



City of Grand Island

Tuesday, December 04, 2007

Council Session

Item G10

**#2007-316 - Approving Changes to Speed Limits on Bismark Road
and Shady Bend Road**

Staff Contact: Steven P. Riehle, City Engineer/Public Works Direc

Council Agenda Memo

From: Steven P. Riehle, Public Works Director

Meeting: December 4, 2007

Subject: Approving Changes to Speed Limits on Bismark Road East of Stuhr Road and on Shady Bend Road North of Bismark Road

Item #'s: G-10

Presenter(s): Steven P. Riehle, Public Works Director

Background

A request to lower the speed limit on Shady Bend Road north of Bismark Road from 50 mph to 35 mph was received in February 2007. The Engineering Division of the Public Works Department performed a speed study that indicated the existing 50 mph speed limit was appropriate for this section of Shady Bend Road. In November 2007 the Engineering Division of the City of Grand Island's Public Works Department in conjunction with the Hall County Surveyor/Highway Superintendent, Grand Island Police Department and the Hall County Sherriff's Department performed a traffic engineering speed study on Shady Bend Road north of Bismark Road that included a traffic accident review. A copy of the study is attached.

Discussion

At the conclusion of the study the following recommendations were made:

Street	From	To	Speed		Limits
			Existing	Proposed	
Bismark Road	Stuhr Road	400 feet east of Stuhr Road (City Limit)	55		45
Shady Bend Road	Arabian Circle (City Limit)	Bronco Road (City Limit)	50		45
Shady Bend Road	Approximately 1/2 mile north of Bismark Road (City Limit)	231 feet south of Gregory Avenue (City Limit)	50		45

The Hall County Board of Supervisors approved 45 mph speed limits for sections of Bismark Road and Shady Bend Road adjacent to the sections inside the city limits.

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee
3. Postpone the issue to future date
4. Take no action on the issue

Recommendation

City Administration recommends that the Council pass a resolution making the speed limit adjustments recommended by the Engineering Division of the Public Works Department.

Sample Motion

Move to approve a resolution making the speed limit adjustments recommended by the Engineering Division of the Public Works Department.

TRAFFIC ENGINEERING SPEED LIMIT STUDY
SHADY BEND ROAD
BETWEEN BURLINGTON NORTHERN SANTA RAILROAD TRACKS
TO
200' SOUTH OF GREGORY AVENUE

November 5, 2007

Request

Both the City of Grand Island and Hall County have received requests to lower the speed limit to 35 miles per hour for the section of Shady Bend Road from Bismark Road to the Wood River Bridge located approximately ½ mile to the north.

Traffic Engineering Speed Study

A traffic engineering speed study is required before changes to the existing speed limits can be considered. The engineering division of the City of Grand Island Public Works Department is performing this speed study in cooperation with the Hall County Surveyor/Superintendent and consultation with the Grand Island Police Department and the Hall County Sheriff.

Manual of Uniform Traffic Control Devices

23 CFR 655.603 adopts the Manual on Uniform Traffic Control Devices (MUTCD) as the national standard for all traffic control devices installed on any street, highway, or bicycle trail open to public travel. The Federal Highway Administration (FHWA) has endorsed the MUTCD (<http://mutcd.fhwa.dot.gov>). Applicable sections of the MUTCD are included for reference as attachment # 1. The Nebraska Department of Roads (NDOR) has adopted and implemented a supplemented MUTCD (<http://www.dor.state.ne.us/traffeng/mutcd/MUTCD-2005.pdf>). The NDOR requires all traffic control devices erected by local authorities to conform with the MUTCD.

Existing Roadway

Shady Bend Rd. is a 24' wide asphalt North-South mile section line road that is used for a cut off between US Highway #30 and US Highway #34. The study section has portions in the Grand Island City Limits and portions in Hall County. There is no parking along the roadway, sight distance is adequate and vehicle turning volumes are light.

Existing Speed Limits

The area is posted at 50 MPH which is 5 MPH lower than the 55 MPH which is set by State of Nebraska Statutes. State Statutes on Rules of the Road, Authority and speed limits is included as attachment # 2. A map of speed limits inside the Grand Island city limits is included as attachment # 3.

Accident History

The accidents in the area are concentrated at the intersection of Shady Bend Road and Bismark Road. A separate study is being conducted to review the warrants for a stop sign at the intersection.

Speed Survey

A speed limit survey was performed on February 21, 2007. The survey showed an 85th percentile speed of 54.0 MPH with 8.8% of vehicles exceeding 55 MPH. See attached chart showing the results of the speed survey (attachment # 4). The data sheet from the speed survey is included as attachment # 5.

Traffic Counts

Traffic counts were taken for this section of roadway on Wednesday, February 21, 2007. The A.M. peak hour for traffic was 7:30 a.m. with 100 vehicles and the P.M. peak hour for traffic was 4:45 p.m. with 141 vehicles. The 24 hour traffic count was 1,365 vehicles per day. Trucks comprised 149 (10.9%) of the vehicle counts.

Pedestrian Activity

Pedestrian activity is light because there are not very many pedestrian traffic generators in the area. The Seventh Day Adventist school that is located in the study area is no longer used. There are no sidewalks in the area and pedestrian activity is light.

Factors that determine Speed Limits-

A PowerPoint titled Frequently Asked Questions for Speed Limits on City Streets is included as attachment # 6. A copy of the speed study guidelines used by the Engineering Division of the City of Grand Island Public Works Department is included for reference as attachment # 7.

Discussion on Enforceability

A common misconception is that reducing the speed limit will automatically slow the speed of traffic, while raising the speed limit will automatically cause an increase in the speed of traffic. Most people will drive the roadway as they perceive the conditions and will ignore a speed limit that is unrealistically too low or too high. The reasonable majority voluntarily obeys a realistic speed limit and more enforcement effort can be applied to the unreasonable few that drive too fast.

Setting appropriate speed limits in a rapidly developing fringe area presents special problems. Drivers don't adapt and lowering speed limits has minimal effect on average speeds or uniformity of speeds. Compliance with speed limits in urban areas is already poor. Setting a low speed limit will either put too many expectations on law enforcement or demand a greater tolerance for non-compliance.

Recommended Speed Limit for Shady Bend Road

Although we understand the desire of the neighborhood to lower the posted speed limit from 50 miles per hour (mph) to 35 mph, we cannot support it based on the following considerations.

1. The guidance in the MUTCD states that the posted speed limit should be within 5 mph of the 85th-percentile speed of free-flowing traffic.
2. The average speed is 47.8 mph.
3. The upper limit of the 10 mph pace speed is 55 mph.
4. Property access to Shady Bend Road is low. The driveways and intersections allow vehicles entering onto Shady Bend Road good access and sight distance.
5. A 35 mph speed limit is not practical to enforce.
6. Turning traffic volumes are low compared to through traffic volumes.
7. Adjacent development density is light.

For driver expectancy and enforceability, the speed limits for both Bismark Road and Shady Bend Roads should be 45 to 50 mph.

Conclusion

A 45 mph speed limit is recommended for Bismark Road from Stuhr Road, through Shady Bend Road to Gunbarrel Road and for Bismark Road from the Burlington Northern Santa Fe railroad tracks, through Bismark Road to the existing 35 mph speed limit at 231' south of Gregory Avenue.

From The Manual of Uniform Traffic Control Devices

Section 1A.07 Responsibility for Traffic Control Devices

Standard:

The responsibility for the design, placement, operation, maintenance, and uniformity of traffic control devices shall rest with the public agency or the official having jurisdiction. 23 CFR 655.603 adopts the Manual on Uniform Traffic Control Devices as the national standard for all traffic control devices installed on any street, highway, or bicycle trail open to public travel. When a State or other Federal agency manual or supplement is required, that manual or supplement shall be in substantial conformance with the national Manual on Uniform Traffic Control Devices.

23 CFR 655.603 also states that traffic control devices on all streets and highways open to public travel in each State shall be in substantial conformance with standards issued or endorsed by the Federal Highway Administrator.

Support:

The "Uniform Vehicle Code" (see Section 1A.11) has the following provision in Section 15-104 for the adoption of a uniform Manual:

"(a)The [State Highway Agency] shall adopt a manual and specification for a uniform system of traffic control devices consistent with the provisions of this code for use upon highways within this State. Such uniform system shall correlate with and so far as possible conform to the system set forth in the most recent edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, and other standards issued or endorsed by the Federal Highway Administrator."

"(b) The Manual adopted pursuant to subsection (a) shall have the force and effect of law."

Additionally, States are encouraged to adopt Section 15-116 of the "Uniform Vehicle Code," which states that, "No person shall install or maintain in any area of private property used by the public any sign, signal, marking or other device intended to regulate, warn, or guide traffic unless it conforms with the State manual and specifications adopted under Section 15-104."

Section 1A.09 Engineering Study and Engineering Judgment

Standard:

This Manual describes the application of traffic control devices, but shall not be a legal requirement for their installation.

Guidance:

The decision to use a particular device at a particular location should be made on the basis of either an engineering study or the application of engineering judgment. Thus, while this Manual provides Standards, Guidance, and Options for design and application of traffic control devices, this Manual should not be considered a substitute for engineering judgment.

Engineering judgment should be exercised in the selection and application of traffic control devices, as well as in the location and design of the roads and streets that the devices complement. Jurisdictions with responsibility for traffic control that do not have engineers on their staffs should seek engineering assistance from others, such as the State transportation agency, their County, a nearby large City, or a traffic engineering consultant.

Section 1A.13 Definitions of Words and Phrases in This Manual

Standard:

Unless otherwise defined herein, or in the other Parts of this Manual, definitions contained in the most recent edition of the "Uniform Vehicle Code," "AASHTO Transportation Glossary (Highway Definitions)," and other publications specified in Section 1A.11 are also incorporated and adopted by reference.

25. **Engineering Judgment**—the evaluation of available pertinent information, and the application of appropriate principles, Standards, Guidance, and practices as contained in this Manual and other sources, for the purpose of deciding upon the applicability, design, operation, or installation of a traffic control device. Engineering judgment shall be exercised by an engineer, or by an individual working under the supervision of an engineer, through the application of procedures and criteria established by the engineer. Documentation of engineering judgment is not required.
26. **Engineering Study**—the comprehensive analysis and evaluation of available pertinent information, and the application of appropriate principles, Standards, Guidance, and practices as contained in this Manual and other sources, for the purpose of deciding upon the applicability, design, operation, or installation of a traffic control device. An engineering study shall be performed by an engineer, or by an individual working under the supervision of an engineer, through the application of procedures and criteria established by the engineer. An engineering study shall be documented.

Section 2B.13 Speed Limit Sign (R2-1)

Standard:

After an engineering study has been made in accordance with established traffic engineering practices, the Speed Limit (R2-1) sign (see Figure 2B-1) shall display the limit established by law, ordinance, regulation, or as adopted by the authorized agency. The speed limits shown shall be in multiples of 10 km/h or 5 mph.

Guidance:

At least once every 5 years, States and local agencies should reevaluate non-statutory speed limits on segments of their roadways that have undergone a significant change in roadway characteristics or surrounding land use since the last review. No more than three speed limits should be displayed on any one Speed Limit sign or assembly. When a speed limit is to be posted, it should be within 10 km/h or 5 mph of the 85th-percentile speed of free-flowing traffic.

Option:

Other factors that may be considered when establishing speed limits are the following:

- A. Road characteristics, shoulder condition, grade, alignment, and sight distance;
- B. The pace speed;
- C. Roadside development and environment;
- D. Parking practices and pedestrian activity; and
- E. Reported crash experience for at least a 12-month period.

Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any nighttime information or minimum speed limit that might apply; and the other to show any special speed limits for trucks and other vehicles.

A changeable message sign that changes the speed limit for traffic and ambient conditions may be installed provided that the appropriate speed limit is shown at the proper times.

A changeable message sign that displays to approaching drivers the speed at which they are traveling may be installed in conjunction with a Speed Limit sign.

Guidance:

If a changeable message sign displaying approach speeds is installed, the legend YOUR SPEED XX km/h (MPH) or such similar legend should be shown. The color of the changeable message legend should be a yellow legend on a black background or the reverse of these colors.

Support:

Advisory Speed signs are discussed in Sections 2C.36 and 2C.46 and Temporary Traffic Control Zone Speed signs are discussed in Part 6.

State Statute

60-680. Regulation of highways by local authority; police powers.

- (1) Any local authority with respect to highways under its jurisdiction and within the reasonable exercise of the police power may:
- (a) Regulate or prohibit stopping, standing, or parking;
 - (b) Regulate traffic by means of peace officers or traffic control devices;
 - (c) Regulate or prohibit processions or assemblages on the highways;
 - (d) Designate highways or roadways for use by traffic moving in one direction;
 - (e) Establish speed limits for vehicles in public parks;
 - (f) Designate any highway as a through highway or designate any intersection as a stop or yield intersection;
 - (g) Restrict the use of highways as authorized in section 60-681;
 - (h) Regulate operation of bicycles and require registration and inspection of such, including requirement of a registration fee;
 - (i) Regulate operation of electric personal assistive mobility devices;
 - (j) Regulate or prohibit the turning of vehicles or specified types of vehicles;
 - (k) Alter or establish speed limits authorized in the Nebraska Rules of the Road;
 - (l) Designate no-passing zones;
 - (m) Prohibit or regulate use of controlled-access highways by any class or kind of traffic except those highways which are a part of the state highway system;
 - (n) Prohibit or regulate use of heavily traveled highways by any class or kind of traffic it finds to be incompatible with the normal and safe movement of traffic, except that such regulations shall not be effective on any highway which is part of the state highway system unless authorized by the Department of Roads;
 - (o) Establish minimum speed limits as authorized in the rules;
 - (p) Designate hazardous railroad grade crossings as authorized in the rules;
 - (q) Designate and regulate traffic on play streets;
 - (r) Prohibit pedestrians from crossing a roadway in a business district or any designated highway except in a crosswalk as authorized in the rules;
 - (s) Restrict pedestrian crossings at unmarked crosswalks as authorized in the rules;
 - (t) Regulate persons propelling push carts;
 - (u) Regulate persons upon skates, coasters, sleds, and other toy vehicles;
 - (v) Notwithstanding any other provision of law, adopt and enforce an ordinance or resolution prohibiting the use of engine brakes on the National System of Interstate and Defense Highways that has a grade of less than five degrees within its jurisdiction. For purposes of this subdivision, engine brake means a device that converts a power producing engine into a power-absorbing air compressor, resulting in a net energy loss;
 - (w) Adopt and enforce such temporary or experimental regulations as may be necessary to cover emergencies or special conditions; and
 - (x) Adopt other traffic regulations except as prohibited by state law or contrary to state law.
- (2) No local authority, except an incorporated city with more than forty thousand inhabitants, shall erect or maintain any traffic control device at any location so as to require the traffic on any state highway or state-maintained freeway to stop before entering or crossing any intersecting highway unless approval in writing has first been obtained from the Department of Roads.
- (3) No ordinance or regulation enacted under subdivision (1)(d), (e), (f), (g), (j), (k), (l), (m), (n), (p), (q), or (s) of this section shall be effective until traffic control devices giving notice of such local traffic regulations are erected upon or at the entrances to such affected highway or part thereof affected as may be most appropriate.

Source: Laws 1973, LB 45, § 97; R.S.1943, (1988), § 39-697; Laws 1993, LB 370, § 176; Laws 2000, LB 1361, § 2; Laws 2002, LB 491, § 2; Laws 2002, LB 1105, § 455;

The city is authorized to regulate or prohibit parking on its streets. There is no requirement that such prohibitions be made by ordinance. *Morrow v. City of Ogallala*, 213 Neb. 414, 329 N.W.2d 351 (1983). A city ordinance regulating funeral processions was a reasonable and valid exercise of the city's police power under this section and does not conflict with Nebraska's present right-of-way statutes, sections 39-609(1) and 39-614(1)(a). *Herman v. Lee*, 210 Neb. 563, 316 N.W.2d 56 (1982).

60-6,118. Manual on Uniform Traffic Control Devices; adoption by Department of Roads.

Consistent with the provisions of the Nebraska Rules of the Road, the Department of Roads may adopt and promulgate rules and regulations adopting and implementing a manual providing a uniform system of traffic control devices on all highways within this state which, together with any supplements adopted by the department, shall be known as the Manual on Uniform Traffic Control Devices.

Source: Laws 1973, LB 45, § 98; Laws 1984, LB 677, § 1; R.S.1943, (1988), § 39-698; Laws 1993, LB 370, § 214

60-6,119. Obedience to traffic control devices; exceptions.

(1) The driver of any vehicle shall obey the instructions of any traffic control device applicable thereto placed in accordance with the Nebraska Rules of the Road, unless otherwise directed by a peace officer, subject to the exceptions granted the driver of an authorized emergency vehicle in the rules.

(2) No provision of the rules for which traffic control devices are required shall be enforced against an alleged violator if at the time and place of the alleged violation an official device is not in proper position and sufficiently legible to be seen by a reasonably observant person. Whenever any provision of the rules does not state that traffic control devices are required, such provision shall be effective even though no devices are erected or in place.

(3) Whenever traffic control devices are placed in position approximately conforming to the requirements of the rules, such devices shall be presumed to have been so placed by the official act or direction of lawful authority unless the contrary is established by competent evidence.

(4) Any traffic control device placed pursuant to the rules and purporting to conform with the lawful requirements pertaining to such devices shall be presumed to comply with the requirements of the rules unless the contrary is established by competent evidence.

Source: Laws 1973, LB 45, § 9; R.S.1943, (1988), § 39-609; Laws 1993, LB 370, § 215;

Subsection (5) of this section applies to the operation of an automobile while it is on that part of the road which is closed and requires extreme caution so as to avoid the additional hazards that may be incident to the reason why the road has been closed. *Birchem v. Eggers*, 236 Neb. 775, 463 N.W.2d 824 (1990) (pursuant to Laws 1993, LB 370, section 211, language from subsection (5) of section 39-609 was placed in section 60-6,115). A city ordinance regulating funeral processions was a reasonable and valid exercise of the city's police power under section 39-697(1)(c) (transferred to section 60-680) and does not conflict with Nebraska's present right-of-way statutes, this section and section 39-614(1)(a) (transferred to section 60-6,123). *Herman v. Lee*, 210 Neb. 563, 316 N.W.2d 56 (1982). This section does not apply to a highway partially barricaded but not closed to traffic. *Central Constr. Co. v. Republican City School Dist. No. 1*, 206 Neb. 615, 294 N.W.2d 347 (1980).

60-6,120. Placing and maintaining traffic control devices; jurisdiction.

(1) The Department of Roads shall place and maintain, or provide for such placing and maintaining, such traffic control devices, conforming to the manual, upon all state highways as it deems necessary to indicate and to carry out the Nebraska Rules of the Road or to regulate, warn, or guide traffic.

(2)(a) In incorporated cities and villages with less than forty thousand inhabitants, the department shall have exclusive jurisdiction regarding the erection and maintenance of traffic control devices on the state highway system but shall not place traffic control devices on the state highway system within incorporated cities and villages of more than twenty-five hundred inhabitants without consultation with the proper city officials.

(b) In incorporated cities of forty thousand or more inhabitants, except on state-maintained freeways of the state highway system where the department retains exclusive jurisdiction, the city shall have jurisdiction regarding erection and maintenance of traffic control devices on the state highway system after consultation with the department, except that there shall be joint jurisdiction with the department for such traffic control devices for which the department accepts responsibility for the erection and maintenance.

(3) No local authority shall place or maintain any traffic control device upon any highway under the jurisdiction of the department, except by permission of the department, or on any state-maintained freeway of the state highway system.

(4) The placing of traffic control devices by the department shall not be a departmental rule, regulation, or order subject to the statutory procedures for such rules, regulations, or orders but shall be considered as establishing precepts extending the provisions of the Nebraska Rules of the Road as necessary to regulate, warn, or guide traffic. Violation of such traffic control devices shall be punishable as provided in the rules.

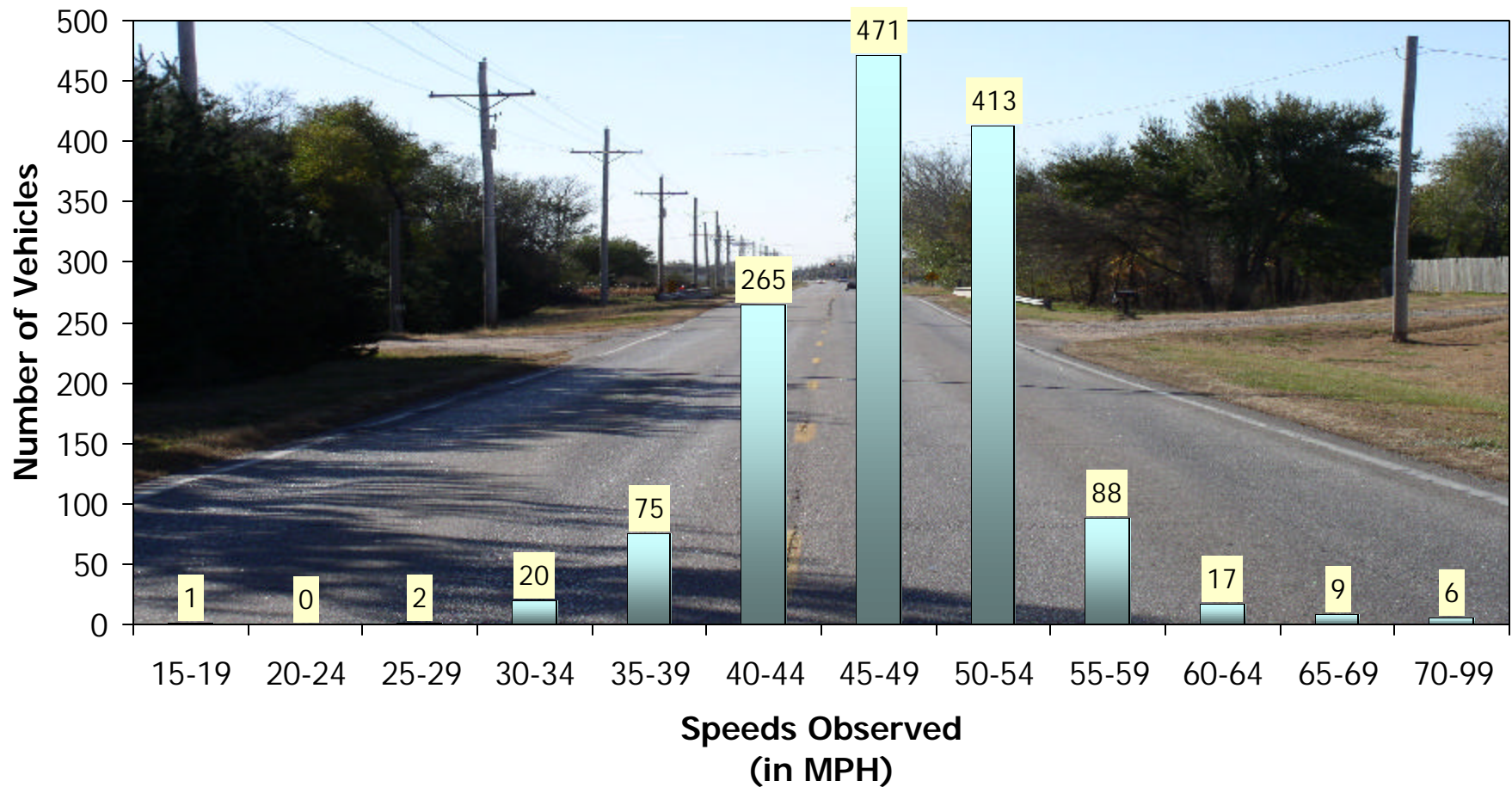
Source: Laws 1973, LB 45, § 10; R.S.1943, (1988), § 39-610; Laws 1993, LB 370, § 216;

60-6,121. Placing and maintaining traffic control devices; local authorities.

Local authorities in their respective jurisdictions shall place and maintain such traffic control devices upon highways under their jurisdictions as they deem necessary to indicate and to carry out the provisions of the Nebraska Rules of the Road or to regulate, warn, or guide traffic. All such traffic control devices erected pursuant to the rules shall conform with the manual.

Source: Laws 1973, LB 45, § 11;; R.S.1943, (1988), § 39-611;; Laws 1993, LB 370, § 217

**Speed Survey - Shady Bend Road
(North of Bismark Road)
November 2007**



City of Grand Island

Public Works Department

Traffic Engineering

Attachment # 5

Title1 : Shady Bend Rd. Speed Study

Title2 :

Title3 :

Direction:

Site:

Data for Wednesday 2/21/2007

Vehicle Count Statistics

Daily Total

1,365

AM	Peak Hour	07:30	PM	Peak Hour	04:45
	Volume	100		Volume	141
	Factor	0.76		Factor	0.90

Speed Statistics

MPH

1- 14 15- 19 20- 24 25- 29 30- 34 35- 39 40- 44 45- 49 50- 54 55- 59 60- 64 65- 69 70- 999

Bin Totals	0	1	0	2	20	75	265	471	413	88	17	9	6
% of Totals	0.0	0.1	0.0	0.1	1.5	5.5	19.4	34.5	30.2	6.4	1.2	0.7	0.4

Avg. Speed 47.78 MPH

%ile Speeds

10%	15%	50%	85%	90%
40.7 MPH	42.0 MPH	48.4 MPH	54.0 MPH	54.8 MPH

Pace

Speed 45-55 MPH

Number in pace 884

% in pace 64.7

Speed Exceeded

45(MPH) 55(MPH) 65(MPH)

Percentage 73.4 8.8 1.1

Totals 1,004 120 15

Class Statistics

Cars & 2 Axle			2 Axle		3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl
Bikes	Trls	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi
35	668	375	43	97	19	2	24	73	22	1	1	7
2.6	48.9	27.4	3.1	7.1	1.4	0.1	1.8	5.3	1.6	0.1	0.1	0.5

Gap Statistics

[Secs] 5- 9 10- 14 15- 19 20- 24 25- 29 30- 34 35- 39 40- 44 45- 49 50- 54 55- 59 60- 64 65- 999

Bin Totals	117	115	84	65	62	56	49	36	48	30	41	29	328
% of Totals	11.0	10.8	7.9	6.1	5.8	5.3	4.6	3.4	4.5	2.8	3.9	2.7	30.9

Error Statistics

Sensor

Total Hits

Percent Used

A	B
7,266	7,231
94.0	95.0

Avg Axles Per Vehicle 2.40

Avg Two Axle Wheelbase 10.0 ft.

FREQUENTLY ASKED QUESTIONS

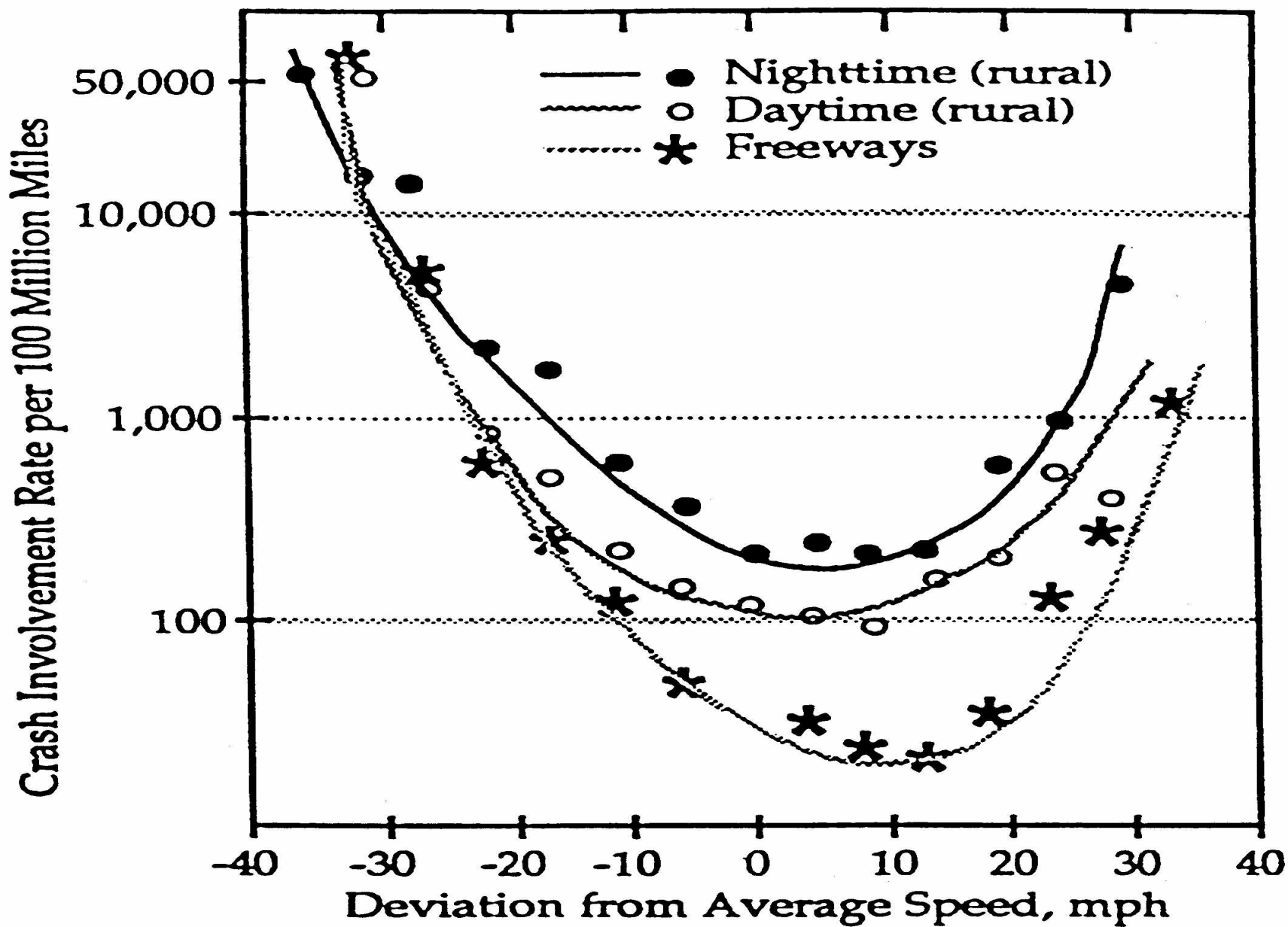
SPEED LIMITS ON CITY STREETS

How are speed limits determined?

- 85 Percentile speed
- Average speed
- Upper limit of 10 mph range
- Travel efficiency
- Property access
- Road user safety
- Community concerns
- Pedestrian activity
- Practicality of enforcement
- Accident History
- Through & turning traffic volumes
- Roadway width, lane configuration, etc.
- Parking and rate of turnover of parking

What effect does uniformity of speed have?

Wide disparities in the speed of the traffic stream leads to more accident involvement. The further the average and the 85 percentile speeds are from the posted speed limit, the greater the disparity.



Doesn't speed kill?

It's true that speed kills, but speed variance is a major contributor to accidents.

Why doesn't lowering the speed limit work?

Compliance with speed limits in urban areas is already poor. Setting a low speed limit will either put too many expectations on law enforcement or demand a greater tolerance for non-compliance.

Why do we have trouble with speed limits on the fringes of the City?

Setting appropriate speed limits in a rapidly developing fringe area presents special problems. Drivers don't adapt and lowering speed limits has minimal effect on average speeds or uniformity of speeds.

What determines how effective a speed limit is?

- Driver perception of reasonableness
- Police enforcement
- Courts punishment

How about increased public awareness to try and change drivers speed behaviors?

Increased public awareness of speed limits has little effect. Studies have shown increased publicity will make:

- 30% more aware of the speed limit
- 5% more change their attitudes on speed limits
- 1% more intend to obey speed limits

Can't we step up enforcement to make drivers obey speed limits?

Traditional enforcement methods have a short-lived effect in deterring speeding. More drivers will obey laws only if they perceive a credible threat of detection and punishment for non-compliance. Studies have shown little residual effects from concentrated enforcement. Soon after the enforcement is no longer present, speeds increase back to what they were before the concentrated enforcement.

Why don't we use more concentrated enforcement?

Maintaining the deterrence effect requires a level of enforcement that's difficult to obtain. Resources are limited and there are many different priorities.

What about traffic calming to slow traffic?

Traffic calming works well on neighborhood residential streets.

Traffic calming should NOT be used on neighborhood collectors or arterials because it will push traffic onto neighborhood streets.

Then what should we do to determine appropriate speed limits in a residential area?

Use the 85 percentile and temper it for the above considerations. Remember that drivers tend to speed on residential streets and that may make the 85 percentile high. Also remember that setting too low of a speed limit will put too many expectations on law enforcement or demand a greater tolerance for non-compliance.

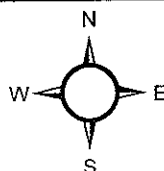
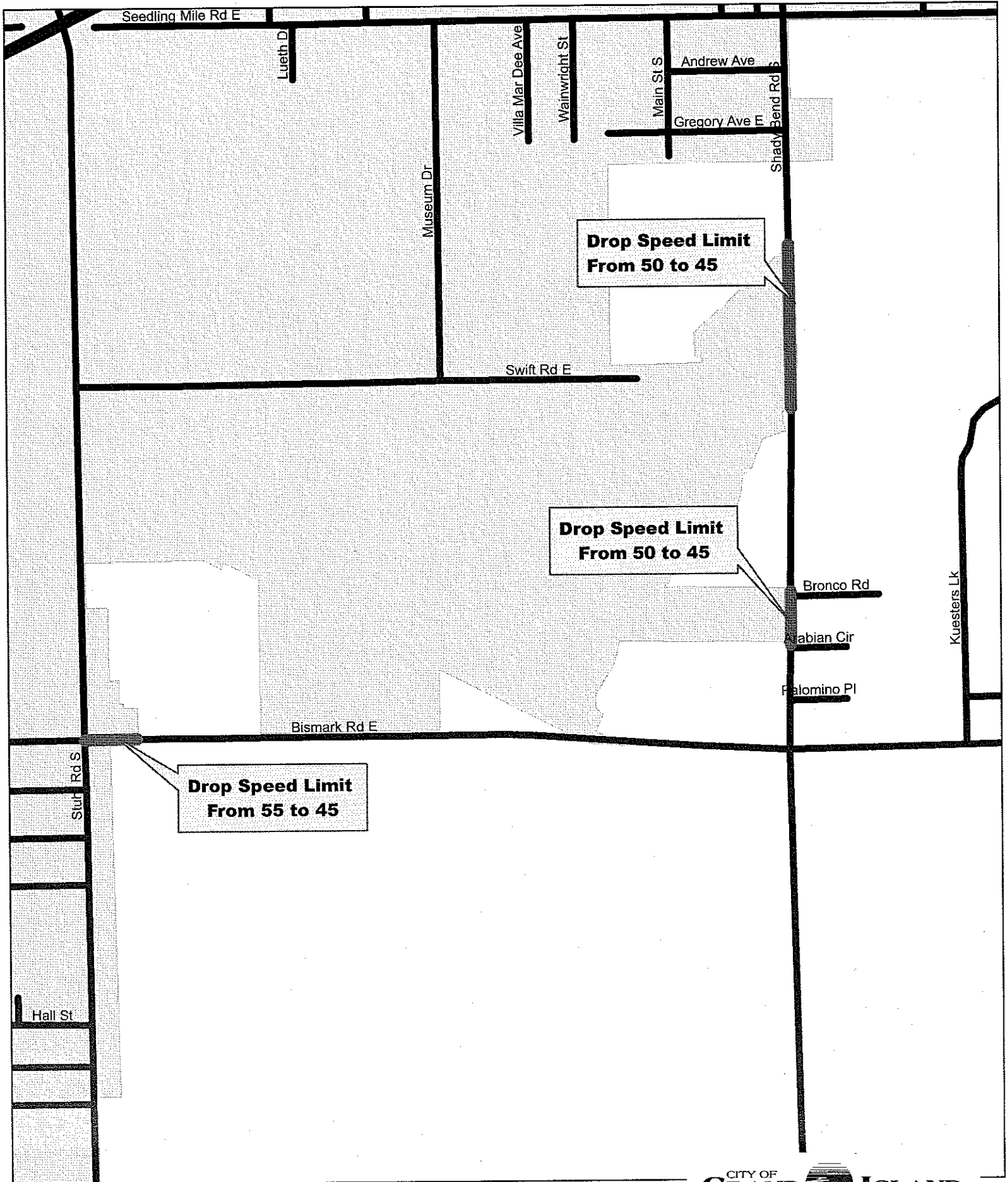
report of the following:

- Bar graph showing speeds observed
- Number of vehicles observed
- Median Speed
- Average Speed
- 85th Percentile Speed
- 10 mph pace speed
- Percentage of vehicles in 10 mph pace

A preliminary speed limit is selected and then adjusted based on the following field conditions:

- Average test run speed by technicians
- Total pavement width
- Number of Lanes
- Lane Width
- Width and type of median
- Parking and rate of turnover
- Restricted sight distances
- Vehicle turning volumes
- Traffic density
- Accident history
- Driveway and intersection density
- Pedestrian activity
- Roadside Development
- Road and shoulder surface characteristics
- Pedestrian and bicycle activity
- Speed limits on adjoining roadway segments
- Accident experience

Any adjustments should not change the preliminary speed limit by more than 20 percent.



CITY OF
GRAND ISLAND

Public Works Department

Plot Date 11-26-2007

R E S O L U T I O N 2007-316

WHEREAS, the City Council, by authority of Section 22-51 of the Grand Island City Code, may by resolution, establish speed limits upon the streets of the City of Grand Island.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that speed limits within the City of Grand Island are established as follows:

Street	From	To	Limit
Abbott Road	1/2 mile west of Sky Park Road (city limit)	Sky Park Road	50
Abbott Road	Quandt Road	Approximately 1/2 mile east of Quandt Road (city limit)	50
Adams Street	Stolley Park Road	Anna Street	30
Airport Road	1/4 mile west of Sky Park Road (west city limits)	Sky Park Road	55
Airport Road	Shady Bend Road	Approximately 1/2 mile east of Shady Bend Road (east city limits)	50
Anna Street	Blaine Street	Locust Street	30
Bismark Road	Vine Street	Stuhr Road	30
Bismark Road	Stuhr Road	400 feet east of Stuhr Road (city limit)	45
Blaine Street	U.S. Highway 34	Stolley Park Road	35
Broadwell Avenue	Anna Street	Prospect Avenue	30
Broadwell Avenue	Prospect Street	Nebraska Highway 2 (city route)	35
Broadwell Avenue	Nebraska Highway 2 (city route)	1/4 mile north of Roberts Street (north city limits)	45
Capital Avenue	Engleman Road	North Road	35

Approved as to Form <input type="checkbox"/> _____ November 30, 2007 November 29, 2007
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Street	From	To	Limit
Capital Avenue	North Road	Carleton Avenue	45
Capital Avenue	Carleton Avenue	St. Paul Road	35
Capital Avenue	St. Paul Road	Sky Park Road	45
Capital Avenue	Sky Park Road	1/2 mile east of Sky Park Road (city limits)	50
Cherry Street	Bismark Road	Sutherland Street	30
Concord Street	Diers Avenue	370 feet North of Diers Avenue	30
Custer Avenue	Old Lincoln Highway/ Old Potash Highway	Capital Avenue	30
Diers Avenue	Old Potash Highway	Capital Avenue	30
Eddy Street	Fourth Street	State Street	30
Engleman Road	Husker Highway	400 feet north of North Lane	45
Engleman Road	200 feet south of Lariat Lane	Capital Avenue	45
Engleman Road	Capital Avenue	1,000 feet north of Michigan Avenue	40
Faidley Avenue	U.S. Highway 281	Webb Road	35
Faidley Avenue	Webb Road	Custer Avenue	30
Fonner Park Road	South Locust Street	Stuhr Road	35
Fourth Street	Sycamore Street	Plum Street	25
Fourth Street	Plum Street	Beal Street	30
Fourth Street	Beal Street	Taft Street	35
Fourth Street	Taft Street	Seventh Street	45
Gold Core Road	Wildwood Drive	Schimmer Drive	40
Husker Highway	U.S. Highway 30	Schroeder Avenue	50

Street	From	To	Limit
Husker Highway	Schroeder Avenue	1/4 mile east of North Road (city limits)	40
Husker Highway	Prairieview Street	U.S. Highway 281	40
Independence Avenue	Capital Avenue	Nebraska Highway 2	35
Juergen Road	Wildwood Drive	Schimmer Drive	30
Locust Street	Wood River Floodway (south city limits)	U.S. Highway 34	45
Locust Street	U.S. Highway 34	Stagecoach Road	40
Locust Street	Stagecoach Road	Stolley Park Road	35
Locust Street	Stolley Park Road	Charles Street	30
Locust Street	Charles Street	First Street	25
Nebraska Highway 2	1/4 mile west of Independence Avenue (west city limits)	1,200 feet west of Diers Avenue	55
Nebraska Highway 2	1,200 feet west of Diers Avenue	100 feet west of O'Flannagan Street	50
Nebraska Highway 2 – City Route	100 feet west of O'Flannagan Street	Broadwell Avenue	50
North Road	Husker Highway	Stolley Park Road	35
North Road	Old Highway 30	U.S. Highway 30	35
North Road	U.S. Highway 30	Old Potash Highway	45
North Road	Old Potash Highway	Nebraska Highway 2	40
Old Lincoln Highway	Garfield Street	Broadwell Avenue	30
Old Highway 30	West intersection with U.S. Highway 30	Webb Road	45
Old Highway 30	Webb Road	East intersection with U.S.	35

Street	From	To	Limit
		Highway 30	
Old Potash Highway	540 feet west of Arapahoe Avenue (west city limits)	Kaufman Avenue	45
Old Potash Highway	Kaufman Avenue	Custer Avenue	35
Quandt Road	Abbott Road	1/4 mile north of Abbott Road	50
Schimmer Drive	1/2 mile west of U.S. Highway 281 (west city limits)	230 feet east of Scheel Road (east city limits)	40
Second Street	Webb Road	Ada Street	35
Seedling Mile Road	1/2 mile west of Museum Drive	Shady Bend Road	35
Seedling Mile Road	Shady Bend Road	Approximately 1/4 mile east of Shady Bend Road (east city limits)	45
Shady Bend Road	Arabian Circle (city limits)	Bronco Road (city limits)	45
Shady Bend Road	Approximately 1/2 mile north of Bismark Road (city limits)	880 feet south of Gregory Avenue (city limits)	45
Shady Bend Road	231 feet south of Gregory Avenue (city limits)	300 feet north of Shady Bend Way (city limits)	35
Shady Bend Road	350 feet north of U.S. Highway 30 (city limits)	Union Pacific Railroad Right-of-Way (city limits)	35
Shady Bend Road	1,910 feet north of Capital Avenue	Airport Road	55
Sky Park Road	Seventh Street	Capital Avenue	45
Sky Park Road	Capital Avenue	Twin Star Lane	55
Sky Park Road	Twin Star Lane	Gulf Stream Drive	45
Sky Park Road	Gulf Stream Drive	White Cloud Road	55
State Street	North Road	Ebony Lane	45

Street	From	To	Limit
State Street	Ebony Lane	U.S. Highway 281	35
Stolley Park Road	920 feet west of Freedom Drive (west city limits)	U.S. Highway 30	50
Stolley Park Road	U.S. Highway 30	North Road	45
Stolley Park Road	North Road	U.S. Highway 281	45
Stolley Park Road	U.S. Highway 281	South Locust Street	35
Stolley Park Road	South Locust Street	Stuhr Road	45
Stuhr Road	270 feet south of the north intersection with Stolley Park Road (south city limits)	Fonner Park Road	55
Stuhr Road	Fonner Park Road	U.S. Highway 30	35
Sycamore Street	Fourth Street	Capital Avenue	30
Thirteenth Street	910 feet west of Branding Iron Lane (west city limits)	Cedar Ridge Court	45
Thirteenth Street	Cedar Ridge Court	U.S. Highway 281	35
U.S. Highway 30	Husker Highway	Johnstown Road	55
U.S. Highway 30	Johnstown Road	East Intersection with Old Highway 30	45
U.S. Highway 30	East Intersection with Old Highway 30	Grant Street	35
U.S. Highway 30 (2 nd Street)	Grant Street	Broadwell Avenue	35
U.S. Highway 30 (2 nd Street)	Broadwell Avenue	Greenwich Street	30
U.S. Highway 30 (eastbound) / Greenwich Street	Second Street	First Street	30

Street	From	To	Limit
U.S. Highway 30 (1 st Street and 2 nd Street)	Greenwich Street	Eddy Street	30
U.S. Highway 30 (1 st Street and 2 nd Street)	Eddy Street	Sycamore Street	25
U.S. Highway 30 (1 st Street and 2 nd Street)	Sycamore Street	1500 feet West of Willow Street	35
U.S. Highway 30	1500 feet West of Willow Street	2500 feet West of Shady Bend Road	45
U.S. Highway 30	2500 feet West of Shady Bend Road	270 feet west of Shady Bend Road (east city limits)	50
U.S. Highway 34 (Husker Highway)	U.S. Highway 281	Wortman Drive (city limits)	45
U.S. Highway 34 (Husker Highway)	Wortman Drive (Begin NDOR jurisdiction)	Blaine Street	50
U.S. Highway 34 (Husker Highway)	Blaine Street	Approximately 1/2 mile west of Locust Street (city limits) (End of NDOR jurisdiction)	50
U.S. Highway 34 (Husker Highway)	Approximately 1/2 mile west of Locust Street (city limits)	Approximately 1/4 mile west of Locust Street (De Ann Road)	50
U.S. Highway 34 (Husker Highway)	Approximately 1/4 mile west of Locust Street (De Ann Road)	1/4 mile East of Locust Street (east city limits)	45
U.S. Highway 34/281	Milepost No. 228.91 (1/4 mile south of Wildwood Drive)	Milepost No. 231.16 (Husker Highway)	55
U.S. Highway 281	Milepost No. 67.6 (Husker Highway)	Milepost No. 68.1 (south intersection with Webb Road)	55
U.S. Highway 281	Milepost No. 68.1 (south intersection with Webb Road)	Milepost No. 72 (NE Highway 2)	50
Walnut Street	Charles Street	First Street	30

Street	From	To	Limit
Webb Road	South Intersection with U.S. Highway 281	Nebraska Highway 2 (city route)	35
Webb Road	Nebraska Highway 2 - city route	1410 feet north of Nebraska Highway 2 – city route (city limits)	40
Webb Road	900 feet south of the north intersection with U.S. Highway 281 (city limits)	240 feet south of the north intersection with U.S. Highway 281 (city limits)	40
White Cloud Road	Sky Park Road	2060 feet east of Sky Park Road (city limits)	50
Wildwood Drive	380 feet west of Elk Drive (west city limits)	610 feet east of Gold Core Drive (East city limits)	45

OTHER SPEED ZONES:

The speed limit for all alleys within the downtown Congested Parking Area as defined in Section 13-17 of the Grand Island City Code shall be 10 miles per hour.

BE IT FURTHER RESOLVED, that this resolution supercedes any and all other resolutions establishing or amending speed limits for the City of Grand Island.

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Adopted by the City Council of the City of Grand Island, Nebraska, December 4, 2007.

Margaret Hornady, Mayor

Attest:

RaNae Edwards, City Clerk