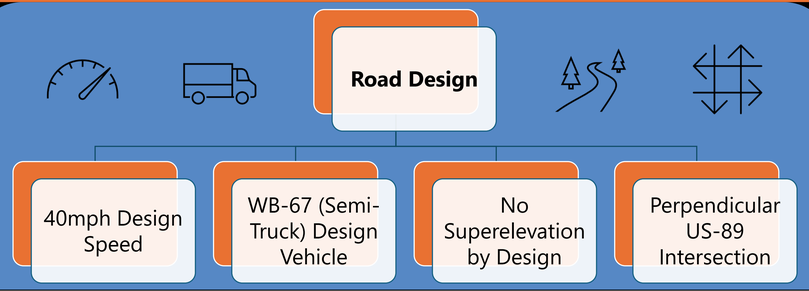
Dry Creek Parkway to US-89 Connection

Improving Regional Connectivity in Springville & Mapleton

Jake Prothero, Carter Walker, Braeden Norman, Zach Nordquist - Utah Valley University

Project Overview

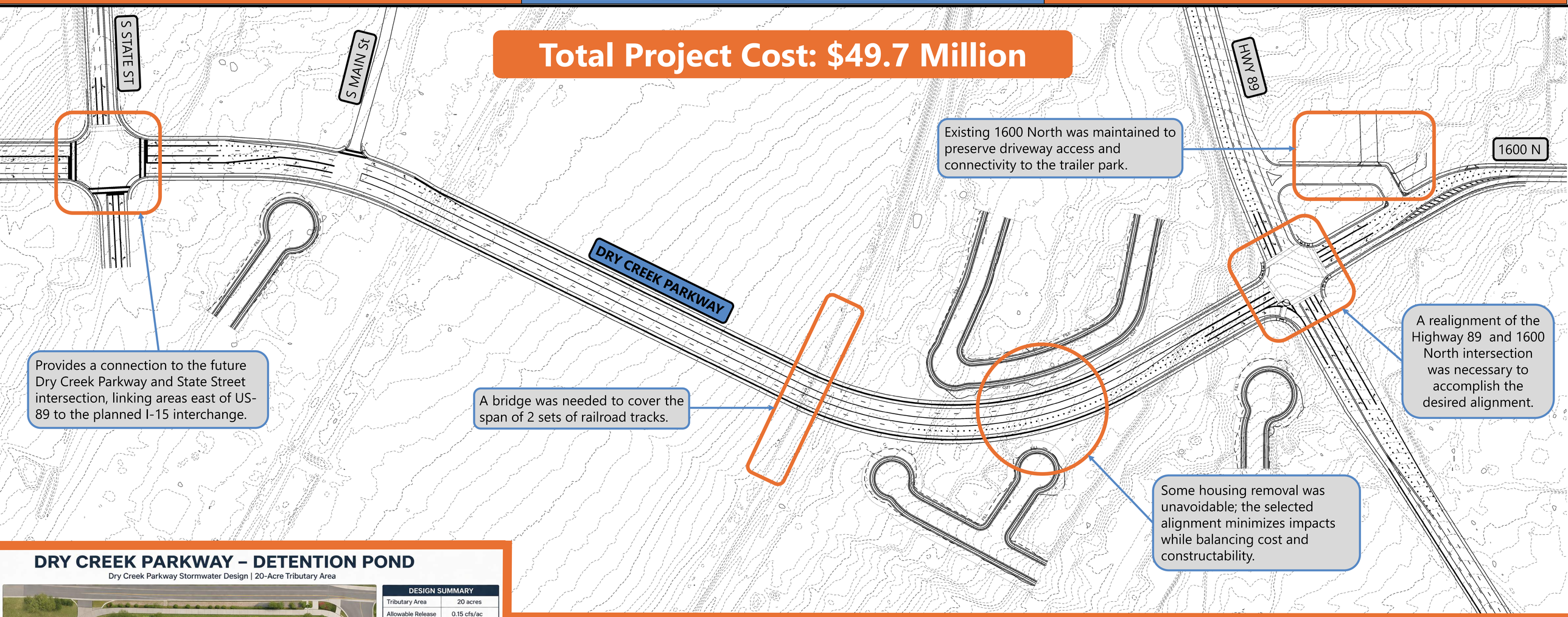
Rapid growth in Springville and Mapleton has created the need for a direct connection between Dry Creek Parkway and US-89. Current conditions limit mobility and increase future congestion. The project must overcome constraints including residential areas, a railroad crossing, and highway geometry, while minimizing impacts and maintaining safe design.



Design Constraints & Solutions

- Railroad Crossing: Bridge designed to span 2 tracks
- Residential Impacts: Alignment minimizes property acquisition
- US-89 Geometry: Perpendicular intersection improves safety
- Topography: Alignment follows natural terrain to reduce grading

Total Project Cost: $49.7 Million



DRY CREEK PARKWAY – DETENTION POND

Dry Creek Parkway Stormwater Design | 20-Acre Tributary Area

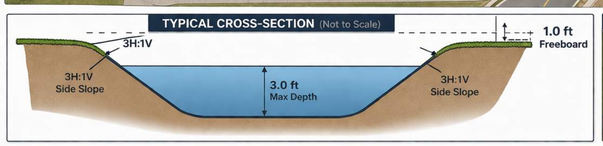


DESIGN SUMMARY	
Tributary Area	20 acres
Allowable Release	0.15 cfs/ac
Q_out = 3.0 cfs	
Required Storage	22,000 ft³ (0.51 ac-ft)
Max Water Depth	3.0 ft
Freeboard	1.0 ft
Side Slopes	3H:1V

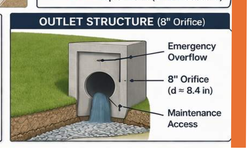
FOOTPRINTS	
Bottom	63 ft × 93 ft
Water Surface (3 ft)	81 ft × 111 ft
Top of Bank (+1 ft FB)	87 ft × 117 ft

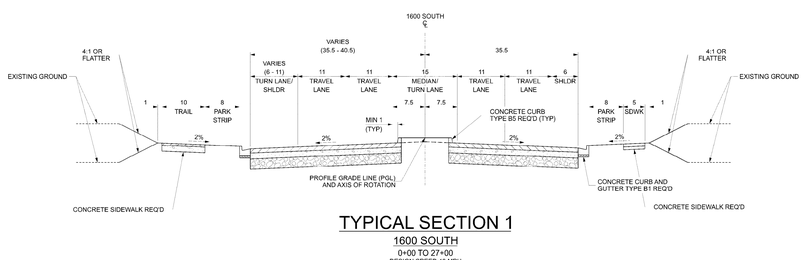
LEGEND
- Bottom of Pond
- Water Surface (3 ft)
- Top of Bank (+1 ft Freeboard)

TYPICAL CROSS-SECTION (Not to Scale)



OUTLET STRUCTURE (8" Orifice)





TYPICAL SECTION 1

1600 SOUTH

0+00 TO 27+00

DESIGN SPEED 40 MPH

PROJECT FEATURES

