Preferred West Alternate 7 (W7)**

This alternative (Figure 2-3) consists of diverting east-bound South Ave. traffic desiring to turn left onto Brooks or Russell down Garfield to Fairview Ave. and thence to Brooks. Curved segments in an elongated "S" would transition eastbound traffic flows from South to Garfield and then from Garfield to Fairview, which would deliver traffic to Brooks. Two commercial structures on South and two other parcels would be displaced. Traffic on Catlin would be limited to northbound only in and out of its intersection with Brooks and Fairview, and westbound traffic on Fairview east of the Brooks intersection would only be allowed to turn right onto northeast-bound Brooks. This alternative would impact existing traffic patterns in the immediate neighborhood of Catlin and Fairview, but access to local businesses would probably not be impacted seriously.

#### **East Alternate 3 (E3)**

This alternative (Figure 2-8) would divert westbound traffic on South east of the Brooks/South/Russell intersection up to Brooks via a connector commencing between Stephens and Regent, cutting across the intersection of Sussex and Regent and teeing into Brooks just south of the latter's intersection with Central. Six commercial structures and one other vacant parcels would be displaced. Existing traffic movements through the intersection of Sussex and Regent would be interdicted, potentially affecting access to some addresses.

#### **East Alternate 4 (E4)**

This Alternative (Figure 2-9) would divert westbound traffic on South east of the Brooks/South/Russell intersection to Brooks via an elongated "S" connector commencing at



Holborn, joining Sussex at its intersection with Stephens, continuing along Sussex to Brooks. This alternative would displace four residential structures (on the south side of Sussex between Stephens and Regent), three commercial structures (one on Brooks, one on Sussex and one on Brooks), and cross a vacant parcel. Portions of two streets would be cut off and terminated by cul-de-sacs: Regent between Sussex and Central would be cut off at Sussex, Sussex between Brooks and Regent would be cut off at Regent, and Sussex between Stephens and Holborn would be cut off at Stephens. Access to some businesses along Sussex would be adversely affected.

#### **Preferred East Alternate 5 (E5)**

This Alternative (Figure 2-2) would divert westbound traffic on South east of the Brooks/South/Russell intersection to Brooks via an elongated "S" connector commencing at Holborn, joining Sussex at its intersection with Stephens, continuing along Sussex to Brooks. This alternative would displace no residential structures, no commercial structures and parts of four other parcels. Portions of two streets would be cut off and terminated by cul-de-sacs: Oxford between South Ave. and Brooks would be cut off at Brooks and Sussex between Stephens and Holborn would be cut off at Stephens. Access to some businesses along Sussex would probably not be impacted seriously.

#### **Conclusions Regarding Circulation Impacts**

Most of the project alternatives would have minor impacts on circulation and parking in the vicinity of the Brooks/South/Russell intersection, with the possible exception of E4, which would entail significant alterations in local traffic patterns and access to some addresses. Turning lanes, signalization and striping could ameliorate much of the additional burden on the side streets, however. The net effect should be to greatly reduce local congestion and improve accessibility to local businesses and institutional facilities.

### **Socioeconomic Conclusions**

To summarize, the short-term socioeconomic impacts of the proposed action would be negative but mitigatable to insignificance through relocation assistance. The long-term impacts would be mainly positive (the more so to the extent that local merchants responded positively to the opportunity to take advantage of the elimination of traffic congestion disincentives and broaden their market attractiveness).

### **NOISE**

#### **Introduction**

Noise has traditionally been defined as "unwanted sound," or sound which interferes with normal activities. Generally, there are two categories of noise problems: occupational noise and environmental noise. This assessment deals only with the latter. Transportation sources are the main contributors to environmental noise. These sources include cars and trucks, railroads, and aircraft. Due to the



remoteness of rail lines and airports from the Brooks/South/Russell intersection, only roadway vehicle noise is addressed here.

This noise assessment is part of the overall environmental evaluation of alternative improvement schemes for the Brooks/South/Russell intersection. This section documents the results of the study, including the noise measurements carried out to characterize the current situation. Recommendations are made for appropriate mitigative measures, such as noise walls and berms which may reduce or eliminate some noise impacts.

### **Affected Environment**

The noise analysis was based on noise measurements of the existing conditions and modeling of expected future conditions. Noise measurements were conducted at several locations in the vicinity of the project on August 25-26, 1994. Traffic counts on the major roadways, including number of heavy and medium trucks, were obtained during the noise measurement period.

A supplementary noise analysis was performed, based on modifications to the October, 1994 noise model, including the new traffic numbers projected by Bell-Walker Engineers, Inc. No new noise measurements of the existing conditions were carried out. B&A conducted noise measurements at several locations in the vicinity of the project for the original analysis, and the results are detailed in the October, 1994 report.

The future condition investigated was the year 2015. Two future alternatives were evaluated for noise impacts: No-Action and the South Ave. Realignment with various alternates.

The Federal Highway Administration's (FHWA) STAMINA/OPTIMA model was used to construct the noise model of the Brooks/South/Russell intersection, as shown in Figure 3-3.

The noise and traffic measurements allowed calibration of the model for existing conditions. The model was then used to estimate the impact from noise due to the design year traffic for the build and no-action alternatives. Impact was estimated on the basis of if the sound approaches exceeded the FHWA Noise Abatement Criteria (NAC), which are shown in Table 3-3. These criteria are used by the FHWA and Montana Department of Transportation to determine the need for noise mitigation measures due to highway improvements. The State of Montana defines "substantial increase" in noise as 10 decibels (dBA) or more, and "approach" as one decibel less than NAC.

The noise measurements at four locations near the Brooks/South/Russell intersection are summarized in Table 3-4.

Some of these measurements (Loc 2 and Loc 4) were taken along the edges of major roads, which is where maximum noise levels can be expected.

The calibration results are shown in Table 3-5. The model is considered well-calibrated since the differences between the measured and modeled values are less than one decibel in all cases. The human



ear is not capable of discerning differences in noise levels of less than one decibel, except in the most stringent laboratory conditions.

**TABLE 3-3**  
**FHWA Design Noise Level/Land Use Relationships**

Land Use Category	Design Noise Level $L_{eq}$	Description of Land Use Category
A	57 dBA (exterior)	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or open spaces which are recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	67 dBA (exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, playgrounds, active sports areas, and parks.
C	72 dBA (exterior)	Developed lands, properties or activities not included in categories A and B above.
D	---	Undeveloped Lands.
E	52 dBA (interior)	Residences, motels, public meeting rooms schools, churches, libraries, hospitals, and auditoriums.

Source: Title 23, Code of Federal Regulations, Part 772

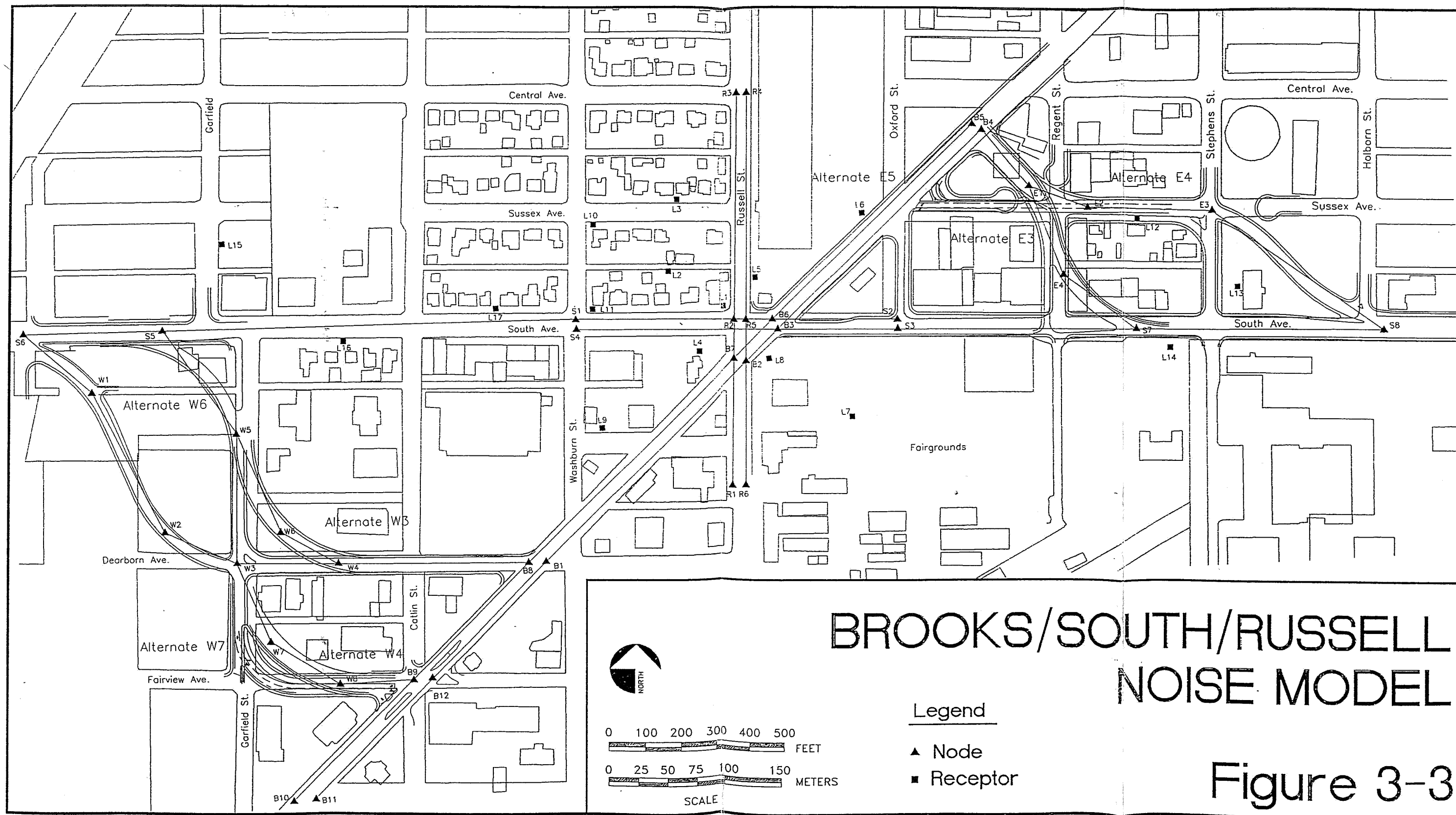
**TABLE 3-4**  
**Field Noise Sampling Results**

	Loc 1 Fairground	Loc 2 Tremper's	Loc 3 Sussex/ Russell	Loc 4 South/ Washburn
Time of day	13:05	13:45	14:05	14:42
$L_{eq}$ (dBA)	66	68	53	68.2

Note: Actual duration for measurements was 10 minutes.

$L_{eq}$  = Equivalent sound level (energy - average of noise over a one-hour period).





**TABLE 3-5**  
**Calibration of the Brooks/South/Russell Model**

Location	Measured $L_{eq}$ (dBA)	Modeled $L_{eq}$ (dBA)	Difference
1 (Fairgrounds)	66	67	+1
2 (Tremper's)	68	67	-1
3 (Sussex)	53	53	0
4 (South Ave.)	68	68	0

### Environmental Consequences

The noise model indicates the following:

1. No location modeled will experience increases of over 3 dBA from the existing condition or the No Action Alternative, with the exception of the block of Sussex St. between Regent and Stephens for Alternative E4 only, which will note increases of about 10 dBA. The Montana NAC for substantial noise impact is an increase of 10 dBA from existing conditions.
2. No location modeled approaches or exceeds the FHWA NAC except for a narrow area of the Fairgrounds where there are currently no buildings or facilities within approximately 15 m. (50 ft.) of the Brooks/South/Russell intersection.
3. None of the future alternative realignments of South Ave. to the west of Brooks will cause impacts according to the NAC. On the east side of Brooks, Alternative E4 will produce increased noise levels as stated above. However, these levels will still fall below the FHWA criterion level of 67 dBA.

### Mitigation

The analysis indicates that the locations in the Project area which will experience noise levels that exceed 67 dBA  $L_{eq}$  (the FHWA design criterion for residential land uses, Table 3-3) are primarily commercial or transportation land uses. These would not be candidates for sound-proofing, barriers, or other mitigation.

The increase of 10 dBA in the partially residential block of Sussex between Regent and Stephens could make this limited area a candidate for noise mitigation. From a practical perspective, it would be very difficult to provide noise shielding along the street without cutting off the residences' access to the street. Noise proofing of the two or three residences along the south side of the street would be a possibility if Alternative E4 is chosen.



Future noise levels at the northeast corner of the Fairgrounds site is expected to exceed the FHWA NAC for all alternatives, including the No Action. This assumes the entire Fairgrounds area is classified as land use "B" (normally reserved for residential and other sensitive areas). If the Fairgrounds were considered class "C" (commercial and industrial areas), then the noise levels will be well within the standards. Mitigation does not appear warranted to protect a narrow band of about 15 m. (50 ft.) of Fairgrounds land from projected noise levels.

## HAZARDOUS MATERIALS

### Affected Environment

The proposed roadway project will encompass property currently used as existing roadways and commercial and office space. The hazardous materials analysis for the project area included a reconnaissance of the project area, review of current and historical maps, review of a site assessment, construction with state and local agencies, and an environmental database list search. A report was prepared entitled "Limited Hazardous Material Survey Brooks/South/Russell Intersection for Montana Department of Transportation" (Dames & Moore, 1994) which describes the results of the site assessment in detail. A summary of the report is included herein.

### Site Reconnaissance

During the site reconnaissance (August 2, 1994), the Brooks/South/Russell intersection and surrounding arterials one half kilometer (1/4 mile) around the intersection were observed for evidence of current and/or past presence of toxic or hazardous materials in use or storage, disposal facilities, visible soil contamination, the potential presence of above ground or underground storage tanks, electrical equipment that may possible contain PCBs, and the presence of storage containers such as drums and barrels.

In general, the area immediately around the intersection is comprised of restaurants, retail stores, gasoline stations, car washes, automobile repair and parts stores, County Fairground, and residential homes. Pole-mounted transformers were observed along the north side of South Ave. Evidence of leakage from transformers was not observed at the time of the site reconnaissance.

Consultation with Montana Power Company indicated that the pole-mounted transformers observed in site reconnaissance along Russell St. have not been tested for PCBs. According to Montana Power officials, the company does not have a comprehensive testing programs for the transformers in its system. Reportedly, transformers are tested when they are repaired or replaced and are given a blue, green or white tag if they have concentrations less than 50 parts per million (ppm) PCBs. Transformers with concentrations of PCBs greater than 50 ppm are replaced.

Visible evidence of distressed vegetation, contaminated soils, storage drums and/or barrels, current and/or past presence of toxic or hazardous materials were not observed in the immediate area of the intersection at the time of the site reconnaissances.



## Historical Review

Archival USGS topographic maps (1964 and photo revised 1978) were reviewed and interpreted for the site and the site vicinity to observe surface conditions and activities. Brooks St. is depicted as a primary highway; South Ave. and Russell St. as light duty roads. Development in the vicinity of the project area shown on these maps includes the County Fairgrounds, residential and commercial properties, schools (Missoula Vocational Technical Center, Sentinel High School, Jefferson Elementary School), and the Burlington Northern Railroad tracks.

Sanborn Map coverage was limited to one map, dated 1969, covering the area west of Russell Street between Benton Avenue on the South and Sussex Avenue on the north. The Sanborn Map was reviewed and evaluated for sites of potential environmental concern in the project area.

Interpretation of the map indicates the area is used for industrial, commercial and residential purposes. Specific sites of potential environmental concern located along the proposed alternative routes are as follows.

**TABLE 3-6**  
**Locations of Sites of Environmental Concern from Sanborn Map Review**

Sanborn Map Reference	Location
Gas and Oil	NW corner, Brooks and Livingston
Gas and Oil	NE corner, Brooks and Fairview
Auto Sales & Service	SE corner, Brooks and Fairview
Gas and Oil in Yard, Auto Rep.	SW corner, Brooks and Fairview
Truck Repair	NW corner, Catlin and Dearborn

Sanborn Map references listed in the table above are all interpreted by Dames & Moore to have the potential to be associated with the use of underground storage tanks (USTs). The date of the map publication (1969) predates state UST registration requirements. Based on information obtained in a telephone conversation with Burger King personnel, the "Gas and Oil" site on the northwest corner of Brooks and Livingston is not the site referenced as Vista Site No. 1A (discussed in Environmental Database review), but are for two adjacent properties. No other readily accessible information regarding the disposition of these sites is available.

## Environmental Database Review

In order to identify sites of potential environmental concern along the South Ave. Realignments, a review of lists of known or potential hazardous waste sites or landfills, and properties currently under investigation for potential environmental violations was again conducted in April, 1996. VISTA, Inc. (VISTA) of San Diego, California performed the list search and prepared a report indicating the location



of sites of concern. The VISTA Report reviewed available federal, state, and local agency lists of: (a) known or potential hazardous waste sites or landfills, (b) sites currently under investigation for environmental violations, (c) sites which manufacture, generate, use, store, and/or dispose of hazardous materials or hazardous waste, (d) sites which have underground storage tanks (USTs), and (e) sites with recorded violations of regulations concerning USTs and hazardous materials/hazardous wastes.

The database list search included the following regulatory agency lists:

- U.S. Environmental Protection Agency (USEPA), Federal Superfund Sites, National Priorities List (NPL)
- USEPA, Comprehensive Environmental Response, Recovery, Compensation and Liability Act List (CERCLIS)
- USEPA, Resource Conservation and Recovery Information System (RCRIS) - Treatment, Storage and Disposal Facilities (TSDF)
- USEPA, Emergency Response Notification System (ERNS)
- RCRIS, Large Quantity Generator
- RCRIS, Small Quantity Generators
- Montana Department of Health and Environmental Sciences (MDHES), Montana Solid Waste Facility List (SWFL) Report
- MDHES Underground Storage Tank Program, Registered Underground Storage Tank Owners and Site Listings (UST)
- MDHES Underground Storage Tank Program, Leaking Underground Storage Tank List (LUST)

The VISTA report noted three sites of potential hazardous materials concerns along the proposed project alignments as in Table 3-7.



**TABLE 3-7**  
**Locations of Sites of Environmental Concern from VISTA Report**

VISTA Site No.	Name/Address	Environmental Concern	Status
1A	Burger King 2405 Brooks St.	LUST <sup>1</sup>	Not Available <sup>2</sup>
2	Brooks Avenue Dairy Queen 2515 Brooks	LUST	Not Available
3A	Cenex Self-Serve - Missoula 1108 West Central	LUST	Not Available

Notes: 1. Leaking underground storage tank  
2. Site status not available from information provided in VISTA Report.

Locations of the three listed sites are depicted on the Site Assessment Report Map contained in the VISTA Report as Appendix B. The status of the sites were evaluated by contacting Alan English of the Missoula County Health Department (MCHD). The following information was provided by Mr. English in a July 31, 1996 telephone conversation.

The State of Montana Department of Environmental Quality (MDEQ) initiated a soil and groundwater investigation at the Burger King at 2405 Brooks Street (VISTA Site No. 1A) to evaluate potential source areas for fuel hydrocarbons noted in a groundwater sample collected from an adjacent (downgradient) well. Laboratory analytical results from the MDEQ investigation indicated detections of diesel range hydrocarbons in both soil and groundwater samples collected from the Burger King site. Groundwater flow direction at the site appears to be toward the southwest. No engineered remedial activity has been proposed for the site. At this time final determination of the hydrocarbon source has not been evaluated, and the case remains open.

The Brooks Avenue Dairy Queen (VISTA Site No. 2) is located immediately southwest (downgradient) of the Burger King site described above. Analytical results of a groundwater sample collected from the on-site water supply well indicated the presence of fuel hydrocarbons. A subsequent investigation to evaluate the nature and extent of the hydrocarbons was performed. Laboratory analytical results from samples collected in this investigation indicated no hydrocarbon detections in soil samples, and diesel range hydrocarbon detections in groundwater samples. At this time final determination of the hydrocarbon source has not been evaluated, and the case remains open.

The Cenex Self-Serve Station (VISTA Site No. 3A) is located at the intersection of Brooks Street and West Central Avenue. A soil vapor extraction (SVE) system was constructed prior to 1990 to recover vapors from an open-bottom sub-grade vault. There is no record of specific releases this system was designed to remediate, although historic soil vapor chemical data note detection of gasoline range hydrocarbons. In the mid-1990's (date uncertain), the station operators noted a sudden loss of inventory from one of their fuel tanks. An investigation to evaluate the potential impact of the product loss to soil and groundwater was performed. Although elevated hydrocarbons were noted in the SVE system



coincident with the product loss, no detectable hydrocarbons were reported from soil or groundwater samples obtained in the Cenex site investigation. This case remains open.

### **Environmental Consequences**

In order to assess potential impacts to the roadway construction project, the following assumptions were made:

- Maximum excavation depth for roadway construction will be 0.9 meters (3 feet) below ground surface (bgs).
- Maximum excavation depth for storm sewer lines to be installed beneath the new roadways will be 2.4m (8 ft.) bgs.
- Maximum excavation depth for storage basin or lift stations could be as much as 6m (20 feet) bgs.
- Depth to groundwater in the subject area is greater than 12 meters (40 feet) bgs. (A. English, MCHD, Personal Communication).
- Potential impacts due to exposure to contaminated soil will be the only hazardous materials concern evaluated.

### **No-Action Alternative**

With the no action alternative, no property would be acquired for additional right-of-way, and no excavation would be conducted. Selection of the No Action alternative would have no effect on existing potentially contaminated sources.

### **South Avenue Realignment**

Three sites of potential soil contamination may occur along the proposed project alignments. The three sites fall within the area affected by any of the proposed alternatives. Project-related construction on the listed sites may encounter fuel hydrocarbon contaminated soil. Exposure of contaminated soil during construction may pose worker health and safety, and soil handling and disposal issues.

The lateral extent of contaminated soil associated with LUSTs generally is limited to the immediate vicinity of the tanks themselves. Fluids released from the tanks are anticipated to migrate vertically until encountering groundwater, which in this case is believed to be greater than 12 m. (40 ft.) bgs. Based on these observations, the potential for encountering contaminated soil at the LUST sites is low unless the proposed construction includes the areas directly over, or in the immediate vicinity of, the LUSTs.

## **Mitigation**

In the event that the construction occurs near one of these sites of contamination, the primary mitigation strategy would be to modify the construction plans to avoid the contaminated areas. If plan modification is not feasible, the following options would be acceptable:

- leave the contaminated material in place,
- remove the contaminated material and haul it to a landfill or licensed soil disposal facility. Prior to removing the material, soils would have to be sampled and analyzed to determine which type of facility would be able to accept the contaminated material.

If the second option is selected, the design and construction specifications should include special provisions for handling the contaminated material.

## **VISUAL RESOURCES**

A visual inventory of the Project Area was conducted in August 1994 and in April 1996. Data collection included field reconnaissance, photo documentation, examination of maps, and review of previous studies.

## **Affected Environment**

Missoula is located in the Rocky Mountain Forest Province whose surrounding landforms provide a wide variety of complex climates and vegetation (Douglas Fir and Cedar/Hemlock/Douglas Fir Sections). Rugged, glaciated mountains, and structural valleys separated by the Blackfoot and Clark Fork rivers surround the Missoula area. The Rattlesnake, Garnet, Sapphire, and Bitterroot Ranges rim the valley and relief ranges from 914 to 2,134 meters (3,000 to 7,000 feet).

The Brooks/South/Russell Intersection is located in south Missoula, in a urban setting with little or no landscaping/vegetation, topographic diversity, and outstanding natural features. The visual setting is defined by different land uses and various land use activities. The character of the study area is defined by the land use types, spatial patterns, viewing variables and visual edge conditions. Throughout the study area four distinct visual setting/sections occur.



To the northeast occurs a commercial and residential setting. The land uses and land use patterns includes residential property (single family), small local businesses, the Trempers Shopping Center, the Main Post Office, Bob Ward & Sons Sporting Goods, and a vacant block. The existing road corridor on Brooks has curb and gutter but no sidewalks. South Ave., Stephens St., and Kent have similar curb and gutter appearances, but include sidewalks on the north side of Kent, east side of Stephens, and south side of South. Vegetation is scarce in this section, but does occur in small planters, vegetated strips and the residential area of Stephens and Sussex. Other landscaped areas include Western Federal Savings Bank, Hardees, the Missoula Post Office, the 93 Stop'n Go Drive Through, and the small picnic area at the corner of Oxford and Brooks. Features detracting from the area aesthetically include the large (asphalt) parking lot in front of Trempers Shopping Center, the discontinuity of buildings, and the bare lot at Stephens and South. Viewing conditions and sensitivity vary throughout this section. Views on Brooks (looking northeast) and South (looking east) show extended views of Mount Sentinel and the Rattlesnake Range in the backdrop landscape setting. Views along Reserve (looking north), Stephens and Kent show enclosed viewing conditions due to buildings and narrow roadways. The buildings in the area are one story tall, built of brick or wood, painted a variety of colors, and have flat roofs. Signage is minuscule and lighting is minimal, with the exception of Trempers parking lot.

The southeast corner is the location of the Western Montana Fairgrounds. Owned by the county, this grassy open area is surrounded by a 2.1 meter (7 foot) chain link fence and includes approximately 19 hectares (47 acres). Development is comprised of fairground buildings, a race track, and open space. East of the fairgrounds is the Missoula Vocational School and Sentinel High School. The existing road corridors are mixed. On south Russell dirt lies between the roadway and fairgrounds fence where sidewalks, curbs and gutter are nonexistent. On east South Ave. twelve large deciduous trees line the road from the intersection to about a block east of the intersection. A 6.1 meter (20-foot) grassy area and old cracked sidewalk lie between the roadway and fairgrounds fence. Curb and gutter is present along South Ave. Views on South (looking east) and Reserve (looking south) are open and show backdrop views of Mount Sentinel and Mount Dean Stone. Buildings on the fairgrounds are primarily wood construction, one to two story tall, wood sided, and have shingled roofs. Periodic attractions occur, but the main activity is the week long fair every summer.

The southwest corner of the intersection has the greatest level of commercial and business development. Commercial businesses vary in size and complexity. Primary businesses include Tidyman's, Five Valley's Bowling Alley, Burger King, Mailbox Etc, the First Christian Church, and Heidelberg. Existing road corridors include Brooks, Fairview and south Reserve which are partially unified with curb, gutter, and installed sidewalks. City blocks with sidewalks include the south side of Fairview, the Five Valley's Bowling Alley block, and Tidyman's block. All other roadways have only curb and gutter installed and no sidewalks. Vegetation is scarce, with a few large deciduous trees near AAA Montana, Trenary's Restaurant, and the Burger King parking area. Small flower beds, shrubs and grassy areas make up other vegetated areas. Distracting features in this section include the bare dirt parking lot behind the First Christian Church, the large parking areas of Five Valleys Bowling Alley and Tidyman's, and the discontinuity of sidewalks. Building appearances are 1 to 1½ story tall, concrete or brick, and flat roofed. One exception to this is Heidelberg with its steep shingled roof line and wood siding appearance as seen in the Alps or Switzerland. Views are mixed in this area and change between enclosed and extended. Extended views of Mount Sentinel and Mount Dean Stone are available from the parking lots



of Tidymans, the bowling alley and along Fairview and Russell streets. Enclosed views are present at the corners of Brooks/Fairview, Brooks/Russell, and along South Ave.

The northwest corner is characterized primarily by residential property (single and multiple family), Jefferson Grade School, McLeod Park, and small residential businesses. The existing road corridors have unity through the use of curb, gutters, sidewalks, and landscape buffers. Vegetation softens the edge of the roads and adds interest through color and texture. Views from the Reserve (north) and South (looking west) are confined to the edge of the road resulting from dense residential development and vegetation. Residential viewing conditions on Reserve are oriented away and towards the road. Some views are blocked by vegetation and fences, others views look across Reserve at the back of Trempers Shopping Center. Views on South include small businesses oriented towards the road.

The overall visual character of the Brooks/South/Russell Intersection Area is diverse and complicated with the respect to the varied land uses, edge conditions, and varied views. Where vegetation is used to soften the edge of the road or serve as a buffer for development, the scenic quality of the area is improved and subsequently more desirable to the viewer (e.g. residential northwest corner and trees in front of fairgrounds on southeast corner of intersection). Views from the intersection or various roadways (Brooks, South, Russell, Kent, Fairview, and Stephens) vary depending on the development occurring adjacent to the corridor and the backdropped landscape settings. Primary residential settings are oriented away from the intersection and screened by vegetation and/or physical location to nearby roads. The most sensitive viewing conditions will be from Trempers Shopping Center, the 93 Stop'n Go Drive Through picnic area, and travelers on Brooks, South, Russell, Kent, Fairview, and Stephens. Low to moderate impacts on viewing conditions will occur from the Fairgrounds during the Fairs operation once a year. Local residents and business users are anticipated to have the highest sensitivity or concern for the visual environment while highway travelers along Business 93 (Brooks) and other local streets would be lower.

### Environmental Consequences

#### **No-Action Alternative**

No adverse impacts to visual resource are predicted for the no-action alternative. Visual impacts would be dependent on the nature of any new development and whether a non-motorized travel network was completed around the intersection. Views of the Brooks/South/Russell Intersection would not change.

This alternative would likely result in increased congestion and delays in the future at the intersection, so no-action would result in increased visual impacts. These impacts would be caused from more traffic and more delays. However, the current views from the area surrounding the intersection would not change.



## **South Avenue Realignment**

This alternative would have a net positive visual impact on the intersection and areas affected by the South Avenue Realignment. It would bring an urban uniformity to the area, which should also be positive. Landscaping would also have positive effect on the visual character of the local community.

Further, the community trail system would be connected at several additional points thereby effectively lengthened. Pedestrian movement across and through the intersection would be enhanced which would also improve the aesthetics of the intersection.

No mitigation is proposed for visual resources.

## **CULTURAL RESOURCES**

### **Affected Environment**

Cultural resources include properties with historical, architectural, archaeological, cultural, or scientific importance that reflect a community's heritage. Historic properties are protected by a number of federal and state laws including the National Historic Preservation Act of 1966, amended and its implementing regulations (36 CFR 800). The National Historic Preservation Act of 1966 defines historic properties as "buildings, sites, districts, structures, or objects included in, or eligible for inclusion in, the National Register of Historic Places, as well as artifacts, records, and remains related to such a district, site, building, structure, or object." Compliance with the Act requires identification of potential impacts upon historic properties, and consideration for avoiding or minimizing any adverse impacts that might be identified.

Prehistoric resources are defined as properties and associated artifacts that date from before the time of written records, which do not appear before the arrival of Spanish explorers in the sixteenth century. These resources represent Native American cultures and societies. Historic resources are defined as those properties that were occupied or used after the time when written records became available. Ordinarily, properties must be at least 50 years old in order to be listed as historic.

In compliance with federal legislation, the proposed project has been assessed to evaluate its potential impacts on cultural resources. The following discussion presents an overview of the prehistory and history of the project area, and summarizes the results of the site file reviews.

### **Records Search and Inventory**

Assessment of the occurrence and significance of prehistoric and historic cultural resources in the Project Area included a background search of cultural resource recorded sites records on file with the State Historic Preservation Office (SHPO) Montana Historical Society in Helena, Montana. Archeological site forms were collected and reviewed from the University of Montana - Missoula



Archeological Records to determine if the sites listed were located within a radius of 0.8 kilometers (½ mile) from the Brooks/South/Russell intersection.

The SHPO file search and personal communications revealed no evidence of recorded prehistoric sites within the Project Area or the surrounding locality. Because no recorded prehistoric sites were identified and the area has already been disturbed by previous actions (i.e., concrete roads), the potential for prehistoric sites in the Project Area is minimal.

The SHPO file search and official list of buildings and properties near the proposed project area. No previously recorded properties were listed. The majority of the eligible and listed Historic Sites and Historic Districts are located primarily in the early downtown of Missoula, along the Clark Fork River, in and around the University of Montana campus, and outlying areas in the Missoula Valley.

A survey of cultural resources and recordation was conducted in August, 1996 for the South Avenue East Realignment alternates (E3, E4 or E5). There were four additional existing properties considered for potential registry as historic sites. A white building located on the corner of Stephens St. and South Ave. presently owned by the school district was built prior to 1937. The building formerly was the Casa Loma Nightclub. The school district bought the building and used it as a school, it is now used for storage. Three residences on the south side of Sussex Ave. were constructed circa 1940. These three properties, affected by Alternate E4 were determined to be historic. However, none of the three structures were deemed eligible for the National Register of Historic Places.

## **Environmental Consequences**

### **No-Action Alternative**

If the proposed Brooks/South/Russell intersection project is not undertaken, the cultural resources would not be affected. Current impacts on cultural resources within the project area would continue for the indefinite future.

### **South Avenue Realignment**

The South Avenue West Realignment alternates (W3, W4, W6 or W7) would have no effect on historic properties as there are none within any of the alternate routes. Excavation will be shallow and it is unlikely that archeological sites would be found in and adjacent to previously disturbed areas (i.e., roads or facilities).

The South Avenue East Realignment preferred Alternate E5 does not encroach on the three historic properties so there would be no effect on the properties. Excavation will also be shallow in the east alternates and it is unlikely that archeological sites would be found in and adjacent to previously disturbed areas (i.e., roads or facilities).



## AIR QUALITY

### Introduction

The proposed Brooks/South/Russell Intersection Transportation Improvement Project is located in the city of Missoula, Montana. Missoula has been designated as nonattainment for carbon monoxide (CO) and respirable particulate matter (PM-10) by the EPA. Tailpipe emissions are the primary source of the total CO emissions in Missoula County (MDHES, 1992). Missoula's PM-10 nonattainment status is primarily attributable to re-entrained road dust and residential wood burning, with vehicular PM-10 emissions accounting for a small portion of the total PM-10 pollutant burden (Missoula City/County Health, 1991).

The City of Missoula is employing a number of mitigation measures to reduce CO and PM-10 emissions, including use of oxygenated fuels to reduce CO emissions, and substitution of liquid de-icer in place of sanding material for roadways.

### Affected Environment

#### Vicinity Air Quality

A complete description of ambient air quality standards and modeling methods used in this analysis are provided in a report entitled *Intersection Air Quality Modeling Analysis Technical Report for the Brooks/South/Russell Project South Avenue Realignment Alternative* (HNTB, 1996). The Air Quality Technical Report is available at the City of Missoula and has been provided to agencies with air quality permitting authority. The project study area is located within the Missoula Air Quality Control Region (AQCR 144). This region is currently classified as better than national standards for SO<sub>2</sub>, unclassifiable/attainment for O<sub>3</sub>, cannot be classified or is better than national standards for NO<sub>2</sub>, and is not designated for lead. The area is designated as being in moderate nonattainment for both CO and PM-10.

According to 40 CFR Part 51, quantitative PM-10 hot-spot modeling is required for projects at sites within the area substantially affected by the project at which violations have been verified by monitoring, as well as at sites with essentially the same emissions and dispersion characteristics as those monitoring locations. However, quantitative hot-spot modeling analysis of PM-10 emissions is not required until modeling guidance for such analyses is released. PM-10 hot-spot modeling guidance will not be published by the EPA until at least late summer of 1997.

According to the Federal Highway Administration (FHWA), PM-10 conformity determinations are to be done on a regional scale by the local Metropolitan Planning Organization (MPO). The MPO for the project area is the Missoula Office of Community Development. Robert Peccia and Associates in Helena, Montana prepared the regional PM-10 emissions analysis for Missoula. The analysis was completed by January of 1997. The MPO made a conformity determination for PM-10 in Missoula that indicated all projects were in conformance.



Carbon monoxide, a colorless and odorless gas which is the product of incomplete combustion, is the major pollutant from gasoline fueled motor vehicles. CO emissions are greatest from vehicles operating at low speeds and prior to complete engine warm-up (within approximately eight minutes of starting). Congested urban roads, therefore, tend to be the principal problem areas for CO. The averaging times associated with the CO standards are relatively short (1 and 8 hours), thus CO concentrations can be modeled using simplified "worst-case" meteorological assumptions. Modeling is also simplified considerably by the stable, non-reactive nature of CO.

Based on the above discussion, the air quality impact analysis for this project will be limited to a microscale analysis of ambient CO concentrations. The criteria for adverse impact shall be: 1) an increase in CO concentrations at the Brooks/South/Russell intersection with the proposed alternative, as compared to the No-Action or 2) an exceedance of the National or Montana AAQS for CO with the proposed Build alternative, at either of the other two modeled intersections.

### Modeling Methods

The air quality analysis focused on the Brooks/South/Russell intersection in Missoula. The Brooks Street/Fairview intersection, and the proposed intersection of Brooks St. with the South Avenue East Realignment (East South) intersections were also modeled, to illustrate the effect of the proposed intersection improvements. Air quality modeling was performed in accordance with the EPA *Guidelines for Modeling Carbon Monoxide from Roadway Intersections* (EPA CO Modeling Guidelines). The Brooks/South/Russell, Brooks/Fairview, and proposed Brooks/East South intersection locations are shown in Figure 3-4.

Modeling receptors were located in accordance with the EPA CO Modeling Guidelines, approximately 3 m. (10 ft.) from the edge of the pavement on both sides of the roadway, beginning at the vehicle stop line of each leg of the intersection (vehicle queue).

Air quality modeling assumptions and procedures were reviewed by local, state, and federal air quality agencies. A summary of correspondence with air quality agency personnel is listed in the consultation summary.

Two EPA-approved computer models, MOBILE5a and CAL3QHC 2.0 (CAL3QHC), were used to analyze the emission and dispersion of CO in the vicinity of the intersections. MOBILE5a calculates CO emission rates using several variables, including vehicle travel speed, year of analysis, and temperature (EPA, 1994). CAL3QHC predicts non-reactive pollutant concentrations, including CO, in the vicinity of signalized intersections. Variables used in CAL3QHC include intersection geometry and signalization, traffic volumes, emission rates from MOBILE5a, and meteorological data (EPA CAL3QHC Modeling Methodology, 1992).



Specific variables used in MOBILE5a include:

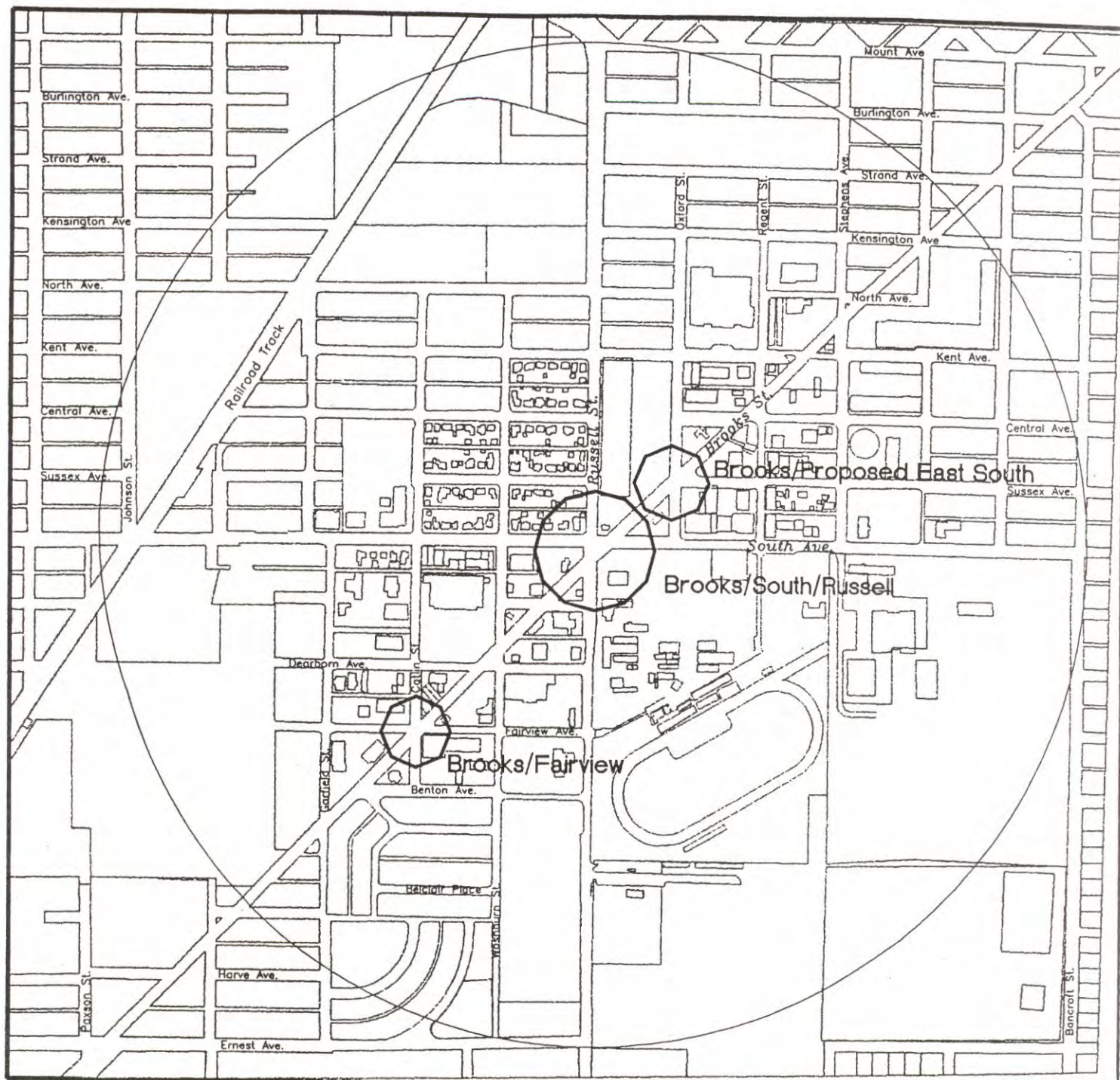
- Analysis years: 1993 (Existing), 1998 (Project Build Year), 2015 (Design Year)
- Average vehicle speeds: 32 and 40 kph (20 and 25 mph), 8 kph (5 mph) less than posted speed
- Vehicle mix and registration distribution: Urban vehicle mix and registration distribution as used in the 1990 Missoula County Carbon Monoxide Emission Inventory (Missoula CO Inventory).
- Ambient temperature: Minimum -2.8°C (27° F), Maximum 5.6°C (42° F), Average Ambient 1.4°C (34.6° F). Calculated in accordance with the EPA CO Modeling Guidelines.
- Fuels: Oxygenated fuels, with no alcohol blend RVP waiver. Ether blend market share/oxygen content: 80% / 2.7%. Alcohol blend market share/oxygen content: 20% / 3.5%. Data obtained from the Missoula CO Inventory.

Copies of the MOBILE5a and CAL3QHC data files and output are presented in the Air Quality Technical Report, Appendices B and C (HNTB, May 1996).

CAL3QHC predicts non-reactive pollutant concentrations, including CO, in the vicinity of signalized intersections. Variables used in CAL3QHC include intersection geometry and signalization, traffic volumes, emission rates from MOBILE5a, and meteorological data. specific variables used in CAL3QHC include:

- Existing (1993) and projected traffic volumes for 1998 (Build year) and 2015 (Design year)
- Meteorological conditions:
  - Wind speed: 1 m/s (3.3ft/s), worst case
  - Wind direction: Worst case for each receptor location, calculated every 10 degrees
  - Atmospheric stability class: Urban - Pasquill Class "D"
- Surface roughness: 108 cm
- Mixing height: 1,000 m
- Peak hour background CO concentrations: 2.7 ppm (1993), 2.2 ppm (1998), 1.9 ppm (2015); projected from 1990 background CO concentration obtained from the Montana Department of Health and Environmental Sciences (MDHES), and performed in accordance with the EPA CO modeling guidelines, using projected traffic volumes and MOBILE5a projected emission factors.
- CO emission factors from MOBILE5a





# AIR QUALITY MODELING SITES



0 500 750 1000 FEET

0 100 200 400 METERS

SCALE

Legend:



Sample Location

Figure 3-4



## Environmental Consequences

The results of the air quality analysis are presented in Tables 3-8 and 3-9, and present the peak 1 and 8 hour maximum CO concentrations at each intersection for each alternative. These values represent the highest concentrations of CO that could reasonably be expected to occur at each intersection during simultaneous occurrence of worst-case traffic and meteorological conditions. The value in parentheses represents the specific receptor location at the intersections (HNTB, May 1996).

The existing (1993) CO concentrations are greater than the modeled CO levels for the No-Action alternative in 1998 and 2015, despite projected increases in traffic volume. Federal standards and regulations to be implemented in the future will result in lower exhaust emissions. Emissions will be further decreased as the number of older, more-polluting vehicles on the road are reduced. The MOBILE5a program considers both the Federal actions and the "phasing-out" of older vehicles. As a result, future year emission rates modeled using the MOBILE5a program are lower than earlier years.

**TABLE 3-8**  
**Peak One Hour Maximum Carbon Monoxide Concentrations, ppm**  
**(Maximum Concentration Receptor)**

Alternative	STUDY INTERSECTION								
	Brooks/South/Russell			Brooks/Fairview			Brooks/East South		
	1993	1998	2015	1993	1998	2015	1993	1998	2015
Existing/ No-Action	30.2 (48) <sup>1</sup>	22.3 (48)	15.4 (18)	13.7 (34)	9.9 (24)	7.8 (24)	7.6 (11)	6.0 (11)	5.1 (18)
South Avenue Realignment	-n.a.-	11.9 (29) <sup>1</sup>	9.4 (9)	-n.a.-	12.2 (26)	8.5 (27)	-n.a.-	10.6 (26)	8.3 (27)

<sup>1</sup> Receptor location for collection of data.

The National Ambient Air Quality Standard for Carbon monoxide, one-hour average, is 35.0 ppm, not to be exceeded more than once per year. The Montana Standard is 23.0 ppm, one-hour average, not to be exceeded more than once per year. Peak hour background CO concentrations used were as follows: 2.7 ppm (1993), 2.2 ppm (1998) and 1.9 ppm (2015).  
Source: HNTB, May 1996.



**TABLE 3-9**  
**Peak Eight Hour Maximum Carbon Monoxide Concentrations, ppm**  
**(Maximum Concentration Receptor)**

Alternative	STUDY INTERSECTION								
	Brooks/South/Russell			Brooks/Fairview			Brooks/East South		
	1993	1998	2015	1993	1998	2015	1993	1998	2015
Existing/ No-Action	21.1 (48) <sup>1</sup>	15.6 (48)	10.8 (18)	9.6 (34)	6.9 (24)	5.5 (24)	5.3 (11)	4.2 (11)	3.6 (18)
South Avenue Realignment	-n.a.-	8.3 (29) <sup>1</sup>	6.6 (9)	-n.a.-	8.5 (26)	6.0 (27)	-n.a.-	7.4 (26)	5.8 (27)

<sup>1</sup> Receptor location for collection of data.

The National and Montana Ambient Air Quality Standard for Carbon monoxide 9.0 ppm, not to be exceeded more than once per year. A persistence factor of 0.70 was applied to one hour concentrations to obtain eight-hour values.  
Source: HNTB, May 1996.

The air quality modeling for the existing conditions indicate no potential exceedances of the 1-hour NAAQS for CO at the three intersections modeled. A potential for exceedance of the Montana 1-hour standard in 1993 is indicated at several receptor locations at the Brooks/South/Russell intersection. Potential exceedances of the National and Montana 8-hour standards are shown at nearly all of the receptor locations at the Brooks/South/Russell intersection, including the CO monitor currently in place, and at one receptor location along the Brooks/Fairview intersection.

### No-Action Alternative

The results indicate no exceedances of either the National or Montana 1-hour CO standard at any of the intersections studied under the future No-Action alternative. However, potential exceedances of the 8-hour standard are indicated at the Brooks/South/Russell intersection in both the 1998 and 2015 model years, with a maximum worst-case concentration of 15.6 ppm in 1998, and 10.8 in 2015. The modeling indicates no potential for exceedance in 1998 or 2015 of either the 1-hour or 8-hour standards at the Brooks/Fairview or Brooks/East South intersections.

### South Avenue Realignment

The South Avenue Realignment alternative would have a beneficial effect on air quality in the vicinity of the Brooks/South/Russell intersection. Compared to the No-Action alternative, the maximum concentration at the intersection would decrease by 47% in 1998, and 40% in 2015. The CO monitor currently at the intersection would experience a 33% reduction in worst-case CO levels with the proposed alignment in 1998, and 29% in 2015.



Carbon monoxide concentrations at the other modeled intersections would increase with the South Avenue Realignment, as compared to the No-Action alternative. This is due to the increase in traffic through these two intersections, resulting from the redirection of South Avenue traffic that would otherwise use the Brooks/South/Russell intersection.

The results from the modeling of the South Avenue Realignment alternative indicate no potential for exceedance in 1998 or 2015, of either the National or Montana 1 or 8-hour CO AAQS at any of the three modeled intersections.

## Conclusions

Implementation of the South Avenue Realignment alternative, compared with the No-Action alternative, would result in decreased congestion and a reduction in CO levels at the Brooks/South/Russell intersection. Worst-case levels of CO at other modeled intersections would increase with the proposed South Avenue Realignment alternative, but would remain below the National and Montana Ambient Air Quality Standards. Based upon the preceding analysis, the Brooks/South/Russell Intersection Project would have a beneficial effect on local CO air quality.

## BIOLOGICAL RESOURCES

This section describes the affected environment and environmental consequences related to vegetation, wildlife, special-status species and wetlands. Inventory data and impact analyses were determined from written consultation and personal communication with the U.S. Fish and Wildlife Service (FWS); Montana Department of Fish, Wildlife and Parks; the Montana Natural Heritage Program; Missoula City Planning Department; Missoula City Parks and Recreation; aerial photographs; and field surveys and ground photographs taken in August 1994.

### Affected Environment

#### Vegetation

Vegetation within the Brooks/South/Russell project area is characteristic of urban areas in Western Montana. There are no native vegetation communities within the project area. Grasses, shrubs and trees in the area are primarily introduced species associated with roadsides and landscaped lawns. Gardens in the area are predominately used for the cultivation of vegetables, fruits and flowers. The county fairgrounds are seeded with species of rye and clover. There are several 38-46 centimeter (15-18 inch) diameter Siberian Elms (*Ulmus pumila*) located on the corner of Brooks St. along the fairgrounds and down along Russell. The trees have not been inventoried, but are believed to be approximately 100 years old (Rogers, 1993). This species is not considered a desired urban street tree due to its susceptibility to disease and insect infestation. No listed or proposed threatened or endangered species of plants exist within the project area (Craig, 1993).



## Wildlife

Wildlife within the project area is typical of urbanized areas throughout Western Montana. Large mammal habitat is restricted due to the predominance of buildings and paved lots and streets, as such, the area supports a low diversity of species. Christmas bird counts within the City of Missoula recorded 66 species (Heron, 1993), however, characteristic species within the study area include the Black-billed Magpie (*Pica pica*), American Robin (*Turdus migratorius*), European starling (*Sturnus vulgaris*), Rock Dove (*Columba livia*), and House Finch (*Carpodacus Mexicanus*). The project area does not include any fish habitat.

The Montana Department of Fish, Wildlife and Parks reports that the project "will have no impacts to the fish and wildlife resource or their habitats. This urban area is highly developed and there are no fisheries or wildlife habitats to impact." (Firebaugh, 1996)

## Special-Status Species

In November 1993, written consultations with the Helena office of the FWS indicated that the federally-listed endangered Peregrine Falcon (*Falco peregrinus*) may occur in the project area (McMaster, 1993). Biologists in the FWS Endangered Species Suboffice in Kalispell were contacted by mail to determine the location of any Peregrine Falcons in the study area. The nearest reintroduction of Peregrine Falcons had occurred one hour north of Missoula on the Flathead Indian Reservation (Shelley, 1993). The FWS concluded that "based upon the nature of the proposed work and the locations of the project, we do not expect any project related impacts to threatened or endangered species." (McMaster, 1993)

## Wetlands

There have been no federal wetland inventories completed for the project area by the Soil Conservation Service (Blaine, 1993) or through the National Wetlands Inventory Program of the U.S. Fish and Wildlife Service (Pearson, 1993). Field investigations and consultation with local resource authorities determined that no wetlands occur within the project area (Reel, 1993).

## Environmental Consequences

### No-Action Alternative

The No-action alternative would have no impact on biological resources in the project area.



## **South Avenue Realignment**

The South Avenue Realignment alternatives would have no impact on biological resources in the project area. No listed or proposed threatened or endangered species of plants or wildlife exist within the project area (MDFWP, 1996).

## **EARTH RESOURCES**

### **Affected Environment**

The affected environment section includes information on the general geology and soils of the site area in order to characterize the site area and identify potential adverse impacts that may be caused by project alternatives. Information on the site area was obtained from existing literature as well as discussions with federal and state agency resource specialists.

### **Geology**

The project area is located in the Missoula Basin of the Northern Rocky Mountains physiographic province. The Missoula Basin is a wedge-shaped depression, trending northwest to southeast, ranging from about 8 kilometers (5 miles) to 24 kilometers (15 miles) across and approximately 80.4 kilometers (50 miles) long. The city of Missoula is located at the eastern edge of the basin. The Missoula Basin consists of the Missoula and Ninemile Valleys and is bounded by deeply dissected mountains with elevations generally around 1,981 meters (6,500 feet). Valley floor elevations in Missoula are about 975 meters (3,200 feet).

The Missoula Basin is a closed structural depression downdropped to the northeast along the northwest-southeast trending Clark Fork Fault, overthrust from the southwest along the Ninemile Fault and Albert Creek Thrust Fault. Deposits of interbedded shale and conglomerate, eroded from the marginal highlands, mantled by channel gravels and sands are found in the Missoula Basin. The basin was flooded and drained by successive glaciations during the Pleistocene. More than 61 meters (200 feet) of unconsolidated glaciolacustrine (Glacial Lake Missoula) cobbles, gravel, sand, and clay was deposited. The present drainage system is eroded into these deposits. The geology of the project area has been mapped as older alluvium, a thin mantle of reworked Lake Missoula silt and poorly sorted, unconsolidated sand and gravel on low terraces marginal to the flood plains of the Clark Fork, the Bitterroot River and their tributaries (McMurtrey and others 1965). Deposits from Glacial Lake Missoula shorelines are evident on Mt. Jumbo and Mt. Sentinel to the east and northeast of the project area (Alt and Hyndman 1986).



## **Paleontology**

Fossils are quite limited in the region due primarily to rock type and age. However, some of the Pliocene gravels may contain bones and teeth of mammals such as mice, horses, and camels (Alt and Hyndman 1986).

## **Soils**

The soils in the project area have only been mapped in a general soil survey (SCS 1978, 1982) so detailed information is limited. It is assumed that an intensive geotechnical study of the site area will be completed prior to final design and construction.

Due to the extensive development in the area, the soils have been extremely reworked. Prior to construction and development, the soil profile was probably 30 to 60 centimeters (1 to 2 feet) of sandy silt overlying sandy gravel, cobbles, some clay, and boulders, typical of glacial lakebed material (Crawford 1993). The Soil Conservation Service (Blaine 1993) has classified the soils in this area as "orthents" since the original soil horizons have been destroyed or buried. Since the soils have been reworked, no erosion potential has been designated for the soils in the area. However, these soils may be subject to erosion on slopes as well as slope instability.

## **Environmental Consequences**

### **No-Action Alternative**

With the no-action alternative there would be no impact to earth resources. On-going soil erosion in the area, which appears to be relatively minor, would continue. Also, much of the project area is under pavement or buildings and the Missoula County Fairgrounds offer the only expanse of exposed ground in the project area.

### **South Avenue Realignment**

With the South Avenue Realignment alternatives, soils would be disturbed during construction. The road alignment will be graded and surfaced and the remaining exposed areas will be revegetated as soon as possible so as to reduce soil erosion and the possibility of slope failure. With adherence to mitigation, minor impacts will be short-term and generally limited to the construction phase of the project.

There are no impacts to geology except surface disturbance as discussed previously. Potential impacts to paleontological resources are mitigated. Should paleontological resources be found during construction, construction supervisory personnel will follow project contract procedures regarding paleontological resources.



## **Mitigation**

Areas disturbed by construction will be contoured and revegetated as soon as possible according to the MDT and FHWA procedures for roadway slope stability so as to reduce the possibility of soil erosion or slope instability.

Prior to construction, all supervisory construction personnel will be instructed on the protection of paleontological resources in regards to state of Montana and federal laws. To assist in this effort, the construction contract will address an acceptable procedure to protect and remove the paleontological resource(s) in the event such features are discovered.

## **SURFACE AND GROUND WATER RESOURCES**

### **Affected Environment**

#### **Surface Water**

The Clark Fork of the Columbia and the Bitterroot River are the nearest large perennial water courses to the project area. Neither river is located within 2 kilometers (1.5 miles) from the project area. Pattee Creek is a small stream entering the Missoula Valley floor approximately 2 kilometers (one mile) southeast of the project area. Flow from Pattee Creek is captured at the canyon mouth and conveyed by an open ditch along the southern margin of the valley to a recharge basin located approximately 1 kilometer (0.8 miles) southeast of the project area. The recharge basin is at a higher elevation than the project.

A detailed evaluation of the flood hazard areas for the city of Missoula was completed by the Federal Emergency Management Agency (FEMA). The fairgrounds have been identified by FEMA to be classified as being effected by a 500 year flood or in the 100 year flood with average depths of less than 30 centimeters (1 foot) or with drainage areas less than 2.6 square kilometers (1 square mile), or an area protected by levees from a 100 year flood (FEMA, 1988). The Stephens Ave. segment near Pattee Creek Drive has been identified by FEMA to be located in a special flood hazard area inundated by a 100 year flood. Flooding in this area could reach an average depth of 30-90 centimeters (1-3 feet), usually sheet flow on sloping terrain (FEMA, 1988). The Stephens Ave. area is located approximately 1 kilometer (0.6 miles) from the Brooks/South/Russell intersection.

A majority of the stormwater runoff in Missoula drains into the 2669 dry wells (Woessner, Wogsland 1988) located throughout the municipal Missoula area. The stormwater is injected into highly permeable soils and is filtered into the Missoula Aquifer. There are some stormwater drainages discharging directly into the rivers, however, runoff in the project area drains to drywells.



## Groundwater

The Missoula Valley Aquifer, a designated sole source aquifer, is located in water-bearing formations below the City of Missoula. The aquifer is the principal source of drinking water for the City of Missoula and supplies 80% of the residents in Missoula County with drinking water. The aquifer also supplies water to over 30 small community water systems serving residential developments throughout the valley. The surrounding recharge area stretches from the eastern end to Huson to approximately 32 kilometers (20 miles) to the northwest. No alternative sources of viable drinking water exists. If this aquifer is contaminated, a significant hazard to public health could occur.

The wide alluvial valley that contains the Missoula Aquifer is typical of mountain valleys in the Rocky Mountain Region. The recent alluvium that fills the valley is underlain by layers of permeable sedimentary deposits and Precambrian Metamorphic bedrock. Surficial deposits are generally coarse grained, although lacustrine silts are present in some areas. Groundwater depths are typically shallow. In the Missoula Aquifer depth to groundwater ranges from 0 meters (0 feet) in some swales to depths greater than 30 meters (100 feet) in some Glacial Lake Missoula Clay deposits (MCCHD 1987). Soils over the aquifer are generally sandy to gravelly loams. The vadose zone consists of clean to silty sand and gravel.

The Missoula Aquifer, with thin, coarse soils and shallow groundwater, is very vulnerable to contamination. The relative vulnerability of an aquifer to contamination is dependent on several factors. The most important of these factors include: the depth to groundwater, the nature of the geological material of the surface, vadose and saturated zones, the hydraulic conductivity and rate of recharge, and to a lesser extent the topography and climate (MCCHD 1987).

## Recharge/Discharge

Groundwater flows away from the Clark Fork River in the Missoula area and towards the River west of the Confluence of the Bitterroot and Clark Fork Rivers. The water table typically is at its highest elevation in June and July and at its lowest in February and March (City-County Health Department, 1987). Average groundwater velocities in the Missoula area have been estimated at 1.8 meters (6 feet) per day (City-County Health Department, 1987).

Water recharge by direct precipitation on the unconfined aquifer has not been quantified, however, it is believed that if recharge occurs as a result of direct precipitation, it is in the spring associated with snow melt and spring rainfall. Once July begins, probably all water not entering the storm systems is evapotranspired. By November, the ground becomes frozen, not thawing until about March.

Recharge occurs by lateral inflow from adjacent valley sediments which outcrop at topographically higher elevations. This occurs in spring when the precipitation and the melting of winter snow pack comprise the principal recharge to the Bedrock and Tertiary hydrostratigraphic units. At the valley margins, groundwater is transmitted into the Missoula Aquifer by the adjacent upland sediments. Recharge also occurs from influent streams. The Clark Fork River, Grant Creek, and smaller streams such as Pattee Creek, Butler Creek, O'Keefe Creek, Mill Creek and La Valle Creek all lose water to the



aquifer over a 4.8 kilometer (3 mile) reach as the river enters the valley. Recharge from storm water runoff in the Missoula area is channeled into 2,669 dry wells which allow water to percolate to the water table. Lateral inflow from adjacent sediments and other sources accounts for the remainder of the total recharge.

Discharge from the aquifer occurs by the following mechanisms: evapotranspiration, base flow to streams and pumping wells. Several streams enter the Missoula Valley and have an influent section that contributes recharge to the aquifer. Pollutants entering the stream above the influent section can reach the aquifer with recharge water.

### **Ground Water Quality**

The Missoula Aquifer is vulnerable to contamination. Urban storm runoff is a potential source of contamination. According to a study done by the University of Montana, (Woessner, Wogsland 1988) there are 2669 dry wells in the municipal area that meet the EPA Class 5 description of an injection well. It is estimated that annually, 4.5 million liters (119 million gallons) of contaminant-laden storm water are injected 2.4 to 6.1 meters (8 to 20 feet) deep into highly permeable soils via these sumps (MCCHD 1987). Although the contribution to groundwater recharge is relatively small compared to other sources, the potential for contamination is disproportionately higher (MCCHD 1987). Runoff quality is variable, with annual total dissolved solids levels estimated at more than 3,991 metric tons (4,400 tons).

### **US EPA Design Plan Review**

If federal monies are to be expended on construction projects over designated sole source aquifers, the US EPA is required to review design documents and provide comment to ensure protection of the groundwater resource. Mr. William Monheiser of the US EPA Region VIII, Groundwater Unit, Pollution Prevention Group will provide oversight for this aspect of the project. After the preferred alternative is selected and nearly complete design drawings are prepared by the project engineer, Mr. Monheiser will review the plans with regard to sole source aquifer protection issues, and provide comment to the engineers for incorporation in the final design plans.

### **Environmental Consequences**

#### **No-Action Alternative**

Under the no-action alternative, existing drainage, aquifer, and flooding conditions associated with existing the Brooks/South/Russell intersection, as described in the existing environment, will not be altered or improved.



## **South Avenue Realignment**

There are two types of water quality effects that are common to all roadway improvements that may potentially occur in the project area with the construction of this alternative:

- storm runoff or the introduction of foreign substances into the groundwater or water courses
- erosion and sedimentation.

### **Storm Runoff**

An area that endures heavy automobile traffic can be expected to experience long-term effects on the quality of the drainage ways along the roadways. Nonpoint source pollutants, such as heavy metals and hydrocarbons, will be transported by the runoff from rainfall and may affect quality of the drainageways. Pollutants will always increase with increased traffic, but the traffic levels are predicted to increase whether or not the proposed project is constructed.

The greatest potential for contamination by point source pollutants is during the construction process. The possibility exists for adverse quality impacts if stockpiled materials or loose soils on cut or fill slopes not yet revegetated or landscaped are eroded by storm runoff during this period. Applicable permits will be filed prior to construction which may include the Construction Dewatering General Discharge Permit authorized under the Montana Pollutant Discharge Elimination System (MPDES) if the construction activity in which clearing, grading, and excavating would result in greater than two hectares (five acres) total or if the disturbance of greater than 0.4 hectares (1 acre) is located within 30.5 meters (100 feet) of a surface water body. Other permits may be necessary including the General Permit to Discharge Treated Waste Water from Ground Water Remediation or Dewatering Operations, if construction dewatering activities that discharge waste water to ground water and would likely cause pollutants to enter ground water.

### **Erosion and Sedimentation**

The most likely opportunity for erosion and/or sedimentation to occur in the project area is during the construction process and revegetation period. Potential sources of erodible material created during the construction process would include loose fill adjacent to drainage features, disturbed earth from roadway leveling, and excavated and backfilled soil around roadway and drainage structures. However, because slopes are very mild, and because the mitigation measures and Best Management Practices will be used (see Mitigation), the probability of major erosion and/or sedimentation to occur would be very low.

### **Mitigation**

Best Management Practices and mitigation strategies in consultation with the EPA and the City/County Environmental Health Department will be implemented to complete the proposed action alternatives. The mitigation measures and management practices include, if appropriate, but are not limited to:



- Protecting against erosion at drainage outlets with check dams and outlet protection
- Trapping sediment before it leaves the site using catch basin inlets, temporary stockpiles, and sediment basins

Other Best Management Practices that will be used, if appropriate, include:

- erosion control matting
- temporary diversion dikes
- rock outlet protection
- straw bale barriers
- storm drain inlet protection
- solid waste management
- stabilized construction entrances
- protected chemical and material storage areas
- scheduling clearing and grading when erosion potential is minimum
- limited disturbance areas
- minimal removal of natural vegetation
- prompt reclamation and revegetation

## CONSTRUCTION RELATED IMPACTS

Short-term, temporary adverse effects related to construction activities have the potential to affect soils; air quality; noise; public safety; population and employment; traffic flow, circulation, and access to businesses; and consequent fiscal impacts due to business disruption. Construction activities will be managed according to the City and County Public Works Department and the Montana Department of Transportation's guidelines for safety and traffic control during construction. Construction of the project will also result in a small beneficial effect on the region's economy.

### Soils

With the South Avenue Realignment alternative, soils would be disturbed during construction. These areas will be graded and surfaced as new by roadway and the remaining exposed areas will be revegetated as soon as possible so as to reduce soil erosion and the possibility of slope failure. With adherence to mitigation, minor impacts will be short-term and generally limited to the construction phase of the project.

### Air Quality

The widening of the existing rights-of-way and construction of new routes from South Ave. to Brooks St. will increase PM-10 from re-entrained road dust, increased traffic flow through road detours, and slash burning from right-of-way clearing. According to the Montana Department of Environmental



Quality, Air Quality Division, certain practices should be followed during the construction phase of the project to keep PM-10 emissions to a minimum.

In order to minimize PM-10 emissions during the construction phase of the project, the following actions are recommended:

- 1) Sweeping streets on both ends of the project each day to reduce the major carry-on of dirt from the project onto the paved streets within the non-attainment boundaries.
- 2) Water and/or chemically stabilize (i.e., so that the emissions are less than 5% opacity) any unpaved detour routes.
- 3) Any slash being burned due to right-of-way clearing should be stacked with a brush blade and cured. Open burning restrictions and any permit or fee must be paid in advance.
- 4) Asphalt plants and gravel crushers are a source of PM-10. If these facilities fall within the immediate vicinity, the use of these would require an air quality permit from the State of Montana Department of Health.

### Noise

Construction equipment used to prepare the new roadways and to widen existing roadways will generate noise during construction. In addition, detour routes used to maintain traffic flow during construction could increase traffic on sides streets that do not receive high traffic volume at the current time. Construction equipment typically generates noise that exceeds noise criteria for residential areas; however, the sounds are short duration and would be generated only during daylight hours as specified by the construction guidelines within City of Missoula. Construction contracts will include a clause requiring construction equipment to meet maximum noise emission standards set by the City of Missoula and/or the State of Montana.

### Public Safety

Three sites of potential soil contamination (see Appendix B) may occur along the proposed project alignments. Ground excavation during construction on or near the listed sites may encounter fuel hydrocarbon contaminated soil. The contractor is responsible for following all applicable OSHA regulations to ensure worker and public safety in the contaminated area.

### Population and Employment

Most of the workers and basic construction materials and equipment will be available from local sources, which means that there will be little need to import labor and materials from outside the region.



With little relocation of workers or expansion of local businesses to accommodate the project likely to occur, the area should not experience any noticeable fluctuations in population or demand for housing and services because of the project.

### **Construction Traffic Control**

During the construction period, traffic would have to be routed within the existing street network and diverted as appropriate using alternative routes. Construction period traffic control would be accomplished according to MDT's *Traffic Control Manual for Highway Construction and Maintenance* (FHWA, 1993).

A construction traffic control plan would be developed as part of the construction plans. It is expected that one lane of traffic can be maintained in each direction throughout the construction. To the extent practical, the traffic lanes would be on the existing roadway or temporary pavings. Before construction begins, warning signs would be installed to and notify the public and authorities of the construction schedules and phasing in an attempt to get motorists to avoid the intersection when possible.

### **Traffic Flow and Circulation**

The local circulation of traffic within the south central portion of Missoula will be disrupted during the construction cycle of the project which is estimated to be six to ten months. Short term delays or temporary street closures are probable. This can be mitigated somewhat through Montana Department of Transportation and the City's Public Works Department procedures that include detour routing and adequate signage and scheduling road work at non-peak traffic times, etc.

### **Economic and Fiscal Impacts**

Right-of-way agreements would have to be acquired prior to beginning construction. Construction activities at the Brooks/South/Russell intersection area may cause some short-term reduction in local business' trade due to interruption of circulation, but this can be mitigated by the contractor to some extent through detour routing and work scheduling measures. Proper handling of these problems can be included in the terms of reference and bid specifications for the job. Displacement of businesses may reduce local employment, but this can be mitigated through relocation assistance, which may find alternative locations within the same market area.

### **Regional Economy**

Construction of the preferred alternatives will have a small, but beneficial impact on the regional economy. The amount and type of construction involved with the intersection improvements would comprise a small fraction of the total construction industry for the region. Missoula County's employed



population is 53,300 (1993 estimate--BEA/REIS, 1995) with gross earnings of more than \$1.12 billion dollars. Of this total, the construction sector accounts for an estimated 2,700 workers and \$74 million in annual earnings. A million dollar expenditure for new construction will generate roughly 16 direct jobs and support another 13 elsewhere in the local economy (BEA, 1992). The proposed alternatives would result in less than 8 percent of the estimated construction sector employment and annual earnings share of the Missoula regional economy.

## **CUMULATIVE IMPACTS**

Cumulative impacts are the effects on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

### **Human Environment**

The Missoula Valley is experiencing ongoing residential, commercial, and industrial development. The result of this expected growth is more population, more employment, and more demand upon the area's transportation system.

Recent system improvements in the City of Missoula include the completion of the road widening project on Reserve St. from South 3<sup>rd</sup> St. to Brooks St. This project, completed in 1993, expanded Reserve St. to four lanes and upgrades signals at South 3<sup>rd</sup> St., South Ave., and Brooks St. The Brooks South Russell Intersection Project will provide an additional benefit to circulation and accommodation of traffic using new commercial and residential development.

Improvements at the Brooks/South/Russell intersection will contribute to the cumulative effect on land use in the City of Missoula as it will displace some existing commercial properties and residences and alter access to existing land uses. However, there is comparable housing and commercial space available in the valley to accommodate the relocation of displaced residents, who will be compensated for relocation. Planned and proposed residential and commercial development in the Missoula Valley will provide additional opportunities for local residents and business owners to remain in the valley if they desire. Utilities will be relocated as necessary, and access will be provided to accommodate existing land uses.

### **Natural Environment**

Recently completed, ongoing, and future urban and suburban development, including highway construction, contributes toward the cumulative impacts to the natural environment. Because the project



area is in a highly developed urban area, wildlife habitat is limited. As such, ongoing development in an already urban setting will have no cumulative effect on biological resources in the region.

The project area is officially within a non-attainment area for air quality standards, so avoidance of further air pollution is mandatory. The proposed action for the Brooks/South/Russell intersection is intended to alleviate congestion at the intersection and surrounding arterials, thus the cumulative impact to area air quality would be predominantly positive, as documented in the air quality analysis. The traffic forecasts used for the air quality analysis were based on the traffic generated by existing and anticipated future land used within the project area. The results of the analysis indicate that regional and localized air quality will not be adversely affected and, due to the lower congestion on Brooks/South/Russell and surrounding arterials, some improvement to area air quality will occur with implementation of the proposed action.

## PERMITS AND APPROVALS

Approvals that will need to be obtained from federal entities prior to construction of the project include:

- Compliance with the Provisions of the Sole Source Aquifer Designation U.S. Environmental Protection Agency (see Chapter 3, Water Resources for more detail)  
Compliance with Section 106 of the National Historic Preservation Act - the State Historic Preservation Office will determine if any of the buildings on Sussex St. that were surveyed in August, 1996 are "eligible" for the National Register of Historic Places. It was determined that none were eligible and the process is completed.

State permits that would be required prior to construction include:

- Construction Dewatering General Discharge Permit authorized under the Montana Pollutant Discharge Elimination System
- General Permit to Discharge Treated Waste Water from Ground Water Remediation or Dewatering Operations
- Right-of-way agreements would need to be acquired from the local agency prior to beginning construction. No preliminary agreements have been made for any right-of-way acquisitions. Temporary construction easements may be required for final design and construction activities.



## CHAPTER 4 - COMMENTS AND COORDINATION

### INTRODUCTION

A project coordination program was developed for the Brooks/South/Russell Intersection Project to ensure that members of the public and the appropriate federal, state, and local agencies were given adequate opportunity to be involved throughout the project. Public information meetings, scoping meetings, and a neighborhood meeting were held to collect and discuss the public's concerns about the project.

### PUBLIC INVOLVEMENT PROGRAM

A public interaction process was created to encourage public interest, foster new ideas, and identify issues and concerns with the project. Two advisory committees were created, one comprised of members of the public and the other of technical specialists, to discuss and evaluate issues and alternatives throughout the process.

#### Citizen's Action Committee

In November 1993, a Citizen's Action Committee (CAC) was created to meet monthly with the City of Missoula and the contractors (Bell-Walker Engineers, now EarthTech, and Group 2000). The CAC, a group of citizen volunteers, reviewed the progress of the preliminary design and served as a liaison between the public, the contractor and the City. CAC members were appointed by the City of Missoula and represented a variety of business, environmental, recreation, transportation and neighborhood groups. The CAC members and their affiliations are listed in Chapter 5.

Members of the CAC, the City of Missoula, and representatives of each contractor met monthly and discussed the following topics:

11/10/93	First Meeting; explained project and CAC role
12/13/93	Reviewed public comments from scoping meeting
1/25/94	Dave Zielinski (Bell-Walker) explained the traffic modeling process
2/22/94	Marie Piper (Dames & Moore) explained environmental studies for the project
3/22/94	Bell-Walker demonstrated the use of Traffic Modeling to analyze preliminary alternatives
4/94	No meeting
5/24/94	Reviewed information scheduled for presentation at the June 9 <sup>th</sup> city-wide neighborhood meeting
6/9/94	Citywide Neighborhood Meeting on preliminary alternatives at Russell School



7/26/94	Engineers from Bell-Walker discussed the process for choosing criteria for the matrix used in the selection of the three final alternatives
8/12/94	TAC meeting to discuss selection of final 3 alternatives
8/23/94	CAC received matrix scoring sheets and instructions on their use in scoring alternatives
9/13/94	CAC advised on Technical Advisory Committee selection of three alternatives for air quality modeling
11/94	CAC received air quality modeling results and advised on recommended alternative for public hearing
12/2/94	CAC meeting to discuss and select preferred alternative for presentation at public hearing
12/14/94	Public hearing on three final alternatives and preferred alternative presented
2/10/95	TAC, property owners and city officials met to discuss the South Ave. Realignment goals, evaluation criteria and variety of alternatives
3/2/95	CAC and property owners met with Kathleen Krager to discuss additional alternatives
3/3/95	City Council met with Kathleen Krager to discuss additional alternatives
4/21/95	East property owners and CAC discussed East Side Alternatives Nos. E1, E2, & E3
4/21/95	West property owners and CAC discussed West Side Alternatives No. W1
5/9/95	East property owners and CAC discussed East Side Alternatives
6/9/95	West property owners and CAC met to discuss West Side Alternatives Nos. W2 & W3
11/14/95	TAC meeting to discuss ranking of the West Side Alternatives
11/15/95	West property owners and CAC discussed all six West Side Alternatives
2/29/96	East property owners and CAC discussed only Alternative No. E3
3/21/96	East property owners and CAC discussed only Alternative No. E4
4/19/96	TAC, City, State and Federal officials met to discuss preferred alternatives
4/24/96	All property owners and CAC held a public forum to discuss the at-grade alternatives for South Avenue Realignment
6/2/96	<u>Missoulian</u> article describing the Brooks/South/Russell problems and solutions
7/16/96	Transportation Policy Coordinating Committee - discussion and decision of Brooks/South/Russell ranking in CMAQ Budget and funding constraints
10/3/96	Area business meeting initiated by Southgate Mall to discuss status of Brooks/South/Russell project



10/16/96	Missoula Transportation Plan Public Hearing - Public statements about need and issues with South Avenue Realignment of Brooks/South/Russell project
7/11/97	Community Meeting held with the City/County of Missoula, interested publics to update the schedule of the project and to discuss the status and any issues and concerns
Ongoing by Appt.	Meetings with individuals who would like to discuss specific aspects of the project that would pertain to the final design, construction schedule, and implementation of the project

### Technical Advisory Committee

The Technical Advisory Committee (TAC) for the Brooks/South/Russell intersection project provided a forum for discussion between the City/County of Missoula, the Montana Department of Transportation, and Bell-Walker Engineers(EarthTech). The Members of the TAC met throughout the project to discuss the alternatives and issues addressed in this document. The TAC members and their affiliations are listed in Chapter 5.

### Public Meetings and Media Events

The purpose of the public scoping meeting, the neighborhood meeting and the public hearing was to provide a forum for the public to present concerns and ideas about the Brooks/South/Russell Intersection Project. In addition, information on the project was made available through a news conference, local newspaper articles and radio and television reports.

### **Public Scoping Meeting**

On November 18, 1993, a public scoping meeting was held at the Fairgrounds Dance Building in Missoula, Montana. The meeting was an open house format with the public invited to attend anytime between 11:00am to 7:00pm. The purpose of the meeting was to inform the public of the scope, details, and anticipated schedule of the project. Displays included a video presentation, rendered aerial photographs of the overpass, display boards on the air quality modeling process, display boards on the traffic modeling process, a tentative schedule, and a study map.

During the scoping meeting the public had an opportunity to meet with the Citizens Action Committee members and leave written comments and suggestions. Many individuals participated by leaving comments on flip charts in the display areas. Others mailed in comments using the form provided with the Scoping Meeting newsletter, or wrote letters in the weeks following the meeting. Of the approximately 190 people attending the meeting, comments were received from more than



120 people. The comments and suggestions received were categorized according to the following issues: preliminary alternatives, environmental issues, or other issues specified by respondents.

### **Neighborhood Meeting**

On June 9<sup>th</sup>, 1994, a Neighborhood Meeting was held on the six preliminary alternatives, at the Russell School in Missoula, from 7:00-9:00pm. Approximately 100 people attended the meeting to view displays on the alternatives, traffic modeling results and general project information. Dave Zielinski and Gary Funkhouser of Bell-Walker Engineers Inc., presented details on the alternatives and traffic modeling. Bruce Bender, City Engineer, along with representatives from Bell-Walker, answered questions about the preliminary design process, the city's use of CMAQ funds and other transportation issues. Written comments were received from 16 people at the meeting.

### **News Conference**

On September 13<sup>th</sup>, 1994, a news conference was conducted on the fairgrounds following the CAC meeting. Bruce Bender announced the selection of the three final alternatives. Gilbert Walker issued a statement focusing on the methods used in the selection of the three alternatives. Bender and Walker then responded to questions. The news conference was attended by representatives of the Missoulian and the Independent newspapers and KECI-TV and KPAX-TV television stations.

### **Public Workshop**

A Public Workshop was held on December 15, 1994 in Missoula, Montana. Representatives from Bell-Walker Engineers and Dames & Moore were present to answer questions regarding the three final alternatives. Four hundred and sixty one (461) people signed in at the meeting. The public was encouraged to leave comments, either on any of the various computer stations provided at the workshop or on comment sheets. Attendees could take their comment sheets with them and mail them to the Department of Public Works by December 31, 1994. Comments were received from 273 people at the meeting; while an additional 250 comments were received at the Department of Public Works. In addition, a petition was submitted against the overpass alternative, signed by 98 residents of the Missoula Manor, an apartment building for elderly residents located in the area. The workshop also provided a forum for a local protest group, Pass on the Overpass, who collected signatures on a petition to encourage the city not to choose the overpass alternative. This group also published a comment sheet in the Missoulian, which contributed to the large number of comments received in the mail by the City.

### **Section of the Preferred Alternative**

The news articles were issued in April 1996 after the preferred alternative of W7 and E5 were selected and announced by the City of Missoula Department of Public Works.



## **Hearing**

A City Council hearing is scheduled to be held in Missoula in August 1997.

## **Newspaper/Radio/Television**

Newspaper articles, editorials and public letters appeared in the Missoulian (local) and Kaimin (University of Montana) newspapers. Local TV stations (KECI-TV and KPAX-TV) and a local radio station (KUFM) also provided news stories and announcements for scheduled public meetings.

The Missoulian published stories following the progress of the project from the initial announcement of the proposed study in September 1993 through the public hearing in December 1994. In addition, editorials appeared in the Missoulian on September 16, 1993, June 5, 1994, August 28, 1994, March 7, 1996 and June 2, 1996.

## **Major Issues, Concerns and Opportunities Raised by the Public**

Throughout the public participation process many concerns and issues were raised by the public through questions asked at public meetings, written comments and media editorials. Public comments have been compiled into three major issues categories: alternatives (comments specific to the proposed alternatives for improving the intersection); environmental issues (e.g., air quality); and other issues (includes broader issues regarding transportation and planning).

A summary of the concerns expressed by the public is provided below:

### **Scoping Meeting (11/18/93) - 190 attendees/120 written responses**

#### **Alternatives**

- impacts to businesses and neighborhoods
- relocation of the county fairgrounds
- rerouting of traffic on surrounding streets
- impact on other intersections
- provisions for bicyclists
- pedestrian concerns (access, safety, and handicap accessibility)
- developing long term improvements consistent with growth

#### **Environmental Issues**

- residential burning alternatives and fines for non-compliance
- turning off engines at the intersection
- vehicle inspections
- planting trees and shrubs as carbon monoxide absorbers



### Other Issues

- alternative modes of transportation
- visual concerns due to loss of mountain views and overpass structure if chosen alternative
- reducing SOVs and number of cars in general

### **Neighborhood Meeting (6/9/94) - approximately 100 attendees/16 written responses**

#### Alternatives Issues

- costs associated with each alternative
- use of federal funds
- rerouting of traffic on surrounding streets
- air quality modeling for each alternative
- provisions for pedestrians and bicyclists
- impacts to businesses and neighborhoods
- visual impacts due to overpass
- safety and winter driving conditions with overpass

#### Environmental Issues

- redistribution of auto emissions
- alternative solutions to auto emissions problem
- impacts to people in the area

### Other Issues

- transportation planning
- shifts in retailing away from Brooks/South/Russell
- Traffic Demand Management (TDM) strategies

### **Missoulian Newspaper Article - September 6<sup>th</sup>, 1994**

#### Alternatives

- business concerns due to relocation, compensation, and clientele
- what do the visual improvements look like and what do they include
- relocation of fairgrounds to Fort Missoula
- changing traffic flow patterns to relieve congestion

#### Environmental Issues

- cutting down on single occupancy motorists



### Other Issues

- visual concerns of views and character change of surroundings

**Public Workshop (12/14/94) - approximately 461 attendees/594 written responses (273 received at the meeting/321 received in the mail)**

### Alternatives Issues

- impacts to businesses and neighborhoods
- impact to access of area businesses
- visual concerns of views and character change of surroundings
- costs associated with each alternative
- use of federal funds
- community impact/change of town's character
- construction impacts
- length of project construction/disruption
- rerouting of traffic on surrounding streets
- provisions for pedestrians and bicyclists
- safety and winter driving conditions with overpass/underpass
- pedestrian concerns (access, safety, and handicap accessibility)
- developing long term improvements consistent with growth
- potential for urban decay in area of overpass/underpass

### Environmental Issues

- vehicle inspections
- noise impacts
- alternative solutions to auto emissions problem
- cutting down on single occupancy motorists

### Other Issues

- alternative modes of transportation/Traffic Demand Management strategies
- transportation planning
- growth management

## **AGENCY CONTACTS**

Agencies and organizations listed below, with jurisdiction and/or specific interest within the project area were contacted to solicit their input throughout the planning process and development of the EA.



### **Local Agencies**

Missoula Department of Revenue  
Missoula City Engineering Department  
Missoula City/County Health Department  
Missoula County Geological Survey  
Missoula County Parks and Recreation  
Missoula County Rural Planning  
Office of Community Development  
Western County Fair

### **Local Organizations**

Clark Fork Coalition  
Five Valleys Audubon Society  
GMT Consultants Inc.  
Montana Pictorial Histories  
Mountain Line-Missoula Urban Transportation District

### **State Agencies**

Montana Bureau of Mines & Geology  
Montana Department of Fish, Wildlife and Park (Helena and Missoula Offices)

- Parks Division
- Wildlife Division

Montana Department of Health & Environmental Sciences

- Air Quality Division
- Solid & Hazardous Waste Bureau, Underground Storage Tank Program
- Water Quality Bureau

Montana Department of Transportation

- Planning and Development
- Environmental Services
- Right-of-Ways

Montana Natural Heritage Program  
State Historical Preservation Office (Helena and Missoula Offices)  
University of Montana

- Anthropology Department, Archaeological Records
- Cooperative Wildlife Research Unit



### Federal Agencies

Federal Highway Administration

U.S.D.A. Forest Service

- Lolo National Forest

U.S. Army Corps of Engineers

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service

- Ecological Services Office (Helena and Denver, CO Offices)

U.S. Soil Conservation Service

The agencies and organizations contacted by principal resource investigators for data and consultation throughout the process are shown on Table 4-1, Consultation Summary.



**TABLE 4-1**  
**Brooks/South/Russell Intersection Project Consultation Summary**

ORGANIZATION	CONTACT NAME	TITLE	ADDRESS	CITY/STATE/ZIP	DATE	P=phone L=letter M=mtng.	SUBJECT
Ada County Highway District	Dorel Hanson		318 E. 37th Street	Boise, ID 83714	12/2/93	P	NPDES Permitting
City of Missoula	Bruce Bender	P.E.	435 Ryman	Missoula, MT 59802	11/4/93	P	Requested resource info
City of Missoula	Bruce Bender	P.E.	435 Ryman	Missoula, MT	11/5/93	P	Economic data
		Director of Public Works					Selection of Preferred Alternative letter to Bell Walker Engrs.
City of Missoula	Bruce Bender		435 Ryman	Missoula, MT	5/2/96	L	
Clark Fork Coalition	Jeff Smith		131 S. Higgins Avenue	Missoula, MT 59802	7/27/94	P	Water resources
County of Missoula		Assessor's Office		Missoula, MT 59802	4/8/96	P	Requested assessors data for socioeconomic analysis
		Regional Mgr., Property Assessment Div.					
Department of Revenue	Jim Fairbanks		200 W. Broadway	Missoula, MT 59802	9/2/94	L	Socioeconomic Data
Environmental Protection Agency	Steve Bubrick		1200 6th Avenue/Mail Stop WD134	Seattle, WA 98101	12/2/93	P	NPDES Permitting
Environmental Protection Agency	Bill Monheiser			Denver, CO	8/4/94	P	EPA Review of Water Resources
			8ART-AP, Region 8, 999 18th Street, Suite 500				Air Quality Analysis Procedures
Environmental Protection Agency	Jeff Houck			Denver, CO 80202	9/6/94	L	
Environmental Protection Agency - Region 8	Jim Dunn		999 18th Street, Ste 500	Denver, CO 80202	11/10/93	P	EPA Review of project
Environmental Protection Agency - Region 8 - Stormwater	Vern Berry		999 18th Street, Suite 500	Denver, CO 80202	12/3/93	P	NPDES Permitting
Environmental Protection Agency	Catherine Sargeant		8ART-AP, Region 8, 999 18th Street, Suite 500	Denver, CO 80202	5/1/96	P	Transportation Conformity Regulations
Environmental Protection Agency - Region 8	Jim Dunn		999 18th Street, Ste 500	Denver, CO 80202	7/18/96	P	Approval letter for compliance with sole source aquifer regulations
Federal Highway Administration	Dave Miller		301 South Park, Drawer 10056	Helena, MT 59628	9/6/94	L	Air Quality Analysis Procedures
Federal Highway Administration	Dave Miller		301 South Park, Drawer 10056	Helena, MT 59628	9/8/94	P	Air Quality Modeling
Federal Highway Administration	Dale Paulson	Environmental Services	301 South Park, Drawer 10056	Helena, MT 59628	12/14/95	P	Approach to the EA for new alternatives
Five Valleys Audubon Society	Lynn Teneffoss	President		Missoula, MT	11/8/93	P	Christmas Bird Counts
Five Valleys Audubon Society	Willis Heron	Biologist		Missoula, MT	11/10/93	P	Christmas Bird Counts
GMT Consultants Inc.	Jay Crawford		P.O. Box 7847	Missoula, MT 59807	10/29/93	P	Soils info



**TABLE 4-1**  
**Brooks/South/Russell Intersection Project Consultation Summary**

ORGANIZATION	CONTACT NAME	TITLE	ADDRESS	CITY/STATE/ZIP	DATE	P=phone L=letter M=mtng.	SUBJECT
Gillespie Realty	Cynthia Bryan		1020 South Avenue West	Missoula, MT 59801	2/22/96	L/M	Request for meeting to discuss project
Gillespie Realty	Cynthia Bryan		1020 South Avenue West	Missoula, MT 59801	2/22/96	L/M	Status Mtg. with Affected Landowners
Missoula City Engineering Department	Doug Harby				9/14/94	P	Stormwater Drainage
Missoula City/County Health Dept.	Jim Carlson		301 W. Alder	Missoula, MT 59802	11/5/93	P	Biology/Soils/Geology inventory info
Missoula City/County Health Dept.	Jim Carlson		301 W. Alder	Missoula, MT 59802	11/10/93	P	Water resources info
Missoula City/County Health Dept.	Allan English		301 W. Alder	Missoula, MT 59802	11/15/93	P	Geology info
Missoula City/County Health Dept.	Allen English		301 W. Alder	Missoula, MT 59802	7/14/94	P	Missoula Sole Source Aquifer
Missoula City/County Health Dept.	Chris Nielson-Cerquone	Environmental Health Specialist	301 W. Alder	Missoula, MT 59802	7/27/94	P	Water resources
Missoula City/County Health Dept.	Peter Neilson		301 W. Alder	Missoula, MT 59802	7/29/94	P	Water Quality Ordinances
Missoula City/County Health Dept.	Jim Carlson		301 W. Alder	Missoula, MT 59802	8/23/94	L	Preliminary Air Quality Analysis Info
Missoula City/County Health Dept.	Jim Carlson		301 West Alder	Missoula, MT 59802	9/6/94	L	Air Quality Analysis Procedures
Missoula City/County Health Dept.	Jim Carlson		301 W. Alder	Missoula, MT 59802	9/9/94	P	Air Quality Modeling
Missoula City/County Health Dept.	Jim Carlson		301 W. Alder	Missoula, MT 59802	9/15/94	L	Air Quality Analysis
Missoula County Geological Survey				Missoula, MT	7/14/94	P	Missoula County soil survey
Missoula County Parks & Rec.	Dan Rogers		100 Hickory	Missoula, MT 59801	11/8/93	P	Vegetation
Missoula County Parks & Rec.	Jim VanVausen		100 Hickory	Missoula, MT 59801	10/21/94	P	Missoula County Recreation Needs Assessment Survey
Missoula County Rural Planning	Tim Hall	Resource Specialist	200 W. Broadway	Missoula, MT 59802	10/15/93	P	Inventory data
Montana Bureau of Mines & Geology	Judy		1300 W. Park Street	Butte, MT 59701	10/19/93	P	Geology/groundwater info
Montana Bureau of Mines & Geology			1300 W. Park Street	Butte, MT 59701	10/29/93	P	Geology
Montana Cooperative Research Unit	Dr. Joe Ball		University of Montana	Missoula, MT 59812	11/5/93	P	Wildlife
Montana Cooperative Research Unit	John Malloy		University of Montana	Missoula, MT 59812	11/5/93	P	Wildlife Info
Montana Dept. of Fish, Wildlife & Parks	John Firebaugh	Regional WL Biologist	3201 Spurgin Road	Missoula, MT 59801	10/14/93	P	Requested biology info
Montana Dept. of Fish, Wildlife & Parks	Dale		3201 Spurgin Road	Missoula, MT 59801	11/30/93	P	LWCF Sites



**TABLE 4-1**  
**Brooks/South/Russell Intersection Project Consultation Summary**

ORGANIZATION	CONTACT NAME	TITLE	ADDRESS	CITY/STATE/ZIP	DATE	P=phone L=letter M=mtng.	SUBJECT
Montana Dept. of Fish, Wildlife & Parks	Mary Ellen McDonald		1420 E. Sixth Avenue	Helena, MT 59620	11/30/93	P	LWCF Sites
Montana Dept. of Fish, Wildlife & Parks	Mary Ellen McDonald		1420 E. Sixth Avenue	Helena, MT 59620	1/17/94	P	Info previously requested
Montana Dept. of Fish, Wildlife & Parks - Parks Division	Mary Ellen McDonald		1420 East Sixth Street	Helena, MT 59620	12/1/93	L	LWCF Sites
Montana Dept. of Fish, Wildlife & Parks - Parks Division	John Firebaugh	Regional Wildlife Manager	3201 Spurgin Rd.	Missoula, MT 59803	11/21/94	L	Letter evaluating wildlife issues for new alternative
Montana Dept. of Fish, Wildlife & Parks - Parks Division	John Firebaugh	Regional Wildlife Manager	3201 Spurgin Rd.	Missoula, MT 59803	4/22/96	L	Letter describing no wildlife issues
Montana Dept. of Health & Environmental Sciences			1400 Broadway/P.O. Box 200901	Helena, MT 200901	11/5/93	P	Underground storage tanks
Montana Dept. of Environmental Quality, Water Quality Division	Gretchen Bennitt		Cogswell Building, P.O. Box 2009011	Helena, MT 59620	9/6/94	L	Air Quality Analysis Procedures
Montana Dept. of Environmental Quality, Water Quality Division	Gretchen Bennitt		Cogswell Building, P.O. Box 2009011	Helena, MT 59620	9/12/94	P	Air Quality Analysis Procedures
Montana Dept. of Environmental Quality, Water Quality Division	Gretchen Bennitt		Cogswell Building, P.O. Box 2009011	Helena, MT 59620	3/21/95	P	Conformity Regulations
Montana Dept. of Health & Environmental Sciences - Air Quality Division	Karen Clavin	Air Quality Specialist - Technical Support Section		Helena, MT	8/23/94	L	CC of Fax to Jim Carlson
Montana Dept. of Health & Environmental Sciences - Air Quality Division	Karen Clavin	Air Quality Specialist - Technical Support Section		Helena, MT	8/23/94	P	Data Review Request
Montana Dept. of Health & Environmental Sciences - Water Quality Bureau	John Arrigo/Roxanne Lincoln			Helena, MT	8/3/94	P	Water Quality Permitting
Montana Dept. of Health & Environmental Sciences - Water Quality Bureau	Jack Thomas			Helena, MT 59620	8/5/94	P	Water Resources
Montana Dept. of Health & Welfare - Solid & Hazardous Waste Bureau - Underground Storage Tank Program	Candy Stenson		Cogswell Building	Helena, MT 59620	12/21/93	L	Underground storage tanks
Montana Dept. of Health and Environmental Sciences - Water Quality Bureau	Mike Pashik		1400 Broadway/P.O. Box 200901	Helena, MT 200901	11/10/93	P	MT Water Quality regs



**TABLE 4-1**  
**Brooks/South/Russell Intersection Project Consultation Summary**

ORGANIZATION	CONTACT NAME	TITLE	ADDRESS	CITY/STATE/ZIP	DATE	P=phone L=letter M=mtng.	SUBJECT
Montana Dept. of Health and Environmental Sciences - Water Quality Bureau	Chris LaVene		1400 Broadway/P.O. Box 200901	Helena, MT 200901	7/27/94	P	Water resources
Montana Dept. of Transportation	Edrie Vinson		2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	10/14/93	P	Determination examples
Montana Dept. of Transportation	Julie Gavin		2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	10/19/93	P	Determination examples
Montana Dept. of Transportation	Karl Helvik	Environmental Services	2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	11/4/93	P	Examples of EA
Montana Dept. of Transportation	Karl Helvik	Environmental Services	2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	12/22/93	P	Determination review
Montana Dept. of Transportation	Dick Turner		2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	7/8/94	P	CMAQ
Montana Dept. of Transportation	Pat Saindon	Administrator - Transportation Planning Division	2701 Prospect Avenue, P.O. Box 201001	Helena, MT 59620	9/6/94	L	Air Quality Analysis Procedures
Montana Dept. of Transportation	Ross Tervo	Air Specialist	2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	3/24/95	P	PM 10 analysis
Montana Dept. of Transportation	Cora Helms	Environmental Specialist	2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	3/24/95	L	Highway Traffic Noise and Construction Noise Procedures
Montana Dept. of Transportation	Karl Helvik	Environmental Services	2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	12/14/95	P	Approach to the EA analysis
Montana Dept. of Transportation	John Axline	Historian	2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	4/29/96	P	Need for recordation of buildings on Sussex St.
Montana Dept. of Transportation	Karl Helvik	Environmental Services	2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	5/7/96	L/P	Contents in EA; MEPA requirements
Montana Dept. of Transportation	Karl Helvik	Environmental Services	2701 Prospect Ave./P.O. Box 201001	Helena, MT 59620	5/7/96	P	Contents in EA
Montana Natural Heritage Program	David Genter	Coordinator	1515 East Sixth Avenue	Helena, MT 59620	10/14/93	P	Requested biology info
Montana Natural Heritage Program	Katherine Jurist	Coordinator	1515 East Sixth Avenue	Helena, MT 59620	5/1/96	L	Natural Resource Information System Species of Special concern info
Montana Pictorial History's Mountain Line - Missoula Urban Transportation District	Stan Cohen	Historian		Missoula, MT	8/23/94	M	History of Missoula/Fairgrounds
Mountain Line - Missoula Urban Transportation District	Mike Kress		1221 Shakespeare	Missoula, MT 59802	7/20/94	P	Missoula county info
Mountain Line - Missoula Urban Transportation District	Mike Kress		1221 Shakespeare	Missoula, MT 59802	7/22/94	P	Cultural resources
Muth Consulting Engineers	Frank Muth		913 SW Higgins Avenue	Missoula, MT 59801	10/29/93	P	Soils Info
Muth Engineering	Frank Muth				9/19/94	L	Simulation Photography
Office of Community Development	Phillip Maechling		435 Ryman	Missoula, MT 59802	9/2/94	L	Alternative Screening Process



TABLE 4-1  
Brooks/South/Russell Intersection Project Consultation Summary

ORGANIZATION	CONTACT NAME	TITLE	ADDRESS	CITY/STATE/ZIP	DATE	P=phone L=letter M=mtng.	SUBJECT
State Historic Preservation Office			1410 8th Avenue/P.O. Box 201202	Helena, MT 59620	10/19/93	P	Cultural Resources info
State Historic Preservation Office	Stan Wilmoth	Archaeologist	1410 8th Avenue/P.O. Box 201202	Helena, MT 59620	10/21/93	P	Cultural Resources info
State Historic Preservation Office	Allen Matthews	Historic Preservation Officer		Missoula, MT	10/28/93	P	Cultural Resources info
State Historic Preservation Office	Stan Wilmoth	Archaeologist	1410 8th Avenue/P.O. Box 201202	Helena, MT 59620	11/10/93	P	Cultural sites list interpretation
State Historic Preservation Office	Allen Matthews	Historic Preservation Officer		Missoula, MT	7/22/94	P	Cultural resources
State Historic Preservation Office	Stan Wilmoth	Archaeologist	1410 8th Avenue/P.O. Box 201202	Helena, MT 59620	7/22/94	P	Cultural resources questions
The Missoulian	Kathleen	Librarian		Missoula, MT	3/3/94	P	Request for newspaper article
The Missoulian	Kathleen	Librarian		Missoula, MT	4/1/96	P	Request for Real Estate Section and Home Sales Price Information
U.S. Army Corps of Engineers	John Hintzman		Walla Walla District	Walla Walla, WA 99362	10/19/93	P	Maps
U.S. Fish & Wildlife Service	Kevin Shelley			Kalispell, MT	11/9/93	P	Peregrine Falcons
U.S. Fish & Wildlife Service - Ecological Services Office	Kemper McMaster	Field Supervisor	301 S. Park	Helena, MT 59626	10/14/93	P	Requested biology info
U.S. Fish & Wildlife Service - Ecological Services Office	Kemper McMaster	Field Supervisor	301 S. Park	Helena, MT 59626	10/19/94	L	Requested update on TES species
U.S. Fish & Wildlife Service - Ecological Services Office	Kemper McMaster	Field Supervisor	301 S. Park	Helena, MT 59626	11/21/94	L	No project related impacts to threatened or endangered species
U.S. Fish & Wildlife Service - Ecological Services Office	Bill Pearson		P.O. Box 25486/Denver Fed. Ctr.	Denver, CO 80225	10/19/93	P	Wetlands Inventory Info
U.S. Forest Service - Lolo National Forest	Sue Reel	Nongame Wildlife Coordinator	Bldg. 24 Fort Missoula	Missoula, MT 59801	11/16/93	P	Wetlands info
U.S. Soil Conservation Service	John Blaine		5115 S. US Hwy. 93	Missoula, MT 59801	10/15/93	P	Soil
U.S. Soil Conservation Service	John Blaine		5115 S. US Hwy. 93	Missoula, MT 59801	10/21/93	P	Wetland inventory data
Univ. of Montana - Anthropology Dept. - Archaeological Records	Erin Driskell		University of Montana	Missoula, MT 59812	7/25/94	P	Cultural resources sites
Western Montana Fair	Sam Yewusiak		Fairgrounds	Missoula, MT	8/23/94	M	Cultural Resources Information
Western Montana Fair	Sam Yewusiak		Fairgrounds	Missoula, MT	11/17/94	P	Fairgrounds vegetation



## CHAPTER 5 - LIST OF PREPARERS AND CONTRIBUTORS

### **BELL-WALKER ENGINEERS (Earth Tech)**

Gilbert C. Walker, P.E./L.S. - Principal in Charge  
Gary R. Funkhouser, P.E. - Project Manager/Transportation Engineering  
Daniel A. Thompson, P.E. - Civil Engineering  
David R. Kinzer, P.E./L.S. - Structural Engineering  
David B. Zielinski, A.I.C.P. - Project Transportation Planner  
Miguel Sandoval, E.I.T. - Transportation Modeling  
Puvada Sivaramavittal, E.I.T. - Traffic Engineering

### **SUBCONTRACTOR**

Franklin R. Muth, P.E.- Muth Consulting Engineers- Local Coordination, Data Gathering

### **DAMES & MOORE**

James Jensen - Project Manager, Environmental  
Nancy Olmsted Everingham, C.W.D. - Technical Manager/Biological Resources  
Terry Lane - Project Coordinator  
Geoffrey Pool - Land Use/Visual Resources/CAD/GIS Specialist  
Leslie Howell - Cultural Resources  
Andrew Mork, P.Geo. - Water Resources/Earth Resources/Hazardous Materials

### **SUBCONTRACTORS**

Robert T. Mott, Consulting Economist - Socioeconomic analysis  
Armando F. Balloffett, Ph.D., P.E. - Balloffett & Associates - Noise Analysis  
John R. Jaeckel, P.E. B.S. - HNTB - Air Quality Analysis  
Matthew R. Klein, E.I.T. - HNTB - Air Quality Analysis

### **CAC MEMBERS**

Doug Anderson - Manager of Southgate Mall  
Dennis Lerum - Director, Missoula Vo-Tech  
Bill Tremper - Trempers Shopping Center  
Andy Sponseller - Advocate for Open Space  
Kathy Ogren - Bitterroot Motors  
Bruce Zinne - Principal, Sentinel High School  
Ken Stoltz - University of Montana



Mark Helean - Bag O Burger  
John Williams - Bicycle Federation of America  
Elaine Smith - Neighborhood Groups  
Sam Yewusiak - Missoula County Fair Board  
Scott Beach - Beach Transportation  
Tom Nettleton - Missoula Technology & Development Center  
Bernadine Gantert - Summit Living Center  
Dale Mahlum - Retired

#### **TAC MEMBERS**

Bruce Bender, P.E. - Public Works Director, City of Missoula  
Steve King, P.E. - City Engineer, City of Missoula  
Carl Thompson - City Traffic Superintendent, City of Missoula  
Jim Carlson - Environmental Health Director, Missoula City/County Health Department  
Mike Kress - Director, Mountain Line  
Jim Weaver - District Engineer, Montana Department of Transportation

#### **CITY OF MISSOULA**

Bruce Bender, P.E. - Director of Public Works

#### **FEDERAL HIGHWAY ADMINISTRATION**

Dale Paulson - Environmental Coordinator  
Dave Miller - Planning Coordinator

#### **MONTANA DEPARTMENT OF TRANSPORTATION**

Joel M. Marshik - Manager, Environmental Services  
Karl Helvik - Environmental Services



## CHAPTER 6 - REFERENCES

### GENERAL

- Bell-Walker Engineers, Inc., 1994. Brooks/South/Russell Intersection Study, Missoula, Montana. Preliminary Draft. Bell-Walker Engineers, Boise, Idaho.
- \_\_\_\_\_, 1996. Brooks/South/Russell Intersection Study, Missoula, Montana. Traffic Analysis and Maps. Bell-Walker Engineers, Boise, Idaho.
- Bender, Bruce T., Selection of the Preferred Alternative. Correspondence dated May 2, 1996 to Gary Funkhouser, Bell-Walker Engineers, Boise, Idaho.
- Bugbee, Bruce, 1985. Inventory of Conservation Resources, Missoula County, Montana. Bruce Bugbee and Associates, Missoula, Montana.
- FHWA, 1987. Federal Highway Administration, U.S. Department of Transportation. Technical Advisory T 6640.8A. Washington, D.C., October 30, 1987.
- \_\_\_\_\_, 1993. Federal Highway Administration, U.S. Department of Transportation. Manual on Uniform Traffic Control Devices, Part 6, MUTCD, Revision 3, September 3, 1993.
- Montana Transportation Research Board, 1985. Highway Capacity Manual Special Report 209.
- Schmidt, Benjamin, 1994. Environmental Health Specialist. Missoula City-County Health Department, Missoula, Montana. Correspondence, September 13.

### LAND USE

- City of Missoula, Engineering Division, 1995. Draft Master Sidewalk Plan. Missoula, Montana.
- County of Missoula, Steering Committee 1994. Guidelines for Creating a Non-Motorized Travel Network in the Greater Missoula Area (Missoula Non-Motorized Transportation Plan). Steering Committee, Missoula, Montana.
- County of Missoula, 1985. Missoula Urban Transportation Plan, Update. Missoula, Montana.
- \_\_\_\_\_, 1990. Missoula Urban Comprehensive Plan. Missoula, Montana.
- Missoula Office of Community Development, 1988. City of Missoula Zoning Ordinance, Title 19. Missoula, Montana.
- Missoula Planning Board, 1975. A Policy Guide for Urban Growth. Missoula, Montana.
- Montana Department of Transportation, 1986. Widening and Overlay of Brooks Street. Montana Department of Transportation Design Department, Missoula, Montana.



## SOCIOECONOMICS

Bell-Walker Engineers: project description maps and data. (file 93-BMI1.511, 04/16/96)

Bureau of Economic Analysis, 1992. Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS-II). Bureau of Economic Analysis, U.S. Department of Commerce, Washington, D.C.

\_\_\_\_\_, 1993. Regional Economic Information System. Bureau of Economic Analysis, U.S. Department of Commerce, Washington D.C.

U.S. Census Bureau, 1993. 1989 and 1990 County Business Patterns on CD-ROM. U.S. Census Bureau, Washington D.C.

U.S. Census Bureau, 1995. 1992 County Business Patterns on CD-ROM. U.S. Census Bureau, Washington D.C.

Missoula County Association of Realtors, 1994. Home Buyer's Guide and Other Real Estate. Missoula County Association of Realtors, Missoula, Montana.

Missoula County Assessor, 1994. Computer printout of property assessment data on parcels in the Brooks/South/Russell project area. Missoula County Assessor's Office, Missoula, Montana.

Federal Highway Administration, 1987. Federal Highway Administration, U.S. Department of Transportation, Washington, D.C., Technical Advisory T 6640.8A.

Montana Department of Revenue, 1994. Assessment data, Montana Department of Revenue, Missoula, Montana

## NOISE

Balloffet & Associates, Inc., 1994. Noise Analysis, Brooks/South/Russell Intersection Transportation Project. Prepared for Dames & Moore, Boise, Idaho.

Balloffet & Associates, Inc., 1996. Noise Analysis Supplement, Brooks/South/Russell Intersection Transportation Project. Prepared for Dames & Moore, Boise, Idaho.

Federal Highway Administration, 1978. Highway Traffic Noise Prediction Model, FHWA-RD-77-108.

U.S. Code of Federal Regulations, Title 23, Part 772. Procedures for Abatement of Highway Traffic Noise and Construction Noise.



## HAZARDOUS MATERIALS

MDOT, 1994. Limited Hazardous Material Survey, Brooks/South/Russell Intersection for Montana Department of Transportation.

## VISUAL RESOURCES

Fenneman, Nevin M., 1931. Physiography of the Western United States. McGraw-Hill Book Company, New York.

## CULTURAL RESOURCES

Mathews, Allan, 1993. State Historic and Preservation Office. Personal communication, October, 28.

Sorenson & Company, 1989. Master Plan, Missoula County Fairgrounds. Sorenson & Company, Missoula, Montana.

Wilmoth, Stan, 1993. State Historic and Preservation Office. Personal communication, November 10.

## AIR QUALITY

HNTB Corporation, 1996. Intersection Air Quality Modeling Analysis Technical Report for the Brooks/South/Russell Intersection Transportation Improvement Project. Milwaukee, Wisconsin.

Missoula City/County Health Department, 1991. Missoula PM<sub>10</sub> Emission Inventory. Missoula, Montana.

Montana Department of Health and Environmental Sciences, 1992. 1990 Base Year Carbon Monoxide Emission Inventory: State of Montana - Missoula County. Air Quality Bureau, Helena, Montana.

U.S. Environmental Protection Agency, 1992. Guideline for Modeling Carbon Monoxide from Roadway Intersections (EPA-454/R-92-005). Office of Air Quality Planning and Standards, Technical Support Division. Research Triangle Park, North Carolina.

\_\_\_\_\_, 1992. User's Guide to CAL3QHC 2.0: A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections (EPA 454/R-92-006). Office of Air Quality Planning and Standards, Technical Support Division. Research Triangle Park, North Carolina.

U.S. Environmental Protection Agency, 1994. User's Guide to MOBILE5a (Mobile Source Emission Factor Model). Office of Mobile Sources, Emission Planning and Strategies Division, Air Quality Analysis Branch. Ann Arbor, Michigan.



## BIOLOGICAL RESOURCES

- Ball, Joseph, 1993. Director, Montana Cooperative Wildlife Research Unit, University of Montana, Missoula, Montana. Personal communication, November 5.
- Blaine, John, 1993. Soil Conservation Service, Missoula, Montana. Personal communication, October 21.
- Craig, Cory, 1993. Assistant Data Manager, Montana Natural Heritage Program, Helena, Montana. Correspondence, October 22.
- Firebaugh, John. Regional Wildlife Manager, Montana Department of Fish, Wildlife & Parks, Missoula, Montana. Correspondence (November 21, 1994) regarding no effect on wildlife and fisheries.
- Firebaugh, John. Regional Wildlife Manager, Montana Department of Fish, Wildlife & Parks, Missoula, Montana. Correspondence (April 22, 1996) regarding no effect on wildlife and fisheries for new alternatives.
- Five Valleys Audubon Society, 1993. 1992-93 Xmas Bird Count. Five Valleys Audubon Society, Missoula, Montana.
- Harris, Richard W., 1983. Arboriculture: Care of Trees, Shrubs, and Vines in the Landscape. Prentice-Hall, Inc., Englewood Cliffs, New Jersey.
- Heron, Willis, 1993. Five Valleys Audubon Society, Missoula, Montana. Personal communication, November 10.
- Hinshaw, John. Environmental Information Specialist, Montana Natural Heritage Program. Helena, Montana. Correspondence, October 26, 1994.
- Jurist, Katherine. Project Information Coordinator for Montana Natural Heritage Program. Helena, Montana. Correspondence, May 1, 1996.
- Malloy, John, 1993. Montana Cooperative Wildlife Research Unit, University of Montana, Missoula, Montana. Personal communication, November 5.
- McMaster, Kemper. Field Supervisor, Montana Field Office, U.S. Fish and Wildlife Service, U.S. Department of Interior, Ecological Services, Helena, Montana. Correspondence, November 21, 1994 regarding effects on sensitive species.
- Pearson, Bill, 1993. U.S. Fish and Wildlife Service, U.S. Department of Interior, National Wetlands Inventory, Denver, Colorado. Personal communication, October, 19.
- Reel, Sue, 1993. Lolo National Forest, Forest Service, U.S. Department of Agriculture, Missoula, Montana. Personal communication, November 16.
- Rogers, Dan, 1993, 1994. Urban Forester, Missoula City Parks and Recreation, Missoula, Montana. Personal communication, November 8, 1993, November 28, 1994.



Rogers, Dan, Beaulieu, James, Madeen, Paul, No Date. City of Missoula Parks and Recreation Department, Appendix to Missoula Municipal Code, Chapter 12.32, Standards and Specifications, Missoula, Montana.

Shelley, Kevin, 1993. U.S. Fish and Wildlife Service, U.S. Department of Interior, Kalispell, Montana. Personal communication, November 9.

Yewusiak, Sam, 1994. Western Montana Fair, Missoula, Montana. Personal communication, November 17.

## **EARTH RESOURCES**

Alt, D. and D.W. Hyndman, 1986. Roadside Geology of Montana. Mountain Press Publishing Co., Missoula, Montana.

Blaine, John, 1993. Soil Conservation Service, Missoula Field Office. Personal communication, October 15.

\_\_\_\_\_, 1993. Soil Conservation Service, Missoula Field Office. Personal communication, October 21.

Crawford, Jay, 1993. GMT. Personal communication, October 29.

McMurtrey, R.G., Konizeski, R.G., Brietkrietz, Alex, 1965. Geology and Ground-Water Resources of the Missoula Basin, Montana. Montana Bureau of Mines and Geology, Butte, Montana. Bulletin 47.

Morgan, W.F., 1986. Geological Interpretation of the Alluvial Aquifer, Missoula Basin, Montana. Senior Thesis, University of Montana, 46 pp., Missoula, Montana.

U.S. Department of Agriculture-Soil Conservation Service, 1978. General Soils Map of Montana, 1:1,000,000. Soil Conservation Service, Bozeman, Montana.

\_\_\_\_\_, and Montana State University, 1982. Soils of Montana. Montana State University, Bozeman, Montana. Bulletin 744, November.

## **SURFACE AND GROUND WATER RESOURCES**

Federal Emergency Management Agency, 1988. Flood Insurance Rate Map, Missoula County, Montana and incorporated areas. Federal Emergency Management Agency, Washington, D.C.

Geldon, A.L., 1979. Hydrogeology and Water Resources of the Missoula Basin, Montana. Masters Thesis, University of Montana. Missoula, Montana.

McMurtrey, R.G., Konizeski, R.G., Brietkrietz, Alex, 1965. Geology and Ground-Water Resources of the Missoula Basin, Montana. Montana Bureau of Mines and Geology, Butte, Montana. Bulletin 47.



Missoula City-County Health Department, 1987. Sole Source Aquifer Petition for the Missoula Valley Aquifer. Missoula, Montana.

Woessner, W.W., 1988. Missoula Valley Aquifer Study: Hydrogeology of the eastern portion of the Missoula Aquifer, Missoula County, Montana. Report, Water Development Bureau, Montana Department of Natural Resources and Conservation. Helena, Montana.

Wogsland, K., 1988. The Effect of Urban Stormwater Injection by Class V Wells on the Missoula Aquifer, Missoula, Montana. Masters Thesis, University of Montana. Missoula, Montana.

U.S. Environmental Protection Agency, 1988. Sole Source Aquifer Determination for Missoula Valley Aquifer, Missoula, Montana. Federal Register, Vol. 53, No. 109, Notices, Tuesday, June 7.



## APPENDIX A

### ALTERNATIVES DEVELOPMENT AND SCREENING PROCESS

#### **METHODS**

Each alternative was evaluated to determine their relative technical merit in resolving the traffic congestion and air quality issues. Reduction in traffic congestion (as expressed by an increased level of service) was one of the most important technical criteria for the reasonableness of the identified alternatives. The measure of reduction in traffic congestion was performed through traffic modeling. Other criteria used to evaluate the alternatives were construction cost, availability of federal funding, facility relocation or right-of-way requirements, safety issues (for bicycles, pedestrians, and vehicles), constructability or design feasibility, traffic control, and potential for environmental and community impacts.

The computer model QRSII was used for traffic modeling for each of the alternatives. The model evaluated the location of workplaces and businesses to determine the shortest time path from the predicted origin of trips to their predicted destinations. The model calculates an acceptable speed along the shortest time path, and slower speeds for those estimated vehicle trips when the path gets close to its vehicle capacity. The various paths can then be assigned a Level of Service (LOS). The model was calibrated using 1992 traffic data which was the most current data available during the 1994 analysis.

Alternatives that performed poorly, or resulted in an unacceptable LOS for the intersection (Level F), were eliminated from further consideration during the initial screening of alternatives. The model was also used to evaluate those alternatives carried forward to a more detailed level of analysis.

#### **ALTERNATIVES SCREENING PROCESS**

This section provides a brief chronology of the alternatives screening process for the project. Some of the initial alternatives identified in the public scoping process (e.g., vehicle inspection/ maintenance programs and traffic signal coordination) were dismissed immediately because they did little or nothing to improve the traffic congestion or air quality at the intersection. The remaining alternatives carried forward into a more detailed level of analysis included:

- Traffic Demand Management Alternative
- Roundabout Alternative
- System Improvements to Surrounding Arterials
- Urban Interchange Alternative
- Grade Separation Overpass Alternative
- Grade Separation Underpass Alternative
- Combination Alternative
- No Action

The grade separation alternatives and the no action alternative were carried forward into the evaluation, comparison, and selection process. All other alternatives are described further in the Alternatives Considered But Rejected section of this chapter.



The No Action Alternative, defined as "doing nothing to fulfill the purpose and need for the project", is required under the National Environmental Policy Act (NEPA) and the implementing Council of Environmental Quality (CEQ) regulations (40 CFR 1500-1508).

Due to strong public opposition to the Grade Separation Overpass or Underpass alternatives, the City eliminated these two alternatives from consideration. A peer review process of the alternatives analysis was then conducted and the following new alternatives were identified:

- Relocate All Movements on South Ave. Alternative
- Relocate East Bound Movements from South Ave. Alternative
- Relocate West Bound Movements from South Ave. Alternative
- Relocate South Ave. Left Turns Alternative (1)
- Relocate South Ave. Left Turns Alternative (2)
- Relocate South Ave. through Movements Alternative

These new alternatives were evaluated based on the following additional criteria: adherence to community goals, impacts on businesses and neighborhoods, and the potential for developing business opportunities. Several of these at grade alternatives were evaluated and dismissed by the City, the Technical Advisory Committee and area business owners. Relocate All Movements on South Ave. was evaluated and compared and carried forward into the final alternatives development. Several options were identified for relocating movements off South Ave. where new roads would be developed to facilitate traffic flow and movement. These options located west of the B/S/R intersection were each labeled as W1, W2, W3, W4, W5, W6 and W7. Those options identified east of the B/S/R intersection were labeled E1, E2, E3, E4, and E5.

## **TRAFFIC DEMAND MANAGEMENT ALTERNATIVE**

Traffic Demand Management (TDM) would attempt to reduce traffic congestion and vehicle emissions through Brooks/South/Russell by changing modes of transportation used by the public city-wide. More people would use buses, carpool, or ride bicycles which would decrease the number of single occupancy vehicles (SOVs) moving through the intersection. The 1985 Missoula Transportation Plan did not address TDM; however, a TDM program is now part of the 1995 Update of the City of Missoula's Transportation Plan.

Two specific TDM scenarios were considered. The first TDM scenario would reduce vehicle demand at the intersection by 5 percent (%) by assuming less SOVs would be driven through Brooks/South/Russell (refer to Table A-1). A 5% TDM would require the purchase of 30 buses (in addition to the 15 already in the fleet) and 175 vans, and would assume that the public would respond with increased bus ridership, use of bicycles, and carpooling (BWE, 1994). This scenario assumes that no specific improvements would be made at the intersection.

The second TDM scenario would reduce the vehicle demand by 20% by also assuming less SOV trips through Brooks/South/Russell throughout the day. The transportation mode assumptions for this scenario are also shown in Table A-1.



**TABLE A-1**  
**Transportation Mode Assumptions**

Mode	Current Modal Split*	5% Modal Split	20% Modal Split
Mass Transit (Bus/Van)	n/a	2%	6%
Carpool/Vanpool	n/a	1%	1%
Bicycle	n/a	1%	1%
Walk/Telecommute	n/a	1%	1%
Single Occupancy Vehicle (SOV)	n/a	95%	80%
<b>Total</b>	<b>n/a</b>	<b>100%</b>	<b>100%</b>

\* There is no data available on the current modal split (1994).

The 5% modal split alternative offers a realistic goal for traffic demand management; however, as a stand alone alternative, with no improvements to the intersection, the 5% modal split would result in a LOS of F, and would not reduce traffic congestion or vehicle emissions at Brooks/South/Russell. Estimates of the costs to implement the 5% modal split include \$6.5 million in capital costs for the purchase of buses and vans, and \$1.23 million in annual operating costs of the expanded fleet.

The TDM 5% modal split alternative was eliminated as a stand alone alternative because it does nothing to resolve traffic congestion or air quality problems at the intersection.

The 20% modal split alternative is a positive goal for the community to have, according to a TDM specialist consulted by the City, but realistically is not achievable in the near future. Traffic modeling revealed that the 20% modal split would not remove enough traffic from Brooks/South/Russell leaving the intersection with an LOS of F. Costs to implement this strategy would be prohibitively high and even if fully implemented would not adequately solve the traffic and air quality problems at the intersection. Also, this alternative requires commitments by local residents that could not be guaranteed in the near-term. Therefore, the 20% modal split TDM was also rejected as a stand-alone alternative.

**Facility Relocation/Right-of-Way Requirements** - There are no specific requirements to accommodate buses or other traffic demand management techniques.

**Other Environmental Impacts** - Site impacts associated with new facilities (e.g., bus barns, etc.). Subsidies may be needed for the bus program (i.e., taxes to cover local costs).



## ROUNABOUT ALTERNATIVE

The roundabout alternative was considered an important option by the members of the public attending the November 1993 scoping meeting in Missoula. This alternative offers an "at-grade" solution, which most of the public agreed was most compatible with the visual image of Missoula.

The roundabout was analyzed to relieve traffic congestion using the RODEL analysis program. None of the variety of sizes or configurations could adequately handle the traffic congestion problem without taking significant amounts of property for right-of-way from both private owners and from the county fairgrounds. For example, one configuration considered was a roundabout approximately 61 meters (200 feet) in diameter. Another was to construct one of the streets, preferably Brooks, over or under the roundabout. Roundabout options would all require additional right-of-way from the fairgrounds as well as other surrounding residential and commercial land uses.

The roundabout was eliminated from consideration because it did not provide the capacity necessary for the volume of traffic going through Brooks/South/Russell. It was not possible to incorporate all of the necessary turning movements in the roundabout design to allow it to function effectively. In addition, the amount of right-of-way acquisition and consequent socioeconomic impact would have been prohibitive.

## SYSTEM IMPROVEMENTS TO SURROUNDING ARTERIALS

System improvements to the surface street system outside of the intersection was suggested by the public in the November 1993 scoping meeting as having potential to reduce traffic at the intersection. Most of these suggestions were eliminated because they were operationally infeasible or did not meet the purpose and need of the project.

The system improvements considered were improvements on the following road segments:

- Stephens from S.W. Higgins to Mount Ave.
- Pattee Creek Drive and Ernest Ave. from Higgins to Reserve
- Add west connection to Southgate Mall on Dearborn St.
- Extension of 5<sup>th</sup>/6<sup>th</sup> couplet to Reserve St.
- South 14<sup>th</sup> Ave. and Mount Ave. from Higgins to Reserve
- Bancroft from Pattee Creek Drive to Mount Ave.
- Johnson and Schilling from Brooks to Mount
- Improve Higgins, S.W. Higgins and 39<sup>th</sup> St. from South Ave. to Reserve St.

Traffic modeling was completed using each of these system-wide improvements as an individual alternative to making improvements to the intersection. None of these improvements, as stand alone alternatives, significantly improve the traffic congestion or air quality problems at the Brooks/South/Russell. The only alternatives that had any appreciable benefit to the intersection were improvements specific to the intersection (i.e. overpass or underpass).



All of the system improvements were modeled (using available 1992 data) to determine what percentage of benefits were gained from intersection improvements versus system improvements. The results of the modeling indicated that intersection improvements would provide about 90% of the total benefit with system improvements contributing about 10% of the total benefit.

Each system improvement was then modeled with the underpass and overpass to determine if any combination of system improvements with intersection improvements would be able to contribute toward the remaining 10% of the total benefit (as indicated above). Of all of the system improvements, Higgins and Reserve Sts. provided approximately 90% of the remaining total benefit. In other words, project-wide, the intersection improvements would provide 90% of the total benefit and improvements to Higgins and Reserve would provide 9% of the total benefit. The remaining system improvements would each account for less than 1% of the total benefit and were therefore eliminated from further consideration.

Due to the results of the modeling, system improvements at Higgins and Reserve were combined with the intersection improvements (overpass or underpass) into the combination alternative. The combination alternative was carried forward through the detailed analysis.

Traffic congestion would remain at the intersection, this alternative would not solve the air quality problem in this location and would not meet the project's purpose and need.

The MDT will oversee the selection of the alternatives, as well as the final design, construction, and operation of the selected alternative. The Federal Highway Administration (FHWA) is the federal lead agency and will sign the Finding of No Significant Impact (FONSI) if so determined by the project. Funding for the improvements at the intersection may be available through the Congestion Mitigation/Air Quality (CMAQ) Program under the ISTEA (1991) (refer to Chapter 1, Project Costs and Funding).

Facility Relocation/Right-of-Way Requirements - There would likely be the removal of residences and commercial/industrial properties with this alternative.

Other Environmental Impacts - unknown impacts associated with these improvements.

## **COMBINATION ALTERNATIVE**

This alternative included constructing an overpass or underpass at the intersection combined with improvements of Higgins St./39th St. from South 5<sup>th</sup> St. to U.S. 93 and North Reserve St. from South 3<sup>rd</sup> St. to I-90. Traffic signals would be installed where appropriate to meter the flow of traffic and gain maximum effectiveness.

This alternative was eliminated from consideration because costs were determined to be prohibitive (estimated \$7.6 million in addition to the costs of the overpass or underpass), with CMAQ funding only potentially available for the overpass or underpass. Carbon monoxide (CO) concentrations for



Brooks/South/Russell showed little to no improvement when the combination improvements were modeled with the overpass and underpass.

On November 17, 1994, a coordination meeting was held between the Federal Highway Administration, the Montana Department of Transportation, the City of Missoula, the Office of Community Development, the Missoula City/County Health Department and the Consultants. It was determined that since the system improvements to Higgins/39<sup>th</sup> St. and North Reserve St. would not result in the attainment of federal air quality standards at Brooks/South/Russell for the design year (2015), these system improvements were not considered "connected and related" actions and should be considered in a separate environmental document. The Montana Department of Transportation is currently conducting a separate Environmental Assessment and design studies to improve to North Reserve St. from South 3<sup>rd</sup> St. to I-90.

Air Quality - Traffic flows would improve, thus air quality would be expected to improve in the vicinity of the intersection.

Facility Relocation/Right-of-Way Requirements - There would likely be the removal of residences and commercial/industrial properties with this alternative.

Other Environmental Impacts - Anticipated impacts include removal and disposal of waste material and noise and visual impacts. Other unknown impacts would be associated with the system-wide improvements.

## URBAN INTERCHANGE ALTERNATIVE

The idea of an urban interchange evolved from the November 1993 public scoping meeting. The engineering team developed and evaluated many different interchange options for Brooks/South/Russell with the goal of providing the same turning movements as the existing intersection. The modeled design provided partial access from South Ave. to Brooks St., while Russell St. would be closed to travel either north or south of South Ave. Closure of Russell to through traffic would be required in the vicinity of Brooks/South/Russell due to conflicts with entry/exit ramps to Brooks St.

Traffic modeling was completed and resulted in a LOS D. This alternative was eliminated from further consideration because of the high costs, failure to improve air quality (due to stopping and starting), extensive right-of-way requirements, visual impacts of the structures (i.e., overpass and ramps), and high social and economic effects on adjacent property values.

Air Quality - Traffic congestion would remain at the intersection, thus alternative would not solve the air quality problem in this location. Would not meet the project's purpose and need.

Facility Relocation/Right-of-Way Requirements - Would likely remove several residences and several commercial businesses. May also have an impact on the fairgrounds property and buildings.



Other Environmental Impacts - Visual impacts of overpass and ramps may be considered by some local residents as being uncharacteristic of urban Missoula. Noise impacts may also be of concern with this alternative. Some social and economic effects including impact on property values.

## **GRADE SEPARATION ALTERNATIVES**

### **Grade Separation - Overpass Alternative in Existing Right-of-Way**

This alternative consisted of constructing an overpass on Brooks St. over a conventional four-way approach intersection of Russell St. and South Ave. The overpass would be a through street with no turning movements at the intersection. The intersection below the overpass would be signalized.

This alternative would construct the overpass using the existing Brooks right-of-way immediately adjacent to the county fairgrounds. This alternative was eliminated from further consideration for the following reasons: a longer structure overall was required to accommodate the higher span which would affect access and road closure along Brooks; the amount of right-of-way acquisition would be prohibitive; and design difficulties were foreseen in placing the support members for the structure.

### **Grade Separation Overpass Alternative**

This alternative would consist of building a structure on Brooks St. over a conventional intersection of Russell St. and South Ave. The overpass would be a through street with no turning movements at the intersection. The intersection below the overpass would be signalized.

This overpass alternative is derived from a second design option of the preceding alternative, that is to shift the centerline alignment to the north as much as 15.2 meters (50 feet) to avoid right-of-way take of the county fairgrounds.

This alternative was considered a viable alternative that would relieve the traffic congestion and air quality (i.e., carbon monoxide) problems at Brooks/South/Russell. It would be expected to keep the city in compliance with federal carbon monoxide limits through the year 2015, improve safety, provide infrastructure for bike/pedestrians, and relieve traffic congestion.

The grade separation overpass alternative was presented on December 15, 1994 in a public workshop in Missoula as one of three feasible alternatives (along with the Grade Separation Underpass and No Action). Public opposition to the overpass and underpass was substantial, with over 76% of the 273 commenters preferring the No Action alternative. An additional 321 comments were received in the mail, with 94% preferring the No Action alternative. A petition was submitted against the overpass alternative, signed by 98 residents of the Missoula Manor, an apartment building for elderly residents located in the area. The workshop also provided a forum for a local



protest group, Pass on the Overpass, who collected signatures on a petition to encourage the city not to choose the overpass alternative.

Citizens were primarily concerned with the economic impact of the overpass (or underpass), as well as the visual intrusion an overpass structure would have on the character of the community. Many felt that the cost of the Overpass (approximately \$7.5 million) and the Underpass (approximately \$8 million) was prohibitive. Other expressed concern over the possible use of federal tax money, which they viewed as their dollars, being used for a project that was largely unwanted by the majority of the community.

This alternative was eliminated by the City due to strong opposition by the public.

Air Quality - Traffic flows would improve, thus air quality would be expected to improve in the vicinity of the intersection. Would meet the project's purpose and need.

Facility Relocation/Right-of-Way Requirements - Would likely remove a couple of residences and at least one commercial business.

Other Environmental Impacts - Visual impacts of overpass may be considered by some local residents as being uncharacteristic of urban Missoula. Noise impacts may also be of concern with this alternative.

Some social and economic impacts expected.

#### **Grade Separation Underpass Alternative**

This alternative involved an underpass on Brooks St. using the existing easement. Traffic flows on Reserve and South would continue above the underpass with a signalized intersection.

Right-of-way requirements would use the existing right-of-way easement. This alternative would likely impact two residential properties (doing business as commercial properties) and four commercial properties. The benefits of the underpass are the similar to the overpass, except for less improvement in air quality. Environmental concerns include the removal and disposal of waste material, groundwater and sediment control into the Missoula Aquifer, drainage, socioeconomic impacts, and utility relocations.

This alternative was also carried forward as a viable alternative into the public workshop on December 15, 1994 (see discussion above). This alternative was also eliminated by the City due to strong opposition by the public.

Air Quality - Traffic flows would improve, thus air quality would be expected to improve in the vicinity of the intersection.



Facility Relocation/Right-of-Way Requirements - Would likely remove a couple of residences and at least one commercial business.

Other Environmental Impacts - Removal and disposal of waste material may be of some concern for groundwater and sediment control. Some social and economic impacts expected.

#### Relocate South Avenue Alternatives

A series of at grade alternatives involving South Ave. were considered but eliminated during the phase of work following the rejection of the grade separation alternatives by the public. The South Ave. Realignment alternatives that were eliminated include:

- Relocate East Bound Movements from South Ave. Alternative
- Relocate South Ave. Left Turns Alternative (1)
- Relocate South Ave. Left Turns Alternative (2)



# SITE ASSESSMENT REPORT ONE MILE

## DETAILS

### PROPERTY AND THE ADJACENT AREA (within 1/8 mile)

VISTA Address*:	BURGER KING 2405 BROOKS ST MISSOULA, MT 59801	VISTA ID#:	4955550
		Distance/Direction:	0.00 MI / ADJACENT
		Plotted as:	Point
STATE LUST - State Leaking Underground Storage Tank / SRC# 2427		Agency ID:	3-210677

Map ID

1A

Agency Address:	BURGER KING 2405 BROOKS ST MISSOULA, MT
Tank Status:	NOT AVAILABLE
Media Affected:	NOT AVAILABLE
Leak Cause:	UNAVAILABLE
Remedial Action:	NOT AVAILABLE
Remedial Status 1:	NOT AVAILABLE
Remedial Status 2:	NOT AVAILABLE
Fields Not Reported:	Discovery Date, Substance, Quantity (Units), Leak Source

STATE UST - State Underground Storage Tank / SRC# 2261		Agency ID:	3-210677
Agency Address:	BURGER KING 2405 BROOKS ST MISSOULA, MT		
Underground Tanks:	NOT REPORTED		
Aboveground Tanks:	NOT REPORTED		
Tanks Removed:	NOT REPORTED		
Tank ID:	NOT REPORTED	Tank Status:	REMOVED
Tank Contents:	NOT REPORTED	Leak Monitoring:	NOT AVAILABLE
Tank Age:	NOT REPORTED	Tank Piping:	NOT AVAILABLE
Tank Size (Units):	NOT REPORTED (NOT AVAILABLE)	Tank Material:	NOT AVAILABLE

VISTA Address*:	U OF M - COLLEGE OF TECHNOLOGY 3639 SOUTH AVE WEST MISSOULA, MT 59801	VISTA ID#:	5385737
		Distance/Direction:	0.00 MI / ADJACENT
		Plotted as:	Point
RCRA-SmGen - RCRA-Small Generator / SRC# 2685		EPA ID:	MTD982647828

Map ID

1B

Agency Address:	SAME AS ABOVE
Generator Class:	GENERATORS WHO GENERATE LESS THAN 100 KG/MONTH OF NON-ACUTELY HAZARDOUS WASTE.



\* VISTA address includes enhanced city and ZIP.

For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

Report ID: 101564-001

Date of Report: April 8, 1996

Version 2.4.1

Page #12



**PROPERTY AND THE ADJACENT AREA (within 1/8 mile) CONT.**

<b>VISTA Address*</b>	<b>MISSOULA VOCATIONAL TECH CENTER</b>	<b>VISTA ID#</b>	456016
	3639 S AVE W	<b>Distance/Direction</b>	0.00 MI / ADJACENT
	MISSOULA, MT 59801	<b>Plotted as:</b>	Point
		<b>Agency ID:</b>	3-206941

Map ID

**1B**

**STATE LUST - State Leaking Underground Storage Tank / SRC# 2427**

Agency Address: MISSOULA VOCATIONAL TECH CENTER  
3639 S AVE W  
MISSOULA, MT  
NOT AVAILABLE  
Tank Status: NOT AVAILABLE  
Media Affected: NOT AVAILABLE  
Leak Cause: UNAVAILABLE  
Remedial Action: NOT AVAILABLE  
Remedial Status 1: NOT AVAILABLE  
Remedial Status 2: NOT AVAILABLE  
Fields Not Reported: Discovery Date, Substance, Quantity (Units), Leak Source

**STATE UST - State Underground Storage Tank / SRC# 2261** Agency ID: 3-206941

Agency Address: MISSOULA VOCATIONAL TECH CENTER  
3639 S AVE W  
MISSOULA, MT  
2  
Underground Tanks: NOT REPORTED  
Aboveground Tanks: NOT REPORTED  
Tanks Removed: NOT REPORTED  
Tank ID: NOT REPORTED Tank Status: NOT AVAILABLE  
Tank Contents: NOT REPORTED Leak Monitoring: NOT AVAILABLE  
Tank Age: NOT REPORTED Tank Piping: NOT AVAILABLE  
Tank Size (Units): NOT REPORTED (NOT AVAILABLE) Tank Material: NOT AVAILABLE

<b>VISTA Address*</b>	<b>MISSOULA VO-TECH CENTER</b>	<b>VISTA ID#</b>	3405052
	3639 SOUTH AVENUE. WEST	<b>Distance/Direction</b>	0.00 MI / ADJACENT
	MISSOULA, MT 59801	<b>Plotted as:</b>	Point
		<b>EPA ID:</b>	MTD982647828

Map ID

**1B**

**CERCLIS / SRC# 2739**

Agency Address: SAME AS ABOVE  
NPL Status: NOT A PROPOSED, CURRENT, OR DELETED NPL SITE  
Site Ownership: COUNTY OWNED  
Lead Agency: NO DETERMINATION  
Site Description: ENGINE REPAIRS ARE CONDUCTED AT THE MISSOULA VO-TECH CENTER LOCATED AT 3629 SO. AVE. WEST. HAZARDOUS WASTES ARE GENERATED FROM THIS MAINTENANCE OPERATION.  
Event Type: DISCOVERY Lead Agency: STATE, FUND FINANCED Event Status: UNKNOWN Start Date: NOT REPORTED Completion Date: AUGUST 9, 1989  
PRELIMINARY ASSESSMENT STATE, FUND FINANCED NO FURTHER REMEDIAL ACTION PLANNED NOT REPORTED OCTOBER 2, 1989

<b>VISTA Address*</b>	<b>BROOKS AVENUE DAIRY QUEEN</b>	<b>VISTA ID#</b>	5344036
	2515 BROOKS	<b>Distance/Direction</b>	0.03 MI / SW
	MISSOULA, MT 59801	<b>Plotted as:</b>	Point
		<b>Agency ID:</b>	3-211912

Map ID

**2**

**STATE UST - State Underground Storage Tank / SRC# 2261**

Agency Address: BROOKS AVENUE DAIRY QUEEN  
2515 BROOKS  
MISSOULA, MT  
NOT REPORTED  
Underground Tanks: NOT REPORTED  
Aboveground Tanks: NOT REPORTED  
Tanks Removed: NOT REPORTED



**PROPERTY AND THE ADJACENT AREA (within 1/8 mile) CONT.**

Tank ID:	NOT REPORTED	Tank Status:	REMOVED
Tank Contents:	NOT REPORTED	Leak Monitoring:	NOT AVAILABLE
Tank Age:	NOT REPORTED	Tank Piping:	NOT AVAILABLE
Tank Size (Units):	NOT REPORTED (NOT AVAILABLE)	Tank Material:	NOT AVAILABLE

VISTA Address*:	BROOKS AVENUE DAIRY QUEEN DOMESTIC WELL 2515 BROOKS MISSOULA, MT	VISTA ID#:	2286221
		Distance/Direction:	0.03 MI / SW
		Plotted as:	Point

Map ID

2

STATE LUST - State Leaking Underground Storage Tank / SRC# 2427	Agency ID:	3-211912
---	------------	----------

Agency Address:	SAME AS ABOVE
Tank Status:	NOT AVAILABLE
Media Affected:	NOT AVAILABLE
Leak Cause:	UNAVAILABLE
Remedial Action:	NOT AVAILABLE
Remedial Status 1:	NOT AVAILABLE
Remedial Status 2:	NOT AVAILABLE
Fields Not Reported:	Discovery Date, Substance, Quantity (Units), Leak Source

VISTA Address*:	TLC CAR WASH INC 2500 BROOKS STREET MISSOULA, MT 59801	VISTA ID#:	2279344
		Distance/Direction:	0.03 MI / SW
		Plotted as:	Point

Map ID

2

STATE UST - State Underground Storage Tank / SRC# 2261	Agency ID:	3-210902
--	------------	----------

Agency Address:	TLC CAR WASH INC 2500 BROOKS STREET MISSOULA, MT		
Underground Tanks:	3		
Aboveground Tanks:	NOT REPORTED		
Tanks Removed:	NOT REPORTED		
Tank ID:	NOT REPORTED	Tank Status:	NOT AVAILABLE
Tank Contents:	NOT REPORTED	Leak Monitoring:	NOT AVAILABLE
Tank Age:	NOT REPORTED	Tank Piping:	NOT AVAILABLE
Tank Size (Units):	NOT REPORTED (NOT AVAILABLE)	Tank Material:	NOT AVAILABLE

**SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)**

VISTA Address*:	CENEX SELF-SERVE-MISSOULA 1108 W. CENTRAL MISSOULA, MT 59801	VISTA ID#:	2279887
		Distance/Direction:	0.13 MI / NE
		Plotted as:	Point

Map ID

3A

STATE LUST - State Leaking Underground Storage Tank / SRC# 2427	Agency ID:	3-208907
---	------------	----------

Agency Address:	CENEX SELF-SERVE-MISSOULA 1108 W. CENTRAL MISSOULA, MT
Tank Status:	NOT AVAILABLE
Media Affected:	NOT AVAILABLE
Leak Cause:	UNAVAILABLE
Remedial Action:	NOT AVAILABLE
Remedial Status 1:	NOT AVAILABLE
Remedial Status 2:	NOT AVAILABLE
Fields Not Reported:	Discovery Date, Substance, Quantity (Units), Leak Source



\* VISTA address includes enhanced city and ZIP.

For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

Report ID: 101564-001

Version 2.4.1

Date of Report: April 8, 1996

Page #14



**SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile) CONT.**

<b>STATE LUST - State Leaking Underground Storage Tank / SRC# 2427</b>	<b>Agency ID:</b>	<b>3-208907</b>
--	-------------------	-----------------

<b>Agency Address:</b>	CENEX SELF-SERVE-MISSOULA 1108 W. CENTRAL MISSOULA, MT
<b>Tank Status:</b>	NOT AVAILABLE
<b>Media Affected:</b>	NOT AVAILABLE
<b>Leak Cause:</b>	UNAVAILABLE
<b>Remedial Action:</b>	NOT AVAILABLE
<b>Remedial Status 1:</b>	NOT AVAILABLE
<b>Remedial Status 2:</b>	NOT AVAILABLE
<b>Fields Not Reported:</b>	Discovery Date, Substance, Quantity (Units), Leak Source

3A

<b>STATE UST - State Underground Storage Tank / SRC# 2261</b>	<b>Agency ID:</b>	<b>3-208907</b>
---	-------------------	-----------------

<b>Agency Address:</b>	CENEX SELF-SERVE-MISSOULA 1108 W. CENTRAL MISSOULA, MT		
<b>Underground Tanks:</b>	3		
<b>Aboveground Tanks:</b>	NOT REPORTED		
<b>Tanks Removed:</b>	NOT REPORTED		
<b>Tank ID:</b>	NOT REPORTED	<b>Tank Status:</b>	NOT AVAILABLE
<b>Tank Contents:</b>	NOT REPORTED	<b>Leak Monitoring:</b>	NOT AVAILABLE
<b>Tank Age:</b>	NOT REPORTED	<b>Tank Piping:</b>	NOT AVAILABLE
<b>Tank Size (Units):</b>	NOT REPORTED (NOT AVAILABLE)	<b>Tank Material:</b>	NOT AVAILABLE

<b>VISTA Address*</b>	P C WOEHR INC. 2130 BROOKS STREET MISSOULA, MT 59801	<b>VISTA ID#</b>	4955549
		<b>Distance/Direction:</b>	0.18 MI / NE
		<b>Plotted as:</b>	Point

Map ID

3B

<b>STATE UST - State Underground Storage Tank / SRC# 2261</b>	<b>Agency ID:</b>	<b>3-204112</b>
---	-------------------	-----------------

<b>Agency Address:</b>	P C WOEHR INC. 2130 BROOKS STREET MISSOULA, MT		
<b>Underground Tanks:</b>	4		
<b>Aboveground Tanks:</b>	NOT REPORTED		
<b>Tanks Removed:</b>	NOT REPORTED		
<b>Tank ID:</b>	NOT REPORTED	<b>Tank Status:</b>	NOT AVAILABLE
<b>Tank Contents:</b>	NOT REPORTED	<b>Leak Monitoring:</b>	NOT AVAILABLE
<b>Tank Age:</b>	NOT REPORTED	<b>Tank Piping:</b>	NOT AVAILABLE
<b>Tank Size (Units):</b>	NOT REPORTED (NOT AVAILABLE)	<b>Tank Material:</b>	NOT AVAILABLE

<b>VISTA Address*</b>	U.S. POST OFFICE 1100 W KENT MISSOULA, MT 59801	<b>VISTA ID#</b>	2281748
		<b>Distance/Direction:</b>	0.19 MI / NE
		<b>Plotted as:</b>	Point

Map ID

3C

<b>STATE UST - State Underground Storage Tank / SRC# 2261</b>	<b>Agency ID:</b>	<b>3-202805</b>
---	-------------------	-----------------

<b>Agency Address:</b>	U.S. POST OFFICE 1100 W KENT MISSOULA, MT		
<b>Underground Tanks:</b>	1		
<b>Aboveground Tanks:</b>	NOT REPORTED		
<b>Tanks Removed:</b>	NOT REPORTED		
<b>Tank ID:</b>	NOT REPORTED	<b>Tank Status:</b>	NOT AVAILABLE
<b>Tank Contents:</b>	NOT REPORTED	<b>Leak Monitoring:</b>	NOT AVAILABLE
<b>Tank Age:</b>	NOT REPORTED	<b>Tank Piping:</b>	NOT AVAILABLE
<b>Tank Size (Units):</b>	NOT REPORTED (NOT AVAILABLE)	<b>Tank Material:</b>	NOT AVAILABLE



\* VISTA address includes enhanced city and ZIP.

For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

Report ID: 101564-001

Version 2.4.1

Date of Report: April 8, 1996

Page #15



**SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile) CONT.**

VISTA Address*	<b>BROOKS STREET SINCLAIR</b> 2650 BROOKS MISSOULA, MT 59801	VISTA ID#:	2277496
		Distance/Direction:	0.14 MI / SW
		Plotted as:	Point

Map ID

**4A**

STATE UST - State Underground Storage Tank / SRC# 2261	Agency ID:	3-205229
--	------------	----------

Agency Address: **BROOKS STREET SINCLAIR**

2650 BROOKS

MISSOULA, MT

Underground Tanks:

NOT REPORTED

Aboveground Tanks:

NOT REPORTED

Tanks Removed:

NOT REPORTED

Tank ID: NOT REPORTED

Tank Status: REMOVED

Tank Contents: NOT REPORTED

Leak Monitoring: NOT AVAILABLE

Tank Age: NOT REPORTED

Tank Piping: NOT AVAILABLE

Tank Size (Units): NOT REPORTED (NOT AVAILABLE)

Tank Material: NOT AVAILABLE

VISTA Address*	<b>MISSOULA NISSAN INC</b> 2715 BROOKS MISSOULA, MT 59801	VISTA ID#:	4953851
		Distance/Direction:	0.21 MI / SW
		Plotted as:	Point

Map ID

**4B**

STATE UST - State Underground Storage Tank / SRC# 2261	Agency ID:	3-203955
--	------------	----------

Agency Address: **MISSOULA NISSAN INC**

2715 BROOKS

MISSOULA, MT

Underground Tanks:

NOT REPORTED

Aboveground Tanks:

NOT REPORTED

Tanks Removed:

NOT REPORTED

Tank ID: NOT REPORTED

Tank Status: REMOVED

Tank Contents: NOT REPORTED

Leak Monitoring: NOT AVAILABLE

Tank Age: NOT REPORTED

Tank Piping: NOT AVAILABLE

Tank Size (Units): NOT REPORTED (NOT AVAILABLE)

Tank Material: NOT AVAILABLE

VISTA Address*	<b>VILLAGE 1-HOUR CLEANERS</b> 1004 SOUTH AVENUE WEST MISSOULA, MT 59801	VISTA ID#:	453854
		Distance/Direction:	0.17 MI / E
		Plotted as:	Point

Map ID

**5A**

RCRA-SmGen - RCRA-Small Generator / SRC# 2685	EPA ID:	MTD981548472
---	---------	--------------

Agency Address: **SAME AS ABOVE**

Generator Class: **GENERATORS WHO GENERATE 100 KG/MONTH BUT LESS THAN 1000 KG/MONTH OF NON-ACUTELY HAZARDOUS WASTE**

VISTA Address*	<b>MONTANA POWER CO - MISSOULA</b> DIVISION 1903 RUSSELL MISSOULA, MT 59801	VISTA ID#:	3403986
		Distance/Direction:	0.23 MI / N
		Plotted as:	Point

Map ID

**6**

RCRA-SmGen - RCRA-Small Generator / SRC# 2685	EPA ID:	MTD981545072
---	---------	--------------

Agency Address: **SAME AS ABOVE**

Generator Class: **GENERATORS WHO GENERATE LESS THAN 100 KG/MONTH OF NON-ACUTELY HAZARDOUS WASTE.**



\* VISTA address includes enhanced city and ZIP.

For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

Report ID: 101564-001

Date of Report: April 8, 1996

Version 2.4.1

Page #16



# SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile) CONT.

VISTA Address**:	MPC SERVICE CENTER 1900 RUSSELL MISSOULA, MT 59801	VISTA ID#:	2284228
		Distance/Direction:	0.24 MI / N
		Plotted as:	Point

Map ID

6

STATE LUST - State Leaking Underground Storage Tank / SRC# 2427	Agency ID:	3-201182
---	------------	----------

Agency Address: MPC SERVICE CENTER  
1900 RUSSELL  
MISSOULA, MT  
NOT AVAILABLE

Tank Status: NOT AVAILABLE

Media Affected: NOT AVAILABLE

Leak Cause: UNAVAILABLE

Remedial Action: NOT AVAILABLE

Remedial Status 1: NOT AVAILABLE

Remedial Status 2: NOT AVAILABLE

Fields Not Reported: Discovery Date, Substance, Quantity (Units), Leak Source

STATE UST - State Underground Storage Tank / SRC# 2261	Agency ID:	3-201182
--	------------	----------

Agency Address: MPC SERVICE CENTER  
1900 RUSSELL  
MISSOULA, MT  
2

Underground Tanks: NOT REPORTED

Aboveground Tanks: NOT REPORTED

Tanks Removed: NOT REPORTED

Tank ID: NOT REPORTED Tank Status: NOT AVAILABLE

Tank Contents: NOT REPORTED Leak Monitoring: NOT AVAILABLE

Tank Age: NOT REPORTED Tank Piping: NOT AVAILABLE

Tank Size (Units): NOT REPORTED (NOT AVAILABLE) Tank Material: NOT AVAILABLE

VISTA Address**:	OPPORTUNITY RESOURCES INC. 2821 RUSSELL MISSOULA, MT 59801	VISTA ID#:	4868674
		Distance/Direction:	0.24 MI / S
		Plotted as:	Point

Map ID

7

RCRA-SmGen - RCRA-Small Generator / SRC# 2685	EPA ID:	MT0000130328
---	---------	--------------

Agency Address: SAME AS ABOVE

Generator Class: GENERATORS WHO GENERATE LESS THAN 100 KG/MONTH OF NON-ACUTELY HAZARDOUS WASTE.

# SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)

VISTA Address**:	SENTINEL HIGH SCHOOL 901 S AVE W MISSOULA, MT 59801	VISTA ID#:	2284991
		Distance/Direction:	0.26 MI / E
		Plotted as:	Point

Map ID

5

STATE UST - State Underground Storage Tank / SRC# 2261	Agency ID:	3-206942
--	------------	----------

Agency Address: SENTINEL HIGH SCHOOL  
901 S AVE W  
MISSOULA, MT  
NOT REPORTED

Underground Tanks: NOT REPORTED

Aboveground Tanks: NOT REPORTED

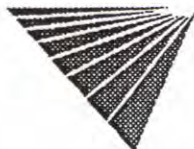
Tanks Removed: NOT REPORTED

Tank ID: NOT REPORTED Tank Status: REMOVED

Tank Contents: NOT REPORTED Leak Monitoring: NOT AVAILABLE

Tank Age: NOT REPORTED Tank Piping: NOT AVAILABLE

Tank Size (Units): NOT REPORTED (NOT AVAILABLE) Tank Material: NOT AVAILABLE



\* VISTA address includes enhanced city and ZIP.

For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

Report ID: 101564-001

Date of Report: April 8, 1996

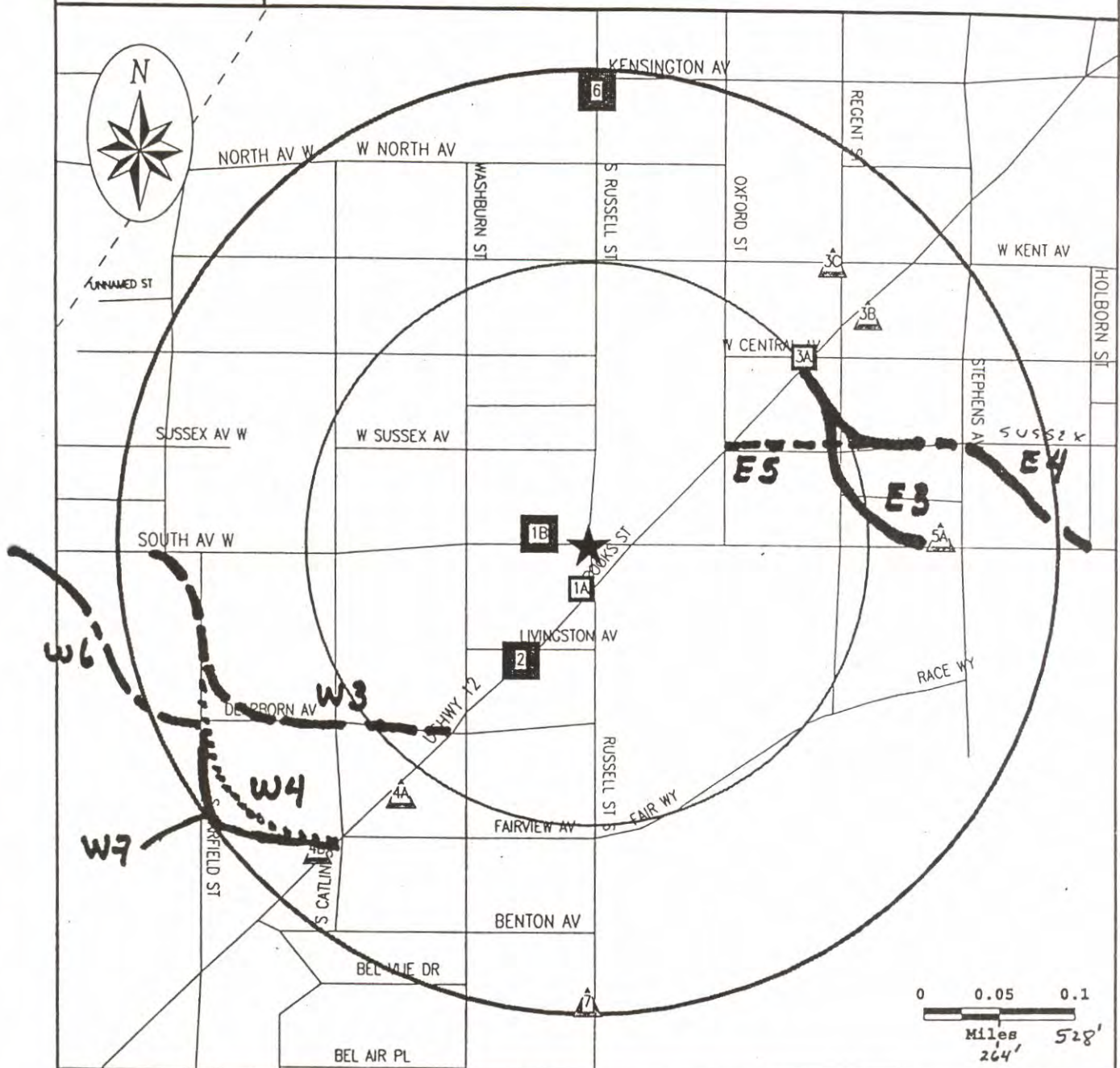
Version 2.4.1

Page #17



# SITE ASSESSMENT REPORT ONE MILE

## Map of Sites within Quarter Mile



Subject Site	Category:	A	B	C	D
★	Databases Searched to:	1 mi.	1 mi.	1 mi.	1 mi.
	Single Sites	◆	■	▲	○
	Multiple Sites	◆◆	■■	▲▲	○○
Roads Highways Railroads Rivers or Water Bodies Utilities		NPL, SPL, SCL, TSD	CERCLIS, LUST, SWLF	UST, GENERATORS	ERNS

$$637' \times \frac{20 \text{ units}}{528' \text{ ft}} = 24 \text{ units.}$$

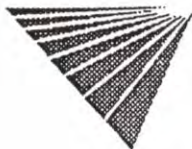


# SITE ASSESSMENT REPORT ONE MILE

## SITE INVENTORY

MAP ID	PROPERTY AND THE ADJACENT AREA (within 1/8 mile)	A				B			C		D	VISTA ID DISTANCE DIRECTION
		NPL	TSD	SPL	SCL	CERCLIS	LUST	SWLF	UST	LG GEN	SM GEN	
1A	BURGER KING 2405 BROOKS ST MISSOULA, MT 59801						X		X			4955550 0.00 MI ADJACENT
1B	U OF M - COLLEGE OF TECHNOLOGY 3639 SOUTH AVE WEST MISSOULA, MT 59801									X		5385737 0.00 MI ADJACENT
1B	MISSOULA VOCATIONAL TECH CENTER 3639 S AVE W MISSOULA, MT 59801						X		X			456016 0.00 MI ADJACENT
1B	MISSOULA VO-TECH CENTER 3639 SOUTH AVENUE. WEST MISSOULA, MT 59801					X						3405052 0.00 MI ADJACENT
2	BROOKS AVENUE DAIRY QUEEN 2515 BROOKS MISSOULA, MT 59801								X			5344036 0.03 MI SW
2	BROOKS AVENUE DAIRY QUEEN DOMESTIC WELL 2515 BROOKS MISSOULA, MT						X					2286221 0.03 MI SW
2	TLC CAR WASH INC 2500 BROOKS STREET MISSOULA, MT 59801								X			2279344 0.03 MI SW

MAP ID	SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)	A				B			C		D	VISTA ID DISTANCE DIRECTION
		NPL	TSD	SPL	SCL	CERCLIS	LUST	SWLF	UST	LG GEN	SM GEN	
3A	CENEX SELF-SERVE-MISSOULA 1108 W. CENTRAL MISSOULA, MT 59801						X		X			2279887 0.13 MI NE
3B	P C WOHR INC. 2130 BROOKS STREET MISSOULA, MT 59801								X			4955549 0.18 MI NE
3C	U.S. POST OFFICE 1100 W KENT MISSOULA, MT 59801								X			2281748 0.19 MI NE
4A	BROOKS STREET SINCLAIR 2650 BROOKS MISSOULA, MT 59801								X			2277496 0.14 MI SW
4B	MISSOULA NISSAN INC 2715 BROOKS MISSOULA, MT 59801								X			4953851 0.21 MI SW



X = search criteria; • = tag-along (beyond search criteria).

For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

Report ID: 101564-001

Date of Report: April 8, 1996

Version 2.4.1

Page #5