


Traffic Engineering Challenges and Solutions

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Fast-growing hometown city

did you know?

ANKENY IS THE
Largest Suburb
IN THE DES MOINES METRO

ANKENY IS THE
6th
LARGEST CITY IN IOWA

70,287
POPULATION



- Growing by an average of 6 people per day
- Population Growth 25,000 in past 10 years
- Population projection 130,000 by 2040

The point is: we're bigger than West Des Moines.

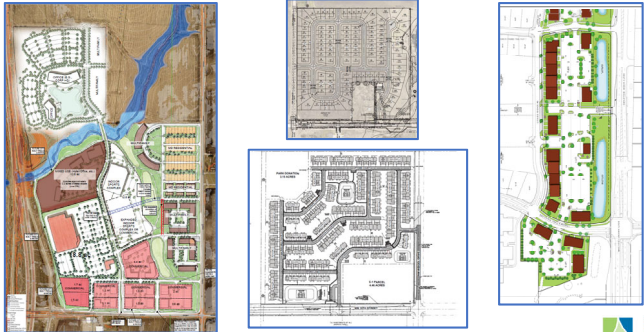

Land Development

- \$498.7 million total investment in new construction projects in 2021
- \$222 million in total non-residential investment
- 1,175 new residential dwelling units




Over the past eight years, the City of Ankeny has permitted more than \$3 billion worth of projects.

Long-term traffic engineering challenges

New development on NE 36th Street


April 1, 2022




November 1, 2022




New Elementary Schools



- 12th elementary school will open in 2024
- Last SRTS was in 2009 for then-8 elementary schools
- Walkability Study observations in spring 2021
- Update of 2015 policy on school crosswalks & special speed zones

Collaboration with Police Department and School District 

Elementary School Walkability








- New all-way STOP controlled intersections
- New pedestrian-actuated warning beacon
- Relocation of school zone flashing beacons to guard-controlled crosswalks
- Implementation of 15 mph school zone at school crosswalks on collector streets
- No part-time/ roll-out/ flip-down STOP control
- Parking restrictions during elementary school arrival & dismissal periods



High Trestle Trail

Diverging Diamond Interchange (DDI)



2008 - Interchange Justification Report (IJR)

2013 - NE 36th Street interchange constructed

2014 - IJR Amended to review alternatives for E 1st Street interchange

2018 - Interchange Reconstruction begins

E 1st Street Interchange fully closed April 2020

DDI opened August 2020



Operation of the DDI



Fiber Optic Network

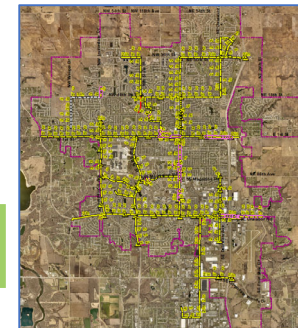
Began traffic signal interconnect to Signal Shop in mid-1990's

City operational network rode on unused fibers

In & out of every cabinet & building

2019 - Began transferring signal network to single mode, and installing separate cables for signal & City networks

Security and bandwidth benefits



Fiber Optic Network Inventory & Master Plan

New Technologies

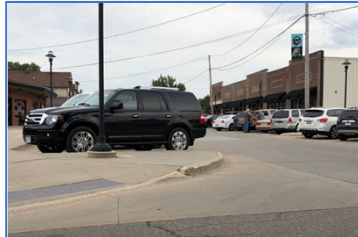
Traffic Management Center (TMC)

- Web-based Advanced Traffic Signal Management system (ATMS)
- Remote viewing and programming of video detection
- Real-time observation of traffic conditions
- Automated Traffic Signal Performance Measures (ATSPM)

Freeway Diversions

PREEMPT DIVERSION	PIA COUNTY IOWA	I-83 SOUTHBOUND	FRM: I-83 (IE Grabbar Road)	TO: Exit 89 Corporate (Hwy 91)	PLAN 1218 1/7
<p>CRITICAL LOCATIONS TO MONITOR FOR LOCAL PRIMARY</p> <p> I-83 Off Ramp to St. Charles Ave. (S Signal) I-83 On Ramp to I-83 (Hwy 91) (S Signal) I-83 On Ramp to I-83 (Hwy 91) (N Signal) I-83 On Ramp to I-83 (Hwy 91) (S Signal) I-83 On Ramp to I-83 (Hwy 91) (N Signal) I-83 On Ramp to I-83 (Hwy 91) (S Signal) I-83 On Ramp to I-83 (Hwy 91) (N Signal) </p>					
<p>AGENCIES TO NOTIFY</p> <p> Polk County Communications 515-281-3333 Iowa DOT Statewide TMC 515-237-2300 Iowa State Patrol Center 515-237-2300 Airway Traffic Engineer 515-464-7337 </p>					
LOCAL MESSAGE 1/7	GLOBAL MESSAGE 2/7	CRITICAL LOCATIONS 3/7	RESPONSE PLAN 4/7	AGENCY CONTACTS 5/7	DRS MESSAGES 6/7
<p>Iowa DOT TMC: 515-237-2300 ENSURE ALL OVERSIGHT AND OVERSIZE VEHICLES ARE PARKED SAFELY Last updated: 6/26/2022</p>					

Low-tech solution



- Diagonal parking in business districts limit driver sight lines
- Generally tied to Farmer's Market and other special events
- Otherwise, not a favorable location for all-way STOP control
- We took a broader look at the on-street parking along these blocks and found another need....



Low-tech solution



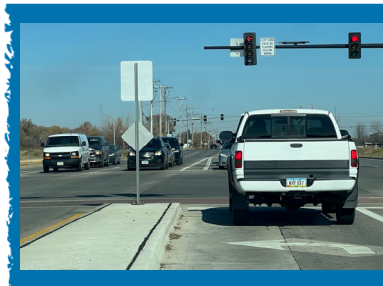
- Installed a couple signs and some pavement markings



Others: remove unneeded signage, replace existing small signs with larger signs, double-up back-to-back....



Safety Concerns



Thank you.

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