

RYAN'S TRAIL ROAD REDESIGN

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Figure 1: Ryan's Trail [1]

PRESENTATION AGENDA

Project Background
Project Understanding
Scope and Schedule
Staffing and Engineering Services
Constraints and Criteria
Acknowledgements

PROJECT BACKGROUND

Purpose: Upgrade
Existing Roadway

Location: Ryan's Trail,
Coconino County, AZ

Client:
Dianne McDonnell



Figure 2: Location of Ryan's Trail in Arizona [2]

PROJECT BACKGROUND

Project Location

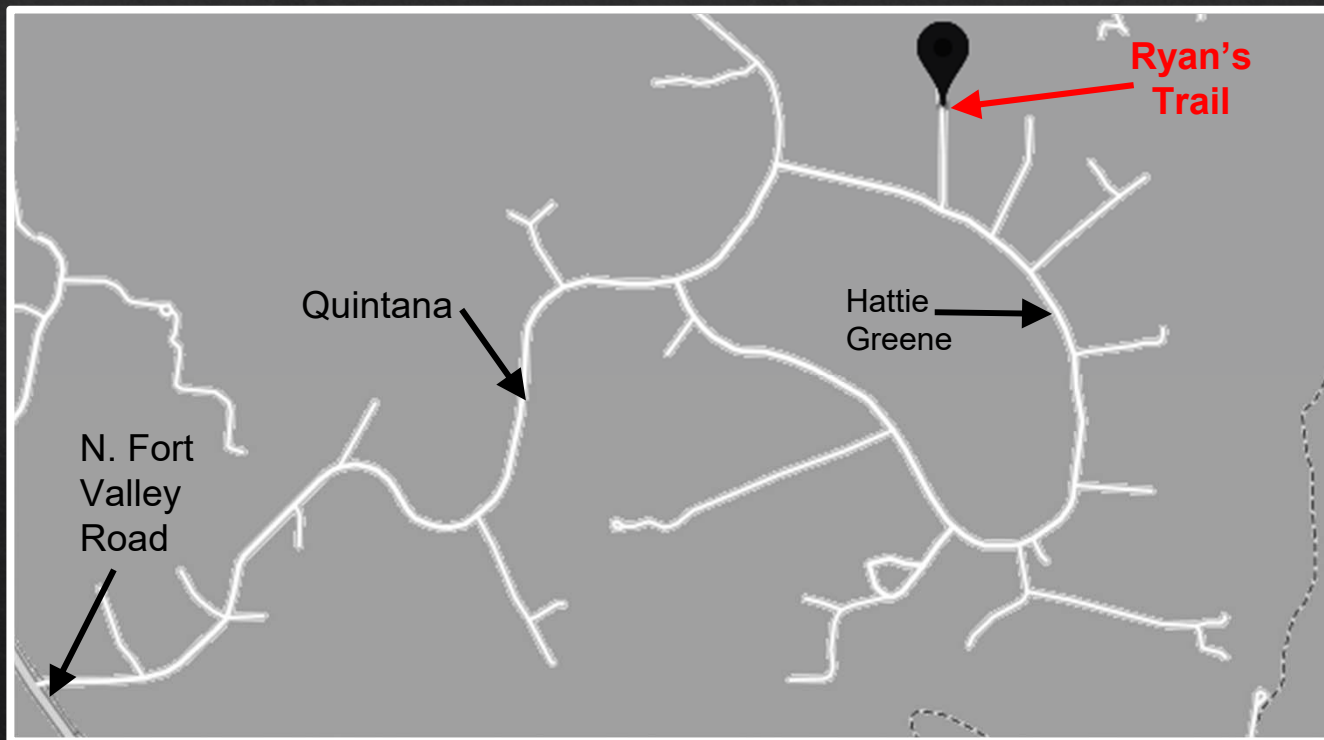


Figure 3: Location of Ryan's Trail within Lockett Ranches [2]



PROJECT UNDERSTANDING

EXISTING CONDITIONS



Figure 4: Existing Culvert



Figure 5: Crushed Cinder



Figure 6: Well System

SCOPE OF SERVICES

1. Site Investigation

1.1 Blue-Stake

1.2 Gather Equipment

1.3 Field Surveying

1. Site Map

2. Conceptual Design

3.1 Existing Design Analysis

3.2 Road Improvement Alternatives



Figure 7: Field Surveying [3]

SCOPE OF SERVICES

4. Hydrology

4.1 Watershed analysis

4.2 Culvert design

4. Life Cycle Cost Analysis

5.1 Feasibility report

5.2 50% Report



Figure 8: Culverts [4]

SCOPE OF SERVICES

6. Final Design

6.1 Final Report

6.2 Final Presentation

7. Project Management

7.1 Website

7.2 Project Challenges



Figure 9: Asphalt [5]

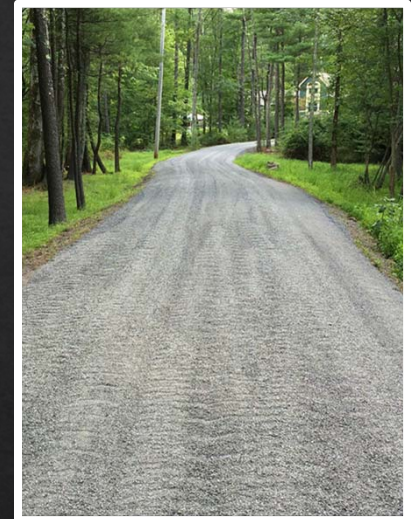


Figure 10 : Improved Gravel [6]



Figure 11: Chip Seal [7]

SCHEDULE

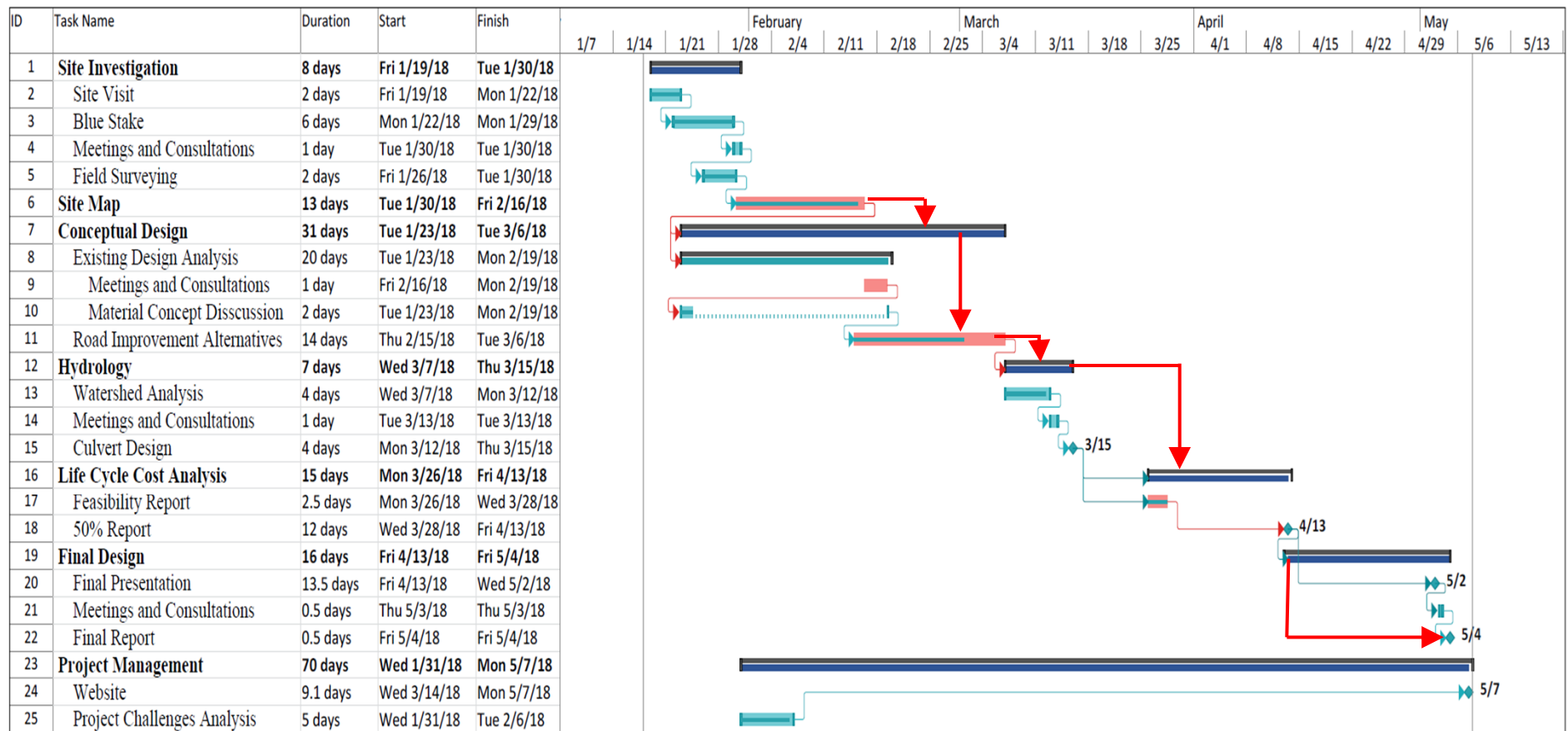


Figure 12: Schedule Critical Path

STAFFING & COST

Staffing Hours and Cost of Services

	Project Manager (60%)	Design Engineer (55%)	Drafter (40%)	Survey Crew (60%)	Technician (50%)	Total for Services
Pay Rate (\$\$/hr)	\$ 55.00	\$ 45.00	\$ 35.00	\$ 60.00	\$ 20.00	\$ 215.00
Task Breakdown						
1. Site Investigation	24	15	8	25	0	72
2. Site Map	0	0	10	10	0	20
3. Conceptual Design	30	60	30	0	0	120
4. Hydrology	18	25	5	0	20	68
5. Life Cycle Cost Analysis	45	50	0	0	0	95
6. Final Design	20	40	10	0	10	80
7. Project Management	35	20	0	0	45	100
Subtotal (hr)	172	210	53	25	75	535
Subtotal Pay (\$\$)	\$ 9,460.00	\$ 9,450.00	\$ 1,855.00	\$ 1,500.00	\$ 1,500.00	\$ 23,765
Benefits (% compensation)	\$ 5,676.00	\$ 5,197.50	\$ 742.00	\$ 900.00	\$ 750.00	\$ 13,266
Profit Margin (\$\$)	\$ 1,395.35	\$ 1,104.65	\$ 872.09	\$ 1,046.51	\$ 581.40	\$ 5,000
Overhead (\$\$)	\$ 2,790.70	\$ 2,209.30	\$ 1,744.18	\$ 2,093.02	\$ 1,162.80	\$ 10,000
Total (\$\$)	\$ 19,322.05	\$ 17,961.45	\$ 5,213.27	\$ 5,539.53	\$ 3,994.20	\$ 54,000

Figure 13: Staffing and Cost

CONSTRAINTS AND CRITERIA

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Photo by: McKenzie Moten



Figure 14: Client's Property [1]



ACKNOWLEDGEMENTS

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REFERENCES

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