Department of Public Works

#### **MEMORANDUM**

TO: Donald E. Wuerz, P.E.-P.L.S., City Engineer/Traffic Engineer

FROM: James E. Thorsen, Development Engineer of

DATE: 26 October 1987

SUBJECT: Truck Route Study

#### BACKGROUND

This report on determining possible truck routes through the City of Commerce City was requested by the City Engineer. The request was to look at the entire City and determine the optimal areas where truck traffic should be directed. This request is also in accordance with the transportation element of the Comprehensive Plan which encourages the adoption of truck routes throughout the City. Too, the draft of this study was staffed to other Departments; comments from the Departments were incorporated in this final version when such were not in conflict with the basic premise - "To enhance the quality of life of residential areas."

#### DISCUSSION

## TRUCK ROUTES (EXCLUSIONS):

Areas not under the City of Commerce City control include the rights-of-way for the State Highways. The following roads will not be addressed as they are accessible by trucks and are under the jurisdiction of the Colorado Department of Highways:

- 1. INTERSTATE 270; from the Western City limits (Platte River) to the Eastern City limits (Quebec Street). To include the Frontage Roads.
- 2. INTERSTATE 76; from Western City limits (near Dahlia Street) to the Northern City limits (near 120th Avenue)
- 3. U.S. HIGHWAY 6 & 85; from the Southern City limits (52nd Avenue) to the Northern City limits. To include the Frontage Roads.

- 4. COLORADO STATE HIGHWAY NO. 2; from U.S. 6 & 85 to the Eastern City limits.
- 5. BRIGHTON BOULEVARD (COLORADO STATE HIGHWAY NO. 265); from 54th Avenue to U.S. 6 & 85.
- 6. 74TH AVENUE (COLORADO STATE HIGHWAY NO. 224); from Interstate 76 to U.S. 6 & 85.

## TRUCK ROUTES (PROPOSED):

The roads determined suitable for truck routes were based on the following six parameters:

- 1. ZONING OF AREAS
- 2. JURISDICTION OF ROADWAY
- 3. REGIONAL COORDINATION WITH OTHER MUNICIPALITIES
- 4. TRAFFIC VOLUMES
- 5. PROXIMITY TO SCHOOLS AND PARKS
- 6. NOISE LEVELS AND AIR POLLUTION

This study includes, as a part thereof, the following road sections: (See appendix 1 for map).

1. 48th Avenue Between Forest Street and Pontiac Street 2. 49th Avenue Between Monaco St. and Sand Creek Drive 3. 49th Drive Between 50th Avenue and Monaco Street Between Ivy Street and Pontiac Street 4. 50th Avenue 5. 52nd Avenue Between U.S. 6 & 85 and Ivy Street 6. 53rd Place Between Newport Street and Quebec Street Between Brighton Blvd. and Quebec Street 7. 56th Avenue Between Dahlia Street and Monaco Street 8. 58th Avenue 9. 58th Place Between U.S. 6 & 85 and Glencoe Courtt Between Brighton Blvd. and Monaco Street 10. 60th Avenue Between Burlington Ditch and U.S. 6 & 85 11. 64th Avenue 12. 72nd Avenue Between Colorado Blvd. and Quebec Street 13. 80th Avenue Between Brighton Road and State Hwy. #2 Between Dahlia St. and State Highway #2 14. 88th Avenue Between U.S. 6 & 85 and State Highway #2 15. 96th Avenue 16. Brighton Blvd. 17. Colorado Blvd. Between 77th Avenue and 88th Avenue Between Brighton Blvd. and 74th Avenue 18. Dahlia Street Between 52nd Avenue and 56th Avenue Between 58th Avenue and 60th Avenue 19. Dahlia Street Between 74th Avenue and 88th Avenue 20. Dahlia Street Between 56th Avenue and 58th Avenue 21. Eudora Street Between 58th Place and 58th Avenue 22. Glencoe Court Between 56th Avenue and 60th Avenue 23. Holly Street Between 48th Avenue and 52nd Avenue 24. Ivy Street Between 48th Avenue and 52nd Avenue 25. Monaco Street Between 56th Avenue and 60th Avenue 26. Monaco Street Between Sand Creek Drive and 56th Avenue 27. Newport Street 28. Pontiac Street
29. Quebec Street
30. Rosemary Street
Between 48th Avenue and 50th Avenue
30th Avenue and State Hwy. #2 31. York Street Between 54th Ave. & Platte River Bridge

#### **DEFINITIONS:**

AXLE: For the purpose of this study an axle is defined as the total load on all wheels whose centers are included within two parallel transverse vertical planes placed not more than forty inches apart.

AXLE WEIGHT: That portion of the gross vehicle weight which is transmitted through the axles to the wheels and tires to the road surface. Axle weight is determined for uniformly loaded vehicles by multiplying the axle load (see definition for axle) by two (2).

NOISE: Succinctly, noise is unwanted sound. Most sound from vehicles is unwanted, primarily because it has the potential for disturbing human activities.

TRUCK: A motorized vehicle of greater than 10,000 pounds gross vehicle weight with two or more axles, including tractor-trailer combinations and buses. (Enforced by public scales within fifteen (15) miles of point of violation, or by use of protable scales).

WIDTH OF TRAFFIC LANE: The width of roadway for one lane of traffic; it is measured from the centerline of one (nearest) traffic lane stripe to the centerline of the nearest adjacent stripe, or from the centerline of one traffic lane stripe to the nearest lip of gutter, or from the centerline of one traffic lane stripe to the edge of paved travelled way (not including gutter or curb widths).

## ASSUMPTIONS AND EXPLANATIONS:

## AIR POLLUTION:

Because the observed levels of vehicular emissions into the atmosphere are subject not only to traffic volumes and vehicle types, but also to climatic vagaries on a local scale, it is foolhardy to use vehicular emissions guidelines analytically in a traffic study.

This statement is reinforced through discussion with the Air Pollution Control Division of the Colorado Department of Health. They perceive vehicular emissions as a subject which is best dealt with on a regional level. As an illustration of this perception, data received from an air quality monitoring station is not used to identify a particularly "good or bad" location, but is used to show with numerical readings the general pattern of air pollution and the level of air quality in the Denver Metropolitan Area. Their recommendation is that on a local level, improving air quality can be accomplished most effectively through a rigorous police enforcement of the State vehicle emissions inspection law (CRS 42-4-306.5).

As a result of the foregoing, the subject of vehicular emissions (pollution) will not be further addressed in this study.

# NOISE LEVELS:

DECIBEL (db or dB): This is a sound pressure unit used to express the magnitude of change in sound level, and is a logarithmic measurement.

Noise Level (dBA): The sound level obtained through use of the A scale. The "A" indicates a particular weighting of intensities at various frequencies to which the human ear is most sensitive. Provided the noise has no overwhelming single pitch component and is not a sharp impact noise, the A scale is useful for measuring noise loudness. It is the most commonly used scale for ground measurement of loudness which uses the A scale for combining the sound pressure levels at various frequencies. Figure 1 shows the relationship between dBA and subjective human response.

To illustrate that decibels are non-arithmetic, a three decibel (3 dB) change is a one hundred percent increase (doubling) or (halving) decrease in the sound level.

Figure 2 shows the relationship between dB and other sound pressure units.

Due to the complexity of the dB unit to many people, a rule of thumb for "decibel addition" where an accuracy of +/-1 dB is desired:

When two decibel values	Add the following amount		
differ by:	to the higher value:		
0 or 1 dB	3 dB		
2 or 3 dB	2 dB		
4 to 9 dB	1 dB		
10 dB or more	0 dB		

When there are several levels of sound to be added, they should be added two at a time, starting with the lower valued levels and continuing the addition procedure of two at a time until only one value remains. To illustrate, suppose it is desired to add the following five sound levels (68, 75, 79, 82, 88) using the above rule of thumb:

therefore: 68 + 75 = 76 dB 76 + 79 = 81 dB 81 + 82 = 85 dB85 + 88 = 90 dB

SUBJECTIVE HUMAN REPONSE AND CONVERSATION	HOME INDUSTRY (INDOOR)	dBA SCALE	COMMUNITY TRAFFIC (OUTDOOR)	REFERENCE	
THRESHOLD OF		-140-	AIRCRAFT CARRIER	32 TIMES	7
PAIN			JET AIRCRAFT	AS LOUD	
AMPLIFIED SPEECH		-130-	LARGE SIREN AT 100'	<u> </u>	30.00
ST BEON			JET TAKEOFF 200'		
THRESHOLD	ROCK BAND DISCOTHEQUE	-120-	OXYGEN TORCH THUNDERSTORM ELEVATED TRAIN	16 TIMES AS LOUD	
MAXIMUM VOCAL EFFORT	INDUSTRIAL PLANT	1	  -   RIVETING MACHINE   AUTO HORN AT 3'	8 TIMES	ī ģ
VERY LOUD	CHAIN SAW	100	PACK COMPACETIO	AS LOUD	
· ·	SHOUTING IN EAR		BACK COMPACTING TRASH TRUCK	i (	VIOLENT
EAR	PRINTING ROOM- NEWSPAPER) OWER MOWER	90-	·	4 TIMES AS LOUD	VIGOROUS ACTION- SUITS
,	FOOD BLENDER AUTO CAR WASH		10hp OUTBOARD AT 50' MOTORCYCLE AT 25' DIESEL TRAIN AT 100'	2 TIMES	
İ	ALARM CLOCK		SMALL TRUCKS AT 25'		
SHOUTING	SYMPHONIC MUSIC			LOUDNESS	THREATS- WIDESPREAD COMPLAINTS
LOUD	VACUUM CLEANER DISHWASHER ELECTRIC TYPE- WRITER			1/2 AS LOUD	
CONVERSATION	AIR CONDITIONER AT 2Q' TYPICAL OFFICE	60-		1/4 AS	FREQUENT COMPLAINTS
QUIET !	LIVING ROOM	50-		LOUD	OCCASIONAL
8	Tell on		AT 100'	1/8 AS	COMPLAINTS
	BEDROOM   LIBRARY	40-	BIRDSONG	LOUD	
	BROADCASTING STUDIO		V		FEW COMPLAINTS
SOFT WHISPER		30-			
		20-	RURAL AREA	JUST AUDIBLE	
	Age II		RUSTLING OF LEAVES	1	
		10-	i i	į	
		0	i 1 1	THRESHOLD! OF HEARING 3 dBA	

# FIGURE 1

Relationship between Sound Lavel Units

FIGURE 2

There are significant variations in the noise signature of individual vehicle types. Trucks, especially large diesel units, although a relatively small proportion of the total traffic stream, contribute significantly to the noise produced by traffic. Diesel trucks are inherently more noisy than passenger cars, producing a noise level about 15 dBA higher in each type of vehicle operating condition. The noise source for large diesel trucks is a composite of contributions from the engine exhaust system and the tire-roadway interaction, but the engine and exhaust noise tends to be dominant at low operating speeds, and tire-roadway interaction dominates at high operating speed. A comparison of passenger car noise with truck noise is given in Figure 3.

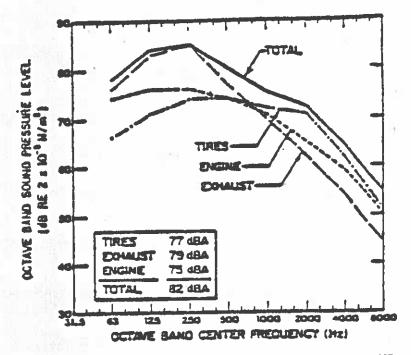
Another interesting characteristic of noise production by trucks is its variation based upon the operating conditions. Figure 4 presents data for a truck during cruise at level conditions (1900 rpm), climbing an upgrade (2100 rpm), and acceleration and descending a downgrade (1600 rpm). There is a 20 dBA difference in sound levels between downgrade and upgrade operating conditions, and generally there is a range of 5 to 10 dBA in noise level based only on speed variations.

Noise level measurements were not taken due to the lack of proper noise level measuring equipment (such as a noise dosimeter). One can be safely estimate that heavy truck travelled roads would have a maximum dBA level of 80-85 during peak hours, while averaging a steady state sound level over a stated period of time of 65-70 dBA.

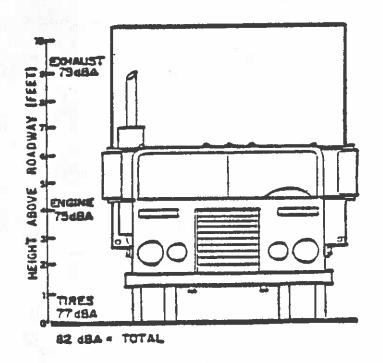
As a result of the foregoing, the subject of Noise Levels will not be further addressed in this study.

## STREET DETERIORATION AND STREET SAFETY:

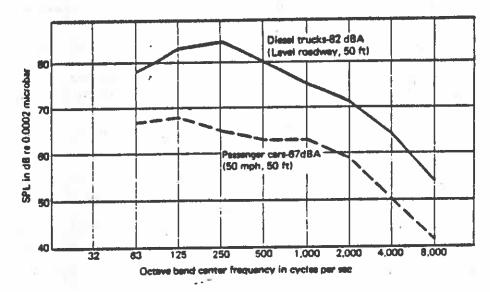
factors for street and One of the main deterioration is excessive loads on the asphalt surface. Heavy trucks cause rutting and severe cracks (aligatoring) and are the major cause for premature failure of pavements. It has been reported by the Federal Highway Administration (FHWA) annual "Highway Statistics", between 1970 and 1984 the number of vehicles on the typical rural Interstate increased 20%, the number of trucks 49%, and the number of equivalent single-axle loads (ESAL) 126%. In other words, 10 or 20 year loading projections are often occurring within half the pavement's design period. Therefore, it is only reasonable that truck traffic has also increased in this time period on local streets, thereby causing early pavement failure and costly repair work.



HYPOTHETICAL MICKTURE OF THE THREE PRINCIPAL SOURCES OF TRUCK MOISE. MOISE LEVELS WILL VARY FOR DAMPERENT COMPONENTS. US DIFFERENT TRUCKS

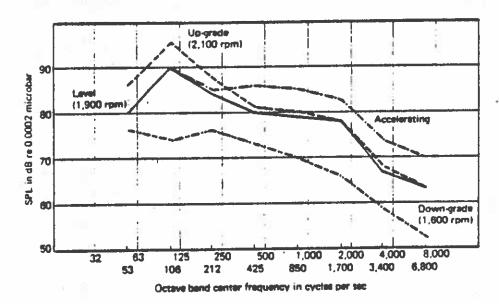


REPRESENTATION OF TRUCK NOISE COMPONENTS RELATIVE TO HEIGHT MADVE THE ROADWAY



Comparison of truck and man noise for acceleration.

# FIGURE 4



Sound level of truck operating conditions.

FIGURE 5

Directing truck traffic to a set of designated City streets will limit the damage and repair cost of local roads which are not designed to carry the amount of truck traffic generated in this City and will save the City taxpayer's dollars.

Additionally, street safety will be greatly enhanced by limiting truck traffic to designated routes. Local roads do not normally have properly designed turning radii for large semi-tractor trailers and therefore create difficult turning movements for trucks into oncoming vehicle lanes. Stopping sight distance problems which arise due to high profile trucks will also be limited to high visibility streets.

Additionally, noise from trucks, which is generated eight feet from pavement height, coupled with higher elevation engine noise will be diminished on residential streets. Too, diesel exhaust from trucks will be removed from residential areas and may be dissipated before wind could carry this noxious fume into a residential area.

Structural construction of residential streets are normally one-third the depth of streets which are designed for heavy trucks. To route trucks on residential roads designed for residential use reduces the life of the residential road from a 20-year life to a life of a few years. One passage of a loaded 18-wheel truck is equal to 5,000 passes of an automobile.

As a result of the foregoing, the subject of street deterioration and street safety will not be further addressed in this study.

## FACTS BEARING ON THE CHALLENGE

## 48TH AVENUE (FROM FOREST STREET TO PONTIAC STREET)

#### ZONING OF AREAS:

The surrounding area is zoned primarily for industrial development (I-1S, I-1 and I-3) with two small areas to the north of 48th Avenue that are zoned for agriculture.

## JURISDICTION OF ROADWAY:

The north half of 48th Avenue lies within the City of Commerce City boundaries while the south half of the road lies within the City and County of Denver. The roadway is maintained by both Cities.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

The south one-half of 48th Avenue is currently being used in the City and County of Denver by all vehicles including trucks.

## TRAFFIC VOLUMES:

Between Forest Street and Pontiac Street, the Average Daily Traffic (ADT) for this road as taken in April of 1984 is:

Eastbound = 1425 vehicles per day (City of Denver)

Westbound = 3371 vehicles per day (City of commerce City)

#### PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

# 49TH AVENUE (FROM MONACO STREET TO SAND CREEK DRIVE)

#### ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-1S) and also commercial (C-3).

## JURISDICTION OF ROADWAY:

East 49th Avenue lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Between Monaco Street and Sand Creek Drive, the Average Daily Traffic (ADT) for this road as taken in July of 1986 is:

Eastbound = 4570 vehicles per day Westbound = 4495 vehicles per day

#### PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

# 49TH DRIVE (FROM 50TH AVENUE TO MONACO STREET)

#### ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-1S).

## JURISDICTION OF ROADWAY:

East 49th Drive lies entirely within the City of Commerce City and is maintained by this City.

#### REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Between 50th Avenue and Monaco Street, the Average Daily Traffic (ADT) for this road as taken in August of 1983 is:

Eastbound = 1980 vehicles per day Westbound = 2506 vehicles per day

#### PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

# 50TH AVENUE (FROM IVY STREET TO PONTIAC STREET)

#### ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-1S).

### JURISDICTION OF ROADWAY:

East 50th Avenue lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

#### TRAFFIC VOLUMES:

Between Ivy Street and Pontiac Street, the Average Daily Traffic (ADT) for this road as taken in October of 1982 is:

Eastbound = 1861 vehicles per day Westbound = 1251 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

## 52ND AVENUE (FROM U.S. 6 & 85 TO IVY STREET)

#### ZONING OF AREAS:

From U.S. 6 & 85 to Forest Street the area to the north is zoned for industrial development (I-1, I-2, and I-3 to the north) and the area to the south is zoned by the City and County of Denver. To the east of Forest Street and west of Holly Street the surrounding area is zoned for agriculture and industrial development (I-1 and I-2). East of Holly Street to Ivy Street the area is zoned for industrial development (I-1 to the south and I-3 to the north) with an area to the north of 52nd Avenue that is zoned for agriculture.

#### JURISDICTION OF ROADWAY:

The north half of 52nd Avenue between U.S. 6 & 85 and Forest Street lies within the City of Commerce City while the south half of the road lies within the the City and County of Denver. This section of the roadway is maintained by both cities. East 52nd Avenue east of Forest Street lies within the City of Commerce City and is maintained by this City.

#### REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

The south half of 52nd Avenue between U.S. 6 & 85 and Forest Street is currently being used in the City and County of Denver by all vehicles including trucks.

#### TRAFFIC VOLUMES:

Between U.S. 6 & 85 and Ivy Street, the Average Daily Traffic (ADT) for this road as taken in July of 1982 is:

Eastbound = 6457 vehicles per day Westbound = 4816 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

# 53RD PLACE (FROM NEWPORT STREET TO QUEBEC STREET)

## ZONING OF AREAS:

The area surrounding 53rd Place between Newport Street and Quebec Street is zoned primarily for industrial development (I-1 and I-2) with a small area zoned for commercial development (C-3 to the north). Also, there is an area zoned for residential development (R-2).

# JURISDICTION OF ROADWAY:

East 53rd Place lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

#### TRAFFIC VOLUMES:

Not available at this time.

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

# 56TH AVENUE (FROM BRIGHTON BOULEVARD TO QUEBEC STREET)

#### ZONING OF AREAS:

The area surrounding 56th Avenue between Brighton Boulevard and U.S. 6 & 85 is zoned primarily for industrial development (I-2 to the north and I-3 to the north and the south) with a small area zoned for commercial development (C-2 to the south). From U.S. 6 & 85 to Monaco Street the area is zoned for industrial development (I-1 and I-2 to the north and south). East of Monaco Street and west of Newport Street the area is zoned for residential development (R-2), commercial development (C-3) and industrial development (I-2). From Newport Street to Quebec Street the adjacent land is primarily zoned for industrial development (I-1 to the north and I-2 to the south) with smaller areas zoned for commercial development (C-3).

#### JURISDICTION OF ROADWAY:

East 56th Avenue lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

### TRAFFIC VOLUMES:

Between Brighton Boulevard and Quebec Street, the Average Daily Traffic (ADT) for this road as taken in June of 1984 is:

Eastbound = 689 vehicles per day Westbound = 345 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

Monaco Park is adjacent to 56th Avenue at the intersection of Monaco Street in the northeast quadrant. Pedestrian traffic is light to moderate. There are no schools adjacent to this roadway.

# 58TH AVENUE (FROM DAHLIA STREET TO MONACO STREET)

## ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-1 and I-2).

## JURISDICTION OF ROADWAY:

East 58th Avenue lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

#### TRAFFIC VOLUMES:

Between Dahlia Street and Monaco Street, the Average Daily Traffic (ADT) for this road as taken in May of 1984 is:

Eastbound = 1175 vehicles per day Westbound = 439 vehicles per day

#### PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

# 58TH PLACE (FROM U.S. 6 & 85 TO GLENCOE COURT)

#### ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-2).

#### JURISDICTION OF ROADWAY:

East 58th Place lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Between U.S. 6 & 85 and Glencoe Street, the Average Daily Traffic (ADT) for this road as taken in March of 1987 is:

Eastbound = 2543 vehicles per day Westbound = 3882 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

## 60TH AVENUE (FROM BRIGHTON BOULEVARD TO MONACO STREET)

#### ZONING OF AREAS:

The area surrounding 60th Avenue between Brighton Boulevard and U.S. 6 & 85 is zoned for industrial development (I-3). East of U.S. 6 & 85 and west of Monaco Street the land is zoned for residential development (R-1 and R-2 to the north, and R-1 and R-3 to the south) with smaller areas zoned for industrial development (I-1 to the north and I-2 to the south) and commercial development (C-1, and C-2 to the north).

## JURISDICTION OF ROADWAY:

East 60th Avenue lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

#### TRAFFIC VOLUMES:

Between Brighton Boulevard and Monaco Street, the Average Daily Traffic (ADT) for this road as taken in January of 1987 is:

Eastbound = 3104 vehicles per day Westbound = 2846 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

City Park is located along 60th Avenue at the Glencoe Street alignment. This park is the site of the City's recreation building. Pedestrian traffic is moderate.

## 64TH AVENUE (FROM BURLINGTON, DITCH TO U.S. 6 & 85)

## ZONING OF AREAS:

The area surrounding 64th Avenue between the Burlington Ditch and Colorado Boulevard is zoned for agriculture (to the north and south) and industrial development (I-2 to the south and I-3 to the north and south). East of Colorado Boulevard and west of U.S. 6 & 85 the land is zoned for industrial development (I-3).

# JURISDICTION OF ROADWAY:

East 64th Avenue lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Between Burlington Ditch and U.S. 6 & 85, the Average Daily Traffic (ADT) for this road as taken in October of 1982 is:

Eastbound = 292 vehicles per day Westbound = 334 vehicles per day

#### PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to the roadway. Pedestrian traffic is light.

# 72ND AVENUE (FROM COLORADO BOULEVARD TO QUEBEC STREET)

## ZONING OF AREAS:

The area surrounding 72nd Avenue between Colorado Boulevard and Dahlia is zoned by Adams County. East of Dahlia Street and west of S.H. #2 the land is zoned for commercial development (C-2 and C-3 to the north and south), industrial development (I-1 and I-3 to the south and I-2 to the north), residential development (R-2 and R-3 to the south) and a portion that is zoned by Adams County (to the north). From S.H. #2 to Quebec Street the area is zoned for both commercial development (C-1 and C-3 to the north and south, and C-2 to the south) and residential development (R-2 to the south and R-3 to the north).

#### JURISDICTION OF ROADWAY:

East 72nd Avenue from Quebec Street to State Highway #2 lies within the City of Commerce City. East 72nd Avenue from State Highway #2 to Colorado Boulevard lies within both Commerce City and Adams County. The roadway is maintained by both the City of Commerce City and Adams County.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

The section of 72nd Avenue between U.S. 6 & 85 and Colorado Boulevard is currently being used in Adams County by all vehicles including trucks.

## TRAFFIC VOLUMES:

Between Colorado Boulevard and Quebec Street, the Average Daily Traffic (ADT) for this road as taken in June of 1985 is:

Eastbound = 8045 vehicles per day Westbound = 6046 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There is a school located at the intersection of 72nd Avenue and Birch Street (Alsup Elementary and Middle School) in the southeast quadrant. There are no parks adjacent to this roadway. Pedestrian traffic is moderate to heavy.

## 80TH AVENUE (FROM U.S. 6 & 85 TO STATE HIGHWAY NO. 2)

# ZONING OF AREAS:

The area surrounding 80th Avenue from U.S. 6 & 85 to Monaco Street is zoned by Adams County. East of Monaco Street to State Highway No. 2 the area is zoned for industrial development (I-2 to the north), residential development (R-1 to the south and R-2 to the north), commercial development (C-3 to the north and south), and areas that are zoned by Adams County (to the north and south).

#### JURISDICTION OF ROADWAY:

The City of Commerce City owns a portion of 80th Avenue while the majority of the road is in the jurisdiction of Adams County. The road is maintained by Adams County.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

East 80th Avenue is currently being used in Adams County by all vehicles including trucks.

## TRAFFIC VOLUMES:

Not available at this time.

## PROXIMITY TO SCHOOLS AND PARKS:

There is a school (Dupont Elementary School) adjacent to 80th Avenue between Larkwood Street and Kimberly Street to the south. Pedestrian traffic is moderate. There are no parks adjacent to this roadway.

# 88TH AVENUE (FROM DAHLIA STREET TO STATE HIGHWAY NO.2)

## ZONING OF AREAS:

The area to the south of 88th Avenue between Dahlia Street and State Highway No. 2 is zoned for agriculture, PUD, residential development (R-2) and industrial development (I-2). Other land along 88th Avenue is zoned by Adams County.

## JURISDICTION OF ROADWAY:

The City of Commerce City owns portions of 88th Avenue while the majority of the road is in the jurisdiction of Adams County. The road is maintained by Adams County.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

East 88th Avenue is currently being used in Adams County by all vehicles including trucks.

#### TRAFFIC VOLUMES:

Not available at this time.

#### PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

## 96TH AVENUE (FROM U.S. 6 & 85 TO STATE HIGHWAY NO.2)

## ZONING OF AREAS:

The land to the south of 96th Avenue is zoned for industrial development (I-1 and I-3), PUD, and a small area that is zoned by Adams County. North of 96th Avenue the land is zoned by Adams County.

#### JURISDICTION OF ROADWAY:

The City of Commerce City owns portions of 96th Avenue while the majority of the road is in the jurisdiction of Adams County. The road is maintained by Adams County.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

East 96th Avenue is currently being used in Adams County by all vehicles including trucks.

## TRAFFIC VOLUMES:

Not available at this time.

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

## BRIGHTON BOULEVARD (FROM 77TH AVENUE TO 88TH AVENUE)

## ZONING OF AREAS:

The land surrounding Brighton Boulevard has been zoned by Adams County except for two small areas that are zoned for commercial development (C-3) and residential development (R-1).

## JURISDICTION OF ROADWAY:

Brighton Boulevard lies entirely within Adams County and is maintained by the County.

#### REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

Brighton Boulevard is currently being used in Adams County by all vehicles including trucks.

#### TRAFFIC VOLUMES:

Not available at this time.

#### PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and pedestrian traffic is light.

## COLORADO BOULEVARD (FROM BRIGHTON BLVD. TO 74TH AVENUE)

#### ZONING OF AREAS:

The land surrounding Colorado Boulevard between Brighton Boulevard and 64th Avenue is zoned for industrial development (I-2 to the west and I-3 to the east and west) with a small area zoned for agriculture (to the west). North of 64th Avenue and south of 70th Avenue the area is zoned for agriculture, industrial development (I-1 and I-2 to the west and I-3 to the east), residential development (R-2 to the east and R-3 to the east and west) and commercial development (C-2 to the west and C-3 to the east). From 70th Avenue to 74th Avenue the land is zoned by Adams County.

#### JURISDICTION OF ROADWAY:

Colorado Boulevard from Brighton Boulevard to 70th Avenue lies within the City of Commerce City. North of 70th Avenue to 74th Avenue lies within Adams County. The roadway is maintained by both the City of Commerce City and Adams County.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

Colorado Boulevard from 70th Avenue to 74th Avenue is currently being used in Adams County by all vehicles including trucks.

## TRAFFIC VOLUMES:

Between Brighton Boulevard and 74th Avenue, the Average Daily Traffic (ADT) for this road as taken in July of 1985 is:

Eastbound = 1306 vehicles per day Westbound = 1246 vehicles per day

#### PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

## DAHLIA STREET (FROM 52ND AVENUE TO 56TH AVENUE)

#### ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-1, 1-2 and I-3).

#### JURISDICTION OF ROADWAY:

Dahlia Street lies entirely within the City of Commerce City and is maintained by this City.

#### REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

#### TRAFFIC VOLUMES:

Between 52nd Avenue and 56th Avenue, the Average Daily Traffic (ADT) for this road as taken in August of 1983 is:

Northbound = 3963 vehicles per day Southbound = 3035 vehicles per day

#### PROXIMITY TO SCHOOLS AND PARKS:

## DAHLIA STREET (FROM 58TH AVENUE TO 60TH AVENUE)

#### ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-2 to the west and I-3 to the east).  $\bullet$ 

## JURISDICTION OF ROADWAY:

Dahlia Street lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Between 58th Avenue and 60th Avenue, the Average Daily Traffic (ADT) for this road as taken in May of 1984 is:

Northbound = 4948 vehicles per day Southbound = 1036 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

## DAHLIA STREET (FROM 74TH AVENUE TO 88TH AVENUE)

#### ZONING OF AREAS:

The surrounding area is zoned for agricultural development (Ag).

#### JURISDICTION OF ROADWAY:

Dahlia Street lies partially within the City of Commerce City and partially by Adams County. The road is maintained by the County.

#### REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

Coordination is necessary between the City and the County for posting of signs.

## TRAFFIC VOLUMES:

Not available at this time.

#### PROXIMITY TO SCHOOLS AND PARKS:

## EUDORA STREET (FROM 56TH AVENUE TO 58TH AVENUE)

## ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-2).

#### JURISDICTION OF ROADWAY:

Eudora Street lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

#### TRAFFIC VOLUMES:

Between 56th Avenue and 58th Avenue the Average Daily Traffic (ADT) for this road as taken in June of 1982 is:

Eastbound = 986 vehicles per day Westbound = 974 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

# GLENCOE COURT (FROM 58TH AVENUE TO 58TH PLACE)

# ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-2).

#### JURISDICTION OF ROADWAY:

Glencoe Court lies entirely within the City of Commerce City and is maintained by this City.

# REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Not available at this time.

## PROXIMITY TO SCHOOLS AND PARKS:

## HOLLY STREET (FROM 56TH AVENUE TO 60TH AVENUE)

## ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-2 to the west and I-1 to the east and west) and residential development (R-1 and R-2 to the east and R-3 to the west).

#### JURISDICTION OF ROADWAY:

Holly Street lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Between 56th Avenue and 60th Avenue, the Average Daily Traffic (ADT) for this road as taken in October of 1986 is:

Northbound = 2655 vehicles per day Southbound = 2690 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

# IVY STREET (FROM 48TH AVENUE TO 52ND AVENUE)

## ZONING OF AREAS:

The surrounding area is zoned primarily for industrial development (I-1 and I-3 to the west and I-1S to the east) with areas to the south of 50th Avenue that are zoned for agriculture.

#### JURISDICTION OF ROADWAY:

Ivy Street lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Between 48th Avenue and 52nd Avenue, the Average Daily Traffic (ADT) for this road as taken in April of 1984 is:

Northbound = 1718 vehicles per day Southbound = 1660 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

## MONACO STREET (FROM 48TH AVENUE TO 50TH AVENUE)

## ZONING OF AREAS:

The surrounding area is zoned industrial development (I-1S).

## JURISDICTION OF ROADWAY:

Monaco Street lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Not available at this time.

### PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

# MONACO STREET (FROM 56TH AVENUE TO 60TH AVENUE)

## ZONING OF AREAS:

The land surrounding Monaco Street is zoned for industrial development (I-1 to the west), residential development (R-1 to the west and R-2 to the east and west) and commercial development (C-1 to the east).

#### JURISDICTION OF ROADWAY:

Monaco Street lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Between 56th Avenue and 60th Avenue, the Average Daily Traffic (ADT) for this road as taken in July of 1983 is:

Northbound = 1362 vehicles per day Southbound = 1708 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There is a park (Monaco Park) adjacent to Monaco Street at the intersection of 58th Avenue in the northeast quadrant. Pedestrian traffic is light to moderate. There are no schools adjacent to the roadway.

## NEWPORT STREET (FROM SAND CREEK DRIVE TO 56TH AVENUE)

## ZONING OF AREAS:

The land surrounding Newport Street between Sand Creek Drive and 53rd Place is zoned primarily for industrial development (I-2 to the east and west) with a small section zoned residential development (R-2 to the west). North of 53rd Place and south of 54th Place the land is zoned for industrial development (I-2 to the east and west) and residential development (R-2 to the east and west). From 54th Place to 56th Avenue the land is zoned primarily for industrial development (I-1 and I-2 to the east and west) with a small area zoned for residential development (R-2 to the east and west).

## JURISDICTION OF ROADWAY:

Newport Street lies entirely within the City of Commerce City and is maintained by this City.

#### REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire City is within the City boundary.

#### TRAFFIC VOLUMES:

Between Sand Creek Drive and 56th Avenue, the Average Daily Traffic (ADT) for this road as taken in March of 1981 is:

Northbound = 167 vehicles per day Southbound = 284 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no schools or parks adjacent to this roadway and little pedestrian traffic.

#### PONTIAC STREET (FROM 48TH AVENUE TO 50TH AVENUE)

#### ZONING OF AREAS:

The surrounding area is zoned for industrial development (I-1S to the west and east) and commercial development (C-3 to the east).

#### JURISDICTION OF ROADWAY:

Pontiac Street lies entirely within the City of Commerce City and is maintained by this City.

## REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

#### TRAFFIC VOLUMES:

Between 48th Avenue and 50th Avenue, the Average Daily Traffic (ADT) for this road as taken in July of 1986 is:

Northbound = 888 vehicles per day Southbound = 860 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no parks or schools adjacent to this roadway and little pedestrian traffic.

## QUEBEC STREET (FROM 50TH AVENUE TO STATE HIGHWAY NO. 2)

# ZONING OF AREAS:

The area west of Quebec Street between 50th Avenue and 56th Avenue is zoned primarily for industrial development (I-1 and I-2) with a small area zoned for commercial development (C-3). North of 56th Avenue and south of 64th Avenue the land is zoned for commercial development (C-3) with an area zoned for industrial development (I-1). From 64th Avenue to 76th Avenue the land is zoned for residential development (R-1, R-2 and R-3) with two smaller areas zoned for commercial development (C-1 and C-3). From 76th Avenue to State Highway No. 2 the area is zoned for commercial development (C-2) and mobile home development (MH). To the east of Quebec Street lies the Rocky Mountain Arsenal.

#### JURISDICTION OF ROADWAY:

Quebec Street lies within the City of Commerce City, unicorporated Adams County, and also the City and County of Denver. The road is maintained by this City.

#### REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

Regional coordination is necessary between unicorporated Adams County, the City and County of Denver, and Commerce City for the posting of signs.

## TRAFFIC VOLUMES:

Between 50th Avenue and State Highway No. 2, the Average Daily Traffic (ADT) for this road as taken in October of 1986 is:

Northbound = 5547 vehicles per day Southbound = 10,183 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There is a park adjacent to Quebec Street between 73rd Avenue and 73rd Place Pedestrian traffic is light to moderate. There are no schools adjacent to this roadway.

# ROSEMARY STREET (FROM 80TH AVENUE TO 88TH AVENUE)

## ZONING OF AREAS:

The land surrounding Rosemary Street north of 80th Avenue and south of 84th Avenue is zoned for industrial development (I-1 to the east and I-2 to the west), commercial development (C-2 and C-3) and agricultural development. This area also includes land which is zoned by Adams County. North of 84th Avenue to 86th Avenue the land is zoned for industrial development (I-2 to the east and I-1 to the east and west), residential development (R-2 to the east) and other areas that are zoned by Adams County. From 86th Avenue to 88th Avenue the surrounding area is zoned primarily for agriculture (to the east and west) with an area zoned for PUD to the east.

## JURISDICTION OF ROADWAY:

Rosemary Street lies within Adams County and is maintained by the City of Commerce City.

#### REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

Rosemary Street is currently being used in Adams County by all vehicles including trucks.

#### TRAFFIC VOLUMES:

Between 80th Avenue and 88th Avenue, the Average Daily Traffic (ADT) for this road as taken in August of 1984 is:

Northbound = 3608 vehicles per day Southbound = 3423 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

There are no parks or schools adjacent to this roadway and pedestrian traffic is light.

## YORK STREET (FROM 54TH AVENUE TO THE PLATTE RIVER)

## ZONING OF AREAS:

The surrounding area is zoned primarily for agriculture with a small area zoned for industrial development (I-3) and commercial development (C-3).

## JURISDICTION OF ROADWAY:

York Street lies entirely within the City of Commerce City and is maintained by this City.

#### REGIONAL COORDINATION WITH OTHER MUNICIPALITIES:

No regional coordination is necessary as the entire street is within the City boundary.

## TRAFFIC VOLUMES:

Between 54th Avenue and the Platte River, the Average Daily Traffic (ADT) for this road as taken in May of 1984 is:

Northbound = 4086 vehicles per day Southbound = 4015 vehicles per day

## PROXIMITY TO SCHOOLS AND PARKS:

