

# BOSHERTOWN AND FOX HILL SIGNAL IMPROVEMENTS

## PROJECT #17STR16

ITEM DESCRIPTION	UNIT	TOTAL QTY	Reinhold Electric		Gerstner Electric		Meyer Electric		Sachs Electric	
			UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST
<b>ROADWAY ITEMS</b>										
REMOVAL OF EXISTING IMPROVEMENTS	LS	1	\$21,000.00	\$21,000.00	\$37,074.00	\$37,074.00	\$10,500.00	\$10,500.00	\$19,535.00	\$19,535.00
CLASS A EXCAVATION	CY	130	\$25.00	\$3,250.00	\$19.44	\$2,527.20	\$44.00	\$5,720.00	\$60.00	\$7,800.00
EMBANKMENT IN PLACE (SPECIAL)	CY	70	\$40.00	\$2,800.00	\$28.08	\$1,965.60	\$60.00	\$4,200.00	\$53.50	\$3,745.00
TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	SY	360	\$28.00	\$10,080.00	\$7.56	\$2,721.60	\$10.00	\$3,600.00	\$18.00	\$6,480.00
CONCRETE PAVEMENT (8 IN. NON-REINF)	SY	30.0	\$109.00	\$3,270.00	\$86.40	\$2,592.00	\$100.00	\$3,000.00	\$86.00	\$2,580.00
2-GRATE INLET, W/SIDE INTAKE UNIT, UNTRAPPED	EA	2	\$3,200.00	\$6,400.00	\$3,672.00	\$7,344.00	\$2,500.00	\$5,000.00	\$3,325.00	\$6,650.00
CONCRETE MEDIAN	SY	7.5	\$230.00	\$1,725.00	\$118.80	\$891.00	\$200.00	\$1,500.00	\$255.00	\$1,912.50
CONCRETE ISLAND (MONOLITHIC)	CY	8.2	\$360.00	\$2,952.00	\$158.00	\$1,295.60	\$200.00	\$1,640.00	\$245.00	\$2,009.00
ROCK LINING	CY	12	\$194.00	\$2,328.00	\$97.20	\$1,166.40	\$80.00	\$960.00	\$131.00	\$1,572.00
CONCRETE GUTTER, TYPE B	LF	25	\$60.00	\$1,500.00	\$54.00	\$1,350.00	\$130.00	\$3,250.00	\$77.00	\$1,925.00
CURB AND GUTTER TYPE B	LF	352	\$51.00	\$17,952.00	\$41.05	\$14,449.60	\$45.00	\$15,840.00	\$36.00	\$12,672.00
MISC. TUBULAR MARKER - 18 INCH WHITE	EA	12	\$45.00	\$540.00	\$97.20	\$1,166.40	\$90.00	\$1,080.00	\$100.00	\$1,200.00
MOBILIZATION	LS	1	\$10,000.00	\$10,000.00	\$22,375.00	\$22,375.00	\$14,830.00	\$14,830.00	\$28,665.00	\$28,665.00
TRAFFIC CONTROL	LS	1	\$10,000.00	\$10,000.00	\$4,052.00	\$4,052.00	\$8,500.00	\$8,500.00	\$6,330.00	\$6,330.00
4 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS	LF	900	\$1.00	\$900.00	\$1.08	\$972.00	\$1.00	\$900.00	\$1.10	\$990.00
4 IN. YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS	LF	1,420	\$1.00	\$1,420.00	\$1.08	\$1,533.60	\$1.00	\$1,420.00	\$1.10	\$1,562.00
COLD APPLIED TAPE PAVEMENT MARKING, 24 IN. WHITE, IN GROOVE	LF	160	\$25.00	\$4,000.00	\$27.00	\$4,320.00	\$25.00	\$4,000.00	\$27.75	\$4,440.00
COLD APPLIED TAPE PAVEMENT MARKING, LEFT/RIGHT ARROW, IN GROOVE	EA	6	\$200.00	\$1,200.00	\$378.00	\$2,268.00	\$200.00	\$1,200.00	\$222.00	\$1,332.00
COLD APPLIED TAPE PAVEMENT MARKING, COMBINATION STR/LT/RT, IN GROOVE	EA	2	\$500.00	\$1,000.00	\$702.00	\$1,404.00	\$500.00	\$1,000.00	\$555.00	\$1,110.00
COLD APPLIED TAPE PAVEMENT MARKING, 12 IN WHITE, YIELD LINE TRIANGLES, IN GROOVE	EA	15	\$30.00	\$450.00	\$37.80	\$567.00	\$36.00	\$540.00	\$33.00	\$495.00
CONSTRUCTION SURVEYING/STAKING	LS	1	\$0.00	\$0.00	\$2,566.00	\$2,566.00	\$4,000.00	\$4,000.00	\$3,775.00	\$3,775.00
12" CLASS III REINFORCED CONCRETE PIPE CULVERT	LF	39	\$85.00	\$3,315.00	\$167.40	\$6,528.60	\$80.00	\$3,120.00	\$115.00	\$4,485.00
12" FLARED END SECTION	EA	2	\$700.00	\$1,400.00	\$648.00	\$1,296.00	\$600.00	\$1,200.00	\$880.00	\$1,760.00
SODDING	SY	720	\$10.00	\$7,200.00	\$12.96	\$9,331.20	\$12.00	\$8,640.00	\$7.30	\$5,256.00
TOPSOIL	CY	360	\$30.00	\$10,800.00	\$5.40	\$1,944.00	\$33.00	\$11,880.00	\$1.10	\$396.00
ALTERNATE DITCH CHECK	LF	36	\$10.00	\$360.00	\$1.00	\$36.00	\$8.00	\$288.00	\$9.40	\$338.40
CURB INLET CHECK	EA	6	\$15.00	\$90.00	\$27.00	\$162.00	\$225.00	\$1,350.00	\$55.00	\$330.00
SEDIMENT REMOVAL	CY	1	\$70.00	\$70.00	\$1.00	\$1.00	\$58.00	\$58.00	\$280.00	\$280.00
SILT FENCE	LF	290	\$1.00	\$290.00	\$1.00	\$290.00	\$4.00	\$1,160.00	\$3.75	\$1,087.50
U-CHANNEL POST, 3 LB	LF	75	\$10.00	\$750.00	\$25.92	\$1,944.00	\$24.00	\$1,800.00	\$26.50	\$1,987.50
SH-FLAT SHEET	SF	75	\$30.00	\$2,250.00	\$34.15	\$2,561.25	\$32.00	\$2,400.00	\$35.50	\$2,662.50
<b>SUB TOTAL ROADWAY</b>				\$129,292.00		\$138,695.05		\$124,576.00		\$135,362.40

<b>PEDESTRIAN ITEMS</b>										
TYPE 5 AGGREGATE FOR BASE (6 IN. THICK)	SY	69	\$17.00	<b>\$1,173.00</b>	\$7.60	<b>\$524.40</b>	\$15.00	<b>\$1,035.00</b>	\$74.50	<b>\$5,140.50</b>
BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TON	14.9	\$337.00	<b>\$5,021.30</b>	\$216.00	<b>\$3,218.40</b>	\$275.00	<b>\$4,097.50</b>	\$267.00	<b>\$3,978.30</b>
CONCRETE SIDEWALK, CURB RAMP (7" THICK)	SY	150	\$88.00	<b>\$13,200.00</b>	\$118.80	<b>\$17,820.00</b>	\$105.00	<b>\$15,750.00</b>	\$95.65	<b>\$14,347.50</b>
TRUNCATED DOMES FOR CURB RAMPS (NEW CONSTRUCTION)	SF	175	\$20.00	<b>\$3,500.00</b>	\$32.40	<b>\$5,670.00</b>	\$20.00	<b>\$3,500.00</b>	\$23.25	<b>\$4,068.75</b>
CONCRETE SIDEWALK (4" THICK)	SY	100	\$110.00	<b>\$11,000.00</b>	\$54.00	<b>\$5,400.00</b>	\$50.00	<b>\$5,000.00</b>	\$80.00	<b>\$8,000.00</b>
TYPE 2 PREFORMED MARKING TAPE (GROOVED), 6 IN., WHITE	LF	230	\$6.00	<b>\$1,380.00</b>	\$6.75	<b>\$1,552.50</b>	\$6.00	<b>\$1,380.00</b>	\$6.70	<b>\$1,541.00</b>
12" CORRUGATED GALVANIZED METAL PIPE	LF	15	\$68.00	<b>\$1,020.00</b>	\$64.80	<b>\$972.00</b>	\$76.00	<b>\$1,140.00</b>	\$130.00	<b>\$1,950.00</b>
12" FALRED END SECTION (METAL)	EA	2	\$445.00	<b>\$890.00</b>	\$486.00	<b>\$972.00</b>	\$400.00	<b>\$800.00</b>	\$355.00	<b>\$710.00</b>
DECORATIVE FENCE	LF	24	\$110.00	<b>\$2,640.00</b>	\$162.00	<b>\$3,888.00</b>	\$150.00	<b>\$3,600.00</b>	\$170.00	<b>\$4,080.00</b>
<i>SUB TOTAL PEDESTRIAN</i>				\$39,824.30		\$40,017.30		\$36,302.50		\$43,816.05
<b>SIGNAL ITEMS</b>										
LIGHTING POLE, 30 FT., TYPE AT	EA	3	\$2,126.00	<b>\$6,378.00</b>	\$2,502.00	<b>\$7,506.00</b>	\$2,100.00	<b>\$6,300.00</b>	\$ 2,685.00	<b>\$8,055.00</b>
BRACKET ARM, 10 FT.	EA	3	\$700.00	<b>\$2,100.00</b>	\$1,065.00	<b>\$3,195.00</b>	\$465.00	<b>\$1,395.00</b>	\$1,075.00	<b>\$3,225.00</b>
LUMINAIRE, LED-A	EA	3	\$400.00	<b>\$1,200.00</b>	\$471.00	<b>\$1,413.00</b>	\$490.00	<b>\$1,470.00</b>	\$445.00	<b>\$1,335.00</b>
WIRE, 8 AWG, BARE NEUTRAL	LF	510	\$1.00	<b>\$510.00</b>	\$1.10	<b>\$561.00</b>	\$1.00	<b>\$510.00</b>	\$1.60	<b>\$816.00</b>
POLE FOUNDATION (30 FT. MOUNTING HEIGHT)	EA	3	\$1,325.00	<b>\$3,975.00</b>	\$804.00	<b>\$2,412.00</b>	\$810.00	<b>\$2,430.00</b>	\$1,000.00	<b>\$3,000.00</b>
PAD MOUNTED 120V/240V POWER SUPPLY & LIGHTING CONTROLLER W/ UNINTERRUPTIBLE POWER SUPPLY	EA	1	\$13,110.00	<b>\$13,110.00</b>	\$10,605.00	<b>\$10,605.00</b>	\$13,883.00	<b>\$13,883.00</b>	\$17,740.00	<b>\$17,740.00</b>
ADJUST EXISTING STREET LIGHT AND CONDUIT	EA	1	\$1,800.00	<b>\$1,800.00</b>	\$1,014.00	<b>\$1,014.00</b>	\$1,500.00	<b>\$1,500.00</b>	\$3,430.00	<b>\$3,430.00</b>
SIGNAL HEAD, TYPE 3S	EA	4	\$742.00	<b>\$2,968.00</b>	\$668.00	<b>\$2,672.00</b>	\$680.00	<b>\$2,720.00</b>	\$800.00	<b>\$3,200.00</b>
SIGNAL HEAD, TYPE 3B	EA	4	\$1,011.00	<b>\$4,044.00</b>	\$900.00	<b>\$3,600.00</b>	\$985.00	<b>\$3,940.00</b>	\$1,145.00	<b>\$4,580.00</b>
SIGNAL HEAD, TYPE 4B	EA	2	\$1,136.00	<b>\$2,272.00</b>	\$1,008.00	<b>\$2,016.00</b>	\$1,106.00	<b>\$2,212.00</b>	\$1,410.00	<b>\$2,820.00</b>
SIGNAL HEAD, TYPE 1S PEDESTRIAN	EA	4	\$563.00	<b>\$2,252.00</b>	\$470.00	<b>\$1,880.00</b>	\$426.00	<b>\$1,704.00</b>	\$610.00	<b>\$2,440.00</b>
SH-FLAT SHEET - SIGNAL SIGN	SF	34	\$30.00	<b>\$1,020.00</b>	\$25.40	<b>\$863.60</b>	\$59.00	<b>\$2,006.00</b>	\$130.00	<b>\$4,420.00</b>
SIGNAL SIGN, MOUNTING HARDWARE	EA	8	\$60.00	<b>\$480.00</b>	\$32.50	<b>\$260.00</b>	\$115.00	<b>\$920.00</b>	\$180.00	<b>\$1,440.00</b>
POST, SIGNAL 8 FT.	EA	1	\$938.00	<b>\$938.00</b>	\$840.00	<b>\$840.00</b>	\$790.00	<b>\$790.00</b>	\$950.00	<b>\$950.00</b>
POST, TYPE C, 20 FT. ARM	EA	1	\$6,190.00	<b>\$6,190.00</b>	\$5,948.00	<b>\$5,948.00</b>	\$6,394.00	<b>\$6,394.00</b>	\$5,860.00	<b>\$5,860.00</b>
POST, TYPE C, 35 FT. ARM	EA	1	\$7,955.00	<b>\$7,955.00</b>	\$7,655.00	<b>\$7,655.00</b>	\$8,338.00	<b>\$8,338.00</b>	\$7,655.00	<b>\$7,655.00</b>
POST, TYPE B, LONGEST ARM 35 FT.	EA	1	\$16,185.00	<b>\$16,185.00</b>	\$14,986.00	<b>\$14,986.00</b>	\$16,731.00	<b>\$16,731.00</b>	\$14,940.00	<b>\$14,940.00</b>
CONTROLLER ASSEMBLY HOUSING, KEYBOARD ENTRY, 8-PHASE NEMA CONTROLLER	EA	1	\$16,260.00	<b>\$16,260.00</b>	\$15,003.00	<b>\$15,003.00</b>	\$15,826.00	<b>\$15,826.00</b>	\$13,670.00	<b>\$13,670.00</b>
VIDEO DETECTION SYSTEM	EA	1	\$37,617.00	<b>\$37,617.00</b>	\$33,177.00	<b>\$33,177.00</b>	\$36,982.00	<b>\$36,982.00</b>	\$36,630.00	<b>\$36,630.00</b>
CONDUIT, 2 IN. TRENCH WITH TRACER WIRE	LF	70	\$10.00	<b>\$700.00</b>	\$7.60	<b>\$532.00</b>	\$9.00	<b>\$630.00</b>	\$28.85	<b>\$2,019.50</b>
CONDUIT, 3 IN. TRENCH WITH TRACER WIRE	LF	220	\$10.00	<b>\$2,200.00</b>	\$10.00	<b>\$2,200.00</b>	\$9.00	<b>\$1,980.00</b>	\$18.95	<b>\$4,169.00</b>
CONDUIT, 2 IN., PUSHED WITH TRACER WIRE	LF	140	\$15.00	<b>\$2,100.00</b>	\$16.20	<b>\$2,268.00</b>	\$14.50	<b>\$2,030.00</b>	\$20.70	<b>\$2,898.00</b>
CONDUIT, 3 IN., PUSHED WITH TRACER WIRE	LF	590	\$18.00	<b>\$10,620.00</b>	\$17.30	<b>\$10,207.00</b>	\$18.00	<b>\$10,620.00</b>	\$20.65	<b>\$12,183.50</b>
CONDUIT, 4 IN., PUSHED WITH TRACER WIRE	LF	210	\$18.00	<b>\$3,780.00</b>	\$17.80	<b>\$3,738.00</b>	\$19.50	<b>\$4,095.00</b>	\$21.75	<b>\$4,567.50</b>
CABLE, 10 AWG 1 CONDUCTOR, POLE AND BRACKET	LF	290	\$0.25	<b>\$72.50</b>	\$0.54	<b>\$156.60</b>	\$0.80	<b>\$232.00</b>	\$2.40	<b>\$696.00</b>
CABLE, 8 AWG 1 CONDUCTOR, POWER	LF	1,140	\$0.85	<b>\$969.00</b>	\$1.10	<b>\$1,254.00</b>	\$1.00	<b>\$1,140.00</b>	\$2.10	<b>\$2,394.00</b>
CABLE, 16 AWG 2 CONDUCTOR	LF	520	\$1.00	<b>\$520.00</b>	\$0.86	<b>\$447.20</b>	\$0.90	<b>\$468.00</b>	\$1.80	<b>\$936.00</b>
CABLE, 16 AWG 3 CONDUCTOR	LF	770	\$1.00	<b>\$770.00</b>	\$1.08	<b>\$831.60</b>	\$0.95	<b>\$731.50</b>	\$1.55	<b>\$1,193.50</b>
CABLE, 16 AWG 5 CONDUCTOR	LF	530	\$1.50	<b>\$795.00</b>	\$1.03	<b>\$545.90</b>	\$1.05	<b>\$556.50</b>	\$2.40	<b>\$1,272.00</b>
CABLE, 16 AWG 7 CONDUCTOR	LF	2,010	\$1.50	<b>\$3,015.00</b>	\$1.57	<b>\$3,155.70</b>	\$1.15	<b>\$2,311.50</b>	\$2.20	<b>\$4,422.00</b>
FIBER OPTIC CABLE, 24 - FIBER, SINGLE MODE	LF	310	\$3.00	<b>\$930.00</b>	\$3.46	<b>\$1,072.60</b>	\$3.90	<b>\$1,209.00</b>	\$3.20	<b>\$992.00</b>
PULL BOX, PREFORMED CLASS 1	EA	4	\$1,000.00	<b>\$4,000.00</b>	\$827.00	<b>\$3,308.00</b>	\$965.00	<b>\$3,860.00</b>	\$1,670.00	<b>\$6,680.00</b>
PULL BOX, PREFORMED CLASS 2	EA	3	\$1,200.00	<b>\$3,600.00</b>	\$1,121.00	<b>\$3,363.00</b>	\$1,300.00	<b>\$3,900.00</b>	\$2,175.00	<b>\$6,525.00</b>

PULL BOX, PREFORMED CLASS 3	EA	1	\$1,800.00	<b>\$1,800.00</b>	\$1,533.00	<b>\$1,533.00</b>	\$1,670.00	<b>\$1,670.00</b>	\$3,680.00	<b>\$3,680.00</b>
BASE, CONCRETE	CY	12	\$1,545.00	<b>\$18,540.00</b>	\$1,215.00	<b>\$14,580.00</b>	\$1,200.00	<b>\$14,400.00</b>	\$1,340.00	<b>\$16,080.00</b>
POST, SIGNAL 4 FT.	EA	3	\$847.00	<b>\$2,541.00</b>	\$810.00	<b>\$2,430.00</b>	\$800.00	<b>\$2,400.00</b>	\$885.00	<b>\$2,655.00</b>
ILLUMINATED STREET NAME SIGNS	EA	4	\$3,565.00	<b>\$14,260.00</b>	\$3,311.00	<b>\$13,244.00</b>	\$3,270.00	<b>\$13,080.00</b>	\$3,460.00	<b>\$13,840.00</b>
PROJECT IDENTIFICATION SIGN	SF	12	\$30.00	<b>\$360.00</b>	\$84.30	<b>\$1,011.60</b>	\$170.00	<b>\$2,040.00</b>	\$585.00	<b>\$7,020.00</b>
NETWORK CONNECTED SIGNAL MALFUNCTION MANAGEMENT UNIT	EA	1	\$1,300.00	<b>\$1,300.00</b>	\$1,237.00	<b>\$1,237.00</b>	\$1,600.00	<b>\$1,600.00</b>	\$1,430.00	<b>\$1,430.00</b>
FIBER OPTIC PIGTAILS, SINGLE MODE	EA	24	\$20.00	<b>\$480.00</b>	\$90.00	<b>\$2,160.00</b>	\$56.00	<b>\$1,344.00</b>	\$19.00	<b>\$456.00</b>
WALL-MOUNTED INTERCONNECT CENTER	EA	2	\$650.00	<b>\$1,300.00</b>	\$1,805.00	<b>\$3,610.00</b>	\$1,000.00	<b>\$2,000.00</b>	\$845.00	<b>\$1,690.00</b>
FUSION SPLICE, SINGLE MODE	EA	66	\$27.00	<b>\$1,782.00</b>	\$90.00	<b>\$5,940.00</b>	\$49.00	<b>\$3,234.00</b>	\$42.00	<b>\$2,772.00</b>
UNDERGROUND SPLICE ENCLOSURE	EA	1	\$1,000.00	<b>\$1,000.00</b>	\$911.00	<b>\$911.00</b>	\$800.00	<b>\$800.00</b>	\$1,305.00	<b>\$1,305.00</b>
FIBER OPTIC JUMPERS	EA	16	\$20.00	<b>\$320.00</b>	\$90.00	<b>\$1,440.00</b>	\$36.00	<b>\$576.00</b>	\$35.00	<b>\$560.00</b>
CCTV CAMERA	EA	1	\$7,998.00	<b>\$7,998.00</b>	\$3,984.00	<b>\$3,984.00</b>	\$7,500.00	<b>\$7,500.00</b>	\$7,205.00	<b>\$7,205.00</b>
HARDENED LAYER 2 ETHERNET SWITCH	EA	2	\$2,750.00	<b>\$5,500.00</b>	\$1,992.00	<b>\$3,984.00</b>	\$2,939.00	<b>\$5,878.00</b>	\$1,405.00	<b>\$2,810.00</b>
RECTANGULAR RAPID FLASHING BEACON ASSEMBLY, DOUBLE SIDED	EA	2	\$4,650.00	<b>\$9,300.00</b>	\$5,752.00	<b>\$11,504.00</b>	\$6,394.00	<b>\$12,788.00</b>	\$6,990.00	<b>\$13,980.00</b>
DETECTOR, PUSH BUTTON, INSTALLED	EA	4	\$241.00	<b>\$964.00</b>	\$176.00	<b>\$704.00</b>	\$290.00	<b>\$1,160.00</b>	\$285.00	<b>\$1,140.00</b>
<i>SUB TOTAL SIGNAL</i>			\$	228,770.50	\$	216,958.80	\$	230,284.50	\$	263,777.00
<b>FINAL TOTAL</b>				<b>\$397,886.80</b>		<b>\$395,671.15</b>		<b>\$391,163.00</b>		<b>\$442,955.45</b>