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1977

TRANSPORTATION IMPROVEMENT PROGRAM

for the

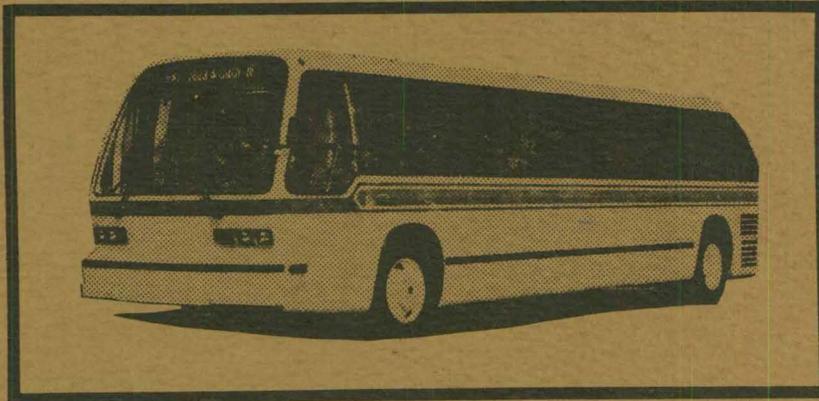
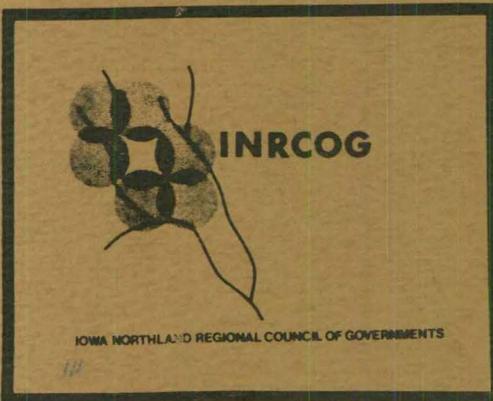
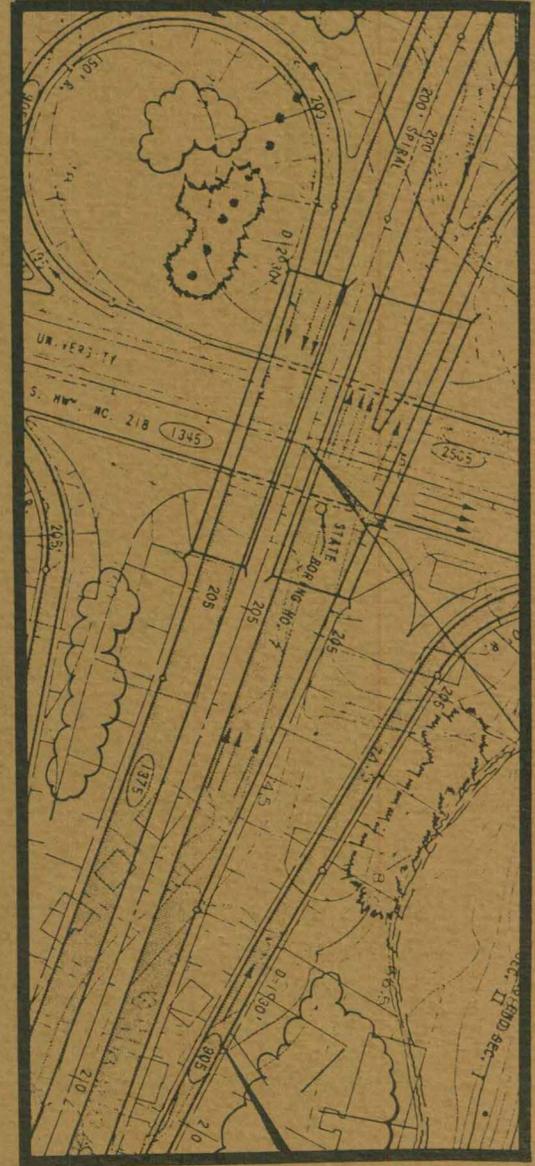
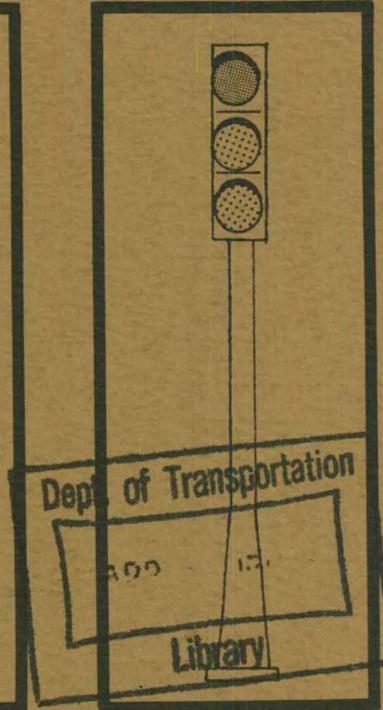
WATERLOO

METROPOLITAN

AREA

JULY

1977



FY 1978 ANNUAL ELEMENT & 1979 - 1982

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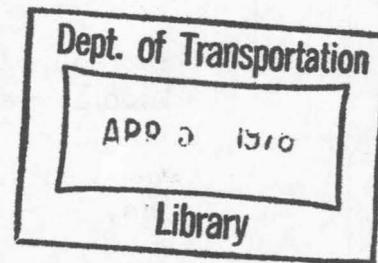
1977 Introduction

The Annual Update of the Transportation Improvement Program for the Waterloo Transportation Study has been prepared in accordance with the rules and regulations of the September 17, 1975, Federal Register. The program, which was initiated on July 1, 1976, included long-range highway improvements and short-range highway and transit improvements. The short-range transportation improvements were identified in the Transportation Systems Management element of the program.

The updated Transportation Improvement Program (TIP) is similar in format to the original TIP. The program includes a listing of the Technical Committee and Policy Board members, the Updated Project Priorities, the 1990 Transportation Plan, 1978-1982 Highway Programs with 1977 Accomplishments, and the 1978-1982 Transportation Systems Management Element.

Contents

- Members--Transportation Policy Board, Technical Committee, and Transit Board
- Transportation Planning Structure
- 1990 Highway System Plan
- Highway Project Priorities
- Merging of Long-Range and TSM Elements into the TIP
- Street and Highway FY 1978-1982 Program with FY 1978 Annual Element
- Traffic-Related TSM Projects
- Transit Program FY 1978 Annual Element and FY 1979-1982
 - Operating Program
 - Capital Program



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Iowa Department of Transportation

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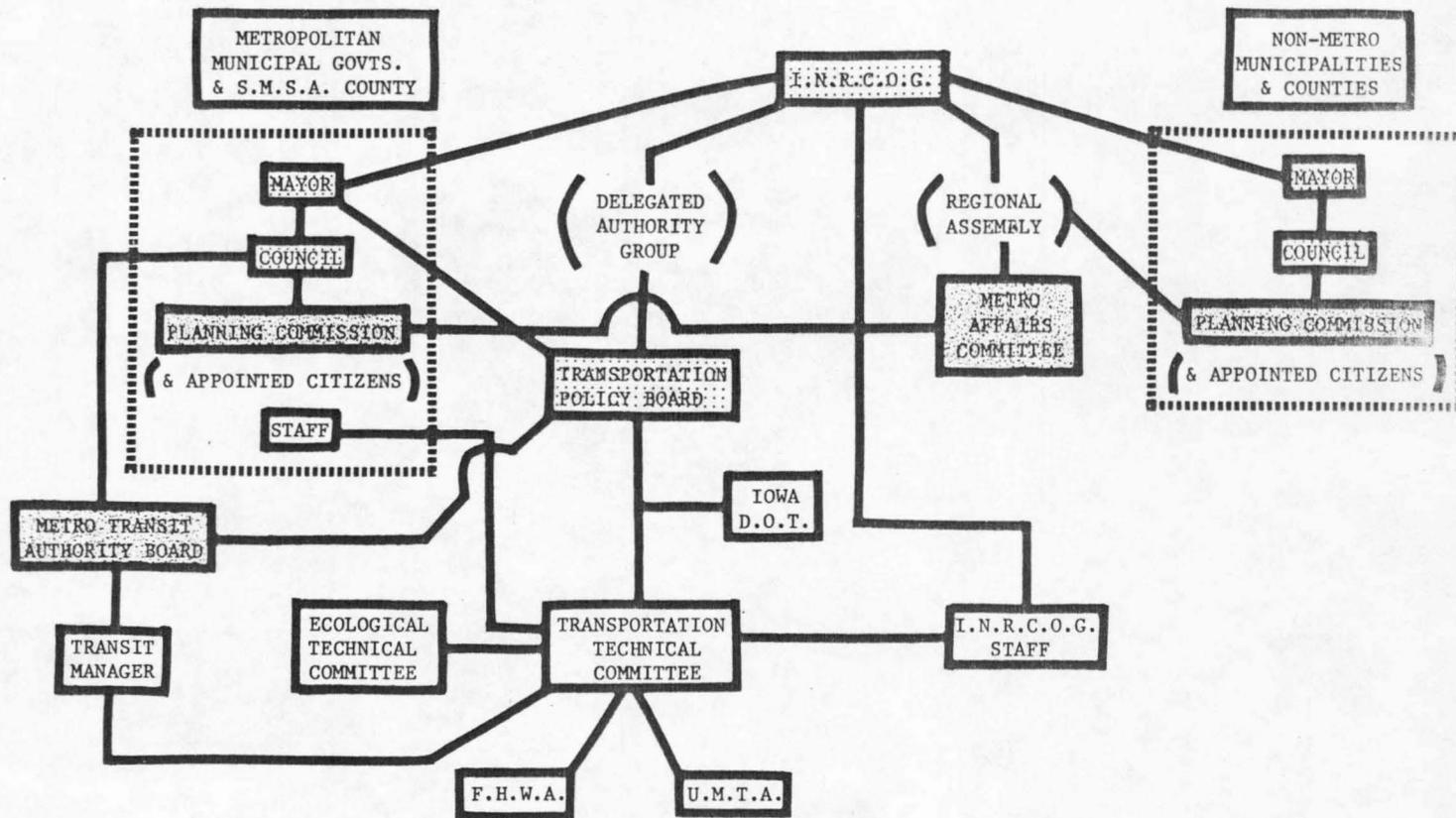
CEDAR FALLS

Wylie Anderson

H. Harold Jensen

Harold M. Jensen

Kenneth Tewalt



TRANSPORTATION PLANNING
STRUCTURE

PLANNING INPUTS

- Local Elected Officials
- Citizens

PROJECT PRIORITIES
UPDATED JUNE 1977

Priority	Project Description	From	To	Type	Year in Prog.* (FY)
1	Waterloo-Cedar Falls Intercity Freeway	Frwy. 520	U.S. 63	Constr.	'81 (R), '82 (G)
2	Iowa 57	Iowa 58	U.S. 20	4-Lane Reconstr.	'78 (C)
3	U.S. 63	Donald St.	Dunkerton Rd.	4-Lane Reconstr.	NP
4	Hackett Road	U.S. 63	U.S. 20	Constr.	'80 R (P), NP (P)
5	Freeway 518	Frwy. 520	U.S. 20	Constr.	NP
6	U.S. 218 Relocated	Frwy. 520	U.S. 218	Constr.	'80 G, '81 (C)
7	Ridgeway Avenue	Iowa 58	U.S. 63	4-Lane Reconstr.	'78 (C), (W'100)
8	Iowa 281	Idaho St.	E. Urban Line	2-Lane Widening & Resurf.	'80 (R) (C)
9	Gilbert Dr./Trail Ave. Connection	Gilbert Dr.	Trail Ave.	Constr.	'80 (G), '81 (C)
10	Iowa 412 Connection	Fourth Street	U.S. 63	Constr.	NP
11	Sixth Street Bridge	Cedar River		Constr.	'80 (C)
12	Viking Road Extension	U.S. 63	Frwy. 518	Constr.	NP
13	Mulberry Street Improvement	Broadway Conn.	Franklin Conn.	Reconstr.	NP
14	I-380 Interchange Connection	McCoy Road	Gilbertville Rd.	Constr.	'80 (G), '81 (C)
15	Wagner Road	U.S. 20	N. Urban Line	Reconstr.	'78 (C)
16	Hammond Avenue Extension	Iowa 412	Orange Road	Constr.	'79 (C)
17	Cedar Heights/Deere Road Conn.	Cedar Heights	Deere Road	Constr.	NP
18	Green Hill Road/Sager Avenue Extension	Iowa 57	E. City Limits	Constr.	NP
19	Orchard Drive/Viking Road Conn.	Orchard Drive	Viking Road	Constr.	NP
20	Shaulis Road Conn.	Ansborough	Iowa 21	Constr.	NP

* This statement of priorities represents an evaluation of the metropolitan system. It is assumed that the construction of statewide projects, i.e., Freeway 520 and portions of 518, are evaluated and programmed on a statewide basis and not intended to satisfy local system deficiencies. Also, improvements such as resurfacing and replacement of structures are only included where such reconstruction projects will have a complimentary impact on the proposed new construction projects within the metropolitan transportation system.

C = Pave (or const.)
G = Grade & Drain
R = Right of Way Acquisition
(P) = Part of Project
NP = Not Currently Programmed
E = Engineering

MERGING OF THE LONG-RANGE ELEMENT AND TSM ELEMENT INTO THE IMPROVEMENT PROGRAM

Metropolitan highway system priorities have previously been established primarily upon their degree of impact toward relieving deficiencies on the 1990 Plan network. Resultant project programming has reflected the established priorities contingent upon the time frame necessary for project development and funding availability during the program period.

The additional considerations of TSM transit and traffic-related projects has not substantially changed the aforementioned process, inasmuch as funding for transit improvements has been available from separate State and Federal sources and has not created an undue burden on local match availability. Additionally, TSM projects identified within the program are of a minimal capital investment nature, and have little substantial affect upon the programming of major street and highway development or redevelopment projects in the metro area.

As a result, the Transportation Improvement Program reflects the aggregation of:

- Long-range projects based on projected 1990 deficiencies, as recommended by the Transportation Technical Committee and approved by the Policy Board;
- TSM street-related improvements, as identified by individual municipalities based on current deficiencies and presented to the Transportation Technical Committee for their review and recommendation for approval by the Policy Board; and
- Transit operating and capital improvement projects, as identified within the TSME for the extension and revision of the original Transit Development Program as approved by the Transportation Technical Committee and recommended for Policy Board approval.

Program Jurisdiction - Cedar Falls

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	Accomplishments		FY 1978-1982 Program Dollar Cost			Total	
						1977	1978	1979	1980	1981		1982
Roosevelt	U.S. 20	Lincoln	.20	Paving	FAUS		\$ 49,700					
					Local		\$ 28,700					\$ 78,400
12th St.	Union Rd.	W. City Limits	.26	Paving	FAUS		\$ 53,900					
					Local		\$ 30,800					\$ 84,700
Fourth St.	Cedar Crest	Lakeview	.35	Paving	SA, Local		\$ 75,000					\$ 75,000
Neola Circle	Terrace Dr.	Cul-de-sac	.07	Paving	SA, Local		\$ 15,000					\$ 15,000
Theimer St.	Genevieve	End of St.	.05	Paving	SA, Local		\$ 10,700					\$ 10,700
Cottage Row Rd.				Seal Coat	FS (RUT)							
Center St.				Seal Coat	FS (RUT)							
Lake Street	Central Ave.	Big Woods Rd.		Seal Coat	FS (RUT)							
Lone Tree Rd.	Center St.	Big Woods Rd.		Seal Coat	FS (RUT)		\$ 50,000		\$ 50,000	\$ 50,000		\$ 150,000
Dunkerton Rd.	Center St.	Symons Rd.		Seal Coat	FS (RUT)							
Ridgeway Ave.	Hudson Rd.	E. City Limits		Seal Coat	FS (RUT)							
E. Main St.	Lincoln St.	Big Woods Rd.		Seal Coat	FS (RUT)							
Independence	Big Woods Rd.	Lincoln St.		Seal Coat	FS (RUT)							
Hudson Rd.	First St.	University Ave.	2.10	4-Lane Reconstr.	GO			\$ 390,000				
					SSBF			\$ 60,000				\$ 450,000
Ridgeway Ave.	Hudson Rd.	E. City Limits	.71	Paving	ES				\$ 600,000			
					SA				\$ 200,000			\$ 800,000
Magnolia Dr.	Fourth St.	12th St.	.51	Paving	SA			\$ 150,000				
					RS			\$ 50,000				\$ 200,000
Bridge	Snag Creek	Cottage Row		Replacement	CDBG				\$ 20,000			\$ 20,000
					60/40							
Tomahawk Lane	Hiawatha Rd.	Pocahontas	.15	Paving	SA, FS							
Minnehaha Ln.	Hiawatha Rd.	Pocahontas	.15	Paving	SA, FS		\$ 100,000					\$ 100,000
Sands Avenue	Lone Tree Rd.	Maple Ave.	.10	Paving	SA, FS							
Cadams Ct.	Cypress Ave.	U.S. 218	.14	Paving	SA, FS							

Cedar Falls

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	Accomplishments		FY 1978-1982 Program Dollar Cost			
						1977	1978	1979	1980	1981	1982
<u>60/40</u>											
High St.	Cherrywood Dr.	Union Rd.	.06	Paving	SA, RS						
Cherrywood Pl.	Cherrywood Dr.	N. end of St.	.06	Paving	SA, RS			\$100,000			\$100,000
Normandy Dr.	Cherrywood Dr.	Columbine	.16	Paving	SA, RS						
Newland Dr.	Cherrywood Dr.	Columbine	.16	Paving	SA, RS						
<u>60/40</u>											
Hiawatha Rd.	Lone Tree Rd.	N. end of St.	.17	Paving	SA, FS						
Pocahontas Rd.	Lone Tree Rd.	N. end of St.	.23	Paving	SA, FS				\$100,000		\$100,000
Maple Ave.	Cypress Ave.	Center St.	.14	Paving	SA, FS						
Cypress Ave.	Lone Tree Rd.	N. end of St.	.44	Paving	SA, FS					\$100,000	\$100,000
Cherrywood Dr.	Columbine Dr.	12th St.	.33	Paving	SA, RS					\$100,000	\$100,000
Columbine Dr.	Cherrywood Dr.	12th St.	.22	Paving	SA, RS						
<u>50/50</u>											
Fifth St.	College St.	Franklin St.	.34	Widen & Resurface	CDBG, SA						
Fourth St.	Main St.	State St.	.07	Resurface	CDBG, SA						
11th St.	Franklin St.	Walnut St.	.21	Widen & Resurface	CDBG, SA		\$200,000				\$200,000
Iowa St.	Third St.	11th St.	.52	Widen & Resurface	CDBG, SA						
State St.	Second St.	12th St.	.64	Widen & Resurface	CDBG, SA						
Grove St.	Ninth St.	12th St.	.19	Resurface	SA, RS						
Bluff St.	Ninth St.	15th St.	.38	Resurface	SA, RS						
13th St.	Main St.	Washington St.	.07	Resurface	SA, RS						
14th St.	State St.	Waterloo Rd.	.14	Resurface	SA, RS			\$200,000			\$200,000
14th St.	Main St.	Clay St.	.14	Resurface	SA, RS						
15th St.	Main St.	State St.	.07	Resurface	SA, RS						
Eighth St.	Main St.	College St.	.52	Widen & Resurface	SA, RS						
Ninth St.	Tremont St.	Pearl St.	.30	Widen & Resurface	SA, RS						

Cedar Falls

<u>Project Title</u>	<u>From</u>	<u>To</u>	<u>Project Length Miles</u>	<u>Type of Work</u>	<u>Funding Source</u>	<u>Accomplishments</u>			<u>FY 1978-1982 Program Dollar Cost</u>			<u>Total</u>
						<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	
22nd St.	College St.	Campus St.	.28	Widen & Resurface	SA, RS							
23rd St.	College St.	Hudson Rd.	.55	Resurface	SA, RS							
25th St.	College St.	Olive St.	.07	Resurface	SA, RS				\$200,000			\$200,000
Walnut St.	18th St.	Seerley Blvd.	.42	Resurface	SA, RS							
Olive St.	18th St.	26th St.	.64	Resurface	SA, RS							
Walnut St.	12th St.	18th St.	.42	Resurface	SA, RS							
Tremont St.	12th St.	18th St.	.41	Resurface	SA, RS							
11th St.	Main St.	Franklin St.	.19	Resurface	SA, RS				\$200,000			\$200,000
16th St.	Main St.	Clay St.	.12	Widen & Resurface	SA, RS							
Olive St.	Fourth St.	12th St.	.51	Resurface	SA, RS							
Iowa St.	22nd St.	Seerley Blvd.	.13	Resurface	SA, RS							
Tremont St.	Second St.	12th St.	.63	Resurface	SA, RS							
Third St.	Franklin St.	Pearl St.	.42	Widen & Resurface	SA, RS						\$200,000	\$200,000
Second St.	State St.	Pearl St.	.64	Resurface	SA, RS							

Financing Codes

City Costs

GR = General Revenue
 GO = General Obligation Bonds
 SSBF = Storm Sewer Bond Fund

Outside Aid

CDBG = Community Development Block Grant
 FS = Federal/State Aid
 O = Other
 RB = Revenue Bonds
 RS = Revenue Sharing
 SA = Assessment

Program Jurisdiction - Evansdale

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	Accomplishments		FY 1978-1982 Program Dollar Cost				
						1977	1978	1979	1980	1981	1982	Total
Roosevelt	Central	Lafayette	.28	Paving	Local	\$134,800						
Collins	Evans	WCF&N RR	.25	Paving	Local	\$102,100						
Boelling	Collins	Central	.06	Paving	Local	\$ 21,500						
Evans	Central	Collins	.08	Paving	Local	\$ 42,800						
Dodge	Collins	Brookside	.10	Resurface	Local	Delete						
East End	Grand	Lawrence	.20	Paving	Local	Delete						
Lawrence	Central	Lafayette	.31	Paving	Local	To FY '78	\$ 92,000					\$ 92,000
Feldt	Lawrence	Roosevelt	.13	Paving	Local	To FY '78	\$ 37,400					\$ 37,400
Marion	Lawrence	East 500'	.10	Paving	Local	To FY '78	\$ 23,500					\$ 23,500
Grand	Central	Lafayette	.40	Paving	FAUS		\$214,610					
					Local	To FY '78	\$ 91,980					\$306,590
Central	WCF&N RR	Roosevelt	.39	Paving	FAUS		\$157,410					
					Local	To FY '78	\$ 67,460					\$224,870
Lafayette	W. C. L.	Evans	.34	Resurface	FAUS		\$ 49,210					
					Local		\$ 21,090					\$ 70,300
Central	River Forest	Evans	.50	Resurface	Local		\$ 80,600					\$ 80,600
Evans	East End	Central	.19	Resurface	Local		\$ 12,500					\$ 12,500
N. Roosevelt	Lafayette	U. S. 20	.27	Paving	Local		\$ 85,200					\$ 85,200
Norma	N. Roosevelt	East 700'	.13	Paving	Local		\$ 24,300					\$ 24,300
Mary	Norma	North 420'	.08	Paving	Local		\$ 15,600					\$ 15,600
S. Evans	Collins	Brookside	.10	Paving	Local		\$ 49,400					\$ 49,400
Morrell	Grand	WCF&N RR	.19	Paving, Storm Sewer	Local		\$ 50,500	\$ 21,500				\$ 72,000
Central	WCF&N RR	Roosevelt	.37	Paving	Local			\$291,000				\$291,000
Grand	Central	Brookside	.34	Paving, Storm Sewer	FAUS			\$ 74,060				
					Local			\$ 31,740				\$105,330
Evans	Brookside	Arbutus	.35	Paving, Storm Sewer	FAUS			\$113,330				
					Local			\$ 48,570				\$161,900
Clark	East End	Lafayette	.19	Paving, Storm Sewer	Local			\$ 61,000				\$ 61,000
N. Evans	Lafayette	WCF&N RR	.07	Widening	Local			\$ 29,700				\$ 29,700
East End	Grand	WCF&N RR	.14	Paving, Storm Sewer	Local			\$ 61,500				\$ 61,500
River Forest	Central	Trail	.31	Paving, Storm Sewer	FAUS			\$133,630				
					Local			\$ 57,270				\$190,900

Evansdale (continued)

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	Accomplishments		FY 1978-1982 Program Dollar Cost					
						1977	1978	1979	1980	1981	1982	Total	
Trail	Grand	WCF&N RR	.08	Paving	Local			\$ 23,000					\$ 23,000
Elmer & Ayers	Central	Meyers Lake	.44	Storm Sewer	Local			\$ 79,700					\$ 79,700
Evans	Collins	Arbutus	.50	Paving, Storm Sewer	FAUS			\$214,900					
					Local			\$ 92,100					\$307,000
Grand	Central	South 2,600'	.33	Paving, Storm Sewer	FAUS				\$150,500				
					Local				\$ 64,500				\$215,000
Arbutus	Evans	Grand	.38	Paving, Storm Sewer	Local			\$212,700					\$212,700
Grand	Brookside	Arbutus	.34	Paving, Storm Sewer	FAUS			\$140,630					
					Local			\$ 60,270					\$200,900
Colleen	Central	Brookside	.18	Paving	Local			\$ 71,000					\$ 71,000
Home Acres	Central	Brookside	.19	Paving, Storm Sewer	Local			\$ 67,300					\$ 67,300
Brookside	Colleen	Evans	.22	Paving, Storm Sewer	Local			\$ 85,800					\$ 85,800
<u>Elk Run Heights</u>													
Traffic Signal	U.S. 20 &	Gilbertville Rd.		Signalization	FAUS			\$24,500					
					Local			\$10,500					\$35,000

Program Jurisdiction - Waterloo

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	Accomplishments 1977	1978	FY 1978-1982 Program Dollar Cost			Total
								1979	1980	1981	
Archer Ave.	Nevada St.	Colorado St.	.13	Paving	Local	\$ 51,000					
Anthony St.	Neville St.	Idaho St.	.12	Paving	Local	\$ 34,300					
Ash St.	Waterloo RR	Douglas St.	.06	Paving	Local	\$ 19,000					
Grandview Ave.	Riehl St.	Parker St.	.24	Paving	Local	\$ 52,500					
Kern St.	Longfellow Ave.	Burton Ave.	.25	Paving	Local	\$ 81,800					
Manson St.	Oneida St.	Sumner St.	.06	Paving	Local	\$ 17,800					
12th St.	Commercial St.	Black Hawk St.	.06	Paving	Local	\$ 26,600					
Wilbur Ave.	Janney Ave.	Hartman Ave.	.09	Paving	Local	\$ 34,900					
Aladdin St.	Stratford Ave.	Upton Ave.	.09	Paving	Local	\$ 25,000					
Hillside Ave.	Mitchell Ave.	Carolina Ave.	.07	Paving	Local	\$ 26,800					
Patton Ave.	Ohio St.	Wisconsin St.	.08	Paving	Local	\$ 22,600					
Barclay St.	Newell St.	WCF&N RR	.46	Paving	Local	\$170,000					
Black Hawk Rd.	Fletcher Ave.	Downing Ave.	.08	Paving	Local	\$ 36,000					
City View	South View	Newell St.	.37	Paving	Local	\$109,900					
Colorado St.	Lafayette St.	U.S. 20	.31	Paving	Local	\$203,600					
Plainview	South View	Anthony St.	.30	Paving	Local	\$ 94,600					
Spring View	Cordell St.	Newell St.	.11	Paving	Local	\$ 36,100					
Flower St.	Scott St.	Sheerer Ave.	.03	Paving	Local	\$ 24,800					
Hillside Ave.	Carolina Ave.	Frederic Ave.	.07	Paving	Local	\$ 25,800					
Sheerer Ave.	Flower St.	U.S. 218	.06	Paving	Local	\$ 27,000					
West 4th St.	Ridgeway Ave.	S. City Limits	2.75	Resurface	FAUS		\$105,000				
					Local		\$ 45,000				\$150,000
Wagner Rd.	U.S. 20	N. City Limits	2.00	Paving	FAUS		\$420,000				
					Local		\$180,000				\$600,000
W. Ridgeway Ave.	U.S. 63	W. City Limits	2.25	Paving	FAUS		\$1,540,000				
					Local		\$660,000				\$2,200,000

Waterloo

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	Accomplishments		FY 1978-1982 Program Dollar Cost			Total
						1977	1978	1979	1980	1981	
Hope Ave.	Esther St.	W. Donald St.	.42	Paving	Local			\$126,000			\$126,000
Boston Ave.	WCF&N RR	W. Donald St.	.49	Paving	Local			\$147,000			\$147,000
Oneida St.	Linn St.	Linden Ave.	.64	Paving	Local			\$192,000			\$192,000
Linn St.	Oneida St.	Lester St.	.73	Paving	Local			\$219,000			\$219,000
Avon Ave.	Conger St.	Thorson St.	.45	Paving	Local			\$135,000			\$135,000
Stratford Ave.	Stephen Ave.	Englewood Ave.	.78	Paving	Local			\$234,000			\$234,000
Janney Ave.	Ansborough	Cleveland St.	.48	Paving	Local			\$144,000			\$144,000
North Ave.	Foulk Rd.	E. City Limits	.25	Paving	Local			\$ 75,000			\$ 75,000
Suburban Dr.	Foulk Rd.	E. cul-de-sac	.21	Paving	Local			\$ 63,000			\$ 63,000
Tucson Dr.	Suburban Dr.	North Ave.	.16	Paving	Local			\$ 48,000			\$ 48,000
Chico Dr.	Tucson Dr.	E. City Limits	.11	Paving	Local			\$ 33,000			\$ 33,000
Foulk Rd.	E. Shaulis Rd.	North Ave.	.50	Paving	FAUS			\$105,000			
					Local			\$ 45,000			\$150,000
Hackett Rd.	U.S. 63	I-380	6.30	Design	FAUS			\$420,000			
					Local			\$180,000			\$600,000
Cedar Terrace	E. Shaulis Rd.	Foulk Rd.	.51	Paving	FAUS			\$112,000			
					Local			\$ 48,000			\$160,000
Hammond Ave.	Ia. 412	Orange Rd.	2.00	Paving	FAUS			\$420,000			
					Local			\$180,000			\$600,000
E. Shaulis Rd.	Cedar Terrace	U.S. 218	.60	Paving	FAUS			\$210,000			
					Local			\$ 90,000			\$300,000
Hwy. 281	Idaho St.	E. City Limits	2.50	Resurface	Local/EDA	\$380,000					\$380,000
Huntington Rd.	Black Hawk Rd.	W. City Limits	2.00	Paving	Local EDA	\$421,000					\$421,000
U.S. 218	W. 11th St.	Plymouth Ave.	1.60	Resurface	State	\$121,000					\$121,000
Linden Ave.	Sumner St.	Webster St.	.21	Paving	Local				\$ 73,500		\$ 73,500
Columbia St.	W. Parker St.	WCF&N RR	.24	Paving	Local				\$ 84,000		\$ 84,000
Ackermant St.	W. Parker St.	WCF&N RR	.27	Paving	Local				\$ 94,500		\$ 94,500
Lincoln St.	W. Parker St.	WCF&N RR	.23	Paving	Local				\$ 80,500		\$ 80,500
Calhoun St.	Bishop Ave.	Short St.	.38	Paving	Local				\$185,500		\$185,500

Waterloo

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	Accomplishments 1977	1978	1979	FY 1978-1982 Program Dollar Cost			Total
									1980	1981	1982	
Hartman St.	Cleveland Ave.	Ansborough Ave.	.53	Paving	Local				\$185,500			\$185,500
W. Arlington	Logan Ave.	Ackermant St.	.31	Paving	Local				\$108,500			\$108,500
Hackett Rd.	Huntington Rd.	U.S. 218	1.00	ROW	FAUS				\$ 70,000			
					Local				\$ 30,000			\$100,000
412 Connection	W. 4th St.	U.S. 63	.50	ROW/Paving	FAUS				\$ 84,000			
					Local				\$ 36,000			\$120,000
Sixth St. Bridge	Cedar River		.25	Bridge	FAUS				\$1,540,000			
					Local				\$660,000			\$2,200,000
Murphy Rd.	Hammond Ave.	U.S. 218	1.15	Paving	FAUS				\$210,000			
					Local				\$ 90,000			\$300,000
Newell St.	Idaho St.	Elk Run Rd.	2.50	Paving	Local/EDA		\$763,000					\$763,000
Sealing Program			7.00	Seal Coat	Local		\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$375,000
Idaho St.	Newell St.	Donald St.	1.00	Paving	Local/EDA				\$312,000			\$312,000
Resurfacing			5.00	Resurface	Local		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
E. Arlington	Logan Ave.	E. 4th St.	.24	Paving	Local		\$ 72,000					\$ 72,000
Garden Ave.	Black Hawk Rd.	Wren Rd.	.49	Paving	Local		\$147,000					\$147,000
Robin Road	Scott Ave.	Black Hawk Rd.	.53	Paving	Local		\$159,000					\$159,000
E. Louise St.	Logan Ave.	E. 4th St.	.24	Paving	Local		\$ 72,000					\$ 72,000
Wren Road	Lark Lane	Huntington Rd.	.19	Paving	Local		\$ 57,000					\$ 57,000
Johnson	W. 7th St.	Williston Ave.	.21	Paving	Local		\$ 63,000					\$ 63,000
W. 8th St.	Williston Ave.	Leavitt St.	.16	Paving	Local		\$ 48,000					\$ 48,000
Cardinal Dr.	Longview Dr.	Helen Rd.	.15	Paving	Local		\$ 45,000					\$ 45,000
Helen Rd.	Cardinal Dr.	Rainbow Dr.	.08	Paving	Local		\$ 24,000					\$ 24,000
Eleanor Dr.	Downing Ave.	Sager Ave.	.16	Paving	Local		\$ 48,000					\$ 48,000
Wallgate Ave.	University Ave.	Bismark Ave.	.45	Paving	Local		\$135,000					\$135,000
Chalmers Ave.	Janney Ave.	Hartman Ave.	.09	Paving	Local		\$ 27,000					\$ 27,000
Warren Dr.	N. Barclay St.	East	.21	Paving	Local		\$ 63,000					\$ 63,000
Martha St.	Williston Ave.	Forest Ave.	.07	Paving	Local		\$ 21,000					\$ 21,000
W. Ridgeway	Bridge (Black Hawk Creek)		.25	Bridge	FAUS		\$460,000					
					Local		\$640,000					\$1,100,000

Revised September 22, 1977

Program Jurisdiction - Iowa Department of Transportation

FY 1978 - 1982 Program

Dollar Cost

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	1978	1979 - 1982 Program				Total
							1979	1980	1981	1982	
U.S. 20	1st St. and CRI & P R.R. in Cedar Falls		—	Railroad Signals	Federal State	\$ 31,500 <u>3,500</u> 35,000					\$ 35,000
Ia. 57	Grundy Co. Line	Cedar Falls	4.90	Safety (Guard Rail)	Federal State	\$ 9,000 <u>1,000</u> 10,000					\$ 10,000
Ia. 57	Ia. 58	U.S. 20	2.10	ROW	Federal State	\$119,000 <u>51,000</u> 170,000					\$ 170,000
			2.10	Grade, Structures and Pave	Federal State	\$1,407,000 <u>603,000</u> 2,010,000					\$ 2,010,000
U.S. 63	W. 1st St. and CRI&P R.R. in Waterloo		—	Railroad Signals	Federal State	\$ 9,000 <u>1,000</u> 10,000					\$ 10,000
U.S. 218	At CNW RR		—	Railroad Signals	Federal State	\$ 31,500 <u>3,500</u> 35,000					\$ 35,000
U.S. 218	U.S. 218	I-380 Interchg.	1.90	Grade & Drain	Federal State		\$ 2,159,100 <u>239,900</u> 2,399,000				\$ 2,399,000
			1.90	Pave	Federal State			\$ 812,700 <u>90,300</u> 903,000			\$ 903,000
I-380	Fwy. 518	U.S. 218 Interchange	7.00	Prel. Engineering	Federal State	\$ 90,000 <u>10,000</u> 100,000					\$ 100,000
			7.00	ROW	Federal State		\$1,350,000 <u>150,000</u> 1,500,000	\$5,400,000 <u>600,000</u> 6,000,000			\$ 7,500,000
			7.00	Grade & Drain	Federal State			\$4,500,000 <u>500,000</u> 5,000,000			\$ 5,000,000
I-380	U.S. 218 Interchange	Cedar River	1.00	Prel. Engineering for Design&RR Work	Federal State	\$301,500 <u>33,500</u> 335,000					\$ 335,000

Program Jurisdiction - Iowa Department of Transportation

FY 1978 - 1982 Program Dollar Cost Revised September 22, 1977

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	FY 1978 - 1982 Program Dollar Cost					Total	
						1978	1979	1980	1981	1982		
			1.00	ROW, Relocation Asst.&Utilities	Federal	\$450,000						
					State	50,000						\$ 500,000
						500,000						
I-380	Cedar River	Just E. of Ia. 297	5.50	Prel. Engineering for Design & RR work	Federal	\$411,300						
					State	45,700						\$ 457,000
						457,000						
			5.50	ROW Relocation Asst. & Utilities	Federal	\$180,000						
					State	20,000						\$ 200,000
						200,000						
			5.50	Salvage & Removal of Buildings	Federal	\$ 27,000						
					State	3,000						\$ 30,000
						30,000						
			5.50	ROW	Federal		\$ 3,089,700					
					State		343,300					\$ 3,433,000
							3,433,000					
			5.50	Grade & Drain	Federal		\$12,698,100	\$17,792,100				
					State		1,410,900	1,976,900				\$33,878,000
							14,109,000	19,769,000				
			5.50	Pave	Federal				\$ 6,262,200			
					State				695,800			\$ 6,958,000
									6,958,000			
			5.50	Miscellaneous	Federal						\$ 719,000	
					State						79,900	\$ 799,000
											799,000	
I-380	Just E. of Ia. 297	Buchanan Co. Line	10.80	Prel. Engineering	Federal	\$331,200						
					State	36,800						\$ 368,000
						368,000						
			10.80	ROW	Federal		\$1,152,900					
					State		128,100					\$1,281,000
							1,281,000					
			10.80	Grade & Drain	Federal			\$10,157,400				
					State			1,128,600				\$11,286,000
								11,286,000				
			10.80	Pave	Federal				\$9,448,200	\$1,144,800		
					State				1,049,800	127,200		\$11,770,000
									10,498,000	1,272,000		
Fwy. 520 Ia. 58	U.S. 63		3.70	ROW	Federal	\$105,000		\$189,700				
					Share	45,000		81,300				\$ 421,000
						150,000		271,000				

Program Jurisdiction - Iowa Department of Transportation

Revised September 22, 1977

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	FY 1978 - 1982 Program Dollar Cost					Total
						1978	1979	1980	1981	1982	
			3.70	Grade & Drain	Federal State				\$ 2,879,800 <u>1,234,200</u> 4,114,000		\$4,114,000
			3.70	Pave	Federal State					\$2,734,900 <u>1,172,100</u> 3,907,000	\$3,907,000
Fwy. 520	U.S. 63	I-380	4.50	ROW	Federal State	\$ 140,000 <u>60,000</u> 200,000	\$845,600 <u>362,400</u> 1,208,000				\$1,408,000
				Grade & Drain	Federal State			\$3,677,800 <u>1,576,200</u> 5,254,000			\$5,254,000
				Pave	Federal State				\$2,349,900 <u>1,007,100</u> 3,357,000		\$3,357,000
Fwy. 520	I-380	Buchanan Co. Line	6.60	ROW	Federal State	\$ 193,900 <u>83,100</u> 277,000					\$ 277,000
				Grade & Structure	Federal State	\$1,828,400 <u>783,600</u> 2,612,000					\$2,612,000
TOTALS - IOWA DEPARTMENT OF TRANSPORTATION						\$7,499,000	\$20,031,000	\$38,979,000	\$27,330,000	\$16,978,000	\$110,817,000

Program Jurisdiction - Black Hawk County

Project Title	From	To	Project Length Miles	Type of Work	Funding Source	Accomplishments		FY 1978-1982 Program Dollar Cost				Total
						1977	1978	1979	1980	1981	1982	
Roosevelt St.	Lincoln St.	U.S. 20	.20	Reconstruction	Local	To FY 78	\$ 12,000					\$ 12,000
Washburn Rd.	Dysart Rd.	Landfill	1.50	Grade and Pave	Local	\$ 85,000	\$ 96,000					\$ 96,000
Elk Run Rd.	D-17	C-66	3.00	Paving	Local	\$260,000						\$260,000
Jepsen Rd.	U.S. 20	Westbrook Rd.	1.00	Grading	Local			\$ 50,000				\$ 50,000
D-17	Cedar Falls	Grundy Co.	2.75	Resurface	FAS				\$100,000			\$100,000
D-35	V-37	U.S. 218	2.00	Grading	Local				\$120,000			\$120,000
Lafayette Rd.	U.S. 20	Raymond	1.00	Resurface	FAS				\$ 40,000			\$ 40,000
V-49	Raymond	Dewar	3.50	Resurface	FAS				\$155,000			\$155,000
Traffic Signal	U.S. 20	Evans Rd.	-	Signalization	FAUS		\$ 24,500					\$ 24,500
					Local		\$ 10,500					\$ 10,500
Foulk	U.S. 218	Waterloo C.L.	.50	Grade and Pave	Local		\$ 20,000	\$ 40,000				\$ 60,000
D-38	U.S. 218	Gilbertville	2.50	Structures & Shoulders	FAS		\$250,000					\$250,000

Transportation Systems Management

Program Jurisdiction - Cedar Falls

<u>Project Title</u>	<u>Location</u>	<u>Type of Work</u>	<u>Funding Source</u>	<u>Accomplishments 1977</u>	<u>FY 1978-1982 Program Dollar Cost</u>					<u>Total</u>
					<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	
First St. and Franklin St.		SM	State & Local		\$30,000					\$ 30,000
University Avenue		PS	Fed., State, Local		\$75,000					\$ 75,000
Sixth St. and Franklin St.		S	Fed., State, Local				\$20,000			\$ 20,000
18th St. and Waterloo Rd.		SM, CH	Fed., State, Local					\$100,000		\$100,000
Main St. and Seerley Blvd.		SM	Local					\$ 10,000		\$ 10,000
College St. and 23rd St.		SM	Local					\$ 5,000		\$ 5,000
Center St. and Lone Tree Rd.		S	Fed., State, Local						\$20,000	\$ 20,000

Type of Work

- | | |
|--------------------------------|-----------------------------|
| CH = Channelization | OW = One-way Systems |
| SM = Signal Modification | B = Bikeways |
| S = Signalization | P = Pedestrian Improvements |
| PS = Progressive Signalization | |

Program Jurisdiction - Waterloo

<u>Project Title</u>	<u>Location</u>	<u>Type of Work</u>	<u>Funding Source</u>	<u>Accomplishments</u>		<u>FY 1978-1982 Program Dollar Cost</u>					
				<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>Total</u>	
Hwy. 412	Kimball Ave.	CH	Local		\$10,000						\$ 10,000
Hwy. 412	Hammond Ave.	CH	Local		\$10,000						\$ 10,000
Hwy. 412	Hammond Ave.	S	Local/State				\$40,000				\$ 40,000
Hwy. 412	Sears Dr.	S	Local/State				\$40,000				\$ 40,000
Ridgeway	Deere Rd.	S	Local	\$ 25,000							\$ 25,000
E. & W. 4th Sts.	CBD	PD	Local	\$1,210,144							\$1,210,144
U.S. 20	Cedar Bend	S	Local/State				\$30,000				\$ 30,000
Kimball Ave.	Ridgeway Ave.	CH/S	Local				\$40,000				\$ 40,000
River Road	Illinois Cent. RR	R/R S	Local/Federal		\$50,000						\$ 50,000

**FIVE-YEAR
TRANSIT
OPERATING
IMPROVEMENT
PROGRAM**

REVISED FOR
FY 1978 T.I.P.

AS AMENDED ON
October 20 and
December 14, 1977.

FISCAL YEAR	<u>1978</u> (Annual Element)	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
<u>Estimated Operating Costs</u> ¹					
Fixed Routes	\$ 789,568	\$ 838,967	\$ 1,116,269	\$ 1,158,234	\$ 1,227,736
Special Project	27,975	30,000	35,000	40,000	45,000
Charter	14,560	17,570	18,620	19,320	20,480
Total	\$ 832,103	\$ 886,537	\$ 1,169,889	\$ 1,217,554	\$ 1,293,216
<u>Estimated Revenue</u>					
Fixed Routes @\$.294 avg. fare	\$ 206,256	\$ 234,318	\$ 295,680 ⁴	\$ 304,416	\$ 313,488
Special Project @ \$.40 avg. fare	4,476	4,800	5,600 ⁵	6,400	7,200
Charter	15,600	20,000 ³	20,000	20,000	25,000 ⁶
Miscellaneous ²	144	200	200	200	200
Total	\$ 226,476	\$ 259,318	\$ 321,480	\$ 331,016	\$ 345,888
<u>Operating Deficit</u>	(\$ 605,627)	(\$ 627,219)	(\$ 848,409)	(\$ 886,538)	(\$ 947,328)
<u>Source of Subsidy</u>					
Federal Subsidy (Section 5)	\$ 291,474	\$ 313,609	\$ 424,204	\$ 443,269	\$ 473,664
Local Subsidy	\$ 284,756	\$ 283,610	\$ 389,205	\$ 403,269	\$ 428,664
State Subsidy	\$ 29,397	\$ 30,000	\$ 35,000	\$ 40,000	\$ 45,000

¹Costs reflect budget adjustment and inflation for FY 78, and 6% inflation for balance of program.

²Miscellaneous revenue includes items such as junk sale, storage, token sale, accident collections over costs, etc.

³Anticipates charter rate of \$20.00/hour.

⁴Anticipates fare increase for average fare of \$.336/rider.

⁵Anticipates fare increase for average fare of \$.450/rider.

⁶Anticipates charter rate of \$25.00/hour.

**FIVE-YEAR
TRANSIT
CAPITAL
IMPROVEMENT
PROGRAM**

REVISED FOR
FY 1978 T.I.P.

AS AMENDED
December 14, 1977

FY 1977 Carry-
over to FY1978
Annual Element

\$204,500
412,282
616,782

\$ 58,383

199,274

\$257,657

\$206,125

\$ 51,532

FISCAL YEAR	(ANNUAL ELEMENT)					TOTAL	
	1978	1979	1980	1981	1982		
Section 5 Federal Funds - After Operating Subsidy	\$ 214,026	\$240,891	\$162,796	\$ -*	\$ -*		
Section 5 Federal Funds - Unused Carry-over	410,657	0	230,971	0	0		
Section 5 Federal Funds - Total Available	624,683	\$240,891	393,767	-*	-*		
CAPITAL COSTS (Number Units)							
16 Passenger Bus w/lift						\$1,875,000	
35 Passenger Bus	(25)	1,875,000				8,400	
Shelters		(4)	8,400			-	
Base Radio Facility						-	
Mobile Radios						-	
Garage Addition						-	
Automatic Bus Washer & Sweeper						-	
Service Truck		9,500				9,500	
Digital Counters	(21)	1,105				1,105	
Registering Fare Box						-	
Bus Stop Signs						-	
Bus Schedule Board	(8)	1,600				1,600	
Office Equipment						-	
Shop Equipment & Inventory		30,000	4,000			34,000	
Central Transfer Facility		105,600				105,600	
TOTAL		\$2,022,805	\$ 12,400	\$ 0	\$ 0	\$ 0	\$2,035,205
80% Federal "Section 5" Funds	\$ 624,683	\$ 9,920	\$ --	\$ --	\$ --	\$ 634,603	
80% Federal "Section 3" Funds	993,561	--	--	--	--	993,561	
20% Local Matching Funds	404,561	2,480	--	--	--	407,041	

*UMTA Section 5 funds have not been appropriated for 1981 and 1982; 1980 balance will be utilized toward 1981 operations.

TRANSIT PROJECTS FOR THE FY 78 ANNUAL ELEMENT*
(As Amended October 20, 1977 and December 14, 1977)

OPERATIONS

Project Description	Estimated Total Cost	Federal Funds/ Source	Non-Federal Funds/ Source
Maintenance of operations on existing 7 regular fixed routes and 5 special school/work trip routes.	\$ 778,493	\$ 274,563 UMTA Section 5	\$ 205,506 - Revenue \$ 29,397 - I-DOT ¹ \$ 267,843 - Local Subsidy ² \$ 1,184 - Misc. Income and Charter Revenues
Initiation of "218 Shopper's Express" Saturday service (Re: '75 TDP) on January 1, 1978 between College Square and Crossroads shopping centers. (8.2 miles in length)	\$ 4,075	\$ 1,662 UMTA Section 5	\$ 750 - Revenue \$ 1,663 - Local Subsidy ²
Charter Service estimated @1,000 hours	\$ 14,560	--	\$ 15,600 - Income (\$1,040 profit toward operating deficit)
Section 15 project establish FARE reporting system.	\$ 7,000	\$ 3,500 UMTA Section 5	\$ 3,500 - Local Subsidy ²
Special Project - coupon user subsidy for handicapped utilizing metro taxi services.	\$ 27,975	\$ 11,749 UMTA Section 5	\$ 4,476 - Revenue 11,750 - Local Subsidy ³
TOTAL FY 78	\$ 832,103	\$ 291,474 UMTA Section 5	\$ 210,732 - Fare Revenue \$ 29,397 - I-DOT¹ \$ 284,756 - Local Subsidy² \$ 15,744 - Misc. Income and Charter Revenue \$ 540,629 - Total Non-Federal Funds

*The MET Transit Authority of Black Hawk County is the funding recipient and agency responsible for implementing all projects in the FY 78 annual element.

¹Iowa D.O.T. State Transit Assistance funds.

²Local subsidy is derived from cities general fund supported primarily through property tax revenue and is received from Waterloo and Cedar Falls at 74.36% and 25.64%, respectively, based on hours of service delivered within each city.

³Local subsidy is derived from cities general fund supported primarily through property tax revenue and is received from Waterloo and Cedar Falls at 68.8% and 31.2%, respectively, based on their 1975 special census populations.

TRANSIT PROJECTS FOR THE FY 78 ANNUAL ELEMENT
(Continued)

FY 1979 OPERATIONS

Project Description	Estimated Total Cost	Federal Funds/ Source	Non-Federal Funds/ Source
Maintenance of operations on existing 7 regular fixed routes and 5 special school/work trip routes.	\$ 838,967	\$ 301,009	\$ 234,318 - Revenue 30,000 - I-DOT 271,010 - Local Subsidy 2,630 - Misc. Income and Charter Revenues
Maintenance of special project of taxi user subsidy for handicapped.	\$ 30,000	\$ 12,600 UMTA Section 5	\$ 4,800 - Revenue 12,600 - Local Subsidy
Charter Service estimated at 1,000 hours.	\$ 17,570	\$ --	\$ 20,000 - Income (\$2,430 profit toward operating deficit)
TOTAL FY 79	\$ 886,537	\$ 313,609	\$ 239,118 - Fare Revenue 30,000 - I-DOT 283,610 - Local Subsidy 20,200 - Misc. Income and Charter Revenue \$ 572,928 - Total Non-Federal Funds

TRANSIT PROJECTS FOR THE FY 78 ANNUAL ELEMENT*
(As Amended October 20 and December 14, 1977)

CAPITAL

Project Description	Estimated Total Cost	Federal Funds/ Source	Non-Federal Funds/ Source
Fleet replacement of 17 existing 1966 transit coaches and 4 existing 1967 transit coaches with (21) 30', 35 passenger buses with air conditioning and registering fare boxes. These vehicles will be used to maintain the existing level of fixed-route operations for 7 regular routes and 5 special routes.	\$1,575,000	\$581,439 UMTA Section 5	\$315,000 Local Funds
		\$993,561 UMTA Section 3	
Four additional 30' 35 passenger buses with air conditioning and registering fare boxes. Two buses will be used on a route extension of approximately 12 miles to extend service to developing areas on Ansborough Avenue South, and to the Central High area. Two buses will be utilized on a new west side route under development to provide direct routing between residential areas, the CBD, and Crossroads Shopping Center, and to connect current route ends on Waterloo's west side.	\$ 300,000	\$240,000 UMTA Section 5	\$ 60,000 Local Funds
Service truck to replace existing 1964 vehicle.	\$ 9,500	\$ 7,600 UMTA Section 5	\$ 1,900 Local Funds
Twenty-one (21) digital counters for vehicles to assist in ridership data gathering.	\$ 1,105	\$ 884 UMTA Section 5	\$ 221 Local Funds
Eight (8) schedule/map boards to be placed in shelters.	\$ 1,600	\$ 1,280 UMTA Section 5	\$ 320 Local Funds
Shop equipment and parts inventory for new bus fleet including 1 spare engine, 1 spare transmission, 1 engine/transmission dolly and an estimated \$10,000 parts inventory.	\$ 30,000	\$ 2,400 UMTA Section 5	\$ 6,000 Local Funds
Development of a central transfer facility on Sycamore Street between Park and East Third on a 13,800 sq. ft. site to include site development (estimated @ \$50,000) and an enclosed shelter area and protective canopy (estimated @ \$46,000) and including a 10% contingency.	\$ 105,600	\$ 84,480 UMTA Section 5	\$ 21,120 Local Funds
	\$2,022,805	\$624,683 UMTA Section 5	\$404,561 Local Funds
TOTAL		\$993,561 UMTA Section 3	

*MET Transit Authority of Black Hawk County is the funding recipient and agency responsible for implementing all projects in the FY 78 annual element.

¹Local subsidy is derived from cities general fund supported primarily through property tax revenue and is received from Waterloo and Cedar Falls at 74.36% and 24.64%, respectively, based on hours of service delivered within each city.

T.I.P. ADDENDUM

Reflecting additions and revisions to the Waterloo Metropolitan Transportation Improvement Program as approved by the Metropolitan Policy Board on October 20, 1977.

I. STREETS AND HIGHWAYS

Under: Program Jurisdiction Cedar Falls
Change: Fourth Street from Cedar Crest to Lakeview Paving from
1978 program to 1979 program.
Delete: Theimer Street paving project

Under: Program Jurisdiction - Iowa Department of Transportation
Change: Entire program to amended Iowa D.O.T. program (attached).

II. TRANSIT

- A. The following "special effort" project has been added to the FY 1978 Annual Element in reponse to UMTA comments on the original T.I.P. document and is intended to provide expanded transit service for the wheelchair bound and semi-ambulatory handicapped.

Demand-responsive handicapped service provided through fare subsidization of user trips on metro taxis:

FY 1978 Project

Cost - \$23,000
Revenue - \$ 3,680
Deficit - \$19,320

Source of Subsidy:

UMTA Section 5 - \$9,660
*Local Subsidy - \$9,660 - Waterloo \$6,646 and Cedar Falls
\$3,014

*State Transit assistance funds may be provided for the "special effort" project through the Iowa D.O.T., but have not yet been determined.

This project has been based on the following criteria:

- Five percent of FY 1978 UMTA Section 5 budget = approximately \$23,000.
- Revenue/ride = 40¢ (current MET fixed-route regular fare)
- Cost/ride = \$2.50
 - Based on:
 - New cab fares
 - Average trip length of four miles
 - Average passenger load of 2.0
- Average deficit/ride of \$2.10

This special project will be further refined through the MET Transit Board and two metro cab operators to determine specific operating procedures for initiation upon receipt of FY 1978 Section 5 funds. Initial demand is expected to be low based on social agencies estimates of users, however, the program budget will provide for a sufficient level of service (9,200 annual rides) based on the estimated deficit per ride.

- B. The FY 1978 annual element has further been revised to reflect changes in state transit assistance funds as approved by the Iowa D.O.T.

Previously \$55,000 of state funding was shown in FY 1978 operations. Approved state funding provides \$29,397 for operations and \$26,775 towards capital projects.

The above two revisions are reflected in the attached table of projects for FY 1978. It should be noted that the addition of the "special effort" project will have a slight affect on Section 5 funding anticipated for carryover to subsequent years of the T.I.P. However, capital and operating projects for the fiscal 1979 to 1982 period will not be substantially affected by the revision except that the special effort project will be maintained.

III. ERRATA

Under: Transportation Policy Board
Change: Hubert A. Willard (ex-officio)
Division Engineer
Iowa Department of Transportation

To Read: Hubert A. Willard
Division Engineer
Federal Highway Administration

Under: Project Priorities Updated June 1977
Change: Priority 1, Waterloo-Cedar Falls Intercity Freeway,
from Frwy. 520 to U.S. 63.
To Read: Priority 1, Waterloo-Cedar Falls Intercity Freeway,
from Frwy. 520 to Frwy. 518.

Change: Priority 4, Hackett Road, from U.S. 63 to U.S. 20.
To Read: Priority 4, Hackett Road, from U.S. 63 to I-380.

Under: Program Jurisdiction Cedar Falls
Change: Projects Cottage Row, Center Street, Lake Street, Lone Tree
Road, Dunkerton Road, Ridgeway Avenue, East Main Street,
and Independence funding sources FS (RUT).
To Read: Projects Cottage Row, Center Street, Lake Street, Lone Tree
Road, Dunkerton Road, Ridgeway Avenue, East Main Street,
and Independence funding sources RS (RUT).

TRANSIT PROGRAM REVISION
(As Amended on December 14, 1977)

The following T.I.P. amendment has been approved by the Metropolitan Policy Board at their December 14, 1977 meeting and reflects a revised operating budget based upon the MET Transit projected budgets for FY 1978 and FY 1979.

The approved revisions are incorporated in the attached tables which indicate the T.I.P. transit program of operations, capital, and specific FY 1978 annual element projects.

These tables reflect:

- An upward adjustment of the MET operating budget;
- Commensurate revision of "special project budget;"
- Addition of projected FY 1979 operations in the annual element; and
- Continuation of the special project through the program and deletion of proposed demand-responsive operating and capital projects.

Additionally, Iowa D.O.T. Transit assistance has been approved for FY 1978 capital and operating assistance. Operating assistance of \$29,397 has been shown for service maintenance in FY 1978.

Capital assistance of \$26,775 has been included as part of the local matching funds in the attached tables. Of the total amount, \$25,665 is applied toward FY 1977 capital projects carried over and \$1,110 is applied toward local match on the service truck and schedule board items within the FY 1978 annual element.

Waterloo Metropolitan Area

LEGEND

- FREEWAYS & EXPRESSWAYS
- MAJOR ARTERIALS
- MINOR ARTERIALS
- COLLECTOR STREETS
- LOCAL STREETS
- INTERCHANGE
- GRADE SEPARATIONS

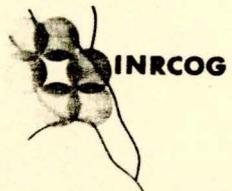


SCALE IN FEET

1990 Transportation Plan

WATERLOO METROPOLITAN AREA TRANSPORTATION STUDY

Revised JULY 1977



INRCOG

IOWA NORTHLAND REGIONAL COUNCIL OF GOVERNMENTS



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$$h \tan 30 = \frac{h}{\sqrt{3}}$$

$$h = \frac{\sqrt{3} a \tan 30}{2}$$

$$\frac{h}{\sqrt{3}} = \frac{1}{2} \cdot \frac{\sqrt{3}}{2} = \frac{1}{2} + \frac{\sqrt{3}}{2} = \frac{\sqrt{3} a \sqrt{3}}{4} = a$$

$$\frac{4}{3} \pi r^3$$

$$\frac{4}{3} \pi r^3 = \frac{4}{3} \pi \left(\frac{a}{\sqrt{3}} \right)^3 = \frac{4}{3} \pi \frac{a^3}{3\sqrt{3}}$$