



CDBG-DR 13 CHANGE ORDER OR WORK ORDER AMENDMENT



Project Information					
Project Name	Plaza Towers Streetscape & Bridge Box				
Work Order Number (CDBG-DR 01)	I-20-W-URG	Project Address	SW 11 th Street from Eagle to Penn, SW 11 th connection at Plaza Towers Elementary		
Date	4/17/2017	Requested By	Rudy Construction		
Date Requested	4/10/2017	Total Budget	\$2,488,796.03	Cost of Change	\$97,081.18

Change Order Type - Description				
Circle Type:	Field	Change	Work Order Amendment	
Budget Line Items Affected: (List All)				
Change in Quantities:				
213-01 Crushed Rock Foundation – Unit Price \$70/CY, Quantity Increased to 96.53, New Total \$6,757.10				
314-00 Brick Pavers – Unit Price \$15/SF, Quantity decreased to 0.00, New Total \$0.00				
812-01 Remove Sidewalk (Width) – Unit Price \$10/SY, Quantity Increased to 171.35, New Total is \$1,713.50				
813-00 Remove Driveway – Unit Price \$10/SY, Quantity Increased to 950.52, New Total \$9,505.20				
820-01 Sawcut Pavement – Unit Price \$4/LF, Quantity Increased to 1,523, New Total \$6,092.00				
823-00 Sidewalk – Unit Price \$55/SY, Quantity Increased to 2,223.85, New Total \$122,311.75				
823-03 6" PC Conc. Driveway (HES) – Unit Price \$65/SY, Quantity Increased to 852.30, New Total \$55,399.50				
824-01 Temporary Surface Course (TBSC) – Unit Price \$40/Ton, Quantity Increased to 639.13, New Total \$25,565.20				
830-00 Wheelchair Ramp – Unit Price \$100/SY, Quantity Increased to 106.69, New total \$10,669.00				
830-01 Tactile Markers/Truncated Domes – Unit Price \$25/SF, Quantity Increased to 120, New Total \$3,000.00				
404-01 Concrete Class A – Unit Price \$850/CY, Quantity Increased to 237.70, New Total \$202,045.00				

453-25 Reinforced Concrete Pipe End Section (24") – Unit Price \$1,250/Each, New Total \$2,500.00
 740-04 Construction Signs (6.26 to 15.99 SF) – Unit Price \$2/SD, Quantity Increased to 1,683, New Total is \$3,366.00
 Stone Columns Type B – Unit Price \$2,500/Each, Quantity Increased to 14, New total is \$35,000.00
 Rebar – Unit Price \$1.50/LB, Quantity Increased to 34,995.52, New Total is \$52,433.28
 453-01 Reinforced Concrete Pipe (24") – Unit Price \$90/LF, Quantity Increased to 174.50, New Total is \$15,705.00
 453-00 Reinforced Concrete Pipe (18") – Unit Price \$70/LF, Quantity Increased to 545, New Total \$38,150.00
 454-03 Manhole 6' Dia – Unit Price \$4,500/each, Quantity decreased to 1, New total \$4,500
 454-37 Design 2-1 Inlet Complete in Place – Unit Price \$4,500/each, Quantity Increased to 5, New Total is \$22,500.00

Added Items:

740-03 Construction Signs (0 to 6.25SF) – Unit Price \$500/SD, Quantity 1, Total \$500.00
 811-22 Structure Removal (Junction Box) – Unit Price \$1,000/each, Quantity 1, Total \$1,000.00
 212-01 Trench Excavation & Backfill – Unit Price \$30/CY, Quantity: 95, Total \$2,850.00
 740-05 Construction signs (16.00 to 32.99SF) – Unit Price \$2/SD, Quantity 516, Total \$1,032.00
 305-04 Integral Curb 8" – Unit Price \$13/LF, Quantity 200, Total \$2,600.00
 304-06 PCC Pavement (8")(Stamped) – Unit Price 135/SY, Quantity 637.43, Total \$86,053.05
 305-02 Integral Curb 6" – Unit Price \$13/LF, Quantity 42.50, Total \$552.50
 454-01 Manhole (4'Dia) – Unit Price \$3,500/each, Quantity 2, Total \$7,000.00
 454-05 Manhole added depth (4'dia) – Unit Price \$300/VF, Quantity 2, Total \$600.00

Mobilization increased to \$162,818.43

Change Description	Change in Quantities:
	213-01 Crushed Rock Foundation – Overran due to drain work not shown on original plans
	812-01 Remove Sidewalk – Sidewalk removed on east side of Eagle Dr per City instructions, not shown on plans. City made the decision to replace sidewalk on both sides of Eagle Dr.
	813-00 Remove Driveway – Same as sidewalk, removal on east side of Eagle Dr per City instructions, not shown on plans. City made the decision to replace sidewalk on both sides of Eagle Dr.
	820-01 Saw Cutting – Overran due to changes in construction sequencing requiring multiple cuts down the centerline of the street
	823-00 Sidewalk – Same as removal item, City decided to replace sidewalk on east side, not show on plans
	823-03 Driveways - Same as removal item, City decided to replace sidewalk on east side, not show on plans
	824-01 TBSC – Original quantity for one temporary install and remove. Actual construction required multiple movements to accommodate residents and school.

830-00 Wheelchair Ramps – Added additional ramps per City Project Manager’s instructions.

404-01 Class A Concrete & Rebar – Added concrete for retaining wall on top of bridge box

740-03, 04, 05 Construction Signs – Changed items to meet construction site requirements

453-00, 01 RCP 18” & 24” – Quantities exceeded plan quantity due to change in size from 36”

454-37 Design 2-1 Inlet – One additional inlet added at 14th & Eagle and two 2-3 inlets were changed to 2-1 inlets per City Project Manager’s request.

314-00 Brick Pavers – City decided to use PCC Stamped concrete in lieu of the brick pavers.

454-03 Manhole 6’ Dia – Only one 6’ Diameter manhole was needed

Added Items:



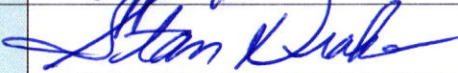
811-22 Structure Removal (junction Box) – Overlooked on original budget

212-01 Trench & Backfill – Added to excavate for 18” pipe not shown on original plans

305-02, 04 Integral Curb – Added to handicap ramps and sidewalk due to higher yard elevations at installation sites

304-06 PCC Stamped Concrete – Used in lieu of brick pavers in intersection on bridge box surface, per project manager’s instructions

454-01, 05 4’ Dia. Manholes – Added in the 18” line that was not shown on original plans

Field Change Order			
Field Change Order Authorization ONLY Vendor Signature		Date	
Field Change Order Authorization ONLY Project Manager Signature		Date	
Change Order			
Change Order Authorization ONLY Vendor Signature		Date	4/18/2017
Change Order Authorization ONLY Project Manager Signature		Date	4/18/2017
Change Order Authorization ONLY Project Supervisor Signature		Date	4/18/2017

Work Order Amendment

Work Order Amendment Authorization ONLY Vendor Signature		Date	
Work Order Amendment Authorization ONLY Project Manager Signature		Date	
Work Order Amendment Authorization ONLY Project Supervisor Signature		Date	
Work Order Amendment Authorization ONLY CDBG Manager		Date	

Cost Reasonableness Certification

Project Name	Plaza Towers Streetscape & Bridge Box	
Work Order Number	I-20-W-URG	Date 4/18/2017

Line Item	Contract Amount	Industry Standard	Vendor
Paving	\$ 487,208.80	Infrastructure Recovery and Implementation Plan Appendix B1 Table B1.8-SubArea PT3	Cardinal Engineering
Drainage	\$ 1,292,094.28	Infrastructure Recovery and Implementation Plan Appendix B1 Table B1.8-SubArea PT3	Cardinal Engineering
Traffic & Streetscape	\$ 273,633.00	Infrastructure Recovery and Implementation Plan Appendix B1 Table B1.8-SubArea PT3	Cardinal Engineering
Landscaping	\$ 100,753.52	Infrastructure Recovery and Implementation Plan Appendix B1 Table B1.8-SubArea PT3	Cardinal Engineering
Mobilization	\$ 162,818.43	Infrastructure Recovery and Implementation Plan Appendix B1 Table B1.8-SubArea PT3	Cardinal Engineering
Watering	\$ 2,500.00	Sole Sourced	Rudy Construction
High Performance Turf Reinforcing Mat	\$ 112,500.00	Sole Sourced	Rudy Construction
Irrigation System per Drawings	\$ 33,000.00	Engineering Plans for Street & Drainage Improvements, Streetscape and Bridge Box in the Plaza Towers Neighborhood	Cardinal Engineering
12" Plain Rirap	\$ 975.00	Sole Sourced	Rudy Construction
Mailbox Remove & Replace	\$ 1,000.00	Sole Sourced	Rudy Construction
Existing Irrigation Repair at school	\$ 7,200.00	Sole Sourced	Rudy Construction
Compost for Trees	\$ 5,600.00	Sole Sourced	Rudy Construction
Segmental Block Retaining Wall	\$ 2,700.00	Sole Sourced	Rudy Construction
Over Excavation for plantings	\$ 1,833.00	Sole Sourced	Rudy Construction
Metal Edging	\$ 4,980.00	Sole Sourced	Rudy Construction
Total	\$ 2,488,796.03		

Certification: The Project Supervisor (PS) of the City of Moore, Oklahoma certifies that the Cost Reasonableness summary provided above for the stated project is accurate, complete, and in conformance with Office of Management and Budget requirements on the date certified.

Stan Drake

Stan Drake, Project Supervisor Signature

4/18/2017

Date





August 10, 2017

City of Moore
Attention Mr. Jared Jakubowski
Capital Planning & Resiliency
301 North Broadway
Moore, Oklahoma 73160

Subject: Reasonable Cost Analysis for Project I-
20-W-URG, Plaza Towers Streetscape & Bridge
Box

Mr. Jakubowski;

Pursuant to a request from the City of Moore, Cabbiness Engineering has investigated the cost of various pay items for the subject project due to revisions in the scope of work for the construction phase and has found those costs to be reasonable. The pay items and unit prices were compared to the City of Moore's 2015-2016 On-Demand Construction Services bid tabulations list, the June 2017 ODOT Price History List and the 2017 Davis-Bacon wage rates for cost "reasonableness". This review is only for general conformance with the design concept of the project and with the information given in the owner provided documents. This review determined neither accuracy of quantities nor substantiates the proper installation of those pay items.

If you have any questions, please feel free to contact us.

Sincerely,
Cabbiness Engineering, LLC

A handwritten signature in black ink that reads 'J. Bret Cabbiness'.

J. Bret Cabbiness, PE
President

JBC/gks
cc: File 261

Pay Item # (Column A)	Item Description (Column B)	Unit (C)	Estimated Quantity (D)	Unit Price (E)	(D*E)	Quantity Used (G)	(G-D)	(G*E)	(I-F)
					Estimated Cost (F)		Difference in Quantity (H)	Cost for Project (I)	Difference in Cost (J)
200-00	Unclassified Excavation (>500 CY)	CY	11,211.00	15.00	168,165.00				
213-03	Crushed Rock Foundation (Crusher Run)(1.5")	CY	2,145.00	70.00	150,150.00				
213-01	Crushed Rock Foundation	CY	57.00	70.00	3,990.00	96.53	39.53	6,757.10	2,767.10
215-08	Rock Backfill	TON	232.00	40.00	9,280.00				
225-00	Aggregate Base (Type A)	CY	175.00	70.00	12,250.00				
304-04	Portland Cement Conc. Pavement (6")(>500)	SY	6,149.00	55.00	338,195.00				
305-00	Curb & Gutter (2'-8")(6" Barrier)(>500')	LF	5,529.00	20.00	110,580.00				
314-00	Brick Pavers (SP)	SF	8,663.00	15.00	129,945.00	0.00	-8,663.00	0.00	-129,945.00
801-00	Construction Staking (Construction Survey)	Day	1,250.00	15.00	18,750.00				
812-01	Remove Sidewalk (Width)	SY	149.00	10.00	1,490.00	171.35	22.35	1,713.50	223.50
812-02	Remove Curb & Gutter	LF	4,674.00	7.00	32,718.00				
812-03	Concrete Pavement Removal	SY	4,744.00	10.00	47,440.00				
812-04	Asphalt Pavement Removal	SY	252.00	10.00	2,520.00				
813-00	Remove Driveway	SY	462.00	10.00	4,620.00	950.52	488.52	9,505.20	4,885.20
820-01	Sawcut Pavement	LF	195.00	4.00	780.00	1,523.00	1,328.00	6,092.00	5,312.00
823-00	Sidewalk	SY	1,761.00	55.00	96,855.00	2,223.85	462.85	122,311.75	25,456.75
823-03	6" PC Conc. Driveway (HES)	SY	462.00	65.00	30,030.00	852.30	390.30	55,399.50	25,369.50
824-01	Temporary Surface Course (TBSC)	Ton	200.00	40.00	8,000.00	639.13	439.13	25,565.20	17,565.20
830-00	Wheelchair Ramp	SY	32.00	100.00	3,200.00	106.69	74.69	10,669.00	7,469.00
830-01	Tactile Markers/Truncated Domes	SF	96.00	25.00	2,400.00	120.00	24.00	3,000.00	600.00
840-04	Solid Slab Sodding (U-3 Bermuda)	SY	19,500.00	3.00	58,500.00				
900-02	Rock Bag Inlet Barrier	LF	255.00	5.00	1,275.00				
900-03	Filter Fabric Silt Fence-Complete in Place	LF	994.00	2.00	1,988.00				
900-04	Silt Dike	LF	308.00	5.00	1,540.00				
988-00	Geotextile for Embankment Stabilization pr paver underlay	SY	1,176.00	5.00	5,880.00				
404-01	Concrete Class A	CY	226.00	850.00	192,100.00	237.70	11.70	202,045.00	9,945.00
404-10	Structural Concrete (Retaining Wall) (Type II B)(2'-5' Height)	LF	140.00	180.00	25,200.00				
453-01	Reinforced Concrete Pipe (24")	LF	86.00	90.00	7,740.00				
453-13	Reinforced Concrete Pipe 24" O ring	LF	52.00	105.00	5,460.00				
453-25	Reinforced Concrete Pipe End Section (24")	EA	1.00	1,250.00	1,250.00	2.00	1.00	2,500.00	1,250.00
454-01	Manhole (4' dia)	EA	2.00	3,500.00	7,000.00				
454-05	Manhole added depth (4' Dia)	VF	2.00	300.00	600.00				
454-72	Design 2-4 Inlet Complete in Place	EA	4.00	7,500.00	30,000.00				
460-00	Setting New Manhole Ring & Cover	EA	2.00	750.00	1,500.00				
811-22	Structure Removal (Junction Box)	EA	1.00	1,000.00	1,000.00				
825-01	18" Dia Plain Riprap	Ton	220.00	70.00	15,400.00				
826-08	Perforated Underdrain Pipe (6")	LF	480.00	20.00	9,600.00				
826-09	Non-perforated Underdrain Pipe (6")	LF			0.00	0.00			
740-04	Construction Signs (6.26 to 15.99 SF)	SD	900.00	2.00	1,800.00	1,683.00	783.00	3,366.00	1,566.00

740-09	Construction Barricades (Type III)	SD	1,440.00	10.00	14,400.00				
740-10	Warning Lights (Type A)	SD	2,880.00	1.00	2,880.00				
740-14	Channelizer Cones	SD	5,400.00	1.50	8,100.00				
	Steel Sidewalk Plate	SF	32.00	40.00	1,280.00				
	Park Benches	EA	10.00	1,500.00	15,000.00				
	Park Picnic Tables	EA	1.00	2,000.00	2,000.00				
	Park Pavilion	EA	1.00	12,000.00	12,000.00				
	Stone Columns Type A	EA	6.00	2,500.00	15,000.00				
	Stone Columns Type B	EA	13.00	2,500.00	32,500.00	14.00	1.00	35,000.00	2,500.00
	Medallions for Type A Columns	EA	6.00	500.00	3,000.00				
	Stone Rail Fence	LF	260.00	75.00	19,500.00				
	Stone Veneer Wall	SF	1,120.00	35.00	39,200.00				
	Ribbon Curbing	LF	640.00	15.00	9,600.00				
	Rebar	LB	27,780.00	1.50	41,670.00	34,955.52	7,175.52	52,433.28	10,763.28
	<u>Landscaping</u>								
	October Glory Maple	EA	37.00	480.00	17,760.00				
	Oklahoma Redbud	EA	3.00	384.00	1,152.00				
	Nellie Stevens Holly	EA	6.00	384.00	2,304.00				
	Muskogee Crape Myrtle	EA	15.00	450.00	6,750.00				
	Blanchard Magnolia	EA	8.00	1,200.00	9,600.00				
	Bald Cypress	EA	17.00	600.00	10,200.00				
	Glossy Abelia	EA	43.00	42.00	1,806.00				
	Karl Foerster Reed Grass	EA	14.00	42.00	588.00				
	Daybreak Tick Seed	EA	162.00	3.84	622.08				
	Red Yucca	EA	18.00	48.00	864.00				
	Stell D'Ora Day Lilly	EA	269.00	13.20	3,550.80				
	Little Rascal Holly	EA	84.00	48.00	4,032.00				
	Elegance Purple Lavendar	EA	409.00	18.36	7,509.24				
	Purple Pixie Fringe Flower	EA	82.00	48.00	3,936.00				
	Pink Muhly Grass	EA	133.00	42.00	5,586.00				
	Mexican Feather Grass	EA	578.00	13.20	7,629.60				
	Hamelin Dwarf Fountain Grass	EA	118.00	48.00	5,664.00				
	Bay Breeze Indian Hawthorne	EA	37.00	48.00	1,776.00				
	Calisto Indian Hawthorne	EA	9.00	48.00	432.00				
	Color Guard Yucca	EA	17.00	51.60	877.20				
	Cedar Mulch	CY	110.00	36.00	3,960.00				
	Tree Staking	EA	80.00	25.00	2,000.00				
	Hydro Seed	SF	10,773.00	0.20	2,154.60				
	Irrigation System Repair	LS	1.00	33,000.00	33,000.00				
	<u>Channel Stabilization</u>								
	Watering	LS	1.00	2,500.00	2,500.00				
	High Performance Turf Reinforcing Mat	SY	4,500.00	25.00	112,500.00				

Electrical for Streetscape									
713-08	2" Traffic Signal Conduit Trenched	LF	1,660.00	12.00	19,920.00				
713-09	2" Traffic Signal Conduit Bored	LF	120.00	26.00	3,120.00				
725-00	Structural Concrete	CY	10.00	1,080.00	10,800.00				
725-01	Reinforcing Steel	LBS	578.00	2.50	1,445.00				
726-00	Pull Box Type 1	EA	19.00	780.00	14,820.00				
Storm Drain N. Side of School									
212-01	Trench Excavation & Backfill	CY	975.00	30.00	29,250.00				
213-01	Crushed Rock Foundation	CY	53.00	70.00	3,710.00				
215-08	Rock Backfill	TON	241.00	40.00	9,640.00				
404-01	Concrete Class A (Collars O-ring to T&G)	CY	8.00	850.00	6,800.00				
453-01	Reinforced Concrete Pipe (24")	LF	172.00	90.00	15,480.00	174.50	2.50	15,705.00	225.00
453-00	Reinforced Concrete Pipe (18")	LF	508.00	70.00	35,560.00	545.00	37.00	38,150.00	2,590.00
453-12	Reinforced Concrete Pipe 18" O-ring	LF	104.00	85.00	8,840.00				
454-03	Manhole (6') Dia	EA	4.00	4,500.00	18,000.00	1.00	-3.00	4,500.00	-13,500.00
454-05	Manhole Added depth (6' dia)	VF	9.00	500.00	4,500.00				
454-37	Design 2-1 inlet Complete in Place	EA	2.00	4,500.00	9,000.00	5.00	3.00	22,500.00	13,500.00
454-45	Design 2-3 inlet Complete in Place	EA	2.00	6,500.00	13,000.00				
460-00	Setting New Manhole Ring & Cover	EA	4.00	750.00	3,000.00				
	12" Plain Riprap	TON	15.00	65.00	975.00				
	Mailbox Remove & Replace	EA	2.00	500.00	1,000.00				
	Existing Irrigation Repair at school	LS	1.00	7,200.00	7,200.00				
	Compost for Trees	CY	35.00	160.00	5,600.00				
	Segmental Block Retaining Wall	SF	60.00	45.00	2,700.00				
	Over Excavation for plantings	LS	1.00	1,833.00	1,833.00				
	Metal Edging	LF	1,328.00	3.75	4,980.00				
			Total Project Cost:		2,235,247.52				
			Mobilization:		156,467.33				
			Total Contract Budget:		2,391,714.85				
Added Items									
740-03	Construction Signs (0 to 6.25 SF)	SD	500.00	1.00	500.00				
811-22	Structure Removal (Junction Box)	EA	1.00	1,000.00	1,000.00				
212-01	Trench Excavation & Backfill	CY	95.00	30.00	2,850.00				
740-05	Construction Signs (16.00 to 32.99SF)	SD	516.00	2.00	1,032.00				
305-04	Integral Curb 8"	LF	200.00	13.00	2,600.00				
304-06	PCC Pavement (8") (Stamped)	SY	637.43	135.00	86,053.05				
454-01	Manhole (4' dia)	EA	2.00	3,500.00	7,000.00				
454-05	Manhole Added depth (4' dia)	VF	2.00	300.00	600.00				
305-02	Integral Curb 6"	LF	42.50	13.00	552.50				
			Total of Added Items:		102,187.55				102,187.55
								Total Change Order	

									(not including Mobilization):	90,730.08
									Previous Total Project Cost:	2,235,247.52
									New Total Project Cost:	2,325,977.60
									Mobilization:	162,818.43
									Total Change Order Budget:	2,488,796.03

Project I-20-W-URG Explanation of overages and added items: (Plaza Towers Streetscape & Box)**Overages:**

- Item 213-01 Crushed Rock Foundation – Overran due to drain work not shown on original plans.
- Item 812-01 Remove Sidewalk – Sidewalk removed on east side of Eagle Road per City instructions and not shown on plans.
- Item 813-00 Remove Driveway – Same as sidewalk removal east side of Eagle and not shown on original plans.
- Item 820-01 Saw Cutting – Overran due to changes in construction sequencing requiring multiple cuts down the centerline of the street.
- Item 823-00 Sidewalk – Same as removal item. Had to replace what was taken out.
- Item 823-03 Driveways – Same as removal. Done per City project manager's instructions.
- Item 824-01 TBSC – Original quantity for one temporary install and remove. Actual construction required multiple movements to accommodate residents and school.
- Item 830-00 Wheelchair ramps – Added additional ramps per City project manager's instructions.
- Item 830-01 Tactile Domes – Added with the wheelchair ramps.
- Item 404-01 Class A Concrete & Rebar – Added concrete for retaining wall on top of bridge box.
- Items 740-03,04,05 Construction Signs = Changed items to meet construction site requirements.
- Items 453-00,01 RCP, 18" & 24" – Quantities exceeded plan quantity due to change in size from 36".
- Item 454-37 Design 2-1 Inlet – One additional inlet added at 14th & Eagle and two 2-3 inlets were changed to 2-1 inlets per City project manager's instructions.

Added Items:

- Item 811-22 Structure Removal J-Box – Overlooked on original budget.
- Item 212-01 Trench & Backfill – Added to excavate for 18" pipe not shown on original plans.
- Item 305-02,04 Integral Curb – Added to handicap ramps & sidewalk due to higher yard elevations at installation sites.
- Item 304-06 PCC Stamped Concrete – Used in lieu of brick pavers in intersection and on bridge box surface, per project manager's instructions.
- Item 454-01, 05 4' Dia. Manhole – Added in the 18" line that was not shown on original plans.