



N.W.B.E.

NORTHERN WISCONSIN-BASED ENGINEERS, INC.

Date: October 5, 2015

Subject: Estimate Documentation Report for
ID 1000-08-08
NW Region, Var Hwy/Freight Mitigation
Various Locations - North
Various Highway, Northwest Region Wide



Associated Design Project ID: None

WisDOT Project Manager: Philip Keppers, P.E.

Estimate and documentation was prepared by: Gary Colbert

PS&E Due Date: 2/1/16

Bid Letting Date: 5/10/16

Executive Summary

This miscellaneous type intersection upgrade project is located in northwestern Wisconsin. Seven intersections in six counties are being modified to accommodate Oversize Overweight (OSOW) turning movements. With the exception of the STH 35/STH 77 intersection in Danbury, all of the intersecting highways are principal arterials, and all are on the National Highway System. STH 35 and STH 77 in Danbury are minor arterials and are not on the National Highway System. The project has an estimated duration of 60 working days. The work consists of removing asphaltic surface, removing curb and gutter and removing sidewalk, excavation common, base aggregate, concrete pavement, asphaltic surface, curb and gutter, sidewalk, concrete safety islands, and traffic control. Other associated work includes relocating light poles and permanent signs, relocating and adjusting storm sewer structures, relocating and adjusting electrical components, erosion control items, and construction staking. Specialty items include: Concrete Curb and Gutter Cure and Seal Treatment, Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D Modified, Concrete Curb Pedestrian Modified, Temporary Item of Wire and Conduit, Salvage and Reset Light Pole Assembly, and Geogrid.

No other projects are associated with this project.

This project is unique in that it involves multiple work locations in multiple counties, both urban and rural. There are differing existing conditions and work types at each location, differing utilities and utility contacts, and differing agency and emergency service contacts. Some intersections are signalized, some are stop-sign controlled tee intersections, and one intersection is a roundabout. Work will be accomplished under traffic with no detours provided, requiring staged construction and traffic control of varying complexity at each site.

Past projects utilized for comparison include:

- 8510-19-70 (20140708030), STH 13, Cornucopia-Red Cliff, Bayfield County - Resurface
- 8570-03-70/72 (20141209024), STH 48, Rice Lake - Birchwood, Barron County - Resurface
- 8997-00-22 (20140512051), City of Rice Lake, Wisconsin Ave., Allen Street Intersection, Barron County - Intersection Reconstruction

STH 13, Cornucopia - Red Cliff is a rural project that includes intersection work. The STH 48, Rice Lake - Birchwood project includes urban and rural sections and intersection work. The Wisconsin Ave./Allen Street project is a stand-alone urban intersection reconstruction project in the City of Rice Lake.

Estimator Parameters

Work Type: General Construction - No Dominant Work Type

Highway Type: Undivided, Principal Arterial

Urban/Rural Type: Rural

Season: Summer

County: Northwest Region Wide

The "General Construction - No Dominant Work Type" Work Type parameter is somewhat unusual, making the task of finding similar projects via Estimator and Bid Express difficult.

Unit Price Documentation of Significant Items

Unlike a resurfacing type project, this project has a large number of items that aren't a high percentage of the project individually. 16 Significant Items have percentages of contract greater than 1.5%, and total 73.21% of the total estimated project costs. Seven Significant Items listed below have percentages of contract greater than 4% and total 45.82% of the total estimated project costs. Individual costs of all other items are less than 4% of the total project cost. See attached spreadsheet under remarks column for Item Level Documentation discussion of significant items.

Table of Significant Items

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST	% Project Costs
415.0080	BACKFILL GRANULAR	280	SY	\$75.00	\$21,000.00	6.75%
465.0105	ASPHALTIC SURFACE	237	TON	\$140.00	\$33,180.00	10.66%
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH					
601.0580	TYPE R	865	LF	\$19.70	\$17,040.50	5.47%
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH					
602.0820	TYPE T	1,200	LF	\$19.70	\$23,640.00	7.50%
	CONCRETE SAFETY					
602.2400	ISLANDS	6,366	SF	\$7.50	\$47,745.00	15.34%
619.1000	MOBILIZATION	1	EA			
	03. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH					
SPV.0090	TYPE D MODIFIED	676	LF	\$22.00	\$14,872.00	4.78%

Estimate Review Summary

Project was reviewed by the consultant design supervisor on 10/5/15. Review Comments (black) and design team responses (blue) are listed below:

- Find any other stand-alone intersection projects? **Not as of this date.**

Project No. 1000-08-08(88) Title: NW Region, Var Hwy/Freight Mitigation Limits: Various Locations - North Highway: Various Highway County: Northwest Region Wide Program Code: Concept Code: 303 - State Highway Rehabilitation Concep Code:	<u>Construction Cost Estimate</u> 9/25/2015 \$379,941.45							Northwest Region Wide						
	SCHEDULE OF BID ITEMS WISDOT STANDARD SPECIFICATIONS 2015 EDITION					Running Total	\$379,941.45	Used date range 01/01/2014 - 9/25/2015 for bid analysis. Quantity ranges are based on quantities for the seven individual intersection locations.	Significant Item > 1.5% of Contract			68.9%		
							Past Projects							
TOTAL BID ITEMS										Corn.-Red Cliff STH 13 Bayfield Co 8510-19-71 (20140708030)	Rice Lk-Birchwood STH 48 Barron Co 8570-03-70/72 (20141209024)	Rice Lake Local St Barron Co 8997-00-22 (20140512051)		
	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST	% Project Costs	Estimator Cat Eng2016	Bid X Average	Significant Item				Remarks	
204.0110	Removing Asphaltic Surface	498	SY	\$12.50	\$6,225.00	1.64%	\$3.88	\$12.90	Significant Item	\$11.60			Used Bid Express value. Set Qty Range 50 to 300. Found item in Bayfield and Ashland Counties. Price \$10.00 to \$15.00. Used average of \$12.50	
204.0130	Removing Curb	404	LF	\$4.50	\$1,818.00	0.48%	\$3.36	\$7.11	-	\$6.00	-	-	Used Removing Curb & Guter price. See item Removing Curb & Gutter. Each location will have one or both items. Likely to have same bid price.	
204.0150	Removing Curb & Gutter	2510	LF	\$4.50	\$11,295.00	2.97%	\$3.67	\$4.45	Significant Item	\$6.00	-	-	Used Bid Express value. Set Qty Range 150 to 950. Found item in Bayfield,Burnett,Barron & Ashland Counties. Price \$2.50 to \$7.50. Used average of \$4.45 round to \$4.50.	
204.0155	Removing Concrete Sidewalk	648	SY	\$5.70	\$3,693.60	0.97%	\$5.86	\$7.60	-	-	\$5.40	\$6.00	Used Bid Express value. Set Qty Range 20 to 500. Found item in Barron & Asland Counties. Price \$5.40 to \$14.00. Used low bid average of \$5.70.	
204.0195	Removing Concrete Bases	3	Each	\$200.00	\$600.00	0.16%	\$190.43	\$327.60	-	-	-	-	Used Bid Express value. Set Qty Range 2 to 4. Had to search item state wide. 19 projects found. Price \$75.00 to \$1500.00. Throw out the high and low low bid to compute low bid average of \$180. Rounded to \$200.	
204.0245	Removing Storm Sewer 01. 15-inch	10	LF	\$12.50	\$125.00	0.03%	-	\$12.50	-	-	\$15.00 (18-inch)	\$10.00	Used Bid Express value. Set no Qty Range. Found item or similar in 2 projects in Barron County. Price \$10.00 to \$15.00. Used low bid average of \$12.50.	
204.9060.S	01. Removing Traffic Signal Standard and Flashing Beacon	2	Each	\$250.00	\$500.00	0.13%	-		-				Searched BidX for removing and signals. Found item "Removing And Salvaging Traffic Signal Poles And Intersection Lighting" \$440.00. Found item "Maintaining And Removing Temporary Traffic Signal (Ush 14 And Cth P)" \$500.00. Since no reinstalling or maintaining, estimated half the cost @ \$250.00 each.	
204.0960.S	02. Removing Inlet Covers	3	Each	\$75.00	\$225.00	0.06%	-	\$75.00	-	-	-	-	Searched BidX for removing and Inlet Covers. Found item in "REMOVING (ITEM DESCRIPTION) 002. INLET COVERS" Dane County, \$75.00. Used that price	
205.9015.S	01. SE Quad USH 8/CTH SS, Village of Cameron	1	LS	\$2,500.00	\$2,500.00	0.66%	-	-	-	-	-	-	Searched Common Exc range 0-200 cy. Project in Rusk, Sawyer& Bayfield co. low bid \$10.00-\$20.00. Used \$20.00/cy * 112 cy=\$2,240. No Landscaping at this intersection. Rounded to \$2,500.	
205.9015.S	02. SE Quad USH 2/USH 63, Town of Keystone	1	LS	\$3,000.00	\$3,000.00	0.79%	-	-	-	-	-	-	Searched Common Exc range 0-200 cy. Proect in Rusk, Sawyer& Bayfield co. low bid \$10.00-\$20.00. Used \$20.00/cy * 116 cy=\$2320. Salvage Topsoil 90sy * \$6.00 = \$540.00 (20141209022) Seed #10 1.5lbs * \$20.00 = \$30.00 (20140610020) Temp Seed 3.0lbs * \$10.00 = \$30.00 (20140610020) Fertilizer Type B .1cwt * \$200.00 = \$20.00 (20140610020) Mulch 175sy * \$0.55 = \$95.00 (20141209022) TOTAL \$3035 Rnd to \$3000	
205.9015.S	04. SE Quad USH 8/STH 73, Village of Ingram	1	LS	\$6,000.00	\$6,000.00	1.58%	-	-	Significant Item	-	-	-	Searched Common Exc range 0-200 cy. Project in Rusk, Sawyer& Bayfield co. low bid \$10.00-\$20.00. Used \$20.00/cy * 202 cy=\$4040 Salvage Topsoil 260sy * \$6.00 = \$1560 (20141209022) Seed #10 3.5lbs * \$20.00 = \$70 (20140610020) Temp Seed 7lbs * \$10.00 = \$70 (20140610020) Fertilizer Type B .18cwt * \$200.00 = \$36 (20140610020) Mulch 71sy * \$0.55 = \$39 (20141209022) TOTAL \$5815 Rnd to \$6000	
205.9015.S	05. SW & NW Quad STH 35/STH 77, Danbury (Unincorporated)	1	LS	\$3,000.00	\$3,000.00	0.79%	-	-	-	-	-	-	Searched Common Exc range 0-200 cy. Project in Rusk, Sawyer& Bayfield co. low bid \$10.00-\$20.00. Used \$20.00/cy * 137 cy=\$2740 Salvage Topsoil 23sy * \$6.00 = \$138 (20141209022) Seed #20 .6lbs * \$20.00 = \$12 (20140610020) Temp Seed 1.2lbs * \$10.00 = \$12 (20140610020) Fertilizer Type B .1cwt * \$200.00 = \$20 (20140610020) Mulch 23sy * \$0.55 = \$13 (20141209022) TOTAL \$2935 Rnd to \$3000	
205.9015.S	07. SW & NE Quad USH 8/STH 35, City of St Croix Falls	1	LS	\$2,500.00	\$2,500.00	0.66%	-	-	-	-	-	-	Searched Common Exc range 0-200 cy. Project in Rusk, Sawyer& Bayfield co. low bid \$10.00-\$20.00. Used \$20.00/cy * 101 cy=\$2020 Salvage Topsoil 62sy * \$6.00 = \$372 (20141209022) Seed #20 1lbs * \$20.00 = \$20 (20140610020) Temp Seed 2lbs * \$10.00 = \$20 (20140610020) Fertilizer Type B .11cwt * \$200.00 = \$20 (20140610020) Mulch 62sy * \$0.55 = \$34 (20141209022) TOTAL \$2486 Rnd to \$2500	
208.1100	Select Borrow	101	CY	\$19.00	\$1,919.00	0.51%	\$19.30	\$14.48	-	\$9.95	-	-	Used Estimator value. Set Qty Range 0 to 500 cy. Found item in Bayfield County at 486 cy. Price \$9.95 to \$19.00. Used higher unit price due to smaller quantity.	
305.0115	Base Aggregate Dense 3/4-inch	56	CY	\$50.00	\$2,800.00	0.74%	-	\$63.33	-	-	-	-	Used BidX value. Set Qty Range 0 to 50 cy. Found item in Brown & Taylor County at 10-24 cy. Low bid price \$45.00 to \$50.00. Used \$50.00.	

								Northwest	Significant Item	Wide				
305.0125	Base Aggregate Dense 1 1/4-inch	432	CY	\$25.00	\$10,800.00	2.84%	\$15.59	\$35.00	Significant Item	-	-	-	-	Used BidX value. Set Qty Range 25 to 200 cy. Found item state wide in four counties at 45-160 cy. Low bid price \$21.34 to \$34.00. Throw out high low bid and ave apprx \$23.30. Used \$25.00.
312.0115	Select Crushed Material	45	CY	\$40.00	\$1,800.00	0.47%	\$32.19	\$39.91	-	-	-	-	-	Used BidX value. Set Qty Range 25 to 200 cy. Found item state wide in four counties at 36-60 cy. Low bid price \$22.00 to \$60.00. Used average round to \$40.00
405.0100	Coloring Concrete Red	79	CY	\$72.00	\$5,688.00	1.50%	\$63.33	\$71.99	-	-	-	-	-	Used BidX value. Set Qty Range 50 to 100 cy. Found item state wide in six counties at 56-100 cy. Low bid price \$56.00 to \$100.00. Used average round to \$72.00
415.0080	Concrete Pavement 8-inch	281	SY	\$75.00	\$21,075.00	5.55%	\$49.63	\$55.36	Significant Item	-	-	-	-	Used Estimator value. Set Qty Range 50 to 200 cy. Found item in Barron County at 145 sy. Price \$45.54 - \$75.00. Used Bidx high bid price due smaller qty at three different locations. Pavt at three locations of 55, 87, & 138 sy.
416.0610	Drilled Tie Bars	509	Each	\$10.00	\$5,090.00	1.34%	\$7.40	\$13.17	-	-	-	-	-	Used BidX value. Set qty range from 50 to 300. Found item in Ashland,Barron & Rusk County at 51-275 each. Low bid price range \$5.00 - \$15.00. Project has two locations at 48 and 294 bars each. Appears most bids treanded at \$10 so that value was used.
455.0605	Tack Coat	62	GAL	\$10.00	\$620.00	0.16%	\$7.10	\$13.17	-	-	-	-	-	Reviewed bids with projects less than 50 gallons via BidX. Appeared that bids were based off of \$150 per location. 4 locations require tack. \$600.00/60 gallons = \$10/gal
465.0105	Asphaltic Surface	238	Ton	\$140.00	\$33,320.00	8.77%	\$106.55	\$147.73	Significant Item	-	\$175.68	-	-	Used weighted ave based on BidX. Set qty range from 20 to 200. Found item in Ashland,Barron,Bayfied,Sawyer & Rusk County at 20-145 ton. Low bid price range \$109.87 - \$175.68. Project has four locations at 14,21,44 and 158 tons. Used weighted average because tonage at each location varied so much.
465.0315	Asphaltic Flumes	13	SY	\$70.00	\$910.00	0.24%	\$68.14	\$80.25	-	-	-	-	-	BidX low bid average \$60.31. Set qty range 0-15 SY. Found item in Ashland,Rusk,Sawyer & Wasburn County. Used Estimator value rounded to nearest \$10 due to low quantity.
522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-inch	1	Each	\$700.00	\$700.00	0.18%	\$696.65	\$673.96	-	-	-	-	-	Used BidX value. Set qty range 0-5 SY. Found item in Ashland & Barron County. Used ave value rounded to nearest \$100 due to low quantity.
601.0405	Concrete Curb & Gutter 18-inch Type A	252	LF	\$23.00	\$5,796.00	1.53%	\$17.00	\$23.09	Significant Item	-	-	-	-	Used BidX value. Set qty range 200-400 LF. Found item in Ashland & Burnett County. Rounded to nearest \$1.
601.0409	Concrete Curb & Gutter 30-inch Type A	63	LF	\$27.00	\$1,701.00	0.45%	\$30.85	\$41.93	-	-	-	-	-	Used BidX value. Set qty range 25-100 LF. Found item in Barron County, 50 lf @ \$26.87. Rounded to nearest \$1. Used ave of two bidx low bids is \$27.00.
601.0580	Concrete Curb & Gutter 4-inch Sloped 36-inch Type R	851	LF	\$19.70	\$16,764.70	4.41%	\$12.09	\$19.70	Significant Item	-	-	-	-	Used BidX value. Set qty range 700-1000 LF. Found item in Racine,Winnebago,St Croix, & Brown County. Low Bid ave \$15.63. St Croix project (20141209020) had two bids at \$15-\$21. Decided to use the Bidx ave value \$19.70.
602.0820	Concrete Curb & Gutter 4-inch Sloped 36-inch Type T	1089	LF	\$19.70	\$21,453.30	5.65%	\$13.73	\$19.68	Significant Item	-	-	-	-	Used BidX value. Set no qty range. Found item in Burnett and St Croix County. Low Bid ave \$19.04. St Croix project (20141209020) had two bids at \$19-\$20.50. Burnett project (20141111019) had three bids \$19.08,\$19.60 & \$20. Decided to use the Bidx ave value rounded to the nearest \$0.10.
602.0415	Concrete Sidewalk 6-inch	391	SF	\$5.00	\$1,955.00	0.51%	\$4.75	\$4.98	-	-	-	-	-	Set qty range 300-600 sf. Found item in Oneida,Dodge, St. Croix & Langlade County. Low Bid ave \$4.75. Langlade project (20140408027) had ten bids at \$4.75-\$5.50. Dodge project (20140513004) had three bids \$5.00,\$9.00 & \$9.00. Decided to use the Bidx avg of project 20140513004 of \$5.00.
602.0505	Curb Ramp Detectable Warning Field Yellow	40	SF	\$40.00	\$1,600.00	0.42%	\$38.98	\$40.20	-	-	-	-	-	Used Bidx ave value for Bayfield, barron,burnett,rusk,iron,sawyer,ashland,St Croix County. Price of \$40 per sf has been used forever.
602.2400	Concrete Safety Islands	6286	SF	\$7.50	\$47,145.00	12.41%	\$5.99	\$10.83	Significant Item	-	-	-	-	Set no BidX qty range. Found item state wide in seven counties, ave \$10.83. Low bid range \$5.00-15.00. Item does not specify depth. Reviewed plans and found depth range 6"-13". Project (20150310036 and 20150210023) specified 6", low bid on each project \$6.50. This project depth is 8". Noticed many projects call the median island "sidewalk". Therefore, I used Concrete Sidewalk 4-inch unit price + additional material costs.Estimate additional 76 cy @ \$100 for 8" concrete and 702 tie bars @ \$2.00 = \$7.43/sf. Round to \$7.50.
608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-inch	32	LF	\$60.00	\$1,920.00	0.51%	\$60.40	\$51.14	-	-	-	-	-	Used Estimator value. Set qty range 0-50 lf. Found item in Sawyer, Barron and St Croix County. Low Bid ave \$56.00. Decided to use Estimator price rounded to nearest \$1.00.
611.0530	Manhole Covers Type J	1	Each	\$500.00	\$500.00	0.13%	\$449.35	\$503.35	-	-	-	\$438.00	-	Used BidX value. Set qty range 1-5 each. Found item in Burnett,Barron and St Croix County. Low Bid ave \$455.86. Decided to use the Bidx ave value rounded to the nearest \$10.00.
611.0627	Inlet Covers Type HM	1	Each	\$575.00	\$575.00	0.15%	\$557.51	\$576.40	-	-	-	-	-	Used BidX value. Set qty range 1-5 each. Found item in St Croix County. Low bid \$500.00. Decided to use the Bidx ave value rounded to the nearest \$5.00.
611.0636	Inlet Covers Type HM-S	3	Each	\$605.00	\$1,815.00	0.48%	\$576.92	\$604.44	-	-	-	-	-	Used BidX value. Set qty range 1-5 each. Found item state widein four counties. Low bid \$419. Decided to use the Bidx ave value rounded to the nearest \$5.00.
611.2004	Manholes 4-FT Diameter	1	Each	\$1,575.00	\$1,575.00	0.41%	\$1,976.92	\$1,768.58	-	-	-	\$1,434.00	-	Used BidX value. Set qty range 1-5 each. Found item in Barron and St Croix County. Low bid \$1085 - \$2015.00, ave \$1573.00. Decided to use the Bidx low bid ave value rounded to the nearest \$5.00.
611.8115	Adjusting Inlet Covers	1	Each	\$410.00	\$410.00	0.11%	\$463.34	\$355.00	-	-	\$355.00	-	-	Set BidX qty range from 0-10 in Ashland,Barron,Rusk,Polk,Burnett,Bayfield,St.Croix counties. One project in Barron (20141209024) had a quantity of 10 EA with one bidder at \$355.00. Took average of BidX and Estimator results and rounded to the nearest \$10.00.
619.1000	Mobilization	1	Each	\$49,000.00	\$49,000.00	12.90%	-	-	Significant Item	-	-	-	-	NWBE completed the design of Region Wide SPGB bullnose treatments at 32 locations on the USH 53 corridor between Eau Claire and Gordon. The multiple locations seem similar to this project. Proposal 20120710026 (Proj. 1190-00-63) Low Bidder Mobilization = 11.1%, No. 2 Bidder Mobilization = 19.3%. This project has a larger variety of items, therfore used an ave. 15.2% rounded to \$1000. WisDOT historical mobilization calculator shows from 2009 to the present 15.6% of the project have mobilization costs of 10% or higher.

Northwest Region Wide													
620.0300	Concrete Median Sloped Nose	649	SF	\$8.70	\$5,646.30	1.49%	\$8.02	\$8.71	-	-	\$8.00	-	Used BidX value. Set qty range 0-100 sf. Found item in Barron and St Croix County. Decided to use the Bidx ave value rounded to the nearest \$0.10.
628.1504	Silt Fence	588	LF	\$2.25	\$1,323.00	0.35%	\$2.13	\$2.12	-	-	-	-	Used BidX value. Set qty range 200-500 sf. Found item in Barron,Rusk,Sawyer and Washburn County. Bidx price range \$1.75 - \$3.00. Decided to use the Bidx ave value rounded to \$2.25.
628.1520	Silt Fence Maintenance	588	LF	\$0.10	\$58.80	0.02%	\$0.08	\$0.01	-	-	-	-	Used Estimator value. Set qty range 200-500 sf. Found item in Barron,Sawyer and Washburn County. Estimator value rounded to \$0.10.
628.1905	Mobilization Erosion Control	9	Each	\$250.00	\$2,250.00	0.59%	\$166.70	\$256.08	-	-	-	-	Used BidX value. Set qty range 5-10 each. Found item in Bayfield,Iron,Barron,Burnett, Sawyer and St Croix County. Bidx price range \$1-\$600. Decided to use the Bidx ave value rounded to \$250.
628.1910	Mobilization Emergency Erosion Control	6	Each	\$200.00	\$1,200.00	0.32%	\$75.13	\$190.35	-	-	-	-	Used BidX value. Set qty range 5-10 each. Found item in Bayfield,Barron,Burnett, and St Croix County. Bidx price range \$1-\$525. Decided to use the Bidx ave value rounded to \$200 due to the various locations, some remote.
628.2004	Erosion Mat Class I Type B	145	SY	\$2.00	\$290.00	0.08%	\$1.56	\$1.91	-	-	-	-	Used BidX value. Set qty range 100-300 sy. Found item in Ashland, and St Croix County. Bidx price range \$1.45-\$5.00. Decided to use the Bidx ave value rounded to \$2.00.
628.7015	Inlet Protection Type C	10	Each	\$50.00	\$500.00	0.13%	\$50.13	\$48.00	-	-	-	\$38.00	Used BidX value. Set qty range 0-20 each. Found item in Ashland,Barron,Rusk,Sawyer and St Croix County. Bidx price range \$35-71.98 Decided to use the Bidx ave value rounded to \$50.
628.7504	Temporary Ditch Checks	60	LF	\$8.00	\$480.00	0.13%	\$8.86	\$7.74	-	-	-	-	Used BidX value. Set qty range 40-80 lf. Found item in Bayfied,Rusk,Sawyer,Iron and St Croix County. Bidx price range \$5-\$10. Decided to use the Bidx ave value rounded to \$8.
628.7555	Culvert Pipe Checks	13	Each	\$30.00	\$390.00	0.10%	\$49.19	\$28.10	-	-	-	-	Used BidX value. Set qty range 0-10 each. Found item in Ashland,Barron,Rusk and St Croix County. Bidx price range \$10.55-\$75. Decided to use the Bidx ave value rounded to \$30.
628.7570	Rock Bags	11	Each	\$12.00	\$132.00	0.03%	\$10.56	\$12.00	-	-	-	-	Used BidX value. Set qty range 0-10 each. Found item in Sawyer County. One bidder.
634.0805	Posts Tubular Steel 2x2-inch x 5-FT	4	Each	\$110.00	\$440.00	0.12%	-	\$109.89	-	-	-	-	Used BidX value. Set qty range 0-10 each. Found item state wide in Douglas and Waukesha County. Bidx price range \$100-\$120. Decided to use the Bidx ave value rounded to \$110.
634.0809	Posts Tubular Steel 2x2-inch x 9.5-FT	1	Each	\$110.00	\$110.00	0.03%	-	\$108.87	-	-	-	-	Used BidX value. Set qty range 0-10 each. Found item state wide in Portage and Rock County. Bidx price range \$100-\$115. Decided to use the Bidx ave value rounded to \$110.
634.0811	Posts Tubular Steel 2x2-inch x 11-FT	24	Each	\$120.00	\$2,880.00	0.76%	\$112.28	\$117.57	-	-	-	-	Used BidX value. Set qty range 10-50 each. Found item in Douglas and Washurn County. Bidx price range \$100-\$130. Decided to use the Bidx ave value rounded to \$120.
637.2210	Signs Type II Reflective H	229.83	SF	\$21.50	\$4,941.35	1.30%	\$17.60	\$21.35	-	-	-	-	Used BidX value. Set qty range 10-100 sf since qty at each location varied from 10.8-66.3 sf. Found item in Barron,St Croix, Ashland and Bayfield County. Bidx price range \$15.50-\$28.00. Decided to use the Bidx ave value rounded to \$21.50.
638.2602	Removing Signs Type II	29	Each	\$40.00	\$1,160.00	0.31%	\$20.64	\$38.80	-	-	-	-	Used BidX value. Set qty range 0-10 each since qty at each location varied from 2-7 each. Found item in Barron,St Croix, Ashland,Bayfield,Sawyer and Rusk County. Bidx price range \$15-\$125. Decided to use the Bidx ave value rounded to \$40.
638.3000	Removing Small Sign Supports	27	Each	\$30.00	\$810.00	0.21%	\$21.30	\$27.47	-	-	-	\$18.00	Used BidX value. Set qty range 0-10 each since qty at each location varied from 2-7 each. Found item in Barron,Ashland,Sawyer and Rusk County. Bidx price range \$15-\$50. Decided to use the Bidx ave value rounded to \$30.
643.0100	Traffic Control Project	1	Each	\$10,500.00	\$10,500.00	2.76%	-	-	Significant Item	-	-	\$19.00	BidX search for small bridge or culvert projects seemed to be similar to each location. Found region wide culvert replacement (20141209010) and (20140408023). Each had three locations. Low bids \$2000 and \$2900 respectively. Douglas Co bridge (20150310039), \$3000. Green Lake Co. bridge (20150714007), \$1800. Due to remoteness of some of the locations used a value of \$1500 per location.Therefore total cost \$10500.
643.0300	Traffic Control Drums	4621	Day	\$1.00	\$4,621.00	1.22%	\$0.52	\$1.00	-	-	-	\$20.00	Used BidX value. Set qty range 200-2000 day day since qty at each location varied from 210-1659 day. Found item in Bayfield,Sawyer and St Croix. Bidx price range \$.50-\$1.00. Decided to use the Bidx ave value.
643.0420	Traffic Control Barricades Type III	252	Day	\$3.00	\$756.00	0.20%	\$1.27	\$3.00	-	-	-	\$21.00	Used BidX value. Set qty range 0-100 day since qty at each location varied from 21-84 day. Found item in Barron,Bayfield,and Iron County. Bidx price range \$1-\$5. Decided to use the Bidx ave.
643.7050	Traffic Control Warning Lights Type A	504	Day	\$0.90	\$453.60	0.12%	\$0.48	\$0.90	-	-	-	-	Set qty range 0-500 day, searched county for reigon wide. 6 projects with lows ranging from \$0.40 - \$1.25. BidX average is \$0.90 of the 10 bids. Used BidX value.
643.0900	Traffic Control Signs	1827	Day	\$1.00	\$1,827.00	0.48%	\$1.01	\$0.83	-	-	-	\$22.00	Used BidX value. Set qty range 100-800 day since qty at each location varied from174-765 day. Found item in Barron,Ashland,and Rusk County. Bidx price range \$0.35-\$2.00. After reviewing etailed bid results, decided to use the estimator price rounded to \$1.
646.0600	Removing Pavement Markings	1008	LF	\$1.35	\$1,360.80	0.36%	\$1.20	\$1.55	-	-	-	-	Set qty range in BidX 800-1200. Found 1 porject in Barron county (20150512051, 920 LF) Avg of 3 bids \$1.73, low was \$1.55. Used avg of low bid and estimator regresstion and rounded to the nearest \$0.05.
647.0456	Pavment Marking Curb Epoxy	80	LF	\$7.25	\$580.00	0.15%	\$6.14	\$7.25	-	-	-	\$23.00	Used BidX value. Set qty range 0-100 lf since qty at each location varied from 42-82 lf. Found item in St Croix County. Bidx price range \$6.75-\$8.00. Decided to use the Bidx ave.
647.0606	Pavement Marking Island Nose Epoxy	10	Each	\$100.00	\$1,000.00	0.26%	\$98.97	-	-	-	-	\$24.00	Used BidX value. Set qty range 0-5 each since qty at each location varied from 3-5 each. Found item in St Croix,Barron,Burnett, and Rusk County. Bidx price range \$80-\$100. Decided to use the Estimator value rounded to \$100.

647.0796	Pavement Marking Crosswalk Epoxy 24-Inch	168	LF	\$10.40	\$1,747.20	0.46%	\$10.89	\$9.83	-	-	-	-	Set qty range from 100 - 200. Lows ranged from \$8.80 - \$14.00. Average of 9 bids = \$9.83. Trend around \$10.00. Used avg of estimator and bidX and rounded to nearest \$0.05.
650.4500	Construction Staking Subgrade	1183	LF	\$0.20	\$236.60	0.06%	\$0.13	\$0.20	-	-	-	\$25.00	Used BidX value. Set qty range 100-500 If since qty at each location varied from 177-372 If. Found item in St Croix,Sawyer,Rusk and Ashland County. Bidx price range \$.01-\$1.00. Decided to use the BidX ave value.
650.5000	Construction Staking Base	1183	LF	\$0.60	\$709.80	0.19%	\$0.62	\$0.58	-	-	-	\$26.00	Used BidX value. Set qty range 100-500 If since qty at each location varied from 177-372 If. Found item in St Croix,Sawyer and Rusk County. Bidx price range \$.01-\$2.00. Decided to use the BidX ave value rounded to \$0.60 due to low cost of item.
650.5500	Construction Staking Curb and Gutter	469	LF	\$3.10	\$1,453.90	0.38%	\$0.69	\$3.12	-	-	-	\$27.00	Set qty range 100-300 If since qty at each location varied from 120-281 If. Found item in St Croix,Bayfield,Sawyer, and Ashland County. Bidx price range \$1.75-\$5.00. Decided to use the BidX ave value rounded to nearest \$0.10.
650.8500	Construction Staking Electrical Installations (project) 01. 1000-08-88	1	LS	\$200.00	\$200.00	0.05%	None	None	-	-	-	\$28.00	BidX info available from 1/1/2015-9/29/2015. Price range \$250-\$18000. Location #2 is only intersection where electrical installation staking is required. Work includes two concrete bases. Assume 3 hr total work @ \$60/hr=\$180. Round to \$200.
650.9920	Construction Staking Slope Stakes	1006	LF	\$1.40	\$1,408.40	0.37%	\$0.60	\$1.44	-	-	-	\$29.00	Set qty range 100-400 If since qty at each location varied from 175-372 If. Found item in St Croix,Sawyer,Rusk and Ashland County. Bidx price range \$0.80-\$3.00. Decided to use the BidX ave value rounded to nearest \$0.10.
653.0900	Adjusting Pole Boxes	6	Each	\$180.00	\$1,080.00	0.28%	\$216.19	\$180.00	-	-	-	\$30.00	Set qty range 0-10 each since qty at each location varied from 1-3 each Found item in St Croix, Ashland County. Bidx price range \$100-\$420. Decided to use the BidX ave value.
654.0106	Concrete Base Type 6	1	Each	\$650.00	\$650.00	0.17%	\$650.00	\$628.33	-	-	-	\$31.00	Set qty range 0-5 each since only have 1 each for project. Found item state wide in Rock,Dane and Sauk County. Bidx price range \$550-\$675. Price range in line with Estimator, therefore, used Estimator value.
654.0113	Concrete Base Type 13	1	Each	\$7,500.00	\$7,500.00	1.97%	\$6,090.10	\$7,032.67	Significant Item	-	-	\$32.00	Set qty range 0-1 each since only have 1 each for project. Found item state wide in Dane,Walworth,Outagamie and Racine County. Bidx price range \$5457-\$7500. Majority of BidX prices for one Type 13 base was \$7500, therefore used \$7500.
657.1355	Installing Poles Type 12	1	Each	\$1,300.00	\$1,300.00	0.34%	\$1,322.22	\$1,717.12	-	-	-	\$33.00	Set qty range 0-1 each since only have 1 each for project. Found item state wide in Walworth,Outagamie,Rock and Oneida County. Bidx price range \$892-\$2100. Since installation appears to be less complex used Estimator price rounded to nearest \$100.
657.1540	Installing Monotube Arms 40-FT	1	Each	\$1,100.00	\$1,100.00	0.29%	\$1,112.69	\$1,342.11	-	-	-	\$34.00	Set qty range 0-1 each since only have 1 each for project. Found item state wide in Walworth,Winnebago,Milwaukee, and dane County. Bidx price range \$280-\$2738. Since installation appears to be less complex used Estimator price rounded to nearest \$100.
690.0150	Sawing Asphalt	1876	LF	\$2.25	\$4,221.00	1.11%	\$1.02	\$2.29	-	-	-	\$35.00	Set qty range 200-400 If since qty at each location varied from 196-330 If. Found item in St Croix,Sawyer and Ashland County. Bidx price range \$0.50-\$3.65. Decided to use the BidX ave value rounded to nearest \$0.25.
690.0250	Sawing Concrete	1462	LF	\$2.75	\$4,020.50	1.06%	\$1.97	\$3.72	-	-	-	\$36.00	Set qty range 10-1200 If since qty at each location varied from 10-201 If. Found item in Barron,Bayfield,St Croix,Ashland,Burnett and Rusk County. Bidx price range \$2.75-\$6.42. Most of the low bid for the nine projects listed was \$2.75, therefore, used that value.
SPV.0090	01. Concrete Curb and Gutter Cure and Seal Treatment	2997	LF	\$0.60	\$1,798.20	0.47%	None	-	-	-	-	\$37.00	Set qty range 150-200 If since qty at each location varied from 176-1899 If. Searched for "Seal Treament", found item in Barron,Bayfield,St Croix,Ashland and Rusk County. Bidx price range \$0.10-\$1.00. BidX ave for the eight projects listed was \$0.60, therefore, used that value.
SPV.0090	02. Concrete Curb & Gutter 4-inch Sloped 36-inch Type D Modified	680	LF	\$22.00	\$14,960.00	3.94%	None	-	Significant Item	-	-	\$38.00	Qty at each location varied from 94-281 If. Searched for "Type D Modified", found item in Burnett County (530 If). Bidx price range \$13.00-\$25.50. Used \$22.00 (\$0.67 higher than average due to small qty at various locations.
SPV.0090	03. Concrete Curb Pedestrian Modified	104	LF	\$25.00	\$2,600.00	0.68%	None	-	-	-	-	\$39.00	Set qty range 30-200 If. Qty at one location 104 If. State wide search found item in numerous counties. Bidx price range \$10.70-\$100. Used Bidx ave rounded to nearest \$1.00.
SPV.0090	04. Construction Staking Select Crushed Material	180	LF	\$0.20	\$36.00	0.01%	None	\$0.20	-	-	-		Used same price as Construction staking subgrade. Used BidX value. Set qty range 100-500 If. Found item in St Croix,Sawyer,Rusk and Ashland County. Bidx price range \$.01-\$1.00. Decided to use the BidX ave value.
SPV.0105	Temporary Item of Wire and Conduit	1	LS	\$500.00	\$500.00	0.13%	None	-	-	-	-	\$40.00	Temopary value until SEH completes lighting and flashing beacon relocation design at Location #2.
SPV.0105	Salvage and Reset Light Pole Assembly	1	LS	\$1,360.00	\$1,360.00	0.36%	None	-	-	-	-	\$41.00	Assume 2 men @ 8 hr @\$60/hr + 200 mi @ \$2.00/mi for truck = \$1360.
SPV.0165	01. Concrete Safety Islands Cure and Seal Treatment	6295	SF	\$0.10	\$629.50	0.17%	None	\$0.10	-	-	-	-	Special Item. BidX search for cure by SF. Found (20150210023, 348 SF), price range \$0.10-\$0.12. Used \$0.10 due to trend.
SPV.0165	02. Concrete Median Sloped Nose Cure and Seal Treatment	649	SF	\$0.10	\$64.90	0.02%	None	\$0.10	-	-	-	-	Special Item. BidX search for cure by SF. Found (20150210023, 348 SF), price range \$0.10-\$0.12. Used \$0.10 due to trend.
SPV.0180	Geogrid	103	SY	\$4.00	\$412.00	0.11%			-				Special Item. BidX search for "Geogrid". Found (20140812002, 770 sy), price range \$2.50-\$3.00. Found (20150915002, 865 sy), price range \$3.00-\$5.00. Used \$4.00 due to lower quantity.
cat. 0025 items	Monotube pole, Type 12	1	LS	\$4,637.00	\$4,637.00	1.22%	None	-	-	-	-	-	Price Supplied by WISDOT
cat. 0025 items	Monotube mast arm, 55'	1	LS	\$5,193.00	\$5,193.00	1.37%	None	-	-	-	-	-	Price Supplied by WISDOT
					\$379,941.45	100.00%							