

2013 KDOT SMART WORK ZONE SURVEY

FINDINGS REPORT

Submitted to:

The Kansas Department of Transportation

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KDOT Smart Work Zone Survey Executive Summary

Overview and Methodology

During October 2013, ETC Institute administered a survey for the Kansas Department of Transportation (KDOT) to gather input from residents who had driven on Interstate 35 (I-35) between K-33 (exit for Wellsville) and US-56 (exit for Gardner) in southern Johnson County during the past 30 days. The purpose of the survey was to determine perceptions of the construction zone on this section of I-35; this construction zone is the first of its kind in Kansas and is called a “Smart Work Zone.” Smart Work Zones integrate various technologies in the construction work zone to increase safety and provide information to drivers.

The survey was administered by phone to a random sample of 400 residents. A screening question was included on the survey to ensure only residents who had driven in the study area during the past 30 days were surveyed. The overall results of the 400 surveys have a 95% level of confidence with a precision of at least +/- 4.8%.

This report contains the following:

- summary of the overall findings of the survey
- charts and graphs displaying the survey results of most questions
- tabular data
- copy of the survey instrument

Major Findings

The major findings from the survey are provided below and on the following pages.

Most Residents Were Supportive of KDOT Adding Smart Work Zone Features to Other Highway Construction Projects in Kansas

Most (84%) of the residents surveyed were “very supportive” or “supportive” of having KDOT add Smart Zone Work features to other highway construction projects in Kansas; 9% were neutral, only 3% were “not supportive” or “not supportive at all” and 4% did not know.

Residents Generally Felt Better About the Smart Work Zone Compared to Other Highway Construction Zones

Eighty-one percent (81%) of the residents surveyed rated their experience driving through this construction zone as “much better” or “better” compared to other highway construction zones they have experienced; 15% rated this construction zone “about the same,” only 3% rated it as “worse” and 1% did not know.

Satisfaction Ratings for the Smart Work Zone

When asked to rate their overall satisfaction with the Smart Work Zone on a scale from 7 to 1, where a rating of 7 meant “very satisfied” and a rating of 1 meant “very dissatisfied,” seventy-three percent (73%) of residents rated their overall satisfaction with the Smart Work Zone as a 7 or 6; 22% of residents gave a rating of 5, 4 or 3, only 2% gave a rating of 2 or 1 and 3% did not know. Residents were also asked to rate their satisfaction with various attributes of the Smart Work Zone. The attributes that residents gave the highest satisfaction ratings for, based upon the combined percentage of residents who gave a rating of 6 or 7, are listed below:

- 75% of residents were satisfied with how safe they felt driving through the construction work zone.
- 71% of residents were satisfied the quality of signage that was available.
- 69% of residents were satisfied with KDOT’s overall efforts to minimize disruptions to traffic flow in the work zone.
- 67% of residents were satisfied with the traffic flow through the construction zone.

Smart Work Zone Attributes Residents Felt Were Most Useful

Residents were asked to rate the usefulness of various Smart Work Zone attributes on a scale from 7 to 1, where a rating of 7 meant “very useful” and a rating of 1 meant “not useful at all.” The attributes that residents felt were most useful, based upon the combined percentage of residents who gave a rating of 6 or 7, are listed below:

- 75% of residents felt the enhanced signage in the Smart Work Zone was useful.
- 71% of residents felt the variable speed limit signs were useful.
- 70% of residents felt the Smart Work Zone website was useful.
- 70% of residents felt the speed sensors were useful.

Other Findings

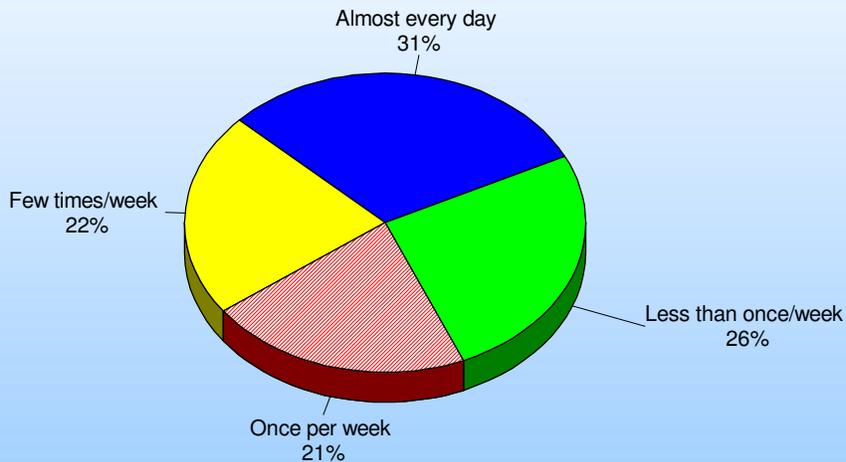
Some of the other findings from the survey are listed below:

- Only nine percent (9%) of the residents surveyed had heard the term “Smart Work Zone” prior to this survey and 91% had not.
- The two Smart Work Zone attributes that residents observed most often or were most aware of were: the variable speed limit signs (92%) and the portable message signs (90%).
- The primary source from which residents reported they received information about the construction zone were the message boards in the work zone (70%).

Section 1:
Charts and Graphs

Q1. During the past 30 days, how frequently have you driven on I-35 between K-33 (exit for Wellsville) and US-56 (exit for Gardner) in southern Johnson county?

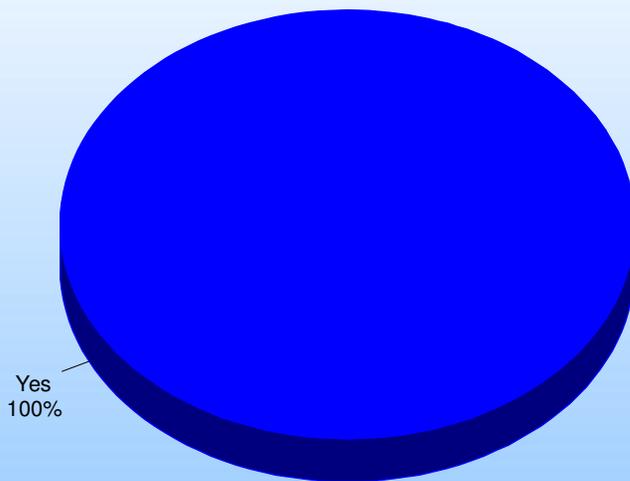
by percentage of residents surveyed



Source: ETC Institute (2013 KDOT Smart Zone Survey)

Q2. Have you noticed the construction efforts that are currently taking place on this section of highway?

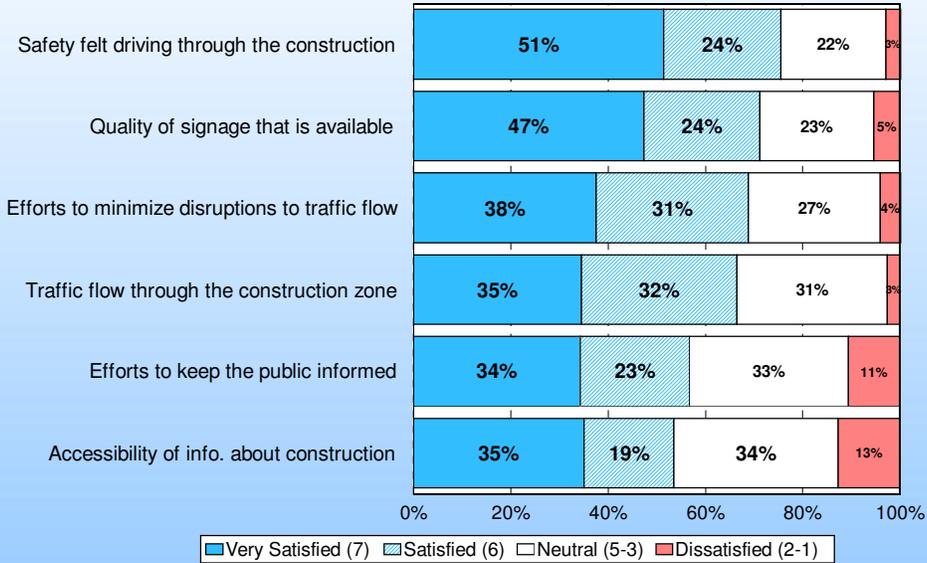
by percentage of residents surveyed



Source: ETC Institute (2013 KDOT Smart Zone Survey)

Q3. Satisfaction with Various Construction Efforts on I-35 Between K-33 and US-56 in Southern JOCO

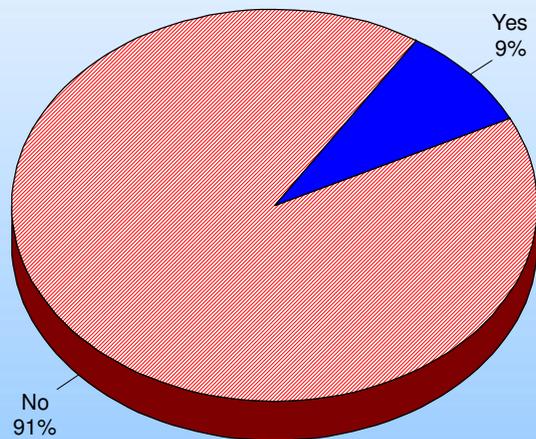
by percentage of residents who rated the item on a 7-point scale, where a rating of 7 meant "very satisfied" and a rating of 1 meant "very dissatisfied" (excluding don't knows)



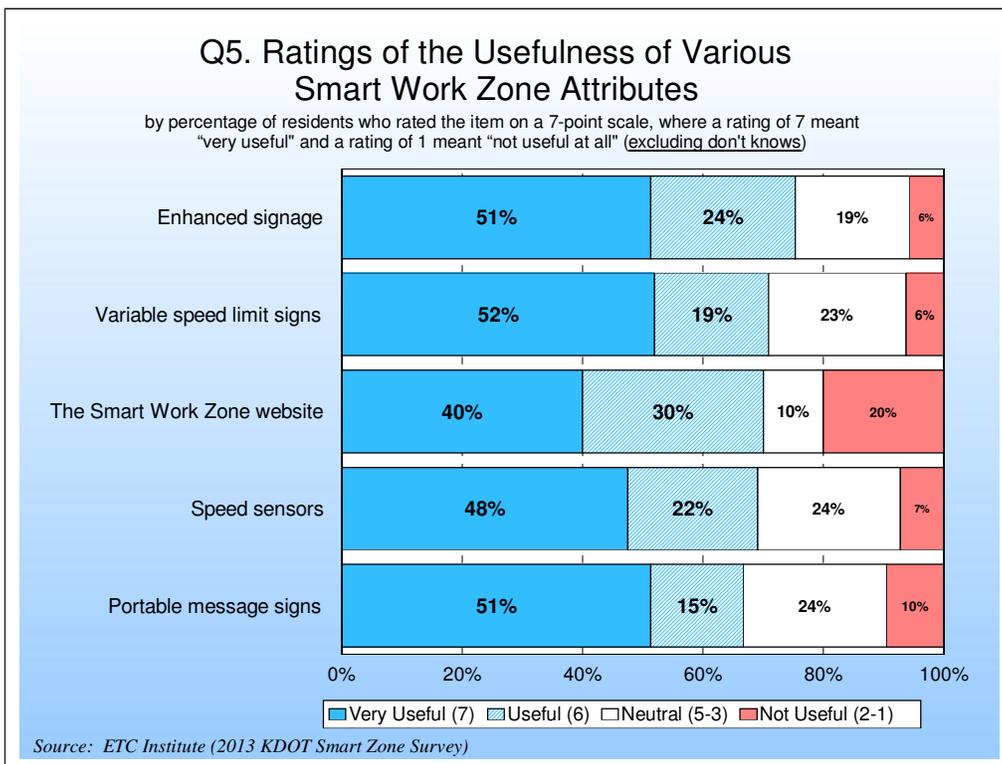
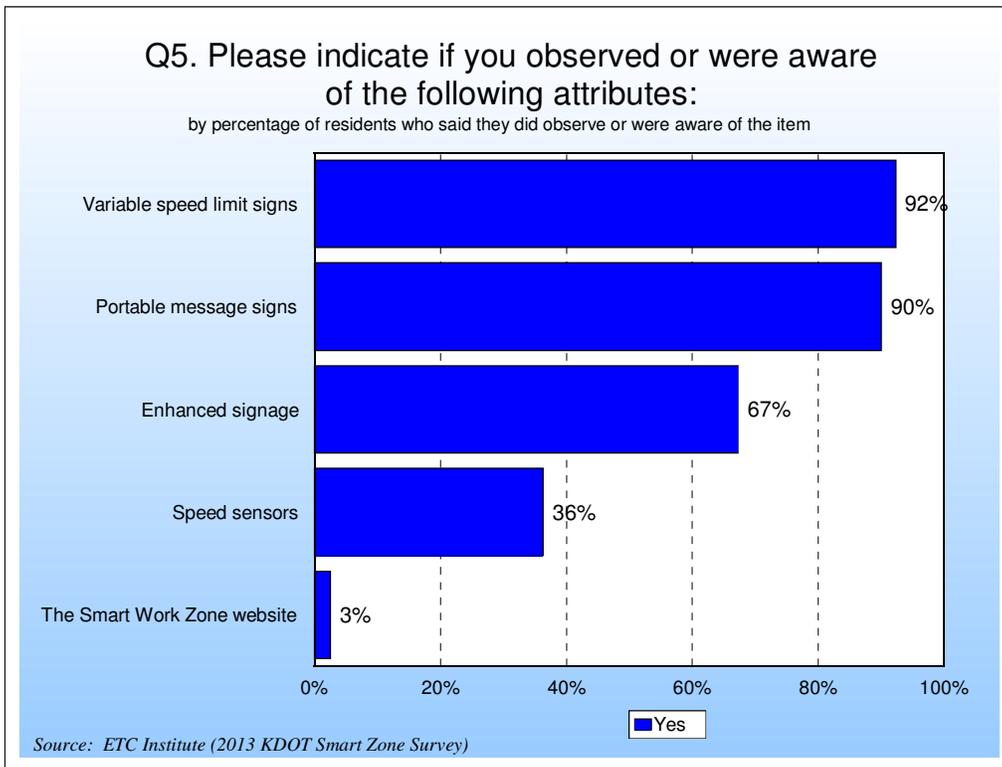
Source: ETC Institute (2013 KDOT Smart Zone Survey)

Q4. For your information, the construction zone on this section of I-35 is the first of its kind in Kansas, and it has been called a "Smart Work Zone" by KDOT. Prior to this call, had you heard the term "Smart Work Zone" used to describe this or any other construction zone?

by percentage of residents surveyed

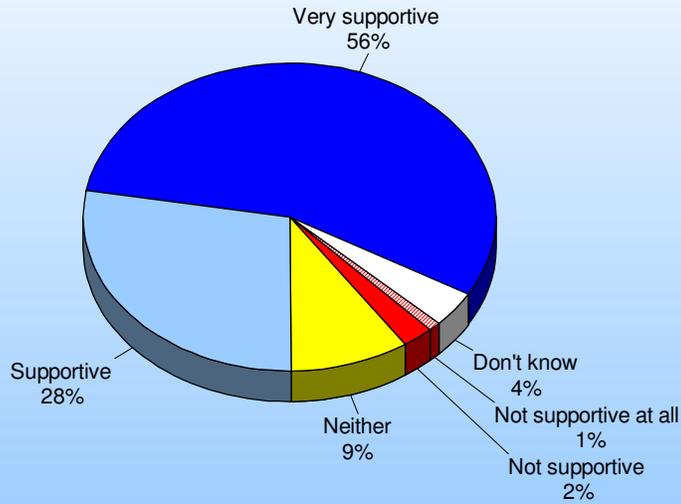


Source: ETC Institute (2013 KDOT Smart Zone Survey)



Q6. How supportive would you be of having KDOT add Smart Work Zone features to other highway construction projects in Kansas?

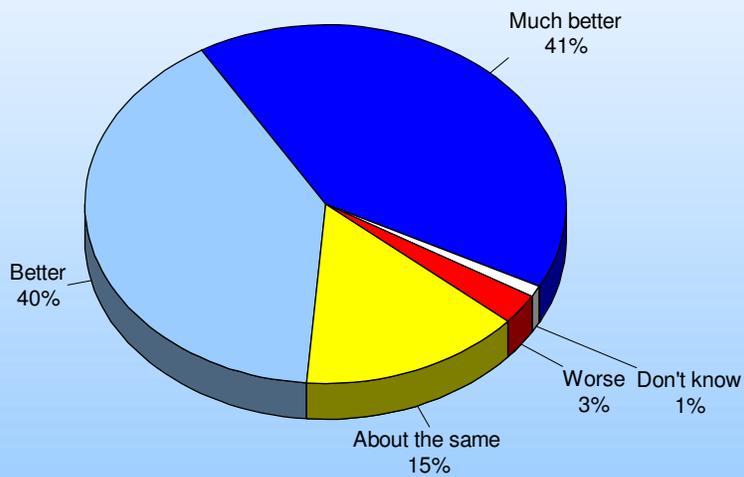
by percentage of residents surveyed



Source: ETC Institute (2013 KDOT Smart Zone Survey)

Q7. Compared to other highway construction zones you have experienced, how would you rate your overall experience driving through this section of I-35?

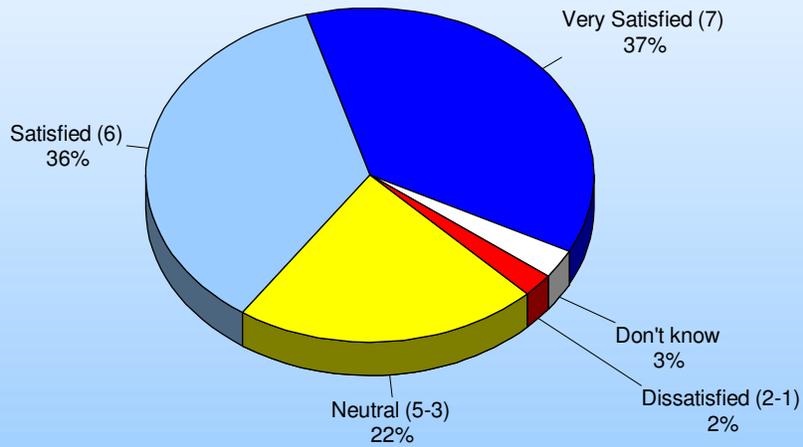
by percentage of residents surveyed



Source: ETC Institute (2013 KDOT Smart Zone Survey)

Q8. How would you rate your overall satisfaction with the Smart Work Zone on this Section of I-35?

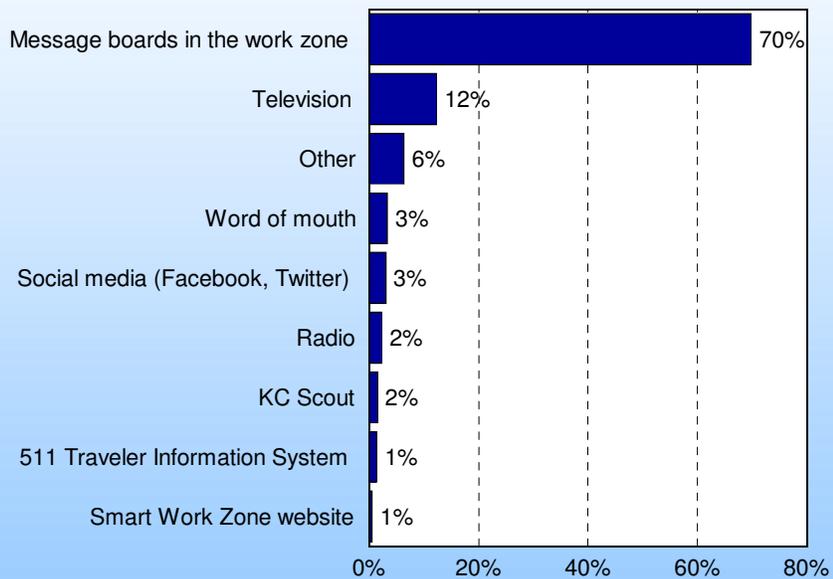
by percentage of residents surveyed



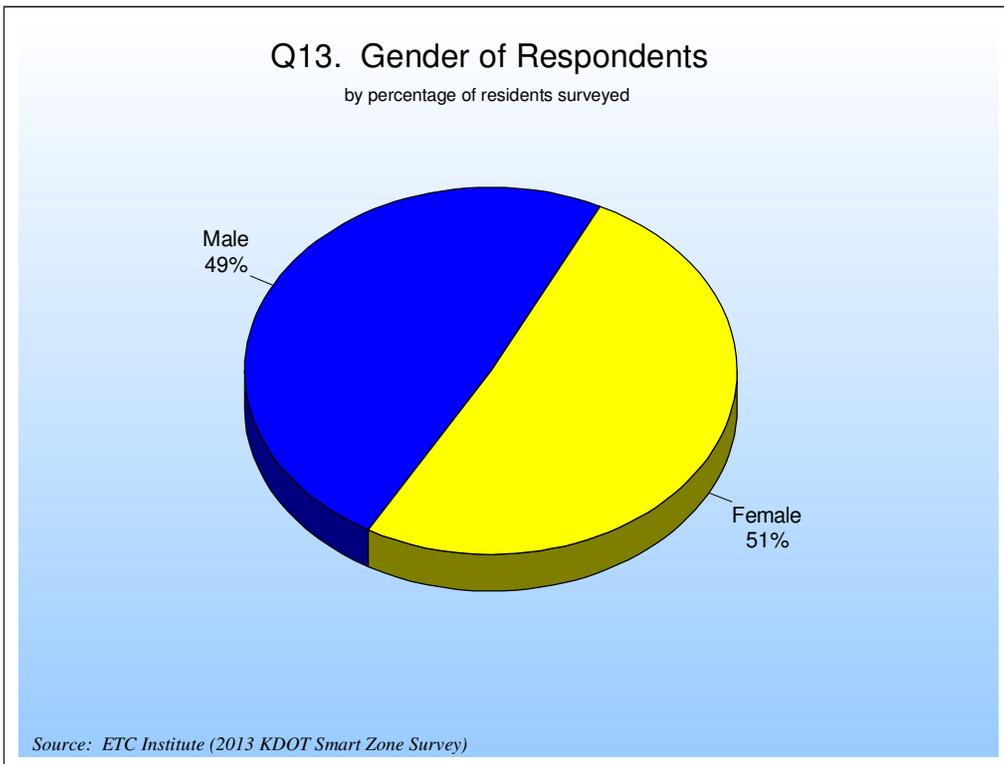
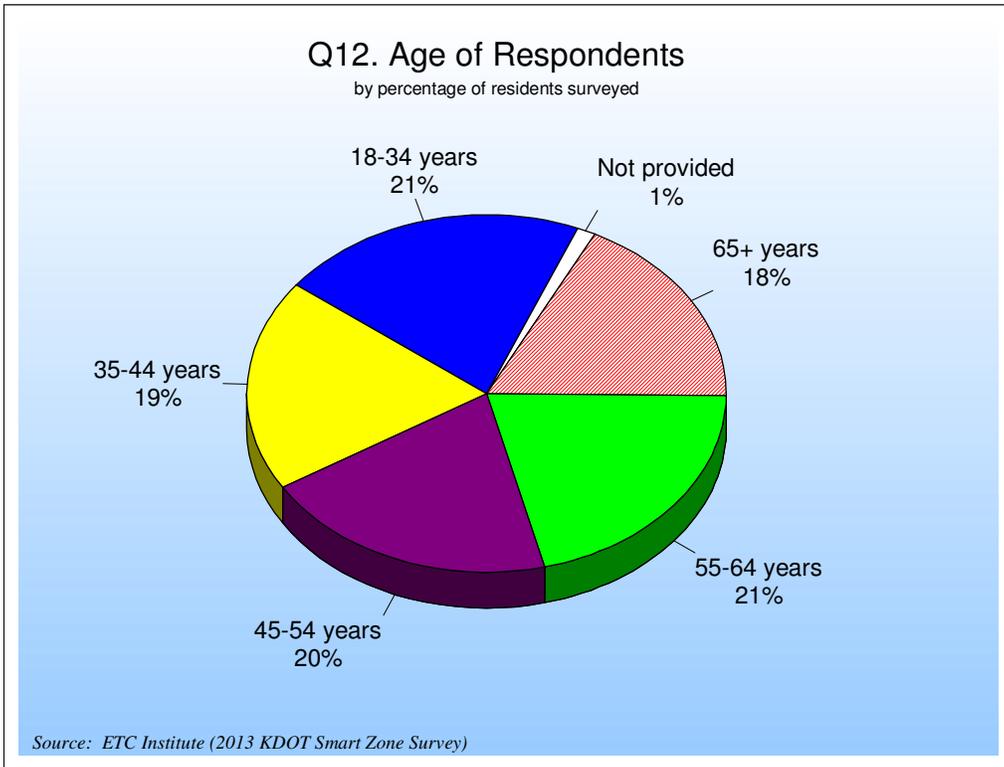
Source: ETC Institute (2013 KDOT Smart Zone Survey)

Q11. Which of the following were your primary sources of information about this construction zone?

by percentage of residents surveyed



Source: ETC Institute (2013 KDOT Smart Zone Survey)



Section 2: **Tabular Data**

Q1. During the past 30 days, how frequently have you driven on I-35 between K-33 (exit for Wellsville) and US-56 (exit for Gardner) in southern Johnson county?

Q1. During the past 30 days, how frequently have you driven on I-35 between K-33 (exit for Wellsville) and US-56 (exit for Gardner) in southern Johnson county?

	Number	Percent
Almost every day	123	30.8 %
A few times per week	88	22.0 %
About once per week	85	21.3 %
Less than once per week	104	26.0 %
Total	400	100.0 %

Q2. Have you noticed the construction efforts that are currently taking place on this section of highway?

Q2. Have you noticed the construction efforts that are currently taking place on this section of highway?

	Number	Percent
Yes	400	100.0 %
Total	400	100.0 %

Q3. Using a scale of 1 to 7 where 7 means "very satisfied" and 1 means "very dissatisfied", please rate your level of satisfaction with the following during construction efforts on this Section of I-35:

(N=400)

	Very Satisfied	6	5	4	3	2	Very Dissatisfied	Don't Know
Q3(A) Traffic flow through the construction zone	34.3%	31.8%	18.5%	8.8%	3.5%	0.8%	1.8%	0.8%
Q3(B) How safe you have felt driving through the construction zone	51.3%	24.0%	14.0%	4.8%	2.8%	2.0%	1.0%	0.3%
Q3(C) How easy has it been to get information about construction activities	22.8%	12.0%	11.0%	6.5%	4.5%	3.3%	5.0%	35.0%
Q3(D) The quality of signage that is available	46.5%	23.5%	15.0%	6.0%	2.0%	2.8%	2.5%	1.8%
Q3(E) KDOT's overall efforts to keep the public informed about construction activities	29.3%	19.3%	17.0%	8.3%	2.8%	4.8%	4.3%	14.5%
Q3(F) KDOT's efforts to minimize disruptions to traffic flow in the work zone	36.3%	30.3%	16.0%	7.8%	2.5%	2.0%	2.0%	3.3%

WITHOUT DON'T KNOW

Q3. Using a scale of 1 to 7 where 7 means "very satisfied" and 1 means "very dissatisfied", please rate your level of satisfaction with the following during construction efforts on this Section of I-35: (Without "Don't Know")

(N=400)

	Very Satisfied	6	5	4	3	2	Very Dissatisfied
Q3(A) Traffic flow through the construction zone	34.5%	32.0%	18.6%	8.8%	3.5%	0.8%	1.8%
Q3(B) How safe you have felt driving through the construction zone	51.4%	24.1%	14.0%	4.8%	2.8%	2.0%	1.0%
Q3(C) How easy has it been to get information about construction activities	35.0%	18.5%	16.9%	10.0%	6.9%	5.0%	7.7%
Q3(D) The quality of signage that is available	47.3%	23.9%	15.3%	6.1%	2.0%	2.8%	2.5%
Q3(E) KDOT's overall efforts to keep the public informed about construction activities	34.2%	22.5%	19.9%	9.6%	3.2%	5.6%	5.0%
Q3(F) KDOT's efforts to minimize disruptions to traffic flow in the work zone	37.5%	31.3%	16.5%	8.0%	2.6%	2.1%	2.1%

Q4. For your information, the construction zone on this section of I-35 is the first of its kind in Kansas, and it has been called a SMART WORK ZONE by KDOT. Prior to this call, had you heard the term SMART WORK ZONE used to describe this or any other construction zone?

Q4. For your information, the construction zone on this section of I-35 is the first of its kind in Kansas, and it has been called a SMART WORK ZONE by KDOT. Prior to this call, had you heard the term SMART WORK ZONE used to describe this or any other construction zone?

	Number	Percent
Yes	35	8.8 %
No	365	91.3 %
Total	400	100.0 %

Q4a. IF YES: Where did you hear the term "Smart Zone?"

Q4a IF YES: Where did you hear the term "Smart Zone?"

- I've seen it on television and a sign on the highway
- Highway signs
- Heard it on the radio.
- At work
- Friends
- Sign in construction zone
- Read a story about it
- Television news
- Newspaper
- Public meeting
- Sign
- Television
- At work
- Daily news paper
- I work at an engineering firm and we work on highways.
- Family members works in the field for KDOT
- Highway signs
- Highway signs
- By driving on I-35
- Television
- Signs
- Instructor for Laborers at Dalton Training Center
- City of Gardner
- Signs
- In the paper
- From the company where I worked.
- Daily news paper
- Highway signs
- Signs
- Signs
- Television news
- Community
- On the radio.
- Television news
- Television news

Q5. Next, I am going to read you a list of attributes that were included with the SMART WORK ZONE that are not typically included in other highway construction projects. For each one, please indicate if you observed or were aware of the item.

(N=400)

	Yes	No
Q5(A) Variable speed limit signs - Did you observe or were you aware of?	92.3%	7.8%
Q5(B) Portable message signs - Did you observe or were you aware of?	90.0%	10.0%
Q5(C) Speed sensors - Did you observe or were you aware of?	36.3%	63.8%
Q5(D) The SMART WORK ZONE website - Did you observe or were you aware of?	2.5%	97.5%
Q5(E) Enhanced signage - Did you observe or were you aware of?	67.3%	32.8%
Q5(F) Other - Did you observe or were you aware of?	2.3%	97.8%

Q5. Next, I am going to read you a list of attributes that were included with the SMART WORK ZONE that are not typically included in other highway construction projects. If you were aware of the item, please tell me how useful you thought it was by rating the item on a 7-point scale where 7 means "very useful" and 1 means "not useful at all".

(N=391)

	Very Useful	6	5	4	3	2	Not Useful At All	Don't Know
Q5(A) Variable speed limit signs - if YES, please tell me how useful	51.2%	18.7%	13.3%	6.2%	3.0%	2.2%	4.1%	1.4%
Q5(B) Portable message signs - if YES, please tell me how useful	50.8%	15.3%	12.5%	6.4%	4.7%	3.1%	6.4%	0.8%
Q5(C) Speed sensors - if YES, please tell me how useful	45.5%	20.7%	12.4%	7.6%	2.8%	0.0%	6.9%	4.1%
Q5(D) The SMART WORK ZONE website - if YES, please tell me how useful	40.0%	30.0%	0.0%	10.0%	0.0%	10.0%	10.0%	0.0%
Q5(E) Enhanced signage - if YES, please tell me how useful	50.2%	23.4%	11.5%	4.8%	2.2%	3.0%	2.6%	2.2%
Q5(F) Other - if YES, please tell me how useful	11.1%	0.0%	11.1%	33.3%	44.4%	0.0%	0.0%	0.0%

WITHOUT DON'T KNOW

Q5. Next, I am going to read you a list of attributes that were included with the SMART WORK ZONE that are not typically included in other highway construction projects. If you were aware of the item, please tell me how useful you thought it was by rating the item on a 7-point scale where 7 means "very useful" and 1 means "not useful at all". (Without "Don't Know")

(N=391)

	Very Useful	6	5	4	3	2	Not Useful At All
Q5(A) Variable speed limit signs - if YES, please tell me how useful	51.9%	19.0%	13.5%	6.3%	3.0%	2.2%	4.1%
Q5(B) Portable message signs - if YES, please tell me how useful	51.3%	15.4%	12.6%	6.4%	4.8%	3.1%	6.4%
Q5(C) Speed sensors - if YES, please tell me how useful	47.5%	21.6%	12.9%	7.9%	2.9%	0.0%	7.2%
Q5(D) The SMART WORK ZONE website - if YES, please tell me how useful	40.0%	30.0%	0.0%	10.0%	0.0%	10.0%	10.0%
Q5(E) Enhanced signage - if YES, please tell me how useful	51.3%	24.0%	11.8%	4.9%	2.3%	3.0%	2.7%
Q5(F) Other - if YES, please tell me how useful	11.1%	0.0%	11.1%	33.3%	44.4%	0.0%	0.0%

Q6. How supportive would you be of having KDOT add SMART WORK ZONE features, such as the ones I just described, to other highway construction projects in Kansas?

Q6. How supportive would you be of having KDOT add SMART WORK ZONE features, such as the ones I just described, to other highway construction projects in Kansas?

	Number	Percent
Very supportive	223	55.8 %
Supportive	111	27.8 %
Neither supportive or unsupportive	37	9.3 %
Not supportive	10	2.5 %
Not supportive at all	4	1.0 %
Don't know	15	3.8 %
Total	400	100.0 %

Q7. Compared to other highway construction zones you have experienced, how would you rate your overall experience driving through this section of I-35? Would you say it was:

Q7. Compared to other highway construction zones you have experienced, how would you rate your overall experience driving through this section of I-35? Would you say it was

	Number	Percent
Much better	165	41.3 %
Better	162	40.5 %
About the same	60	15.0 %
Worse	11	2.8 %
Don't know	2	0.5 %
Total	400	100.0 %

Q8. Using a 7-point scale, where 7 means very satisfied and 1 means very dissatisfied, how would you rates your overall satisfaction with the SMART WORK ZONE on this Section of I-35?

Q8. Using a 7-point scale, where 7 means very satisfied and 1 means very dissatisfied, how would you rates your overall satisfaction with the SMART WORK ZONE on this Section of I-35?

	Number	Percent
Very Satisfied	148	37.0 %
6	144	36.0 %
5	62	15.5 %
4	18	4.5 %
3	8	2.0 %
2	4	1.0 %
Very Dissatisfied	5	1.3 %
Don't Know	11	2.8 %
Total	400	100.0 %

Q9. Is there anything you particularly LIKED about the way KDOT managed this construction zone?

Q9 Is there anything you particularly LIKED?

- Variable speed limit signs, jersey barriers
- I liked the speed limits being displayed with lights
- Put the speed limits up
- KDOT took the bridge out at night during low traffic time, avoiding long delays and also, the variable speed limit signs caught drivers' attention (the lighted speed limit sign in white numbers)
- Easier to get through; I like the variable speed signs
- I liked the speed signage
- Portable message signs
- Liked the marking signs
- I like that I didn't have to slow down as much
- KDOT always informed drivers of what was going on such as lane closures
- I tried to keep both lanes open as much as possible and doing work at night.
- Variable speed limit signs, speed with which they took care of projection
- Variable speed limits
- Traffic flowed well and there were no traffic obstructions
- I liked the signs letting me know how far exits were
- It was good; I liked there were no delays
- I liked the opening of two lanes until last phase of construction
- I liked the enhanced signage.
- The digital lighted speed signs were really great
- Seemed transitioned better
- Open and great traffic signs also really liked variable speed signs
- Traffic flows really well
- Schedules, two lanes moving constant
- The lite up signage for the variable speeds. the information from place to place
- I like that they didn't brag about it
- The overall safety they put out was good. it was handled very well.
- Traffic never stopped/hated changing speeds
- I like that it flowed a lot better than most construction zones
- It was much quicker
- I didn't have a lot closed off
- It was very uncluttered
- Knew before that there would be construction.
- Glad to see tax dollars at work.
- They did well with the speed limit signs

Q9. Is there anything you particularly LIKED about the way KDOT managed this construction zone?

Q9 Is there anything you particularly LIKED?

- Overall everything was good
- I loved the way it was managed. Likes how they did not like automatic speed track.
- Steady flow of traffic
- Kept the speeds up to a reasonable limit
- Keeping the speed up for the flow of traffic was helpful
- I liked the signs
- Traffic flow is great
- I liked that they kept the traffic moving
- They did a good job
- There have not been any backups--nice traffic flow
- I did notice that going south the exit for the trucks was enough room for the trucks to safely exit
- They are just doing fine
- No delays.
- They didn't screw it up
- I think they made the speed limit signs slower and though that was smart.
- They tried to keep it at two lanes during rush hour. They only closed the highway at night.
- The KDOT workers weren't on the road as much just standing around
- Traffic flowed very well.
- Signage was helpful
- They seemed to do a good job; traffic flow seemed to be good
- I like that there are always two lanes of traffic moving most of the time.
- Easy traffic flow
- It was all good. There were never any backups.
- They kept traffic moving through the area and felt more safer for workers as well as drivers--KDOT did a good job keeping their workers safe
- It's well laid out; easier to get through compared to before
- All the signs were good-letting you know what was going on and how fast to go
- Signage was good
- They tried to minimize disruptions and do stuff at night
- Flow of traffic was good
- There was more room to drive and the construction guys were not working near me.
- The signs are very useful.
- I liked KDOT keeping disruption to a minimum in this construction zone
- They did a very good job of signage and traffic flow nicely
- I like that there is not a lot of traffic

Q9. Is there anything you particularly LIKED about the way KDOT managed this construction zone?

Q9 Is there anything you particularly LIKED?

- Signage is great; I like the signs that light up
- I like how fast the speed limit was set.
- I liked the variable speed limits
- There were lots of speed signs which is good; the more signs the better
- I like the signs that tell you how long the delay will be.
- It seemed to flow better
- They did a good job
- I like the variable signage
- I like the speed limit signs
- The signage and the speed limit zones
- They are doing a better job with the traffic flow and the variable speed limit
- The extras signage
- I like that they are not reducing the speed limit so drastically
- I liked that they set the speed limit to 55 where people were around
- Its impressive
- Flag man was nice
- Putting up barriers and the signage
- The signage
- Smooth traffic
- Didn't really affect traffic
- Everything is marked well; it was easy to navigate
- For as long as traffic was messed, traffic was pretty smooth
- The way the construction zone hasn't affected us in any way, while driving down that section of I-35.
- Variable speed limits
- Variable speed signs
- Like the variable speed and the fact that the signs tell you way in advance
- The speed signage are very helpful
- The traffic flowed well land the speed limit was a good speed. We did not to wait got the construction equipment for the workers.
- I prefer when they put up concrete blocks instead of cones
- Traffic keeps going.
- Traffic flow
- Did some of the work during the night
- It was consistent with traffic flow
- I liked shutdown only at night
- I like the speed limit signs that lite up

Q9. Is there anything you particularly LIKED about the way KDOT managed this construction zone?

Q9 Is there anything you particularly LIKED?

- It kept going. You don't have to stop or anything.
- Traffic flowed well
- I like that they were making sure drivers are aware.
- The traffic flowed a lot better
- It's fine.
- Plenty of warning of construction coming up
- Run a little smoother
- No problems with traffic flow
- Easy to get through
- The whole concept and visual enhancement was very good
- Pretty good area
- Very well handled with signage and all features.
- Kept traffic at a flow, really nice.
- Message signs.
- The signage and the cement barriers on the edge
- Variable speeds and time was quick
- I thought that it was better than what I have seen previously
- I thought that they provided informative signage every day
- I like what KDOT accomplished in such a short period of time.
- The signs are a good way to let people know what is going on.
- We work at a night which makes it more convenient.
- I liked the fact that there were more concrete barriers to protect the construction zones
- I like the variable speed signs
- It seemed more organized
- It was well managed
- I like that there were no disruptions
- Speed signs
- Done very well
- Felt Safe
- It's ok
- Warning signs
- Overall its enhanced
- No traffic hold ups
- Much safer
- Traffic wasn't affected

Q9. Is there anything you particularly LIKED about the way KDOT managed this construction zone?

Q9 Is there anything you particularly LIKED?

- Liked the signage and the communication on behalf of KDOT.
- They seemed to always be working
- I liked the signs and the wider roads
- Overall it was very well done.
- I like that there were no slow downs
- I liked that it is almost over
- The big signs are more helpful
- I liked the enhanced signage; I hope people will read them. I am unsure of overall satisfaction until I see the completed project.
- I like that there are plenty of signs that let you know what is going on.
- Signage
- It has been managed very well
- Flow of traffic
- Signs that lit up, really help.
- Variable speed signs
- The FEATURES where good
- Its' very good.
- I like that they kept traffic flowing
- ORGANIZED!
- Good speed limit
- Unobtrusive and that the work is done in the evening hours
- Traffic flowed well
- The speed of the event
- I did not see any problems and traffic flowed fine.
- Signs
- Variable speed signs are excellent
- Speed signs
- I like that they will get it finished
- They seemed to move fast and efficient
- The flow of traffic
- I like that we could see them working
- I am happy with it
- The signs that say how many minutes, tell you get to the next off ramp is very important and I like them.
- I liked the variable speed signs.
- I liked that we things were well noted on what was coming ahead
- I like the signs

Q9. Is there anything you particularly LIKED about the way KDOT managed this construction zone?

Q9 Is there anything you particularly LIKED?

- The variable speed limits and warnings for what is coming up
- The system works ok
- I like that it is getting done.
- I like signs for warning speed and how many minutes to places up ahead
- The construction zone was marked very well/ and I was aware of the construction site, getting in and out of it.
- Just real clear and liked the signs. Also KDOT let the drivers aware of what was going on.
- I like that they are keeping the traffic flowing
- I did not have problem with the traffic flow
- I like the lighted speed signs
- Variable speed signs.
- They moved quickly, getting things done quickly
- I liked the amount of time it will take
- It went smooth
- Very well done.
- Very clean and neat
- KDOT finally provided enough signs in a construction zone
- It seemed like it went quickly; getting a lot of work done.
- More night work was done, so that takes the pressure off of daytime traffic
- Signage
- They need more news coverage so people are aware. I was impressed with the features and that they did not hold up traffic.
- Signage that tells you the time it takes to get to the next exit
- They advertised it three miles away in each direction.
- Constant flowing traffic
- Overall good job
- I did like the signage and that the signs gave early notification as to when the construction would start
- I liked that it was always open and not blocked by traffic
- It was safe.
- The additional speed limit signs were good
- I like that the information was shared
- Signs never changed
- They never backed up traffic
- The traffic flowed very well, and we did not have to stop. I also liked that all of the workers where working and NOT standing around.
- I like the sign saying how far away exits are

Q9. Is there anything you particularly LIKED about the way KDOT managed this construction zone?

Q9 Is there anything you particularly LIKED?

- Traffic flow seemed to be better than other construction zones
- It was nice to know how fast you needed to go. I like the variable speed sign that lets you know that there will be changing speeds throughout the section.
- The flow of traffic was good
- The speed signs were well lit. It was well thought out.
- I liked the signage
- The message boards that say how long it will take to get to each exit along that stretch of highway.
- I liked the speed limit sign and the barricades that protected the workers
- I like that they communicated how the speed would vary
- I like that there were no stops in the traffic flow
- It was a good overall experienced; I like the signs, they gave me the information I needed.
- Seemed a lot cleaner.
- There was not much traffic backup
- They gave us plenty of warning that their would be a detour on I -35. I liked that they only shut down one side of the highway.
- The signs were great.
- I liked that they were looking way ahead of things.
- The flow is much easier
- The speed was higher than normal.
- The signs were well lit, especially for late night driving
- The variable speed signs were very helpful.
- I like the information they give us on how long it will take.
- I liked that they kept travelers well informed
- The light up speed signs were great
- I like the signs, and that they reduced the speed limit
- It was a very smooth drive at nighttime
- I liked the extra signage informing residents of the drive time in Gardner.
- I liked that there were plenty of signs that let you know what was going on.

Q10. Can you think of any ways KDOT could have improved the way it managed this construction zone?

Q10 Can you think of any ways KDOT could improve the way it managed this construction zone?

- KDOT could explain what the features are to the people and more ways to spread the word.
- Lighten up on the signage.
- They are blocking traffic WAY too early.
- The variable speed signs hard to read because of the glare of the headlights on the speed limit number.
- The mobile speed limit signs don't stand out much.
- Police regulation to enforce the speed sensor.
- Needed more publicity.
- The variable speed signs were hard to read in the bright sun.
- If you're done with it, cleanup and return the speed limit to normal limits
- I'm concerned that this area will not be large enough for all of the semi-truck traffic; are the semis going to be able to exit safely and not interfere with through traffic?
- The signs didn't make sense
- There may be some traffic because of intermodal development, especially semis, in this area. They need to make sure the on/off-ramps have been designed for this.
- The variable speed limit signs were confusing.
- Roads were blocked off WAY too far in advanced and causes problems with traffic
- The management of lane closers is my concern, such as the top cones. They should start using big signs with light bulb arrows and give notice, at least a mile in advance; but I do like how the taxes are being used.
- The cones were so narrowly placed that semis hit them and threw them back into traffic behind them; sometimes the cones were placed crookedly so that a driver had to swerve to avoid them.
- Manage the signs better in the bright sunlight!!!!
- The speed limit is only 65 when there's no construction workers
- Hurry up with the construction.
- They should put up signs earlier that alerting construction is coming.
- The speed limit signs are confusing; they seemed to change repeatedly and seemed uncoordinated.
- There should be more info on the signs; share with public what you really mean.
- There are too many signs to look at, too many speed limits. There should be a straight path through.
- The portable electronic signs are too much for taxpayers to be responsible for.
- Make more speed limit signs and make them more noticeable.
- There is a false sense of finish. It was at one lane tonight.
- I am worried about how much traffic is going to be going through their area and about how semis are going to safely pass through this area.
- They need to do the work faster and more work at night.
- Set a flat speed limit.
- Let people know better ahead of time.
- The signs on I- 35 did not give me notice on when the construction was going to start on the hwy.
- Variable speed signs that are lit up are difficult to read in the day light. I would suggest having those signs on each side of the road so that drivers in both lanes are able to see them.

Q10. Can you think of any ways KDOT could have improved the way it managed this construction zone?

Q10 Can you think of any ways KDOT could improve the way it managed this construction zone?

- It was hard to read the speed signs during the day (electronic).
- Day mode and night mode should check how bright they are at night time, make sure they are at the right time of day mode.
- The variable speed limit signs, why are they still at such a low speed limit? Should increase it.
- They should have people on job sites to solve problems.
- Clearer speed limit signs, especially when it goes up to 65 on weekends
- The area was coned off to long prior to doing the project and in too long of stretches of road at a time.
- Be more specific on signage.
- Portable message signs are a bit confusing on giving directions. Maybe the first sign should explain a bit on why it's giving those directions or to who it's being directed to.
- In some place the barriers are very close.
- Cover up the signs while they are working but don't cover the whole sign; this is very distracting, especially at night.
- There were too many signs telling us how far Edgerton or Gardner was; there were also not enough alternate routes to take if it was congested.
- What about the use of concrete blocks?
- Speed limit signs should be easier to read
- There are too many signs and they were not consistent in the signage
- Drivers need more than one lane
- Construction zone signs are too far away from actual construction which causes drivers to ignore it because it doesn't look like a work zone.
- Keep up with these kind of improvements!
- The right lane was blocked when trying to get onto the highway and it only allowed you a tiny area to merge onto I-35.
- Maybe put police enforcement out there to get speeders.
- There is too much information shown on portable signs; there should also be stricter enforcement of speeds throughout the work zone--to keep it safer for drivers, as well as the workers.
- Change the variable speed sign in sections of road that are completed.
- KDOT needs more officers patrolling the area.
- There should be more public knowledge of what's going on.
- Signs should be easier to read in the sunlight
- There were too many signs.
- They should do work around the clock to complete construction faster.
- They should do a better job of telling us when it will be open and about closures before they happen.
- Let people know ahead of time, rather than 'running up on it' at the last minute.
- Detour traffic on K-33.
- Add signage along US 56.
- The speed limit should be the same all the way through the construction zone.
- One mile length of merging into one lane is too much sometimes

Q10. Can you think of any ways KDOT could have improved the way it managed this construction zone?

Q10 Can you think of any ways KDOT could improve the way it managed this construction zone?

- Give drivers more notice on an upcoming work zone.
- Have more highway patrol on the speed control.
- The debris blowing was messy, dirty and dangerous for motorcycles.
- Pick a speed limit and stay with it.
- They need more mileage makers and more signs about worker safety.
- There were too many cones and signs and not enough workers. The overall message was not clear.
- Enforce the speed limit and give out fines.
- Maybe NOT so many signs for such a small construction area, but I really liked the idea.
- More police presence.
- Lower the cost.
- Need brighter signs and wider lanes.
- Less signs.
- There were dust clouds that made it difficult to see
- I am concerned with I-35 and their speed limits.
- The sign that said 7 miles to Edgerton was not useful at all.
- Enforce the speed limits.
- There were too many different speed limits and too many closed areas all on area; it was very confusing.
- The angle of the signs was an issue; they need sun visors on signs because of the reflection of sun.
- Construction should be done faster
- The way they configured it is wrong and it is taking way too long to finish.
- Please get it done before winter.
- Shut down completely at night, tools and large materials need to be moved completely out of the way.
- Once the construction has been opened, get rid of temporary speed limit signs and have more communication for drivers until the job is complete.
- I am not sure what the point of the exit is so I would like more information about where it goes.
- Make the speed limit signs more readable, something might be done with the bubs; they are hard to read with the sun. Also, place them ahead of the construction so we have more time to read them.
- The construction is taking way too long; maybe KDOT should stop doing so many projects at once.
- Keep the speed signs at the same speed instead of changing speeds every mile.
- You need more state patrol monitoring the traffic.
- Reduce the speed limit signs to three.
- The statements on the portable signs need to be worded different. I was under the impression that Edgerton Rd. was closed and that I had to get off in Gardner because my exit was closed. I was rather confused on whether or not the Edgerton exit was closed. KDOT could have worded the signage differently.
- The LED lighting is very nice or even solar power should be used; both are easy to see and very nice. I've seen it before and I was very impressed. not sure of some signage/phrases such as "last exit for Edgerton" when there is another exit--not very clear and concise
- Dim the speed limit signs.
- Change the signage of the mobile signs.

Q10. Can you think of any ways KDOT could have improved the way it managed this construction zone?

Q10 Can you think of any ways KDOT could improve the way it managed this construction zone?

- Use speed sensors to control speeds.
- I want to know more of when it starts and when the construction ends in some work zones.
- Move the signs saying how long it will take to get to an exit somewhere actually in Edgerton so people can see those signs before they get to that exit. Also, cover the permanent speed zone signs because a driver cannot tell if the speed is 70 or 55 throughout the different hours of the day or night. You should also consider using more cones.
around off-ramp so the exit can be more defined so that there's no confusion at the exit
- The placement of the speed limit signs caused some confusion in the beginning of the project. Maybe have more consistency with the speed limits.
- Provide more information on the local television.
- I think they did a good job!
- They should add a sign for people going east to let them know about the construction.
- You need to move the sign on K-33 before the ramp to I-35 away from the tress so people can see it when they drive by.
- There should be more driving space given for drivers
- Taking there cones down when you are not working. They left their cones up and there was no work being done.
- Give more time for people who are merging onto the highway.
- Maybe get the word out to the public in more way; maybe use social media.

Q11. Which of the following were your primary sources of information about this construction zone?

Q11. Which of the following were your primary sources of information about this construction zone?

	Number	Percent
Social media (Facebook, Twitter)	12	3.0 %
Television	49	12.3 %
Radio	9	2.3 %
511 Traveler Information System	5	1.3 %
SMART WORK ZONE website	2	0.5 %
KC Scout	6	1.5 %
Message boards in the work zone	279	69.8 %
Word of mouth	13	3.3 %
Other	25	6.3 %
Total	400	100.0 %

Q11. Which of the following were your primary sources of information about this construction zone? (Other Responses)

Other (please specify)

- Newspaper
- Newspaper--Ottawa Herald
- Involved in intermodal development/construction
- Newspaper--Ottawa Herald
- Newspaper--Ottawa Herald
- Newspaper
- KOFO website
- Transportation office
- Newspaper--Ottawa Herald
- Newspaper
- Newspaper
- Newspaper
- Newspaper--Ottawa Herald
- Newspaper
- Gardner City Website
- Planning areas
- Newspaper
- Edgerton website
- Legislative liaison
- From the city
- Gardner website

Q12. Age of Respondents

Q12. Before we end the interview, can you tell me which of the following categories best describes your age?

	Number	Percent
18-34 years	82	20.5 %
35-44 years	77	19.3 %
45-54 years	81	20.3 %
55-64 years	85	21.3 %
65+ years	70	17.5 %
Not provided	5	1.3 %
Total	400	100.0 %

Q13. Gender of Respondents

Q13 Gender	Number	Percent
Male	196	49.0 %
Female	204	51.0 %
Total	400	100.0 %

Zip Code of Respondents

Zip Code:	Number	Percent
66067	127	31.8 %
66030	129	32.3 %
66021	52	13.0 %
66092	89	22.3 %
66047	3	0.8 %
Total	400	100.0 %

Other Comments

Optional comments:

- I am very concerned about the variable speeds and the safety of construction workers. I also felt the signs were not always accurate.
- I am a very pleased, happy customer.
- They need to put the sandblasters behind a wall to protect them from vehicles.
- I felt there were actually too many signs at times and it became confusing/distraction while driving.
- I really liked the way KDOT handled the project.
- There were way too many signs that it became very confusing.
- There were too many people texting while driving through the construction zone.

Section 3:
Survey Instrument

KDOT Smart Zone Survey

Phone: _____

Interviewer: _____

This is _____. I am calling for the Kansas Department of Transportation. KDOT would like your opinion to help improve the quality of transportation services in Kansas. Can I have a just few minutes of your time to ask you a few questions? (If asked: the survey takes less than 6 minutes). If the respondent asks for more information, have them go to: <http://public.jamlogic.com/zone/ks-i35homstead>

SCREENING QUESTION

Have you driven on I-35 between K-33 (exit for Wellsville) and US-56 (exit for Gardner) in southern Johnson county during the past 30 days?

YES – continue

NO – has anyone else in your household?

If YES – ask to speak to that person

If NO – thank the person for the time and end the interview. The survey is only for people who have driven on this section of I-35 since August 1

1. During the past 30 days, how frequently have you driven on I-35 between K-33 (exit for Wellsville) and US-56 (exit for Gardner) in southern Johnson county?

- ___ (1) Almost every day
- ___ (2) A few times per week
- ___ (3) About once per week
- ___ (4) Less than once per week
- ___ (9) [Do Not Read] Don't know

2. Have you noticed the construction efforts that are currently taking place on this section of highway?

- ___ (1) Yes
- ___ (2) No – end the interview (the person may not have driven on I-35 during the past 30 days)

3. Using a scale of 1 to 7 where 7 means “very satisfied” and 1 means “very dissatisfied”, please rate your level of satisfaction with the following during construction efforts on this Section of I-35:

- | | Very Satisfied | | | | | | | Very Dissatisfied | Don't Know |
|--|----------------|---|---|---|---|---|---|-------------------|------------|
| (A) Traffic flow through the construction zone | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | 9 |
| (B) How safe you have felt driving through the construction zone | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | 9 |
| (C) How easy has it been to get information about about construction activities | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | 9 |
| (D) The quality of signage that is available | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | 9 |
| (E) KDOT's overall efforts to keep the public informed about construction activities | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | 9 |
| (F) KDOT's efforts to minimize disruptions to traffic flow in the work zone | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | 9 |

4. For your information, the construction zone on this section of I-35 is the first of its kind in Kansas, and it has been called a SMART WORK ZONE by KDOT. Prior to this call, had you heard the term “SMART WORK ZONE” used to describe this or any other construction zone?
- ____(1) Yes – ask 4a
 ____ (2) No

4a. IF YES: Where did you hear the term “SMART WORK ZONE”?

5. Next, I am going to read you a list of attributes that were included with the SMART WORK ZONE that are not typically included in other highway construction projects. For each one, please indicate if you observed or were aware of the item, and if YES, please tell me how useful you thought it was by rating the item on a 7-point scale where 7 means “very useful” and 1 means “not useful at all”.

		Very Useful					Not Useful		Don't	
Did you observe or were you aware of?							At All	Know		
Yes	No	(A) Variable speed limit signs	7	6	5	4	3	2	1	9
Yes	No	(B) Portable message signs	7	6	5	4	3	2	1	9
Yes	No	(C) Speed sensors	7	6	5	4	3	2	1	9
Yes	No	(D) The SMART WORK ZONE website	7	6	5	4	3	2	1	9
Yes	No	(E) Enhanced signage	7	6	5	4	3	2	1	9
Yes	No	(F) Other: _____	7	6	5	4	3	2	1	9

6. How supportive would you be of having KDOT add SMART WORK ZONE features, such as the ones I just described, to other highway construction projects in Kansas?
- ____(1) Very supportive
 ____ (2) Supportive
 ____ (3) Neither supportive or unsupportive
 ____ (4) Not supportive
 ____ (5) Not supportive at all
 ____ (9) Don't know

7. Compared to other highway construction zones you have experienced, how would you rate your overall experience driving through this section of I-35? Would you say it was
- ____(1) Much better
 ____ (2) Better
 ____ (3) About the same
 ____ (4) Worse
 ____ (5) Much worse
 ____ (9) Don't know

8. Using a 7-point scale, where 7 means very satisfied and 1 means very dissatisfied, how would you rate your overall satisfaction with the SMART WORK ZONE on this Section of I-35?

Rating: _____ (7=Very satisfied 1=Very Dissatisfied 9=Don't know)

9. Is there anything you particularly LIKED about the way KDOT managed this construction zone?

10. Can you think of any ways KDOT could have improved the way it managed this construction zone?

11. Which of the following were your primary sources of information about this construction zone?

- (1) Social media (Facebook, Twitter)
- (2) Television
- (3) Radio
- (4) 511 Traveler Information System
- (5) SMART WORK ZONE website
- (6) KC Scout
- (7) Message boards in the work zone
- (8) Word of mouth
- (9) Other: _____

12. Before we end the interview, can you tell me which of the following categories best describes your age?

- (1) 18-34 years
- (2) 35-44 years
- (3) 45-54 years
- (4) 55-64 years
- (5) 65+ years

13. Respondents gender: (do not ask)

- (1) Male
- (2) Female

***This Concludes the Survey
KDOT Thanks You for Your Time***