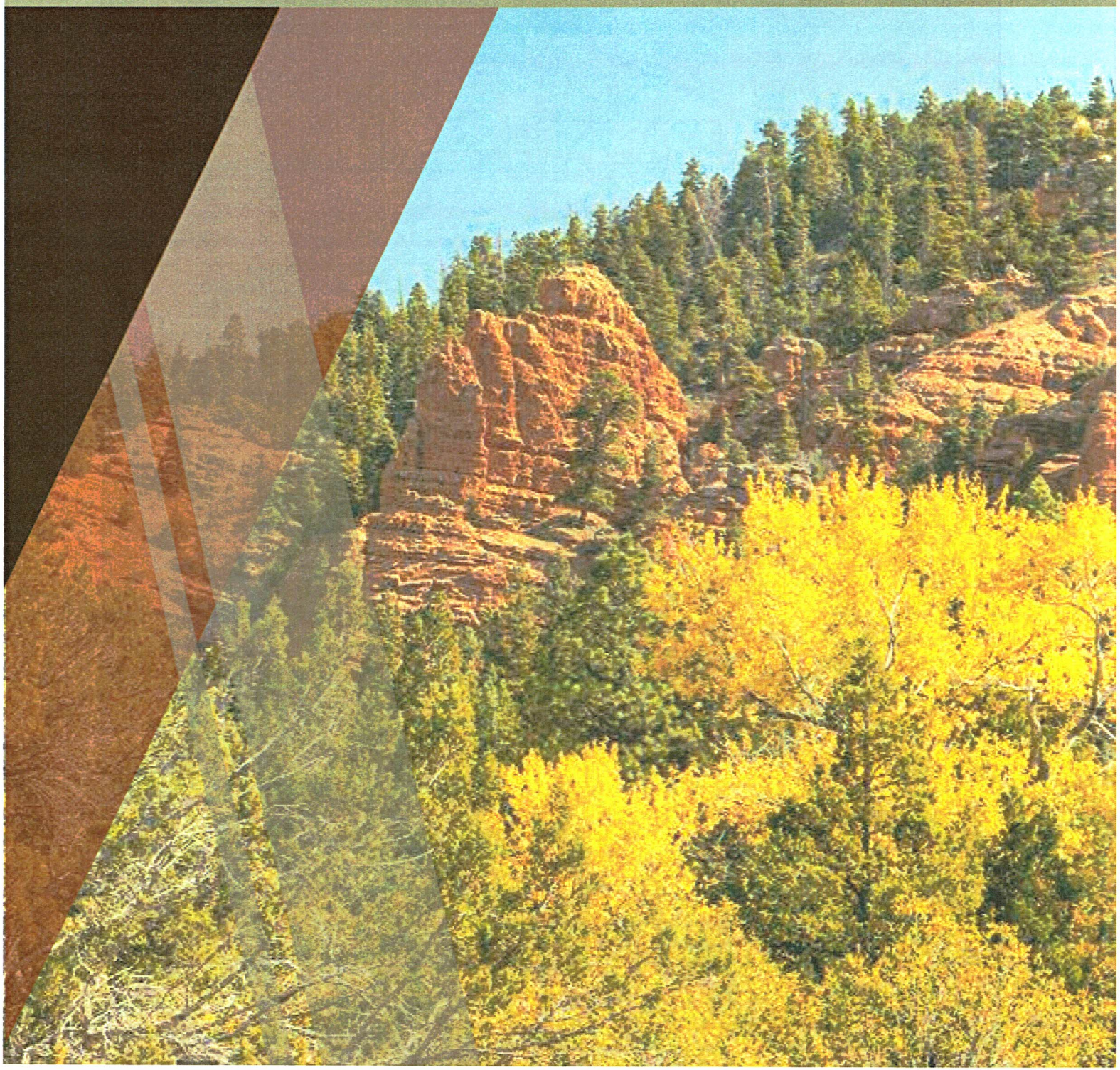
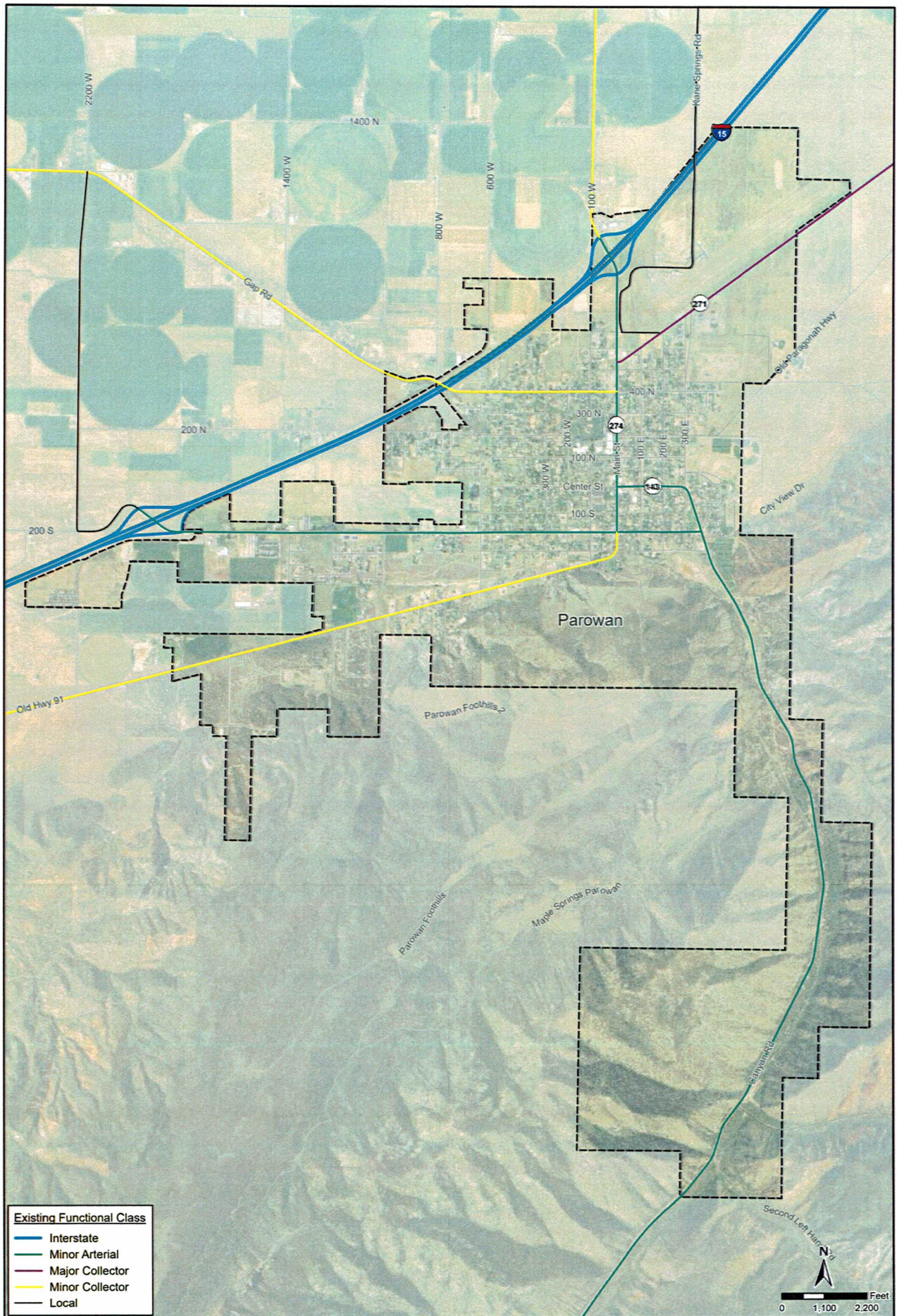


APPENDIX 1

ROADWAY CLASSIFICATION MAPS





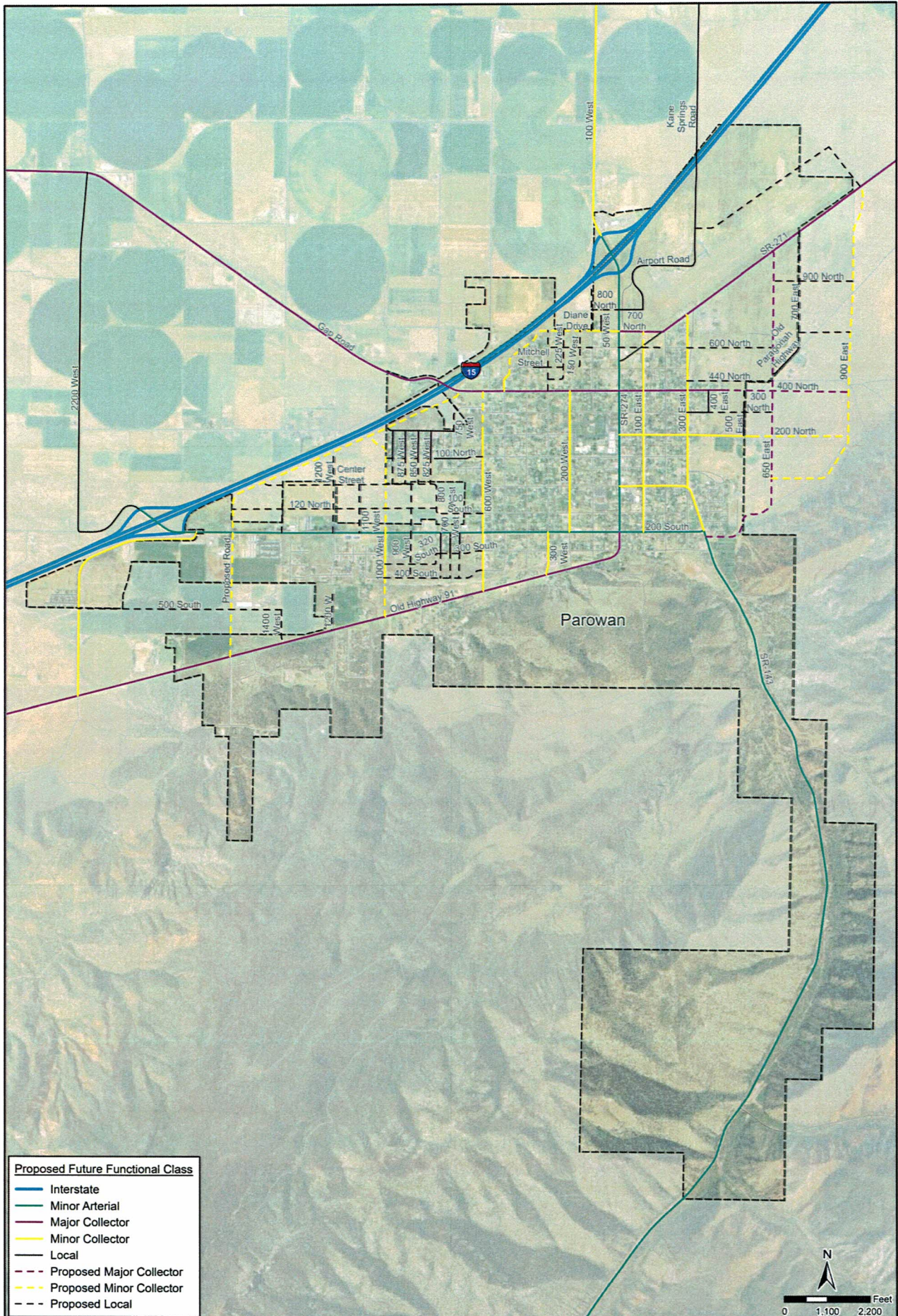
	Interstate
	Minor Arterial
	Major Collector
	Minor Collector
	Local
	Parowan City Boundary



**Jones & DeMille
Engineering**

Parowan City		
Transportation Master Plan		
Existing Functional Class		
<small>Map Name: H:\2\Proj\2207-029\GIS\Projects\2207-029_Design\2207-029_Existing Functional Class</small>		
<small>Project Number: 2207-029</small>	<small>Drawn by: TAB 12-20</small>	<small>Last Edit: 04/10/2024</small>

Iron County, Utah
Scale: 1" = 2,200'
1



Proposed Future Functional Class	
	Interstate
	Minor Arterial
	Major Collector
	Minor Collector
	Local
	Proposed Major Collector
	Proposed Minor Collector
	Proposed Local

	Interstate
	US Highway
	State Highway
	Local Road
	Parowan City Boundary



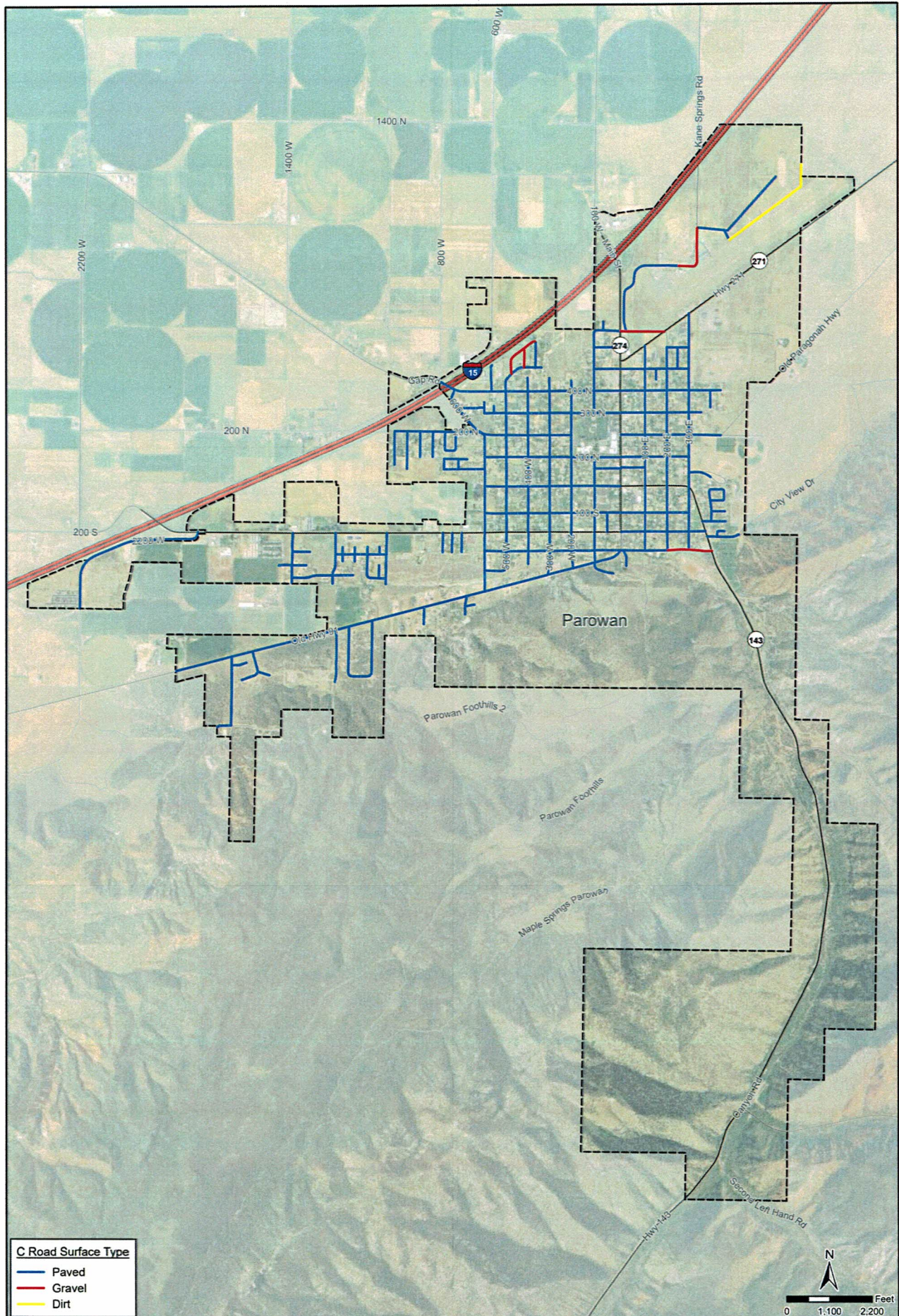
Parowan City	
<i>Transportation Master Plan</i>	
Proposed Future Functional Class	
Map Name: H:\JDP\Proj\2307-008\GIS\Projects\2307-008_Design\2307-008_Design.aprx - EIR Report Future Functional Class	
Project Number: 2307-009	Drawn by: TAB 10-23
Last Edit: 07/23/24	

Iron County, Utah
Scale: 1" = 2,200'
1

APPENDIX 2

EXISTING ROADWAY INVENTORY MAPS





C Road Surface Type	
—	Paved
—	Gravel
—	Dirt

—	Interstate
—	US Highway
—	State Highway
—	Major Local Road
 	Parowan City Boundary



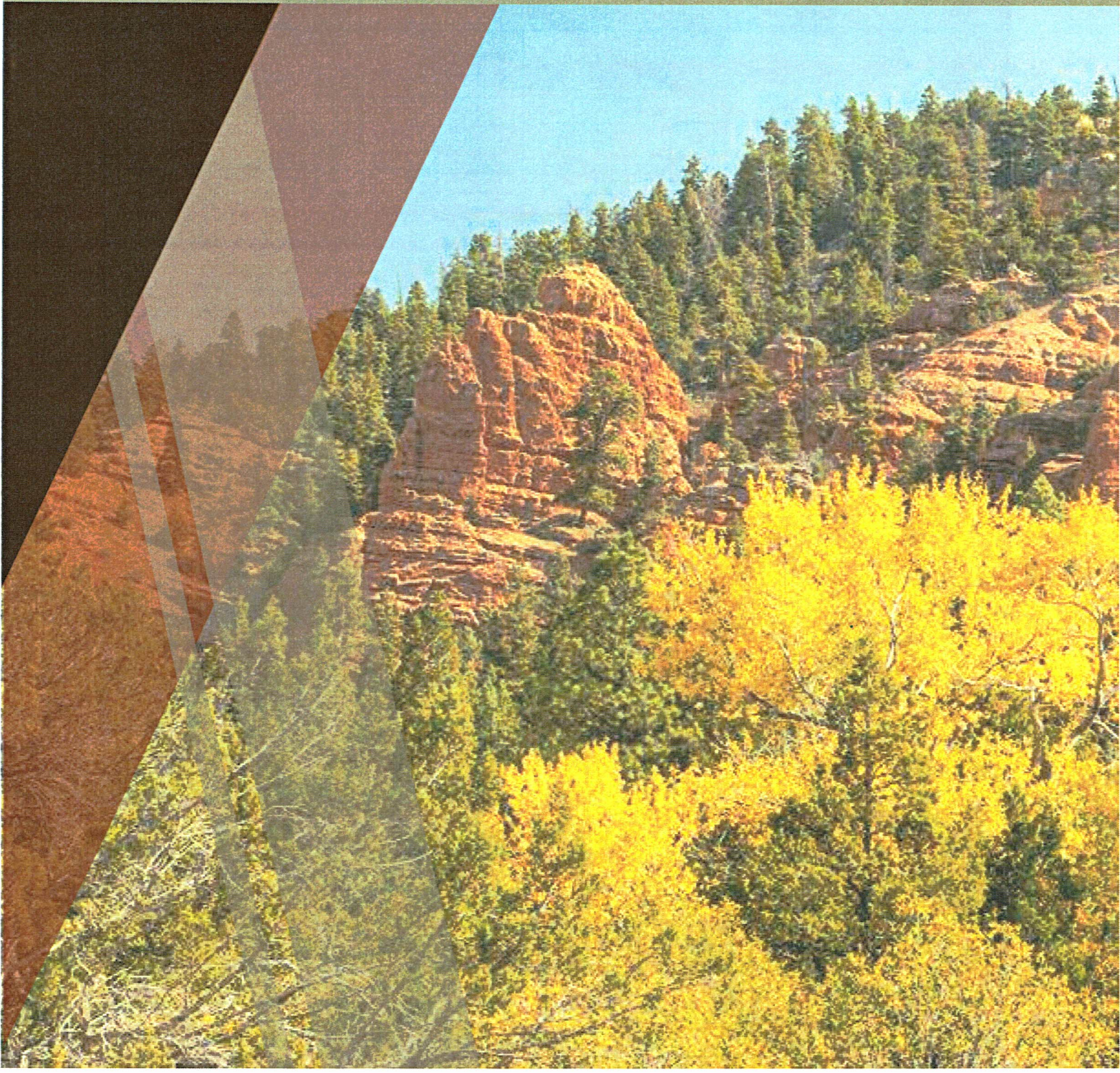
**Jones & DeMille
Engineering**

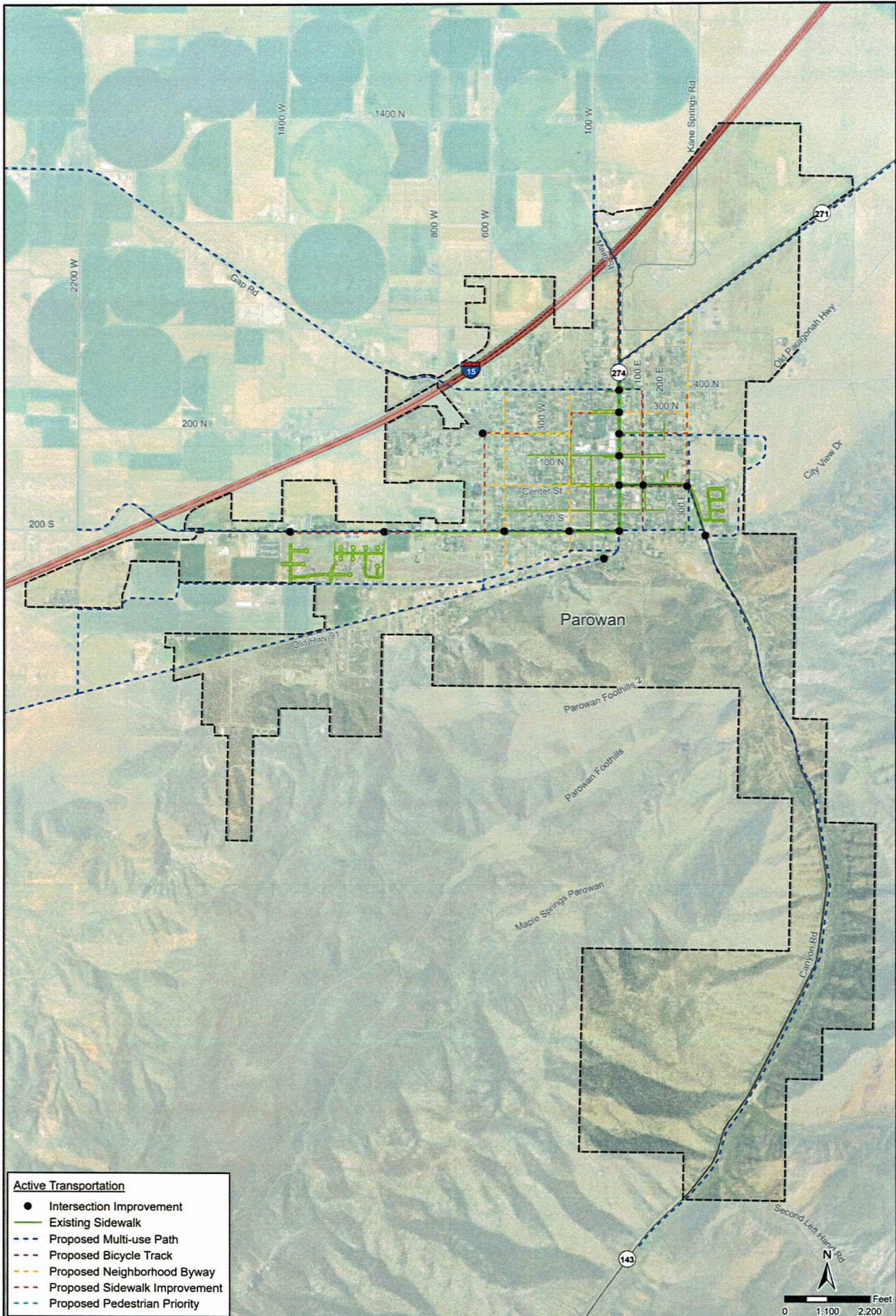
Parowan City
Transportation Master Plan C Road Surface Type
<small>Map Name: H:\CD\Proj\2307\009\GIS\Process\2307-009_Design\aprs - Esh Report C Road Surface Type Project Number: 2307-009</small>
<small>Drawn by: T&B 04-24</small>
<small>Last Edit: 07/05/2024</small>

Iron County, Utah
Scale: 1" = 2,200'
1

APPENDIX 3

ACTIVE TRANSPORTATION MAP





- Active Transportation**
- Intersection Improvement
 - Existing Sidewalk
 - - - Proposed Multi-use Path
 - - - Proposed Bicycle Track
 - - - Proposed Neighborhood Byway
 - - - Proposed Sidewalk Improvement
 - - - Proposed Pedestrian Priority

- Interstate
- US Highway
- State Highway
- Local Road
- - - Parowan City Boundary



Parowan City	
<i>Transportation Master Plan Active Transportation</i>	
Map Name: H:\C:\Proj\2307-009\GIS\Projects\2307-009_Design\2307-009_Design.aprx - EIR Report Active Transportation Project Number: 2307-009 Drawn by: TAB 12-23 Last Edit: 04/29/24	

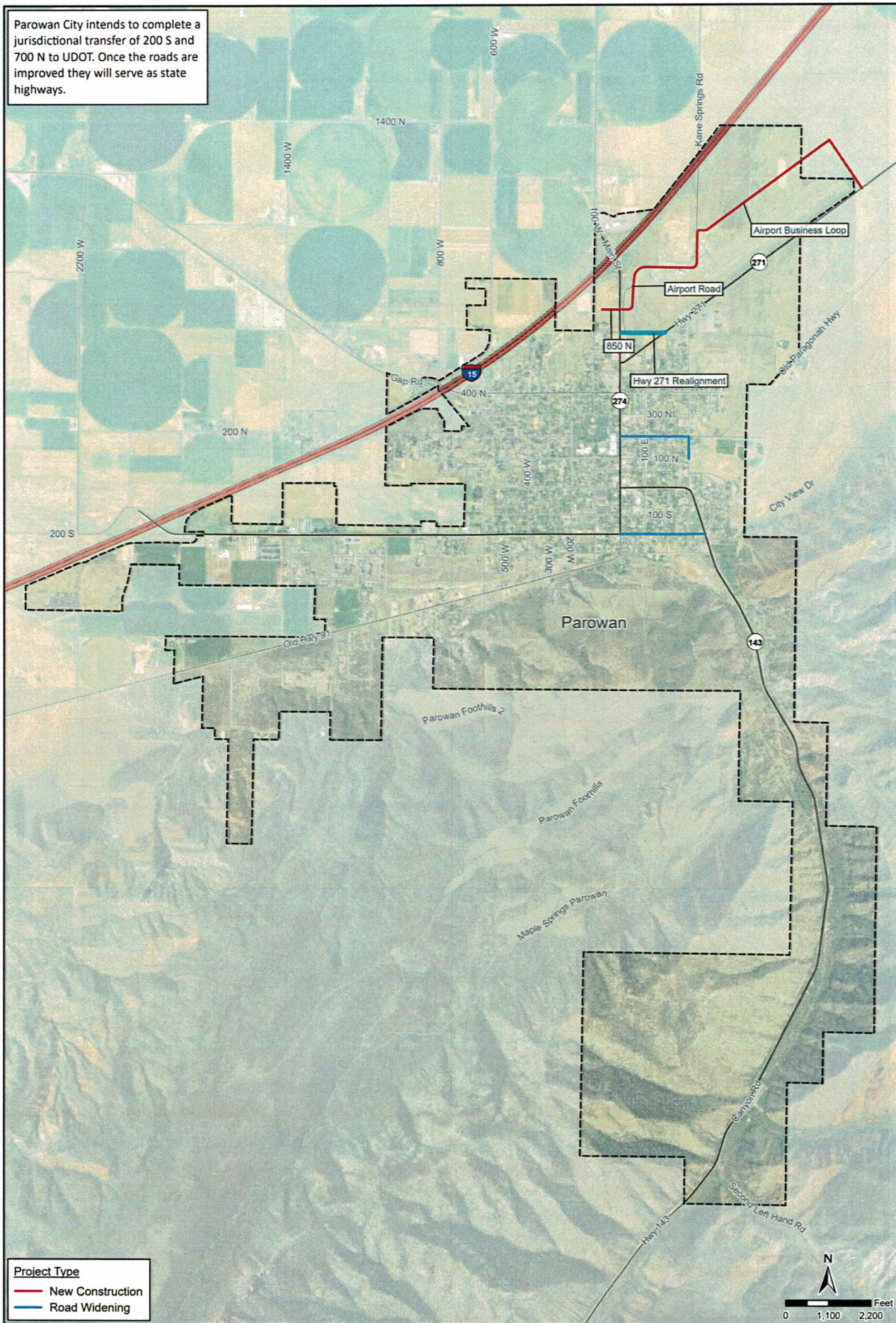
Iron County, Utah
Scale: 1" = 2,200'
1

APPENDIX 4

TRANSPORTATION
IMPROVEMENT PLANS -
MAPS AND COST ESTIMATES



Parowan City intends to complete a jurisdictional transfer of 200 S and 700 N to UDOT. Once the roads are improved they will serve as state highways.



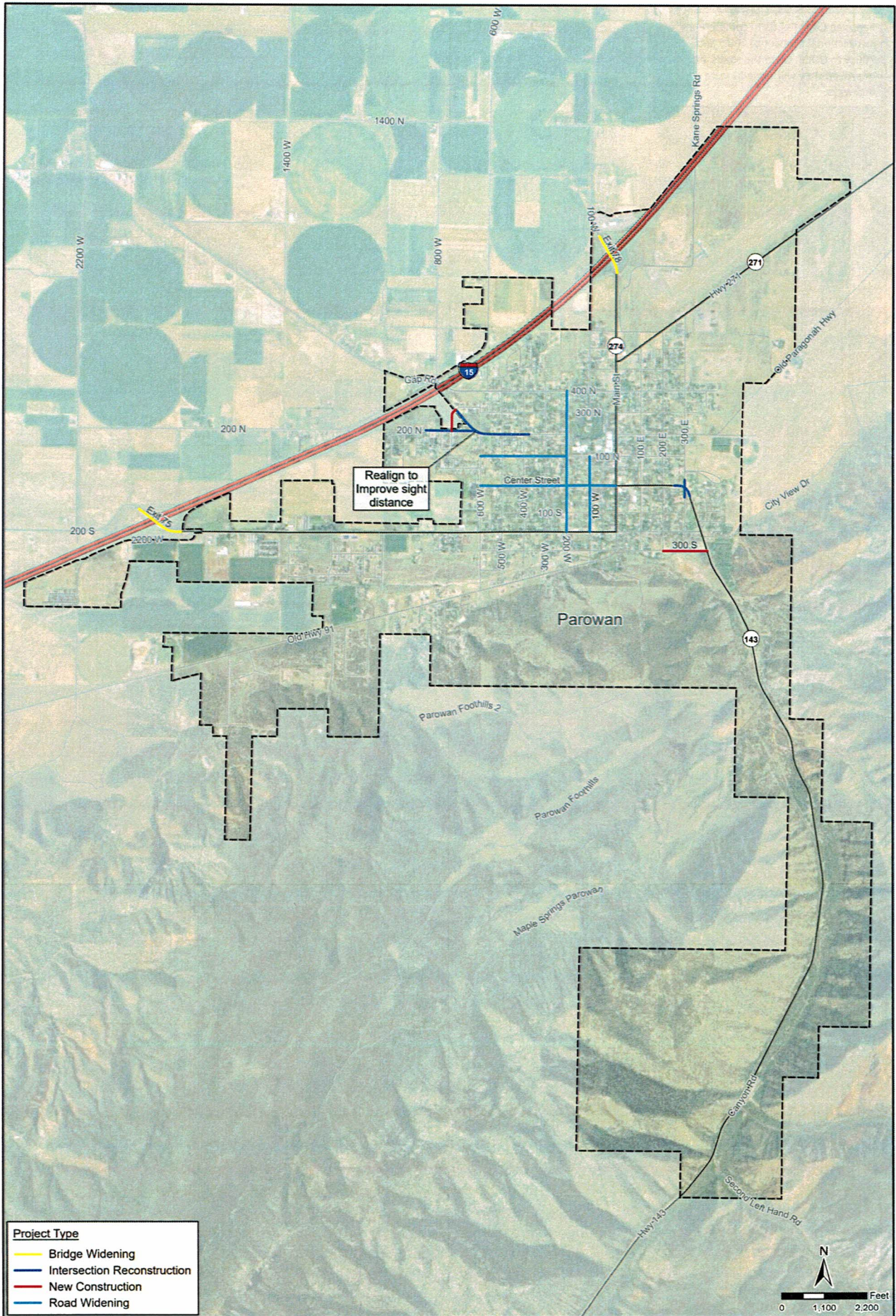
Project Type
 — New Construction
 — Road Widening

— Interstate
 — US Highway
 — State Highway
 — Major Local Road
 - - - Parowan City Boundary



Parowan City
Transportation Master Plan
Short-range Transportation Improvement Plan
 Map Name: H:\UD\Proj\2307-039\GIS\Projects\2307-039_Design\2307-039_Design.aprx - EIR Report Short-range TIP
 Project Number: 2307-039
 Drawn by: TAB 01-24
 Last Edit: 04/11/2024

Iron County, Utah
 Scale: 1" = 2,200'
1



Project Type	
	Bridge Widening
	Intersection Reconstruction
	New Construction
	Road Widening

	Interstate
	US Highway
	State Highway
	Major Local Road
	Parowan City Boundary

**Jones & DeMille
Engineering**

Parowan City	
Transportation Master Plan Long-range Transportation Improvement Plan	
<small>Map Name: J:\CD\Proj2307\09\GIS\Projects\2307-100_Design\2307-100_Design.aprx - EIR Report Long-range.TIP</small>	
<small>Project Number: 2307-100</small>	<small>Drawn by: TAB 5/24</small>
<small>Last Edit: 4/10/2024</small>	

Iron County, Utah
Scale: 1" = 2,200'
1

PROJECT NAME: 200 North Improvements

Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Reconstruction, road widening, and drainage improvements of 200 N from Main Street to 300 E and 300 E from 100 N to 200 N.

Project Length =	0.748	miles	3,951 ft
Current Year =	2023		
Assumed Construction Year =	2030		
Construction Items Inflation Factor =	1.55	7 yrs for inflation	
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%		
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%		
Items not Estimated (% of Construction) =	10.0%		
Preliminary Engineering (% of Construction + Incentives) =	8.0%		
Construction Engineering (% of Construction + Incentives) =	10.0%		

Construction Items	Cost	Remarks
Public Information Services	\$5,000	
Roadway and Drainage	\$2,664,599	
Traffic and Safety	\$10,160	
Structures	\$0	
Environmental Mitigation	\$0	
ITS	\$0	
	Subtotal	\$2,679,759
	Items not Estimated (10%)	\$267,976
	Construction Subtotal	\$2,947,735
P.E. Cost	P.E. Subtotal	\$235,819 8%
C.E. Cost	C.E. Subtotal	\$294,774 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2030
P.E.	\$236,000	\$305,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$2,948,000	\$4,559,000
C.E.	\$295,000	\$382,000
Incentives	\$0	\$0
Aesthetics	0.00%	\$0
Change Order Contingency	10.00%	\$295,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$3,774,000	\$5,702,000

PROPOSED COMMISSION REQUEST	TOTAL \$3,774,000	TOTAL \$5,702,000
------------------------------------	--------------------------	--------------------------

Project Assumptions/Risks

- | | | |
|---|--|----|
| 1 | Widen 200 N to 49' wide with curb and gutter on both sides. 10' wide concrete multiuse path on one side and 5' sidewalk on the | 8 |
| 2 | Widen 300 E to 38' wide with curb and gutter on both sides. 5' sidewalk on one side of the road. | 9 |
| 3 | Cement Treated Base includes 6% cement powder, 6-in deep reclamation, concrete powder unit weight 124 lb/ft ³ . | 10 |
| 4 | | 11 |
| 5 | | 12 |
| 6 | | 13 |
| 7 | | 14 |

Inflation

PROJECT NAME: 200 North Improvements

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: 200 North Improvements

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$200,000.00	\$200,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$150,000.00	\$150,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	5,551	cu yd	\$45.00	\$249,795.00	
	Roadway Excavation (Plan Quantity)	11,102	cu yd	\$25.00	\$277,550.00	
	Untreated Base Course (Plan Quantity)	5,088	cu yd	\$35.00	\$178,080.00	
	HMA - 1/2 Inch	4,257	Ton	\$120.00	\$510,840.00	
	Concrete Curb and Gutter Type B1	7,902	ft	\$40.00	\$316,080.00	
	Concrete Sidewalk	53,935	sq ft	\$12.00	\$647,220.00	
	Full Depth Reclamation Cement Treated Asphalt	8,780	sq yd	\$5.50	\$48,290.00	
	Cement Powder	147	Ton	\$250.00	\$36,744.30	
	Asphalt Soft Spot Repair	1,000	sq yd	\$50.00	\$50,000.00	
Roadway Subtotal					\$2,664,599	
Drainage						
Drainage Subtotal					\$0	
PI						
	Public Information Services	1	Lump	\$5,000.00	\$5,000.00	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: 200 North Improvements

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Pavement Marking Paint	98	gal	\$80.00	\$7,840.00	
	Pavement Message (Preformed Thermoplastic Stop Line)	4	Each	\$80.00	\$320.00	
	Relocate Sign Less Than 20 Square Feet	8	Each	\$250.00	\$2,000.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$10,160	
ITS						
ITS Subtotal					\$0	

MAIN

PROJECT NAME: 200 South Improvements

Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Reconstruction and widening of 200 S from Main Street to Highway 143.

Project Length =	0.403	miles	2,126	ft
Current Year =	2023			
Assumed Construction Year =	2032			
Construction Items Inflation Factor =	1.74	9 yrs for inflation		
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%			
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%			
Items not Estimated (% of Construction) =	10.0%			
Preliminary Engineering (% of Construction + Incentives) =	8.0%			
Construction Engineering (% of Construction + Incentives) =	10.0%			

Construction Items	Cost	Remarks
Pulic Information Services	\$5,000	
Roadway and Drainage	\$1,458,111	
Traffic and Safety	\$6,480	
Sstructures	\$0	
Environmental Mitigation	\$0	
ITS	\$0	
	Subtotal	
	\$1,469,591	
	Items not Estimated (10%)	
	\$146,959	
	Construction Subtotal	
	\$1,616,550	
P.E. Cost	P.E. Subtotal	8%
	\$129,324	
C.E. Cost	C.E. Subtotal	10%
	\$161,655	
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2032
P.E.	\$129,000	\$180,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$1,617,000	\$2,810,000
C.E.	\$162,000	\$226,000
Incentives	\$0	\$0
Aesthetics	\$0	\$0
Change Order Contingency	10.00% \$162,000	\$281,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$2,070,000	\$3,497,000
PROPOSED COMMISSION REQUEST	TOTAL \$2,070,000	TOTAL \$3,497,000

Project Assumptions/Risks

1	Widen road to 62' and put 5' sidewalk on one side and 10' concrete multi-use path on other side of the road.	8
2		9
3		10
4		11
5		12
6		13
7		14

Inflation

PROJECT NAME: 200 South Improvements

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: 200 South Improvements

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$125,000.00	\$125,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$90,000.00	\$90,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	3,655	cu yd	\$35.00	\$127,925.00	
	Roadway Excavation (Plan Quantity)	3,655	cu yd	\$25.00	\$91,375.00	
	Untreated Base Course (Plan Quantity)	2,133	cu yd	\$45.00	\$95,985.00	
	HMA - 1/2 Inch	2,972	Ton	\$120.00	\$356,640.00	
	Concrete Curb and Gutter Type B1	4,252	ft	\$40.00	\$170,080.00	
	Concrete Sidewalk	31,890	sq ft	\$12.00	\$382,680.00	
	Rotomilling - 2 Inch	6,142	sq yd	\$3.00	\$18,426.00	
Roadway Subtotal					\$1,458,111	
Drainage						
Drainage Subtotal					\$0	
PI						
	Public Information Services	1	Lump	\$5,000.00	\$5,000.00	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: 200 South Improvements

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Pavement Marking Paint	52	gal	\$80.00	\$4,160.00	
	Pavement Message (Preformed Thermoplastic Stop Line.	4	Each	\$80.00	\$320.00	
	Relocate Sign Less Than 20 Square Feet	8	Each	\$250.00	\$2,000.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$6,480	
ITS						
ITS Subtotal					\$0	

MAIN

Cost Estimate Summary of Assumptions

PROJECT NAME: 209 South Improvements

Material Assumptions	Unit Weights	Application Rates	Prime Cost	Task Cost	OSSE Task Cost	Chip Seal Emulsion	Form Coat
	150 lb/cf 100 lb/cf 100 lb/cf		Area sq	ft ² sq	Area sq	Area sq	Area sq
Granular Base/Borrow							
UT/BC							
OSSE							
Asphalt Binder							
Form Coat							
Emulsified Asphalt (EMUL-2)							
Flash Coat							
Water							
TOTALS			0	0	0	0	0

OSSE Task Cost	OSSE Task Cost	OSSE Task Cost	OSSE Task Cost	OSSE Task Cost	OSSE Task Cost	OSSE Task Cost	OSSE Task Cost
Area sq	ft ² sq	Area sq	ft ² sq	Area sq	ft ² sq	Area sq	ft ² sq
TOTALS							

Pavements	Roadway	Length ft	Width ft	Type	No. of 15-ton with Pavement	Side Slope	Granular Borrow		HMA		SMA		OSSE		Asphalt Binder		Chip Seal/Borrowed Course		PCCP		Recon/ Milling	
							Depth in	Vol cu yd	Depth in	Vol cu yd	Depth in	Vol cu yd	Depth in	Vol cu yd	Depth in	Vol cu yd	Depth in	Vol cu yd	Depth in	Vol cu yd	Depth in	Vol cu yd
200 S mill		2,126	20.0	0	13	12.00	48.42	3,654.83	8.00	400.0	2,132.79	3,373.39	4.99									
200 S wet-dry		2,126	20.0	2	13	12.00	48.42	3,654.83	8.00	400.0	2,132.79	3,373.39	4.99									
TOTALS								3,655				3,374										6,122

Earthwork	Roadway Excavation	Length ft	Width ft	Depth ft	No. of 15-ton with Pavement	Side Slope	Borrow		Water	
							Depth in	Vol cu yd	Depth in	Vol cu yd
200 S mill		2,126	20.0	12.00	13	12.00	48.42	3,654.83		
200 S wet-dry		2,126	20.0	12.00	13	12.00	48.42	3,654.83		
TOTALS								3,655		

Pavement Marking Paint	Roadway	Length ft	Width ft	No. of 15-ton with Pavement	Striping Type	
					Striping Type	Quantity gal
200 S mill		2,126	20.0	13		
200 S wet-dry		2,126	20.0	13		
TOTALS						

Water	Material	Volume cu yd	V/C	Gall
Untreated Base Course		2,133	0	0
Granular Base/Borrow/embankment		3,374	0	0
TOTALS				15,515.18

Misc. Area Calculator	Area Location	Length	Width	Total Area	Notes
TOTALS					

Misc. Volume Calculator					
Volume Location	Length	Width	Depth	Total Volume	Notes
TOTALS					

1 Widened road to 62' and put 5' sidewalk on one side and 10' concrete multi-use path on other side of the road.

- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

PROJECT NAME: 300 South Paving
Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Paving and Realignment of 300 S from 200 E to Highway 143.

Project Length =	0.181	miles	957 ft
Current Year =	2023		
Assumed Construction Year =	2050		
Construction Items Inflation Factor =	4.96	27 yrs for inflation	
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%		
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%		
Items not Estimated (% of Construction) =	10.0%		
Preliminary Engineering (% of Construction + Incentives) =	8.0%		
Construction Engineering (% of Construction + Incentives) =	10.0%		

Construction Items	Cost	Remarks
Pulic Information Services	\$5,000	
Roadway and Drainage	\$239,630	
Traffic and Safety	\$1,650	
Sttructures	\$0	
Environmental Mitigation	\$0	
ITS	\$0	
	Subtotal	\$246,280
	Items not Estimated (10%)	\$24,628
	Construction Subtotal	\$270,908
P.E. Cost	P.E. Subtotal	\$21,673 8%
C.E. Cost	C.E. Subtotal	\$27,091 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$20,000
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2050
P.E.	\$22,000	\$59,000
Right of Way	\$20,000	\$58,000
Utilities	\$0	\$0
Construction	\$271,000	\$1,344,000
C.E.	\$27,000	\$73,000
Incentives	\$0	\$0
Aesthetics	0.00% \$0	\$0
Change Order Contingency	10.00% \$27,000	\$134,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$367,000	\$1,668,000

PROPOSED COMMISSION REQUEST	TOTAL	\$367,000	TOTAL	\$1,668,000
------------------------------------	--------------	------------------	--------------	--------------------

Project Assumptions/Risks

- | | |
|---|----|
| 1 | 8 |
| 2 | 9 |
| 3 | 10 |
| 4 | 11 |
| 5 | 12 |
| 6 | 13 |
| 7 | 14 |

Inflation

PROJECT NAME: 300 South Paving

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68
2050	6.0%	6.0%	4.96

Roadway and Drainage

PROJECT NAME: 300 South Paving

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$30,000.00	\$30,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$15,000.00	\$15,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	1,230	cu yd	\$45.00	\$55,350.00	
	Roadway Excavation (Plan Quantity)	2,459	cu yd	\$25.00	\$61,475.00	
	Untreated Base Course (Plan Quantity)	523	cu yd	\$35.00	\$18,305.00	
	HMA - 1/2 Inch	476	Ton	\$125.00	\$59,500.00	
	Roadway Subtotal				\$239,630	
Drainage						
	Drainage Subtotal				\$0	
PI						
	Public Information Services	1	Lump	\$5,000.00	\$5,000	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: 300 South Paving

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Sign Type A-1, 48 Inch X 48 Inch	2	Each	\$75.00	\$150.00	
	Sign Post	2	Each	\$250.00	\$500.00	
	Sign Base	2	Each	\$500.00	\$1,000.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$1,650	
ITS						
ITS Subtotal					\$0	

MAIN

Utilities, Right of Way, and Incentives

PROJECT NAME: 300 South Paving

Item #	Item	Quantity	Units	Price	Cost	Remarks
Utilities						
Utilities Subtotal					\$0	
Right-of-way						
	Non-Urban/Suburban Residential	1	Each	\$20,000.00	\$20,000.00	Approx 0.18 acres
Right-of-Way Subtotal					\$20,000	
Incentives						
Incentives Subtotal					\$0	

MAIN

PROJECT NAME: 200 North & 600 West Intersection Improvements
Cost Estimate - Concept Level

Date 1/26/2024

Proposed Project Scope: Realigning 200 N and 600 W intersection to improve sight distance. This includes widening 200 N and abandoning North leg of intersection.

Project Length =	0.047	miles	247 ft
Current Year =	2023		
Assumed Construction Year =	2036		
Construction Items Inflation Factor =	2.19		13 yrs for inflation
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%		
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%		
Items not Estimated (% of Construction) =	10.0%		
Preliminary Engineering (% of Construction + Incentives) =	16.0%		
Construction Engineering (% of Construction + Incentives) =	16.0%		

Construction Items	Cost	Remarks
Public Information Services	\$3,000	
Roadway and Drainage	\$71,790	
Traffic and Safety	\$1,950	
Structures	\$0	
Environmental Mitigation	\$0	
ITS	\$0	
	Subtotal	\$76,740
	Items not Estimated (10%)	\$7,674
	Construction Subtotal	\$84,414
P.E. Cost	P.E. Subtotal	\$13,506 16%
C.E. Cost	C.E. Subtotal	\$13,506 16%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2036
P.E.	\$14,000	\$23,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$84,000	\$184,000
C.E.	\$14,000	\$23,000
Incentives	\$0	\$0
Aesthetics	\$0	\$0
Change Order Contingency	10.00% \$8,000	\$18,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$120,000	\$248,000

PROPOSED COMMISSION REQUEST	TOTAL	\$120,000	TOTAL	\$248,000
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Project Assumptions/Risks

1	8
2	9
3	10
4	11
5	12
6	13
7	14

Inflation

PROJECT NAME: 200 North & 600 West Intersection Improvements

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: 200 North & 600 West Intersection Improvements

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$25,000.00	\$25,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$10,000.00	\$10,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	223	cu yd	\$55.00	\$12,265.00	
	Roadway Excavation (Plan Quantity)	223	cu yd	\$35.00	\$7,805.00	
	Untreated Base Course (Plan Quantity)	100	cu yd	\$45.00	\$4,500.00	
	HMA - 1/2 Inch	94	Ton	\$130.00	\$12,220.00	
Roadway Subtotal					\$71,790	
Drainage						
Drainage Subtotal					\$0	
PI						
	Public Information Services	1	Lump	\$3,000.00	\$3,000	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: 200 North & 600 West Intersection Improvements

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Pavement Marking Paint	10	gal	\$150.00	\$1,500.00	
	Pavement Message (Preformed Thermoplastic Stop Line)	2	Each	\$100.00	\$200.00	
	Relocate Sign Less Than 20 Square Feet	1	Each	\$250.00	\$250.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$1,950	
ITS						
ITS Subtotal					\$0	

MAIN

Cost Estimate Summary of Assumptions
PROJECT NAME: 200 North & 690 West Intermodal Improvements

Material Assumptions

Material	Unit Weights	Application Rates
Borrow	1.32 t/cyf	
Granular Backfill Borrow/Embankment	1.32 t/cyf	
Subgrade	1.10 t/cyf	
U/LIC	1.10 t/cyf	
HMA	1.48 t/cyf	
Asphalt Binder	8.19% (dry)	
Prime Coat	2.45 gallon	
Emulsified Asphalt (EMULS-2)	2.50 gallon	
Finish Coat	0.11 t/cyf	
Water	51 gal/cyf U/LIC, 45 gal/cyf Borrow/Embankment	

Oil

Item	Area	From Chit	LIR	# of apps	Area	Tons	Area	Tons	Area	Tons
Intersection improvement	557.07	1.20	0.0000	600.01	0.88	524.11	0.88	524.11	0.88	524.11
TOTALS		2				524.11		524.11		524.11

Pavement

Roadway	Length	Width	No. of Slabs	No. of Slabs with Width			Grandular Borrow			Unreserved Base Course			HMA			SMA			OSGC			Asphalt Binder			Chip Seal/ Micro Emulsion			PCCP			Rooming Mill		
				Length	Width	Depth	Length	Width	Depth	Length	Width	Depth	Length	Width	Depth	Length	Width	Depth	Length	Width	Depth	Length	Width	Depth	Length	Width	Depth	Length	Width	Depth			
Intersection improvement	247	20.0	1	1.13	11.00	21.84	272.75	436.25	436.25	8.00	21.74	99.24	164.96	20.44	93.24																		
TOTALS			223				223	427				164.96																					

Earthwork

Roadway	Length	Depth	Roadway Excavation			Borrow			Granular Backfill Borrow/Embankment		
			Length	Width	Depth	Length	Width	Depth	Length	Width	Depth
Intersection improvement	246.65	17.00	24.34	272.75	27.74	15.97	15.97				
TOTALS											

Water

Material	Length	Width	Depth	Volume
Granular Backfill Borrow/Embankment	100			1600 yd
Asphalt Binder	5			5
Unreserved Base Course	500			5,100
Borrow	0			0
Granular Backfill Borrow/Embankment	0			0
TOTALS				15

Pavement Marking Plans

Roadway	Length	Edges to be Stripped	No. of Separation Lines	Median Striping Adjustment	Striping Type	Total Area
TOTALS						

Pavement Marking Application Rates

Striping Type	Length	Width	Area
Edge			100
Median			50
Separation			100
TOTALS			250

Misc. Area Calculator

Area Location	Length	Width	Total Area	Notes
				Notes

Misc. Volume Calculator

Volume Location	Length	Width	Depth	Total Volume	Notes
					Notes

Project Assumptions/Risks

1	
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PROJECT NAME: 850 North & Airport Road Realignment

Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Construction of 850 N and Realignment 0.16 miles of Airport Road.

Project Length =	0.249	miles	1,314	ft
Current Year =	2023			
Assumed Construction Year =	2026			
Construction Items Inflation Factor =	1.22		3 yrs	for inflation
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%			
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%			
Items not Estimated (% of Construction) =	10.0%			
Preliminary Engineering (% of Construction + Incentives) =	8.0%			
Construction Engineering (% of Construction + Incentives) =	10.0%			

Construction Items	Cost	Remarks
Public Information Services	\$4,000	
Roadway and Drainage	\$309,770	
Traffic and Safety	\$5,540	
Structures	\$0	
Environmental Mitigation	\$6,020	
ITS	\$0	
	Subtotal	\$325,330
	Items not Estimated (10%)	\$32,533
	Construction Subtotal	\$357,863
P.E. Cost	P.E. Subtotal	\$28,629 8%
C.E. Cost	C.E. Subtotal	\$35,786 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2026
P.E.	\$29,000	\$32,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$358,000	\$439,000
C.E.	\$36,000	\$40,000
Incentives	\$0	\$0
Aesthetics	0.00% \$0	\$0
Change Order Contingency	10.00% \$36,000	\$44,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$459,000	\$555,000
PROPOSED COMMISSION REQUEST	TOTAL \$459,000	TOTAL \$555,000

Project Assumptions/Risks

- | | | | |
|---|--|----|-------|
| 1 | Airport Road Realignment includes 10' of seeding and ROW fence on each side of the road. | 8 | _____ |
| 2 | _____ | 9 | _____ |
| 3 | _____ | 10 | _____ |
| 4 | _____ | 11 | _____ |
| 5 | _____ | 12 | _____ |
| 6 | _____ | 13 | _____ |
| 7 | _____ | 14 | _____ |

Inflation

PROJECT NAME: 850 North & Airport Road Realignment

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: 850 North & Airport Road Realignment

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$30,000.00	\$30,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$15,000.00	\$15,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	1,688	cu yd	\$45.00	\$75,960.00	
	Roadway Excavation (Plan Quantity)	1,688	cu yd	\$25.00	\$42,200.00	
	Untreated Base Course (Plan Quantity)	718	cu yd	\$35.00	\$25,130.00	
	HMA - 1/2 Inch	654	Ton	\$120.00	\$78,480.00	
	Right of Way Fence	1,720	ft	\$25.00	\$43,000.00	
Roadway Subtotal					\$309,770	
Drainage						
Drainage Subtotal					\$0	
PI						
	Public Information Services	1	Lump	\$4,000.00	\$4,000	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: 850 North & Airport Road Realignment

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Pavement Marking Paint	22	gal	\$80.00	\$1,760.00	
	Pavement Message (Preformed Thermoplastic Stop Line.	6	Each	\$80.00	\$480.00	
	Sign Type A-1, 48 Inch X 48 Inch	4	Each	\$75.00	\$300.00	
	Sign Post	4	Each	\$250.00	\$1,000.00	
	Sign Base	4	Each	\$500.00	\$2,000.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$5,540	
ITS						
ITS Subtotal					\$0	

MAIN

Environmental and Landscaping

PROJECT NAME: 850 North & Airport Road Realignment

Item #	Item	Quantity	Units	Price	Cost	Remarks
Environmental						
Temporary Erosion Control						
Landscaping						
029117010	HECP Type 1	17	1000sq ft	\$200.00	\$3,440.00	
029227030	Broadcast Seed	17	1000sq ft	\$150.00	\$2,580.00	
Environmental Mitigation Subtotal					\$6,020	

MAIN

Cost Estimate Summary of Assumptions
PROJECT NAME: 660 North & Airport Road Redignment

Material Assumptions	Unit Weights	Application Rates
Gravel	130 lb/cy	
Granular Base Course	138 lb/cy	
HMA	148 lb/cy	
Asphalt Binder	6.10%	
Prime Coat	0.50 gal/cy	
Emulsified Asphalt	0.50 gal/cy	
Flux Coat	0.11 gal/cy	
Water	45 gal/cy	

Roadway	Prime Coat		Flux Coat		GSSC Test Coat		Chip Seal Emulsion		Flux Coat	
	Area	Yd	Area	Yd	Area	Yd	Area	Yd	Area	Yd
TOTALS	0	0	0	0	0	0	0	0	0	0

Pavements	No. of Sections		Granular Borrow		Unreated Base Course		HMA		SMA		GSSC		Alphalt Binder		Chip Seal, Micro-Surfacing or Banded Wearing Course		Reconrolling		
	Length	Width	Length	Width	Length	Width	Length	Width	Length	Width	Length	Width	Length	Width	Length	Width	Length	Width	
Roadway	464	26.0	1.0	1.0	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47
TOTALS	464	26.0	1.0	1.0	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47	24.47

Roadway	Unreated Base Course		HMA		SMA		GSSC		Alphalt Binder		Chip Seal, Micro-Surfacing or Banded Wearing Course		Reconrolling	
	Length	Width	Length	Width	Length	Width	Length	Width	Length	Width	Length	Width	Length	Width
TOTALS	718	1.337	0	0	0	0	0	0	0	0	0	0	0	0

Earthwork	Roadway Excavation		Borrow		Granular Backfill		Borrow Embankment	
	Length	Width	Length	Width	Length	Width	Length	Width
Roadway	660.00	34.08	34.08	34.08	24.47	24.47	24.47	24.47
TOTALS	660.00	34.08	34.08	34.08	24.47	24.47	24.47	24.47

Water	Material		TOTALS	
	Length	Width	Length	Width
TOTALS	0	0	0	0

Pavement Marking Paint	Edges to be Stripped		Median Striping		Inter-Median Separation		Pavement Marking Paint	
	Length	Width	Length	Width	Length	Width	Length	Width
Roadway	660	2	1	2500	22	22	22	22
TOTALS	660	2	1	2500	22	22	22	22

Misc. Area Calculator	Area Location		Total Area	
	Length	Width	Length	Width
TOTALS	0	0	0	0

Misc. Volume Calculator	Volume Location		Total Volume	
	Length	Width	Length	Width
TOTALS	0	0	0	0

Pavement Marking Application Rates	Stripes Type		Signal	
	Length	Width	Length	Width
TOTALS	0	0	0	0

Project Assumptions/Risks	Area Location		Total Area	
	Length	Width	Length	Width
1. Airport Road Redignment includes 10' of seeding and ROW fence on each side of the road.	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0

Project Assumptions/Risks	Volume Location		Total Volume	
	Length	Width	Length	Width
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0

PROJECT NAME: Airport Business Loop
Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope:

Construction of roadway around Parowan City airport connecting Airport Road to Highway 271 for future industrial development.

Project Length =	1.614	miles	8,523	ft
Current Year =	2023			
Assumed Construction Year =	2028			
Construction Items Inflation Factor =	1.38	5 yrs for inflation		
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%			
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%			
Items not Estimated (% of Construction) =	10.0%			
Preliminary Engineering (% of Construction + Incentives) =	8.0%			
Construction Engineering (% of Construction + Incentives) =	10.0%			

Construction Items	Cost	Remarks
Public Information Services	\$6,000	
Roadway and Drainage	\$1,790,195	
Traffic and Safety	\$20,260	
Structures	\$0	
Environmental Mitigation	\$45,185	
ITS	\$0	
	Subtotal	\$1,861,640
	Items not Estimated (10%)	\$186,164
	Construction Subtotal	\$2,047,804
P.E. Cost	P.E. Subtotal	\$163,824 8%
C.E. Cost	C.E. Subtotal	\$204,780 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2028
P.E.	\$164,000	\$197,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$2,048,000	\$2,819,000
C.E.	\$205,000	\$246,000
Incentives	\$0	\$0
Aesthetics	0.00% \$0	\$0
Change Order Contingency	10.00% \$205,000	\$282,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$2,622,000	\$3,544,000

PROPOSED COMMISSION REQUEST	TOTAL \$2,622,000	TOTAL \$3,544,000
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Project Assumptions/Risks

1 Cement treated base includes 6% cement powder, 6-in deep, 124 lb/ft ³ cement powder unit weight	8
2 Seeding and Right of Way Fence along both sides of road.	9
3	10
4	11
5	12
6	13
7	14

Inflation

PROJECT NAME: Airport Business Loop

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: Airport Business Loop

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$200,000.00	\$200,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$150,000.00	\$150,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	6,974	cu yd	\$45.00	\$313,830.00	
	Roadway Excavation (Plan Quantity)	6,974	cu yd	\$25.00	\$174,350.00	
	Untreated Base Course (Plan Quantity)	3,959	cu yd	\$35.00	\$138,565.00	
	HMA - 1/2 Inch	4,204	Ton	\$120.00	\$504,480.00	
	Full Depth Reclamation	2,394	sq yd	\$5.50	\$13,167.00	
	FDR Cement Content	50	Ton	\$250.00	\$12,404.34	
	Right of Way Fence	10,858	ft	\$25.00	\$271,450.00	
	Subgrade Preparation	5,974	sq yd	\$2.00	\$11,948.44	
Roadway Subtotal					\$1,790,195	
Drainage						
Drainage Subtotal					\$0	
PI						
	Public Information Services	1	Lump	\$6,000.00	\$6,000	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: Airport Business Loop

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Pavement Marking Paint	206	gal	\$80.00	\$16,480.00	
	Pavement Message (Preformed Thermoplastic Stop Line.	6	Each	\$80.00	\$480.00	
	Sign Type A-1, 48 Inch X 48 Inch	4	Each	\$75.00	\$300.00	
	Sign Post	4	Each	\$250.00	\$1,000.00	
	Sign Base	4	Each	\$500.00	\$2,000.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$20,260	
ITS						
ITS Subtotal					\$0	

MAIN

Environmental and Landscaping

PROJECT NAME: Airport Business Loop

Item #	Item	Quantity	Units	Price	Cost	Remarks
Environmental						
Temporary Erosion Control						
Landscaping						
029117010	HECP Type 1	129	1000sq ft	\$200.00	\$25,820.00	
029227030	Broadcast Seed	129	1000sq ft	\$150.00	\$19,365.00	
Environmental Mitigation Subtotal					\$45,185	

MAIN

PROJECT NAME: Highway 271 Realignment

Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Realigning Highway 271 to intersect Main Street along 700 N.

Project Length =	0.209	miles	1.105	ft
Current Year =	2023			
Assumed Construction Year =	2034			
Construction Items Inflation Factor =	1.95		11 yrs for inflation	
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%			
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%			
Items not Estimated (% of Construction) =	10.0%			
Preliminary Engineering (% of Construction + Incentives) =	8.0%			
Construction Engineering (% of Construction + Incentives) =	10.0%			

Construction Items	Cost	Remarks
Public Information Services	\$5,000	
Roadway and Drainage	\$205,469	
Traffic and Safety	\$4,660	
Structures	\$0	
Environmental Mitigation	\$8,840	
ITS	\$0	
	Subtotal	\$223,969
	Items not Estimated (10%)	\$22,397
	Construction Subtotal	\$246,366
P.E. Cost	P.E. Subtotal	\$19,709 8%
C.E. Cost	C.E. Subtotal	\$24,637 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2034
P.E.	\$20,000	\$30,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$246,000	\$480,000
C.E.	\$25,000	\$37,000
Incentives	\$0	\$0
Aesthetics	\$0	\$0
Change Order Contingency	10.00% \$25,000	\$49,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$316,000	\$596,000

PROPOSED COMMISSION REQUEST	TOTAL	\$316,000	TOTAL	\$596,000
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Project Assumptions/Risks

1 Includes 10' of seeding on each side of 700 North.	8
2	9
3	10
4	11
5	12
6	13
7	14

Inflation

PROJECT NAME: Highway 271 Realignment

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: Highway 271 Realignment

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$25,000.00	\$25,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$15,000.00	\$15,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	1,515	cu yd	\$45.00	\$68,175.00	
	Roadway Excavation (Plan Quantity)	105	cu yd	\$25.00	\$2,625.00	
	Subgrade Preparation	3,192	sq yd	\$2.00	\$6,384.44	
	Untreated Base Course (Plan Quantity)	623	cu yd	\$35.00	\$21,805.00	
	HMA - 1/2 Inch	554	Ton	\$120.00	\$66,480.00	
Roadway Subtotal					\$205,469	
Drainage						
Drainage Subtotal					\$0	
PI						
	Public Information Services	1	Lump	\$5,000.00	\$5,000	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: Highway 271 Realignment

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Pavement Marking Paint	48	Gal	\$80.00	\$3,840.00	
	Pavement Message (Preformed Thermoplastic)	2	Each	\$80.00	\$160.00	
	Pavement Message (Preformed Thermoplastic Stop Line)	2	Each	\$80.00	\$160.00	
	Relocate Sign Less Than 20 Square Feet	2	Each	\$250.00	\$500.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$4,660	
ITS						
ITS Subtotal					\$0	

MAIN

Environmental and Landscaping

PROJECT NAME: Highway 271 Realignment

Item #	Item	Quantity	Units	Price	Cost	Remarks
Environmental						
Temporary Erosion Control						
Landscaping						
029117010	HECP Type 1	22	1000sq ft	\$250.00	\$5,525.00	
029227030	Broadcast Seed	22	1000sq ft	\$150.00	\$3,315.00	
Environmental Mitigation Subtotal					\$8,840	

MAIN

PROJECT NAME: 300 East & Center Street Improvements

Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Construction of roundabout with pedestrian crossings at 300 E and Center Street.

Project Length =	0.305	miles	1.611	ft
Current Year =	2023			
Assumed Construction Year =	2040			
Construction Items Inflation Factor =	2.77		17 yrs for inflation	
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%			
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%			
Items not Estimated (% of Construction) =	10.0%			
Preliminary Engineering (% of Construction + Incentives) =	10.0%			
Construction Engineering (% of Construction + Incentives) =	10.0%			

Construction Items	Cost	Remarks
Public Information Services	\$5,000	
Roadway and Drainage	\$768,825	
Traffic and Safety	\$29,600	
Structures	\$0	
Environmental Mitigation	\$0	
ITS	\$0	
	Subtotal	\$803,425
	Items not Estimated (10%)	\$80,343
	Construction Subtotal	\$883,768
P.E. Cost	P.E. Subtotal	\$88,377 10%
C.E. Cost	C.E. Subtotal	\$88,377 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2040
P.E.	\$88,000	\$165,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$884,000	\$2,448,000
C.E.	\$88,000	\$165,000
Incentives	\$0	\$0
Aesthetics	0.00%	\$0
Change Order Contingency	10.00%	\$88,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$1,148,000	\$3,022,000

PROPOSED COMMISSION REQUEST	TOTAL \$1,148,000	TOTAL \$3,022,000
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Project Assumptions/Risks

- | | | | |
|---|---|----|-------|
| 1 | Areas and quantities obtained from concept design of roundabout.
Alternative solutions for intersection improvements to be | 8 | _____ |
| 2 | _____ | 9 | _____ |
| 3 | _____ | 10 | _____ |
| 4 | _____ | 11 | _____ |
| 5 | _____ | 12 | _____ |
| 6 | _____ | 13 | _____ |
| 7 | _____ | 14 | _____ |

Inflation

PROJECT NAME: 300 East & Center Street Improvements

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68
2050	6.0%	6.0%	4.96

Roadway and Drainage

PROJECT NAME: 300 East & Center Street Improvements

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$85,000.00	\$85,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$50,000.00	\$50,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	2,208	cu yd	\$45.00	\$99,360.00	
	Roadway Excavation (Plan Quantity)	4,814	cu yd	\$25.00	\$120,350.00	
	Untreated Base Course (Plan Quantity)	1,242	cu yd	\$35.00	\$43,470.00	
	HMA - 1/2 Inch	1,364	Ton	\$120.00	\$163,680.00	
	Concrete Sidewalk 4" Thick	8,417	sq ft	\$12.00	\$101,004.00	
	Concrete Medians 12" Thick	432	sq ft	\$28.00	\$12,096.00	
	Concrete Curb and Gutter	995	ft	\$40.00	\$39,800.00	
	Landscape Rock	904	cy yd	\$15.00	\$13,565.00	
	Corner Curb Ramp	8	Each	\$3,000.00	\$24,000.00	
	Relocate Power	1	Lump	\$6,500.00	\$6,500.00	
	Reconstruct Manhole/Water Valve	8	Each	\$1,250.00	\$10,000.00	
Roadway Subtotal					\$768,825	
Drainage						
Drainage Subtotal					\$0	
PI						
	Public Information Services	1	Lump	\$5,000.00	\$5,000	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: 300 East & Center Street Improvements

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Pavement Marking Paint	88	gal	\$75.00	\$6,600.00	
	Pavement Message (Preformed Thermoplastic)	60	Each	\$100.00	\$6,000.00	pedestrian crosswalk
	Sign 48 Inch X 48 Inch	20	Each	\$75.00	\$1,500.00	
	Sign Post	20	Each	\$250.00	\$5,000.00	
	Sign Base	20	Each	\$500.00	\$10,000.00	
	Remove Sign	2	Each	\$250.00	\$500.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$29,600	
ITS						
ITS Subtotal					\$0	

MAIN

PROJECT NAME: 100 N from 200 W to 600 W
Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Widening 100 N from 200 W to 600 W.

Project Length =	0.403	miles	2,129 ft
Current Year =	2023		
Assumed Construction Year =	2044		
Construction Items Inflation Factor =	3.50	21 yrs for inflation	
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%		
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%		
Items not Estimated (% of Construction) =	10.0%		
Preliminary Engineering (% of Construction + Incentives) =	8.0%		
Construction Engineering (% of Construction + Incentives) =	10.0%		

Construction Items	Cost	Remarks
Public Information Services	\$2,500	
Roadway and Drainage	\$1,050,239	
Traffic and Safety	\$6,980	
Structures	\$0	
Environmental Mitigation	\$0	
ITS	\$0	
	Subtotal	\$1,059,719
	Items not Estimated (10%)	\$105,972
	Construction Subtotal	\$1,165,691
P.E. Cost	P.E. Subtotal	\$93,255 8%
C.E. Cost	C.E. Subtotal	\$116,569 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2044
P.E.	\$93,000	\$201,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$1,166,000	\$4,077,000
C.E.	\$117,000	\$253,000
Incentives	\$0	\$0
Aesthetics	0.00%	\$0
Change Order Contingency	10.00%	\$117,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$1,493,000	\$4,940,000

PROPOSED COMMISSION REQUEST	TOTAL \$1,493,000	TOTAL \$4,940,000
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Project Assumptions/Risks

- | | |
|---|----|
| 1 | 8 |
| 2 | 9 |
| 3 | 10 |
| 4 | 11 |
| 5 | 12 |
| 6 | 13 |
| 7 | 14 |

Inflation

PROJECT NAME: 100 N from 200 W to 600 W

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: 100 N from 200 W to 600 W

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$80,000.00	\$80,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$50,000.00	\$50,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	2,851	cu yd	\$45.00	\$128,295.00	
	Roadway Excavation (Plan Quantity)	494	cu yd	\$25.00	\$12,350.00	
	Untreated Base Course (Plan Quantity)	1,212	cu yd	\$35.00	\$42,420.00	
	HMA - 1/2 Inch	2,007	Ton	\$120.00	\$240,840.00	
	Full Depth Reclamation Cement Treated Asphalt	5,424	sq yd	\$5.50	\$29,833.22	
	Cement Powder	91	Ton	\$250.00	\$22,700.37	
	Concrete Curb and Gutter	4,438	ft	\$40.00	\$177,520.00	
	Concrete Sidewalk	22,190	sq ft	\$12.00	\$266,280.00	
	Roadway Subtotal				\$1,050,239	
Drainage						
	Drainage Subtotal				\$0	
PI						
	Public Information Services	1	Lump	\$2,500.00	\$2,500	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: 100 N from 200 W to 600 W

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Pavement Marking Paint	54	gal	\$80.00	\$4,320.00	
	Pavement Message (Preformed Thermoplastic Stop Line,	2	Each	\$80.00	\$160.00	
	Relocate Sign Less Than 20 Square Feet	10	Each	\$250.00	\$2,500.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$6,980	
ITS						
ITS Subtotal					\$0	

MAIN

PROJECT NAME: 100 W Widening
Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Widening 100 W from 200 S to 400 N.

Project Length =	0.367	miles	1,937	ft
Current Year =	2023			
Assumed Construction Year =	2046			
Construction Items Inflation Factor =	3.93	23 yrs for inflation		
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%			
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%			
Items not Estimated (% of Construction) =	10.0%			
Preliminary Engineering (% of Construction + Incentives) =	8.0%			
Construction Engineering (% of Construction + Incentives) =	10.0%			

Construction Items	Cost	Remarks
Pulic Information Services	\$2,500	
Roadway and Drainage	\$712,736	
Traffic and Safety	\$8,440	
Sitstructures	\$0	
Environmental Mitigation	\$0	
ITS	\$0	
	Subtotal	\$723,676
	Items not Estimated (10%)	\$72,368
	Construction Subtotal	\$796,044
P.E. Cost	P.E. Subtotal	\$63,684 8%
C.E. Cost	C.E. Subtotal	\$79,604 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2046
P.E.	\$64,000	\$149,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$796,000	\$3,127,000
C.E.	\$80,000	\$187,000
Incentives	\$0	\$0
Aesthetics	0.00%	\$0
Change Order Contingency	10.00%	\$80,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$1,020,000	\$3,777,000

PROPOSED COMMISSION REQUEST	TOTAL	\$1,020,000	TOTAL	\$3,777,000
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Project Assumptions/Risks

1	8
2	9
3	10
4	11
5	12
6	13
7	14

Inflation

PROJECT NAME: 100 W Widening

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: 100 W Widening

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$60,000.00	\$60,000.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$35,000.00	\$35,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	1,992	cu yd	\$45.00	\$89,640.00	
	Roadway Excavation (Plan Quantity)	2,103	cu yd	\$25.00	\$52,575.00	
	Untreated Base Course (Plan Quantity)	756	cu yd	\$35.00	\$26,460.00	
	HMA - 1/2 Inch	2,100	Ton	\$120.00	\$252,000.00	
	Rotomill - 2 Inch	5,647	sq yd	\$3.00	\$16,941.00	
	Concrete Curb and Gutter	2,712	ft	\$40.00	\$108,480.00	
	Concrete Sidewalk	5,970	sq ft	\$12.00	\$71,640.00	
	Roadway Subtotal				\$712,736	
Drainage						
	Loose Riprap		cu yd			
	Drainage Pipe - 18 inch. Smooth, Leak-Resistant		ft			
	Drainage Pipe - 24 inch. Smooth, Leak-Resistant		ft			
	Drainage Pipe - 36 inch. Smooth, Leak-Resistant		ft			
	Concrete Drainage Structure 5 ft to 7 ft deep - CB 9		Each			
	Drainage Subtotal				\$0	
PI						
	Public Information Services	1	Lump	\$2,500.00	\$2,500	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: 100 W Widening

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
027657050	Pavement Marking Paint	66	gal	\$80.00	\$5,280.00	
027687110	Pavement Message (Preformed Thermoplastic Stop Line.	2	Each	\$80.00	\$160.00	
028917285	Relocate Sign Less Than 20 Square Feet	12	Each	\$250.00	\$3,000.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$8,440	
ITS						
ITS Subtotal					\$0	

MAIN

PROJECT NAME: Center Street Widening
Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Widen Center Street from Main Street to 600 W.

Project Length =	0.655	miles	3,458	ft
Current Year =	2023			
Assumed Construction Year =	2042			
Construction Items Inflation Factor =	3.11	19 yrs for inflation		
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%			
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%			
Items not Estimated (% of Construction) =	10.0%			
Preliminary Engineering (% of Construction + Incentives) =	8.0%			
Construction Engineering (% of Construction + Incentives) =	10.0%			

Construction Items	Cost	Remarks
Pulic Information Services	\$2,500	
Roadway and Drainage	\$1,664,884	
Traffic and Safety	\$9,880	
Sstructures	\$0	
Environmental Mitigation	\$0	
ITS	\$0	
	Subtotal	\$1,677,264
	Items not Estimated (10%)	\$167,726
	Construction Subtotal	\$1,844,990
P.E. Cost	P.E. Subtotal	\$147,599 8%
C.E. Cost	C.E. Subtotal	\$184,499 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2042
P.E.	\$148,000	\$298,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$1,845,000	\$5,741,000
C.E.	\$184,000	\$370,000
Incentives	\$0	\$0
Aesthetics	0.00%	\$0
Change Order Contingency	10.00%	\$185,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$2,362,000	\$6,985,000

PROPOSED COMMISSION REQUEST	TOTAL \$2,362,000	TOTAL \$6,985,000
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Project Assumptions/Risks

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2	9
3	10
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Inflation

PROJECT NAME: Center Street Widening

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
2028	6.0%	6.0%	1.38
2029	6.0%	6.0%	1.46
2030	6.0%	6.0%	1.55
2031	6.0%	6.0%	1.64
2032	6.0%	6.0%	1.74
2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
2037	6.0%	6.0%	2.33
2038	6.0%	6.0%	2.46
2039	6.0%	6.0%	2.61
2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: Center Street Widening

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$172,500.00	\$172,500.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$120,000.00	\$120,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	4,978	cu yd	\$45.00	\$224,010.00	
	Roadway Excavation (Plan Quantity)	4,978	cu yd	\$25.00	\$124,450.00	
	Untreated Base Course (Plan Quantity)	2,156	cu yd	\$35.00	\$75,460.00	
	HMA - 1/2 Inch	3,267	Ton	\$120.00	\$392,040.00	
	Full Depth Reclamation Cement Treated Asphalt	7,684	sq yd	\$5.50	\$42,264.44	
	Cement Powder	129	Ton	\$250.00	\$32,159.40	
	Concrete Curb and Gutter	5,876	ft	\$40.00	\$235,040.00	
	Concrete Sidewalk	20,580	sq ft	\$12.00	\$246,960.00	
	Roadway Subtotal				\$1,664,884	
Drainage						
	Drainage Subtotal				\$0	
PI						
015407010	Public Information Services	1	Lump	\$2,500.00	\$2,500	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: Center Street Widening

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
027657050	Pavement Marking Paint	84	gal	\$80.00	\$6,720.00	
027687110	Pavement Message (Preformed Thermoplastic Stop Line.	2	Each	\$80.00	\$160.00	
028917285	Relocate Sign Less Than 20 Square Feet	12	Each	\$250.00	\$3,000.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$9,880	
ITS						
ITS Subtotal					\$0	

MAIN

PROJECT NAME: 200 West Widening
Cost Estimate - Concept Level

Date 1/23/2024

Proposed Project Scope: Widening 200 W from 300 S to 400 N.

Project Length =	0.688	miles	3,631	ft
Current Year =	2023			
Assumed Construction Year =	2048			
Construction Items Inflation Factor =	4.41	25 yrs for inflation		
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.75%			
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%			
Items not Estimated (% of Construction) =	10.0%			
Preliminary Engineering (% of Construction + Incentives) =	8.0%			
Construction Engineering (% of Construction + Incentives) =	10.0%			

Construction Items	Cost	Remarks
Pulic Information Services	\$2,500	
Roadway and Drainage	\$1,686,788	
Traffic and Safety	\$1,980	
Sstructures	\$0	
Environmental Mitigation	\$0	
ITS	\$0	
	Subtotal	\$1,691,268
	Items not Estimated (10%)	\$169,127
	Construction Subtotal	\$1,860,395
P.E. Cost	P.E. Subtotal	\$148,832 8%
C.E. Cost	C.E. Subtotal	\$186,040 10%
Right of Way Urban/Suburban Residential	Right of Way Subtotal	\$0
Utilities	Utilities Subtotal	\$0
Incentives	Incentives Subtotal	\$0
Miscellaneous	Miscellaneous Subtotal	\$0

Cost Estimate (ePM screen 505)	2023	2048
P.E.	\$149,000	\$374,000
Right of Way	\$0	\$0
Utilities	\$0	\$0
Construction	\$1,860,000	\$8,210,000
C.E.	\$186,000	\$467,000
Incentives	\$0	\$0
Aesthetics	0.00% \$0	\$0
Change Order Contingency	10.00% \$186,000	\$821,000
UDOT Oversight	\$0	\$0
Miscellaneous	\$0	\$0
TOTAL	\$2,381,000	\$9,872,000

PROPOSED COMMISSION REQUEST	TOTAL \$2,381,000	TOTAL \$9,872,000
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Project Assumptions/Risks

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| 4 _____ | 11 _____ |
| 5 _____ | 12 _____ |
| 6 _____ | 13 _____ |
| 7 _____ | 14 _____ |

Inflation

PROJECT NAME: 200 West Widening

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2023	0.0%	0.0%	1.00
2024	8.0%	8.0%	1.08
2025	7.0%	7.0%	1.16
2026	6.0%	6.0%	1.22
2027	6.0%	6.0%	1.30
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2030	6.0%	6.0%	1.55
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2033	6.0%	6.0%	1.84
2034	6.0%	6.0%	1.95
2035	6.0%	6.0%	2.07
2036	6.0%	6.0%	2.19
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2040	6.0%	6.0%	2.77
2041	6.0%	6.0%	2.94
2042	6.0%	6.0%	3.11
2043	6.0%	6.0%	3.30
2044	6.0%	6.0%	3.50
2045	6.0%	6.0%	3.71
2046	6.0%	6.0%	3.93
2047	6.0%	6.0%	4.16
2048	6.0%	6.0%	4.41
2049	6.0%	6.0%	4.68

Roadway and Drainage

PROJECT NAME: 200 West Widening

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	\$172,250.00	\$172,250.00	Usually 7-10% of construction
	Traffic Control	1	Lump	\$100,000.00	\$100,000.00	Usually 3-5% of construction
	Granular Borrow (Plan Quantity)	4,395	cu yd	\$45.00	\$197,775.00	
	Roadway Excavation (Plan Quantity)	4,395	cu yd	\$25.00	\$109,875.00	
	Untreated Base Course (Plan Quantity)	1,848	cu yd	\$35.00	\$64,680.00	
	HMA - 1/2 Inch	3,149	Ton	\$120.00	\$377,880.00	
	Rotomill - 2 Inch	8,876	sq yd	\$3.00	\$26,628.00	
	Concrete Curb and Gutter	7,262	ft	\$40.00	\$290,480.00	
	Concrete Sidewalk	28,935	sq ft	\$12.00	\$347,220.00	
Roadway Subtotal					\$1,686,788	
Drainage						
Drainage Subtotal					\$0	
PI						
	Public Information Services	1	Lump	\$2,500.00	\$2,500	Usually 0.25% of construction

MAIN

Traffic, Safety & ITS

PROJECT NAME: 200 West Widening

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
	Pavement Marking Paint	0	gal	\$80.00	\$0.00	
	Pavement Message (Preformed Thermoplastic Stop Line.	6	Each	\$80.00	\$480.00	
	Relocate Sign Less Than 20 Square Feet	6	Each	\$250.00	\$1,500.00	
Signals						
Lighting						
Traffic and Safety Subtotal					\$1,980	
ITS						
ITS Subtotal					\$0	

MAIN

Cost Estimate Summary of Assumptions

PROJECT NAME: 200 West Widdening

Material Assumptions

Material	Unit Weights	Application Rates
Gravel	130 lbs/cy	
Gravel Base/Borrow	130 lbs/cy	
Gravel Base/Borrow	130 lbs/cy	
U.F.C.C.	130 lbs/cy	
U.F.C.C.	130 lbs/cy	
U.F.C.C.	130 lbs/cy	
Asphalt Binder	8.15% O.S.G.	
Asphalt Binder	0.02 gal/sq yd	
Emulsified Asphalt (LEC) #2	240 gal/cy	
Emulsified Asphalt (LEC) #2	240 gal/cy	
Plant Cost	11 gal/cy	
Water	47 gal/cy U.F.C.C.	
	47 gal/cy U.F.C.C.	

Oil

Roadway	Prime Coat		Tack Coat		OGSC Fast Coat		Chip Seal Emulsion		Finish Coat	
	Area sq	Tons	Area sq	# of apps	Area sq	Tons	Area sq	Tons	Area sq	Tons
TOTALS		0				0		0		0

Pavements

Roadway	No. of Sq-Ft with Pavement		Granular Borrow		Ungraded Base Course		RMA		OGSC		Chip Seal/Binder-Bonded Wearing Course		PCCP		Reconforming				
	Length ft	Width ft	Depth in	Vol cy	Length ft	Width ft	Depth in	# of joints	Depth in	Tons	Depth in	Tons	Depth in	Area sq	Area sq	Depth in	Area sq		
Center Street & N	3,631	24.0	0	0	6.00	27.47	1.947.73	3,441.40	3.00										
Center Street Wearing	3,631	24.0	2	1.3	6.00	27.47	1,947.73	3,441.40	3.00										
TOTALS																			

Earthwork

Roadway	Roadway Excavation		Borrow		Granular Base/Borrow Embankment	
	Length ft	Width ft	Depth in	Vol cy	Length ft	Width ft
Center Street & N	3,631.00	12.00	32.00	4,394.65		
Center Street Wearing						
TOTALS						

Pavement Machine Pallet

Roadway	Edges to Separation Strip		Median Striping		Taper Section		Pavement Marking Paint	
	Length ft	No. of Sections	Length ft	Area sq	Length ft	Area sq	Length ft	Area sq
Center Street & N								
Center Street Wearing								
TOTALS								

Misc. Area Calculator

Area Location	Length	Width	Total Area	Notes

WRRF

Material		Vol	gal
Gravel Base/Borrow		4,395	184,593
Gravel Base/Borrow		1,948	94,248
Gravel Base/Borrow Embankment		0	0
TOTALS			279

Misc. Volume Calculator

Volume Location	Length	Width	Depth	Total Volume	Notes

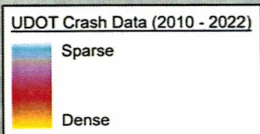
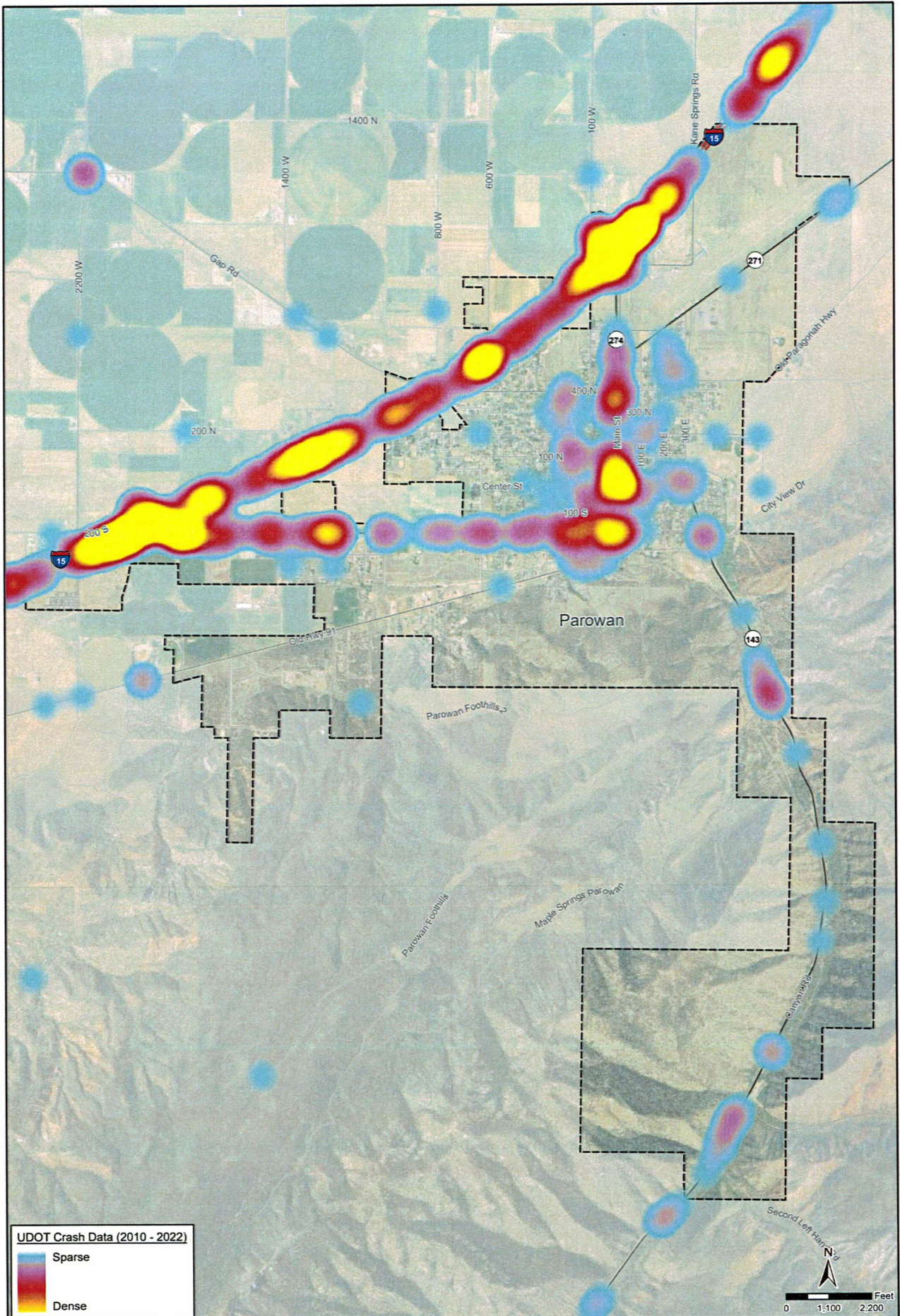
Project Assumptions/Risks

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APPENDIX 5

TRAFFIC CRASHES HEAT MAP





- Interstate
- US Highway
- State Highway
- Local Road
- Parowan City Boundary



Parowan City	
Transportation Master Plan Crash Heat Map	
Map Name: H:\QIP\Proj\2307-009\GIS\Projects\2307-009_Design\2307-009_Design.aprx - EIR Report Crash Heat Map	
Project Number: 2307-009	Drawn by: TAB 12-23
Last Edit: 1/11/24	

Iron County, Utah
Scale: 1" = 2,200'
1