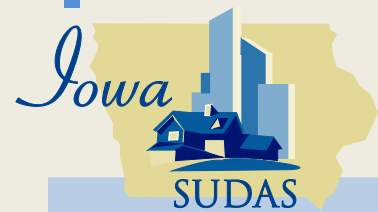


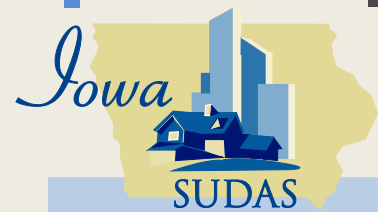
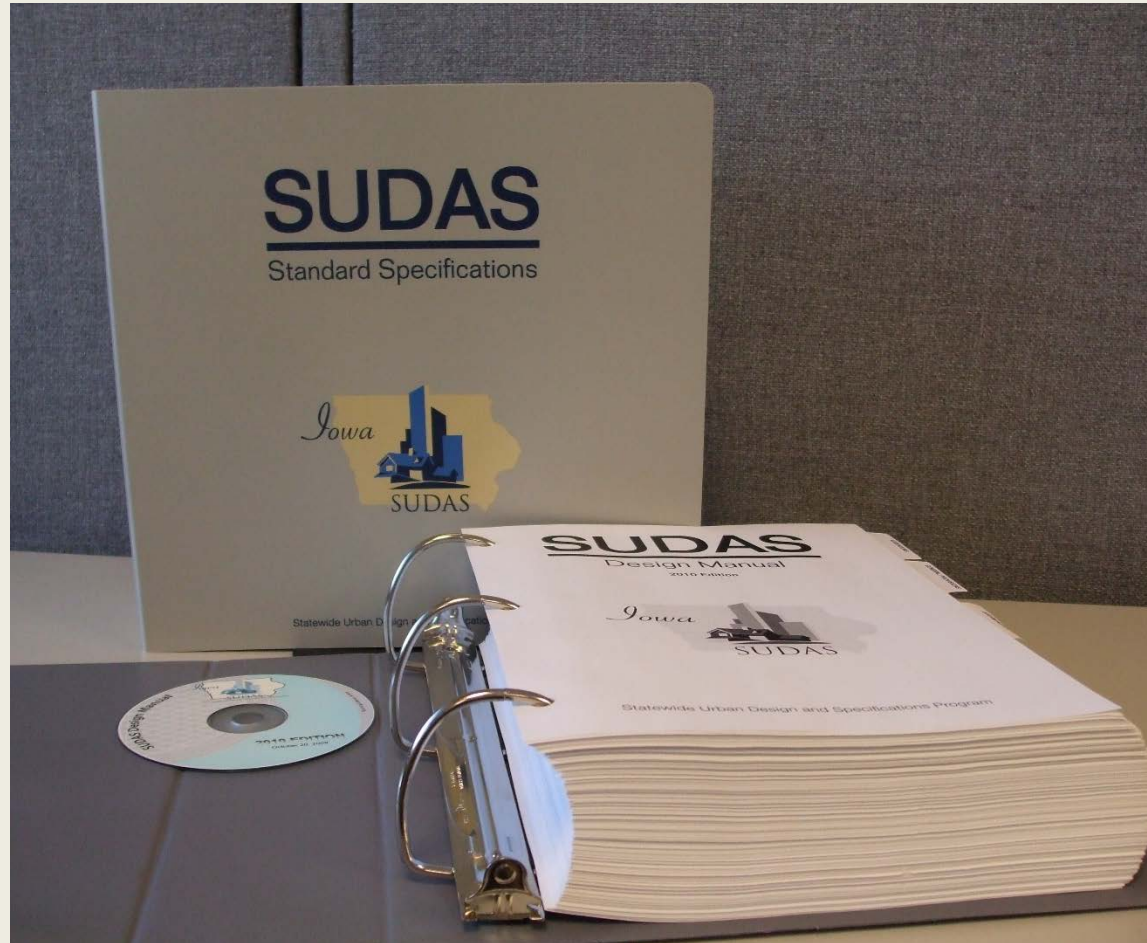
# SUDAS UPDATE

Municipal Streets Seminar  
November 15, 2017

Paul D. Wiegand, P.E.

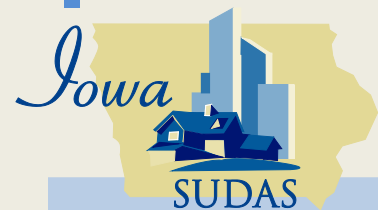


# SUDAS – The Statewide Standard



# Benefits of Statewide Standard Design and Specifications

- Uniformity of urban design and specs across the state
- Reduction of contractor confusion and mistakes due to differing specifications; encourages more bidders
- Mechanism to be proactive in research and studies for new and improved urban design and specifications
- Method for study and statewide implementation of latest techniques and material use
- Forum that allows state and local governments to collaborate with each other and industry
- Allows better allocation of staff to projects - and not updating specs



# Statewide Involvement

- Managed through InTrans at Iowa State University
- Volunteer system involving engineers from across the state
  - District committees (6)
    - Meet February, April, and October
    - Approximately 80 to 100 attendees each round
  - Board of Directors (38 members)
    - Meet twice a year

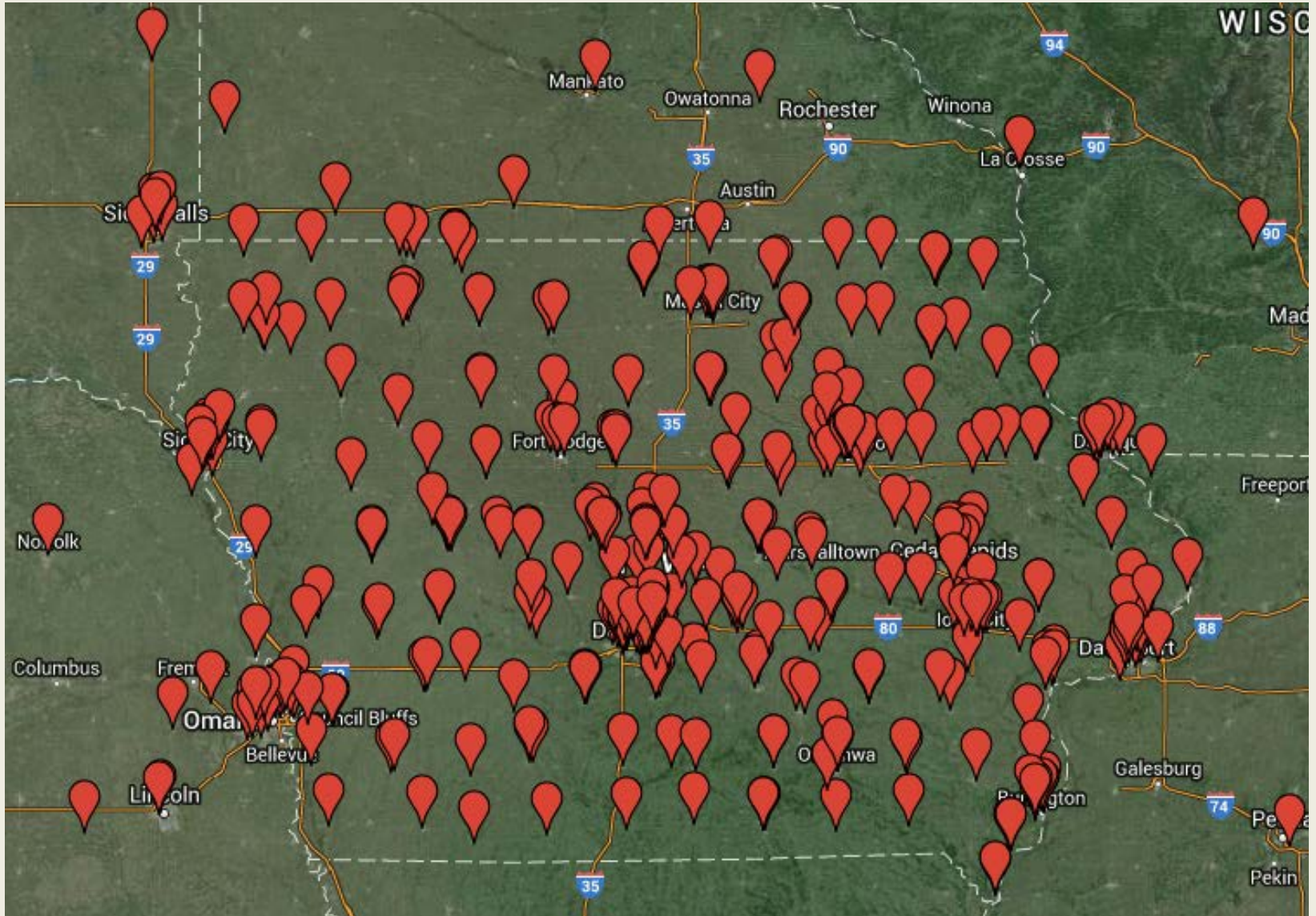


# Usage

- Today there are over 1,325 SUDAS Specifications Manuals and nearly 700 Design Manuals in circulation, providing uniformity in urban design and construction across the state.
- Public agencies at all levels, including Iowa DOT, counties, and cities, are using the manuals.
- Consultants and Industry use the manuals and strongly support the program.



# Specifications Manual Holders



# Common SUDAS/Iowa DOT Specifications

<b>Trench Excavation and Backfill</b>	<b>Valves, Fire Hydrants, and Appurtenances</b>
<b>Trenchless Construction</b>	<b>Water Main Testing and Disinfection</b>
<b>Sanitary Sewers</b>	<b>Structures for Sanitary and Storm Sewers</b>
<b>Storm Sewers</b>	<b>Rehabilitation of Existing Manholes</b>
<b>Pipe Rehabilitation</b>	<b>Cleaning, Inspection, and Testing of Structures</b>
<b>Cleaning, Inspection, and Testing of Sewers</b>	<b>Traffic Signals</b>
<b>Water Main Pipe and Fittings</b>	

# Common SUDAS/Iowa DOT Figures

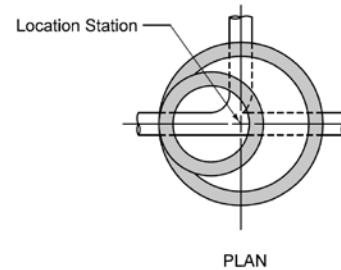
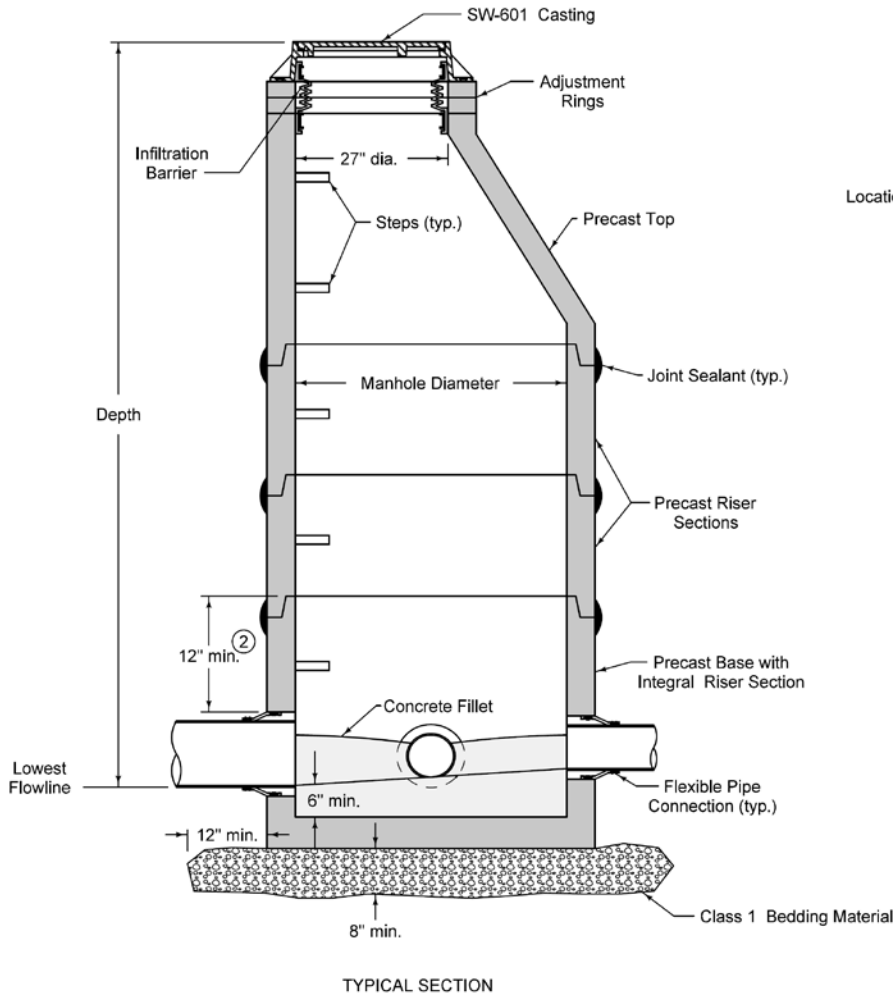
- 52 common figures (85 pages of information!)
  - Trench and Backfill (5)
  - Sewers (4)
  - Sanitary Sewer Manholes (7)
  - Storm Sewer Manholes (6)
  - Intakes (14)
  - Castings (4)
  - Thrust Blocks & Tracer Wire (2)
  - Fire Hydrants (1)
  - PCC Paving (5)
  - HMA Paving (1)
  - Traffic Signals/Lighting (2)
  - Combined Sidewalk & Retaining Wall (1)





# Common Figures

- ① For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.
- ② 12 inch minimum riser height above all pipe openings.



Manhole Diameter (inches)	Maximum Pipe Diameter (inches) for 2 Pipes ①	
	At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

FIGURE 6010.301 SHEET 1 OF 1

SUDAS	IOWADOT	REVISION
		2 04-17-18
FIGURE 6010.301	STANDARD ROAD PLAN	<b>SW-301</b>
		SHEET 1 of 1
REVISIONS: Changed "Invert" to "Concrete Fillet".		
Paul D. Wigand Brian Smith <small>SIGNAL INSPECTOR ENGINEER</small>		
<b>CIRCULAR SANITARY SEWER MANHOLE</b>		

# Updating Process

- Subject is raised by a user, research project, or a change in laws/regulations
- Item is sent to a technical committee for review and comment if appropriate
  - Technical committee makes a recommendation
- Discussion and action at each District Committee meeting
  - Recommendation forwarded to the Board
- Board of Directors votes on recommendation



# Design Manual Changes for 2018 Edition

- Updated information on asphalt binder selection to match new industry standards
- Provided guidance on selecting jointing type and layout for PCC roundabouts



# Design Manual Changes for 2018 Edition

- New section on HMA and PCC overlays and interlayers

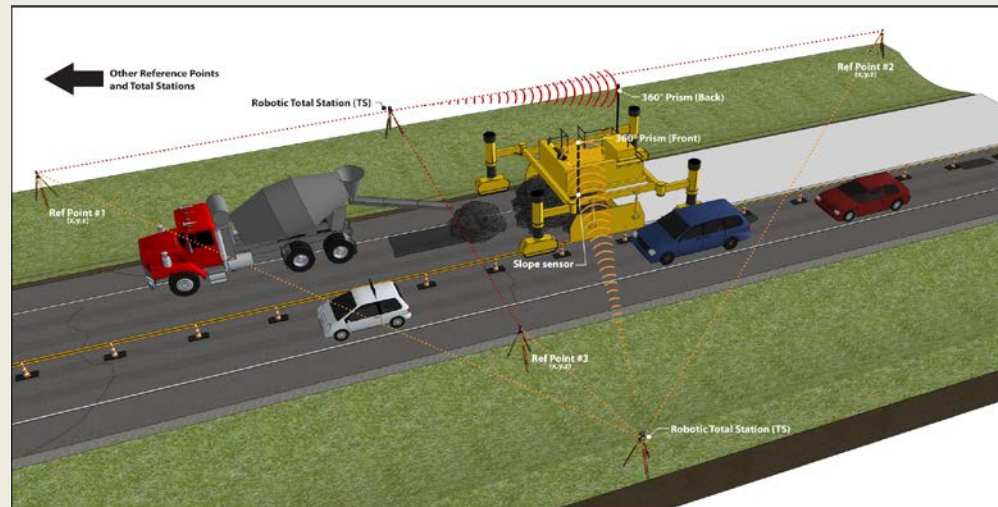


- Expanded bicycle lane types in the Complete Streets section to add design information on buffered and separated bicycle lanes



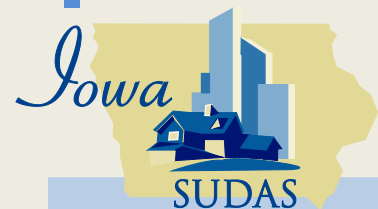
# Design Manual Changes for 2018 Edition

- Adding information on joint durability mixes (C-SUD and CV-SUD) to match current research
- Adding a section on Automated Machine Guidance (AMG) for grading and stringless paving



# Design Manual Changes for 2018 Edition

- Low Speed Design
  - Adding to footnote to allow horizontal curves with design speeds of 15 and 20 mph if stopping sight distance is maintained
- Adding reference to Crash Warrant #7
  - Modified by IA-19
    - Added crash experience over a 3-year period in addition to the one-year period
    - Included rural/urban locations with the number of legs at the intersection



# Spec Manual Changes for 2018 Edition

- Deleting bidder prequalification requirements to reflect changes to Iowa law for cities
- Specifically, the law prohibits a municipal governmental entity from:

“Imposing any requirement that directly or indirectly restricts potential bidders to any predetermined class of bidders defined by experience on similar projects, size of company, union membership, or any other criteria.”

# Spec Manual Changes for 2018 Edition

- Expanded concrete placement specifications to allow laser guided screeds and concrete pumping
- New specifications sections for PCC and HMA overlays





# Spec Manual Changes for 2018 Edition

- New section to provide standard temporary traffic control layouts
- Added a new developmental section for fusible PVC for water mains



# Spec Manual Changes for 2018 Edition

- Section 7030 - Sidewalks, Shared Use Paths, and Driveways
  - If survey is not a bid item and either of the following is met, the Contracting Authority will verify form work:
    - Design running slope within 1.0% of maximum
    - Design cross slope within 0.5% of maximum
  - No verification if design slopes meet tolerances
  - Document according to Iowa DOT Material I.M. 363

# Spec Manual Changes for 2018 Edition

- Modifying several sections (1040, 1050, 7010, and 11,010) to allow and control AMG for grading and stringless paving (if approved)
- Adding cored openings in storm sewer structures for small pipes as an option to cut and chip
- Adding intermediate aggregates and C-SUD mixes along with modifications to supplementary cementitious materials (SCMs)



# In Progress

- For 2019 Design Manual:
  - Updating pavement thickness design
    - Added a third truck mix
    - Discussion of which CBR value to use for design
    - Modified Loss of Support value
  - Developing new design sections on Cold-In-Place Recycling and Full Depth Reclamation
  - Updating stormwater General Permit No. 2 to match Iowa DNR changes

# In Progress

- For 2019 Specifications Manual:
  - Adding sections on Cold-In-Place Recycling and Full Depth Reclamation
  - Updating the pipe rehabilitation section (4050)
  - Looking to expand ways to determine concrete pavement thickness in addition to cores:
    - Measure in plastic concrete
    - Verify subgrade elevations and check yield
    - MIT Scan (DOT)



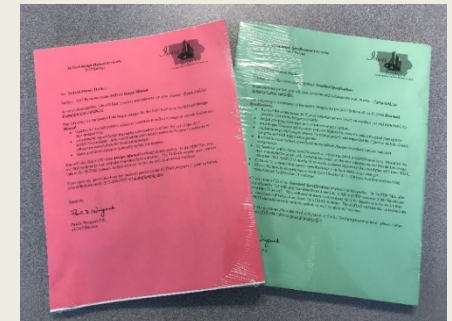
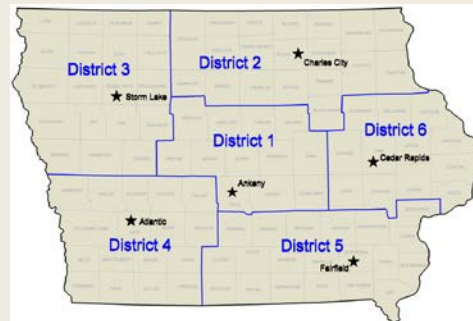
# In Progress

- Discussion items for potential future updates:
  - Percent of contract that can be subcontracted
  - Continue to allow bricks sidewalks for pedestrian access routes?
    - PROWAG says pedestrian access routes must be planar and smooth

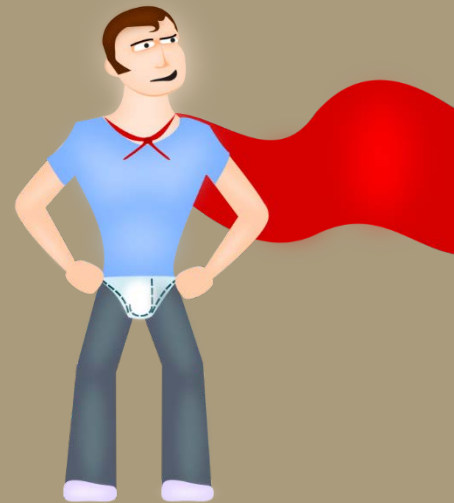


# Current Schedule

- Supplemental design/specs are posted online after Board of Directors approval
- Sell printed manuals
- Paper updates printed and mailed in December including all changes made each calendar year
- Currently mail updates for over 1,325 Specifications and 700 Design Manuals free of charge
- Three rounds of on-site District meetings



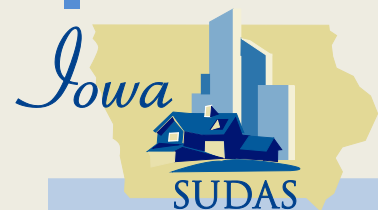
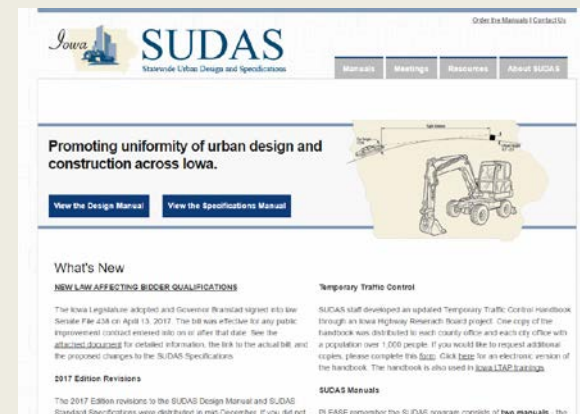
**Life is like  
underwear,  
change is good.**





# SUDAS Future

- Going Electronic!
  - Two more years of printed revision packets
    - 2018 Edition (December 2017) and 2019 Edition (December 2018)
  - For 2020 Edition, printed manuals and printed annual revision packets will be discontinued – online only
  - Designate the February District meeting as a webinar meeting for all districts at once



**Iowa is the only state to have  
a program like SUDAS.  
We are unique!**



# Questions?

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