

Appendix A

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Summary - Opinion of Probable Costs

Project No: 358033	
By: MSF	Ckd: RJD
Date: 08/04/15	Date: 08/05/15

Description - Base	Total Project Cost
<i>New WWTP - Off-River - Without Headworks and Storage</i>	
Santa Rita WWTP Demolition	\$1,380,000
Site/Civil	\$5,260,000
Headworks (see alternatives below)	\$0
Primary Clarifiers	\$3,740,000
Secondary Process + Thickening	\$21,800,000
Anaerobic Digestion	\$6,580,000
Dewatering - Fournier Rotary Press	\$3,080,000
Sidestream Treatment	\$1,360,000
Class A Biosolids - Heat Dryer	\$3,660,000
UV Disinfection	\$2,260,000
Chemical Building	\$660,000
Admin/Lab Building	\$6,480,000
FOG/Septage Receiving (see alternatives below)	\$0
Odor Control	\$1,010,000
<i>Subtotal</i>	<i>\$57,270,000</i>

Description - Alt. A	Total Project Cost
<i>New WWTP - Off-River - Headworks and Storage at Santa Rita</i>	
Headworks	\$4,100,000
FOG/Septage Receiving	\$1,740,000
Ex. Primary Clarifiers (reused for emergency storage)	\$0
Lift Station	\$5,010,000
Odor Control (included with Headworks and Lift Station)	\$0
<i>Total Project Cost Base + Alt. A</i>	<i>\$68,120,000</i>

Description - Alt. B	Total Project Cost
<i>New WWTP - Off-River - Headworks and Storage at Cundiff Park</i>	
Headworks	\$4,100,000
FOG/Septage Receiving	\$1,740,000
Ex. Primary Clarifiers (reused for emergency storage)	\$0
Lift Station	\$5,010,000
Odor Control (included with Headworks and Lift Station)	\$0
<i>Total Project Cost Base + Alt. B</i>	<i>\$68,120,000</i>

*AACE Class 2 - Range: -15% to +20%

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Demolition of Santa Rita WWTP

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/08/15	Date: 08/05/15

A Description	B Quantity	C Units	D Unit Cost	E Total Cost
Erosion Control (5%)	1	EA		\$40,000
Sludge Storage	4,500	SF	\$10	\$45,000
Trickling Filter	12,300	SF	\$10	\$123,000
Aeration Basins	7,500	SF	\$10	\$75,000
Secondary Clarifiers	6,600	SF	\$10	\$66,000
RAS/WAS/Blower Building	5,550	SF	\$10	\$56,000
UV Building	900	SF	\$10	\$9,000
Scrubber/Microturbine Building	1,400	SF	\$10	\$14,000
Anaerobic Digester	1,300	SF	\$10	\$13,000
Chlorine Contact Basins	3,200	SF	\$10	\$32,000
Administration Building/Lab	6,500	SF	\$10	\$65,000
Asphalt	16,000	SF	\$10	\$160,000
On-site Grinding of Excess Concrete	1	LS	\$25,000	\$25,000
Site Restoration (Seeding, Mulching, etc.)	20,000	SY	\$2	\$40,000
Subtotal				\$763,000

Mobilization/Demobilization	3%	\$23,000
Contractor's Overhead and Profit/General Conditions	15%	\$115,000
Bonds & Insurance	2%	\$16,000
Subtotal		\$917,000
Unaccounted Items	25%	\$230,000
Total Construction Cost		\$1,150,000

Engineering/Legal/Administration/Land Acquisition	20%	\$230,000
Total Project Cost		\$1,380,000

ASSUMPTIONS:

- Concrete structures cut 3' below existing grade
- Some concrete rubble buried onsite, excess concrete to be ground on-site and re-used for pipe bedding
- Primary clarifiers to remain for emergency storage
- Headworks/Septage Receiving to remain at existing site

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Site/Civil

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/10/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Erosion Control (5%)	1	EA		\$139,000
Excavation	70,000	CY	\$10	\$700,000
Backfill and Compaction	35,000	CY	\$10	\$350,000
Asphalt	9,000	SY	\$25	\$225,000
Site Piping	1	LS	\$700,000	\$700,000
Emergency Storage Pond Liner (see headworks alt)	0	SF	\$5	\$0
Stormwater Detention Pond	1	LS	\$100,000	\$100,000
Site Fencing	2,600	LF	\$25	\$65,000
Discharge Piping	2,640	LF	\$240	\$634,000
Subtotal				\$2,913,000

Mobilization/Demobilization	3%	\$88,000
Contractor's Overhead and Profit/General Conditions	15%	\$437,000
Bonds & Insurance	2%	\$59,000
Subtotal		\$3,497,000
Unaccounted Items	25%	\$874,250
Total Construction Cost		\$4,380,000

Engineering/Legal/Administration/Land Acquisition	20%	\$876,000
Total Project Cost		\$5,260,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Headworks

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/10/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
Headworks Building	3,500	SF	\$150	\$525,000
Building Concrete Slab	135	CY	\$650	\$88,000
Influent Channels	60	CY	\$650	\$39,000
Process				
Influent Flume	1	EA	\$18,000	\$18,000
Manual Screen	1	EA	\$15,000	\$15,000
Mechanical Fine Screen (includes washer/compactor, grit chambers, etc.)	2	EA	\$140,000	\$280,000
Grit Pumps	2	EA	\$215,000	\$430,000
Odor Control	1	EA	\$84,000	\$84,000
Sluice Gates	11	EA	\$18,000	\$198,000
Valves for Grit Piping (4")	12	EA	\$1,200	\$15,000
Grit Piping (4")	250	LF	\$100	\$25,000
Electrical				
Electrical (20%)	1	EA		\$344,000
HVAC				
HVAC (12%)	1	EA		\$207,000
Subtotal				\$2,268,000
Mobilization/Demobilization				
			3%	\$69,000
Contractor's Overhead and Profit/General Conditions				
			15%	\$341,000
Bonds & Insurance				
			2%	\$46,000
Subtotal				\$2,724,000
Unaccounted Items				
			25%	\$681,000
Total Construction Cost				\$3,410,000
Engineering/Legal/Administration/Land Acquisition				
			20%	\$682,000
Total Project Cost				\$4,100,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Primary Clarifiers (2)

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/10/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
Grouting	71	CY	\$400	\$29,000
Concrete	1,000	CY	\$650	\$650,000
Raw Sewage/Sludge Pump Building Concrete	90	CY	\$650	\$59,000
Raw Sewage/Sludge Pump Building	1,800	SF	\$150	\$270,000
Process				
Raw Sewage Pumps	4	EA	\$35,000	\$140,000
Clarifier Mechanisms	2	EA	\$180,000	\$360,000
Raw Sludge Pumps	3	EA	\$30,000	\$90,000
Sludge Piping (6")	150	LF	\$115	\$18,000
Valves - 6" Plug	15	EA	\$850	\$13,000
Electrical				
Electrical (15%)	1	EA		\$245,000
HVAC				
HVAC (12%)	1	EA		\$196,000
Subtotal				\$2,070,000

Mobilization/Demobilization	3%	\$63,000
Contractor's Overhead and Profit/General Conditions	15%	\$311,000
Bonds & Insurance	2%	\$42,000
Subtotal		\$2,486,000
Unaccounted Items	25%	\$622,000
Total Construction Cost		\$3,110,000

Engineering/Legal/Administration/Land Acquisition	20%	\$622,000
Total Project Cost		\$3,740,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Secondary Process + Thickening

Project No: 358033	
By: MSF	Ckd: RJD
Date: 08/04/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
BNR Basin Concrete Walls	1,600	CY	\$650	\$1,040,000
BNR Concrete Slab	2,700	CY	\$650	\$1,755,000
RAS/WAS/Blower Building	4,000	SF	\$150	\$600,000
RAS/WAS/Blower Building Slab	150	CY	\$650	\$98,000
Secondary Clarifier Concrete	540	CY	\$650	\$351,000
Secondary Clarifier Slabs	600	CY	\$650	\$390,000
Process				
Sluice Gates	50	EA	\$12,000	\$600,000
Valves	1	LS	\$420,000	\$420,000
Piping (air and process)	1	LS	\$192,000	\$192,000
Fine Bubble Diffusers (9" disc)	1	LS	\$230,000	\$230,000
HST Blowers	1	LS	\$750,000	\$750,000
Mixers	1	LS	\$415,000	\$415,000
RAS Pumps (4 duty, 1 stand-by)	5	EA	\$50,000	\$250,000
WAS Pumps (4 duty, 1 stand-by)	5	EA	\$15,000	\$75,000
Internal Recycle Pumps (4 duty, 1 stand-by)	5	EA	\$72,000	\$360,000
Thickening	3	EA	\$312,000	\$936,000
Secondary Clarifier Mechanisms	4	EA	\$260,000	\$1,040,000
Scum Pumps	2	EA	\$12,500	\$25,000
Electrical				
Electrical (15%)	1	EA		\$1,430,000
HVAC				
HVAC (12%)	1	EA		\$1,144,000
Subtotal				\$12,101,000
Mobilization/Demobilization			3%	\$364,000
Contractor's Overhead and Profit/General Conditions			15%	\$1,816,000
Bonds & Insurance			2%	\$243,000
Subtotal				\$14,524,000
Unaccounted Items			25%	\$3,631,000
Total Construction Cost				\$18,160,000
Engineering/Legal/Administration/Land Acquisition			20%	\$3,632,000
Total Project Cost				\$21,800,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Anaerobic Digestion (2 Digesters)

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/10/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
Anaerobic Digester Concrete Slabs	140	CY	\$650	\$91,000
Anaerobic Digester Concrete Walls	325	CY	\$650	\$212,000
Scrubber/Microturbine Building	1,800	SF	\$150	\$270,000
Scrubber/Microturbine Building Slab	70	CY	\$650	\$46,000
Process				
Digester Covers	2	EA	\$155,000	\$310,000
Mixing System	2	LS	\$175,000	\$350,000
Capstone C65 MicroTurbine w/Heat Exchanger	2	LS	\$170,000	\$340,000
Gas Cleaning System	2	LS	\$138,000	\$276,000
Boiler	2	LS	\$43,000	\$86,000
Flame Arrester	2	LS	\$87,000	\$174,000
Boiler and CHP Safety Equipment	1	EA	\$40,000	\$40,000
Enclosed Burner Train	1	EA	\$295,000	\$295,000
10 HP Recirculation Pumps	4	EA	\$39,000	\$156,000
Digester Feed Pumps	3	EA	\$33,000	\$99,000
Piping and Valves	2	LS	\$65,000	\$130,000
Electrical				
Electrical (15%)	1	EA		\$432,000
HVAC				
HVAC (12%)	1	EA		\$345,000
Subtotal				\$3,652,000

Mobilization/Demobilization	3%	\$110,000
Contractor's Overhead and Profit/General Conditions	15%	\$548,000
Bonds & Insurance	2%	\$74,000
Subtotal		\$4,384,000
Unaccounted Items	25%	\$1,096,000
Total Construction Cost		\$5,480,000

Engineering/Legal/Administration/Land Acquisition	20%	\$1,096,000
Total Project Cost		\$6,580,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Dewatering/Drying

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/10/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
Dewatering/Drying Building	2,500	SF	\$150	\$375,000
Dewatering/Drying Building Slab	100	CY	\$650	\$65,000
Dewatering/Drying Building Second Floor Deck	50	CY	\$650	\$32,500
Process				
Fournier Rotary Press	2	EA	\$173,000	\$346,000
Dewatered Solids Hopper	3	EA	\$18,000	\$54,000
Polymer System	1	EA	\$32,500	\$32,500
Solids Access Hatches (4'x6')	3	EA	\$105,000	\$315,000
Valves (4")	15	EA	\$1,200	\$18,000
Piping (4")	150	LF	\$100	\$15,000
Dewatering Feed Pumps	3	EA	\$29,000	\$87,000
Electrical				
Electrical (15%)	1	EA		\$201,000
HVAC				
HVAC (12%)	1	EA		\$161,000
Subtotal				\$1,702,000

Mobilization/Demobilization	3%	\$52,000
Contractor's Overhead and Profit/General Conditions	15%	\$256,000
Bonds & Insurance	2%	\$35,000
Subtotal		\$2,045,000
Unaccounted Items	25%	\$512,000
Total Construction Cost		\$2,560,000

Engineering/Legal/Administration/Land Acquisition	20%	\$512,000
Total Project Cost		\$3,080,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Sidestream Treatment

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/10/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
Concrete Slab	100	CY	\$650	\$65,000
Concrete Walls	200	CY	\$650	\$130,000
Process				
Sluice Gates	4	EA	\$12,000	\$48,000
Valves	1	LS	\$72,000	\$72,000
Piping (Air and Process)	1	LS	\$48,000	\$48,000
Fine Bubble Diffusers (9" Disc)	1	LS	\$36,000	\$36,000
Mixers	1	LS	\$46,000	\$46,000
Internal Recycle Pumps	3	EA	\$48,000	\$144,000
Electrical				
Electrical (15%)	1	EA		\$89,000
HVAC				
HVAC (12%)	1	EA		\$71,000
Subtotal				\$749,000

Mobilization/Demobilization	3%	\$23,000
Contractor's Overhead and Profit/General Conditions	15%	\$113,000
Bonds & Insurance	2%	\$15,000
Subtotal		\$900,000
Unaccounted Items	25%	\$225,000
Total Construction Cost		\$1,130,000

Engineering/Legal/Administration/Land Acquisition	20%	\$226,000
Total Project Cost		\$1,360,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Class A Biosolids - Dryer

Project No: 358033	
By: MSF	Ckd: RJD
Date: 08/04/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
Structural Costs Included in Dewatering Building				
Process				
Heat Dryer	1	LS	\$1,560,000	\$1,560,000
Dryer Piping	1	LS	\$39,000	\$39,000
Electrical				
Electrical (15%)	1	EA		\$240,000
HVAC				
HVAC (12%)	1	EA		\$192,000
Subtotal				\$2,031,000

Mobilization/Demobilization	3%	\$61,000
Contractor's Overhead and Profit/General Conditions	15%	\$305,000
Bonds & Insurance	2%	\$41,000
Subtotal		\$2,438,000
Unaccounted Items	25%	\$610,000
Total Construction Cost		\$3,050,000

Engineering/Legal/Administration/Land Acquisition	20%	\$610,000
Total Project Cost		\$3,660,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
UV Disinfection

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/10/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
UV Building	800	SF	\$150	\$120,000
UV Building Slab	30	CY	\$650	\$19,500
UV Concrete Channels	50	CY	\$650	\$32,500
Bridge Crane	1	EA	\$50,000	\$50,000
Process				
UV Systems - including weir	1	LS	\$670,000	\$670,000
Sluice Gates	2	EA	\$20,000	\$40,000
Effluent Parshall Flume	1	EA	\$20,000	\$20,000
Onsite reuse system	1	LS	\$30,000	\$30,000
Electrical				
Electrical (15%)	1	EA		\$148,000
HVAC				
HVAC (12%)	1	EA		\$118,000
Subtotal				\$1,248,000
Mobilization/Demobilization			3%	\$38,000
Contractor's Overhead and Profit/General Conditions			15%	\$188,000
Bonds & Insurance			2%	\$25,000
Subtotal				\$1,499,000
Unaccounted Items			25%	\$374,750
Total Construction Cost				\$1,880,000
Engineering/Legal/Administration/Land Acquisition			20%	\$376,000
Total Project Cost				\$2,260,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
UV/Chemical Building

Project No: 358033	
By: MSF	Ckd: RJD
Date: 08/04/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
Chem Building	1,000	SF	\$150	\$150,000
Chem Building Slab	40	CY	\$650	\$26,000
Process				
Chemical Storage Tanks	3	EA	\$20,000	\$60,000
Chemical Feed Pumps	3	EA	\$6,000	\$18,000
Instrumentation	1	LS	\$30,000	\$30,000
Electrical				
Electrical (15%)	1	EA		\$43,000
HVAC				
HVAC (12%)	1	EA		\$35,000
Subtotal				\$362,000
Mobilization/Demobilization			3%	\$11,000
Contractor's Overhead and Profit/General Conditions			15%	\$55,000
Bonds & Insurance			2%	\$8,000
Subtotal				\$436,000
Unaccounted Items			25%	\$109,000
Total Construction Cost				\$550,000
Engineering/Legal/Administration/Land Acquisition			20%	\$110,000
Total Project Cost				\$660,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Admin/Lab Building

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/10/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
Admin/Lab Building ¹	7,500	SF	\$300	\$2,250,000
Admin/Lab Building Slab	280	CY	\$650	\$182,000
Process				
Casework/Lab Equipment	1	LS	\$400,000	\$400,000
Electrical				
Electrical (15%)	1	EA		\$425,000
HVAC				
HVAC (12%)	1	EA		\$340,000
Subtotal				\$3,597,000

Mobilization/Demobilization	3%	\$108,000
Contractor's Overhead and Profit/General Conditions	15%	\$540,000
Bonds & Insurance	2%	\$72,000
Subtotal		\$4,317,000
Unaccounted Items	25%	\$1,080,000
Total Construction Cost		\$5,400,000

Engineering/Legal/Administration/Land Acquisition	20%	\$1,080,000
Total Project Cost		\$6,480,000

Notes:

1 - Admin building to be LEED certified

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
FOG and Septage Receiving

Project No: 358033	
By: MSF	Ckd: RJD
Date: 08/04/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
FOG/Septage Receiving Building	1,500	SF	\$150	\$225,000
Building Concrete Slab	50	CY	\$650	\$33,000
Septage Storage	15	CY	\$650	\$10,000
FOG Storage	15	CY	\$650	\$10,000
Process				
Septage Receiving Equipment	1	LS	\$168,000	\$168,000
FOG Station	1	LS	\$132,000	\$132,000
Piping	1	LS	\$45,500	\$46,000
Mixers	2	EA	\$15,000	\$30,000
Pumps	4	EA	\$18,000	\$72,000
Electrical				
Electrical (20%)	1	EA		\$146,000
HVAC				
HVAC (12%)	1	EA		\$88,000
			Subtotal	\$960,000
Mobilization/Demobilization			3%	\$29,000
Contractor's Overhead and Profit/General Conditions			15%	\$144,000
Bonds & Insurance			2%	\$20,000
			Subtotal	\$1,153,000
Unaccounted Items			25%	\$289,000
			Total Construction Cost	\$1,450,000
Engineering/Legal/Administration/Land Acquisition			20%	\$290,000
			Total Project Cost	\$1,740,000

OPINION OF PROBABLE COST

Client: City of Durango
Project: Santa Rita WWTP Siting Alternative Investigation
Item: New WWTP - Off-River Alternative
Odor Control

Project No: 358033	
By: MSF	Ckd: RJD
Date: 07/10/15	Date: 08/05/15

A	B	C	D	E
Description	Quantity	Units	Unit Cost	Total Cost
Structural				
Reinforced Concrete Containment Vessel	100	CY	\$650	\$65,000
Containment Vessel Coating	1	LS	\$10,000	\$10,000
Process				
Equipment (blowers, filter media, irrigation, air distribution piping, etc.)	1	LS	\$300,000	\$300,000
Piping	100	LF	\$85	\$8,500
Valves and Fittings	1	LS	\$25,000	\$25,000
3/4" Irrigation Line	100	LF	\$10	\$1,000
4" Drain Line Piping	150	LF	\$20	\$3,000
Electrical				
Electrical (15%)	1	EA		\$62,000
HVAC				
HVAC (20%)	1	EA		\$83,000
Subtotal				\$558,000
Mobilization/Demobilization				
			3%	\$17,000
Contractor's Overhead and Profit/General Conditions				
			15%	\$84,000
Bonds & Insurance				
			2%	\$12,000
Subtotal				\$671,000
Unaccounted Items				
			25%	\$168,000
Total Construction Cost				\$840,000
Engineering/Legal/Administration/Land Acquisition				
			20%	\$168,000
Total Project Cost				\$1,010,000

Alignment A

Item No.	Description	Quantity	Unit	Unit Cost	Total
1	Tie-in to existing sewer main with a 7-ft I.D. manhole	1	EA	15,000	15,000
2	Furnish and install equipment necessary to temporarily bypass sanitary sewer flows as necessary to install 7-ft I.D. manhole to allow for redirection of flows from existing WWTP via new sewer pipelines. (assumes 3 full days of by-passing)	1	LS	25,000	25,000
4	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 5 & 10-ft with 3/4" crushed rock, backfill,	4,407	LF	200	881,400
5	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 10 & 15-ft with 3/4" crushed rock, backfill, complete in place	6,105	LF	220	1,343,100
6	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 15 & 20-ft with 3/4" crushed rock, backfill, complete in place	4,426	LF	280	1,239,280
7	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 20 & 25-ft with 3/4" crushed rock, backfill, complete in place	1,086	LF	320	347,520
8	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 25 & 30-ft with 3/4" crushed rock, backfill, complete in place	1,270	LF	380	482,600
9	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 30 & 35-ft with 3/4" crushed rock, backfill, complete in place	1,353	LF	420	568,260
10	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 35 & 40-ft with 3/4" crushed rock, backfill, complete in place	1,227	LF	500	613,500
11	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 40 & 45-ft with 3/4" crushed rock, backfill, complete in place	2,605	LF	800	2,084,000
12	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 45 & 50-ft with 3/4" crushed rock, backfill, complete in place	1,330	LF	1,000	1,330,000
13	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 5 & 10-ft	21	EA	7,500	157,500
14	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 10 & 15-ft	17	EA	12,500	212,500
15	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 15 & 20-ft	21	EA	17,500	367,500
16	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 20 & 25-ft	4	EA	22,500	90,000
17	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 25 & 30-ft	3	EA	27,500	82,500
18	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 30 & 35-ft	5	EA	66,000	330,000
19	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 35 & 40-ft	4	EA	77,000	308,000
20	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 40 & 45-ft	8	EA	88,000	704,000
21	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 45 & 50-ft	4	EA	99,000	396,000
22	Bore Pit (10-ft x 30-ft) @ SE corner of Santa Rita Park	1	EA	8,000	8,000
23	Bore Pit (15-ft x 30-ft) @ SW corner of River Rd bridge	1	EA	12,000	12,000
24	Install bore for 42-inch sanitary sewer at Hwy 50 (Santa Rita park bridge). The bore shall include 60-inch steel casing w/ 42-inch PVC PS46-ASTM-F649 pipe. The bore shall also include casing spacers, and related appurtenances (including restrained joints throughout	283	LF	1,500	424,500
25	Install bore for dual 18-inch sanitary sewer (pressure) at SW corner of River Rd Bridge. The bore shall include 30-inch steel casing w/C905 DR 18 pressure pipeline (green). The bores shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	150	LF	1,600	240,000
26	Install sewer vault 12-ft x 15-ft for inverted siphon (SE of Santa Rita Park, Just east of HWY 50)	2	EA	50,000	100,000
27	Install Dual 12-inch C905 DR 18 pressure pipeline (green) and 24-inch C905 DR 25 pressure pipeline (green) under Las Animas River with concrete encasement, backfill, thrust blocks and all associated items including joint restraint, epoxy coated mechanical bends and river diversion (160-ft wide river bed), dewatering, complete in place. Pipelines' separation at 3-ft off outside wall to outside wall) (SE	283	LF	900	254,700
28					0
29	Remove existing irrigated turf grass and replace with like-kind turf grass sod including sub grade preparation and irrigation lines repairs, complete in place.	3,200	SY	20	64,000
30	Remove and replace trees within Santa Rita park	5	EA	2,500	12,500
31	Remove and replace existing 10-ft wide concrete sidewalk	7,880	LF	90	709,200
32	Saw cut and remove existing asphalt and replace with asphalt patch including sub grade preparation. Asphalt shall be to existing depth plus 1-inch. Bottom lifts to be 3/4-inch mix asphalt. Top 2-inches to be 1/2-inch mix asphalt. (assumes 12-inch asphalt depth	17,788	SY	145	2,579,260
33	Striping of La Posta Rd (from High Bridge to River Rd Bridge)	1	LS	15,000	15,000
34	Saw cut, remove and replace existing concrete 6-inch vertical curb and 2-foot gutter	120	LF	45	5,400
35	Seeding & mulching (native grasses)	15	AC	1,500	22,500
36	Import 1 1/2" crushed rock for backfill material for trench under La postsa Rd. Installed & compacted in place	82,300	CY	20	1,646,000
37	Export excess material	82,300	CY	20	1,646,000
38	Trench Dewatering - excavation depth grater than 20-ft	9,191	LF	6	55,146
39	Utility Pothole	100	EA	300	30,000
40	Remove and replace guard rail	50	LF	300	15,000
41	Acces Rd (dirt) repair	1,035	SY	22	22,770
42	Erosion Control BMP's	25,300	LF	20	506,000
43	Staging Areas: 1) at BMX track and 2) south of River Rd Bridge	4	AC	2,500	10,000
44	Lift Station @ SW corner of River Rd Bridge	1	LS		0
45	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	1,955	LF	170	332,350
46	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 10 & 15-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	61	LF	190	11,590
47	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 15 & 20-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	61	LF	230	14,030
48	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 20 & 25-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	171	LF	270	46,170
49	Furnish and install bends with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	22	EA	3,800	83,600
50	Furnish and install 18-inch butterfly valve (direct buried (5 - 10-ft deep) with epoxy coating, including bedding, thrust block and all	2	EA	13,500	27,000
51	Furnish and install 18-inch x 18-inch wye connection with epoxy coating, including bedding, thrust block and all related appurtenances,	1	EA	15,000	15,000
52	Temporary 2-inch blowoff assembly with 18-inch cap including all related appurtenances, complete in place	1	EA	5,500	5,500
53	Contingency for unaccounted items (15%)	1	LS	3,073,631	3,073,631
54	Engineering (20%)	1	LS	4,098,175	4,098,175

\$27,662,683

Alignment B

Item No.	Description	Quantit	Unit	Unit Cost	Total
1	Tie-in to existing sewer main with a 7-ft I.D. manhole	1	EA	15,000	15,000
2	Furnish and install equipment necessary to temporarily bypass sanitary sewer flows as necessary to install 7-ft I.D. manhole to allow for redirection of flows from existing WWTP via new sewer pipelines. (assumes 3 full days of by-passing)	1	LS	25,000	25,000
3	Furnish and install 24" I.D. gravity return line (purple) PVC Pipe - PS46-ASTM-F649 buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	1,580	LF	120	189,600
4	Furnish and install 30" I.D. sewer PVC Pipe - PS46-ASTM-F649 buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	5,470	LF	200	1,094,000
5	Furnish and install 30" I.D. sewer PVC Pipe - PS46-ASTM-F649 buried depths between 10 & 15-ft with 3/4" crushed rock, backfill, complete in place	6,347	LF	220	1,396,340
6	Furnish and install 30" I.D. sewer PVC Pipe - PS46-ASTM-F649 buried depths between 15 & 20-ft with 3/4" crushed rock, backfill, complete in place	5,392	LF	280	1,509,760
7	Furnish and install 30" I.D. sewer PVC Pipe - PS46-ASTM-F649 buried depths between 20 & 25-ft with 3/4" crushed rock, backfill, complete in place	2,412	LF	320	771,840
8	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 5 & 10-ft	41	EA	7,500	307,500
9	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 10 & 15-ft	22	EA	12,500	275,000
10	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 15 & 20-ft	22	EA	17,500	385,000
11	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 20 & 25-ft	16	EA	22,500	360,000
12	Bore Pit (10-ft x 30-ft) @ SE conner of Santa Rita Park	1	EA	8,000	8,000
13	Bore Pit (15-ft x 30-ft) @ SW corner of River Rd Bridge	1	EA	1,200	1,200
14	Install bore for 42-inch sanitary sewer at Hwy 50 (Santa Rita park bridge). The bore shall include 60-inch steel casing w/ 42-inch PVC PS46-ASTM-F649 pipe. The bore shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	283	LF	1,500	424,500
15	Furnish and install 42-inch PVC PS46-ASTM-F649 pipe buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	200	LF	350	70,000
16	Furnish and install 42-inch PVC PS46-ASTM-F649 pipe buried depths between 10 & 15-ft with 3/4" crushed rock, backfill, complete in place	400	LF	400	160,000
17	Furnish and install 42-inch PVC PS46-ASTM-F649 pipe buried depths between 15 & 20-ft with 3/4" crushed rock, backfill, complete in place	200	LF	420	84,000
18	Install bore for dual 18-inch sanitary sewer (pressure) at NW corner of River Rd Bridge. The bore shall include 30-inch steel casing w/C905 DR 18 pressure pipeline (green). The bores shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	130	LF	1,600	208,000
19	Install sewer vault 12-ft x 15-ft for inverted siphon	10	EA	50,000	500,000
20	Install Dual 12-inch C905 DR 18 pressure pipeline (green) and 24-inch C905 DR 25 pressure pipeline (green) under Las Animas River with concrete encasement, backfill, thrust blocks and all associated items including joint restraint, epoxy coated mechanical bends and river diversion (830-ft wide river bed), dewatering, complete in place. Pipelines' separation at 3-ft off outside wall to outside wall). Total of 5 river Crossings	1,904	LF	900	1,713,600
21	Concrete encasement, including rebar reinforcement, for Dual 12-inch C905 DR 18 pressure pipeline (green) and 24-inch C905 DR 25 pressure pipeline (green) within Las Aminas 100-yr floodplain (outside the river bed)	184	CY	500	92,000
22	Remove existing irrigated turf grass and replace with like-kind turf grass sod including sub grade preparation and irrigation lines repairs, complete in place.	3,200	SY	20	64,000
23	Remove and replace trees within Santa Rita park	5	EA	2,500	12,500
24	Remove and replace existing 10-ft wide concrete sidewalk	9,846	LF	90	886,140
25	Saw cut and remove existing asphalt and replace with asphalt patch including sub grade preparation. Asphalt shall be to existing depth plus 1-inch. Bottom lifts to be 3/4-inch mix asphalt. Top 2-inches to be 1/2-inch mix asphalt. (assumes 12-inch asphalt depth)	1,492	SY	145	216,340
26	Saw cut, remove and replace existing concrete 6-inch vertical curb and 2-foot gutter	80	LF	45	3,600
27	Seeding & mulching (native grasses)	24	AC	2,500	60,000
28	Import 1 1/2" crushed rock for backfill material for trench under La postsa Rd. Installed & compacted in place	54,000	CY	20	1,080,000
29	Export excess material	54,000	CY	20	1,080,000
30	Trench Dewatering - excavation depth grater than 20-ft	2,583	LF	6	15,498
31	Utility Pothole	200	EA	300	60,000
32	Erosion Control BMP's	25,600	LF	20	512,000
33	Acces Rd (dirt) repair	1,352	SY	22	29,744
34	Staging Areas: 1) at BMX track and 2) at La Posta Rd	4	AC	1,500	6,000
35	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	1,955	LF	170	332,350
36	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 10 & 15-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	61	LF	190	11,590
37	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 15 & 20-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	61	LF	230	14,030
38	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 20 & 25-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	171	LF	270	46,170
39	Furnish and install 18" bends with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	22	EA	3,800	83,600
40	Furnish and install 18-inch butterfly valve (direct buried (5 - 10-ft deep) with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	2	EA	13,500	27,000
41	Furnish and install 18-inch x 18-inch wye connection with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	1	EA	9,000	9,000
42	Temporary 2-inch blowoff assembly with 18-inch cap including all related appurtenances, complete in place	1	EA	5,500	5,500
43	Contingency for unaccounted items (25%)	1	LS	3,536,351	3,536,351
44	Engineering (20%)	1	LS	2,829,080	2,829,080

\$20,510,833

Alignment C

Item

No.	Description	Quantit	Unit	Unit Cost	Total
1	Tie-in to existing sewer main with a 7-ft I.D. manhole	1	EA	15,000	15,000
2	Furnish and install equipment necessary to temporarily bypass sanitary sewer flows as necessary to install 7-ft I.D. manhole to allow for redirection of flows from existing WWTP via new sewer pipelines. (assumes 3 full days of by-passing)	1	LS	25,000	25,000
3	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	8,772	LF	200	1,754,400
4	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 10 & 15-ft with 3/4" crushed rock, backfill, complete in place	5,115	LF	220	1,125,300
5	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 15 & 20-ft with 3/4" crushed rock, backfill, complete in place	3,915	LF	280	1,096,200
6	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 20 & 25-ft with 3/4" crushed rock, backfill, complete in place	645	LF	320	206,400
7	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 25 & 30-ft with 3/4" crushed rock, backfill, complete in place	313	LF	380	118,940
8	Furnish and install 30" I.D. Sewer PVC Pipe - PS46-ASTM-F649 buried depths between 30 & 35-ft with 3/4" crushed rock, backfill, complete in place	277	LF	420	116,340
9	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 5 & 10-ft	33	EA	7,500	247,500
10	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 10 & 15-ft	19	EA	12,500	237,500
11	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 15 & 20-ft	13	EA	17,500	227,500
12	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 25 & 30-ft	3	EA	27,500	82,500
13	Bore Pit (10-ft x 30-ft) @ SE corner of Santa Rita Park	1	EA	8,000	8,000
14	Bore Pit (10-ft x 30-ft) @ Mercury Village Dr	2	EA	8,000	16,000
15	Bore Pit (10-ft x 30-ft) @ west side Mercury Bldg & east side of HWY 50	1	EA	8,000	8,000
16	Bore Pit (15-ft x 30-ft) @ SW corner of River Rd bridge	1	EA	12,000	12,000
17	Install bore for 42-inch sanitary sewer at Hwy 50 (Santa Rita park bridge). The bore shall include 60-inch steel casing w/ 42-inch PVC PS46-ASTM-F649 pipe. The bore shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	283	LF	1,500	424,500
18	Install bore for: A) 30-inch sanitary sewer at Hwy 50 @ Mercury Village Dr. and B) 30-inch sanitary sewer at Hwy 50 (west side of Mercury Bldg & east side of HWY 50). The bore shall include 42-inch steel casing w/ 30-inch PVC PS46-ASTM-F649 pipe. The bore shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	360	LF	1,500	540,000
19	Install bore for dual 18-inch sanitary sewer (pressure) at SW corner of River Rd Bridge. The bore shall include 30-inch steel casing w/C905 DR 18 pressure pipeline (green). The bores shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	150	LF	1,600	240,000
20	Install sewer vault 12-ft x 15-ft for inverted siphon (SE of Santa Rita Park, Just east of HWY 50)	2	EA	50,000	100,000
21	Install Dual 12-inch C905 DR 18 pressure pipeline (green) and 24-inch C905 DR 25 pressure pipeline (green) under Las Animas River with concrete encasement, backfill, thrust blocks and all associated items including joint restraint, epoxy coated mechanical bends and river diversion (160-ft wide river bed), dewatering, complete in place. Pipelines' separation at 3-ft off outside wall to outside wall) (SE of Santa Rita Park, Just east of HWY 50)	283	LF	900	254,700
22	Remove existing irrigated turf grass and replace with like-kind turf grass sod including sub grade preparation and irrigation lines repairs, complete in place.	3,200	SY	20	64,000
23	Remove and replace trees within Santa Rita park	5	EA	2,500	12,500
24	Remove and replace existing 10-ft wide concrete sidewalk	3,760	LF	90	338,400
25	Saw cut and remove existing asphalt and replace with asphalt patch including sub grade preparation. Asphalt shall be to existing depth plus 1-inch. Bottom lifts to be 3/4-inch mix asphalt. Top 2-inches to be 1/2-inch mix asphalt. (assumes 12-inch asphalt depth)	15,037	SY	145	2,180,365
26	Striping of La Posta Rd & east frontage rd (from BPX site to north of Mercury Village Dr and from La Posta rd, just south of Turner Dr to River Rd Bridge)	1	LS	23,000	23,000
27	Saw cut, remove and replace existing concrete 6-inch vertical curb and 2-foot gutter	120	LF	45	5,400
28	Seeding & mulching (native grasses)	14	AC	2,500	35,000
29	Import 1 1/2" crushed rock for backfill material for trench under La postsa Rd. Installed & compacted in place	53,800	CY	20	1,076,000
30	Export excess material	53,800	CY	20	1,076,000
31	Trench Dewatering - excavation depth grater than 20-ft	1,430	LF	6	8,580
32	Utility Pothole	150	EA	300	45,000
33	Remove and replace guard rail	50	LF	300	15,000
34	Acces Rd (dirt) repair	1,035	SY	22	22,770
35	Erosion Control BMP's	24,900	LF	20	498,000
36	Staging Areas: 1) at BMX track and 2) south of River Rd Bridge	4	AC	2,500	10,000
37	Lift Station #1 @ BMX Site				0
38	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	3,100	LF	170	527,000
39	Furnish and install 18" bends with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	20	EA	3,800	76,000
40	Furnish and install 18-inch x 18-inch wye connection with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	1	EA	9,000	9,000
41	Furnish and install 18-inch butterfly valve (direct buried (5 - 10-ft deep) with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	2	EA	13,500	27,000
42	Lift Station #2 @ NW corner of River Rd Bridge	1	LS		0
43	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	1,955	LF	170	332,350
44	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 10 & 15-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	61	LF	190	11,590
45	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 15 & 20-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	61	LF	230	14,030
46	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 20 & 25-ft with 3/4" crushed rock, backfill, complete in placecomplete in place	171	LF	270	46,170
47	Furnish and install bends with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	22	EA	3,800	83,600
48	Furnish and install 18-inch butterfly valve (direct buried (5 - 10-ft deep) with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	2	EA	13,500	27,000
49	Furnish and install 18-inch x 18-inch wye connection with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	1	EA	15,000	15,000
50	Temporary 2-inch blowoff assembly with 18-inch cap including all related appurtenances, complete in place	1	EA	5,500	5,500
51	Contingency for unaccounted items (15%)	1	LS	2,016,005	2,016,005
52	Engineering (20%)	1	LS	2,688,007	2,688,007

\$18,144,047

Alignment PS-A

Item No.	Description	Quantit	Unit	Unit Cost	Total
1	Tie-in proposed dual 18-inch sanitary forcemain into dual forcemain from new L.S. including removal of existing plugs, 2-inch blow-offs and thrust blocks.	1	EA	12,500	12,500
2	Furnish and install 24" I.D. gravity return line (purple) PVC Pipe - PS46-ASTM-F649 buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	1,580	LF	150	237,000
3	Lift Station @ Santa Rita Park	1	LS		0
4	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	4,242	LF	170	721,140
5	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 10 & 12-ft with 3/4" crushed rock, backfill, complete in place	242	LF	190	45,980
6	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 12 & 16-ft with 3/4" crushed rock, backfill, complete in place	126	LF	210	26,460
7	Furnish and install 30" I.D. sewer PVC Pipe - PS46-ASTM-F649 buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	797	LF	200	159,400
8	Furnish and install 30" I.D. sewer PVC Pipe - PS46-ASTM-F649 buried depths between 10 & 12-ft with 3/4" crushed rock, backfill, complete in place	40	LF	220	8,800
9	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 5 & 10-ft	17	EA	7,500	127,500
10	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 10 & 15-ft	1	EA	10,500	10,500
11	Aerial crossing over Animas River, including pedestrian bridge, bridge abutment, pipe, pipe carrier w/ insulation and pipe supports	1	EA	600,000	600,000
12	Bore Pit (10-ft x 30-ft) for return pipelines under HWY 50 & Frontage Rd	1	EA	8,000	8,000
13	Install bore for 24-inch return pipelines (gravity) at NW corner of BMX site. The bore shall include 36-inch steel casing w/C905 DR 18 pressure pipeline (green).The bores shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	320	LF	1,200	384,000
14	Install 24" F.E.S, cut-off wall and toe protection for F.E.S	1	LS	10,000	10,000
15	Acces Rd (dirt) repair	950	SY	22	20,900
16	Remove and replace trees within Santa Rita park	2	EA	2,500	5,000
17	Remove and replace trees within property north of Pepsi Site	5	EA	2,500	12,500
18	Remove and replace existing 10-ft wide concrete sidewalk	60	LF	110	6,600
19	Saw cut and remove existing asphalt and replace with asphalt patch including sub grade preparation. Asphalt shall be to existing depth plus 1-inch. Bottom lifts to be 3/4-inch mix asphalt. Top 2-inches to be 1/2-inch mix asphalt @ Santa Rita WWTP and property north of Pepsi Site. (assumes 12-inch asphalt depth)	2,721	SY	185	503,385
20	Striping of: La Posta Rd & Everett Rd intersection, 210 and property (parking lot) north of Pepsi Site	1	LS	4,500	4,500
21	Saw cut, remove and replace existing concrete 6-inch vertical curb and 2-foot gutter	223	LF	45	10,035
22	Seeding & mulching (native grasses)	5	AC	2,500	12,500
23	Import 1 1/2" crushed rock for backfill material. Installed & compacted in place	8,300	CY	20	166,000
24	Export excess material	8,300	CY	20	166,000
25	Trench Dewatering - drainageway (southeast of baseball fields)	200	LF	6	1,200
26	Utility Pothole	50	EA	300	15,000
27	Erosion Control BMP's	5,359	LF	20	107,180
28	Staging Area at Pepsi Site & Santa Rita WWTP Site	2	AC	2,500	5,000
29	Furnish and install 18" bends with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	112	EA	3,450	386,400
30	Furnish and install 18-inch butterfly valve (direct buried (5 - 10-ft deep) with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	2	EA	13,500	27,000
31	Furnish and install 18-inch x 18-inch wye connection with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	1	EA	9,000	9,000
32	Temporary 2-inch blowoff assembly with 18-inch cap including all related appurtenances, complete in place	1	EA	5,500	5,500
33	Remove and Replace Fence @ Santa Rita WWTP Site	1	LS	2,500	2,500
34	Contingency for unaccounted items (15%)	1	LS	579,459	579,459
35	Engineering (20%)	1	LS	763,496	763,496

\$5,160,435

Alignment PS-B

Item No.	Description	Quantity	Unit	Unit Cost	Total
1	Tie-in to existing sewer main with a 7-ft I.D. manhole	1	EA	15,000	15,000
2	Furnish and install equipment necessary to temporarily bypass sanitary sewer flows as necessary to install 7-ft I.D. manhole to allow for redirection of flows from existing WWTP via new sewer pipelines. (assumes 3 full days of by-passing)	1	LS	25,000	25,000
3	Furnish and install 24" I.D. gravity return line (purple) PVC Pipe - PS46-ASTM-F649 buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	1,580	LF	150	237,000
4	Furnish and install 30" I.D. sewer PVC Pipe - PS46-ASTM-F649 buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	3,237	LF	200	647,400
5	Furnish and install 30" I.D. sewer PVC Pipe - PS46-ASTM-F649 buried depths between 10 & 15-ft with 3/4" crushed rock, backfill, complete in place	1,672	LF	220	367,840
6	Furnish and install 30" I.D. sewer PVC Pipe - PS46-ASTM-F649 buried depths between 15 & 20-ft with 3/4" crushed rock, backfill, complete in place	350	LF	280	98,000
7	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 5 & 10-ft	23	EA	7,500	172,500
8	Furnish and install 6-foot diameter standard manhole w/ epoxy lining & locking cover including all related appurtenances, complete in place. Buried depths between 10 & 15-ft	3	EA	12,500	37,500
9	Bore Pit (10-ft x 30-ft) @ SE corner of Santa Rita Park	1	EA	8,000	8,000
10	Bore Pit (10-ft x 30-ft) for return pipelines under HWY 50 & Frontage Rd	1	EA	8,000	8,000
11	Bore Pit (15-ft x 30-ft) for dual forcemain under HWY 50 & Frontage Rd	1	EA	12,000	12,000
12	Install bore for 42-inch sanitary sewer at Hwy 50 (Santa Rita park bridge). The bore shall include 60-inch steel casing w/ 42-inch PVC PS46-ASTM-F649 pipe. The bore shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	283	LF	1,500	424,500
13	Install bore for dual 18-inch sanitary sewer (pressure) at NW corner of BMX site. The bore shall include 30-inch steel casing w/C905 DR 18 pressure pipeline (green). The bores shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	320	LF	1,600	512,000
14	Install bore 24-inch return pipelines (pressure) at NW corner of BMX site. The bore shall include 36-inch steel casing w/C905 DR 18 pressure pipeline (green). The bores shall also include casing spacers, and related appurtenances (including restrained joints throughout casings and one pipe length past the casings), complete in place.	320	LF	1,200	384,000
15	Install sewer vault 12-ft x 15-ft for inverted siphon (SE of Santa Rita Park, Just east of HWY 50)	2	EA	50,000	100,000
16	Install 24" F.E.S, cut-off wall and toe protection for F.E.S	1	LS	10,000	10,000
17	Install Dual 12-inch C905 DR 18 pressure pipeline (green) and 24-inch C905 DR 25 pressure pipeline (green) under Las Animas River with concrete encasement, backfill, thrust blocks and all associated items including joint restraint, epoxy coated mechanical bends and river diversion (160-ft wide river bed), dewatering, complete in place. Pipelines' separation at 3-ft off outside wall to outside wall (SE of Santa Rita Park, Just east of HWY 50)	283	LF	900	254,700
18	Remove existing irrigated turf grass and replace with like-kind turf grass sod including sub grade preparation and irrigation lines repairs, complete in place.	3,200	SY	20	64,000
19	Remove and replace trees within Santa Rita park	5	EA	2,500	12,500
20	Remove and replace existing 10-ft wide concrete sidewalk	3,760	LF	90	338,400
21	Saw cut and remove existing asphalt and replace with asphalt patch including sub grade preparation. Asphalt shall be to existing depth plus 1-inch. Bottom lifts to be 3/4-inch mix asphalt. Top 2-inches to be 1/2-inch mix asphalt. (assumes 12-inch asphalt depth)	2,732	SY	145	396,140
22	Striping of La Posta Rd & Everett Rd intersection	1	LS	3,000	3,000
23	Saw cut, remove and replace existing concrete 6-inch vertical curb and 2-foot gutter	203	LF	45	9,135
24	Seeding & mulching (native grasses)	5	AC	2,500	12,500
25	Import 1 1/2" crushed rock for backfill material for trench under La postsa Rd. Installed & compacted in place	16,300	CY	20	326,000
26	Export excess material	16,300	CY	20	326,000
27	Trench Dewatering - excavation depth grater than 20-ft	350	LF	6	2,100
28	Utility Pothole	50	EA	300	15,000
29	Erosion Control BMP's	8,400	LF	20	168,000
30	Staging Areas: 1) at BMX track and 2) at Pepsi Site	4	AC	2,500	10,000
31	Lift Station #1 @ BMX Site				0
32	Install Dual 18-inch C905 DR 18 pressure pipeline (green) backfill, and all associated items including joint restraint, buried depths between 5 & 10-ft with 3/4" crushed rock, backfill, complete in place	1,545	LF	170	262,650
33	Furnish and install 18" bends with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	32	EA	3,800	121,600
34	Furnish and install 18-inch butterfly valve (direct buried (5 - 10-ft deep) with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	2	EA	13,500	27,000
35	Furnish and install 18-inch x 18-inch wye connection with epoxy coating, including bedding, thrust block and all related appurtenances, complete in place	1	EA	9,000	9,000
36	Temporary 2-inch blowoff assembly with 18-inch cap including all related appurtenances, complete in place	1	EA	5,500	5,500
37	Contingency for unaccounted items (15%)	1	LS	813,295	813,295
38	Engineering (20%)	1	LS	1,084,393	1,084,393

\$7,319,653



0 400' 800'
SCALE: 1" = 400'



CITY OF DURANGO
ALIGNMENT A - EASEMENTS

JULY 2015



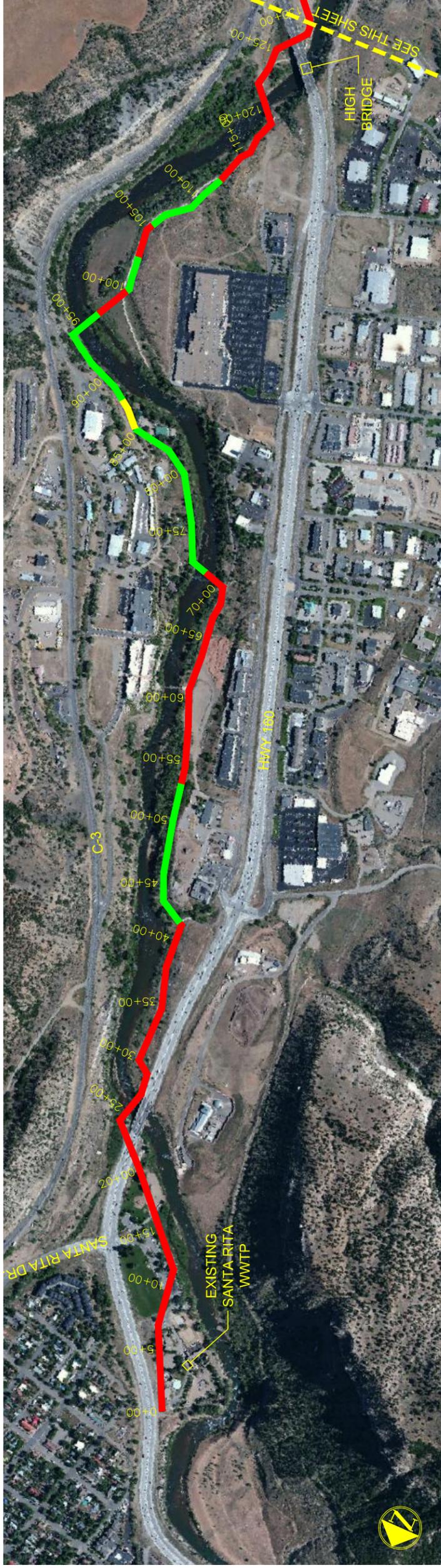
**Mulhern
MRE, Inc.**
2 Inverness Drive East, Suite 200
Englewood, CO 80112
(303) 649-9857



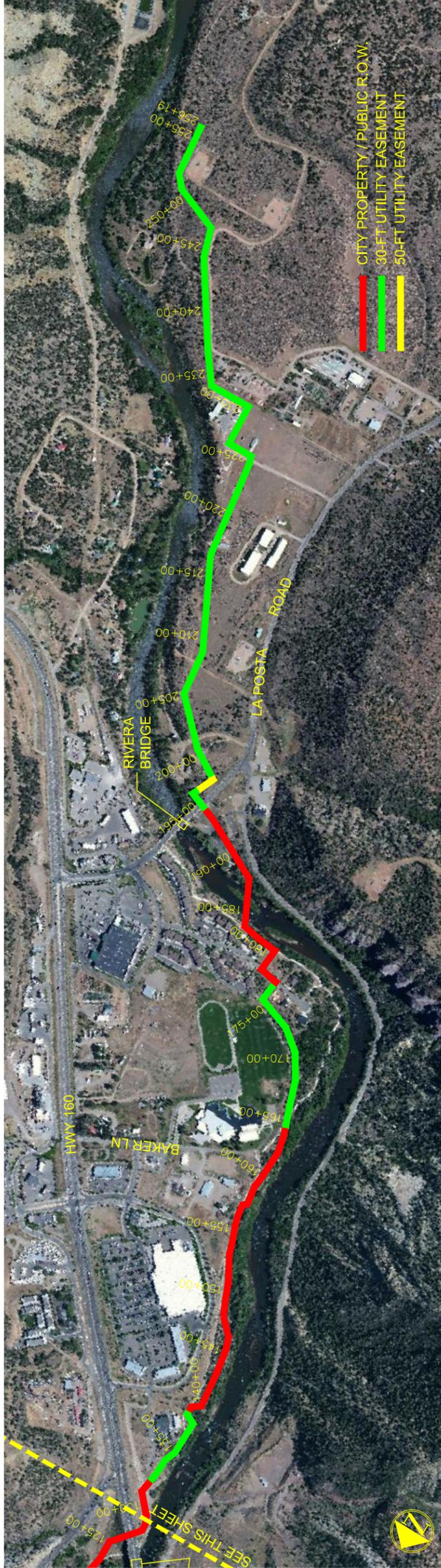
**Hatch Mott
MacDonald**

FIGURE

A



0 400' 800'
SCALE: 1" = 400'



CITY OF DURANGO
ALIGNMENT B - EASEMENTS

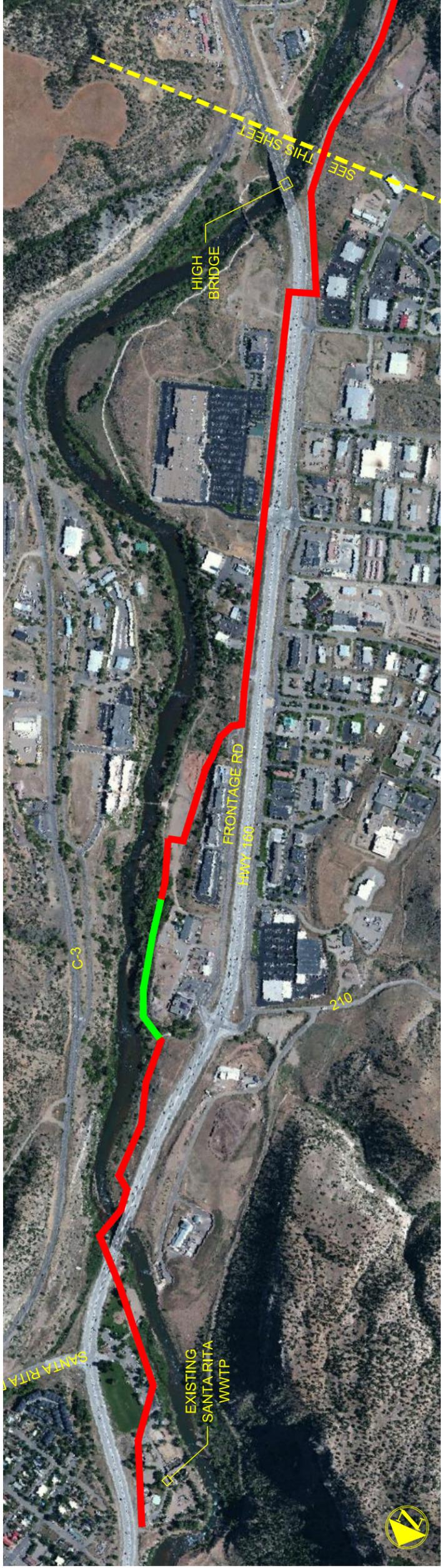
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Englewood, CO 80112
(303) 649-9857



FIGURE
B



CITY OF DURANGO
ALIGNMENT C - EASEMENTS

JULY 2015

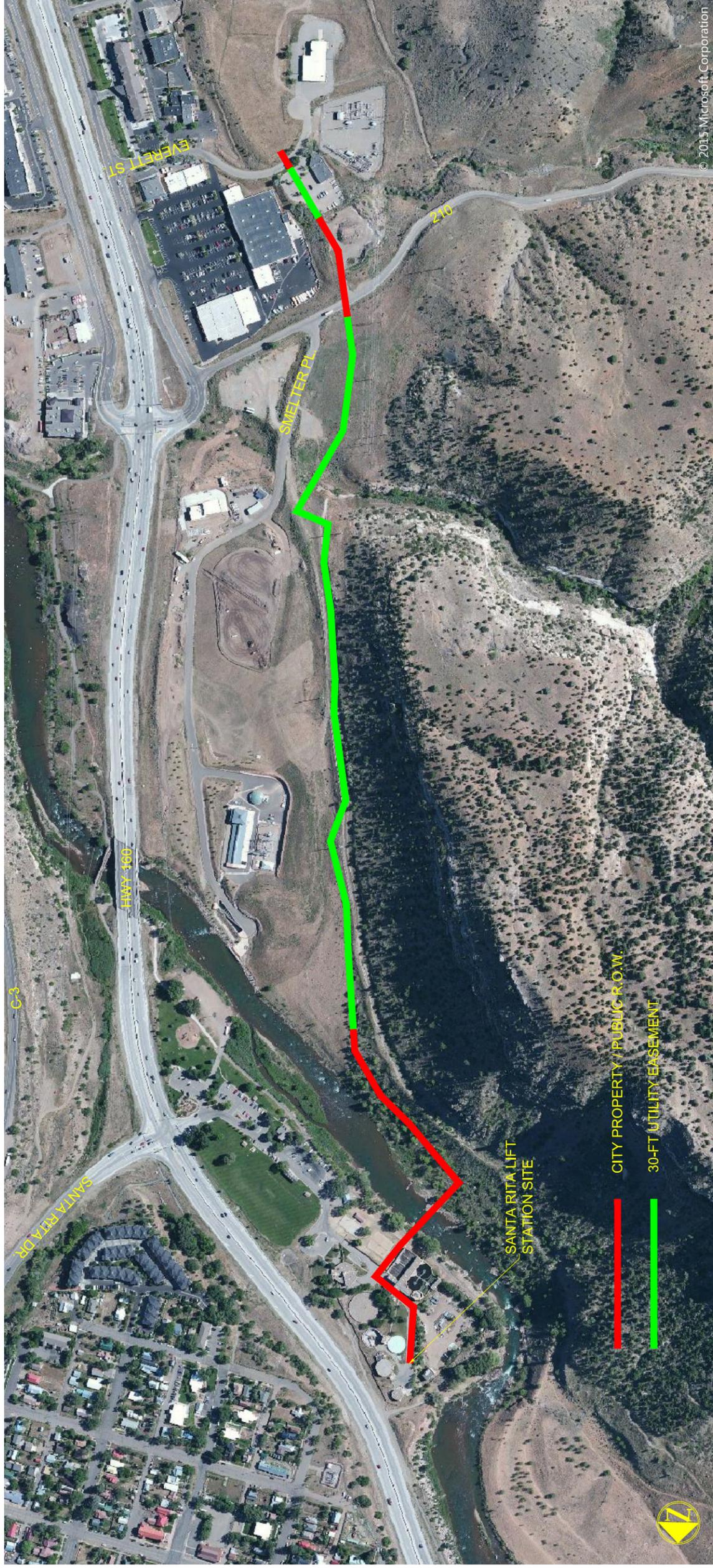


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FIGURE
C



CITY OF DURANGO
ALIGNMENT PS-A EASEMENTS

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FIGURE
D



CITY OF DURANGO
ALIGNMENT PS-B EASEMENTS

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FIGURE
E