

SUDAS and PWSB Updates

2023 Municipal Streets Seminar

David Carney and Beth Richards



IOWA STATE UNIVERSITY
Institute for Transportation

En Route

NEWS FROM THE INSTITUTE FOR TRANSPORTATION
October 16, 2023

Top Stories

Meet David Carney, new SUDAS director

The Iowa Statewide Urban Design and Specifications program (SUDAS) welcomed its new director, David Carney, in August. Carney joins SUDAS with over 30 years of experience in public works engineering and maintenance—including 13 years with the City of Sioux City and 7 years with Monona County—and nearly 20 years of service on various SUDAS committees.



"I am very excited to have been selected as the new SUDAS Director," Carney said in the SUDAS announcement. "This will be an exciting career opportunity for me, while getting to remain active in the public works sector. Following in the footsteps of Paul Wiegand, Larry Stevens, and Dale Harrington is an honor in itself." [More](#)

Posted on SUDAS homepage and PWSB headlines



Complete Streets

- Began as an Iowa DOT initiative
 - Establish a complete streets policy for the DOT
 - Be as consistent as possible with SUDAS except for some tiered elements
- Take into account all users
 - Vehicle, pedestrian, bicyclists, etc.
- Review and update SUDAS Design Sections
 - Chapters 5, 12, and 13



Section 5C-1 & 2 – Geometric Design Tables & Elements

- Added language from the Green Book to highlight key points about designing streets for all users.
- Add discussion about setting design speeds for lower speed (< 45 mph) roadways to match the expected posted speed limit.
- No changes to the preferred or acceptable tables!
- Add discussion about design flexibility and level of service.
- Expand discussion on intersection radii to consider added pedestrian and bicyclist safety.
- Add discussion about turning vehicles encroaching into opposing traffic lanes.



Section 5M-1 – Complete Streets

- Expand discussion on determining appropriate design speed when considering all user groups.
- Update Table 5M-1.01 (Preferred Design Elements for Complete Streets) based on Green Book minimums.
- Expand discussion on traffic calming measures.

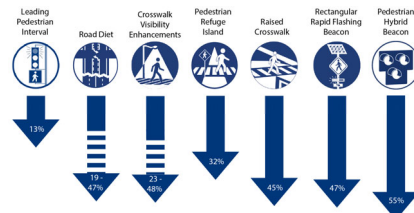
Table 5M-1.01: Preferred Design Elements for Complete Streets

Classification	Local		Collector				Arterial			
	< 25		< 35		35		> 35		35 to 45	
Posted Speed (mph)	R/C	I	R/C	I	R/C	I	R/C	I	R/C	I
Travel lane width (ft)	10 ²	11	10	11	10 ¹	11	10 ¹	11	11	12 ¹
Turn lane width (ft)	--	--	10	11	10	11	10	11	11	12 ¹
Two-way left-turn lanes width (ft)	--	--	10	11	10	11	10	11	11	12 ¹
Curb Offset (ft) ²	0	0	0	0	0 to 2	0 to 2	0	0	0 to 2	0 to 2
Parallel parking width (no buffer) (ft) ³	8	8	8	9	8	9	8	9	9	9
Sidewalk Width (ft)	See Section 12A-1									
Bicycle lane width (ft)	See Section 12B-1									



Chapter 12 – Pedestrian and Bicycle Facilities

- Changed chapter from “Sidewalks and...” to “Pedestrian and...”
- No major changes in Sections 12A-1, 12A-2, 12A-3, or 12A-4
- Section 12A-5 - Pedestrian Safety Measures and Crossings
 - New section providing information on selecting pedestrian crossing locations and safety measures to ensure a safe crossing at uncontrolled and controlled locations.



Chapter 12 (con't)

Section 12B-1 - Selecting Bicycle Facilities

- Expanded definitions for clarification; added e-bikes.
- Added information on bicycle user profiles.
- Expanded bikeway facility selection.

Section 12B-2 - Shared Use Path Design

- Modified the bicyclist design speed table to reflect the context of the shared use path including paved/unpaved, volume of diverse users, and terrain.



Chapter 12 (con't)

Section 12B-3 - On-Street Bicycle Facilities

- Expanded design considerations and design exceptions for on-street bicycle facilities – speed, stopping sight distance, shy space, tapers.
- Don't increase shared lane widths because it encourages higher vehicle speeds!
- Curb and gutter sections of asphalt pavements should not be included in the bike lane width due to potential dangers with the longitudinal joint.
- Added extensive discussions of treatments at intersections for separated on-street bicycle lanes.
- Expanded discussion on design of traffic signals for bicyclists.
- Expanded discussion of bicyclist facilities at interchanges and roundabouts.



Chapter 13 – Traffic Control

Section 13A-3 - Traffic Signal Features

- Expanded requirements for installation of Accessible Pedestrian Signals (APS)

Section 13A-4 - Traffic Signal Design Considerations

- Expanded discussion on pedestrian considerations in traffic signal timing, including using Leading Pedestrian Interval (LPI) and Exclusive Pedestrian Phases (EPP)



Specifications Changes

- Identified the combinations of cement types that can be used with fly ash and GGBFS.
- Updated pavement smoothness quality control to reflect DOT deleting their specs on profilograph and adding inertial profiler.
- Adding an option for non-destructive thickness measurements (MIT scan) – based on Iowa DOT Specs.
- Clarified placement and opening temperatures for thin lift HMA overlays.



2024 Editions

- Approved in May 2023
 - Currently online as supplementals:
 - <https://iowasudas.org/supplemental-design/>
 - <https://iowasudas.org/supplemental-specifications/>
 - Emailed all contacts in June to let them know they were there
 - Not on the list? Link on homepage to “subscribe to our list”
- Final versions will be posted in Dec.



Iowa SUDAS
STATEWIDE URBAN DESIGN AND SPECIFICATIONS

SUDAS Supplementals
June 2023

2024 Edition Supplementals
Items approved by the SUDAS Board of Directors in May are available for use. These items will be included in the 2024 editions of the manuals, which will be ready by the end of the calendar year. You can find the supplementals online under Design Manual -> Supplemental Design or Specifications Manual -> Supplemental Specifications.

Public Works Service Bureau
Please remember to check out the Iowa Public Works Service Bureau (IPWSB). The IPWSB provides a resource for public works staff members from cities of all sizes to connect with and learn from others how best to improve work efficiencies, learn new techniques, and maximize available resources. Our goal is "communicate to improve!" Check out our new website, its register and learn more. If you're already a member, please interact with the site - check out the reports, post a discussion on the forums, etc.

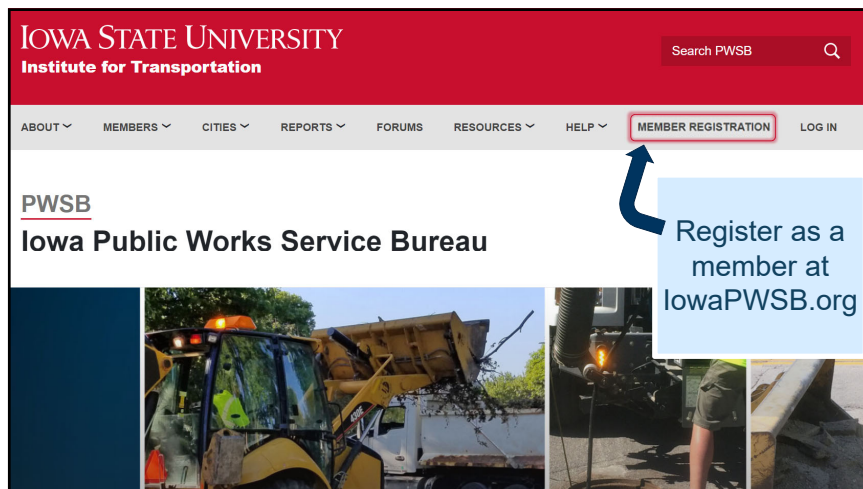
Questions?
If you have any questions about this email or the SUDAS program in general, please contact Beth Richards (bethr@iastate.edu).



What is the Public Works Service Bureau?

- The Public Works Service Bureau (PWSB) provides a resource for public works staff members from cities of all sizes to connect with and learn from others how best to improve work efficiencies, learn new techniques, and maximize available resources. Our goal is “communicate to innovate!”
- Currently funded by the Iowa Highway Research Board
 - One of our tasks is to establish permanent funding
- Website has been up and running since August 2021

Communicate to Innovate



Becoming a member is EASY and FREE!

- Step 1 – Create an Account

- ✓ Email
- ✓ Password
- ✓ Name

[Anti-spam measure requires staff approval of account]

- Step 2 – Additional Contact Info

- ✓ Name
- ✓ Title
- ✓ Organization
- ✓ Contact Info

Communicate to Innovate



PWSB Membership Breakdown

Population Range	Incorporated Cities	Cities with Members
< 100	127	0
101 - 250	211	4
251 - 500	170	7
501 - 1,000	167	12
1,001 - 2,000	108	5
2,001 - 5,000	85	28
5,001 - 10,000	43	26
10,001 - 25,000	24	17
25,001 - 49,999	7	7
50,000 - 99,999	8	8
100,000+	3	3

42 consulting firms
12 counties
20 partners/other



Communicate to Innovate

Website Highlights

- Contacts
- City policies
- City supplementals
- Reports
- Forums
- Funding opportunities
- Headlines
- Job board
- Newsletters
- Partner contacts
- Training opportunities
- Video Tutorials



Communicate to Innovate

Reports

- Financial
 - Capacity Improvements, Engineering and Professional Services, Principal and Interest, Road Use Spending, Snow Removal, Street Cleaning, Street Lighting, Street Maintenance, Street Preservation
- Street
 - Pavement Miles by Condition (Average and Total), Surface Breakdown, and Lane Mile Breakdown Report (newest)
- Iowa DOT Reports (links)
- Bridge Condition Report
- Bid Tabulation Report

Thank you to the Iowa DOT and the Iowa Pavement Management Program for providing data to generate these reports!



Lane Mile Breakdown Report

This report places a dollar figure estimate on the replacement cost of pavement for each city in Iowa, as measured in lane miles. The total lane miles were measured by a regular survey by the Iowa DOT's RAMS (Roadway Asset Management System) program, and are current through 2021. The population data is taken from the 2020 U.S. Census. The cost of each lane mile of pavement reflects estimates based upon data accumulated from open bids from cities across Iowa (please see the PWSB Bid Tabulation Report for more details). The figures were calculated as follows:

Unit Costs Based on 2022 Weighted Average PWSB Bid Tabulation Report.

Pavement:

12' wide * 5,280' long = 7,040 SY = 1 lane mile.
 7" PCC = \$59.93/SY
 6" Asphalt (1 1/2" PG 58-285) = \$65.65/SY
 (For asphalt, we base our calculations on 9 inch thickness for a more representative sample size, but pro-rate to 6 inch thickness. This includes 30 inch curb and gutter)
 Average = \$62.79
 Pavement cost = \$62.79 * 7,040 SY = \$442,042

Subgrade Preparation:

7,040 SY * \$3.58/SY = \$25,203

8" Granular Subbase:

7,040 SY * \$13.88/SY = \$97,715

Storm Sewer – 18" Reinforced Concrete Pipe:

5,280 FT * \$84.20/FT = \$442,376

Intakes:

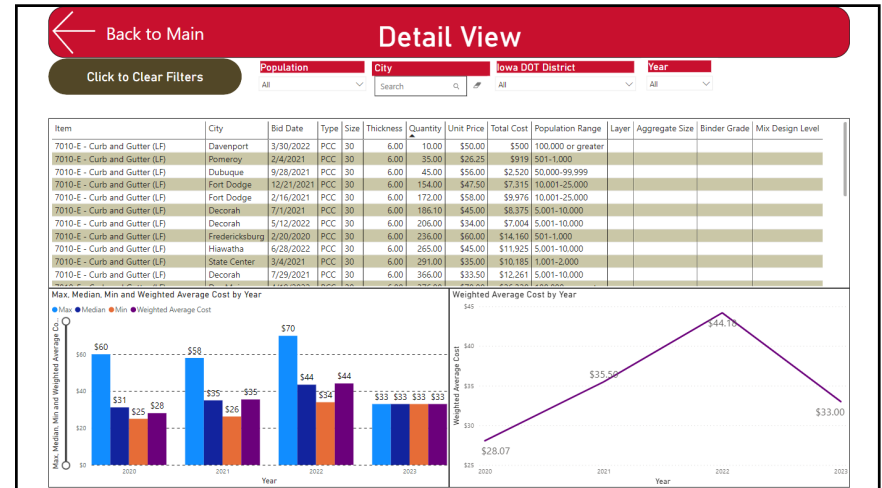
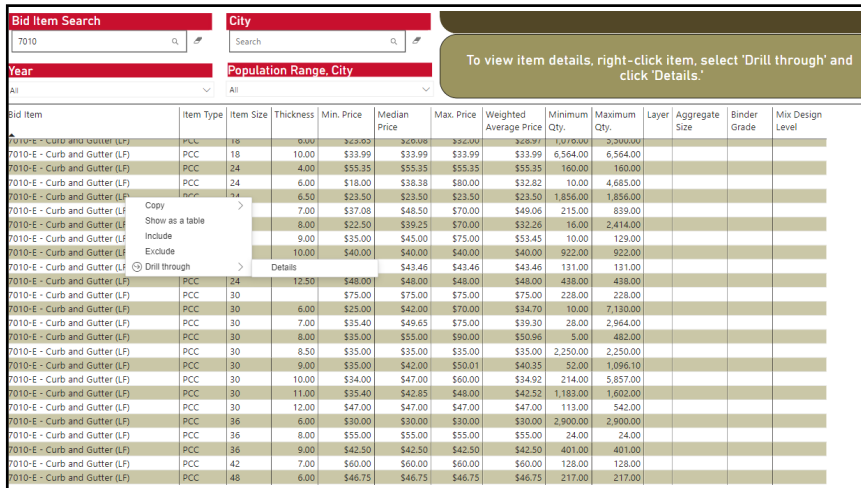
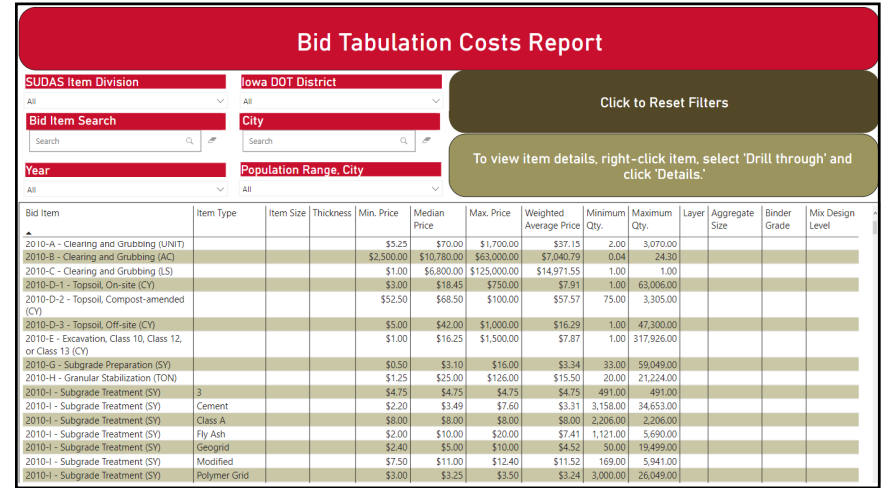
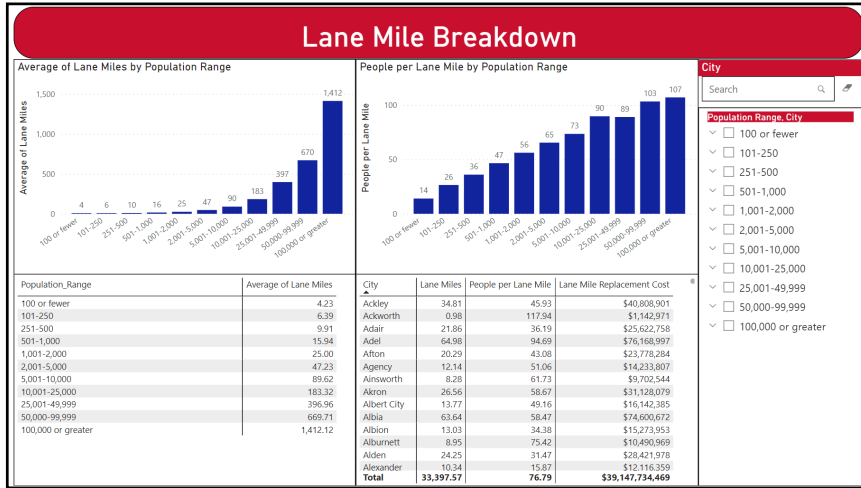
1 intake every 300 feet = 17 intakes
 SW-503 (Grate type) = \$6,322/ each
 SW-505 (Open Throat type) = \$6,600/ each
 Average = \$6,461/each
 Intake cost = \$6,461 * 17 = \$109,837

Summary

\$442,042 + \$25,203 + \$97,715 + \$497,376 + \$109,837 = \$1,172,173

Total cost per lane mile = \$1,172,173





Forum Categories (9)

- ✓ Announcements
- ✓ Budgeting
- ✓ Just for Fun
- ✓ Open Forum
- ✓ Research
- ✓ Right-of-Way Management
- ✓ Staffing
- ✓ Streets
- ✓ Training



Communicate to Innovate

Recent Forum Discussions

- Surety bond and COI amounts
- Traffic calming
- Yearly reviews
- Sidewalk cost share program
- Utilities in the right-of-way
- Body camera policy
- Sealcoat alternative
- Leased parking stalls downtown
- Pavement management and PCI



Communicate to Innovate

How do I find out about forum posts?

Option 1
upper right when open a topic

Option 2
when replying or starting new discussion

Option 3
email to all registered users

Help us Help YOU!

1. Register as a member
2. Use our various features
3. Participate in the forums
4. Send us your suggestions
5. Utilize the job board
6. **Send us your bid tabs**
7. Follow us on social media
8. Spread the word!



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Social Media

[Facebook.com/IowaPWSB](https://www.facebook.com/IowaPWSB)

[LinkedIn.com/company/IowaPWSB](https://www.linkedin.com/company/IowaPWSB)

[Twitter.com/IowaPWSB](https://twitter.com/IowaPWSB)



Iowa Public Works Service Bureau - PWSB
 Published by Beth Richards · September 13 ·

PWSB staff will be at the Iowa League of Cities Annual Conference next week with an exhibit booth and the exhibit hall theme is movies throughout the ages. So in honor of that, today's Friday Funny is movie themed.

If I owned a DeLorean...I'd probably only drive it from time to time.

Stay tuned for pictures next week of our exhibit booth setup. Also, if you or your police department have a policy on the use of body cameras, please respond to last week's forum post (under open forums).



Iowa Public Works Service Bureau - PWSB
 Published by Beth Richards · September 22 ·

Friday Fact for today...Did you know Barbie is the highest grossing film of 2023 and the highest-grossing release in Warner Brothers history? Didn't realize we were ahead of our time two years ago when we decided to incorporate Barbies into our Iowa League of Cities booth! The 2023 League conference was this week and the theme was "movies through the ages". So why not have a Barbie drive-in?!



Questions?



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