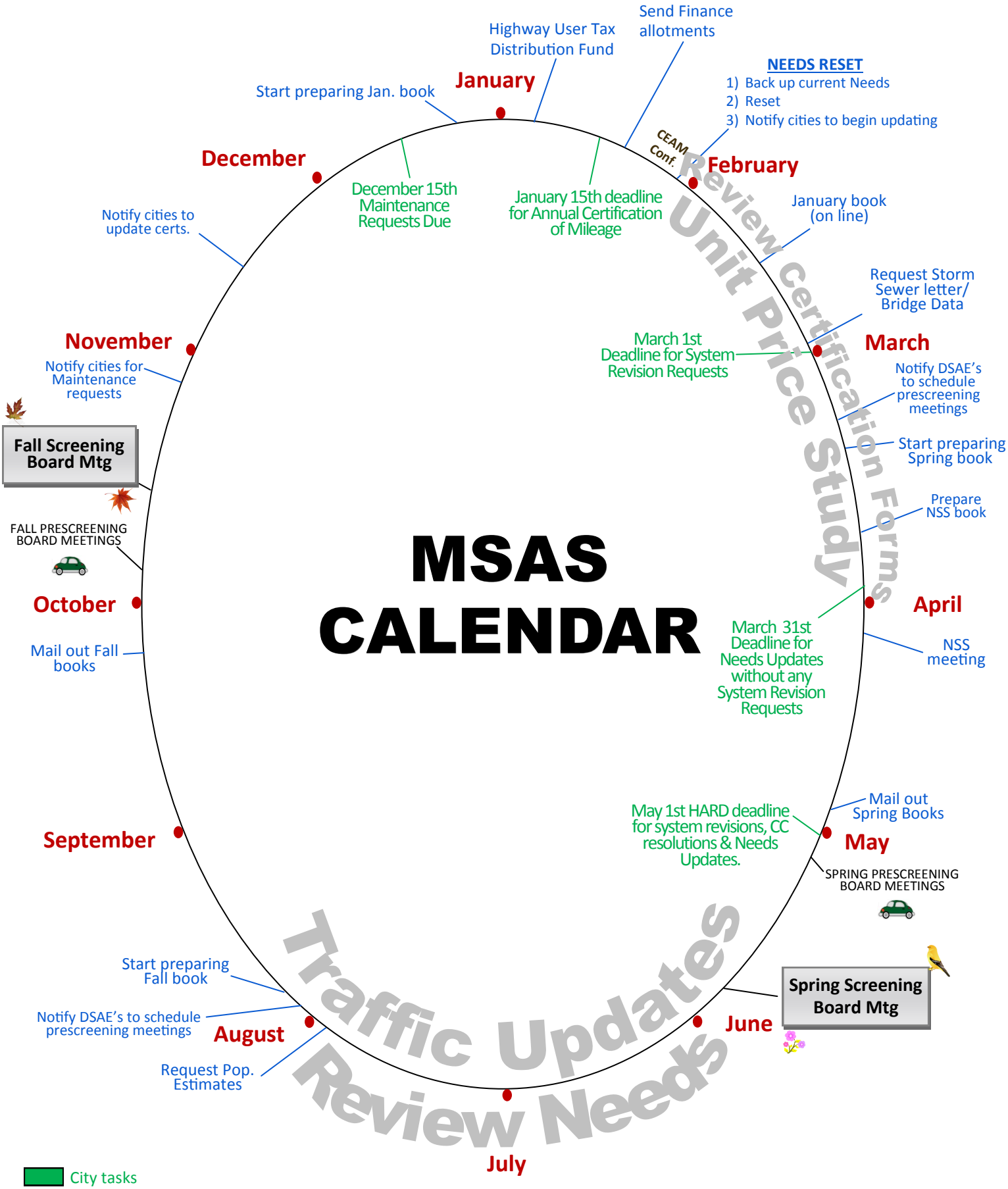
2018 MUNICIPAL SCREENING BOARD DATA

UNIT PRICES

Spring 2018


MSAS CALENDAR
January
Highway User Tax Distribution Fund
Send Finance allotments
NEEDS RESET
1) Back up current Needs
2) Reset
3) Notify cities to begin updating
February
CEAM Conf.
Review certification Forms
Unit Price Study
January book (on line)
January 15th deadline for Annual Certification of Mileage
March
Request Storm Sewer letter/ Bridge Data
March 1st Deadline for System Revision Requests
Notify DSAE's to schedule prescreening meetings
Start preparing Spring book
April
Prepare NSS book
March 31st Deadline for Needs Updates without any System Revision Requests
NSS meeting
May
Mail out Spring Books
May 1st HARD deadline for system revisions, CC resolutions & Needs Updates.
SPRING PRESCREENING BOARD MEETINGS
Spring Screening Board Mtg
June
Traffic Updates
Review Needs
July
August
Start preparing Fall book
Notify DSAE's to schedule prescreening meetings
Request Pop. Estimates
September
October
Mail out Fall books
FALL PRESCREENING BOARD MEETINGS
Fall Screening Board Mtg
November
Notify cities for Maintenance requests
December
Notify cities to update certs.
Start preparing Jan. book
December 15th Maintenance Requests Due
City tasks
State Aid tasks
Ongoing Processes

The State Aid Program Mission Study

Mission Statement:

The purpose of the state-aid program is to provide resources, from the Highway Users Tax Distribution Fund, to assist local governments with the construction and maintenance of community-interest highways and streets on the state-aid system.

Program Goals:

The goals of the state-aid program are to provide users of secondary highways and streets with:

- Safe highways and streets;
- Adequate mobility and structural capacity on highways and streets; and
- An integrated transportation network.

Key Program Concepts:

Highways and streets of community interest are those highways and streets that function as an integrated network and provide more than only local access. Secondary highways and streets are those routes of community interest that are not on the Trunk Highway system.

A community interest highway or street may be selected for the state-aid system if it:

A. Is projected to carry a relatively heavier traffic volume or is functionally classified as collector or arterial

B. Connects towns, communities, shipping points, and markets within a county or in adjacent counties; provides access to rural churches, schools, community meeting halls, industrial areas, state institutions, and recreational areas; serves as a principal rural mail route and school bus route; or connects the points of major traffic interest, parks, parkways, or recreational areas within an urban municipality.

C. Provides an integrated and coordinated highway and street system affording, within practical limits, a state-aid highway network consistent with projected traffic demands.

The function of a road may change over time requiring periodic revisions to the state-aid highway and street network.

State-aid funds are the funds collected by the state according to the constitution and law, distributed from the Highway Users Tax Distribution Fund, apportioned among the counties and cities, and used by the counties and cities for aid in the construction, improvement and maintenance of county state-aid highways and municipal state-aid streets.

The *Needs* component of the distribution formula estimates the relative cost to build county highways or build and maintain city streets designated as state-aid routes.

TABLE OF CONTENTS

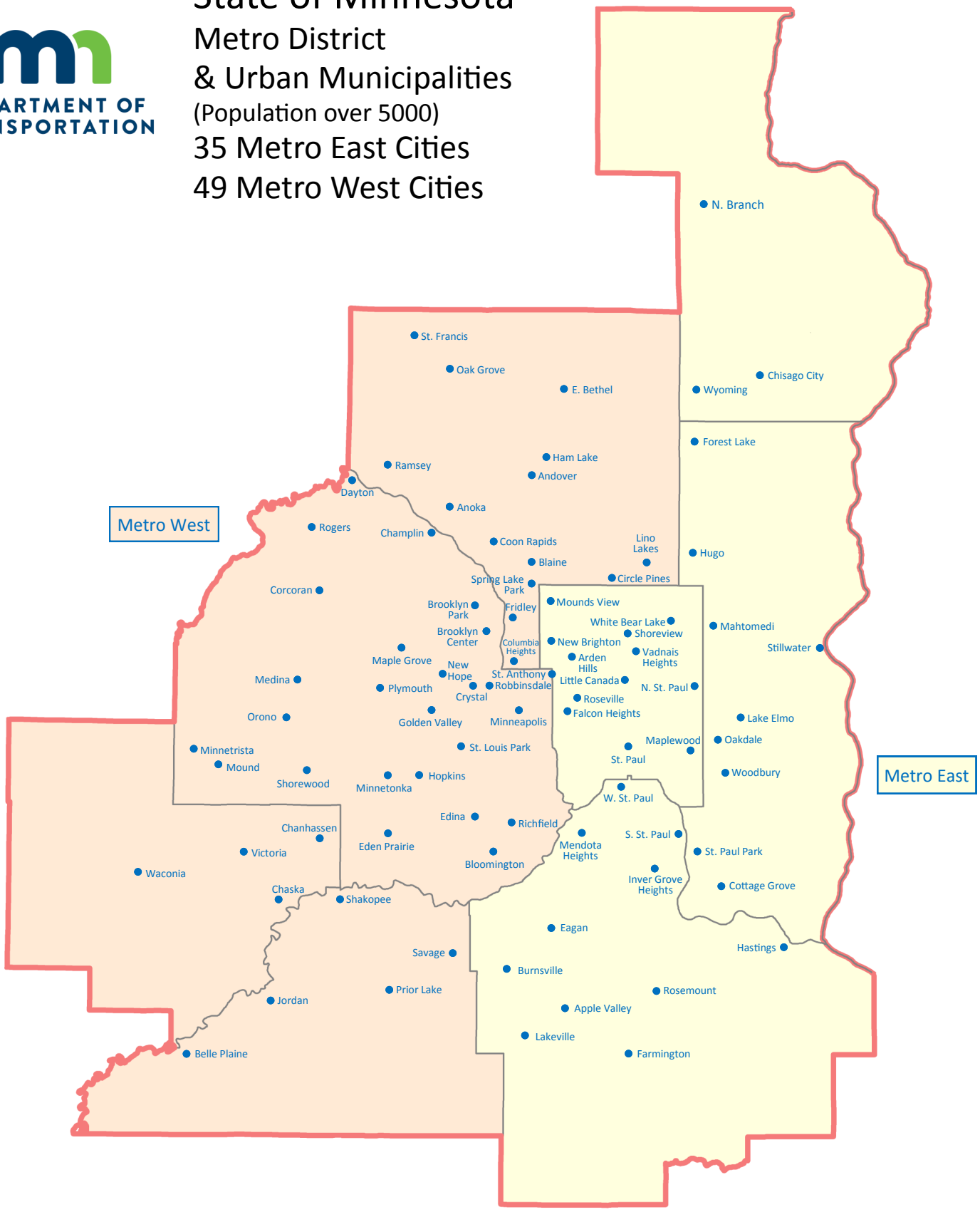
INTRODUCTORY INFORMATION

UNIT PRICES AND GRAPHS 20

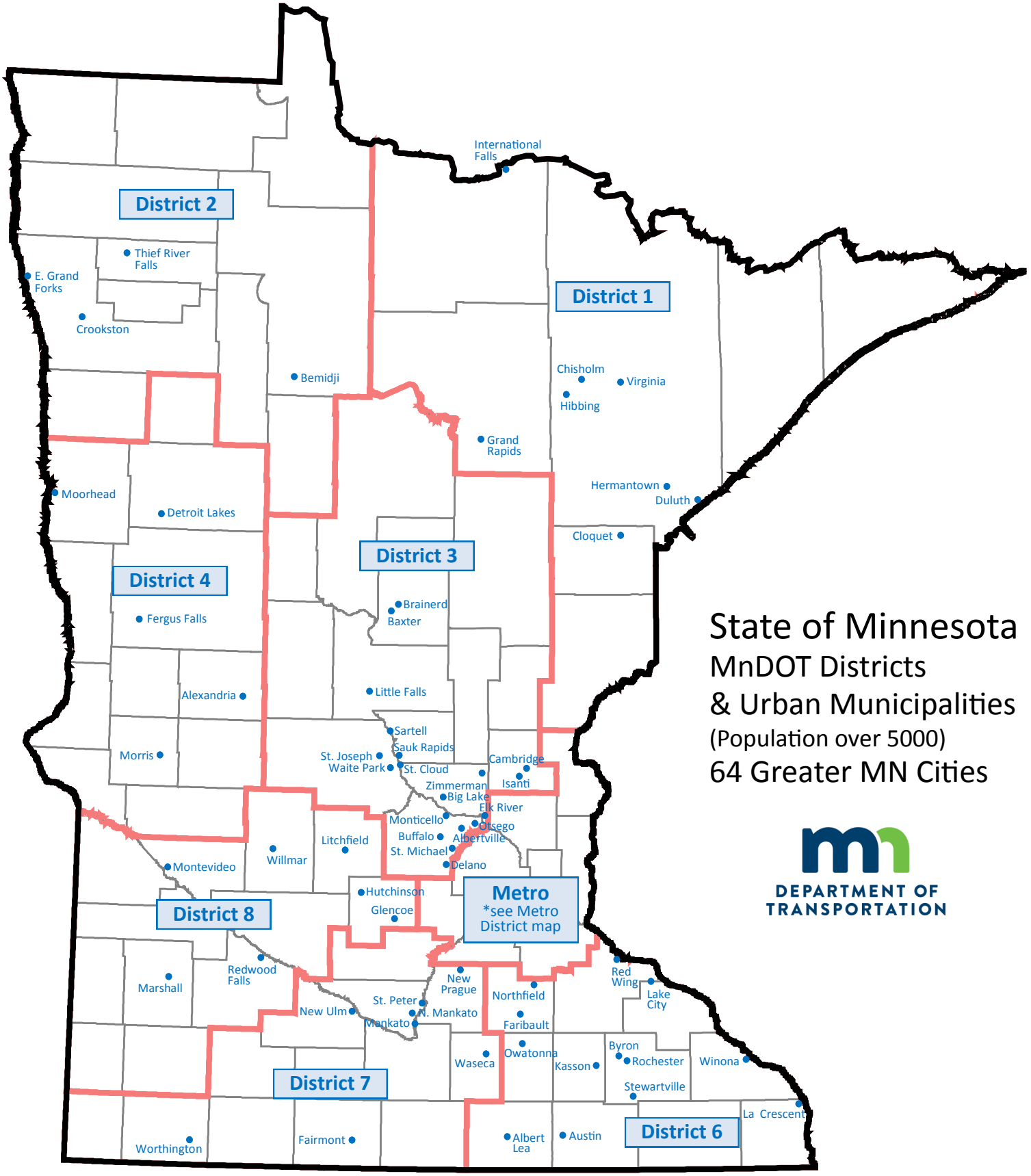
OTHER TOPICS 63

DEPARTMENT OF TRANSPORTATION

State of Minnesota
Metro District
& Urban Municipalities
(Population over 5000)
35 Metro East Cities
49 Metro West Cities



Updated 12/9/14



State of Minnesota

MnDOT Districts & Urban Municipalities

(Population over 5000)

64 Greater MN Cities

DEPARTMENT OF TRANSPORTATION

Updated 1/8/14

2018 MUNICIPAL SCREENING BOARD

19-Apr-18

Officers

Chair	Glenn Olson	Marshall	(507) 537-6774
Vice Chair	John Gorder	Eagan	(651) 675-5645
Secretary	Justin Femrite	Elk River	(763) 635-1051

Members

District	Years Served	Representative	City	Phone
1	2017-2019	Matt Wegwerth	Grand Rapids	(218) 326-7625
2	2018-2020	Rich Clauson	Crookston	(218) 281-6522
3	2018-2020	Adam Nafstad	Albertville	(763) 497-3384
4	2016-2018	Jeff Kuhn	Morris	(320) 762-8149
Metro-West	2016-2018	Steve Lillehaug	Shakopee	(952) 233-9361
6	2016-2018	Jay Owens	Red Wing	(651) 385-3625
7	2017-2019	Chris Cavett*	New Prague	(507) 388-1989
8	2018-2020	Andy Kehren	Redwood Falls	(507) 794-5541
Metro-East	2018-2019	Tom Wesolowski	Shoreview	(651) 490-4652
Cities	Permanent	Cindy Voigt	Duluth	(218) 730-5200
of the	Permanent	Don Elwood	Minneapolis	(612) 673-3622
First	Permanent	Richard Freese	Rochester	(507) 328-2426
Class	Permanent	Paul Kurtz	Saint Paul	(651) 266-6203

Alternates

District	Year Beginning		City	Phone
1	2020	Caleb Peterson	Cloquet	(218) 879-6758
2	2021	Steve Emery	East Grand Forks	(218) 773-5626
3	2021	Layne Otteson	Big Lake	(763) 251-2984
4	2019	Brian Yavarow	Fergus Falls	(218) 332-5413
Metro-West	2019	Chad Milner	Edina	(952) 826-0318
6	2019	Kyle Skov	Owatonna	(507) 444-4350
7	2020	Chris Cavett	New Prague	(507) 388-1989
8	2021	Brad DeWolf	Litchfield	(320) 231-3956
Metro-East	2020	Brian Erickson	Rosemount	(651) 322-2025

* Seat was vacated in 2018. Chris Cavett finishing out term.

2018 SUBCOMMITTEES

The Screening Board Chair appoints one city Engineer, who has served on the Screening Board, to serve a three year term on the Needs Study Subcommittee.

The past Chair of the Screening Board is appointed to serve a three year term on the Unencumbered Construction Fund Subcommittee.

Needs Study Subcommittee	Unencumbered Construction Funds Subcommittee
Jon Pratt Detroit Lakes (218) 847-5607 Expires after 2018	Klayton Eckles Woodbury (651) 714-3593 Expires after 2018
Jeff Johnson Mankato (507) 387-8640 Expires after 2019	Jeff Johnson Mankato (507) 387-8640 Expires after 2019
Sean Christensen Willmar (320) 235-4202 Expires after 2020	Marc Culver Roseville (651) 792-7041 Expires after 2020

MUNICIPAL SCREENING BOARD
MEETING MINUTES
October 24-25, 2017
Ruttger's Bay Lodge – Isle of Pines Meeting Room, Deerwood, MN

Tuesday Session, October 24, 2017 – 1:00 p.m.

I. Call to Order and Welcome

a. Introduction of the Head Table, Subcommittee Chairs and Past Chairs of the Municipal Screening Board (MSB) by Chair Marc Culver
   i. Mitch Rasmussen, MnDOT – State Aid Engineer
   ii. Bill Lanoux, MnDOT – Manager, Municipal State Aid Needs Unit
   iii. Glenn Olson, Marshall – Vice Chair, MSB
   iv. Rich Clauson, Crookston – Chair, Needs Study Subcommittee
   v. Steve Bot, St. Michael – Chair, Unencumbered Construction Funds Subcommittee & Past Chair, MSB
   vi. Jeff Johnson, Mankato – Past Chair, MSB

b. Introduction of John Gorder, Eagan – Secretary, MSB, who then conducted the roll call of the screening board members:

i.	District 1	Matt Wegwerth, Grand Rapids
ii.	District 2	Craig Gray, Bemidji
iii.	District 3	Steve Bot, (St. Michael) (representing Justin Femrite, Elk River)
iv.	District 4	Jeff Kuhn, Morris
v.	Metro East	Brian Erickson, Rosemount
vi.	Metro West	Steve Lillehaug, Shakopee
vii.	District 6	Jay Owens, Red Wing
viii.	District 7	Mark DuChene, Waseca
ix.	District 8	Sean Christensen, Willmar
x.	Duluth	Cindy Voigt
xi.	Minneapolis	Don Elwood
xii.	Rochester	Doug Nelson
xiii.	St. Paul	Paul Kurtz

All members were present, as noted.

c. Screening Board Alternates, not in attendance, were recognized:

i.	District 3	Adam Nafstad, Albertville
ii.	District 8	Any Kehren, Redwood Falls

d. Department of Transportation personnel in attendance were recognized:

i.	Ted Schoenecker	Deputy State Aid Engineer
ii.	Patti Loken	State Aid Programs Engineer
iii.	John McDonald	District 1 State Aid Engineer
iv.	Lou Tasa	District 2 State Aid Engineer
v.	Kelvin Howieson	District 3 State Aid Engineer
vi.	Nathan Gannon	District 4 State Aid Engineer
vii.	Fausto Cabral	District 6 State Aid Engineer
viii.	Gordy Regenscheid	District 7 State Aid Engineer

ix. Todd Broadwell District 8 State Aid Engineer
x. Dan Erickson Metro State Aid Engineer
xi. Julie Dresel Assistant Metro State Aid Engineer

e. Recognition of others in attendance:
   i. Dave Sonnenberg Chair, CEAM Legislative Committee
   ii. Larry Veek , Minneapolis
   iii. Mike Van Beusekom, St Paul
   iv. Greg Coughlin, State Aid

II. 2017 Municipal State Aid Street Needs Report Review

a. Lanoux reviewed the minutes and actions approved at the May Screening Board meeting. **A motion was made by Lillehaug, and seconded by Duchene, to approve the minutes as presented. Motion carried.**

b. Lanoux reviewed the remainder of the Needs Report, including Needs Data and Apportionment, cities with complete MSA systems, the proposed MSB research account resolution, and MSB resolutions.

When Lanoux finished his review, Kurtz raised a question concerning ATF ROW Needs Adjustments: Can a city request an ATF ROW Needs adjustment when spending their state aid money on a CSAH project – and if not why not? Lanoux acknowledged that currently cities can't get this adjustment. Kurtz pointed out that the CSAH system is also the State-aid system, and questioned the logic of why you couldn't get an ATF adjustment if you're spending city state aid dollars on the State Aid System, regardless of whether it's spent on MSAS or CSAH. Chair Culver mentioned that this has been discussed before and that issue has been that cities don't have a roadway segment on a CSAH system to apply the ATF Needs to, and added that maybe it can be discussed further. Voight raised a similar question for the scenario of State Aid money spent on a match on a Trunk Hwy. Kurtz commented that the TH system would be a different system than the state aid system, then reiterated his original question: if we're spending state-aid dollars on a state-aid system, regardless of its spent on MSAS or CSAH, shouldn't the city get an after-the-fact ROW needs adjustment. Kurtz felt that administratively, it wouldn't be difficult. He also added that Ramsey County has changed their cost share participation policy – which requires a 50-50 match from the city, if the county is doing a project in that city and the project involves acquiring ROW. Olson asked Lanoux to clarify current policy regarding ROW Needs, stating that the issue as to why money spent on CSAH system isn't eligible for the ATF Needs appears to be because it's not on the city's system – or part of the city's mileage. Lanoux concurred – saying State Aid only gives the adjustment for ROW purchases on the Municipal State Aid System. The main question, as discussion closed for the session: if a city assists in funding with their state-aid dollars, no matter the jurisdiction, can it /should it be included in the Needs?

III. Other Discussion Items

a. Sonnenberg provided a preview of numerous potential Legislatives items for the upcoming 2018 session. Handouts were provided detailing the items.

b. Rasmussen mentioned State Aid's position on conditional use permits (CUP) for private facilities located within private property and State right-of-way, such as outdoor restaurant patios. The State will support the cities' action on CUP's for both the private property and the right-of-way, provided they have appropriate ordinances in place.
Rasmussen also mentioned the success of the "idea-mining" process at the pre-screening meetings this Fall.

c. Other

i. Olson questioned whether the item regarding private welling drilling (Item #5) on the Legislative update applied to potable water supply only. Gray provided clarification that it was for potable water only, and continues the cities' ability to adopt ordinances prohibiting private wells within municipal water service boundaries

ii. Lillehaug questioned the proposed City Engineers of MN opposition to the potential speed limit control authority proposed by Metro Cities. Lillehaug and Bot mentioned previous CEAM Traffic Safety Committee discussion and work on this topic in 2014, and requested asks that Executive Committee be neutral until the CEAM Traffic Safety Committee revisited this topic. Culver concurred, and also proposed there be discussion at the 2018 CEAM annual meeting. Gray opposition to ambiguous language on speed limit controls for different scenarios. This item will be directed to the CEAM Traffic Safety Committee for recommendations.

IV. A motion was made by Voigt, and seconded by Wegwerth, to adjourn until 8:30 AM Wednesday morning. The motion passed unanimously. The meeting adjourned at 2:45 PM.

WEDNESDAY MORNING SESSION – October 25

Additional attendance: Justin Femrite, Elk River (District 3)

Chair Culver reconvened the meeting at 8:40 AM.

I. Review Tuesday's Subjects and Take Action

a. **A motion was made by Voigt, seconded by Kuhn, to approve the original letter to the Minnesota Department of Transportation Commissioner, recommending approval of the Needs and Apportionment Data, as shown on pages 61-62 of the Needs Report. The motion passed unanimously.**

b. A motion was made by Nelson, seconded by Wegwerth, to approve the resolution *"Be it resolved that an amount of $866,092 (not to exceed ½ of 1% of the 2017 MSAS Apportionment sum of $173,218,364) shall be set aside from the 2018 Apportionment fund and be credited to the research account."* The motion passed unanimously.

III. Other Discussion Topics

Kurtz reviewed yesterday's topic of cities spending their State Aid dollars on ROW for County State Aid Highway Projects. Asking again why they can't draw ATF ROW Needs for those purchases. Lanoux mentioned that cities currently don't draw needs on streets that aren't theirs, but that State Aid could check on how definitive that is and see if it's possible that cities could draw Needs on anything other than the Municipal State Aid System. Culver noted that in addition to ROW, cities participate on other elements of County Projects that they can't draw Needs on. Kurtz felt ROW was different in that ROW wasn't a "core Needs item" because it gets treated as an adjustment. Kurtz also noted that at the time of purchase, ROW isn't on either the Municipal or County State Aid System, so in the case of 50-50 participation, he felt a ROW purchase on an eventual County State Aid Hwy was still partly the city's designation, so the city should draw ATF Needs on it. Kurtz acknowledged that not every city has cost participation with their county. Elwood noted that cost participation policies are often a percentage, making it difficult to know just how much Curb & Gutter you might be paying for on a project, but that ROW participation is much more clear an easier to qualify than other project elements. Voigt said this deserves attention, for county and state joint projects as well. (Nelson asked about ROW purchases when they result in CSAH Turnbacks. Would ROW purchased by the city before a Turnback become eligible at the time of Turnback? Lanoux thought it was likely wasn't sure. Culver suggested this item be referred refer to Unencumbered Construction Funds Subcommittee for a recommendation. **A motion was made by Voigt, seconded by Elwood to refer this to the UCFS for recommendation.** Further discussion occurred. Kurtz asked if this was the something the Board would take action and asked State Aid if it says anywhere we can't do this. He also questioned how administratively this would be handled. Rasmussen said State Aid would need time to look into their authority to administer this, and to determine legally that this could not be done. But he reminded the Board that when it comes to Needs Calculations and the methodology of those Needs, that this is the Board's responsibility. Lillehaug voiced opposition to this motion, stating this would go away from the simplicity of the system we have now and that this may possibly skew money

towards cities that have a unique relationship with their county. He also questioned cities and counties drawing Needs off the same system. Gray agreed with Lillehaug. He acknowledged that cities can use their State-Aid money for off system expenditures, but questioned getting Needs for something not on the city's system. He also stated that not all counties are making cities pay for half the ROW costs, and that this proposal could move money towards cities that have to pay ROW costs and take money away from cities that don't have to. Gray also added that counties may find out cities can get these Needs, and then start requesting cities pay 100% of the costs. The discussion ended. **The motion carried 8-5 in favor.**

III. Thank

a. Culver recognized and thanked the outgoing members of the Screening Board – Craig Gray, Justin Femrite and Sean Christiansen

b. Culver thanked Bill Lanoux and all State Aid staff for all their work in coordinating the Screening Board meetings.

IV. Culver reminded the group of the Spring Screening Board meeting scheduled for May 22 & 23, 2018 at Maddens on Gull Lake.

V. Culver mentioned expense report forms were available, hard copy in the meeting room, and available on the MSAS website.

VI. A motion was made by Kuhn, and seconded by Gray, to adjourn. The motion passed unanimously. The meeting adjourned at 9:00 AM.

Respectfully submitted,

John Gorder
CEAM Secretary-Treasurer
City of Eagan

Unencumbered Construction Funds Subcommittee

Meeting Minutes: December 1st, 2017

Attendees

Klayton Eckles, Woodbury
Jeff Johnson, Mankato
Marc Culver, Roseville

Meeting Agenda Discussion

The UCFS met on Friday December 1st to discuss a question brought up by the screening board concerning the use of MSA funds to do "after the fact" right of way purchases on CSAH projects. Here are the talking points/minutes of that discussion:

1) We have a set pot of money…our rules are a distribution method—more for ROW means less for other items

2) We did spend 3 years and 4 more adapting new rules to simplify….the idea is that this is about spreading money to build roads to meet larger transportation goals…the actual cost of individual roadway elements had grown to be too cumbersome, so we drastically reduced the elements, and focused more on actual traffic volume served and roadway construction items

3) ROW purchasing has a full of gamut of perspectives and issues…platting process, planning process, county/city agreements or policies, are there other funding sources (state or fed), easements vs ROW, public/private agreements, development deals with private parties.

4) Could ATF expenditures encourage counties to crank the screws on their cost participation policies? (they can pay, so we will charge)…the thought was that although some counties do have some policies that require cities participate at a high level in ROW acquisition, it is highly variable. And the policies themselves are debatable, and MSA monies are not well spent "enabling" the stricter county policies. Given the sporadic nature of the various policies, allowing ATF would provide more benefit to some than to others…which is counter to some of the base philosophies of the simplification effort.

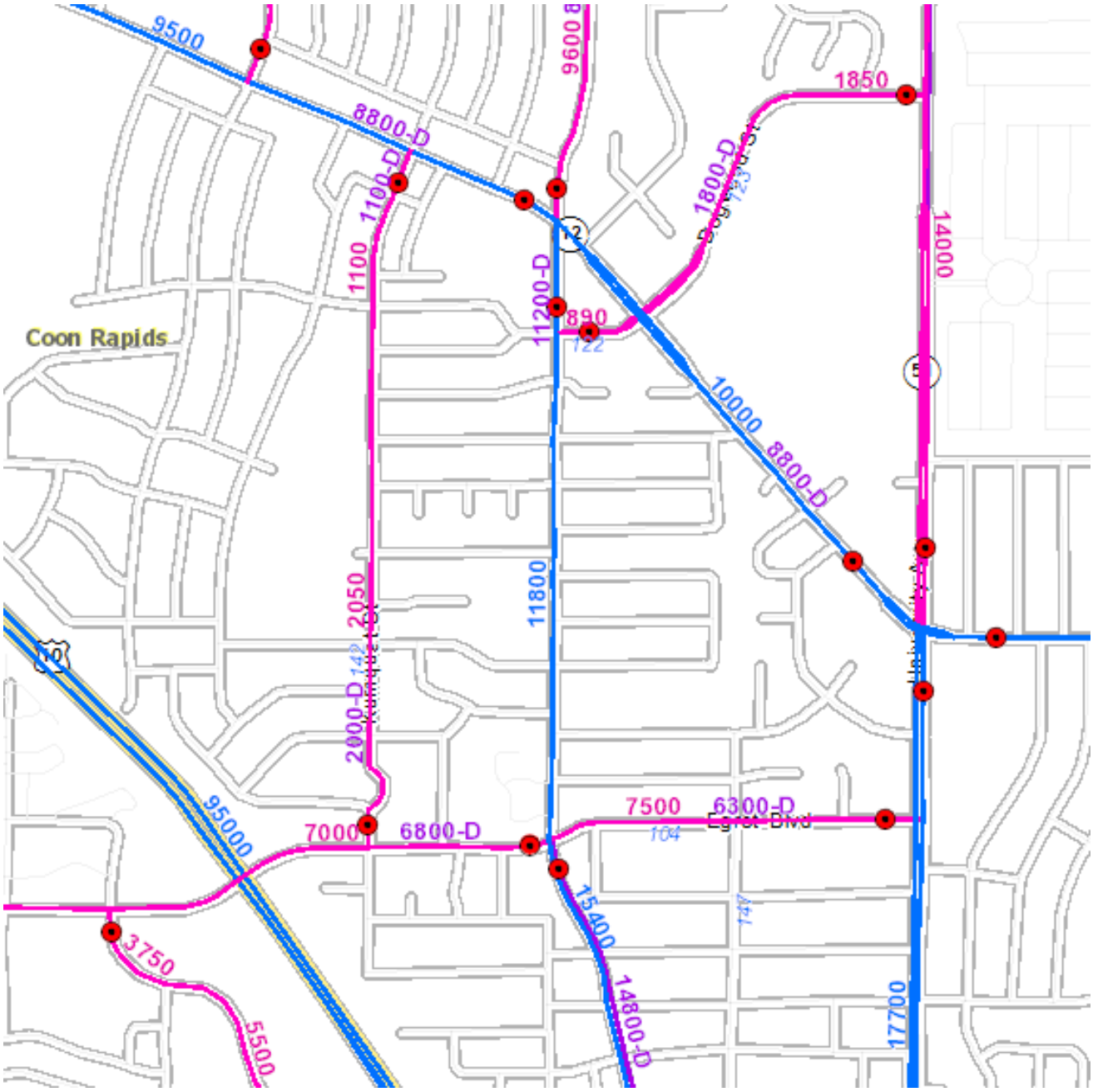
5) Based on the general philosophy that this is meant to be a simple method of equitably distributing SA monies between eligible cities, the idea of ATF ROW needs does not fit. ATF would be more complicated, not always equitable, and doesn't improve the Municipal transportation system. Therefore *the UCFS recommends that off system expenditures on CSAH for ATF right of way be deemed an ineligible expense. IE, no change from the current practice.*

Motion carried unanimously.
Respectfully Submitted,

Klayton Eckles
UCFS Chair

NOTES AND COMMENTS

TRAFFIC COUNTING &
ADT GROUPS



http://www.dot.state.mn.us/traffic/data/index.html

Municipal (MSAS) Traffic Counting

The current Municipal State Aid Traffic Counting resolution reads:

That future traffic data for State Aid Needs Studies be developed as follows:

1. **The municipalities in the metropolitan area cooperate with the State by agreeing to participate in counting traffic every two or four years at the discretion of the city.**

2. **The cities in the outstate area may have their traffic counted and maps prepared by State forces every four years, or may elect to continue the present procedure of taking their own counts and have state forces prepare the maps.**

3. **Any city may count traffic with their own forces every two years at their discretion and expense, unless the municipality has made arrangements with the Mn/DOT district to do the count.**

In 1998, cities were given the option of counting on a 2 or 4 year cycle.
In 2008, cities were given the option to revise their 2 or 4 year cycle as well as the count year.
In 2009, cities were given the option to move to a 4 year cycle with the option to count a subset of locations in the "off cycle" or 2nd year of a 4 year cycle (they will only recieve new count materials if these choose to count)

See Metro and Outstate counting schedules below
(Note that Chisago County MSAS are grouped with the Outstate schedule)

Metro Municipal Traffic Counting Schedule (publication year, city name, two or four year cycle)

2016	2017	2018	2019	2020	2021	2022
Anoka (4)	Arden Hills (4)	Andover (4)	Blaine (2)	Anoka (4)	Arden Hills (4)	Andover (4)
Columbia Heights (4)	Blaine (2)	Apple Valley (4)	Brooklyn Center (4)	Columbia Heights (4)	Blaine (2)	Apple Valley (4)
Coon Rapids (4)	Brooklyn Park (2)	Belle Plaine (4)	Brooklyn Park (2)	Coon Rapids (4)	Brooklyn Park (2)	Belle Plaine (4)
Crystal (4)	Chanhassen (2)	**Bloomington (4*)**	Chanhassen (2)	Crystal (4)	Chanhassen (2)	**Bloomington (4*)**
Dayton (2)	Cottage Grove (2)	Burnsville (4)	Circle Pine (4)	Dayton (2)	**Coon Rapids (4*)**	Burnsville (4)
Eden Prairie (4)	East Bethel (2)	Champlin (4)	Cottage Grove (2)	Eden Prairie (4)	Cottage Grove (2)	Champlin (4)
Hopkins (4)	**Edina (4*)**	Chaska (4)	East Bethel (2)	Hopkins (4)	**East Bethel (2)**	Chaska (4)
Minneapolis (4*)	Falcon Heights (4)	Corcoran (4)	Farmington (4)	**Minneapolis (4*)**	Edina (4*)	Corcoran (4)
Mound (4)	Fridley (4)	Dayton (2)	Ham Lake (4)	Mound (4)	Falcon Heights (4)	Dayton (2)
Shakopee (4*)	Golden Valley (4)	Eagan (4)	Hastings (4)	**Shakopee (4*)**	Fridley (4)	Eagan (4)
South St. Paul (4)	Lake Elmo (2)	Forest Lake (4)	Lake Elmo (2)	South St. Paul (4)	Golden Valley (4)	Forest Lake (4)
Spring Lake Park (4)	Mahtomedi (4)	Hugo (4)	**Lakeville (4*)**	Spring Lake Park (4)	Lake Elmo (2)	Hugo (4)
St. Paul (4*)	Maplewood (4)	Inver Grove Heights (4)	Mounds View (4)	**St. Paul (4*)**	Mahtomedi (4)	Inver Grove Heights (4)
	Medina (4)	Jordan (4)	Orono (4)		Maplewood (4)	Jordan (4)
	New Brighton (4)	Lino Lakes (4)	Prior Lake (2)		Medina (4)	Lino Lakes (4)
	New Hope (4)	Little Canada (4)	Ramsey (2)		New Brighton (4)	Little Canada (4)
	North St. Paul (4)	**Maple Grove (4*)**	**Rogers (4^)**		New Hope (4)	**Maple Grove (4*)**
	Oak Grove (4)	Mendota Heights (4)	Savage (4)		North St. Paul (4)	Mendota Heights (4)
	Plymouth (4^)	**Minnetonka (4*)**	Shoreview (2)		**Oak Grove (4)**	**Minnetonka (4*)**
	Prior Lake (2)	Minnetrista (4)	St. Anthony (4)		Plymouth (4^)	Minnetrista (4)
	Ramsey (2)	Oakdale (4)	Victoria (2)		Prior Lake (2)	Oakdale (4)
	Richfield (4)	Rosemount (4)	**Woodbury (4^)**		Ramsey (2)	Rosemount (4)
	Robbinsdale (4)	**St. Francis (4^)**			Richfield (4)	**St. Francis (4^)**
	Roseville (4)	Vadnais Heights (4)			Robbinsdale (4)	Vadnais Heights (4)
	Shoreview (2)	Waconia (4)			Roseville (4)	Waconia (4)
	Shorewood (4)				Shoreview (2)	
	St. Louis Park (4)				Shorewood (4)	
	St. Paul Park (4)				St. Louis Park (4)	
	Stillwater (4)				St. Paul Park (4)	
	Victoria (2)				Stillwater (4)	
	West St. Paul (4)				Victoria (2)	
	White Bear Lake (4)				West St. Paul (4)	
					White Bear Lake (4)	

Takes counts over several years rather than just the publication year, year listed is the last year of the cycle (Bloomington, Coon Rapids, Duluth, Edina, Lakeville, Maple Grove, Minneapolis, Minnetonka, St. Paul, Shakopee)

^May choose to have a select set updated every 2 years (Rogers, Woodbury, Plymouth, St. Francis)

Outstate Municipal Traffic Counting Schedule (publication year, city name, four year cycle)

2016	2017	2018	2019	2020	2021	2022
Albertville	Albert Lea	Alexandria	Baxter	Albertville	Albert Lea	Alexandria
Austin	Crookston	Bemidji	Brainerd	Austin	Crookston	Bemidji
Buffalo	Chisago City	Big Lake	Chisholm	Buffalo	Chisago City	Big Lake
Cambridge	East Grand Forks	Byron	**Duluth* (year 4)**	Cambridge	East Grand Forks	Byron
Delano	Glencoe	Cloquet	Fergus Falls	Delano	Glencoe	Cloquet
Detroit Lakes	Grand Rapids	Elk River	Hermantown	Detroit Lakes	Grand Rapids	Elk River
Faribault	Hutchinson	Fairmont	Hibbing	Faribault	Hutchinson	Fairmont
International Falls	Kasson	Lake City	Litchfield	International Falls	Kasson	Lake City
Isanti	Little Falls	Marshall	North Mankato	Isanti	Little Falls	Marshall
La Crescent	Mankato	New Ulm	Owatonna	La Crescent	Mankato	New Ulm
Montevideo	Moorhead	Rochester **	Red Wing	Montevideo	Moorhead	Rochester **
Monticello	Morris	Stewartville	Redwood Falls	Monticello	Morris	Stewartville
Northfield	New Prague	Willmar	Saint Peter	Northfield	New Prague	Willmar
Otsego	North Branch	Zimmerman	Sauk Rapids	Otsego	North Branch	Zimmerman
Rochester **	Saint Joseph		Thief River Falls	Saint Michael	Saint Joseph	
Saint Michael	Sartell		Virginia	Waseca	Sartell	
Waseca	St. Cloud		Worthington		St. Cloud	
	Waite Park		Winona		Waite Park	
	Wyoming				Wyoming	

**** Duluth counts approximately 1/4 of the city each year***

***** Up until 2012 Rochester was counted every two years (rotating between the city and MnDOT); 2016 city choose to count***

****** No longer a city over 5000***

Portions of St. Cloud are always being counting due to it crossing into 3 different counties

State Aid will be updating the traffic for these cities in 2018

CURRENT SCREENING BOARD RESOLUTION ON TRAFFIC

TRAFFIC - June 1971 (Revised May 2014)

Beginning in 1965 and for all future Municipal State Aid Street Needs Studies, the Needs Study procedure will utilize traffic data developed according the Traffic Forecasting and Analysis web site at http://www.dot.state.mn.us/traffic/data/coll-methods.html#TCS

Traffic Counting - Sept. 1973 (Revised June 1987, 1997, 1999, Oct. 2014)

Traffic data for State Aid Needs Studies will be developed as follows:

1) The municipalities in the metropolitan area cooperate with the State by agreeing to participate in counting traffic every two or four years at the discretion of the city.
2) The cities in the outstate area may have their traffic counted and maps prepared by State forces every four years, or may elect to continue the present procedure of taking their own counts and have state forces prepare the maps.
3) Any city may count traffic with their own forces every two years at their discretion and expense, unless the municipality has made arrangements with the Mn/DOT district to do the count.
4) On new MSAS routes, the ADT will be determined by the City with the concurrence of the District State Aid Engineer until such time the roadway is counted in the standard MnDOT count rotation.

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
500-1999 EXISTING ADT	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
9000-13,999 EXISTING ADT	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
14,000-24,999 EXISTING ADT	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

Roadway Segment Information

Status : Original

City Name : DETROIT LAKES **Segment Nbr : 117-120-010**

Original		Current
NORTH SHORE DRIVE	Street Name	NORTH SHORE DRIVE
CORBETT ROAD TO TH 10	Termini	CORBETT ROAD TO TH 10
0.55	Length	0.55
Improved	Existing Roadway Type	Improved
Undivided	Existing Lane Description	Undivided
0	Existing Number of Signal Legs	0
1350	Present AADT	1350
3 (500 - 1999)	Traffic Group Code	3 (500 - 1999)
2016	Year of AADT Count	2016
N	Common Boundary Designation	N
Y	Turnback Mileage	Y
N	Outside City Limit	N
2001	Year of Latest SA Fund	2001
CONSTRUCTED UNDER PLAN # SAP 117-120-001	Comments	CONSTRUCTED UNDER PLAN # SAP 117-120-001
	Segment Override	

Culvert Information

Status: Original

Original		Current
03J19	Structure Number	03J19
0.22	Milepoint	0.22
PELICAN RIVER	Feature Crossed	PELICAN RIVER
2	Barrels	2
5	Culvert Height	5
10	Culvert Width	10
2001	Year Built	2001
	Comments	
3 (500 - 1999)	Culvert Group Code	3 (500 - 1999)

Segment Cost Information

segment length

quantity from chart

unit cost

Cost Factor	Unit Cost	Computation Formula or Rule	Equation	Result
Gravel	MSAS Gravel Cost Group 3	Length * Quantity * UnitCost	0.55 * 10176 * 14.9	$83,392
Bituminous	MSAS Bituminous Cost Group 3	Length * Quantity * UnitCost	0.55 * 3978 * 69.6	$152,278
Excavation	MSAS Excavation Cost Group 3	Length * Quantity * UnitCost	0.55 * 17698 * 7.95	$77,385
Storm Sewer	MSAS Storm Sewer Cost Group 3	Length * UnitCost	0.55 * 168400	$92,620
Sidewalk	MSAS Sidewalk Cost Group 3	Length * UnitCost * FeetPerMile * SidewalkWidth	0.55 * 4.75 * 5280 * 10	$137,940
Street Lighting	MSAS Street Lighting Cost Group 3	Length * UnitCost	0.55 * 100000	$55,000
Curb and Gutter	MSAS Curb And Gutter Cost Group 3	Length * UnitCost * FeetPerMile * NumberOfCurbs	0.55 * 14.55 * 5280 * 2	$84,506
Signal Leg	MSAS Traffic Signals Cost Group 3	NumOfSignals * UnitCost / 4	0 * 195000 / 4	$0
Culvert	MSAS Culvert TGC Group 3	CulvertWidth * NeedsWidth * UnitCost * NumOfBarrels	10 * 34 * 90 * 2	$61,200
Engineering Cost		Percent of costs	744321 * 0.220	$163,751
Total				$908,072

UNIT PRICES

AND GRAPHS

UNIT PRICE STUDY

HISTORY

An annual unit price study was conducted until 1997.

In 1996, the Municipal Screening Board made a motion to conduct the Unit Price study every two years, with the ability to adjust significant unit price changes on a yearly basis. There were no changes in the unit prices in 1997.

In 1999 and 2001, a construction cost index was applied to the 1998 and 2000 contract prices.

In 2003, the Screening Board directed the Needs Study Subcommittee to use the percent of increase in the annual National Engineering News Record Construction Cost Index to recommend Unit Costs to the Screening Board.

In 2007, the Municipal Screening Board made a motion to conduct the Unit Price study every three years with the option to request a Unit Price study on individual items in “off years”.

INTRODUCTION

Unit Prices are applied against the quantities in the Needs Study computation program to compute the construction (money) needs apportionment.

For this year, the 5 year average of State Aid bridge costs, from 2014 to 2017, are used to determine the unit price for structures.

MN/DOT’s hydraulic office furnished a recommendation of costs for storm sewer construction and adjustment based on 2017 construction costs.

The SALT Program Support Engineer supplied a recommendation for Traffic Signals.

This year, the Municipal State Aid Needs Unit conducted a Unit Price Study, based on the project costs of on system MSAS projects for **Excavation**, **Aggregate Base**, **Bituminous**, **Sidewalk** Construction and **Curb & Gutter** Construction. These project costs are used to calculate a statewide average cost for these items.

158 on-system projects were incuded in the study.

2018 Unit Price Study

Printed: 03/30/18

CITY NAME	SAP/SP	PROJECT #	DIST NO.	CO. NO.	EXCAVATION Excavation - CY QTY.	EXCAVATION Excavation - CY AMOUNT	EXCAVATION Unit Price	AGGREGATE BASE Base 2211 - Ton QTY.	AGGREGATE BASE Base 2211 - Ton AMOUNT	AGGREGATE BASE Unit Price	ALL BITUMINOUS All Bit. - Ton QTY.	ALL BITUMINOUS All Bit. - Ton AMOUNT	ALL BITUMINOUS Unit Price	SIDEWALK Sidewalk Const.-Sq Ft QTY.	SIDEWALK Sidewalk Const.-Sq Ft AMOUNT	SIDEWALK Unit Price	CURB & GUTTER C & G Const. - LF QTY.	CURB & GUTTER C & G Const. - LF AMOUNT	CURB & GUTTER Unit Price
DISTRICT 1																			
Chisholm	SAP	111-236-003	1	69	0	0		0	0		500	$32,150	$64.30	0	0		0	0	
Chisholm	SAP	111-239-003	1	69	0	0		0	0		402	25,850	64.30	0	0		0	0	
Chisholm	SAP	111-243-007	1	69	896	$11,200	$12.50	886	$14,539	$16.40	277	17,459	63.03	0	0		760	$15,200	$20.00
Chisholm	SAP	111-248-004	1	69	0	0		0	0		122	7,840	64.26	0	0		0	0	
Chisholm	SAP	111-250-001	1	69	0	0		0	0		400	25,725	64.31	0	0		0	0	
Duluth	SAP	118-132-010	1	69	0	0		0	0		4,145	267,353	64.50	4,899	$33,606	$6.86	659	22,406	34.00
Duluth	SAP	118-140-032	1	69	0	0		0	0		1,020	53,307	52.26	0	0		0	0	
Duluth	SAP	118-151-013	1	69	234	6,552	28.00	217	4,370	20.11	966	77,280	80.00	4,656	32,592	7.00	1,147	34,059	29.69
Hibbing	SAP	131-182-001	1	69	0	0		0	0		495	25,874	52.27	0	0		0	0	
Hibbing	SAP	131-191-001	1	69	0	0		0	0		585	30,583	52.28	0	0		0	0	
Hibbing	SAP	131-192-001	1	69	0	0		0	0		1,020	53,307	52.26	0	0		0	0	
Hibbing	SAP	131-201-004	1	69	0	0		0	0		4,310	163,797	38.00	0	0		0	0	
Hibbing	SAP	131-203-004	1	69	0	0		0	0		4,160	157,939	37.97	0	0		0	0	
Hibbing	SAP	131-207-002	1	69	0	0		0	0		5,180	196,705	37.97	0	0		0	0	
Hibbing	SAP	131-213-004	1	69	0	0		0	0		5,820	221,051	37.98	0	0		0	0	
Hibbing	SAP	131-216-005	1	69	0	0		0	0		2,240	85,010	37.95	0	0		0	0	
Hibbing	SAP	131-234-001	1	69	0	0		0	0		525	27,465	52.31	0	0		0	0	
International Falls	SAP	134-122-005	1	36	3,668	14,672	4.00	4,651	41,837	8.99	1,788	117,780	65.87	0	0		1,856	38,976	21.00
Virginia	SAP	171-217-008	1	69	0	0		0	0		1,225	64,702	52.82	0	0		0	0	
Virginia	SAP	171-222-004	1	69	0	0		0	0		855	45,158	52.82	0	0		0	0	
Hermantown	SAP	202-106-002	1	69	2,940	47,040	16.00	3,404	61,082	17.94	1,894	93,970	49.61	5,795	26,060	4.50	2,371	34,380	14.50
Hermantown	SAP	202-107-003	1	69	4,847	77,552	16.00	4,326	76,698	17.73	2,346	116,395	49.61	13,228	47,638	3.60	2,962	44,031	14.87
DISTRICT 1 TOTALS					12,585	$157,016	$12.48	13,485	$198,526	$14.72	40,275	$1,906,699	$47.34	28,578	$139,896	$4.90	9,755	$189,051	$19.38
DISTRICT 2																			
Bemidji	SAP	105-141-001	2	4	2,798	$13,990	$5.00	4,620	53,130	$11.50	1,981	$118,844	$59.99	12,445	$47,284	$3.80	5,817	$66,933	$11.51
Crookston	SP	115-115-010	2	60	1,437	31,614	$22.00	2,674	57,308	21.43	2,379	139,192	58.51	24,387	108,522	4.45	2,413	71,184	29.50
Crookston	SP	115-126-010	2	60	78	3,588	$46.00	113	2,430	21.43	340	20,105	59.13	1,289	5,736	4.45	204	6,018	29.50
Crookston	SP	115-126-011	2	60	20	920	$46.00	28	608	21.43	156	9,222	59.12	450	2,003	4.45	56	1,652	29.50
Crookston	SP	115-146-001	2	60	0	0		0	0		851	49,870	58.60	0	0		0	0	
DISTRICT 2 TOTALS					4,333	$50,112	$11.57	7,436	$113,475	$15.26	5,707	$337,234	$59.09	38,571	$163,545	$4.24	8,490	$145,786	$17.17
DISTRICT 3																			
Brainerd	SAP	108-113-007	3	18	537	$6,444	$12.00	240	$3,600	$15.00	5,068	$222,992	$44.00	8,082	$46,267	$5.72	2,204	$50,692	$23.00
Brainerd	SAP	108-129-002	3	18	1,932	13,524	7.00	2,464	32,032	13.00	1,886	82,104	43.53	6,098	31,207	5.12	930	20,460	22.00
Brainerd	SAP	108-136-003	3	18	1,747	12,229	7.00	3,259	45,626	14.00	2,661	117,084	44.00	1,460	7,676	5.26	1,273	28,006	22.00
St. Cloud	SAP	162-108-018	3	73	1,754	21,048	12.00	3,680	56,755	15.42	1,114	70,379	63.18	25,938	268,779	10.36	1,521	34,466	22.66
St. Cloud	SAP	162-118-009	3	73	882	10,584	12.00	1,126	17,373	15.42	450	27,875	61.95	6,828	72,727	10.65	730	16,542	22.66
St. Cloud	SAP	162-134-009	3	73	0	0		0	0		1,809	107,973	59.69	54	379	7.02	80	3,025	37.81
St. Cloud	SAP	162-140-011	3	73	0	0		0	0		2,213	132,257	59.76	27	190	7.02	147	5,558	37.81
St. Cloud	SAP	162-145-013	3	73	0	0		83	2,733	32.87	3,346	200,412	59.90	0	0		0	0	
Sauk Rapids	SAP	191-102-006	3	5	885	6,155	6.95	1,223	16,946	13.86	455	29,568	64.98	2,998	15,098	5.04	630	7,560	12.00
Sauk Rapids	SAP	191-104-005	3	5	4,862	33,874	6.97	5,028	69,632	13.85	1,873	121,414	64.82	14,656	61,981	4.23	2,497	29,964	12.00
Elk River	SAP	204-113-016	3	71	160	1,877	11.73	0	0		4,463	200,908	45.02	1,085	7,666	7.07	4,730	60,497	12.79
Elk River	SAP	204-129-001	3	71	870	17,017	19.56	0	0		4,766	211,309	44.34	2,927	19,902	6.80	5,215	66,700	12.79
Elk River	SAP	204-131-003	3	71	2,167	40,176	18.54	0	0		5,877	257,791	43.86	2,468	15,967	6.47	3,490	44,637	12.79
Elk River	SAP	204-149-001	3	71	676	8,470	12.53	0	0		1,455	65,477	44.99	0	0		3,511	41,149	11.72
Elk River	SAP	204-154-001	3	71	0	0		0	0		1,530	75,457	49.32	2,270	15,391	6.78	2,160	27,626	12.79
Sartell	SP	220-117-004	3	73	18,666	110,396	5.91	10,342	109,440	10.58	5,030	269,830	53.64	176	1,584	9.00	7,760	97,000	12.50
St. Michael	SAP	227-114-001	3	86	0	0		76	1,280	16.93	5,100	267,750	52.50	0	0		0	0	
St. Michael	SAP	227-116-001	3	86	2,350	32,430	13.80	28	480	16.93	4,780	251,575	52.63	0	0		395	6,320	16.00
St. Michael	SAP	227-124-001	3	86	8,070	88,770	11.00	1,304	22,080	16.93	645	33,800	52.40	3,930	25,545	6.50	1,430	22,880	16.00
St. Michael	SAP	227-127-001	3	86	570	6,270	11.00	1,021	17,280	16.93	840	44,450	52.92	6,580	42,770	6.50	1,390	22,680	16.32
Isanti	SAP	245-108-001	3	30	604	9,060	15.00	0	0		1,676	101,727	60.68	10,875	43,500	4.00	2,350	41,445	17.64
Zimmerman	SAP	251-104-001	3	71	1,210	11,435	9.45	1,940	25,414	13.10	630	34,426	54.64	4,430	19,271	4.35	1,450	17,400	12.00
Zimmerman	SAP	251-117-002	3	71	1,950	18,428	9.45	3,930	51,483	13.10	1,290	70,480	54.64	6,690	29,102	4.35	1,880	22,560	12.00
DISTRICT 3 TOTALS					49,892	$448,186	$8.98	35,744	$472,155	$13.21	58,958	$2,997,037	$50.83	107,572	$725,000	$6.74	45,773	$667,167	$14.58

2018 Unit Price Study			Printed: 03/30/18		EXCAVATION			AGGREGATE BASE			ALL BITUMINOUS			SIDEWALK			CURB & GUTTER		
CITY NAME	SAP/SP	PROJECT #	DIST NO.	CO. NO.	Excavation - CY QTY.	AMOUNT	Unit Price	Base 2211 - Ton QTY.	AMOUNT	Unit Price	All Bit. - Ton QTY.	AMOUNT	Unit Price	Sidewalk Const.-Sq Ft QTY.	AMOUNT	Unit Price	C & G Const. - LF QTY.	AMOUNT	Unit Price
DISTRICT 4																			
Alexandria	SP	102-103-002	4	21	0	0		0	0		2,923	$149,105	$51.01	0	0		0	0	
Alexandria	SP	102-144-001	4	21	7,350	$69,263	$9.42	7,152	$94,600	$13.23	3,532	$180,141	51.00	8,554	$36,711	$4.29	3,113	$35,544	$11.42
Fergus Falls	SAP	126-132-004	4	56	0	0		0	0		806	$55,807	69.24	2,694	20,212	7.50	407	17,094	42.00
DISTRICT 4 TOTALS					7,350	$69,263	$9.42	7,152	$94,600	$13.23	7,261	$385,054	$53.03	11,248	$56,923	$5.06	3,520	$52,638	$14.95
DISTRICT 6																			
Albert Lea	SAP	101-120-005	6	24	139	$6,255	$45.00	87	$2,610	$30.00	0	0		7,958	$34,793	$4.37	40	$1,600	$40.00
Albert Lea	SAP	101-128-005	6	24	6,468	63,063	9.75	4,133	67,797	16.40	113	$22,056	$196.00	9,868	52,888	5.36	4,204	76,796	18.27
Albert Lea	SAP	101-134-003	6	24	427	5,551	13.00	2,306	29,978	13.00	1,228	86,660	70.57	0	0		0	0	
Austin	SAP	104-104-004	6	50	4,740	34,994	7.38	5,885	80,919	13.75	121	14,640	121.21	9,517	71,957	7.56	265	7,553	
Austin	SAP	104-112-006	6	50	0	0		0	0		588	38,320	65.14	643	6,383	9.93	202	8,686	43.00
Rochester	SAP	159-113-018	6	55	0	0		0	0		2,130	119,737	56.21	0	0		0	0	
Rochester	SAP	159-130-008	6	55	0	0		0	0		1,362	79,677	58.50	0	0		0	0	
Winona	SAP	176-116-002	6	85	2,740	23,290	8.50	4,044	59,649	14.75	1,820	155,547	85.47	11,362	55,403	4.88	3,032	44,722	14.75
DISTRICT 6 TOTALS					14,514	$133,153	$9.17	16,455	$240,953	$14.64	7,362	$516,637	$70.18	39,348	$221,424	$5.63	7,743	$139,357	$18.00
DISTRICT 7																			
Fairmont	SP	123-112-001	7	46	18,619	$183,066	$9.83	13,215	$208,136	$15.75	5,900	$388,248	$65.80	1,927	$26,593	$13.80	7,761	$103,609	$13.35
Mankato	SAP	137-107-001	7	7	7,268	63,958	8.80	5,871	74,865	12.75	1,755	113,701	64.77	19,669	105,315	5.35	3,376	54,323	16.09
St. Peter	SAP	165-101-006	7	52	1,278	5,879	4.60	2,054	25,307	12.32	1,186	79,968	67.45	10,263	38,486	3.75	2,102	31,110	14.80
St. Peter	SAP	165-592-001	7	52	3,721	17,604	4.73	3,757	44,289	11.79	1,967	133,311	67.77	0	0		0	0	
Worthington	SAP	177-103-007	7	53	4,082	49,184	12.05	1,969	41,349	21.00	1,190	117,477	98.72	18,072	109,057	6.03	2,826	64,715	
Worthington	SAP	177-105-007	7	53	134	1,340	10.00	225	4,185	18.61	0	0		1,369	10,678	7.80	25	625	25.00
Worthington	SAP	177-110-004	7	53	515	5,150	10.00	263	4,865	18.52	0	0		2,730	21,294	7.80	0	0	
Worthington	SAP	177-118-002	7	53	584	7,008	12.00	158	3,318	21.00	0	0		9,813	48,195	4.91	548	12,549	22.90
DISTRICT 7 TOTALS					36,201	$333,190	$9.20	27,513	$406,314	$14.77	11,998	$832,705	$69.40	63,843	$359,617	$5.63	16,638	$266,932	$16.04
DISTRICT 8																			
Hutchinson	SAP	133-116-003	8	43	1,839	$22,590	$12.28	597	$7,982	$13.37	1,879	$143,450	$76.35	1,407	$15,885	$11.29	2,621	$30,666	$11.70
Hutchinson	SAP	133-117-014	8	43	8,050	99,119	12.31	7,858	106,794	13.59	3,389	249,125	73.51	285	1,525	5.35	4,671	54,651	11.70
Litchfield	SAP	135-107-004	8	47	0	0		0	0		496	23,693	47.73	0	0		100	3,300	33.00
Litchfield	SAP	135-108-006	8	47	0	0		0	0		582	27,788	47.73	0	0		100	3,300	33.00
Litchfield	SAP	135-109-007	8	47	0	0		0	0		1,232	59,667	48.42	0	0		200	6,600	33.00
Litchfield	SAP	135-111-002	8	47	0	0		0	0		1,142	54,521	47.73	0	0		0	0	
Marshall	SAP	139-129-002	8	42	1,984	11,904	6.00	945	5,500	5.82	8,170	547,390	67.00	0	0		4,400	49,060	11.15
Montevideo	SAP	143-106-004	8	12	3,500	40,425	11.55	4,550	65,975	14.50	2,260	130,000	57.52	3,832	21,675	5.66	2,016	32,256	16.00
Willmar	SAP	175-152-007	8	34	956	10,516	11.00	646	8,618	13.33	4,227	288,815	68.33	2,312	22,324	9.66	3,152	60,518	19.20
Willmar	SAP	175-153-021	8	34	60	2,100	35.00	0	0		1,932	182,883	94.66	2,511	21,926	8.73	457	13,253	29.00
Redwood Falls	SP	207-105-006	8	64	9,010	98,156	10.89	11,128	184,925	16.62	4,078	310,095	76.04	9,188	50,534	5.50	4,143	60,488	14.60
DISTRICT 8 TOTALS					25,399	$284,810	$11.21	25,725	$379,794	$14.76	29,388	$2,017,428	$68.65	19,535	$133,868	$6.85	21,860	$314,092	$14.37

2018 Unit Price Study

Printed: 03/30/18

CITY NAME	SAP/SP	PROJECT #	DIST NO.	CO. NO.	EXCAVATION Excavation - CY QTY.	EXCAVATION Excavation - CY AMOUNT	Unit Price	AGGREGATE BASE Base 2211 - Ton QTY.	AGGREGATE BASE Base 2211 - Ton AMOUNT	Unit Price	ALL BITUMINOUS All Bit. - Ton QTY.	ALL BITUMINOUS All Bit. - Ton AMOUNT	Unit Price	SIDEWALK Sidewalk Const.-Sq Ft QTY.	SIDEWALK Sidewalk Const.-Sq Ft AMOUNT	Unit Price	CURB & GUTTER C & G Const. - LF QTY.	CURB & GUTTER C & G Const. - LF AMOUNT	Unit Price
METRO EAST																			
Hastings	SAP	130-122-013	ME	19	0	0		0	0		1,345	$78,594	$58.43	824	$9,120	$11.07	300	$6,504	$21.68
Hastings	SAP	130-137-005	ME	19	0	0		0	0		210	12,219	58.19	270	$3,037	11.25	100	2,168	21.68
Mendota Heights	SAP	140-103-020	ME	19	10,630	$174,606	$16.43	250	$4,500	$18.00	12,102	651,427	53.83	351	$3,159	9.00	6,198	129,515	20.90
Mendota Heights	SP	140-103-019	ME	19	2,802	51,837	18.50	932	15,844	17.00	1,256	86,897	69.19	2,159	$22,279	10.32	2,072	35,224	17.00
Roseville	SAP	160-219-012	ME	62	75	2,828	37.70	189	4,270	22.59	474	46,010	97.07	1,221	9,707	7.95	151	5,059	33.50
Roseville	SAP	160-221-009	ME	62	0	0		0	0		1,385	76,348	55.12	0	0		61	1,174	19.25
Roseville	SAP	160-225-006	ME	62	0	0		0	0		816	45,325	55.55	226	1,921	8.50	253	4,870	19.25
Roseville	SAP	160-227-012	ME	62	0	0		0	0		210	20,414	97.21	163	1,467	9.00	12	402	33.50
Roseville	SAP	160-235-003	ME	62	0	0		0	0		465	25,888	55.67	114	969	8.50	191	4,059	21.25
Roseville	SAP	160-249-002	ME	62	0	0		0	0		1,137	62,538	55.00	390	3,315	8.50	251	4,832	19.25
Roseville	SAP	160-250-002	ME	62	0	0		0	0		696	38,285	55.01	264	2,244	8.50	34	655	19.25
Roseville	SAP	160-261-001	ME	62	0	0		0	0		526	28,933	55.01	0	0		124	2,636	21.26
St. Paul	SAP	164-121-007	ME	62	7,680	161,280	21.00	12,852	210,800	16.40	4,392	265,163	60.38	22,340	125,785	5.63	3,930	70,968	18.06
St. Paul	SAP	164-269-001	ME	62	6,738	33,780	5.01	1,833	29,560	16.13	2,587	146,473	56.62	7,317	45,225	6.18	3,314	62,966	19.00
St. Paul	SP	164-270-003	ME	62	3,416	37,576	11.00	6,933	113,708	16.40	2,728	157,288	57.66	12,648	89,486	7.08	2,552	49,764	19.50
South St. Paul	SAP	168-160-005	ME	19	160	2,160	13.50	150	2,565	17.10	1,070	52,791	49.34	0	0		150	3,120	20.80
South St. Paul	SAP	168-163-004	ME	19	470	6,345	13.50	220	3,762	17.10	2,390	117,986	49.37	0	0		170	3,536	20.80
West St. Paul	SAP	173-123-006	ME	19	12,042	169,551	14.08	5,445	74,488	13.68	3,485	155,698	44.68	4,608	22,742	4.94	5,781	68,505	11.85
Burnsville	SAP	179-114-006	ME	19	0	0		43	849	19.75	590	30,259	51.29	800	5,529	6.91	400	10,160	25.40
Burnsville	SAP	179-132-001	ME	19	0	0		19	375	19.75	420	21,550	51.31	110	506	4.60	210	5,334	25.40
Cottage Grove	SAP	180-112-011	ME	82	0	0		0	0		0	0		0	0		0	0	
Oakdale	SAP	185-121-021	ME	82	0	0		0	0		0	0		300	2,220	7.40	220	4,796	21.80
Oakdale	SAP	185-234-007	ME	82	0	0		0	0		25	1,790	71.60	430	3,156	7.34	300	6,540	21.80
Lakeville	SAP	188-121-003	ME	19	0	0		0	0		0	0		843	9,821	11.65	66	2,063	31.25
Eagan	SAP	195-122-011	ME	19	1,444	43,698	30.26	752	21,357	28.40	311	33,899	109.00	1,148	13,317	11.60	605	15,518	25.65
Forest Lake	SAP	214-110-002	ME	82	6,300	31,017	4.92	6,320	72,643	11.49	2,180	120,251	55.16	2,360	15,364	6.51	5,855	82,777	14.14
Forest Lake	SAP	214-126-001	ME	82	8,170	42,764	5.23	9,740	110,993	11.40	3,750	206,100	54.96	2,475	16,112	6.51	8,735	123,183	14.10
Hugo	SAP	224-109-001	ME	82	25	254	10.18	556	1,472	2.65	3,995	189,737	47.49	0	0		0	0	
Hugo	SAP	224-123-001	ME	82	12	117	9.71	253	672	2.66	1,998	97,008	48.54	0	0		0	0	
North Branch	SAP	225-104-004	ME	13	20	480	24.00	0	0		1,140	47,880	42.00	0	0		0	0	
North Branch	SAP	225-105-001	ME	13	25	600	24.00	0	0		2,164	90,888	42.00	0	0		0	0	
North Branch	SAP	225-123-001	ME	13	0	0		0	0		634	26,628	42.00	0	0		0	0	
North Branch	SAP	225-124-001	ME	13	0	0		0	0		2,098	88,116	42.00	0	0		0	0	
North Branch	SAP	225-133-001	ME	13	0	0		0	0		808	33,936	42.00	0	0		0	0	
Wyoming	SAP	248-116-002	ME	13	39,637	260,420	6.57	12,357	130,760	10.58	7,432	348,517	46.89	2,300	26,500	11.52	250	5,038	20.15
Wyoming	SAP	248-117-002	ME	13	11,952	79,146	6.62	3,498	37,020	10.58	2,266	109,853	48.48	0	0		300	6,045	20.15
Chisago City	SAP	252-116-001	ME	13	245	3,014	12.30	0	0		563	35,518	63.09	159	5,600	35.22	72	5,705	79.24
Chisago City	SAP	252-117-001	ME	13	350	4,305	12.30	0	0		541	35,022	64.73	126	4,438	35.22	0	0	
METRO EAST TOTALS					112,193	$1,105,776	$9.86	62,342	$835,638	$13.40	68,189	$3,585,227	$52.58	63,946	$443,017	$6.93	42,657	$723,114	$16.95

2018 Unit Price Study			Printed: 03/30/18		EXCAVATION			AGGREGATE BASE			ALL BITUMINOUS			SIDEWALK			CURB & GUTTER		
CITY NAME	SAP/SP	PROJECT #	DIST NO.	CO. NO.	Excavation - CY QTY.	AMOUNT	Unit Price	Base 2211 - Ton QTY.	AMOUNT	Unit Price	All Bit. - Ton QTY.	AMOUNT	Unit Price	Sidewalk Const.-Sq Ft QTY.	AMOUNT	Unit Price	C & G Const. - LF QTY.	AMOUNT	Unit Price
METRO WEST																			
Blaine	SAP	106-147-001	MW	2	21,768	$207,948	$9.55	24,208	$159,474	$6.59	12,250	$771,750	$63.00	49,680	$205,336	$4.13	22,750	$286,887	$12.61
Bloomington	SAP	107-129-025	MW	27	98	1,960	20.00	141	2,115	15.00	1,459	76,254	52.26	5,534	33,656	6.08	1,273	24,951	19.60
Bloomington	SAP	107-136-012	MW	27	43	860	20.00	50	750	15.00	629	32,687	51.97	1,284	9,423	7.34	326	6,390	19.60
Bloomington	SAP	107-414-006	MW	27	43	860	20.00	51	765	15.00	298	16,488	55.33	2,055	12,644	6.15	345	6,762	19.60
Bloomington	SAP	107-422-016	MW	27	184	3,680	20.00	227	3,405	15.00	2,768	144,954	52.37	5,255	31,374	5.97	2,201	43,140	19.60
Bloomington	SAP	107-440-002	MW	27	1,397	27,940	20.00	103	1,545	15.00	1,060	54,853	51.75	8,221	47,578	5.79	1,347	25,471	18.91
Bloomington	SAP	107-442-006	MW	27	131	2,620	20.00	143	2,145	15.00	1,397	75,052	53.72	944	6,626	7.02	827	$16,209	19.60
Brooklyn Park	SAP	110-101-015	MW	27	334	4,876	14.60	669	11,045	16.51	3,071	174,241	56.74	9,160	72,333	7.90	5,179	88,719	17.13
Brooklyn Park	SAP	110-102-014	MW	27	121	1,767	14.60	234	3,869	16.51	927	52,667	56.79	4,253	28,354	6.67	624	13,087	20.97
Brooklyn Park	SAP	110-103-013	MW	27	558	8,147	14.60	1,015	16,754	16.51	2,746	153,196	55.79	16,289	100,735	6.18	4,857	101,530	20.90
Coon Rapids	SAP	114-102-018	MW	2	405	7,493	18.50	0	0		5,500	289,528	52.64	6,200	28,875	4.66	4,900	90,190	18.41
Coon Rapids	SAP	114-121-015	MW	2	0	0		0	0		529	33,075	62.52	0	0		134	3,399	25.37
Coon Rapids	SAP	114-128-005	MW	2	740	13,690	18.50	0	0		4,470	240,051	53.71	6,490	28,858	4.45	4,086	48,429	11.85
Coon Rapids	SAP	114-129-012	MW	2	75	1,388	18.51	0	0		2,373	124,222	52.35	3,000	13,130	4.38	1,100	19,850	18.05
Edina	SAP	120-170-001	MW	27	999	11,990	12.00	3,102	41,096	13.25	2,080	109,268	52.53	5,754	25,803	4.48	5,104	82,976	16.26
Fridley	SAP	127-321-004	MW	2	0	0		0	0		643	35,156	54.67	27	177	6.54	318	6,758	21.25
Fridley	SAP	127-338-004	MW	2	0	0		0	0		1,117	61,070	54.67	0	0		20	425	21.25
Fridley	SAP	127-350-002	MW	2	0	0		0	0		177	9,678	54.68	0	0		0	0	
Fridley	SAP	127-351-002	MW	2	0	0		0	0		421	23,019	54.68	0	0		30	638	21.25
Fridley	SAP	127-357-001	MW	2	261	2,753	10.55	0	0		529	28,858	54.55	0	0		80	1,700	21.25
Golden Valley	SAP	128-389-010	MW	27	0	0		0	0		0	0		2,941	15,440	5.25	511	16,012	31.33
Golden Valley	SAP	128-412-009	MW	27	7,171	43,026	6.00	679	13,580	20.00	1,398	106,326	76.06	1,910	9,550	5.00	797	26,983	33.86
Minneapolis	SAP	141-284-005	MW	27	4,779	83,468	17.47	5,061	97,211	19.21	8,687	539,157	62.06	21,865	156,049	7.14	6,928	155,332	22.42
Mound	SAP	145-103-004	MW	27	5,080	51,952	10.23	7,371	77,220	10.48	1,980	124,050	62.66	0	0		0	0	
Mound	SAP	145-104-004	MW	27	4,490	45,720	10.18	4,914	51,480	10.48	1,648	103,230	62.65	0	0		0	0	
Mound	SAP	145-109-007	MW	27	1,630	16,607	10.19	1,814	19,008	10.48	560	35,104	62.65	0	0		0	0	
Mound	SAP	145-109-006	MW	27	1,720	17,537	10.20	1,909	19,998	10.48	625	39,152	62.64	0	0		0	0	
Robbinsdale	SAP	158-298-009	MW	27	2,556	35,401	13.85	4,997	70,296	14.07	4,480	244,350	54.55	16,026	62,009	3.87	5,271	61,144	11.60
St. Louis Park	SAP	163-275-019	MW	27	7,571	101,583	13.42	11,000	189,200	17.20	6,500	392,130	60.33	34,020	164,877	4.85	5,530	133,628	24.16
Chanhassen	SAP	194-127-001	MW	27	0	0		450	8,010	17.80	3,401	205,348	60.37	5,000	33,750	6.75	1,825	36,956	20.25
Ham Lake	SAP	197-125-004	MW	2	3,069	32,225	10.50	2,837	35,277	12.43	2,462	141,197	57.36	71	568	8.00	2,619	27,211	10.39
Andover	SAP	198-116-004	MW	2	280	3,848	13.74	610	8,619	14.13	3,900	216,239	55.45	90	803	8.92	10,500	117,285	11.17
East Bethel	SAP	203-111-004	MW	2	15,192	43,297	2.85	9,470	125,478	13.25	6,484	320,179	49.38	0	0		10,374	121,261	11.69
Savage	SAP	211-103-003	MW	70	0	0		76	975	12.90	0	0		1,171	10,995	9.39	233	3,495	15.00
Savage	SAP	211-106-009	MW	70	6,000	112,200	18.70	16,300	242,695	14.89	12,471	599,097	48.04	25,200	138,899	5.51	4,630	95,378	20.60
Savage	SAP	211-127-001	MW	70	2,350	37,600	16.00	1,713	30,900	18.03	844	54,312	64.32	324	3,005	9.27	1,520	22,800	15.00
Waconia	SAP	231-124-001	MW	10	35,910	204,687	5.70	7,488	110,144	14.71	1,505	96,121	63.87	0	0		1,956	23,879	12.21
Rogers	SAP	238-110-001	MW	27	1,995	24,319	12.19	611	9,312	15.24	477	32,170	67.44	0	0		976	17,500	17.93
Minnetrista	SAP	243-101-001	MW	27	44,930	226,772	5.05	13,910	274,234	19.71	8,263	517,700	62.66	2,710	18,157	6.70	1,930	33,941	17.59
Medina	SP	250-118-001	MW	27	0	0		0	0		0	0		0	0		296	4,631	15.64
METRO WEST TOTALS					171,880	$1,378,214	$8.02	121,155	$1,626,600	$13.43	110,129	$6,271,930	$56.95	235,474	$1,259,003	$5.35	111,397	$1,764,946	$15.84
STATE TOTAL					434,347	$3,959,719		317,006	$4,368,054		339,266	$18,849,950		608,114	$3,502,293		267,833	$4,263,081	
AVERAGE UNIT PRICE							$9.12			$13.78			$55.56			$5.76			$15.92

NEEDS STUDY SUBCOMMITTEE MEETING MINUTES

The Needs Study Subcommittee meeting was held on April 16, 2018 at MnDOT's Central Office located at 395 John Ireland Blvd in St. Paul, MN.

NSS members present were Jon Pratt (Detroit Lakes / Chair), and Sean Christensen (Willmar). Also in attendance were: Bill Lanoux (MSAS Needs Manager), Patti Loken (State Aid Program Engineer).

A 2018 Needs Study Subcommittee Report was sent to all members prior to the meeting. Bill Lanoux noted that, for 2018, recommendations will be based off a full Unit Cost Study (For the previous two years, recommendations were based off an inflation factor). Before the Unit Cost discussion, Bill reviewed several pages with other information, including the MSB meeting minutes from October 2017 and the recent UCFS recommendation on After-the-fact Right of Way Needs. Bill also commented on the significance of the 8 Urban ADT Groups for Needs Purposes.

Bill Lanoux reviewed the Unit Cost Items that were part of this year's Unit Cost Study. The NSS made recommendations for the following items.

Grading/Excavation: Price used in 2017 Needs - $7.95 Cu. Yd.
Avg. Contract Price 2017 - $9.12 Cu. Yd.
Committee's Recommendation for 2018 Needs - $9.10 Cu. Yd.

Aggregate Base: Price used in 2017 Needs - $14.90 Ton
Avg. Contract Price 2017 - $13.78 Ton
Committee's Recommendation for 2018 Needs - $13.78 Ton
NOTE: committee felt the decrease from last year's cost could be due to a high unit cost for this item during the 2015 Unit Cost Study. The figure of $13.78 appears right and corresponds to long term trends. Committee is comfortable with the 2017 Avg. Contract price.

All Bituminous: Price used in 2017 Needs - $69.60 Ton
Avg. Contract Price 2017 - $55.56 Ton
Committee's Recommendation for 2018 Needs - $60.00 Ton
NOTE: the contract price showed a 20% decrease from last year's Needs Price. The committee felt with current oil prices, this decline in the bituminous unit cost was possible.

Sidewalk: Price used in 2017 Needs - $4.75 Sq. Ft.
Avg. Contract Price 2017 - $5.76 Sq. Ft
Committee's Recommendation for 2018 Needs - $5.50 per Sq. Ft.
NOTE: This cost has seen large increases in recent years. Rounding to $5.50 still makes this a 15.8% increase from last year's cost.

Curb and Gutter: Price used in 2017 Needs - $14.55 Lin. Ft.
Avg. Contract Price 2017 – $15.92 Lin. Ft.
Committee's Recommendation for 2018 Needs - $15.90 Lin. Ft.

Storm Sewer: The MnDOT Hydraulics Unit performed an analysis of storm sewer Costs for 2017 (172 Storm Sewer Plans were submitted). Costs are $346,066 for new construction, and $106,075 for adjustments of existing systems. This is an average of $226,071 per mile. Committee makes recommendation for the highest of eight sections.
Committee's Recommendation for 2018 Needs - $226,100 Per Mile
The recommendation of $226,100 per mile is for a 70 foot section. The cost per mile will be prorated down through the other ADT groups.

Street Lighting: Price used in 2017 Needs - $100,000 per mile
Committee's Recommendation for 2018 Needs - $100,000 Per Mile

Traffic Signals: Price used in 2017 Needs - $195,000 per Signal
Committee's Recommendation for 2018 Needs - $201,850 Per Signal

Engineering: Price used in 2017 Needs – 22%
Committee's Recommendation for 2018 Needs – 22%

Structures: Price used in 2017 Needs - $90.00 Sq. Ft.
Committee's Recommendation for 2018 Needs - $87.55 Sq. Ft

The Committee reviewed the following direction from the May 2017 Municipal Screening Meeting Minutes: "*motion that the NSS meet to further study ways to reduce the large fluctuations in the Structures Unit Prices from year to year*".

Since 2014, this Unit Cost has been determined annually by using the previous year's information provided by the MnDOT State Aid Bridge Office. (MSB Resolutions state that ½ of the statewide average bridge cost is used as the structure cost in the Needs). Using this method this year (using bridge costs from 2017) would yield a recommendation of $77.81.

The committee eventually decided to base the upcoming recommendation ($87.55) on "one-half the five year average" … taking the TOTAL COST for the last 5 years of projects…… divided by the TOTAL AREA for the last 5 years of projects. The committee determined that had we be using this method since the new Needs were implemented, we wouldn't have seen large fluctuations in the unit cost.

Meeting adjourned.
Minutes submitted by Sean Christensen

2018 UNIT PRICE RECOMMENDATIONS

for the January 2019 distribution (FULL UNIT COST STUDY THIS YEAR)

Needs Item		2017 MSB Approved Prices for the 2018 Distribution	**2018 NSS Recommended Prices for 2019 Distribution**	2018 MSB Approved Prices for the 2019 Distribution
Grading (Excavation)	Cu. Yd.	$7.95	**$9.10**	
Aggregate Base	Ton	14.90	**13.78**	
All Bituminous	Ton	69.60	**60.00**	
Sidewalk Construction	Sq. Ft.	4.75	**5.50**	
Curb and Gutter Construction	Lin.Ft.	14.55	**15.90**	
Traffic Signals *	Per Sig	195,000	**201,850**	
Street Lighting	Mile	100,000	**100,000**	
Engineering	Percent	22	**22**	
All Structures (includes both bridges and box culverts)				
	Sq. Ft.	90.00	**87.55**	
Storm Sewer (based on ADT)	Per Mile			
0 ADT & Non Existing		156,500	**159,500**	
1-499		159,500	**162,500**	
500-1,999		168,400	**171,600**	
2,000-4,999		177,300	**180,700**	
5,000-8,999		189,200	**192,800**	
9,000-13,999		198,100	**201,900**	
14,000-24,999		210,000	**214,000**	
25,000 and over		221,900	**226,100**	

N:\MSAS\Books\June 2018 Book\UNIT PRICE RECOMMENDATIONS.XLXS

Annual Percentage Change of Unit Costs, 2009 - 2018

sidewalk	$	$	% Change
from 2009 to 2010	$3.00	$3.09	**3.0**
from 2010 to 2011	$3.09	$3.18	**2.9**
from 2011 to 2012	$3.18	$3.17	***-0.3***
from 2012 to 2013	$3.17	$3.25	**2.5**
from 2013 to 2014	$3.25	$3.50	**7.7**
from 2014 to 2015	$3.50	$4.25	***21.4***
from 2015 to 2016	$4.25	$4.35	**2.4**
from 2016 to 2017	$4.35	$4.75	**9.2**
from 2017 to 2018	$4.75	$5.50	***15.8***

curb & gutter			
from 2009 to 2010	$10.70	$11.00	**2.8**
from 2010 to 2011	$11.00	$11.30	**2.7**
from 2011 to 2012	$11.30	$11.15	***-1.3***
from 2012 to 2013	$11.15	$11.45	**2.7**
from 2013 to 2014	$11.45	$11.75	**2.6**
from 2014 to 2015	$11.75	$13.75	***17.0***
from 2015 to 2016	$13.75	$14.00	**1.8**
from 2016 to 2017	$14.00	$14.55	**3.9**
from 2017 to 2018	$14.55	$15.90	***9.3***

grading/excavtion			
from 2009 to 2010	$4.75	$4.90	**3.2**
from 2010 to 2011	$4.90	$5.05	**3.1**
from 2011 to 2012	$5.05	$6.60	***30.7***
from 2012 to 2013	$6.60	$6.75	**2.3**
from 2013 to 2014	$6.75	$7.00	**3.7**
from 2014 to 2015	$7.00	$7.50	***7.1***
from 2015 to 2016	$7.50	$7.65	**2.0**
from 2016 to 2017	$7.65	$7.95	**3.9**
from 2017 to 2018	$7.95	$9.10	***14.5***

aggregate base	$	$	% Change
from 2009 to 2010	$9.81	$10.10	**3.0**
from 2010 to 2011	$10.10	$10.40	**3.0**
from 2011 to 2012	$10.40	$10.65	***2.4***
from 2012 to 2013	$10.65	$10.90	**2.3**
from 2013 to 2014	$10.90	$11.25	**3.2**
from 2014 to 2015	$11.25	$14.00	***24.4***
from 2015 to 2016	$14.00	$14.30	**2.1**
from 2016 to 2017	$14.30	$14.90	**4.2**
from 2017 to 2018	$14.90	$13.78	***-7.5***

all bituminous			
from 2009 to 2010	$55.00	$56.75	**3.2**
from 2010 to 2011	$56.75	$60.00	**5.7**
from 2011 to 2012	$60.00	$58.00	***-3.3***
from 2012 to 2013	$58.00	$59.50	**2.6**
from 2013 to 2014	$59.50	$61.25	**2.9**
from 2014 to 2015	$61.25	$65.50	***6.9***
from 2015 to 2016	$65.50	$66.80	**2.0**
from 2016 to 2017	$66.80	$69.60	**4.2**
from 2017 to 2018	$69.60	$60.00	***-13.8***

structures			
from 2009 to 2010	$115.00	$120.00	**4.3**
from 2010 to 2011	$120.00	$115.00	**-4.2**
from 2011 to 2012	$115.00	$125.00	**8.7**
from 2012 to 2013	$125.00	$120.00	**-4.0**
from 2013 to 2014	$120.00	$72.00	**-40.0**
from 2014 to 2015	$72.00	$96.50	**34.0**
from 2015 to 2016	$96.50	$120.00	**24.4**
from 2016 to 2017	$120.00	$90.00	**-25.0**
from 2017 to 2018	$90.00	$87.55	**-2.7**

*All costs shown are actual costs used in Needs. 2018 figures (inblue) show tenative prices.

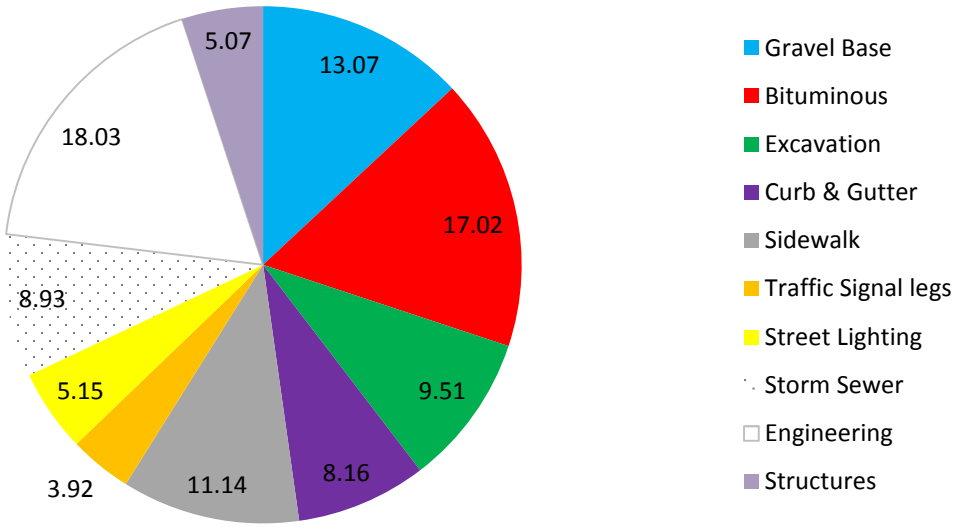
*Since 2014 cost for structures have been calculated by dividing the yearly contract price by 2.

*Underlined are years of a Full Unit Cost Study

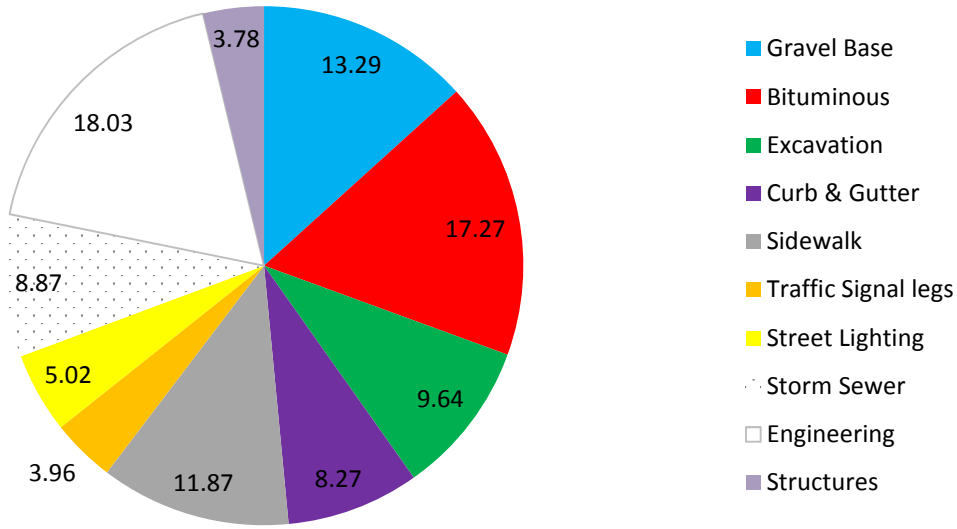
PERCENTAGE OF NEEDS FOR UNIT COST ITEMS

for 2016 and 2017

2016



2017



MSAS UNIT PRICE STUDY
EXCAVATION - CUBIC YARD

CITY NAME	NO. OF PROJECTS	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Chisholm	1	896	$11,200	$12.50
Duluth	1	234	6,552	28.00
International Falls	1	3,668	14,672	4.00
Hermantown	2	7,787	124,592	16.00
District 1 Total	**5**	**12,585**	**$157,016**	**$12.48**
District 2				
Bemidji	1	2,798	$13,990	$5.00
Crookston	3	1,535	36,122	23.53
District 2 Total	**4**	**4,333**	**$50,112**	**$11.57**
District 3				
Brainerd	3	4,216	$32,197	$7.64
St. Cloud	2	2,636	31,632	12.00
Sauk Rapids	2	5,747	40,029	6.97
Elk River	4	3,873	67,540	17.44
Sartell	1	18,666	110,396	5.91
St. Michael	3	10,990	127,470	11.60
Isanti	1	604	9,060	15.00
Zimmerman	2	3,160	29,862	9.45
District 3 Total	**18**	**49,892**	**$448,186**	**$8.98**
District 4				
Alexandria	1	7,350	$69,263	$9.42
District 4 Total	**1**	**7,350**	**$69,263**	**$9.42**
District 6				
Albert Lea	3	7,034	$74,869	$10.64
Austin	1	4,740	34,994	7.38
Winona	1	2,740	23,290	8.50
District 6 Total	**5**	**14,514**	**$133,153**	**$9.17**
District 7				
Fairmont	1	18,619	$183,066	$9.83
Mankato	1	7,268	63,958	8.80
St. Peter	2	4,999	23,483	4.70
Worthington	4	5,315	62,682	11.79
District 7 Total	**8**	**36,201**	**$333,190**	**$9.20**
District 8				
Hutchinson	2	9,889	$121,709	$12.31
Marshall	1	1,984	11,904	6.00
Montevideo	1	3,500	40,425	11.55
Willmar	2	1,016	12,616	12.42
Redwood Falls	1	9,010	98,156	10.89
District 8 Total	**7**	**25,399**	**$284,810**	**$11.21**

MSAS UNIT PRICE STUDY
EXCAVATION - CUBIC YARD

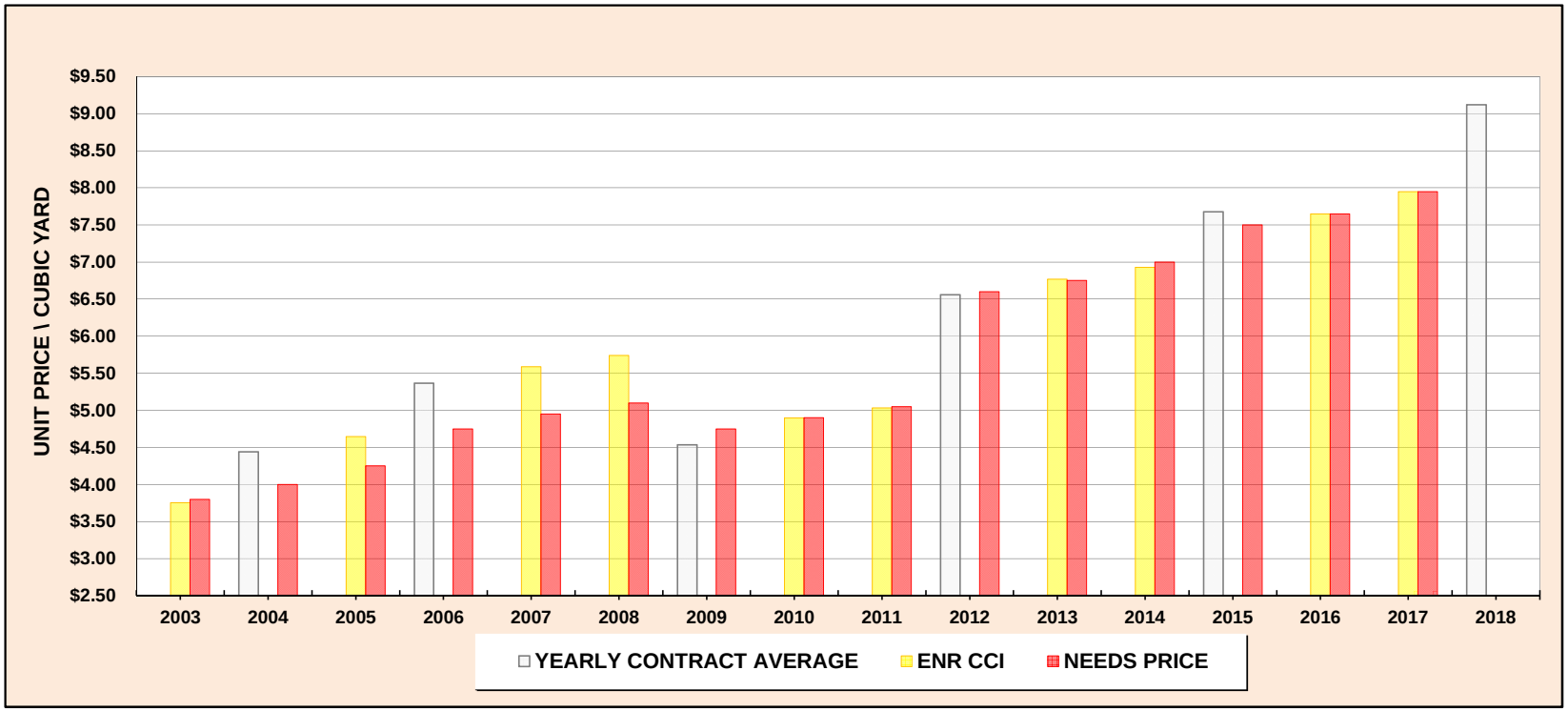
CITY NAME	NO. OF PROJECTS	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
Metro East				
Mendota Heights	2	13,432	$226,443	$16.86
Roseville	1	75	2,828	37.70
St. Paul	3	17,834	232,636	13.04
South St. Paul	2	630	8,505	13.50
West St. Paul	1	12,042	169,551	14.08
Eagan	1	1,444	43,698	30.26
Forest Lake	2	14,470	73,781	5.10
Hugo	2	37	371	10.03
North Branch	2	45	1,080	24.00
Wyoming	2	51,589	339,566	6.58
Chisago City	2	595	7,319	12.30
Metro East Total	**20**	**112,193**	**$1,105,776**	**$9.86**

Metro West				
Blaine	1	21,768	$207,948	$9.55
Bloomington	6	1,896	37,920	20.00
Brooklyn Park	3	1,013	14,790	14.60
Coon Rapids	3	1,220	22,571	18.50
Edina	1	999	11,990	12.00
Fridley	1	261	2,753	10.55
Golden Valley	1	7,171	43,026	6.00
Minneapolis	1	4,779	83,468	17.47
Mound	4	12,920	131,815	10.20
Robbinsdale	1	2,556	35,401	13.85
St. Louis Park	1	7,571	101,583	13.42
Ham Lake	1	3,069	32,225	10.50
Andover	1	280	3,848	13.74
East Bethel	1	15,192	43,297	2.85
Savage	2	8,350	149,800	17.94
Waconia	1	35,910	204,687	5.70
Rogers	1	1,995	24,319	12.19
Minnetrista	1	44,930	226,772	5.05
Metro West Total	**31**	**171,880**	**$1,378,214**	**$8.02**

District Totals				
District 1 Total	5	12,585	$157,016	$12.48
District 2 Total	4	4,333	50,112	11.57
District 3 Total	18	49,892	448,186	0.00
District 4 Total	1	7,350	69,263	0.00
District 6 Total	5	14,514	133,153	7.64
District 7 Total	8	36,201	333,190	12.00
District 8 Total	7	25,399	284,810	6.97
Metro East Total	20	112,193	1,105,776	17.44
Metro West Total	31	171,880	1,378,214	5.91
STATE TOTAL	**99**	**434,347**	**$3,959,719**	**$9.12**

N:\MSAS\UNIT COST STUDY\2018\UNIT PRICE BREAK OUT 2018.xls EXCAVATION

GRADING/EXCAVATION



Needs Year	Number of Cities	Quantity (Cu.Yd)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2003					$3.75	$3.80
2004	56	1,018,912	$4,523,089	4.44		4.00
2005					4.65	4.25
2006	48	587,442	3,152,838	5.37		4.75
2007					5.59	4.95
2008					5.74	5.10
2009	47	1,334,769	6,052,005	4.53		4.75
2010					4.90	4.90

Needs Year	Number of Cities	Quantity (Cu. Yd.)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2011					5.03	$5.05
2012	56	689,502	4,521,435	$6.56		6.60
2013					6.77	6.75
2014					6.93	7.00
2015	40	472,486	$3,627,575	$7.68		7.50
2016					7.65	7.65
2017					7.95	7.95
2018	56	434,347	3,959,719	9.12		

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2018 NEEDS STUDY IS $9.10 PER CUBIC YARD

Yearly Contract Price of **$9.12** is a 14.7% increase from "Price used in Needs" last year ($7.95) (Last Year - this increase was 3.9%)
Since 2011, this Unit Cost has increased by an average of $0.58 (note $1.17 increase this year)
(For this Unit Cost Study, there were 99 projects in 56 cities)

MSAS UNIT PRICE STUDY
AGGREGATE BASE - TONS

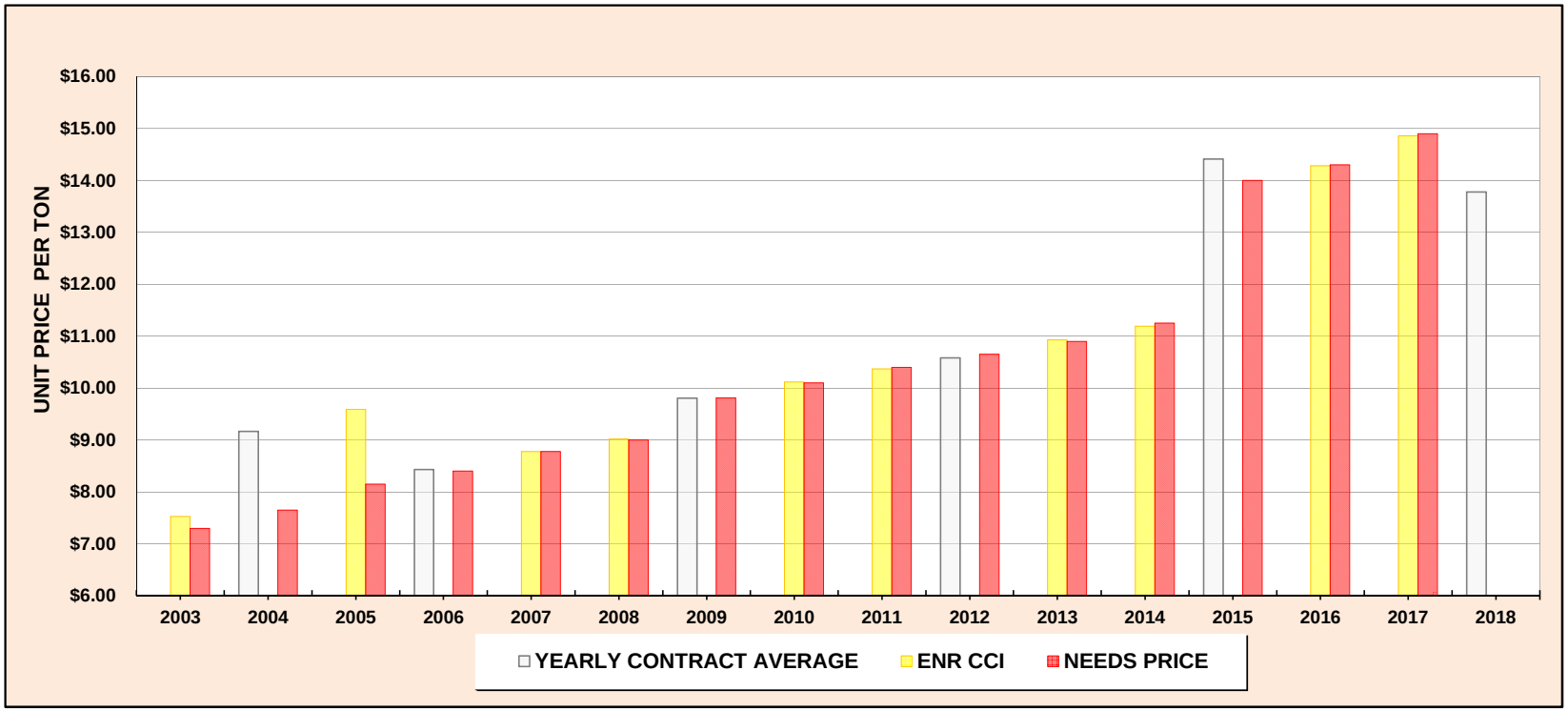
CITY NAME	NO. OF PROJECTS	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
		District 1		
Chisholm	1	886	$14,539	$16.40
Duluth	1	217	$4,370	20.11
International Falls	1	4,651	$41,837	8.99
Hermantown	2	7,730	$137,780	17.82
District 1 Total	**1**	**13,485**	**$198,526**	**$14.72**
		District 2		
Bemidji	1	4,620	$53,130	$11.50
Crookston	3	2,816	60,345	21.43
District 2 Total	**4**	**7,436**	**$113,475**	**$15.26**
		District 3		
Brainerd	3	5,963	$81,258	$13.63
St. Cloud	3	4,889	76,862	15.72
Sauk Rapids	2	6,250	86,578	13.85
Sartell	1	10,342	109,440	10.58
St. Michael	4	2,429	41,120	16.93
Zimmerman	2	5,870	76,897	13.10
District 3 Total	**7**	**35,744**	**$472,155**	**$13.21**
		District 4		
Alexandria	1	7,152	$94,600	$13.23
District 4 Total	**1**	**7,152**	**$94,600**	**$13.23**
		District 6		
Albert Lea	3	6,526	$100,385	$15.38
Austin	1	5,885	80,919	13.75
Winona	1	4,044	59,649	14.75
District 6 Total	**5**	**16,455**	**$240,953**	**$14.64**
		District 7		
Fairmont	1	13,215	$208,136	$15.75
Mankato	1	5,871	74,865	12.75
St. Peter	2	5,812	69,596	11.97
Worthington	4	2,615	53,717	20.54
District 7 Total	**8**	**27,513**	**$406,314**	**$14.77**
		District 8		
Hutchinson	2	8,455	$114,776	$13.57
Marshall	1	945	5,500	5.82
Montevideo	1	4,550	65,975	14.50
Willmar	1	646	8,618	13.33
Redwood Falls	1	11,128	184,925	16.62
District 8 Total	**6**	**25,725**	**$379,794**	**$14.76**

MSAS UNIT PRICE STUDY
AGGREGATE BASE - TONS

CITY NAME	NO. OF PROJECTS	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
Metro East				
Mendota Heights	2	1,182	$20,344	$17.21
Roseville	1	189	4,270	22.59
St. Paul	3	21,618	354,068	16.38
South St. Paul	2	370	6,327	17.10
West St. Paul	1	5,445	74,488	13.68
Burnsville	2	62	1,225	19.75
Eagan	1	752	21,357	28.40
Forest Lake	2	16,060	183,636	11.43
Hugo	2	809	2,144	2.65
Wyoming	2	15,855	167,780	10.58
Metro East Total	**18**	**62,342**	**$835,638**	**$13.40**
Metro West				
Blaine	1	24,208	$159,474	$6.59
Bloomington	6	715	10,725	15.00
Brooklyn Park	3	1,918	31,668	16.51
Edina	1	3,102	41,096	13.25
Golden Valley	1	679	13,580	20.00
Minneapolis	1	5,061	97,211	19.21
Mound	4	16,008	167,706	10.48
Robbinsdale	1	4,997	70,296	14.07
St. Louis Park	1	11,000	189,200	17.20
Chanhassen	1	450	8,010	17.80
Ham Lake	1	2,837	35,277	12.43
Andover	1	610	8,619	14.13
East Bethel	1	9,470	125,478	13.25
Savage	3	18,089	274,570	15.18
Waconia	1	7,488	110,144	14.71
Rogers	1	611	9,312	15.24
Minnetrista	1	13,910	274,234	19.71
Metro West Total	**29**	**121,155**	**$1,626,600**	**$13.43**
District Totals				
District 1 Total	1	13,485	$198,526	$14.72
District 2 Total	4	7,436	113,475	15.26
District 3 Total	7	35,744	472,155	13.21
District 4 Total	1	7,152	94,600	13.23
District 6 Total	5	16,455	240,953	14.64
District 7 Total	8	27,513	406,314	14.77
District 8 Total	6	25,725	379,794	14.76
Metro East Total	18	62,342	835,638	13.40
Metro West Total	29	121,155	1,626,600	13.43
STATE TOTAL	**79**	**317,006**	**$4,368,054**	**$13.78**

N:\MSAS\UNIT COST STUDY\2015\UNIT PRICE BREAK OUT 2018.xls Agg Base

AGGREGATE BASE



Needs Year	Number of Cities	Quantity (Ton)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2003					$7.53	$7.30
2004	58	573,153	$5,252,804	9.16		7.65
2005					9.59	8.15
2006	46	355,866	3,000,906	8.43		8.40
2007					8.78	8.78
2008					9.02	9.00
2009	45	436,802	4,284,174	9.81		9.81
2010					10.12	10.10

Needs Year	Number of Cities	Quantity (Ton)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2011					10.37	$10.40
2012	57	416,725	4,409,415	$10.58		10.65
2013					10.93	10.90
2014					11.19	11.25
2015	40	199,868	$2,880,423	$14.41		14.00
2016					14.28	14.30
2017					14.86	14.90
2018	52	317,006	4,368,054	13.78		

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2018 NEEDS STUDY IS $ 13.78 PER TON

Yearly Contract Price of **$13.78** is a -7.5% *decrease* from "Price used in Needs" last year ($14.90) (Previous year saw an increase of 4.2%)
Since 2011, this Unit Cost has increased by an average of $0.48 (note -$1.12 decrease this year)
(For this Unit Cost Study, there were 79 projects in 52 cities)

MSAS UNIT PRICE STUDY
BITUMINOUS

CITY NAME	NO. OF PROJECTS	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Chisholm	5	1,701	$109,024	$64.09
Duluth	3	6,131	397,940	64.91
Hibbing	9	24,335	961,731	39.52
International Falls	1	1,788	117,780	65.87
Virginia	2	2,080	109,860	52.82
Hermantown	2	4,240	210,365	49.61
District 1 Total	**22**	**40,275**	**$1,906,699**	**$47.34**
District 2				
Bemidji	1	1,981	$118,844	$59.99
Crookston	4	3,726	218,390	58.61
District 2 Total	**5**	**5,707**	**$337,234**	**$59.09**
District 3				
Brainerd	3	9,615	$422,180	$43.91
St. Cloud	5	8,932	538,895	60.33
Sauk Rapids	2	2,328	150,982	64.85
Elk River	5	18,091	810,942	44.82
Sartell	1	5,030	269,830	53.64
St. Michael	4	11,365	597,575	52.58
Isanti	1	1,676	101,727	60.68
Zimmerman	2	1,920	104,906	54.64
District 3 Total	**23**	**58,958**	**$2,997,037**	**$50.83**
District 4				
Alexandria	2	6,455	$329,247	$51.01
Fergus Falls	1	806	55,807	69.24
District 4 Total	**3**	**7,261**	**$385,054**	**$53.03**
District 6				
Albert Lea	2	1,341	$108,716	$81.10
Austin	2	709	52,960	74.69
Rochester	2	3,492	199,414	57.11
Winona	1	1,820	155,547	85.47
District 6 Total	**7**	**7,362**	**$516,637**	**$70.18**
District 7				
Fairmont	1	5,900	$388,248	$65.80
Mankato	1	1,755	113,701	64.77
St. Peter	2	3,153	213,280	67.65
Worthington	1	1,190	117,477	98.72
District 7 Total	**5**	**11,998**	**$832,705**	**$69.40**
District 8				
Hutchinson	1	5,268	$392,574	$74.52
Litchfield	4	3,453	165,670	47.97
Marshall	1	8,170	547,390	67.00
Montevideo	1	2,260	130,000	57.52
Willmar	2	6,159	471,698	76.59
Redwood Falls	1	4,078	310,095	76.04
District 8 Total	**10**	**29,388**	**$2,017,428**	**$68.65**

MSAS UNIT PRICE STUDY
BITUMINOUS

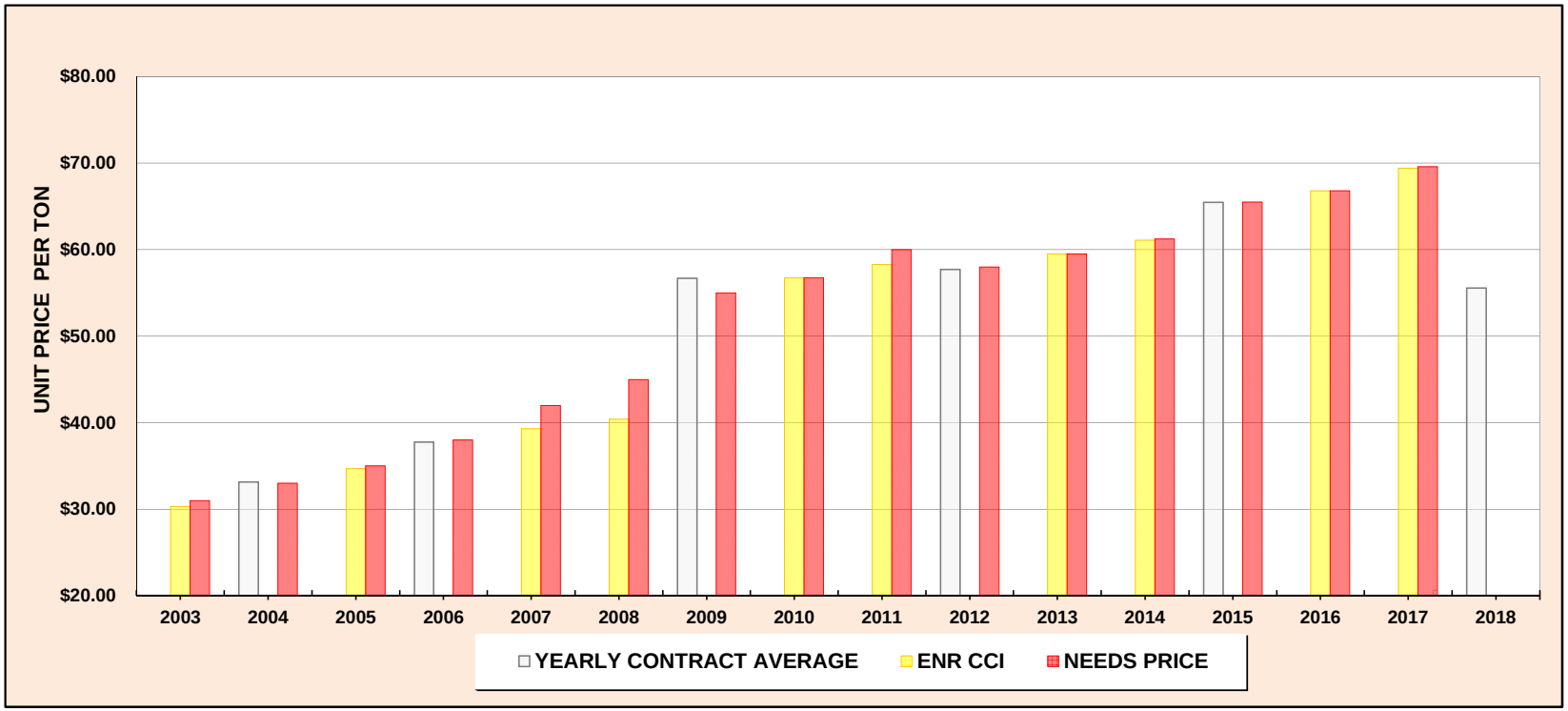
CITY NAME	NO. OF PROJECTS	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
Metro East				
Hastings	2	1,555	$90,813	$58.40
Mendota Heights	2	13,358	738,324	55.27
Roseville	8	5,709	343,741	60.21
St. Paul	3	9,706	568,924	58.61
South St. Paul	2	3,460	170,777	49.36
West St. Paul	1	3,485	155,698	44.68
Burnsville	2	1,010	51,809	51.30
Oakdale	2	25	1,790	71.60
Eagan	1	311	33,899	109.00
Forest Lake	2	5,930	326,351	55.03
Hugo	2	5,993	286,744	47.84
North Branch	5	6,844	287,448	42.00
Wyoming	2	9,698	458,370	47.26
Chisago City	2	1,104	70,539	63.89
Metro East Total	**36**	**68,189**	**$3,585,227**	**$52.58**

Metro West				
Blaine	1	12,250	$771,750	$63.00
Bloomington	6	7,611	400,288	52.59
Brooklyn Park	3	6,744	380,105	56.36
Coon Rapids	4	12,872	686,876	53.36
Edina	1	2,080	109,268	52.53
Fridley	5	2,887	157,780	54.65
Golden Valley	1	1,398	106,326	76.06
Minneapolis	1	8,687	539,157	62.06
Mound	4	4,813	301,536	62.66
Robbinsdale	1	4,480	244,350	54.55
St. Louis Park	1	6,500	392,130	60.33
Chanhassen	1	3,401	205,348	60.37
Ham Lake	1	2,462	141,197	57.36
Andover	1	3,900	216,239	55.45
East Bethel	1	6,484	320,179	49.38
Savage	2	13,315	653,409	49.07
Waconia	1	1,505	96,121	63.87
Rogers	1	477	32,170	67.44
Minnetrista	1	8,263	517,700	62.66
Metro West Total	**37**	**110,129**	**$6,271,930**	**$56.95**

District Totals				
District 1 Total	22	40,275	$1,906,699	$47.34
District 2 Total	5	5,707	337,234	59.09
District 3 Total	23	58,958	2,997,037	50.83
District 4 Total	3	7,261	385,054	53.03
District 6 Total	7	7,362	516,637	70.18
District 7 Total	5	11,998	832,705	69.40
District 8 Total	10	29,388	2,017,428	68.65
Metro East Total	36	68,189	3,585,227	52.58
Metro West Total	37	110,129	6,271,930	56.95
STATE TOTAL	**148**	**339,266**	**$18,849,950**	**$55.56**

N:\MSAS\UNIT COST STUDY\2018\UNIT PRICE BREAK OUT 2018.xls Bituminous

ALL BITUMINOUS BASE & SURFACE



Needs Year	Number of Cities	Quantity (Ton)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2003					$30.31	$31.00
2004	60	459,606	$15,229,960	33.14		33.00
2005					34.68	35.00
2006	51	305,073	11,524,574	37.78		38.00
2007					39.33	42.00
2008					40.42	45.00
2009	44	277,797	15,744,901	56.68		55.00
2010					56.72	56.75

Needs Year	Number of Cities	Quantity (Ton)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2011					58.27	$60.00
2012	65	317,687	$18,334,854	$57.71		58.00
2013					59.51	59.50
2014					61.11	61.25
2015	48	226,676	14,843,126	$65.48		65.50
2016					66.81	66.80
2017					69.41	69.60
2018	65	339,266	18,849,950	55.56		

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2018 NEEDS STUDY IS $60.00 PER TON

Yearly Contract Price of $55.56 is a -20.2% *decrease* from "Price used in Needs" last year ($69.60) (Previous year saw an increase of 4.2%)
(note **-$14.04** decrease this year)

(For this Unit Cost Study, there were 148 projects in 65 cities)

MSAS UNIT PRICE STUDY
SIDEWALK CONSTRUCTION - SQUARE FOOT

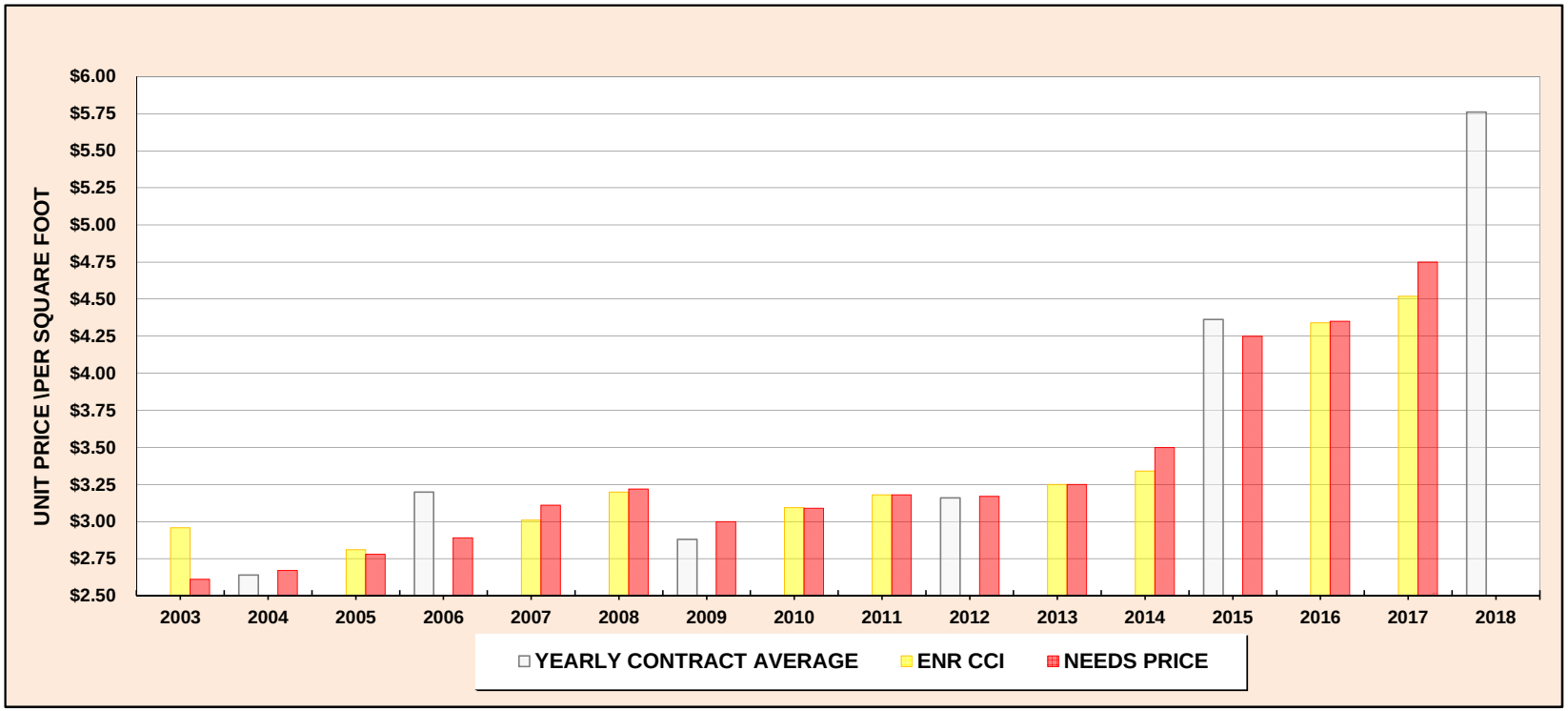
CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Duluth	2	9,555	66,198	$6.93
Hermantown	2	19,023	73,698	$3.87
District 1 Total	**4**	**28,578**	**$139,896**	**$4.90**
District 2				
Bemidji	1	12,445	$47,284	$3.80
Crookston	3	26,126	116,261	4.45
District 2 Total	**4**	**38,571**	**$163,545**	**$4.24**
District 3				
Brainerd	3	15,640	$85,150	$5.44
St. Cloud	4	32,847	342,074	10.41
Sauk Rapids	2	17,654	77,079	4.37
Elk River	4	8,750	58,926	6.73
Sartell	1	176	1,584	9.00
St. Michael	2	10,510	68,315	6.50
Isanti	1	10,875	43,500	4.00
Zimmerman	2	11,120	48,372	4.35
District 3 Total	**19**	**107,572**	**$725,000**	**$6.74**
District 4				
Alexandria	1	8,554	$36,711	$4.29
Fergus Falls	1	2,694	20,212	7.50
District 4 Total	**2**	**11,248**	**$56,923**	**$5.06**
District 6				
Albert Lea	2	17,826	$87,681	$4.92
Austin	2	10,160	78,339	7.71
Winona	1	11,362	55,403	4.88
District 6 Total	**5**	**39,348**	**$221,424**	**$5.63**
District 7				
Fairmont	1	1,927	$26,593	$13.80
Mankato	1	19,669	105,315	5.35
St. Peter	1	10,263	38,486	3.75
Worthington	4	31,984	189,224	5.92
District 7 Total	**7**	**63,843**	**$359,617**	**$5.63**
District 8				
Hutchinson	2	1,692	$17,410	$10.29
Montevideo	1	3,832	21,675	5.66
Willmar	2	4,823	44,250	9.17
Redwood Falls	1	9,188	50,534	5.50
District 8 Total	**6**	**19,535**	**$133,868**	**$6.85**

MSAS UNIT PRICE STUDY
SIDEWALK CONSTRUCTION - SQUARE FOOT

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
Metro East				
Hastings	2	1,094	$12,157	$11.12
Mendota Heights	2	2,510	25,438	$10.13
Roseville	6	2,378	19,623	$8.25
St. Paul	3	42,305	260,495	$6.16
West St. Paul	1	4,608	22,742	$4.94
Burnsville	2	910	6,035	$6.63
Oakdale	2	730	5,376	$7.36
Lakeville	1	843	9,821	$11.65
Eagan	1	1,148	13,317	$11.60
Forest Lake	2	4,835	31,476	$6.51
Wyoming	1	2,300	26,500	$11.52
Chisago City	2	285	10,038	$35.22
Metro East Total	**25**	**63,946**	**$443,017**	**$6.93**
Metro West				
Blaine	1	49,680	$205,336	$4.13
Bloomington	6	23,293	141,300	6.07
Brooklyn Park	3	29,702	201,421	6.78
Coon Rapids	3	15,690	70,863	4.52
Edina	1	5,754	25,803	4.48
Fridley	1	27	177	6.54
Golden Valley	2	4,851	24,990	5.15
Minneapolis	1	21,865	156,049	7.14
Robbinsdale	1	16,026	62,009	3.87
St. Louis Park	1	34,020	164,877	4.85
Chanhassen	1	5,000	33,750	6.75
Ham Lake	1	71	568	8.00
Andover	1	90	803	8.92
Savage	3	26,695	152,899	5.73
Minnetrista	1	2,710	18,157	6.70
Metro West Total	**27**	**235,474**	**$1,259,003**	**$5.35**
District Totals				
District 1 Total	4	28,578	$139,896	$4.90
District 2 Total	4	38,571	163,545	4.24
District 3 Total	19	107,572	725,000	6.74
District 4 Total	2	11,248	56,923	5.06
District 6 Total	5	39,348	221,424	5.63
District 7 Total	7	63,843	359,617	5.63
District 8 Total	6	19,535	133,868	6.85
Metro East Total	25	63,946	443,017	6.93
Metro West Total	27	235,474	1,259,003	5.35
STATE TOTAL	**99**	**608,114**	**$3,502,293**	**$5.76**

N:\MSAS\UNIT COST STUDY\2018\UNIT PRICE BREAK OUT 2018.xls Sidewalk

SIDEWALK CONSTRUCTION



PRICE PER SQUARE YARD WAS USED UNTIL 2012 AND CHANGED TO SQUARE FOOT IN 2013

Needs Year	Number of Cities	Quantity (Sq.Ft.)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2003					$2.96	$2.61
2004	47	123,460	$2,937,553	2.64		2.67
2005					2.81	2.78
2006	43	69,500	2,004,367	3.20		2.89
2007					3.01	3.11
2008					3.20	3.22
2009	44	95,689	2,482,820	2.88		3.00
2010					3.09	3.09
2011					3.18	$3.18
2012	51	66,045	$1,880,257	$3.16		3.17
2013					3.25	3.25
2014					3.34	3.50
2015	39	356,709	$1,556,517	$4.36		4.25
2016					4.34	4.35
2017					4.52	4.75
2018	52	608,114	3,502,293	5.76		

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2018 NEEDS STUDY IS $5.50 PER SQ. FT.

Yearly Contract Price of $5.76 is a 21.3% increase from "Price used in Needs" last year ($4.75) (Previous year saw an increase of 9.2%)
Since 2011, this Unit Cost has increased by an average of $0.37 (note $1.01 increase this year)
(For this Unit Cost Study, there were 99 projects in 52 cities)

MSAS UNIT PRICE STUDY
CURB AND GUTTER CONSTRUCTION - LIN. FT.

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Chisholm	1	760	$15,200	$20.00
Duluth	2	1,806	56,465	31.27
International Falls	1	1,856	38,976	21.00
Hermantown	2	5,333	78,410	14.70
District 1 Total	**6**	**9,755**	**$189,051**	**$19.38**
District 2				
Bemidji	1	5,817	$66,933	$11.51
Crookston	3	2,673	78,854	29.50
District 2 Total	**4**	**8,490**	**$145,786**	**$17.17**
District 3				
Brainerd	3	4,407	$99,158	$22.50
St. Cloud	4	2,478	59,591	24.05
Sauk Rapids	2	3,127	37,524	12.00
Elk River	5	19,106	240,609	12.59
Sartell	1	7,760	97,000	12.50
St. Michael	3	3,215	51,880	16.14
Isanti	1	2,350	41,445	17.64
Zimmerman	2	3,330	39,960	12.00
District 3 Total	**21**	**45,773**	**$667,167**	**$14.58**
District 4				
Alexandria	1	3,113	$35,544	$11.42
Fergus Falls	1	407	17,094	42.00
District 4 Total	**2**	**3,520**	**$52,638**	**$14.95**
District 6				
Albert Lea	2	4,244	$78,396	$18.47
Austin	2	467	16,239	34.77
Winona	1	3,032	44,722	14.75
District 6 Total	**5**	**7,743**	**$139,357**	**$18.00**
District 7				
Fairmont	1	7,761	$103,609	$13.35
Mankato	1	3,376	54,323	16.09
St. Peter	1	2,102	31,110	14.80
Worthington	3	3,399	77,890	22.92
District 7 Total	**6**	**16,638**	**$266,932**	**$16.04**
District 8				
Hutchinson	2	7,292	$85,316	$11.70
Litchfield	3	400	13,200	33.00
Marshall	1	4,400	49,060	11.15
Montevideo	1	2,016	32,256	16.00
Willmar	2	3,609	73,771	20.44
Redwood Falls	1	4,143	60,488	14.60
District 8 Total	**10**	**21,860**	**$314,092**	**$14.37**

MSAS UNIT PRICE STUDY
CURB AND GUTTER CONSTRUCTION - LIN. FT.

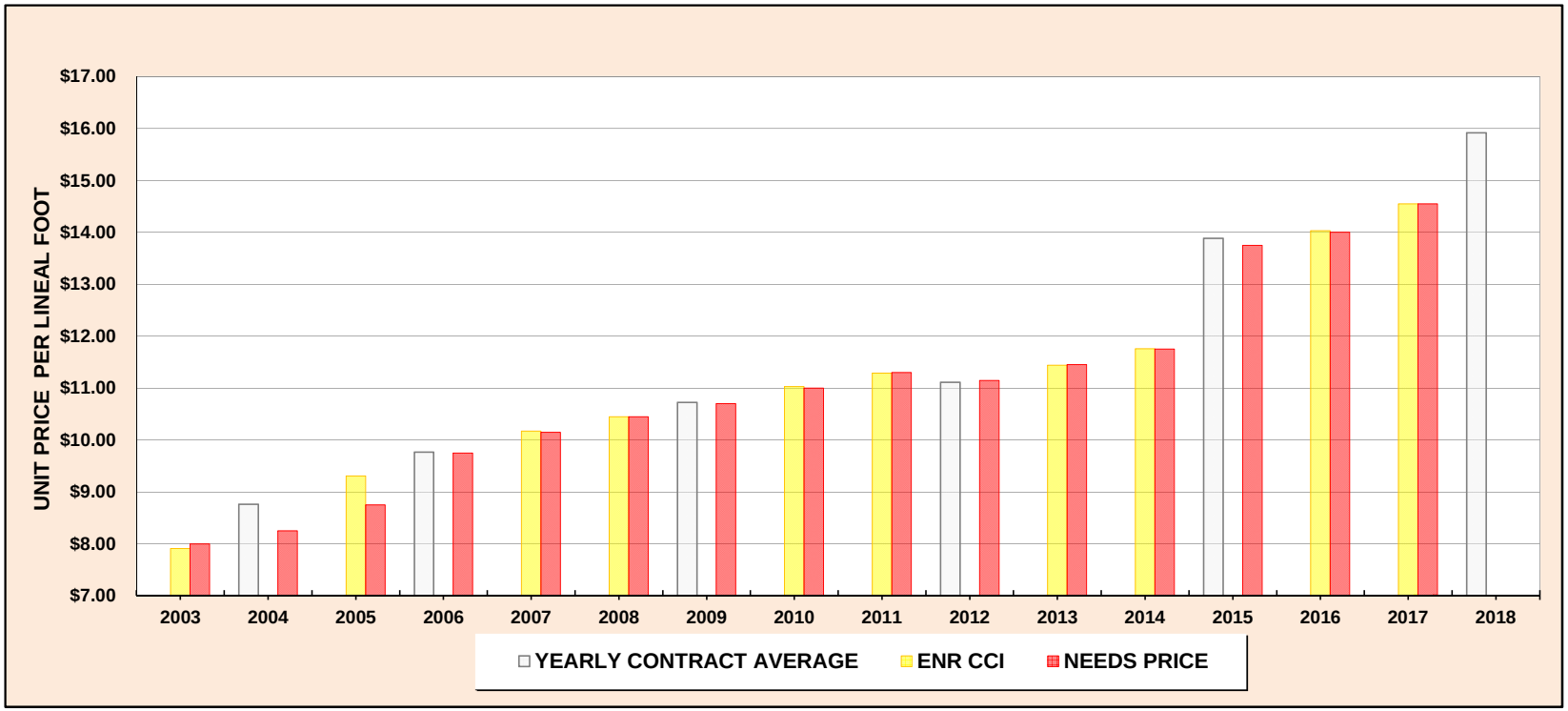
CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
Metro East				
Hastings	2	400	$8,672	$21.68
Mendota Heights	2	8,270	164,739	19.92
Roseville	8	1,077	23,686	21.99
St. Paul	3	9,796	183,698	18.75
South St. Paul	2	320	6,656	20.80
West St. Paul	1	5,781	68,505	11.85
Burnsville	2	610	15,494	25.40
Oakdale	2	520	11,336	21.80
Lakeville	1	66	2,063	31.25
Eagan	1	605	15,518	25.65
Forest Lake	2	14,590	205,960	14.12
Wyoming	2	550	11,083	20.15
Chisago City	1	72	5,705	79.24
Metro East Total	**29**	**42,657**	**$723,114**	**$16.95**

Metro West				
Blaine	1	22,750	$286,887	$12.61
Bloomington	6	6,319	122,922	19.45
Brooklyn Park	3	10,660	203,337	19.07
Coon Rapids	4	10,220	161,868	15.84
Edina	1	5,104	82,976	16.26
Fridley	4	448	9,520	21.25
Golden Valley	2	1,308	42,995	32.87
Minneapolis	1	6,928	155,332	22.42
Robbinsdale	1	5,271	61,144	11.60
St. Louis Park	1	5,530	133,628	24.16
Chanhassen	1	1,825	36,956	20.25
Ham Lake	1	2,619	27,211	10.39
Andover	1	10,500	117,285	11.17
East Bethel	1	10,374	121,261	11.69
Savage	3	6,383	121,673	19.06
Waconia	1	1,956	23,879	12.21
Rogers	1	976	17,500	17.93
Minnetrista	1	1,930	33,941	17.59
Medina	1	296	4,631	15.64
Metro West Total	**35**	**111,397**	**$1,764,946**	**$15.84**

District Totals				
District 1 Total	6	9,755	$189,051	$19.38
District 2 Total	4	8,490	145,786	17.17
District 3 Total	21	45,773	667,167	14.58
District 4 Total	2	3,520	52,638	14.95
District 6 Total	5	7743	139,357	18.00
District 7 Total	6	16,638	266,932	16.04
District 8 Total	10	21,860	314,092	14.37
Metro East Total	29	42,657	723,114	16.95
Metro West Total	35	111,397	1,764,946	15.84
STATE TOTAL	**118**	**267,833**	**$4,263,081**	**$15.92**

N:\MSAS\UNIT COST STUDY\2018\UNIT PRICE BREAK OUT 2018.xls C&G

CURB AND GUTTER CONSTRUCTION



Needs Year	Number of Cities	Quantity (Ln. Ft.)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2003					$7.91	$8.00
2004	59	469,131	$4,110,211	8.76		8.25
2005					9.31	8.75
2006	52	327,171	3,195,201	9.77		9.75
2007					10.17	10.15
2008					10.45	10.45
2009	43	262,251	2,812,246	10.72		10.70
2010					11.03	11.00

Needs Year	Number of Cities	Quantity (Ln. Ft.)	Total Cost	Yearly Average Contract Price	Engineering News Record Construction Cost Index	Price Used in Needs
2011					11.29	$11.30
2012	63	281,751	3,130,181	$11.11		11.15
2013					11.44	11.45
2014					11.76	11.75
2015	44	168,891	$2,344,989	$13.88		13.75
2016					14.03	14.00
2017					14.55	14.55
2018	61	267,833	4,263,081	15.92		

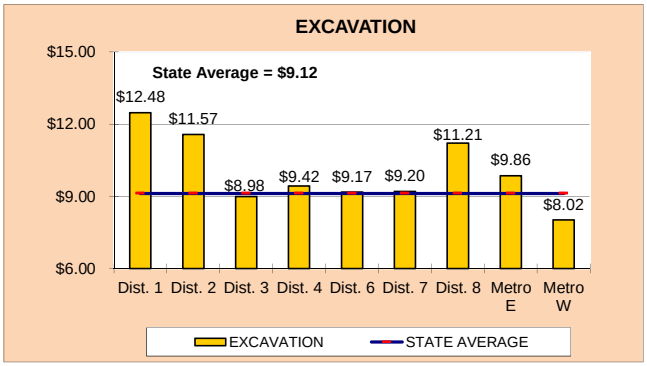
SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2018 NEEDS STUDY IS $15.90 PER LIN. FT.

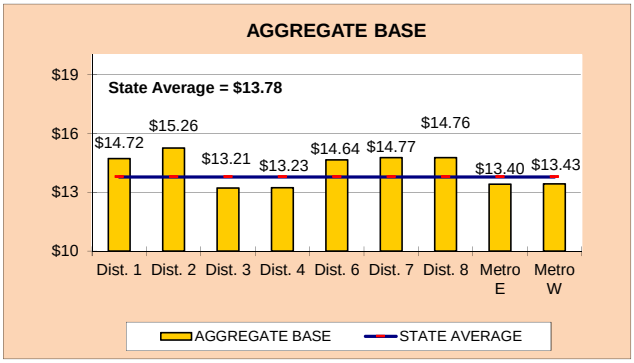
Yearly Contract Price of $15.92 is a 9.4% increase from "Price used in Needs" last year ($14.55) (Previous year saw an increase of 3.9%)
Since 2011, this Unit Cost has increased by an average of $0.66 (note $1.37 increase this year)
(For this Unit Cost Study, there were 118 projects in 61 cities)

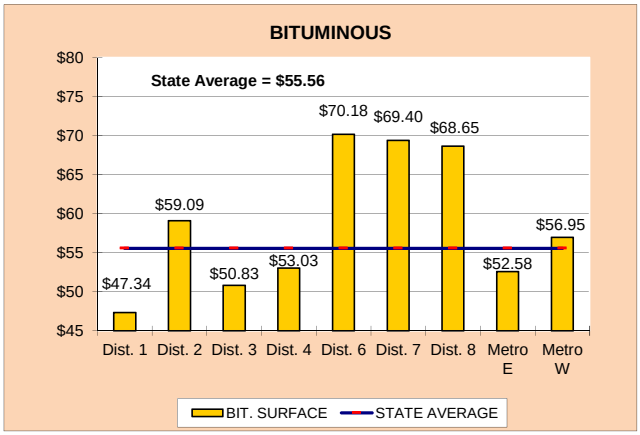
UNIT PRICES BY DISTRICT

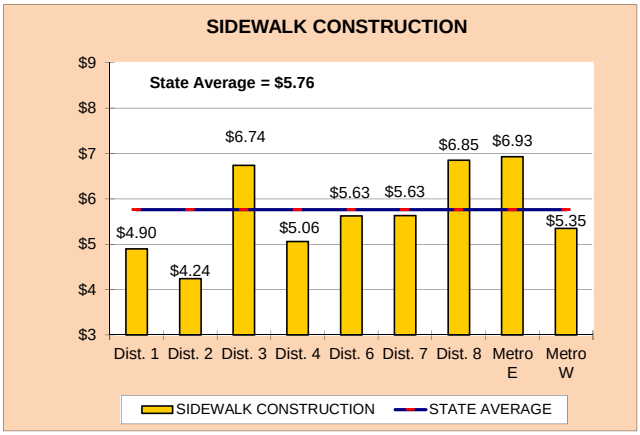
2017 prices, for the 2018 Unit Price Study

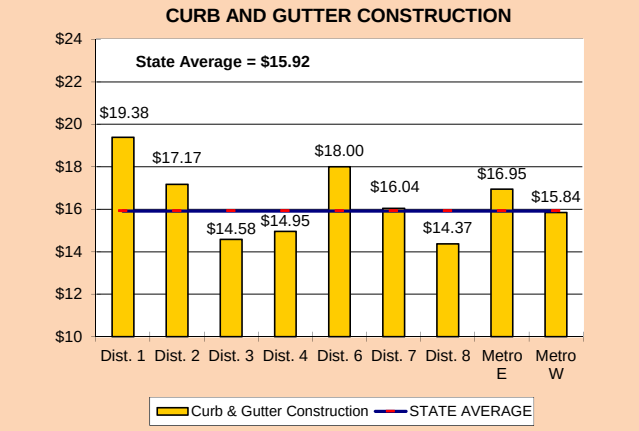
	Dist. 1	Dist. 2	Dist. 3	Dist. 4	Dist. 6	Dist. 7	Dist. 8	Metro East	Metro West	State Average
Excavation	$12.48	$11.57	$8.98	$9.42	$9.17	$9.20	$11.21	$9.86	$8.02	**$9.12**
Aggregate Base	$14.72	$15.26	$13.21	$13.23	$14.64	$14.77	$14.76	$13.40	$13.43	**$13.78**
Bituminous- All	$47.34	$59.09	$50.83	$53.03	$70.18	$69.40	$68.65	$52.58	$56.95	**$55.56**
Sidewalk Construction	$4.90	$4.24	$6.74	$5.06	$5.63	$5.63	$6.85	$6.93	$5.35	**$5.76**
C & G Construction	$19.38	$17.17	$14.58	$14.95	$18.00	$16.04	$14.37	$16.95	$15.84	**$15.92**











Storm Sewer

Lighting

Signals

NOTES AND COMMENTS

HISTORY: STORM SEWER, LIGHTING AND SIGNAL NEEDS COSTS

NEEDS YEAR	STORM SEWER ADJUSTMENT	STORM SEWER** CONSTRUCTION	LIGHTING	SIGNALS**
1998	$76,000	$245,000	$20,000	$24,990-$99,990
1999	79,000	246,000	35,000	24,990-99,990
2000	80,200	248,500	50,000	24,990-99,990
2001	80,400	248,000	78,000	30,000-120,000
2002	81,600	254,200	78,000	30,000-120,000
2003	82,700	257,375	80,000	31,000-124,000
2004	83,775	262,780	80,000	31,000-124,000
2005	85,100	265,780	82,500	32,500-130,000
2006	86,100	268,035	100,000	32,500-130,000
2007	88,100	271,000	100,000	32,500-130,000
2008	89,700	278,200	100,000	32,500-130,000
2009	92,800	289,300	100,000	32,500-130,000
2010	94,200	295,400	100,000	34,000-136,000
2011	95,600	301,300	100,000	34,000-136,000
2012	97,000	307,300	100,000	34,000-136,000
New Needs Method				
2013	$145,260 to $205,954		100,000	$225,000/signal
2014	148,100 to 210,000		100,000	205,000/signal
2015	150,900 to 214,000		100,000	185,000/signal
2016	153,600 to 217,800		100,000	188,700/signal
2017	156,500 to 221,900		100,000	195,000/signal
2018	159,500 to 226,100		100,000	201,850/signal

** Signals and Storm Sewer were 'per mile' in old Needs method

NEEDS STUDY SUBCOMMITTEE'S RECOMMENDED PRICES FOR 2018:

Storm Sewer (high section)	**$226,100**
Lighting / Mile	**$100,000**
Traffic Signals (per Signal)	**$201,850**

DEPARTMENT OF TRANSPORTATION

State Aid Hydraulics
3485 Hadley Avenue North
Oakdale, MN 55128-3307

Memo

Date: March 28, 2018

To: William Lanoux
Manager, Municipal State Aid Street Needs Section

From: Juanita Voigt
State Aid Hydraulic Specialist
651-366-4469

RE: State Aid Storm Sewer
Construction Costs for 2017

We have completed our analysis of storm sewer construction costs incurred for 2017 and the following assumptions can be utilized for planning purposes per roadway mile:

- Approximately $346,066 for new construction, and
- Approximately $106,075 for adjustment of existing systems

The preceding amounts are based on the average cost per mile of State Aid storm sewer using unit prices. 172 Storm Sewer Plans were submitted during 2017.

EC: Andrea Hendrickson (MnDOT file)

STORM SEWER COST RECOMMENDATIONS

Municipal Screening Board Resolutions state:

The Unit Cost per mile of Storm Sewer for the highest MSAS Urban ADT Group for Needs Purposes will be based on the average costs of all Storm Sewer Construction on the MSAS system in the previous year. To determine the Unit Cost for the highest ADT Group, average costs for Complete Storm Sewer projects and Partial Storm Sewer projects will be provided to State Aid by the MnDOT Hydraulics Office and then added together and divided by two to calculate a statewide average Unit Cost for all Storm Sewer Construction.

The Unit Cost per mile for Storm Sewer Construction will be calculated for the highest MSAS Urban ADT Group and be prorated downward for the other ADT Groups. This proration has been determined based upon an engineering study requested by the Municipal Screening Board in 2011 and will be the basis for the Needs calculations.

Complete Storm Sewer Cost from Hydraulics Specialist	$346,066	
Partial Storm Sewer Cost from Hydraulics Specialist	$106,075	
Average SS Cost = ($346,066 + $106,075) / 2 =		$226,071
NSS Recommended Unit Cost		**$226,100**
MSB Approved Unit Cost for 2018		$xxx,xxx

NSS recommended Storm Sewer Costs for 2018

based on 2017 costs - for the 2018 Needs Study

Needs Width of MSAS Urban ADT Groups for Needs Purposes	Existing ADT per Traffic Group	Cost difference from 70' section	MSB approved percent cost difference from 70' section	Cost based on % of Cost of highest Typical Section
26	0 ADT & Non Existing	($66,600)	-29.5%	$159,500
28	1-499	($63,600)	-28.1%	$162,500
34	500-1,999	($54,500)	-24.1%	$171,600
40	2,000-4,999	($45,400)	-20.1%	$180,700
48	5,000-8,999	($33,300)	-14.7%	$192,800
54	9,000-13,999	($24,200)	-10.7%	$201,900
62	14,000-24,999	($12,100)	-5.4%	$214,000
70	25,000 and over	$0	0.0%	**$226,100**

from last year's SS letter
Complete: $339,280
Partial: $104,507
AVG: $221,894

MSB approved Storm Sewer Costs for 2017 (last year)

based on 2016 costs - for the 2017 Needs Study

Needs Width of MSAS Urban ADT Groups	Existing ADT per Traffic Group	Cost difference from 70' section	MSB approved percent cost difference from 70' section	Cost based on % of Cost of highest Typical Section
26	0 ADT & Non Existing	($65,400)	-29.5%	$156,500
28	1-499	($62,400)	-28.1%	$159,500
34	500-1,999	($53,500)	-24.1%	$168,400
40	2,000-4,999	($44,600)	-20.1%	$177,300
48	5,000-8,999	($32,700)	-14.7%	$189,200
54	9,000-13,999	($23,800)	-10.7%	$198,100
62	14,000-24,999	($11,900)	-5.4%	$210,000
70	25,000 and over	$0	0.0%	$221,900

2017-2018 Percentage Change for highest section = 1.9% (same as 2017)

N:MSAS\Books\2018 June Book\Storm Sewer Recommendations.xlsx

SIGNALS

CURRENT SCREENING BOARD RESOLUTION ON TRAFFIC SIGNALS

*The Unit Cost for **Traffic Signals** will be determined by the recommendation by the SALT Program Support Engineer and approved by the MSB.*
The Unit Cost for traffic signals will be based on a cost per signal leg, and for Needs purposes a signal leg will be defined as ¼ of the signal cost.
Only signal legs on designated MSAS routes will be included in the Needs study.
Stand-alone pedestrian crossing signals will not be included in the Needs study.

TRAFFIC SIGNALS AND THE UNIT COST STUDY

Traffic Signals are part of the Unit Cost Study. Signal Studies are conducted by The SALT Program Support Engineer once every 3 years. In 'off years' an inflation factor is applied. Here is the summary of this year's study:

Average Cost	
Greater MN	$203,863
Metro	$198,830
Statewide	$201,850

NSS RECOMMENDATION

Last year's unit cost for signals was $195,000.

SUBCOMMITTEE'S RECOMMENDED SIGNAL PRICE FOR THE 2018 NEEDS IS **$201,850.**

Summary Signal ONLY Needs

Greater MN

Intersection Configuration	Cost Construct	Cost Remove Exiting	**Grand Total Signal ONLY**	Contract Total	Contract Holder	Location	Year Built
Smaller 4 Legged	$150,471	Incidental	**$157,159**	$14,320,706	MnDOT	Detroit Lakes	2016
Smaller 4 Legged	$190,000	$3,400	**$193,400**	$2,037,500	MnDOT	Morris	2015
Larger 4 Legged	$241,000	$8,500	**$261,030**	$1,197,442	MnDOT	Baxter	2016

Metro

Intersection Configuration	Cost Construct	Cost Remove Exiting	**Grand Total Signal ONLY**	Contract Total	Contract Holder	Location	Year Built
Larger 4 Legged	$204,510	Incidental	**$214,200**	$962,925	Hennepin County	Richfield	2015
Smaller 4 Legged	$175,000	$2,710	**$183,460**	$15,574,002	Hennepin County	Minnetonka	2015

Average Cost	
Greater MN	$203,863
Metro	$198,830
Statewide	$201,850

NOTES:
These estimates do NOT account for temporary signal systems, curb and gutter, pavement, pavement marking, traffic signing, truncated domes or pedestrian ramps, interconnection, etc.
These estimates account for signal mast arms, signal heads, handholes, loops, EVP, push buttons, etc.

By: GF and MEV
On: 041118

LIGHTING

The unit cost for Street lighting has been $100,000 / per mile since 2007.

During the 2014 NSS meeting, the committee approved a motion that lighting costs should be studied as part of the 2015 Full Unit Cost Study. The highlights from that study are below:

AVERAGE COST PER LIGHTING UNIT

two options for light spacing

	PER LIGHTING UNIT	WIRING COST PER LIGHTING UNIT	FOUNDATION COST PER LIGHTING UNIT	TOTALS of AVERAGES	EXAMPLE Costs per Mile (Totals X 26)	EXAMPLE Costs per Mile (Totals X 19)
METRO AVERAGE	$1,887	$1,977	$588	$4,451	$115,735	$84,575
OUTSTATE AVERAGE	$3,755	$1,894	$674	$6,323	$164,396	$120,136
STATEWIDE TOTAL AVERAGE	**$2,609**	**$1,938**	**$650**	**$5,196**	**$135,103**	**$98,729**

Needs Study Subcommittee's recommended price for 2015: $100,000 per mile

For details of the 2015 Street Light Study, find the 2015 Spring Report at following website:

http://www.dot.state.mn.us/stateaid/msas-springbooks.html

CURRENT SCREENING BOARD RESOLUTION ON STREET LIGHTING

(revised May, 2015)

The Unit Cost for Street Lighting will be determined by multiplying the Unit Price per mile by the segment length. This Unit Cost will remain at $100,000 per mile. The Municipal Screening Board may request a study on this item on any year if it is deemed necessary

SUBCOMMITTEE'S RECOMMENDED PRICE FOR 2018 NEEDS IS *$100,000 PER MILE*

MnDOT State Aid Bridge Office
2017 Calendar Year - - Bridge Cost Report

General Notes

The CY 2017 Bridge Cost Report reflects the unit cost ($ per square foot of bridge area) of all of the bridges let in CY 2017.

Pre-cast concrete box culverts have not been included in this report as they do not generally get reviewed (or approved) by the State Aid Bridge Office. We have produced a separate report for pre-cast concrete box culvert cost information.

The bridge unit costs are derived from the pay items on the 1st sheet of each bridge plan and therefore may include Traffic Control, Guardrail, etc.

We exclude one bridge pay item when calculating the cost of each bridge. That pay item is *Remove Existing Bridge* and it occurs prior to bridge construction and is not eligible for state or federal funding.

If a bridge has expensive aesthetic features, it may result in a higher unit cost for the bridge. Bridges with an unusually high (or low) unit cost will be omitted to ensure we are reporting “average” bridge unit costs.

Please note that the purpose of this report is to provide the approximate costs of building the various types of bridges and to track those cost trends over time.

Please report any missing bridges to the State Aid Bridge Office as soon as possible so we can revise the report. Once the report gets loaded to our website it’s considered to be final.

As always we appreciate your comments and feel free to call us if you have any questions or comments.

Dave Conkel
MnDOT State Aid Bridge Engineer
Phone: 651-366-4493
E-Mail: dave.conkel@state.mn.us

MnDOT State Aid Bridge Office
2017 Calendar Year - - Bridge Cost Report

Separated per Bridge Length < 150'

SORTED BY BRIDGE LENGTH

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
34529	SP	034-605-030	32.67	C-SLAB	5/2/2017	2013	$434,736	$215.96
50596	SAP	050-628-009	38.75	PCB	5/4/2017	1525	$241,256	$158.20
18533	SAP	018-597-009	48.17	PCB	8/30/2017	1060	$262,054	$247.22
69A55	*LOCAL*	*LOCAL*	50.75	PCB	6/20/2017	1819	$430,749	$236.81
69A52	*LOCAL*	*LOCAL*	57.73	C-SLAB	1/23/2017	1809	$556,974	$307.89
69A54	SAP	069-641-004	58.92	PCB	12/14/2017	2097	$440,298	$209.97
17535	SAP	017-604-020	60.00	PCB	9/18/2017	1860	$218,311	$117.37
66558	SAP	066-621-005	64.92	PCB	2/2/2017	2554	$352,360	$137.96
69A40	SAP	069-599-041	67.69	C-SLAB	1/12/2017	2121	$469,407	$221.31
23594	SP	023-601-024	68.53	PCB	6/26/2017	2947	$391,106	$132.71
10551	SAP	010-661-006	69.92	PCB	5/25/2017	5722	$953,178	$166.58
69A46	SAP	069-652-017	71.38	PCB	2/9/2017	2236	$405,818	$181.49
24563	SAP	024-604-014	74.92	PCB	3/28/2017	2647	$362,073	$136.79
69A27	SP	069-597-007	75.67	PCB	5/11/2017	3322	$844,151	$254.11
50593	SAP	050-598-004	76.00	PCB	5/4/2017	2685	$339,565	$126.47
42576	SAP	042-600-003	77.67	C-SLAB	8/30/2017	2227	$543,564	$244.08
64594	SAP	064-608-028	79.17	PCB	11/16/2017	3088	$416,590	$134.91
65571	SAP	065-599-074	80.90	PCB	7/20/2017	2831	$289,589	$102.29
69A42	*LOCAL*	*LOCAL*	82.75	PCB	1/23/2017	2593	$504,172	$194.44
27C49	SP	163-080-002	83.66	PCB	6/15/2017	5759	$1,087,337	$188.81
67569	SAP	067-598-016	83.67	C-SLAB	9/18/2017	2957	$296,183	$100.16
22606	SAP	022-599-100	84.00	PCB	8/10/2017	2968	$461,577	$155.52

LOCAL DENOTES ST. LOUIS COUNTY BRIDGES FUNDED WITH TAX LEVY DOLLARS.

NOTE: LIST OF BRIDGES LESS THAN 150' LENGTH CONTINUED ON NEXT SHEET.

MnDOT State Aid Bridge Office
2017 Calendar Year - - Bridge Cost Report

Separated per Bridge Length < 150' (Cont'd)

SORTED BY BRIDGE LENGTH

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
28557	SAP	028-619-001	87.34	PCB	7/17/2017	3200	$392,774	$122.74
42578	SAP	042-600-003	89.67	C-SLAB	8/30/2017	2571	$580,922	$225.95
31575	SAP	031-598-024	90.17	PCB	5/2/2017	3186	$408,346	$128.17
37555	SAP	037-599-107	97.00	C-SLAB	3/20/2017	3427	$386,747	$112.85
42577	SAP	042-600-003	99.67	C-SLAB	8/30/2017	2858	$640,719	$224.18
69A50	SAP	069-597-008	100.21	PCB	11/9/2017	3724	$864,629	$232.18
74560	SAP	074-599-031	104.00	PCB	5/4/2017	3675	$374,987	$102.04
77536	SAP	077-601-021	104.17	PCB	7/11/2017	3889	$463,371	$119.15
14557	SAP	014-598-068	104.67	C-SLAB	9/5/2017	3280	$396,884	$121.00
25619	SAP	025-599-116	111.92	PCB	1/14/2017	3283	$346,477	$105.54
14558	SAP	014-599-102	118.73	C-SLAB	2/21/2017	3721	$409,957	$110.17
32576	SP	032-624-035	123.00	PCB	3/24/2017	4838	$521,501	$107.79
67570	SAP	067-617-011	128.67	C-SLAB	3/31/2017	4547	$541,874	$119.17
43539	SAP	133-109-008	147.73	C-SLAB	12/21/2017	6328	$846,426	$133.76

LOCAL DENOTES ST. LOUIS COUNTY BRIDGES FUNDED WITH TAX LEVY DOLLARS.

Total Cost	**$17,476,662**
Total Deck Area	**111,367**
Average Cost per Sq Ft	**$156.93**
Total No. of Bridges < 150'	**36**

MnDOT State Aid Bridge Office
2017 Calendar Year - - Bridge Cost Report

Separated per Bridge Length > 150'

SORTED BY BRIDGE LENGTH

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
43561	SAP	043-599-043	160.38	PCB	3/28/2017	5667	$867,902	$153.15
31574	SAP	031-598-025	175.17	PCB	5/2/2017	5489	$1,050,133	$191.32
03513	SAP	003-607-022	192.17	PCB	9/14/2017	9624	$2,038,065	$211.77
R0665	SP	073-090-010	200.00	TRUSS	7/21/2017	2867	$620,014	$216.26
87563	SP	087-598-025	252.42	PCB	8/3/2017	8919	$951,385	$106.67
13526	SAP	013-620-026	354.17	PCB	11/21/2017	15348	$1,782,433	$116.13

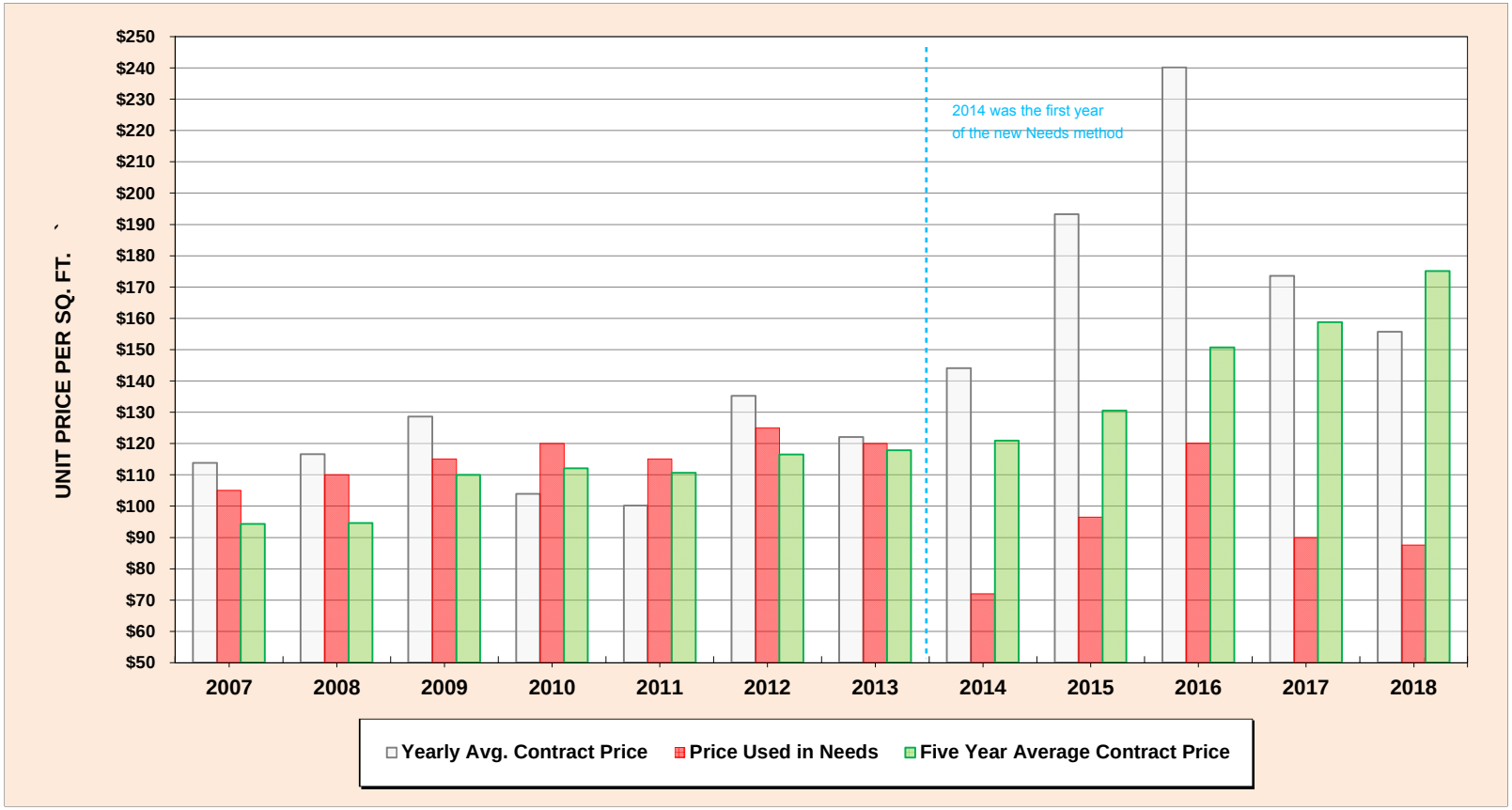
Total Cost	**$7,309,934**
Total Deck Area	**47,914**
Average Cost per Sq Ft	**$152.56**
Total No. of Bridges > 150'	**6**

Totals for All Bridges Let in CY 2017

Total Cost for all Bridges	**$24,786,595**
Total Deck Area for all Bridges	**159,281**
Average Cost per Sq Ft	**$155.62**
Total Number of Bridges	**42**

1/2 = $77.81

ALL BRIDGES



NEEDS YEAR	NUMBER OF PROJECTS	DECK AREA	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
2007	49	235,505	$26,798,183	$113.79	**$105.00**	$94.26
2008	37	247,120	28,815,052	116.60	**110.00**	94.58
2009	46	301,827	38,797,162	128.54	**115.00**	109.97
2010	56	333,867	34,675,259	103.86	**120.00**	112.02
2011	66	509,552	51,008,086	100.10	**115.00**	110.63
2012	69	475,190	64,255,407	135.22	**125.00**	116.49

AVG COST PER SQ FT — AVG COST PER SQ FT

NEEDS YEAR	NUMBER OF PROJECTS	DECK AREA	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
2013	73	505,031	$61,637,866	$122.05	**$120.00**	$117.80
2014	91	379,364	54,646,656	144.05	**72.00**	120.85
2015	49	196,550	37,973,287	193.20	**96.50**	130.48
2016	41	178,429	42,852,558	240.17	**120.08**	150.68
2017	47	184,138	31,962,025	173.58	**90.00**	158.69
2018	42	159,281	24,786,595	155.62	***87.55***	175.10

SUBCOMMITTEES RECOMMENDED STRUCTURE PRICE FOR THE 2018 NEEDS STUDY IS $87.55 PER SQ. FT.

MSB RESOLUTIONS STATE THAT 1\2 OF THE STATEWIDE AVERAGE BRIDGE COST BE USED AS THE STRUCTURE COST IN THE NEEDS

ALL BRIDGES (Hypothetical)

NEEDS YEAR	NUMBER OF PROJECTS	DECK AREA	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
2007	49	235,505	$26,798,183	$113.79	**$105.00**	$94.26
2008	37	247,120	28,815,052	116.60	**110.00**	94.58
2009	46	301,827	38,797,162	128.54	**115.00**	109.97
2010	56	333,867	34,675,259	103.86	**120.00**	112.02
2011	66	509,552	51,008,086	100.10	**115.00**	110.63
2012	69	475,190	64,255,407	135.22	**125.00**	116.49

					AVG COST PER SQ FT		AVG COST PER SQ FT
NEEDS YEAR	NUMBER OF PROJECTS	DECK AREA	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
** 2013	73	505,031	$61,637,866	$122.05	**$120.00**	$117.80
2014	91	379,364	54,646,656	144.05	**60.43**	120.85
2015	49	196,550	37,973,287	193.20	**65.24**	130.48
2016	41	178,429	42,852,558	240.17	**75.34**	150.68
2017	47	184,138	31,962,025	173.58	**79.35**	158.69
2018	42	159,281	24,786,595	155.62	**87.55**	175.10

GRAPH SHOWS WHAT NEEDS PRICES FOR STRUCTURES WOULD HAVE BEEN SINCE 2014,
IF THE ANNUAL NSS RECOMMENDATION HAD BEEN BASED OFF ONE-HALF THE 5 YEAR CONTRACT AVERAGE

April 16, 2018.

RECOMMENDATION ON STRUCTURE UNIT COST FOR THE NEEDS

The Needs Study Subcommittee reviewed the following motion, which was approved by the Municipal Screening Board on May 24th 2017:

Motion: that the NSS meet to further study ways to reduce the large fluctuations in the Structures Unit Prices from year to year.

The committee looked at the annual fluctuations in this cost, noting that some years have low numbers of low priced projects, while in other years we might see more funding / bridge bonding and therefore higher numbers of larger projects, bringing the overall cost up.

Using just one year of data for a given year – this unit cost will continue to fluctuate.

NSS RECOMMENDATION: the Unit Cost for Structures shall be based off a "5-year average" of bridge costs provided by the MnDOT State Aid Bridge Office. Keeping consistent with current Screening Board Resolutions, *one-half* of this 5-year average will the basis of the recommendation for the Unit Price for Structures.

The Needs Study Subcommittee has determined that this method increases the sample size of projects being used in the average cost, thus reducing the annual fluctuation in the Structure Cost used in the Needs.

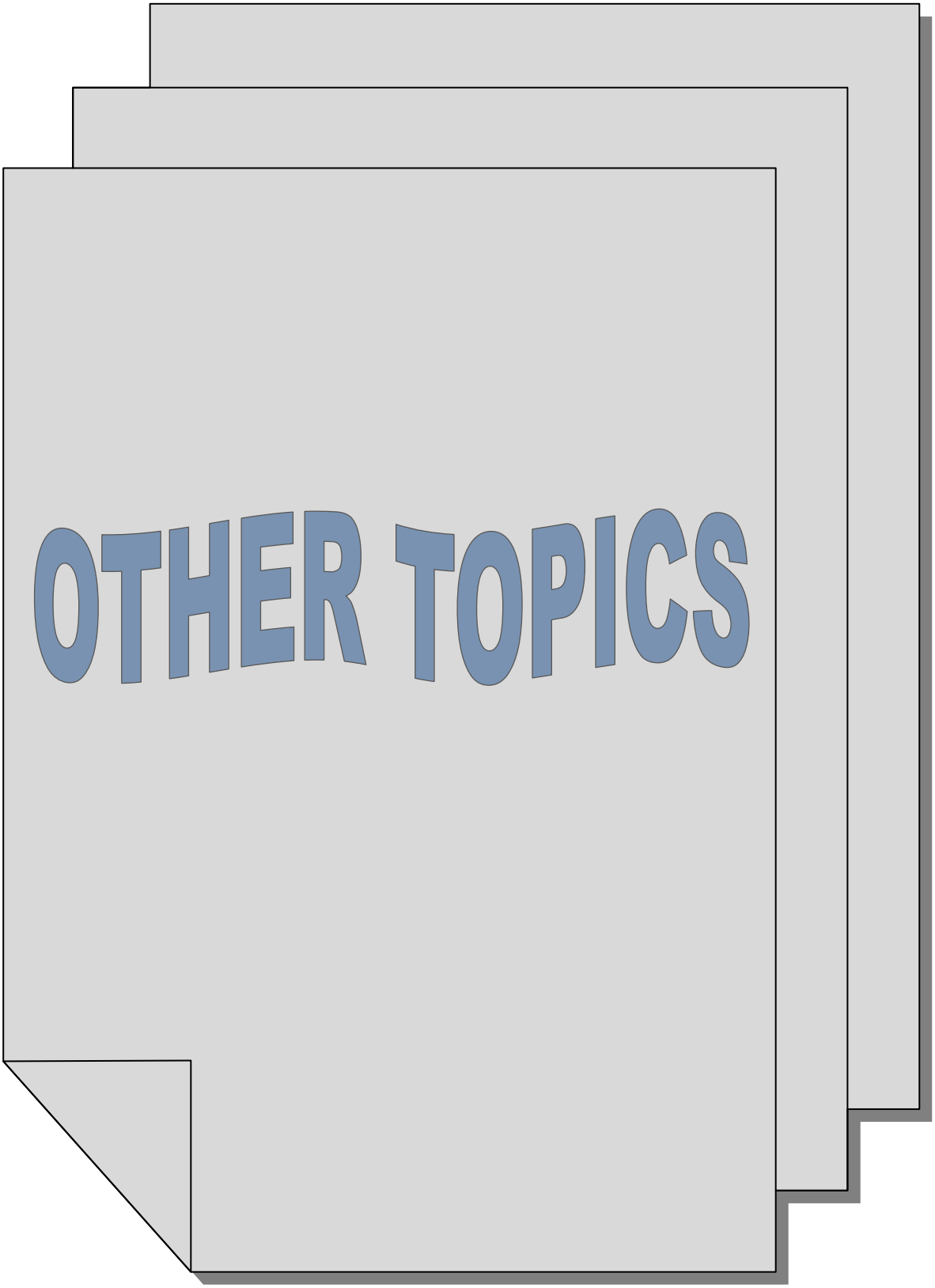
For 2018 Needs Study, the Needs Study Subcommittee's recommended structure price is $87.55 per SQ FT

Five Year Average				
Data Year / Needs Year	*Area*	*Cost*	*yearly contract price*	*one-half*
2013/2014	*379,364*	*$54,646,656*	*$144.05*	*$72.02*
2014/2015	*196,550*	*$37,973,287*	*$193.20*	*$96.60*
2015/2016	*178,429*	*$42,852,558*	*$240.17*	*$120.08*
2016/2017	*184,138*	*$31,962,025*	*$173.58*	*$86.79*
2017/2018	*159,281*	*$24,786,595*	*$155.62*	*$77.81*
5 year Ave	***1,097,762***	***$192,221,121***	***$175.10***	***$87.55***

Submitted,

Sean Christensen

NSS Secretary


OTHER TOPICS

REMINDER OF THE 2015 UCFS RECOMMENDATION ON SIGNALS

In August of 2015, the UCFS made a recommendation which provided clarity on how Unit Costs for Signals would be determined:

"Consistent with current MSB resolution which states, "The Unit Cost for Traffic Signals will be determined by the recommendation by the SALT Program Support Engineer and approved by the MSB", the UCFS recommends that the screening board direct the NSS to utilize the average cost of a four leg signal as provided every three years by the SALT program engineer as the primary basis for their unit price study recommendation for signal needs. In 'off years', the unit price be set using the Engineering News Record construction cost index. For the 2015 needs Unit Price Study this average cost is $185,000.

The UCFS Meeting was adjourned by Chair Keely at 2:20 pm.

Respectfully Submitted,

Steven G. Bot, P.E.

Unencumbered Construction Funds Subcommittee Secretary

St. Michael City Engineer

REMINDER OF THE 2016 UCFS RECOMMENDATION ON ROUNDABOUTS

As formally requested by the MSA Screening Board at their 2015 fall meeting, the UCFS has reviewed the possibility of including roundabouts as a Needs item. Per meeting discussions on January 27 and March 2, 2016, the UCFS believes that Needs Study Task Force's (NSTF) approach to not include roundabouts as a Needs item should remain as it currently exists. This decision was based on the following considerations and points:

- *Respect of the NSTF's determination not to include roundabouts in the new MSA Needs administration/calculation system.*
- *MSA street segments are currently measured to the center of a roundabout intersection, therefore each leg receives Needs on an approximate relative share of the roundabout circumference.*
- *Roundabout improvements primarily consist of roadway construction costs, where traffic signal improvements also have significant roadway construction costs along with the actual signal system equipment installations.*
- *The major distinction between roundabout and signalized intersections appears to be the addition of the actual traffic signal equipment installation and associated maintenance costs.*
- *Can't simply apply traffic signal Needs amounts to roundabouts, due to this approach utilizing unit costs from one item to generate Needs for another when the costs involved in constructing, maintaining and potentially replacing the two are significantly different.*
- *Cities are currently receiving after-the-fact adjustments of right-of-way acquisition costs (potentially a significant roundabout construction cost).*
- *Cities often decide to construct a roundabout where traffic signal warrants aren't satisfied.*
- *Maintenance costs for traffic signals in comparison to roundabouts seem to be higher.*

The UCFS has unanimously approved the position that roundabouts do not have the ongoing maintenance and equipment replacement for which signals draw Needs. Therefore roundabouts should draw Needs as a typical non-signalized intersection.

Respectfully submitted,

Klayton Eckles

State Aid for Local Transportation
395 John Ireland Blvd., MS 500
St. Paul, MN 55155

Local Road Research Board

Program Overview

Established in 1959 through state legislation, the Local Road Research Board has brought important developments to transportation engineers throughout Minnesota. Those developments range from new ways to determine pavement strength to innovative methods for engaging the public. Today, LRRB remains true to its mission of supporting and sharing the latest transportation research applications with the state's city and county engineers. These engineers, who best understand the problems and challenges in providing safe and efficient roadways, are responsible for city streets and county highways. The LRRB makes it easy for them to participate in setting the research agenda.

Transportation practitioners from across Minnesota submit research ideas to the LRRB through MnDOT Research Services. The LRRB Board then selects and approves research proposals. MnDOT Research Services provides administrative support and technical assistance. Researchers from MnDOT, universities, and consulting firms conduct the research and the LRRB monitors the progress.

Board Members

The Board consists of 10 members, including:

- Four County Engineers
- Two City Engineers
- Three MnDOT representatives
  - State Aid Engineer
  - A representative from a MnDOT specialty office
  - Director of Research Services
- One University of Minnesota Center for Transportation Studies representative

Committees

Research Implementation Committee

The LRRB works through its Research Implementation Committee to make research information available and to transfer research results into practical applications. The RIC uses a variety of methods to reach engineers and others with new developments, including presentations, videos, written reports, pamphlets, seminars, workshops, field demonstrations, web-based technology, and on-site visits. RIC members include:

- Four County Engineers
- Two City Engineers
- MnDOT Deputy State Aid Engineer
- A MnDOT District State Aid Engineer
- A representative from MnDOT's Research Services

- A representative from a MnDOT's specialty office
- A representative from University of Minnesota, Center for Transportation Studies.

MnDOT Research Services provides support services, and at least one voting RIC member serves on the LRRB to ensure a strong link between the RIC and the LRRB.

Outreach Subcommittee

The Outreach Subcommittee was established by the LRRB to increase the awareness of LRRB functions and products within the transportation community. It meets as needed to review current LRRB marketing practices and public relations strategies.

Funding

LRRB is funded from the County State Aid Highway and the Municipal State Aid Street accounts. Each year, the County and City Screening Boards recommend to the Commissioner a sum of money to be set aside from the CSAH and the MSAS funds. The table below shows the amount of funds allocated to the LRRB and number of research projects funded over the past five years.

	2013	2014	2015	2016	2017
Amount Allocated	$3.1	$3.2 M	$3.3 M	$3.5 M	$2.5 M
Number of New Projects	24	25	25	17	19
Total Number of Active Projects	n/a	n/a	n/a	74	72

For More Information

The LRRB publishes an annual LRRB At-a-Glance Report. This is a summary of completed reports and active projects and describes its goals and resources.

http://www.dot.state.mn.us/research/documents/LRRB_At-A-Glance_2016_WEB.pdf

Website: www.lrrb.org

LRRB Board Chair: Lyndon Robjent
lrobjent@co.carver.mn.us
Carver County Engineer
(952) 466-5200

Linda Taylor: MnDOT Research Services and Library Director
linda.taylor@state.mn.us
(651) 366-3765

Revised: 2/2018

COUNTY HIGHWAY TURNBACK POLICY

Definitions:

County Highway – Either a County State Aid Highway or a County Road

County Highway Turnback- A CSAH or a County Road which has been released by the county and designated as an MSAS roadway. A designation request must be approved and a Commissioner's Order written. A County Highway Turnback may be either County Road (CR) Turnback or a County State Aid (CSAH) Turnback. (See Minnesota Statute 162.09 Subdivision 1). A County Highway Turnback designation has to stay with the County Highway turned back and is not transferable to any other roadways.

Basic Mileage- Total improved mileage of local streets, county roads and county road turnbacks. Frontage roads which are not designated trunk highway, trunk highway turnback or on the County State Aid Highway System shall be considered in the computation of the basic street mileage. A city is allowed to designate 20% of this mileage as MSAS. (See Screening Board Resolutions in the back of the most current booklet).

MILEAGE CONSIDERATIONS

County State Aid Highway Turnbacks

A CSAH Turnback **is not** included in a city's basic mileage, which means it **is not** included in the computation for a city's 20% allowable mileage. However, a city may draw Construction Needs and generate allocation on 100% of the length of the CSAH Turnback

County Road Turnbacks

A County Road Turnback **is** included in a city's basic mileage, so it **is** included in the computation for a city's 20% allowable mileage. A city may also draw Construction Needs and generate allocation on 100% of the length of the County Road Turnback.

Jurisdictional Exchanges

County Road for MSAS

Only the **extra** mileage a city receives in an exchange between a County Road and an MSAS route **will be** considered as a County Road Turnback.

If the mileage of a jurisdictional exchange is **even**, the County Road **will not be** considered as a County Road Turnback.

If a city receives **less** mileage in a jurisdictional exchange, the County Road **will not be** considered as a County Road Turnback.

CSAH for MSAS

Only the **extra** mileage a city receives in an exchange between a CSAH and an MSAS route **will be** considered as a CSAH Turnback.

If the mileage of a jurisdictional exchange is **even**, the CSAH **will not be** considered as a CSAH Turnback.

If a city receives **less** mileage in a jurisdictional exchange, the CSAH **will not be** considered as a CSAH Turnback

NOTE:
When a city receives **less** mileage in a CSAH exchange it will have less mileage to designate within its 20% mileage limitation and may have to revoke mileage the following year when it computes its allowable mileage.
Explanation: After this exchange is completed, a city will have more CSAH mileage and less MSAS mileage than before the exchange. The new CSAH mileage was included in the city's basic mileage when it was MSAS (before the exchange) but is not included when it is CSAH (after the exchange). So, after the jurisdictional exchange the city will have less basic mileage and 20% of that mileage will be a smaller number.
If a city has more mileage designated than the new, lower 20% allowable mileage, the city will be over designated and be required to revoke some mileage. **If a revocation is necessary, it will not have to be done until the following year after a city computes its new allowable mileage.**

MSAS designation on a County Road

County Roads can be designated as MSAS. If a County Road which is designated as MSAS is turned back to the city, it will not be considered as County Road Turnback.

MISCELLANEOUS

A CSAH which was previously designated as Trunk Highway turnback on the CSAH system and is turned back to the city will lose all status as a TH turnback and only be considered as CSAH Turnback.

A city that had previously been over 5,000 population, lost its eligibility for an MSAS system and regained it shall revoke all streets designated as CSAH at the time of eligibility loss and consider them for MSAS designation. These roads will not be eligible for consideration as CSAH turnback designation.

In a city that becomes eligible for MSAS designation for the first time all CSAH routes which serve only a municipal function and have both termini within or at the municipal boundary, should be revoked as CSAH and considered for MSAS designation. These roads will not be eligible for consideration as CSAH turnbacks.

For MSAS purposes, a County or CSAH that has been released to a city cannot be local road for more than two years and still be considered a turnback.

MUNICIPAL STATE AID CONSTUCTION ACCOUNT
ADVANCE GUIDELINES

ADVANCE STATUS IS CURRENTLY CODE GREEN

State Aid Advances

M.S. 162.14, Subd 6 provides for municipalities to make advances from future year's allocations for the purpose of expediting construction. This process not only helps reduce the construction cash balance, but also allows municipalities to fund projects that may have been delayed due to funding shortages.

The formula used to determine if advances will be available is based on the current construction cash balance, expenditures trends, repayments and the $20,000,000 recommended threshold in MSAS construction. The threshold can be administratively adjusted by the Chief Financial Officer and reported to the Screening Board at the next Screening Board meeting.

The process used for advancing is dependent on the code levels which are listed below. Code levels for the current year can be obtained from the SAF website - http://www.dot.state.mn.us/safinance/advances.html.

State Aid Advance Code Levels

Guidelines for advances are determined by the following codes.

SEVERE

Code RED - SEVERE – Construction cash balance too low. NO MORE ADVANCES - NO EXCEPTIONS

GUARDED

Code YELLOW - GUARDED – Construction cash balance low; balances reviewed monthly. Advancing money may not meet the anticipated needs. Priority system will be used. Resolution required. Reserve option is available only prior to bid advertisement.

LOW

Code GREEN - LOW – Construction cash balance at acceptable level to approve anticipated advances. Advances approved on first-come, first-serve basis while funds are available. Resolution required. High priority projects are reserved; others optional.

General Guidelines for State Aid & Federal Aid Advance Construction

If a City requests an advance on future allotments they need to submit an Advance Resolution authorizing the advance by the board. This will "earmark" the funding for that City, but it will

NOT hold the funds. Advanced funds will be paid out on a first come first serve basis as the construction accounts are spent down to zero. The correct resolution must be used for each advance type and there is a sample resolution for each on the State Aid Finance webpage. **Requests are good only for the year requested (cannot be summited for multiple years) and void at 12/31 of that year.**

Advances are not limited to the projects listed on the resolution. Project payments are processed in the order received by SAF until the maximum advance amount is reached. Advances are repaid from next year's allocation until fully repaid.

Advance funding is not guaranteed. If the City finds they need a guarantee that the funds will be held specifically for them they can submit a "Request to Reserve Funds" to ensure funds will be available for their project. Once approved, a signed copy will be returned to the County. **Requests are good only for the year requested (cannot be summited for multiple years) and void at 12/31 of that year.**

Sample Advance Resolutions and a - Request to Reserve Funds can be obtained from SAF website - http://www.dot.state.mn.us/safinance/formsandresolutions.html.
E-mail completed forms to Sandra Martinez in State Aid Finance and your DSAE for review.

Priority System

A Priority System will be required if the construction cash balances drop below an acceptable level which is Code Yellow. This process starts in early October proceeding the advance year. Each city will be required to submit projects to their DSAE for prioritization within the district. The DSAE will submit the prioritized list to SALT for final prioritization.

Requests should include a negative impact statement if project had to be delayed or advance funding was not available. In addition, include the significance of the project.

Priority projects include, but are not limited to projects where agreements have mandated the city's participation, or projects with advanced federal aid. Small over-runs and funding shortfalls may be funded, but require State Aid approval.

Advance Limitations

Statutory - None
Ref. M.S.162.14, Subd 6.
State Aid Rules - None
Ref. State Aid Rules 8820.1500, Subp 10& 10b.
State Aid Guidelines
Advance is limited to five times the municipalities' last construction allotment or $4,000,000, whichever is less. Advance amount will be reduced by any similar outstanding obligations and/or bond principle payments due. The limit can be administratively adjusted by the Chief Financial Officer.

Limitation may be exceeded due to federal aid advance construction projects programmed by the ATP in the STIP where State Aid funds are used in lieu of federal funds. Repayment will be made at the time federal funds are converted. Should federal funds fail to be programmed, or the project (or a portion of the project) be declared federally ineligible, the local agency is required to pay back the advance under a payment plan mutually agreed to between State Aid and the Municipality.

CURRENT RESOLUTIONS
OF THE
MUNICIPAL SCREENING BOARD

October 2017

Bolded wording (except headings) are revisions since the last publication of the Resolutions

BE IT RESOLVED:

ADMINISTRATION

Appointments to Screening Board - Oct. 1961 (Revised June 1981, May 2011)

The Commissioner of Mn/DOT will annually be requested to appoint three (3) new members, upon recommendation of the City Engineers Association of Minnesota, to serve three (3) year terms as voting members of the Municipal Screening Board. These appointees are selected from the MnDOT State Aid Districts as they exist in 2010, together with one representative from each of the four (4) cities of the first class.

Screening Board Chair, Vice Chair and Secretary- June 1987 (Revised June, 2002)

The Chair Vice Chair, and Secretary**,** nominated annually at the annual meeting of the City Engineers Association of Minnesota and subsequently appointed by the Commissioner of the Minnesota Department of Transportation will not have a vote in matters before the Screening Board unless they are also the duly appointed Screening Board Representative of a construction District or of a City of the first class.

Appointment to the Needs Study Subcommittee - June 1987 (Revised June 1993)

The Screening Board Chair will annually appoint one city engineer, who has served on the Screening Board, to serve a three year term on the Needs Study Subcommittee. The appointment will be made at the annual winter meeting of the City's Engineers Association. The appointed subcommittee person will serve as chair of the subcommittee in the third year of the appointment.

Appointment to Unencumbered Construction Funds Subcommittee – (Revised June 1979, May 2014)

The Screening Board past Chair will be appointed to serve a minimum three-year term on the Unencumbered Construction Fund Subcommittee. This appointment will continue to maintain an experienced group to follow a program of accomplishments. The most senior member will serve as chair of the subcommittee.

Appearance Screening Board - Oct. 1962 (Revised Oct. 1982)

Any individual or delegation having items of concern regarding the study of State Aid Needs or State Aid Apportionment amounts, and wishing to have consideration given to these items, will send such request in writing to the State Aid Engineer. The State Aid Engineer with concurrence of the Chair of the Screening Board will determine which requests are to be referred to the Screening Board for their consideration. This resolution does not abrogate the right of the Screening Board to call any person or persons before the Board for discussion purposes.

Screening Board Meeting Dates and Locations - June 1996

The Screening Board Chair, with the assistance of the State Aid Engineer, will determine the dates and locations for Screening Board meetings.

Research Account - Oct. 1961

An annual resolution be considered for setting aside up to ½ of 1% of the previous years' Apportionment fund for the Research Account to continue municipal street research activity.

Population Apportionment - October 1994, 1996

Beginning with calendar year 1996, the MSAS population apportionment will be determined using the latest available federal census or population estimates of the State Demographer and/or the Metropolitan Council. However, no population will be decreased below that of the latest available federal census, and no city will be dropped from the MSAS eligible list based on population estimates.

Improper Needs Report - Oct. 1961

The State Aid Engineer and the District State Aid Engineer (DSAE) are requested to recommend an adjustment of the Needs reporting whenever there is a reason to believe that said reports have deviated from accepted standards and to submit their recommendations to the Screening Board, with a copy to the municipality involved, or its engineer.

New Cities Needs - Oct. 1983 (Revised June 2005, May 2014)

Any new city having determined its eligible mileage, but has not submitted its Needs to the DSAE by December 1, will have its Needs based upon zero ADT assigned to the eligible mileage until the DSAE approves the traffic counts.

Certified Complete Cities – May 2014 (Revised October 2014)
State Aid Operational Rule 8820.18 subp.2 allows cities to spend the population based portion of their Construction Allotment on non MSAS city streets if its MSAS system has been Certified Complete.

At the city's request, the District State Aid Engineer will review the MSAS system in that city and if the system has been completely built, may certify it complete for a period of two years.
The same proportion of a city's total allocation based on population will be used to compute the population portion of its Construction Allotment.

If a payment request for a project on the MSAS system is greater than the amount available in the Needs based account, the remainder will come from the population based account, thereby reducing the amount available for non MSAS city streets.

A city may carry over any remaining amount in its population based account from year to year. However if a payment request for a project on a non MSAS city street is greater than the amount available in the population based account, the population based account will be reduced to zero and the city will be responsible for the remaining amount.

Construction Needs Components – May 2014

For Construction Needs purposes, all roadways on the MSAS system will be considered as being built to Urban standards.
All segments on the MSAS system will generate continuous Construction Needs on the following items:
Excavation/Grading
Gravel Base
Bituminous
Curb and Gutter Construction
Sidewalk Construction
Storm Sewer Construction
Street Lighting
Traffic Signals
Engineering
Structures

Unit Price Study- Oct. 2006 (Revised May, 2014)

The Needs Study Subcommittee will annually review the Unit Prices for the Needs components used in the Needs Study. The Subcommittee will make its recommendation to the Municipal Screening board at its annual spring meeting.

The Unit Price Study go to a 3 year (or triennial) cycle with the Unit Prices for the two 'off years' to be set using the Engineering News Record construction cost index on all items where a Unit Price is not estimated and provided by other MnDOT offices. The Screening Board may request a Unit Price Study on individual items in the 'off years' if it is deemed necessary.

Unit Costs – May 2014, (Revised January 2015, May 2015)

The quantities which the Unit Costs for Excavation/Grading, Gravel Base, and Bituminous are based upon will be determined by using the roadway cross sections and structural sections in each of the ADT groups as determined by the Municipal Screening Board and shown in the following table 'MSAS Urban ADT Groups for Needs Purposes'.

MSAS URBAN ADT GROUPS FOR NEEDS PURPOSES

Quantities Based on a One Mile Section

EXISTING ADT	NEEDS WIDTH	NEEDS GENERATION DATA	GRADING DEPTH (inches)	GRADING QUANTITY (cubic yards)	CLASS 5 GRAVEL BASE DEPTH (inches)	CLASS 5 GRAVEL BASE QUANTITY (Tons)	TOTAL BITUMINOUS QUANTITY (TONS)
0 EXISTING ADT & NON EXISTING	**26 FOOT ROADBED WIDTH**	2- 11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**11,655**	6 INCHES	**4,346**	**2,917** 4 INCHES
1-499 EXISTING ADT	**28' FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	22 INCHES	**12,496**	6 INCHES	**4,691**	**3,182** 4 INCHES
500-1999 EXISTING ADT	**34 FOOT ROADBED WIDTH**	2- 12' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	26 INCHES	**17,698**	10 INCHES	**10,176**	**3,978** 4 INCHES
2000-4999 EXISTING ADT	**40 FOOT ROADBED WIDTH**	2-12' TRAFFIC LANES 2- 8' PARKING LANE	32 INCHES	**25,188**	16 INCHES	**19,628**	**4,773** 4 INCHES
5000-8999 EXISTING ADT	**48 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 2- 2' CURB REACTION	35 INCHES	**32,795**	19 INCHES	**27,907**	**5,834** 4 INCHES
9000-13,999 EXISTING ADT	**54 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 8' PARKING LANE 1- 2' CURB REACTION	36 INCHES	**37,918**	19 INCHES	**31,460**	**8,287** 5 INCHES
14,000-24,999 EXISTING ADT	**62 FOOT ROADBED WIDTH**	4-11' TRAFFIC LANES 1- 14' CENTER TURN 2- 2' CURB REACTION	38 INCHES	**45,838**	20 INCHES	**38,049**	**11,535** 6 INCHES
GT 25,000 EXISTING ADT	**70 FOOT ROADBED WIDTH**	6-11' TRAFFIC LANES 0 PARKING LANES 2- 2' CURB REACTION	39 INCHES	**53,172**	21 INCHES	**44,776**	**13,126** 6 INCHES

The quantity used for **Curb and Gutter** Construction will be determined by multiplying the segment length times two if it is an undivided roadway and by four if it is divided.
This quantity will then be multiplied by the Municipal Screening Board approved Unit Price to determine the Curb and Gutter Construction Needs.

The quantity used for **Sidewalk Construction** will be determined by multiplying the segment length times 26,400 (a five foot wide sidewalk on one side of a mile of roadway) in the lower two ADT groups (less than 500 ADT) and by 52,800 (two five foot wide sidewalks on a mile of roadway) in the upper ADT groups.
This quantity will then be multiplied by the Municipal Screening Board approved Unit Price to determine the Sidewalk Construction Needs.

The Unit Cost per mile of **Storm Sewer** for the highest MSAS Urban ADT Group for Needs Purposes will be based on the average costs of all Storm Sewer Construction on the MSAS system in the previous year. To determine the Unit Cost for the highest ADT Group, average costs for Complete Storm Sewer projects and Partial Storm Sewer projects will be provided to State Aid by the MnDOT Hydraulics Office and then added together and divided by two to calculate a statewide average Unit Cost for all Storm Sewer Construction.
The Unit Cost per mile for Storm Sewer Construction will be calculated for the highest MSAS Urban ADT Group and be prorated downward for the other ADT Groups. This proration has been determined based upon an engineering study requested by the Municipal Screening Board in 2011 and will be the basis for the Needs calculations.

The Unit Cost for **Street Lighting** will be determined by multiplying the Unit Price per mile by the segment length. This Unit Cost will remain at $100,000 per mile. The Municipal Screening Board may request a study on this item on any year if it is deemed necessary.

The Unit Cost for **Traffic Signals** will be determined by the recommendation by the SALT Program Support Engineer and approved by the MSB.
The Unit Cost for traffic signals will be based on a cost per signal leg, and for Needs purposes a signal leg will be defined as ¼ of the signal cost.
Only signal legs on designated MSAS routes will be included in the Needs study.
Stand-alone pedestrian crossing signals will not be included in the Needs study.

The area in square feet used for **Structure Needs** (Bridges and Box Culverts) will be determined by multiplying the centerline length of the bridge, or the culvert width of the box culvert, times the Needs Width from the appropriate MSAS Urban ADT Group. This quantity will then be multiplied by the Municipal Screening Board Unit Price to determine the Structure Needs. The Unit Price for Structures will be determined by using one-half of the approved unit cost provided by the MnDOT State Aid Bridge Office.

The Unit Cost for **Engineering** will be determined by adding together all other Unit Costs and multiplying them by the MSB approved percentage. The result is added to the other Unit Costs.

2017 UNIT PRICE RECOMMENDATIONS

for the January 2018 distribution

Needs Item		Municipal Screening Board Approved Prices for the 2017 Distribution	Needs Study Subcommittee Recommended Prices for 2018 Distribution	Municipal Screening Board Approved Prices for the 2018 Distribution
Grading (Excavation)	Cu. Yd.	$7.65	$7.95	**$7.95**
Aggregate Base	Ton	14.30	14.90	**14.90**
All Bituminous	Ton	66.80	69.60	**69.60**
Sidewalk Construction	Sq. Ft.	4.35	4.75	**4.75**
Curb and Gutter Construction	Lin.Ft.	14.00	14.55	**14.55**
Traffic Signals	Per Sig	188,700	195,000	**195,000**
Street Lighting	Mile	100,000	100,000	**100,000**
Engineering	Percent	22	22	**22**
All Structures (includes both bridges and box culverts)	Sq. Ft.	120.00	90.00	**90.00**
Storm Sewer (based on ADT)	Per Mile			
0 ADT & Non Existing		153,600	156,500	**156,500**
1-499		156,500	159,500	**159,500**
500-1,999		165,300	168,400	**168,400**
2,000-4,999		174,000	177,300	**177,300**
5,000-8,999		185,700	189,200	**189,200**
9,000-13,999		194,500	198,100	**198,100**
14,000-24,999		206,100	210,000	**210,000**
25,000 and over		217,800	221,900	**221,900**

Mileage - Feb. 1959 (Revised Oct. 1994. 1998)

The maximum mileage for Municipal State Aid Street designation will be 20 percent of the municipality's basic mileage - which is comprised of the total improved mileage of local streets, county roads and county road turnbacks.

Nov. 1965 – (Revised 1969, October 1993, October 1994, June 1996, October 1998, May 2014)

That the maximum mileage for State Aid designation may be exceeded to designate trunk highway turnbacks released to the Municipality after July 1, 1965.
The maximum mileage for State Aid designation may also be exceeded to designate both County Road and County State Aid Highways released to the Municipality after May 11th, 1994.

Nov. 1965 (Revised 1972, Oct. 1993, 1995, 1998)

The maximum mileage for Municipal State Aid Street designation will be based on the Annual Certification of Mileage current as of December 31st of the preceding year. Submittal of a supplementary certification during the year will not be permitted. Frontage roads not designated Trunk Highway, Trunk Highway Turnback or County State Aid Highways will be considered in the computation of the basic street mileage. The total mileage of local streets, county roads and county road turnbacks on corporate limits will be included in the municipality's basic street mileage. Any State Aid Street that is on the boundary of two adjoining urban municipalities will be considered as one-half mileage for each municipality.

All mileage on the MSAS system will accrue Needs in accordance with current rules and resolutions.

Oct. 1961 (Revised May 1980, Oct. 1982, Oct. 1983, June 1993, June 2003)

All requests for revisions to the Municipal State Aid System must be received by the District State Aid Engineer by March first to be included in that years Needs Study. If a system revision has been requested, a City Council resolution approving the system revisions and the Needs Study reporting data must be received by May first, to be included in the current year's Needs Study. If no system revisions are requested, the District State Aid Engineer must receive the Normal Needs Updates by March 31st to be included in that years' Needs Study.

One Way Street Mileage - June 1983 (Revised Oct. 1984, Oct. 1993, June 1994, Oct. 1997)

Any one-way streets added to the Municipal State Aid Street system must be reviewed by the Needs Study Sub-Committee, and approved by the Screening Board before any one-way street can be treated as one-half mileage in the Needs Study.

All Municipal Screening Board approved one-way streets be treated as one-half of the mileage and allow one-half complete Needs. When Trunk Highway or County Highway Turnback is used as part of a one-way pair, mileage for certification shall only be included as Trunk Highway or County Turnback mileage and not as approved one-way mileage.

Needs Adjustments

Phase In (Restriction) May 2014
The method of computing Needs is to be phased in over a period of seven years. This seven year period will begin with the January 2015 allocation and go through the January 2021 allocation.
The phase in will be reviewed annually by the Municipal Screening Board to determine if the Phase In period should be revised.
During the seven year period the phase in is being applied, a city's Restricted Needs will be computed using the following steps:

1) Compare the current years Unadjusted Needs to the previous years Restricted Needs. In the first year of the phase in, the current years Unadjusted Needs will be compared to the previous years Unadjusted Needs.
2) Compute the Statewide Average Percent of Change between the two totals.
3) Determine each individual city's Percent of Change between last years Restricted Needs
4) and this years Unadjusted Needs.
5) If an individual city's Percent of Change is greater than 5 Percentage Points less than the Statewide Average Percent of Change, increase this year's Unadjusted Needs to 5 Percentage Points less than the Statewide Average Percent of Change.
6) If an individual city's Percent of Change is greater than 10 Percentage Points more than the Statewide Average Percent of Change, decrease this year's Unadjusted Needs to 10 Percentage Points more than the Statewide Average Percent of Change.
7) If an individual city's Percent of Change is between 5 Percentage Points less and 10 Percentage Points more than the Statewide Average Percent of Change, no restriction is made and the current year's Unadjusted Needs will be used as its Restricted Needs.

All Needs adjustments will be applied to the city's Restricted Needs.

In the event that an MSAS route earning "After the Fact" Needs is removed from the MSAS system, the "After the Fact" Needs will then be removed from the Needs Study, except if transferred to another state system. No adjustment will be required on Needs earned prior to the revocation.

Excess Unencumbered Construction Fund Balance Adjustment – Oct. 2002, (Revised Jan. 2010, May 2014)

State Aid Payment Requests received before December 1st by the District State Aid Engineer for payment will be considered as being encumbered and the construction balances will be so adjusted.

The December 31 construction fund balance will be compared to the annual construction allotment from January of the same year.
If the December 31 construction fund balance exceeds 3 times the January construction allotment and $1,500,000, the negative adjustment to the Needs will be 1 times the December 31 construction fund balance. In each consecutive year the December 31 construction fund balance exceeds 3 times the January construction allotment and $1,500,000, the negative adjustment to the Needs will be increased to 2, 3, 4, etc. times the December 31 construction fund balance until such time the Construction Needs are adjusted to zero.

If the December 31 construction fund balance drops below 3 times the January construction allotment and subsequently increases to over 3 times, the multipliers will start over with one.

Low Balance Incentive – Oct. 2003 (Revised May, 2014)

The amount of the Excess Unencumbered Construction Fund Balance Adjustment will be redistributed as a positive adjustment to the Construction Needs of all municipalities whose December 31st construction fund balance is less than 1 times their January construction allotment of the same year. This redistribution will be based on a city's prorated share of its Unadjusted Construction Needs to the total Unadjusted Construction Needs of all participating

cities times the total Excess Balance Adjustment**.**

After the Fact Right of Way Adjustment - Oct. 1965 (Revised June 1986, 2000, May 2014)

Right of Way Needs will not be included in the Needs calculations until the right of way is acquired and the actual cost established. At that time a Construction Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a 15-year period. Only right of way acquisition costs that are eligible for State-Aid funding will be included in the right-of-way Construction Needs adjustment. This Directive is to exclude all Federal or State grants.
When "After the Fact" Needs are requested for right-of-way projects that have been funded with local funds, but qualify for State Aid reimbursement, documentation (copies of warrants and description of acquisition) must be submitted to the District State Aid Engineer. The City Engineer will input the data into the Needs Update program and the data will be approved by the DSAE.

After the Fact Railroad Bridge over MSAS Route Adjustment – May 2014

RR Bridge over MSAS Route Rehabilitation
Any structure that has been rehabilitated (Minnesota Administrative Rules, CHAPTER 8820, 8820.0200 DEFINITIONS, Subp. 8. Bridge rehabilitation) will not be included in the Needs calculations until the rehabilitation project has been completed and the actual cost established. At that time a Construction Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a 15-year period. Only State Aid eligible items are allowed to be included in this adjustment and all structure rehabilitation Needs adjustments must be input by the city and approved by the DSAE.

RR Bridge over MSAS Route Construction/Reconstruction
Any structure that has been constructed/reconstructed (Minnesota Administrative Rules, CHAPTER 8820, 8820.0200 DEFINITIONS, Subp. 31. Reconstruction) will not be included in the Needs calculations until the project has been completed and the actual cost established. At that time a Construction Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a 35-year period. Only State Aid eligible items are allowed to be included in this adjustment and all structure construction/reconstruction Needs adjustments must be input by the city and approved by the District State Aid Engineer.

After the Fact Railroad Crossing Adjustment

Any Railroad Crossing improvements will not be included in the Needs Calculations until the project has been completed and the actual cost established. At that time a Construction Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) to the annual Construction Needs for a 15 year period. Only State Aid eligible items are allowed to be included in this adjustment, and all Railroad Crossing Needs adjustments must be input by the city and approved by the District State Aid Engineer.

Excess Maintenance Account – June 2006

Any city which requests an annual Maintenance Allocation of more than 35% of their Total Allocation, is granted a variance by the Variance Committee, and subsequently receives the increased Maintenance Allocation will receive a negative Needs adjustment equal to the amount of money over and above the 35% amount transferred from the city's Construction Account to its Maintenance Account. The Needs adjustment will be calculated for an accumulative period of twenty years, and applied as a single one-year (one time) deduction each year the city receives the maintenance allocation.

After the Fact Retaining Wall Adjustment Oct. 2006 (Revised May 2014)

Retaining wall Needs will not be included in the Needs study until such time that the retaining wall has been constructed and the actual cost established. At that time a Needs adjustment will be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a 15 year period. Documentation of the construction of the retaining wall, including eligible costs, must be submitted to your District State Aid Engineer by July 1 to be included in that years Needs study. After the Fact needs on retaining walls will begin effective for all projects awarded after January 1, 2006. All Retaining Wall adjustments must be input by the city and approved by the District State Aid Engineer.

Trunk Highway Turnback - Oct. 1967 (Revised June 1989, May 2014)

Any trunk highway turnback which reverts directly to the municipality and becomes part of the Municipal State Aid Street system will not have its Construction Needs considered in the Construction Needs apportionment determination as long as the former trunk highway is fully eligible for 100 percent construction payment from the Municipal Turnback Account. During this time of eligibility, financial aid for the additional maintenance obligation, to the municipality imposed by the turnback will be computed on the basis of the current year's apportionment data and will be accomplished in the following manner.
The initial turnback maintenance adjustment when for less than 12 full months will provide partial maintenance cost reimbursement by adding said initial adjustment to the Construction Needs which will produce approximately 1/12 of $7,200 per mile in apportionment funds for each month or part of a month that the municipality had maintenance responsibility during the initial year.

To provide an advance payment for the coming year's additional maintenance obligation, a Needs adjustment per mile will be added to the annual Construction Needs. This Needs adjustment per mile will produce sufficient apportionment funds so that at least $7,200 in apportionment will be earned for each mile of trunk highway turnback on Municipal State Aid Street System.

Trunk Highway Turnback adjustments will terminate at the end of the calendar year during which a construction contract has been awarded that fulfills the Municipal Turnback Account Payment provisions.

TRAFFIC - June 1971 (Revised May 2014)

Beginning in 1965 and for all future Municipal State Aid Street Needs Studies, the Needs Study procedure will utilize traffic data developed according the Traffic Forecasting and Analysis web site at http://www.dot.state.mn.us/traffic/data/coll-methods.html#TCS

Traffic Counting - Sept. 1973 (Revised June 1987, 1997, 1999, Oct. 2014)

Traffic data for State Aid Needs Studies will be developed as follows:

1) The municipalities in the metropolitan area cooperate with the State by agreeing to participate in counting traffic every two or four years at the discretion of the city.
2) The cities in the outstate area may have their traffic counted and maps prepared by State forces every four years, or may elect to continue the present procedure of taking their own counts and have state forces prepare the maps.
3) Any city may count traffic with their own forces every two years at their discretion and expense, unless the municipality has made arrangements with the Mn/DOT district to do the count.
4) On new MSAS routes, the ADT will be determined by the City with the concurrence of the District State Aid Engineer until such time the roadway is counted in the standard MnDOT count rotation.