
AGENDA ITEM SUMMARY

Subject: Discuss results of the South Grand Avenue speed study conducted by the Iowa Department of Transportation

Background Summary:

The Iowa Department of Transportation has completed a speed study on South Grand Avenue from the south corporate limits to Old Highway Road which the City Council had previously requested. The study results are attached.

South Grand Avenue from Old Highway Road to the south City limits consist of three separate speed limit zones. North of CUSB Bank the posted speed limit is 35 miles per hour (MPH). From CUSB Bank to Molstead Motors the speed limit is 45 MPH. South of Molstead Motors the speed limit is 55 MPH. Please refer to the attachment that provides a visual of the speed limit zones.

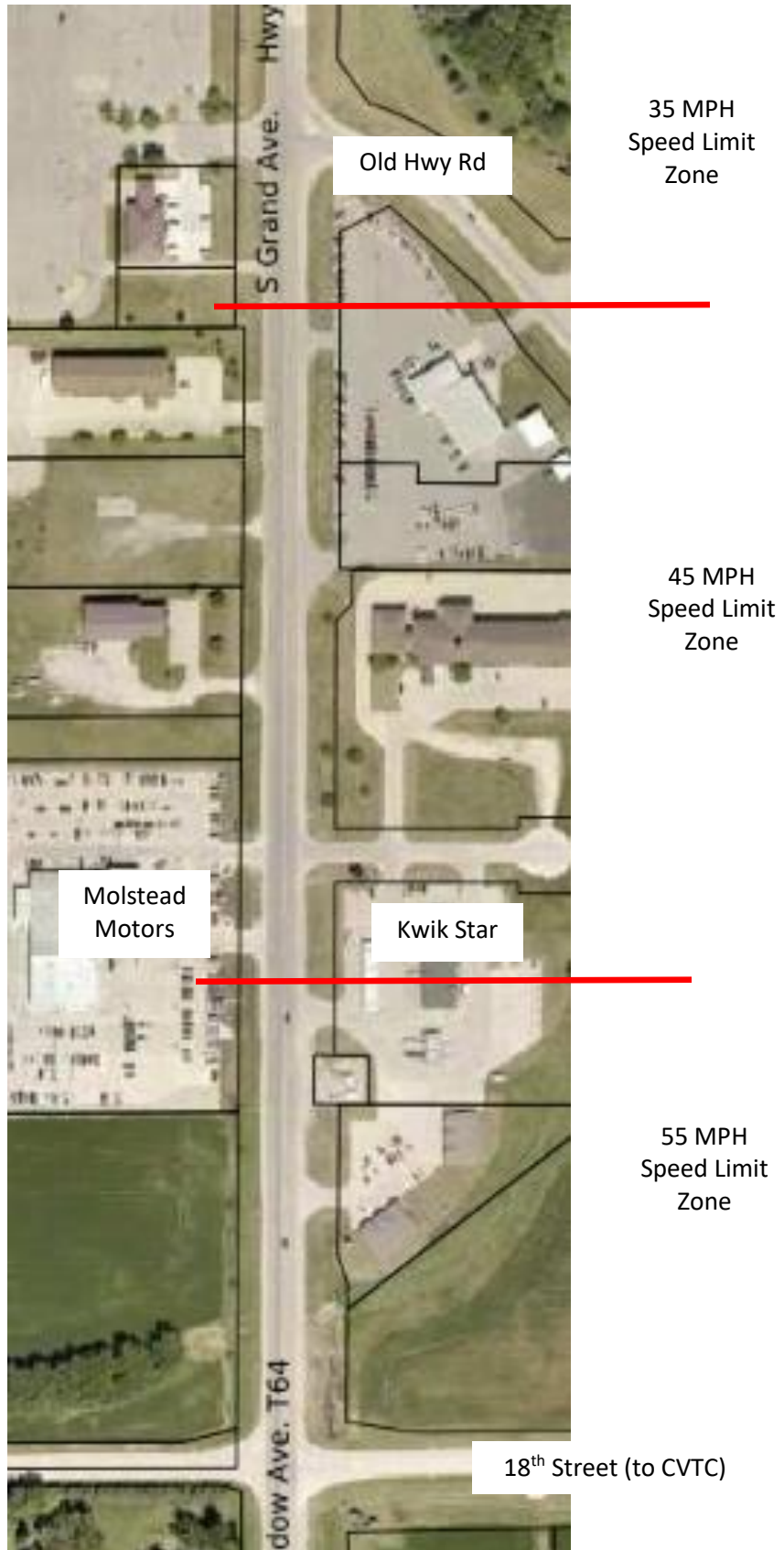
An analysis of traffic accidents was a part of the study. From 1/1/2017 to 12/31/2021 there were 15 reported crashes. The Iowa DOT's Crash Analysis Tool provided the following data:

- Crash Severity: 1 Possible /Unknown Injury Crashes, 1 Possible Minor Injury Crash and 13 Property Damage Only Crashes
- Major Cause: 5 Animal, 1 Ran Stop Sign, 2 FTYROW: From stop sign, 1 FTYROW: Making left turn, 1 Driver Distraction: Inattentive/lost in thought, 2 Followed too close, 1 Made improper turn, 1 Driver Distraction: Passenger, 1 Driver Distraction: Other interior distraction.
- Crash Rate: Calculated Crash Rate for this area was 210.5 crashes/hundred million vehicle miles compared to a statewide average of 263 crashes/hundred million vehicle miles on a Municipal US Highway.

There was a wide range of observed vehicle speeds. The 85th percentile speed in the 55 MPH Zone was 59 MPH and the 85th percentile speed in the 45 MPH zone was 53 MPH. The study stated that consistent enforcement would be an effective solution to bringing speeding vehicles into compliance with the posted speed limits.

The results of the study did not recommend decreasing the speed limit but supports increasing the 45 MPH zone to 50 MPH. Maintaining the existing posted speed limits is also acceptable to the DOT. Following our discussion at the Planning Session, we can forward to the DOT the City's thoughts on the speed study's implementation.

South Grand Avenue (US Hwy 18) Speed Limit Zones



IOWA DEPARTMENT OF TRANSPORTATION

To Office District 2 **Date** February 21, 2021
Attention Craig Wood **Ref. No.** 456
Jon Raney
From Dave Matulac
Office Traffic and Safety
Subject Recommendation to District: Speed Study on US 18 in Charles City, IA
(Floyd County)

District 2 requested a speed review of the Subject area (from the south corporate limits, northward, to Old Highway Road) on behalf of the City of Charles City.

It was decided that the Iowa D.O.T. would conduct a speed study to determine the appropriate speed zones for the area.

Speed Data was collected (see below) and a review of the area was conducted.

Last Staff Action/Commission Resolution: 01-0381 dated October 31, 2000

The collected data and review of the area support increasing the 45mph zone to 50mph. Should the District prefer to maintain the existing speed zones, that would be acceptable.

Consistent enforcement would be an effective solution to bringing speeding vehicles into compliance with the posted speed limits.

Please respond to this recommendation with your concurrence or suggestions for change.

If you have any questions or concerns, please contact Ron McDaniel at 515-239-1537 or Ron.McDaniel@iowa.gov.

Project ID : C1
Street : US 18
Capture Zone : 18TH ST

Direction(s) : BOTH -- FACING S
Posted Speed Limit: 55
Types of Vehicles : ALL
Weather Conditions: 10S SUNNY

Filter Settings

Date Range : 01/10/22 Through 01/10/22
Time Range : 03:25:00P Through 05:25:00P
Direction(s) : Approaching & Departing
Types of Vehicles : All Vehicles

Lowest Recorded Speed : 39 15th Percentile : 50
Highest Recorded Speed : 67 50th Percentile : 55
Average Speed : 54.7 85th Percentile : 59
Vehicles Observed : 191 95th Percentile : 61

10 MPH Pace Speed : 51 Through 60
Percent In Pace Speed : 79.6
Percent Under Pace Speed : 15.2
Percent Over Pace Speed : 5.2

SPEED	COUNT	PERCENT	CUM. %	SPEED	COUNT	PERCENT	CUM. %
30	0	0.0	0.0	56	16	8.4	61.3
31	0	0.0	0.0	57	14	7.3	68.6
32	0	0.0	0.0	58	17	8.9	77.5
33	0	0.0	0.0	59	22	11.5	89.0
34	0	0.0	0.0	60	11	5.8	94.8
35	0	0.0	0.0	61	4	2.1	96.9
36	0	0.0	0.0	62	3	1.6	98.4
37	0	0.0	0.0	63	0	0.0	98.4
38	0	0.0	0.0	64	1	0.5	99.0
39	1	0.5	0.5	65	0	0.0	99.0
40	1	0.5	1.0	66	1	0.5	99.5
41	1	0.5	1.6	67	1	0.5	100.0
42	1	0.5	2.1	68	0	0.0	100.0
43	2	1.0	3.1	69	0	0.0	100.0
44	0	0.0	3.1	70	0	0.0	100.0
45	0	0.0	3.1	71	0	0.0	100.0
46	2	1.0	4.2	72	0	0.0	100.0
47	1	0.5	4.7	73	0	0.0	100.0
48	12	6.3	11.0	74	0	0.0	100.0
49	5	2.6	13.6	75	0	0.0	100.0
50	3	1.6	15.2	76	0	0.0	100.0
51	15	7.9	23.0	77	0	0.0	100.0
52	10	5.2	28.3	78	0	0.0	100.0
53	14	7.3	35.6	79	0	0.0	100.0
54	12	6.3	41.9	80	0	0.0	100.0
55	21	11.0	52.9				

SpeedStat Version 2.3 11/96
 Project ID : C2
 Street : US 18
 Capture Zone : HOLLAND ST

Direction(s) : BOTH --FACING N
 Posted Speed Limit: 45
 Types of Vehicles : ALL
 Weather Conditions: 10S SUNNY

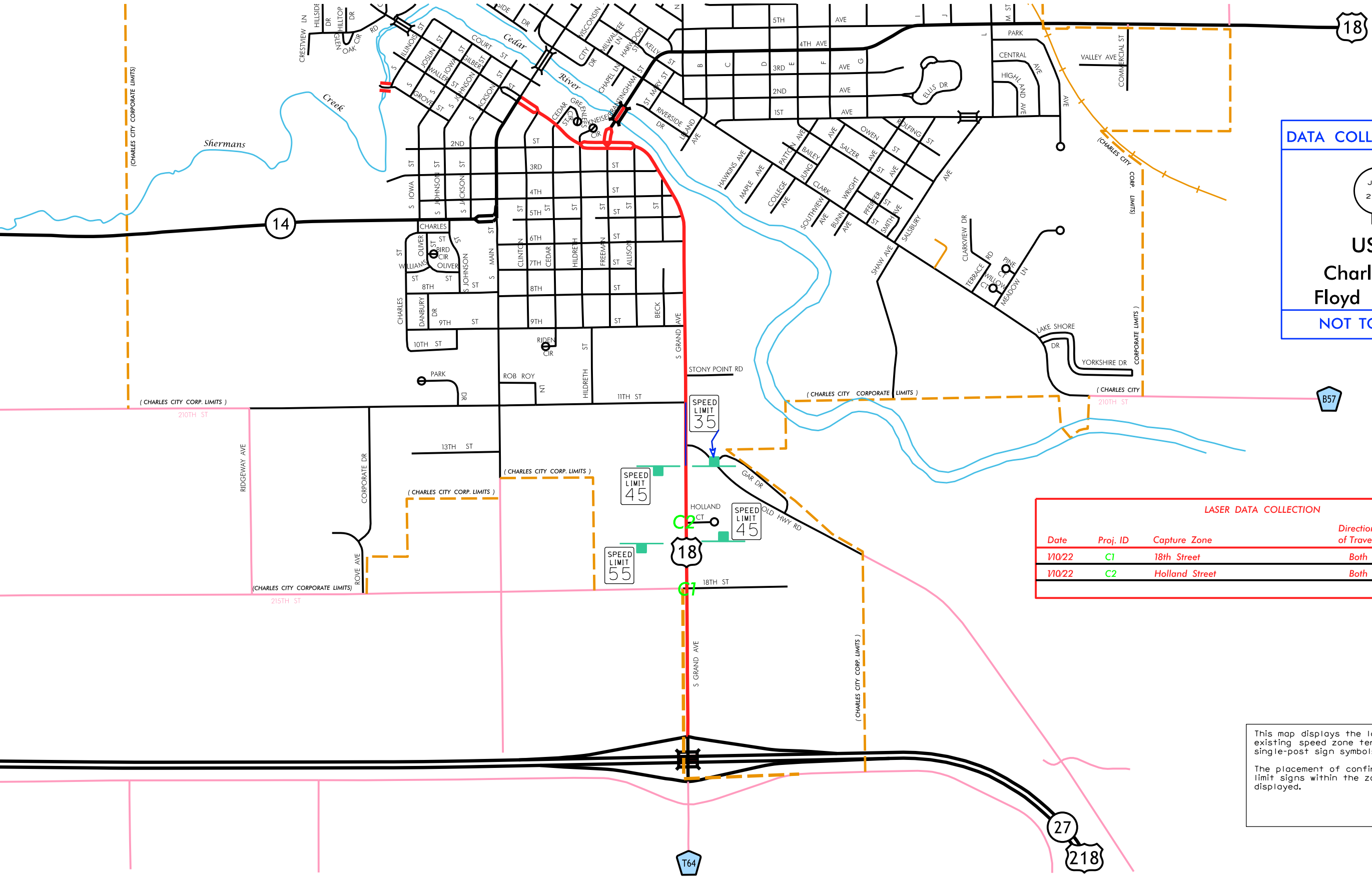
Filter Settings

Date Range : 01/10/22 Through 01/10/22
 Time Range : 01:20:00P Through 03:20:00P
 Direction(s) : Approaching & Departing
 Types of Vehicles : All Vehicles

Lowest Recorded Speed : 30 15th Percentile : 43
 Highest Recorded Speed : 71 50th Percentile : 47
 Average Speed : 47.4 85th Percentile : 53
 Vehicles Observed : 231 95th Percentile : 56

10 MPH Pace Speed : 43 Through 52
 Percent In Pace Speed : 68.0
 Percent Under Pace Speed : 14.7
 Percent Over Pace Speed : 17.3

SPEED	COUNT	PERCENT	CUM.%	SPEED	COUNT	PERCENT	CUM.%
30	1	0.4	0.4	56	4	1.7	96.1
31	0	0.0	0.4	57	6	2.6	98.7
32	0	0.0	0.4	58	2	0.9	99.6
33	0	0.0	0.4	59	0	0.0	99.6
34	3	1.3	1.7	60	0	0.0	99.6
35	1	0.4	2.2	61	0	0.0	99.6
36	4	1.7	3.9	62	0	0.0	99.6
37	3	1.3	5.2	63	0	0.0	99.6
38	0	0.0	5.2	64	0	0.0	99.6
39	1	0.4	5.6	65	0	0.0	99.6
40	6	2.6	8.2	66	0	0.0	99.6
41	9	3.9	12.1	67	0	0.0	99.6
42	6	2.6	14.7	68	0	0.0	99.6
43	13	5.6	20.3	69	0	0.0	99.6
44	12	5.2	25.5	70	0	0.0	99.6
45	21	9.1	34.6	71	1	0.4	100.0
46	19	8.2	42.9	72	0	0.0	100.0
47	31	13.4	56.3	73	0	0.0	100.0
48	10	4.3	60.6	74	0	0.0	100.0
49	14	6.1	66.7	75	0	0.0	100.0
50	10	4.3	71.0	76	0	0.0	100.0
51	15	6.5	77.5	77	0	0.0	100.0
52	12	5.2	82.7	78	0	0.0	100.0
53	12	5.2	87.9	79	0	0.0	100.0
54	11	4.8	92.6	80	0	0.0	100.0
55	4	1.7	94.4				



DATA COLLECTION MAP


JAN. 2022

US 18
Charles City
Floyd County

NOT TO SCALE

LASER DATA COLLECTION

Date	Proj. ID	Capture Zone	Direction of Travel	85th Percentile	Posted Speed Limit
1/10/22	C1	18th Street	Both	59	55
1/10/22	C2	Holland Street	Both	53	45

This map displays the location of existing speed zone termini with a single-post sign symbol: 

The placement of confirmation-speed limit signs within the zones is not displayed.