

MnDOT State Aid Bridge Office 2014 Calendar Year - - Bridge Cost Report

General Notes

The CY 2014 Bridge Cost Report reflects the unit cost (\$ per square foot of bridge area) of all of the bridges let in CY 2014.

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. Please contact the SALT Office 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

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Duluth Area Flooding Notes

In June, 2012 the Duluth area received over 10 inches of rain. The resulting flood waters severely damaged our local roads and bridges. Shortly after the waters started to recede, a small army of local agency personnel, District 1 staff, and local bridge consultants painstakingly cataloged the damage and began the efforts of restoring the crippled transportation system.

The list of the affected bridges featured both bridge replacements and bridge rehabs/repairs. There were also quite a few bridges replaced with box culverts, which are not tracked in this report.

The list of bridges was also very complex, due to the various funding sources used to replace or repair the affected bridges and also due to the fact that some of the bridges were slated for replacement before the flooding rain began. Most of the flood bridges were let in CY 2013, but a few bridge repair projects trickled into CY 2014. This report is aimed at a simpler goal of listing the bridges that were affected by the flooding and were let and/or awarded in CY 2014.

We added a special summary for the Duluth Area Flood Bridges in this report in order to track them separately from the normally funded bridges. These flood bridges are also included in the normal body of the report and are denoted as flood bridges by the *SP* and *SAP* designations.

The CY 2014 let Duluth Area Flood Bridges accounted for 3% (compared to 9% in CY 2013) of the total dollar amount of all local bridges let in CY 2014.

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Duluth Area Flood Bridges Let in CY 2014

INCLUDES NEW BRIDGES AND BRIDGE REHABS/REPAIRS

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
88552	*SP*	118-126-021	20.26	REHAB	6/3/2014	54	\$126,239	\$2,337.76
91143	*SAP*	118-126-020	156.28	REHAB	2/21/2014	1485	\$539,732	\$363.46
92277A	*SAP*	118-080-053	193.00	REHAB	6/3/2014	3088	\$29,957	\$9.70
92277B	*SAP*	118-080-051	67.00	REHAB	6/3/2014	1072	\$2,075	\$1.94
92277C	*SAP*	118-080-057	137.00	REHAB	6/3/2014	2192	\$2,075	\$0.95
92277D	*SAP*	118-080-052	25.00	REHAB	6/3/2014	400	\$2,075	\$5.19
92277E	*SAP*	118-080-054	134.00	REHAB	6/3/2014	2144	\$2,075	\$0.97
92277F	*SAP*	118-173-010	72.00	REHAB	6/3/2014	1152	\$20,662	\$17.94
92277G	*SAP*	118-080-055	295.00	REHAB	6/3/2014	4720	\$378,118	\$80.11
92277H	*SAP*	118-109-019	85.00	REHAB	6/3/2014	1360	\$146,090	\$107.42
92277I	*SAP*	118-080-056	141.00	REHAB	6/3/2014	2256	\$157,912	\$70.00
92277J	*SAP*	118-194-007	59.00	REHAB	6/3/2014	944	\$100,750	\$106.73
92277K	*SAP*	118-080-050	167.00	REHAB	6/3/2014	2672	\$173,639	\$64.98
L6113	*SP*	118-133-007	26.00	REHAB	8/6/2014	1317	\$517,894	\$393.24

SAP AND *SP* DENOTES DULUTH AREA FLOOD BRIDGES

BRIDGE NOS. 92277A-92277K HAVE BEEN COMBINED INTO A SINGLE BRIDGE ON THE 'SORTED BY BRIDGE LENGTH' LIST, SINCE THEY ARE ALL CONNECTED SEGMENTS OF A LONG TUNNEL BRIDGE. THEY WERE LET AS SEPARATE SEGMENTS, SO EACH SEGMENT IS LISTED HERE.

Total Cost

\$2,199,293

Total Number of Bridges

14

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Separated per Structure Type

BEAM TYPE= *PRE-CAST BEAMS*

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
02585	SP	002-651-007	86.67	PCB	7/29/2014	9736	\$1,267,341	\$130.17
04528	SAP	004-598-019	70.92	PCB	7/22/2014	2234	\$319,077	\$142.83
07594*	SAP	007-614-009	83.00	PCB	7/2/2014	3085	\$761,235	\$246.75
07597	SAP	007-599-056	83.50	PCB	4/4/2014	2505	\$300,217	\$119.85
10550*	SAP	010-610-047	167.46	PCB	11/13/2014	10921	\$2,265,483	\$207.44
13522	SAP	013-611-003	144.17	PCB	3/17/2014	5094	\$655,374	\$128.66
23588	SAP	023-599-171	73.91	PCB	7/28/2014	2008	\$346,027	\$172.32
25613	SAP	025-599-102	98.35	PCB	6/3/2014	3476	\$404,416	\$116.35
27B90	SAP	098-594-002	109.31	PCB	2/12/2014	5539	\$1,050,276	\$189.61
27B91*	SAP	027-701-017	65.67	PCB	7/15/2014	4531	\$2,212,853	\$488.38
28555	SAP	028-603-022	136.35	PCB	7/14/2014	4818	\$577,343	\$119.83
31564	SAP	031-614-015	68.94	PCB	5/20/2014	2436	\$346,286	\$142.15
31566	SAP	031-668-007	49.42	PCB	8/19/2014	1763	\$309,779	\$175.71
35538	SAP	035-604-025	198.20	PCB	8/14/2014	7003	\$1,047,236	\$149.54
40526	SAP	040-599-022	63.92	PCB	5/16/2014	2003	\$263,432	\$131.52
64585*	SAP	064-598-019	72.92	PCB	8/21/2014	2577	\$249,410	\$96.78
67568	SAP	067-608-014	77.92	PCB	10/17/2014	2753	\$358,189	\$130.11
69A18*	SAP	069-689-010	185.94	PCB	3/20/2014	9244	\$2,493,417	\$269.73
69A19*	SAP	069-622-021	149.67	PCB	10/15/2014	5288	\$1,136,984	\$215.01
69A21*	SAP	069-598-054	52.74	PCB	11/19/2014	1864	\$453,197	\$243.13
72543	SP	072-613-014	82.42	PCB	6/5/2014	3242	\$359,037	\$110.75
74555	SAP	074-599-030	86.25	PCB	4/3/2014	2703	\$349,211	\$129.19
74556	SAP	074-612-039	227.14	PCB	5/8/2014	11887	\$1,498,147	\$126.03

Total Cost	\$19,023,968
Total Deck Area	106,710
Average Cost per Sq Ft	\$136.58
Total Number of Bridges	23

* Due to the unusually high or low unit cost for this bridge, it was not included in the computation for average unit cost.

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Separated per Structure Type

BEAM TYPE= **CONCRETE SLAB SPAN**

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
10545	SAP	010-640-010	89.67	C-SLAB	12/11/2014	3886	\$660,493	\$169.97
22615	SAP	022-606-018	85.25	C-SLAB	4/28/2014	3012	\$407,873	\$135.42
24558	SAP	024-625-024	79.67	C-SLAB	3/11/2014	2815	\$320,875	\$113.99
25616	SAP	025-599-105	99.92	C-SLAB	3/25/2014	2968	\$312,413	\$105.26
27B70*	SAP	027-597-007	29.67	C-SLAB	11/18/2014	836	\$1,019,838	\$1,219.90
27B87*	SAP	027-701-026	41.73	C-SLAB	5/13/2014	1809	\$414,111	\$228.92
28553	SP	028-599-077	67.02	C-SLAB	11/17/2014	1966	\$212,044	\$107.86
31567	SAP	031-612-011	106.67	C-SLAB	7/21/2014	4195	\$461,835	\$110.09
32574	SAP	032-599-099	61.00	C-SLAB	5/2/2014	1911	\$248,928	\$130.26
50594	SAP	050-601-031	105.67	C-SLAB	10/9/2014	3734	\$399,407	\$106.96
78531	SP	078-606-025	75.00	C-SLAB	7/1/2014	2950	\$353,087	\$119.69

SAP AND *SP* DENOTES DULUTH AREA FLOOD BRIDGES

Total Cost	\$4,810,904
Total Deck Area	30,082
Average Cost per Sq Ft	\$123.08
Total Number of Bridges	11

* Due to the unusually high or low unit cost for this bridge, it was not included in the computation for average unit cost.

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Separated per Structure Type

BEAM TYPE= *STEEL TRUSS*

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
19567	SP	019-090-011	350.00	TRUSS	11/12/2014	4164	\$1,246,951	\$299.46
19568	SP	019-090-013	220.00	TRUSS	11/12/2014	2604	\$862,311	\$331.15
27B92	SP	091-090-072	787.90	TRUSS	7/23/2014	11180	\$1,834,574	\$164.09
R0605	SP	047-090-003	112.00	TRUSS	6/17/2014	1120	\$251,709	\$224.74
R0613	SP	072-090-002	98.00	TRUSS	5/1/2014	1176	\$179,563	\$152.69
R0614	SP	072-090-002	74.00	TRUSS	5/1/2014	888	\$156,853	\$176.64
R0641	SP	092-090-047	295.67	TRUSS	1/23/2014	3545	\$1,480,222	\$417.55

Total Cost	\$6,012,182
Total Deck Area	24,677
Average Cost per Sq Ft	\$243.64
Total Number of Bridges	7

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Separated per Structure Type

BEAM TYPE= **CONCRETE ARCH**

New Bridge Number	Project Type	Project Number	Length	Beam Type Code	Letting Date	Area	Cost	Unit Cost
19J62	SP	019-090-015	20.00	C-ARCH	7/1/2014	1920	\$861,722	\$448.81

Total Cost	\$861,722
Total Deck Area	1,920
Average Cost per Sq Ft	\$448.81
Total Number of Bridges	1

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Summary of Structure Type Unit Costs As Compared to Previous Fiscal Years

STATE AID BRIDGES
SUMMARY OF BRIDGE UNIT COST PER BEAM TYPE

CALENDAR YEAR	2014	2013	2012	2011	2010	2009	2008	2007
TYPE								
C-ARCH	\$448.81	\$485.92	\$366.96	\$126.38	\$434.58		\$396.53	
C-SLAB	\$123.08	\$110.91	\$112.60	\$109.17	\$92.06	\$97.82	\$101.18	\$94.51
DBL T								
GLULAM				\$343.48				
PCB	\$136.58	\$130.44	\$125.39	\$118.83	\$97.08	\$102.52	\$115.16	\$102.41
PCBped		\$218.74					\$173.63	
PT SLAB								
R-FRAME								
STEEL			\$610.71	\$1,241.08		\$122.76	\$156.14	\$150.23
TRUSS	\$243.64	\$322.73	\$149.83	\$191.93	\$168.81	\$133.30	\$228.88	\$145.57
TTS			\$222.25		\$117.94			\$92.64
INV-T			\$212.70					

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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
19J62	SP	019-090-015	20.00	C-ARCH	7/1/2014	1920	\$861,722	\$448.81
88552	*SP*	118-126-021	20.26	REHAB	6/3/2014	54	\$126,239	\$2,337.76
L6113	*SP*	118-133-007	26.00	REHAB	8/6/2014	1317	\$517,894	\$393.24
27B70	SAP	027-597-007	29.67	C-SLAB	11/18/2014	836	\$1,019,838	\$1,219.90
27B87	SAP	027-701-026	41.73	C-SLAB	5/13/2014	1809	\$414,111	\$228.92
31566	SAP	031-668-007	49.42	PCB	8/19/2014	1763	\$309,779	\$175.71
69A21	SAP	069-598-054	52.74	PCB	11/19/2014	1864	\$453,197	\$243.13
32574	SAP	032-599-099	61.00	C-SLAB	5/2/2014	1911	\$248,928	\$130.26
40526	SAP	040-599-022	63.92	PCB	5/16/2014	2003	\$263,432	\$131.52
27B91	SAP	027-701-017	65.67	PCB	7/15/2014	4531	\$2,212,853	\$488.38
28553	SP	028-599-077	67.02	C-SLAB	11/17/2014	1966	\$212,044	\$107.86
31564	SAP	031-614-015	68.94	PCB	5/20/2014	2436	\$346,286	\$142.15
04528	SAP	004-598-019	70.92	PCB	7/22/2014	2234	\$319,077	\$142.83
64585	SAP	064-598-019	72.92	PCB	8/21/2014	2577	\$249,410	\$96.78
23588	SAP	023-599-171	73.91	PCB	7/28/2014	2008	\$346,027	\$172.32
R0614	SP	072-090-002	74.00	TRUSS	5/1/2014	888	\$156,853	\$176.64
78531	SP	078-606-025	75.00	C-SLAB	7/1/2014	2950	\$353,087	\$119.69
67568	SAP	067-608-014	77.92	PCB	10/17/2014	2753	\$358,189	\$130.11
24558	SAP	024-625-024	79.67	C-SLAB	3/11/2014	2815	\$320,875	\$113.99
72543	SP	072-613-014	82.42	PCB	6/5/2014	3242	\$359,037	\$110.75
07594	SAP	007-614-009	83.00	PCB	7/2/2014	3085	\$761,235	\$246.75
07597	SAP	007-599-056	83.50	PCB	4/4/2014	2505	\$300,217	\$119.85
22615	SAP	022-606-018	85.25	C-SLAB	4/28/2014	3012	\$407,873	\$135.42
74555	SAP	074-599-030	86.25	PCB	4/3/2014	2703	\$349,211	\$129.19
02585	SP	002-651-007	86.67	PCB	7/29/2014	9736	\$1,267,341	\$130.17

SAP AND *SP* DENOTES DULUTH AREA FLOOD BRIDGES

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

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

SORTED BY BRIDGE LENGTH

10545	SAP	010-640-010	89.67	C-SLAB	12/11/2014	3886	\$660,493	\$169.97
R0613	SP	072-090-002	98.00	TRUSS	5/1/2014	1176	\$179,563	\$152.69
25613	SAP	025-599-102	98.35	PCB	6/3/2014	3476	\$404,416	\$116.35
25616	SAP	025-599-105	99.92	C-SLAB	3/25/2014	2968	\$312,413	\$105.26
50594	SAP	050-601-031	105.67	C-SLAB	10/9/2014	3734	\$399,407	\$106.96
31567	SAP	031-612-011	106.67	C-SLAB	7/21/2014	4195	\$461,835	\$110.09
27B90	SAP	098-594-002	109.31	PCB	2/12/2014	5539	\$1,050,276	\$189.61
R0605	SP	047-090-003	112.00	TRUSS	6/17/2014	1120	\$251,709	\$224.74
94246	SP	141-090-038	115.00	REHAB	7/22/2014	1802	\$970,380	\$538.50
4481	SP	159-090-018	129.61	REHAB	10/15/2014	1945	\$755,279	\$388.32
28555	SAP	028-603-022	136.35	PCB	7/14/2014	4818	\$577,343	\$119.83
13522	SAP	013-611-003	144.17	PCB	3/17/2014	5094	\$655,374	\$128.66
69A19	SAP	069-622-021	149.67	PCB	10/15/2014	5288	\$1,136,984	\$215.01

SAP AND *SP* DENOTES DULUTH AREA FLOOD BRIDGES

Total Cost	\$20,350,227
Total Deck Area	107,959
Average Cost per Sq Ft	\$188.50
Total No. of Bridges < 150'	38

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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
1461	SAP	007-598-024	153.00	REHAB	10/31/2014	2372	\$1,554,587	\$655.39
91143	*SAP*	118-126-020	156.28	REHAB	2/21/2014	1485	\$539,732	\$363.46
10550	SAP	010-610-047	167.46	PCB	11/13/2014	10921	\$2,265,483	\$207.44
69A18	SAP	069-689-010	185.94	PCB	3/20/2014	9244	\$2,493,417	\$269.73
35538	SAP	035-604-025	198.20	PCB	8/14/2014	7003	\$1,047,236	\$149.54
19568	SP	019-090-013	220.00	TRUSS	11/12/2014	2604	\$862,311	\$331.15
74556	SAP	074-612-039	227.14	PCB	5/8/2014	11887	\$1,498,147	\$126.03
R0657	SP	098-060-002	280.00	REHAB	6/27/2014	2240	\$1,911,211	\$853.22
R0641	SP	092-090-047	295.67	TRUSS	1/23/2014	3545	\$1,480,222	\$417.55
19567	SP	019-090-011	350.00	TRUSS	11/12/2014	4164	\$1,246,951	\$299.46
27B92	SP	091-090-072	787.90	TRUSS	7/23/2014	11180	\$1,834,574	\$164.09
2441	SP	027-605-029	1049.96	REHAB	12/16/2014	72940	\$40,591,217	\$556.50
92277A-K	*SAP*	118-080-050	1375.00	REHAB	6/3/2014	22000	\$1,015,428	\$46.16

SAP AND *SP* DENOTES DULUTH AREA FLOOD BRIDGES

BRIDGE 2441 IS A MAJOR RIVER CROSSING HISTORICAL REHABILITATION PROJECT
(CSAH 5 - FRANKLIN AVE. OVER MISSISSIPPI RIVER IN MINNEAPOLIS).

Total Cost	\$58,340,516
Total Deck Area	161,585
Average Cost per Sq Ft	\$361.05
Total No. of Bridges > 150'	13

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Totals for All Bridges Let in CY 2014

Total Cost for all Bridges	\$78,690,743
Total Deck Area for all Bridges	269,544
Average Cost per Sq Ft	\$291.94
Total Number of Bridges	51

