

APPENDIX A DETAILED COST ESTIMATES

Date: October 29, 2020

Anamosa Street Water Main - E. Philadelphia to Elk Vale

ITEM NO.	DESCRIPTION OF ITEM	QTY. (est.)	QTY. PHASE 1	QTY. PHASE 2	UNIT	UNIT COST	PHASE 1 COST	PHASE 2 COST	EXTENDED COST
GENERAL									
100	Mobilization	1.0	0.5	0.5	LS	\$ 100,000.00	\$ 50,000.00	\$ 50,000.00	\$ 100,000.00
101	Incidental	1.0	0.5	0.5	LS	\$ 75,000.00	\$ 37,500.00	\$ 37,500.00	\$ 75,000.00
102	Traffic Control	1.0	-	1.0	LS	\$ 6,950.00	\$ -	\$ 6,950.00	\$ 6,950.00
103	Erosion Control	1.0	0.6	0.4	LS	\$ 52,000.00	\$ 31,200.00	\$ 20,800.00	\$ 52,000.00
104	Material Testing	1.0	0.6	0.4	LS	\$ 45,000.00	\$ 27,000.00	\$ 18,000.00	\$ 45,000.00
REMOVALS									
200	Misc Removals	1.0	0.2	0.8	EA	\$ 50,000.00	\$ 10,000.00	\$ 40,000.00	\$ 50,000.00
EXCAVATION									
300	Unclassified Excavation	795,863.0	562,248.0	233,615.0	CY	\$ 3.00	\$ 1,686,744.00	\$ 700,845.00	\$ 2,387,589.00
302	Stockpile	317,059.0	317,059.0	-	CY	\$ 1.10	\$ 348,764.90	\$ -	\$ 348,764.90
303	Topsoil, stockpile and replace	60,741.0	41,164.0	19,577.0	CY	\$ 6.50	\$ 267,566.00	\$ 127,250.50	\$ 394,816.50
304	Seed, fertilize, and mulch	75.3	51.0	24.2	AC	\$ 1,600.00	\$ 81,664.00	\$ 38,768.00	\$ 120,432.00
305	Pipeline Encasement	250.0	-	250.0	LF	\$ 80.00	\$ -	\$ 20,000.00	\$ 20,000.00
306	36" Bore and Jack	120.0	-	120.0	EA	\$ 1,000.00	\$ -	\$ 120,000.00	\$ 120,000.00
307	Adjust Power and Communications	6,004.0	3,724.0	2,280.0	LF	\$ 65.00	\$ 242,060.00	\$ 148,200.00	\$ 390,260.00
308	Type 1 Bedding	2,000.0	1,000.0	1,000.0	T	\$ 29.00	\$ 29,000.00	\$ 29,000.00	\$ 58,000.00
309	Type 2 Foundation material	500.0	250.0	250.0	T	\$ 29.00	\$ 7,250.00	\$ 7,250.00	\$ 14,500.00
WATER MAIN									
400	16" PVC Water Main	6,214.0	3,211.0	3,003.0	LF	\$ 100.00	\$ 321,100.00	\$ 300,300.00	\$ 621,400.00
401	20" PVC Water Main	8,482.0	3,302.0	5,180.0	EA	\$ 150.00	\$ 495,300.00	\$ 777,000.00	\$ 1,272,300.00
402	16" misc appurtenances	38.0	28.0	10.0	EA	\$ 1,750.00	\$ 49,000.00	\$ 17,500.00	\$ 66,500.00
403	20" misc appurtenances	43.0	32.0	11.0	EA	\$ 2,750.00	\$ 88,000.00	\$ 30,250.00	\$ 118,250.00
404	16" x 6" Tee	14.0	7.0	7.0	EA	\$ 1,800.00	\$ 12,600.00	\$ 12,600.00	\$ 25,200.00
405	20" x 6" Tee	19.0	7.0	12.0	EA	\$ 3,500.00	\$ 24,500.00	\$ 42,000.00	\$ 66,500.00
406	20" x 16" Tapping Tee	1.0	-	1.0	EA	\$ 25,000.00	\$ -	\$ 25,000.00	\$ 25,000.00
407	16" Gate Valve	14.0	7.0	7.0	EA	\$ 7,000.00	\$ 49,000.00	\$ 49,000.00	\$ 98,000.00
408	20" Gate Valve	19.0	7.0	12.0	EA	\$ 15,000.00	\$ 105,000.00	\$ 180,000.00	\$ 285,000.00
409	Standard FH	33.0	14.0	19.0	EA	\$ 5,600.00	\$ 78,400.00	\$ 106,400.00	\$ 184,800.00
410	Cathodic Protection	1.0	0.5	0.5	EA	\$ 275,000.00	\$ 137,500.00	\$ 137,500.00	\$ 275,000.00
411	Connect to existing	4.0	2.0	2.0	EA	\$ 1,800.00	\$ 3,600.00	\$ 3,600.00	\$ 7,200.00
ROAD IMPROVEMENTS									
600	All weather surfacing	4,742.0	2,908.0	1,834.0	T	\$ 25.00	\$ 72,700.00	\$ 45,850.00	\$ 118,550.00
601	Right-of way fencing	11,224.0	6,890.0	4,334.0	LF	\$ 4.00	\$ 27,560.00	\$ 17,336.00	\$ 44,896.00
							\$ -	\$ -	\$ -
						Subtotal	\$ 4,283,008.90	\$ 3,108,899.50	\$ 7,391,909.00
						Contingency (10%)	\$ 428,300.89	\$ 310,889.95	\$ 739,191.00
						Engineering & CA (10%)	\$ 428,300.89	\$ 310,889.95	\$ 739,190.90
						Total	\$ 5,139,610.68	\$ 3,730,679.40	\$ 8,870,290.90

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Date: October 29, 2020

Regional Drainage Facilities

ITEM NO.	DESCRIPTION OF ITEM	QTY. (est.)	QTY. PHASE 1	QTY. PHASE 2	UNIT	UNIT COST	PHASE 1 COST	PHASE 2 COST	EXTENDED COST	
GENERAL										
100	Mobilization	1.0	0.5	0.5	LS	\$ 50,000.00	\$ 25,000.00	\$ 25,000.00	\$ 50,000.00	
101	Incidental	1.0	0.5	0.5	LS	\$ 25,000.00	\$ 12,500.00	\$ 12,500.00	\$ 25,000.00	
102	Erosion Control	1.0	0.7	0.3	LS	\$ 24,000.00	\$ 16,800.00	\$ 7,200.00	\$ 24,000.00	
103	Material Testing	1.0	0.7	0.3	LS	\$ 20,000.00	\$ 14,000.00	\$ 6,000.00	\$ 20,000.00	
REMOVALS										
200	Misc Removals	0.9	0.7	0.2	EA	\$ 10,000.00	\$ 7,000.00	\$ 2,000.00	\$ 9,000.00	
EXCAVATION										
300	Unclassified Excavation (Aprox 25% Drainage)	228,132.0	187,415.0	40,717.0	CY	\$ 1.35	\$ 253,010.25	\$ 54,967.95	\$ 307,978.20	
301	Unclassified Embankment	207,077.0	129,206.0	77,871.0	CY	\$ 1.65	\$ 213,189.90	\$ 128,487.15	\$ 341,677.05	
302	Stockpile - export import	-	-	-	CY	\$ 1.10	\$ -	\$ -	\$ -	
303	Topsoil, stockpile and replace	6,937.0	5,485.0	1,452.0	CY	\$ 6.50	\$ 35,652.50	\$ 9,438.00	\$ 45,090.50	
304	Seed, fertilize, and mulch	8.6	6.8	1.8	AC	\$ 1,600.00	\$ 10,864.00	\$ 2,944.00	\$ 13,808.00	
305	Type 2 Foundation material	500.0	250.0	250.0	T	\$ 29.00	\$ 7,250.00	\$ 7,250.00	\$ 14,500.00	
DRAINAGE IMPROVEMENTS										
500	18" RCP, Class III	244.0	244.0		LF	\$ 65.00	\$ 15,860.00	\$ -	\$ 15,860.00	
501	24" RCP, Class III	220.0		220.0	LF	\$ 75.00	\$ -	\$ 16,500.00	\$ 16,500.00	
502	30" RCP, Class III	30.0		30.0	LF	\$ 85.00	\$ -	\$ 2,550.00	\$ 2,550.00	
503	48" RCP, Class III	200.0	200.0		LF	\$ 200.00	\$ 40,000.00	\$ -	\$ 40,000.00	
504	48" RCP, Class III	196.0	196.0		LF	\$ 200.00	\$ 39,200.00	\$ -	\$ 39,200.00	
505	18" RCP Flared End	2.0	2.0		EA	\$ 1,100.00	\$ 2,200.00	\$ -	\$ 2,200.00	
506	24" RCP Flared End	2.0	-	2.0	EA	\$ 1,300.00	\$ -	\$ 2,600.00	\$ 2,600.00	
507	30" RCP Flared End	2.0	-	2.0	EA	\$ 1,500.00	\$ -	\$ 3,000.00	\$ 3,000.00	
508	48" RCP Flared End	2.0	2.0		EA	\$ 2,300.00	\$ 4,600.00	\$ -	\$ 4,600.00	
509	48" RCP Flared End	2.0	2.0		EA	\$ 2,300.00	\$ 4,600.00	\$ -	\$ 4,600.00	
510	Outlet Structures	4.0	3.0	1.0	EA	\$ 20,000.00	\$ 60,000.00	\$ 20,000.00	\$ 80,000.00	
511	Class 2 Riprap	800.0	480.0	320.0	T	\$ 100.00	\$ 48,000.00	\$ 32,000.00	\$ 80,000.00	
LAND ACQUISITION										
600	Overdetention Land Area - Drainage				ACRE	\$ -	\$ -	\$ -	\$ -	
							Subtotal	\$ 809,726.65	\$ 332,437.10	\$ 1,142,164.00
							Contingency (10%)	\$ 80,972.67	\$ 33,243.71	\$ 114,217.00
							Engineering & CA (10%)	\$ 80,972.67	\$ 33,243.71	\$ 114,216.40
							Total	\$ 971,671.98	\$ 398,924.52	\$ 1,370,597.40

APPENDIX A DETAILED COST ESTIMATES

Date: October 29, 2020

Mickelson Drive

ITEM NO.	DESCRIPTION OF ITEM	QTY. (est.)	UNIT	UNIT COST	EXTENDED COST	
GENERAL						
100	Mobilization	1.0	LS	\$ 10,000.00	\$ 10,000.00	
101	Incidental	1.0	LS	\$ 10,000.00	\$ 10,000.00	
102	Traffic Control	1.0	LS	\$ 1,500.00	\$ 1,500.00	
103	Erosion Control	1.0	LS	\$ 15,000.00	\$ 15,000.00	
104	Material Testing	1.0	LS	\$ 5,000.00	\$ 5,000.00	
REMOVALS						
200	Misc Removals	1.0	EA	\$ 10,000.00	\$ 10,000.00	
EXCAVATION						
300	Unclassified Excavation (Aprox 25% Drainage)	95,000.0	CY	\$ 3.00	\$ 285,000.00	
301	Topsoil, stockpile and replace	10,000.0	CY	\$ 6.50	\$ 65,000.00	
302	Seed, fertilize, and mulch	30.0	AC	\$ 1,600.00	\$ 48,000.00	
303	Type 1 Bedding	600.0	T	\$ 29.00	\$ 17,400.00	
304	Type 2 Foundation material	200.0	T	\$ 29.00	\$ 5,800.00	
WATER MAIN						
400	12" PVC Water Main	1,965.0	LF	\$ 65.00	\$ 127,725.00	
401	12" misc appurtenances	10.0	EA	\$ 1,000.00	\$ 10,000.00	
402	12" x 6" Tee	6.0	EA	\$ 1,800.00	\$ 10,800.00	
403	12" Gate Valve	7.0	EA	\$ 7,000.00	\$ 49,000.00	
404	Standard FH	6.0	EA	\$ 5,600.00	\$ 33,600.00	
405	Cathodic Protection	1.0	EA	\$ 20,000.00	\$ 20,000.00	
406	Connect to existing	2.0	EA	\$ 1,800.00	\$ 3,600.00	
DRAINAGE IMPROVEMENTS						
500	30" RCP, Class III	308.0	LF	\$ 85.00	\$ 26,180.00	
501	30" RCP Flared End	2.0	EA	\$ 1,500.00	\$ 3,000.00	
502	Class 2 Riprap	10.0	T	\$ 100.00	\$ 1,000.00	
ROAD IMPROVEMENTS						
600	Road Improvements	1.0	LS	\$ 55,462.50	\$ 55,462.50	
					Subtotal	\$ 813,068.00
					Contingency (10%)	\$ 81,307.00
					Engineering & CA (10%)	\$ 81,306.80
					Total	\$ 975,681.80

APPENDIX A DETAILED COST ESTIMATES

Date: October 29, 2020

Regional Booster Station

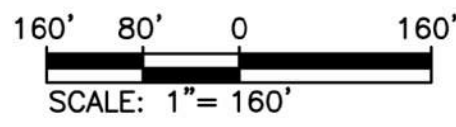
ITEM NO.	DESCRIPTION OF ITEM	QTY. (est.)	UNIT	UNIT COST	EXTENDED COST
REGIONAL BOOSTER STATION					
100	Regional Booster Station	1.0	LS	\$ 1,970,000.00	\$ 1,970,000.00
				Subtotal	\$ 1,970,000.00
				Feasibility Study	\$ 75,000.00
				Contingency (10%)	\$ 197,000.00
				Engineering & CA	\$ 554,000.00
				Total	\$ 2,796,000.00

APPENDIX A DETAILED COST ESTIMATES

Date: October 29, 2020

North Valley Drive Grading

ITEM NO.	DESCRIPTION OF ITEM	QTY. (est.)	UNIT	UNIT COST	EXTENDED COST
GENERAL					
100	Mobilization	1.0	LS	\$ 10,000.00	\$ 10,000.00
101	Incidental	1.0	LS	\$ 10,000.00	\$ 10,000.00
102	Traffic Control	1.0	LS	\$ 1,500.00	\$ 1,500.00
103	Erosion Control	1.0	LS	\$ 25,000.00	\$ 25,000.00
104	Material Testing	1.0	LS	\$ 10,000.00	\$ 10,000.00
REMOVALS					
200	Misc Removals	1.0	EA	\$ 20,000.00	\$ 20,000.00
EXCAVATION					
300	Unclassified Excavation (Aprox 25% Drainage)	250,000.0	CY	\$ 3.00	\$ 750,000.00
301	Topsoil, stockpile and replace	10,000.0	CY	\$ 6.50	\$ 65,000.00
302	Seed, fertilize, and mulch	25.0	AC	\$ 1,300.00	\$ 32,500.00
303	Adjust Existing Power and Communication	1.0	LS	\$ 75,000.00	\$ 75,000.00
304	Type 1 Bedding	100.0	T	\$ 29.00	\$ 2,900.00
DRAINAGE IMPROVEMENTS					
500	30" RCP, Class III	400.0	LF	\$ 100.00	\$ 40,000.00
501	30" RCP Flared End	2.0	EA	\$ 1,500.00	\$ 3,000.00
502	Class 2 Riprap	10.0	T	\$ 300.00	\$ 3,000.00
Subtotal					
					\$ 1,047,900.00
Contingency (10%)					
					\$ 104,790.00
Engineering & CA (10%)					
					\$ 104,790.00
Total					\$ 1,257,480.00



**PRELIMINARY
FOR REVIEW ONLY**

**ANAMOSA
MASTER GRADING**
SEPTEMBER, 2020

Plans are reviewed for general conformance with applicable governmental regulations, stipulations, design criteria and engineering standards. The City of Rapid City does not certify the suitability, adequacy or completeness of the plans or design, which are the responsibility of the engineer of record. All necessary permits shall be obtained prior to construction of the proposed public improvements.

Engineering Reviewer _____ Date _____

COMMENTS

Internal Job No: 18-0883
 Designed By: MS
 Drawn By: KM
 Surveyed By: KTM
 Survey Date: MAR 2018

**PRELIMINARY
FOR REVIEW ONLY**

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 www.ktmdesignsolutions.com
 CIVIL ENGINEERING | LAND PLANNING
 DESIGN SOLUTIONS, INC. CONSTRUCTION ADMINISTRATION

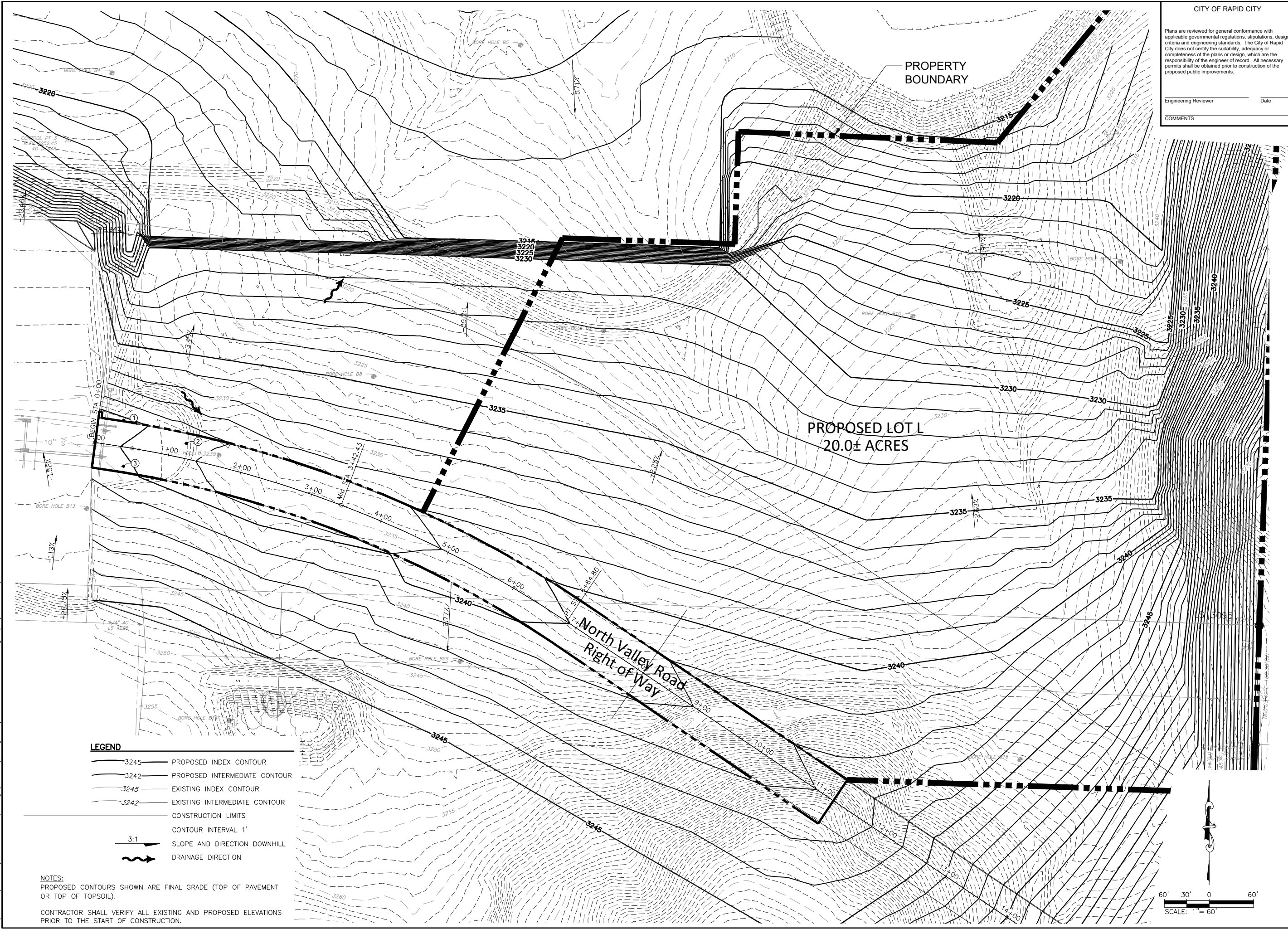
**NORTH VALLEY PARK
SUBDIVISION PLAN
RAPID CITY, SOUTH DAKOTA**



Sheet Name:

SITE GRADING PLAN

15 Sheet Number OF 41



- LEGEND**
- 3245 — PROPOSED INDEX CONTOUR
 - 3242 — PROPOSED INTERMEDIATE CONTOUR
 - 3245 — EXISTING INDEX CONTOUR
 - 3242 — EXISTING INTERMEDIATE CONTOUR
 - CONSTRUCTION LIMITS
 - CONTOUR INTERVAL 1'
 - 3:1 SLOPE AND DIRECTION DOWNHILL
 - ~ DRAINAGE DIRECTION

NOTES:
 PROPOSED CONTOURS SHOWN ARE FINAL GRADE (TOP OF PAVEMENT OR TOP OF TOPSOIL).
 CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

X:\850-899\883_Valley Industrial Park Drawings\EXHIBITS\Grading Plan\GRADING PLAN 6.16.20 d.dwg 6/22/2020 12:49pm