



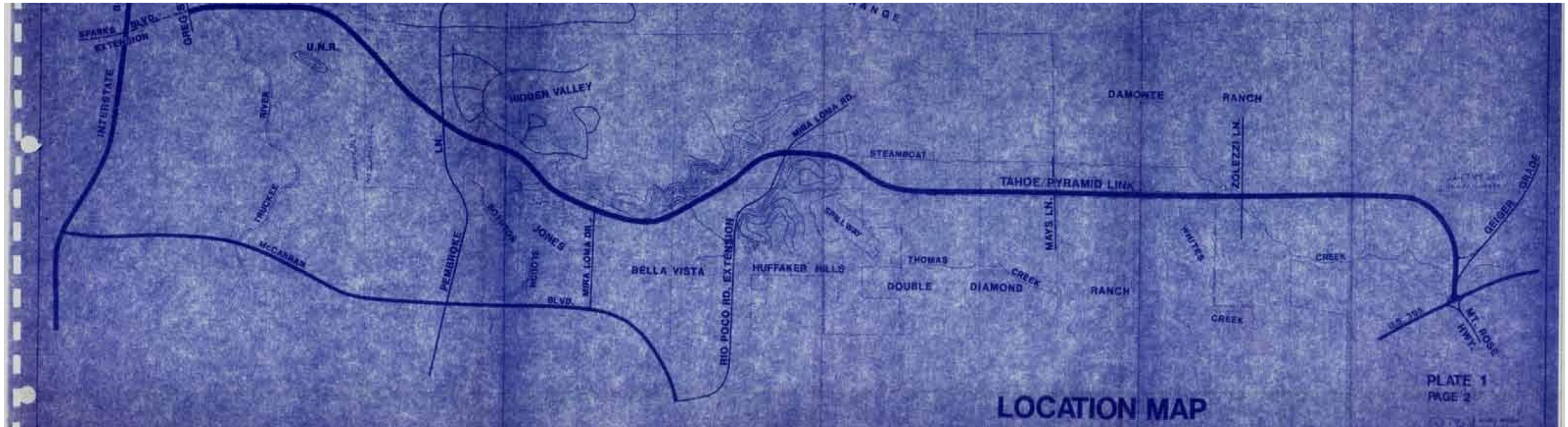
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# Introduction

2017 SE Connector



# Introduction



## Tahoe—Pyramid Link

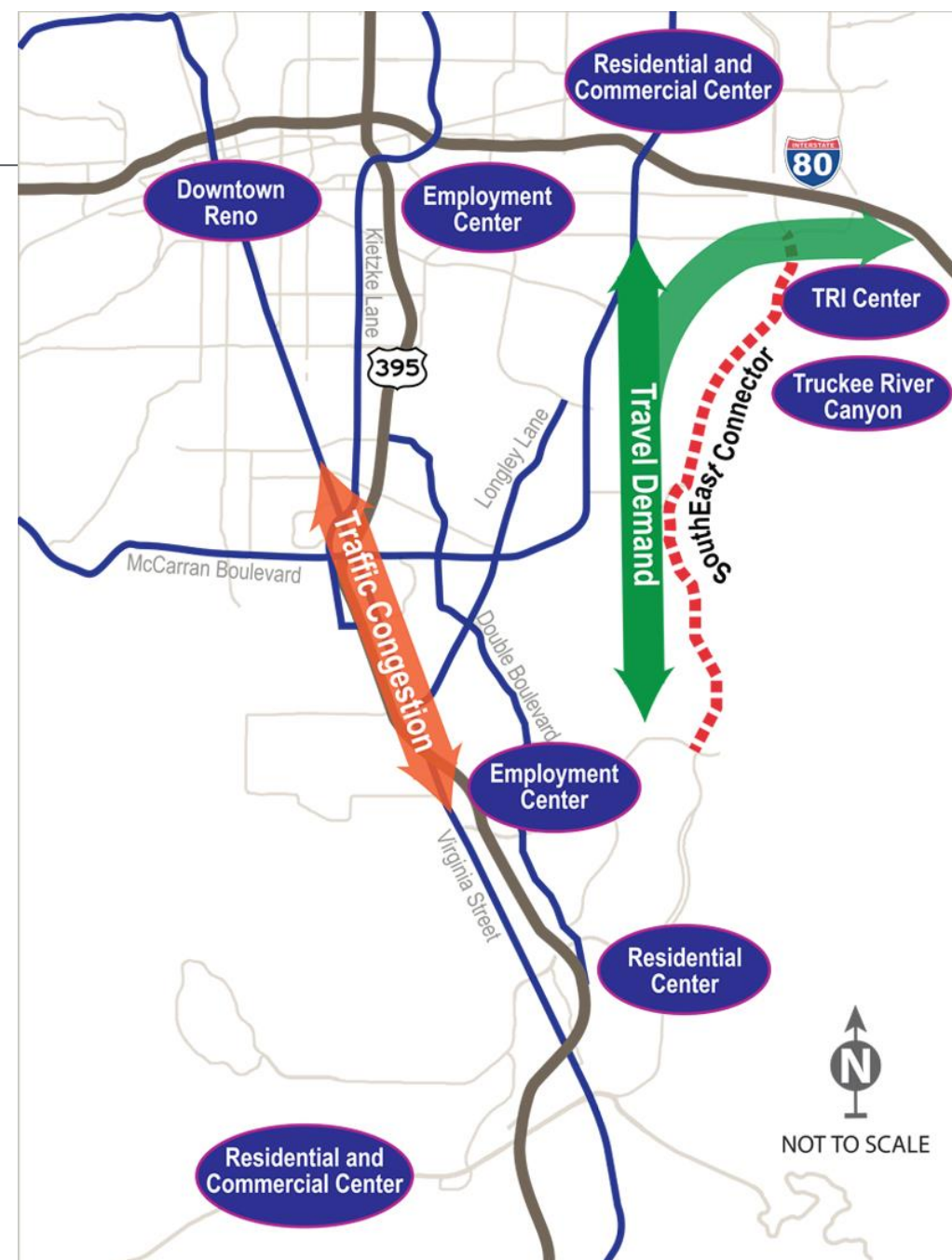
1982 RTC Authorized Alignment Study

### Purpose of Report

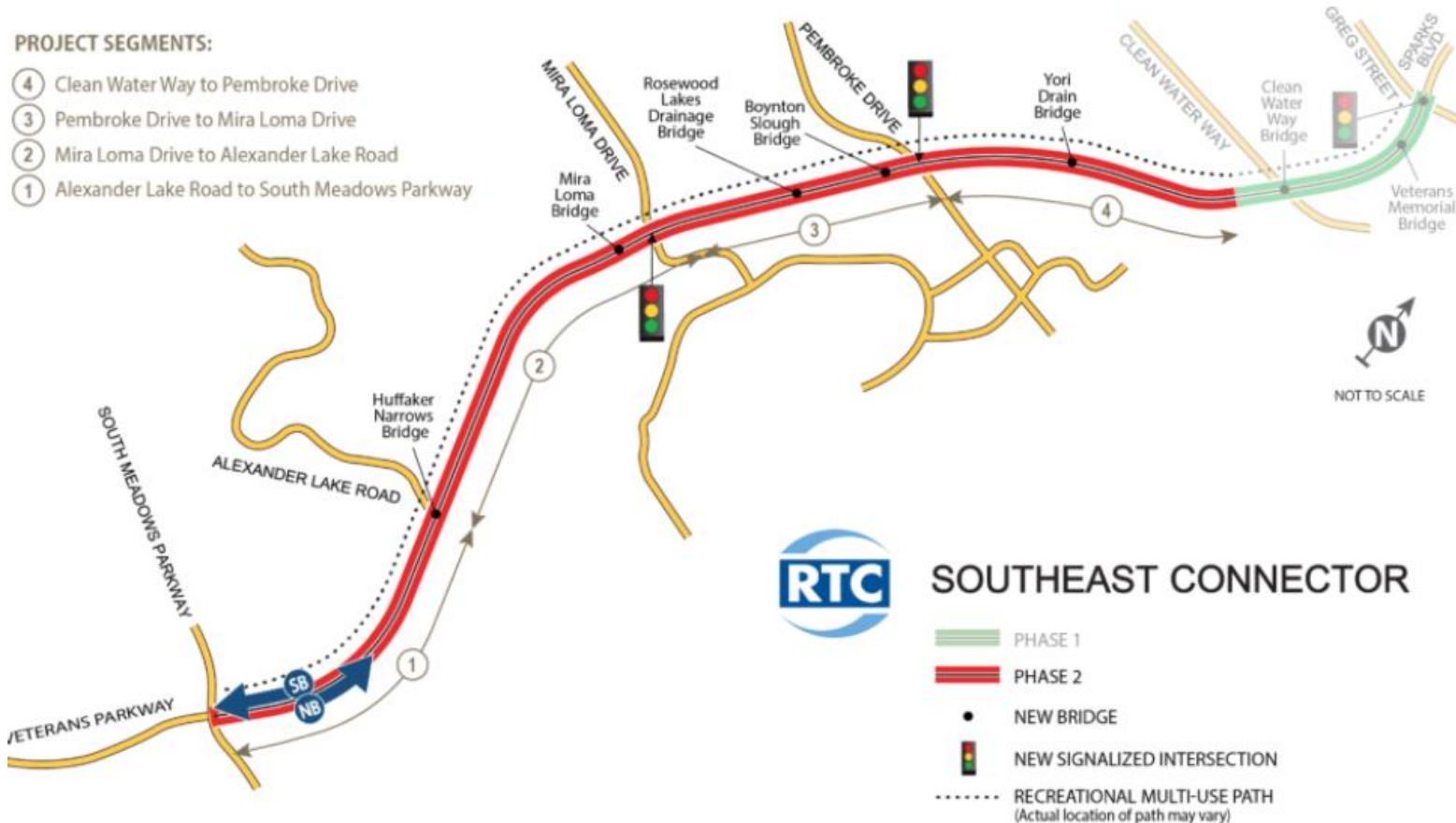
The general location for the Tahoe-Pyramid Link between the intersection of the Mt. Rose Highway/U.S. Highway 395 and Interstate 80 (I-80) has been adopted by the Regional Planning Commission as shown on the Regional Master Plan of Streets and Highways. The roadway lies in the southeastern portion of the Truckee Meadows and traverses large property holdings such as the Damonte, Double Diamond, Bella Vista, and Jones' Ranches, and portions of the Hidden Valley properties (see Plate No. 1). The potential development of these properties in conjunction with the increasing traffic demand on U.S. Highway 395/South Virginia Street necessitates an additional north-south expressway in the southeast portion of the Truckee Meadows. To assist in planning for future development in this area, the corridor of the Tahoe-Pyramid Link needed to be refined and a definite horizontal and vertical alignment established.

# Introduction

- 1997 New Watershed Data and Traffic Volume Projections
- 2004-2008 Alignment Finalized
  - Needs same as realized in 1982.
  - Increased with TRIC and lack of N/S route



# Introduction



- November 2008 RTC Board Voted for Final Alignment
- 2011 RTC issued RFP for PH1
  - USACE Allowed for Construction due to Limited Impacts of Viaduct Structure
- April 2012 Kiewit Awarded CMAR



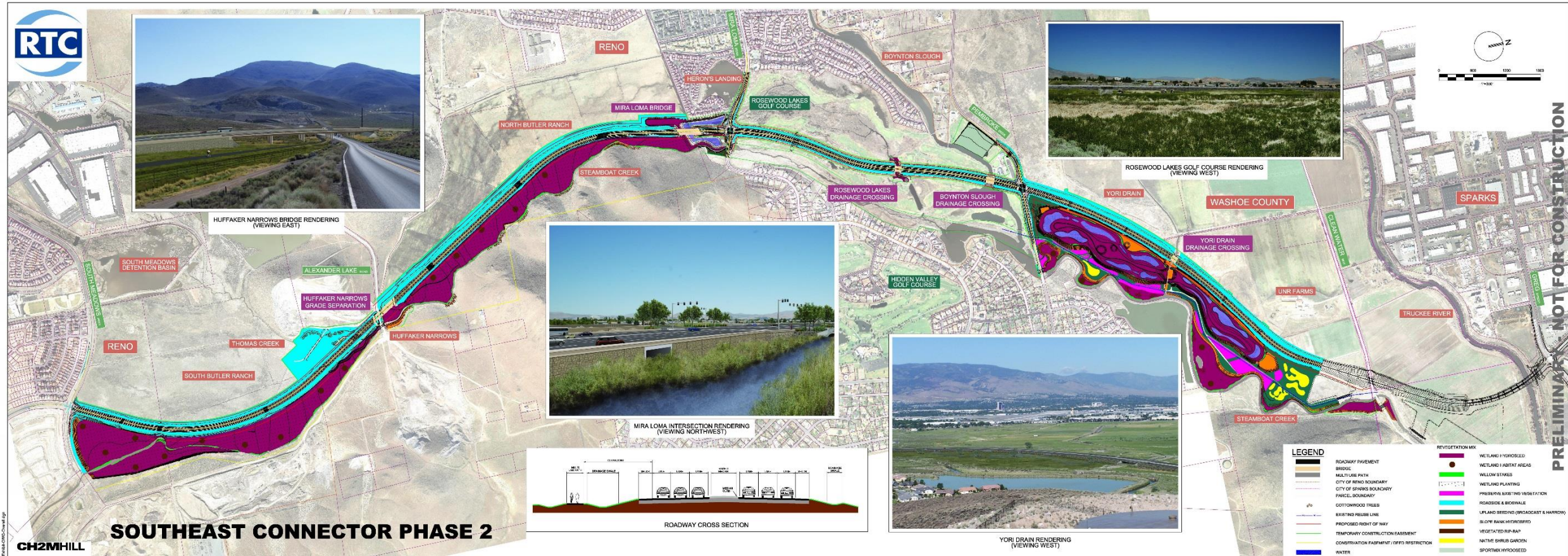
# Introduction

- Feb 2013 Kiewit Began Phase 1 Construction
- May 2013 Granite Awarded CMAR for Phase 2 Pre-Construction
- Phase 1 Construction Completed July 2014





# Introduction



- July 2014 CH2M Completed 100% Design for PH2
- April 2015 USACE Issued 404 Permit
- June 2015 Granite Started Construction of SEC PH2





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# Earthwork

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# Earthwork



## Rock Stabilization

- Primarily in Golf Course
- 1'-4' of Stab Rock or Broken Concrete
- 170,000cy



## Dewatering

- Majority of Cut Areas at or Below Ground Water Table
- 193 Wells ranging from 15' to 40'
- 2ea 5-6 Million Gallon Ponds, Discharge to Land



# Earthwork



## Settlement

- Settlement, Expected up to 2' and 4-6 Months
- Surcharge, minimum of 19" up to 4ft



## Deep Soil Mixing

- Areas of High Settlement / Schedule Purposes
- Bridge Abutments for Geotechnical Needs
- 35,000cy of Displacement



# Earthwork



## Mass Grading

- 1.5 Million Cubic Yards of Cut/Fill
- Blend of Scrapers and Haul Trucks
- Blend for Moisture, PI, Hg, and Organic Content



## Cement Treat Subgrade

- Over 2 Million Square Feet of 18" CTS





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# Paving

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# Paving – Base and AC



## Agg Base

- Complete to date – 40,000 TN
- mainline – 136,500 TN
- x-streets – 24,500 TN



## AC

- Complete to date – 20,000 TN
- mainline – 84,100 TN
- x-streets – 14,600 TN





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# Drainage

2017 SE Connector Kickoff Meeting



# Flood Equalization Culverts

- 13,579LF of 6'X4' Precast RCB
- Range from Single Cell to 19 Cells Wide
- Roadway Creates a “Dam” within the Flood Plain and RCB's allow water to Equalize across the Flood Plain





# RCB Installations

## Pembroke Installation

- Used Precast on Installations at Cross Streets to Minimize Impact to Traveling Public





# Drainage



**Cast In Place RCB Sta 79**

Larger RCB's from 10X6 to 12 X12 were Cast In Place



**Cast In Place RCB Sta 170**



A construction site for the 2017 SE Connector project. In the foreground, several workers in high-visibility yellow safety vests and hard hats are working on a concrete structure. A large yellow crane or drilling rig is positioned in the middle ground, with a worker on a platform. An American flag flies on a tall pole in the background. The sky is blue with scattered clouds, and snow-capped mountains are visible in the distance. A green semi-transparent box on the left contains the company name and project title.

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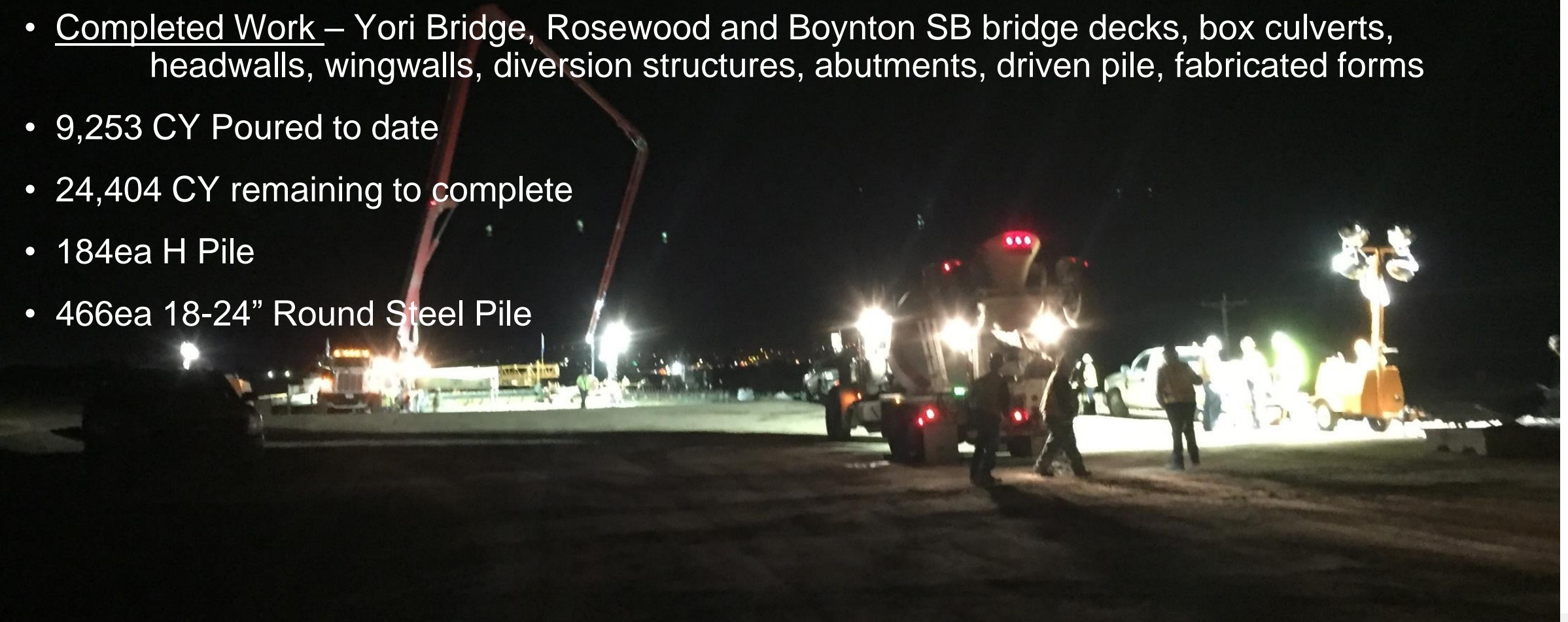
# Structures

2017 SE Connector



# Structures 2016 – Foundation for 2017

- 4 Flat Slab Bridge Locations
- 1ea 500', 5 span, Cast in Place Box Girder
- Completed Work – Yori Bridge, Rosewood and Boynton SB bridge decks, box culverts, headwalls, wingwalls, diversion structures, abutments, driven pile, fabricated forms
- 9,253 CY Poured to date
- 24,404 CY remaining to complete
- 184ea H Pile
- 466ea 18-24" Round Steel Pile





# Boynton Slough Bridge





# Rosewood Lakes Bridge





# Mira Loma Bridge





# Mira Loma Bridge

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# Huffaker Bridge Sub-Structure

- **H-Pile**
  - 184 EA
- **Abutment Footings**
  - 404 CY
- **8 Pier Footings**
  - 444 CY
- **24 – 4 ft Columns**
  - 272 CY





# Huffaker Bridge Superstructure



## Soffit

- 761 CY / 68,109 SF

## Stem Walls/Diaphragms

- 1199 CY / 48,019 SF

## Deck

- 1426 CY/ 39,656 SF

## Post Tensioning

- Subcontractor - Dywidag

## Rail

- 164 CY/1165 LF



## CIP Arch Culvert Extensions – Mira Loma

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- RCA 3 Cell 16 x 8 – Avg. 61' to the North, 3' to the South
- RCA 6 Cell 16 x 8 – Avg. 46' to the North
- Demo headwalls and tie in
- Coordinate with Utility Work (Sub) and low water flows (Historically June –July, into August this year)
- Predecessor to widening intersection







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# Environmental

2017 SE Connector





# Environmental

## Environmental Project with a Road Running Though It!

### Compliance

- 404/401 USACE/NDEP
  - SWPPP
  - Working in Waterways
    - 8 locations
  - Cultural Resources
    - 3 Tribes
    - SHPO
  - Mercury Contaminated Soils
  - Noxious Weeds/White Top
- CLOMAR/FEMA Flood Plane
- Washoe County Air Quality

**ZERO VIOLATIONS!!!!**



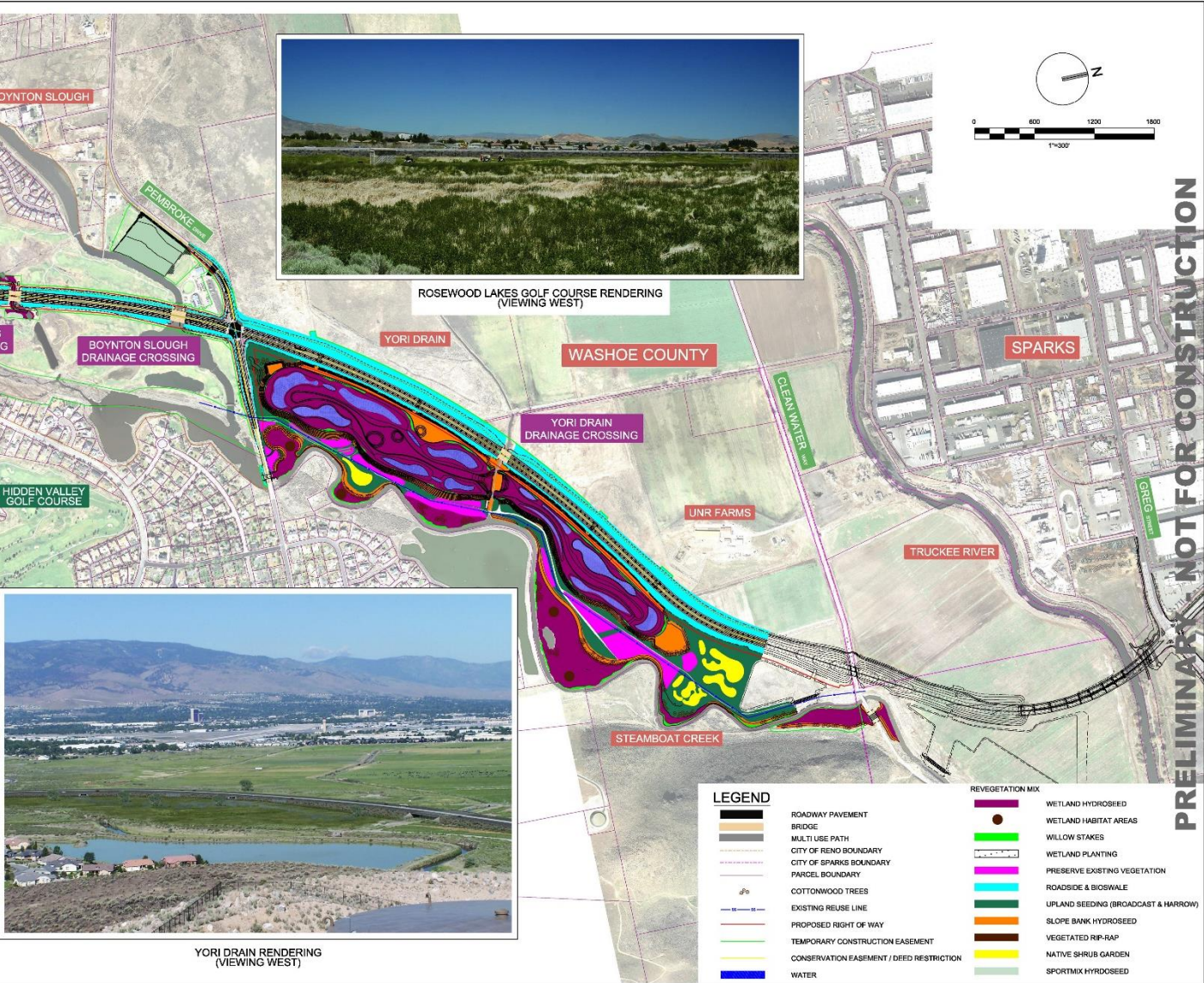


# Environmental

## Wetland Habitats

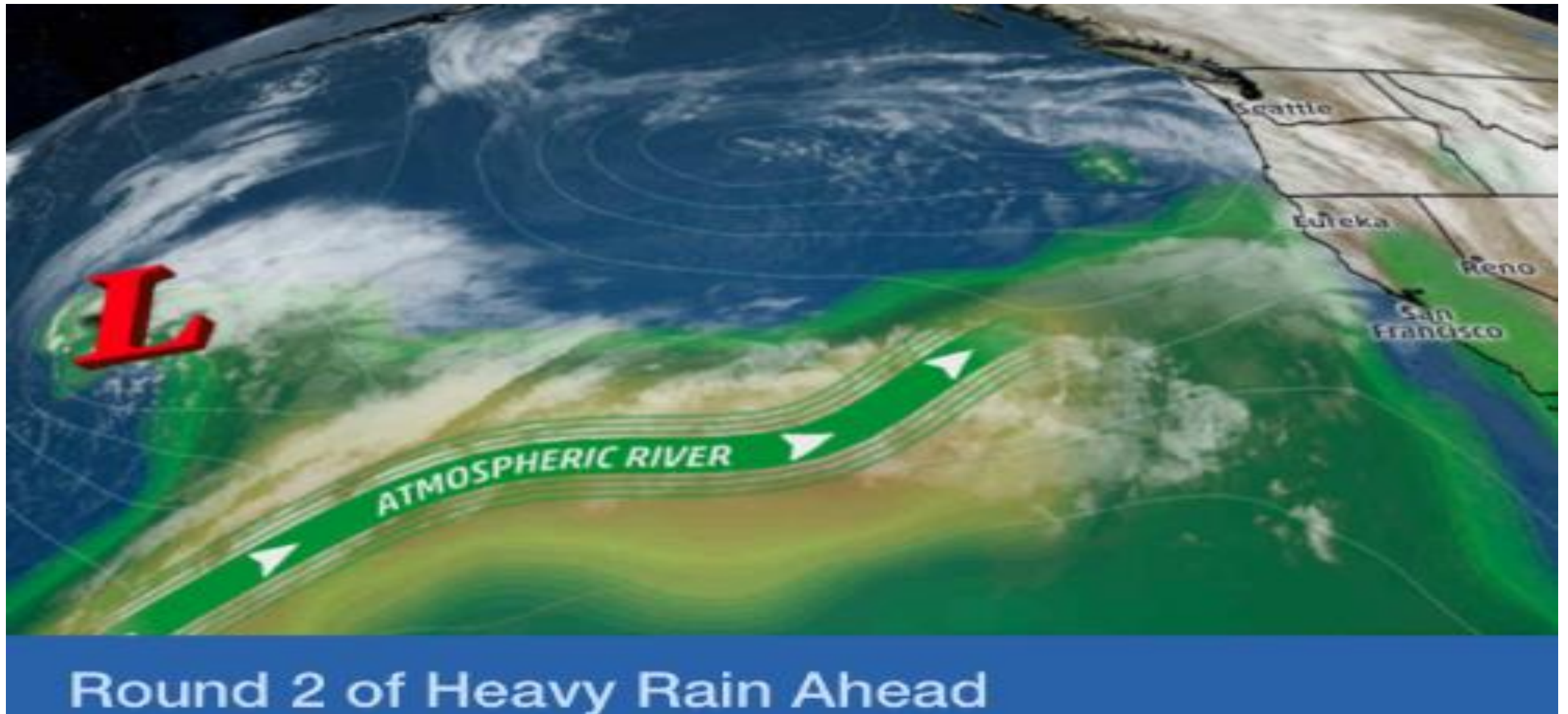
- 9 acres of Wetland from Golf Course.
- 80 Acre Wetland Complex—Yori Drain

seeding	- 310	AC
wetland planting	- 102	AC
plant propagation	- 33,000+	EA
fiber rolls	- 57,000	LF
habitat areas	- 19	EA
vegetated riprap	- 1,800	CY
willow stakes	- 21,000	SY
cottonwoods	- 570	EA





# 2017 Wettest Season On Record





# Environmental

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## 2017 Challenges

- water
- more water





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# Project Video

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**Q&A**

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