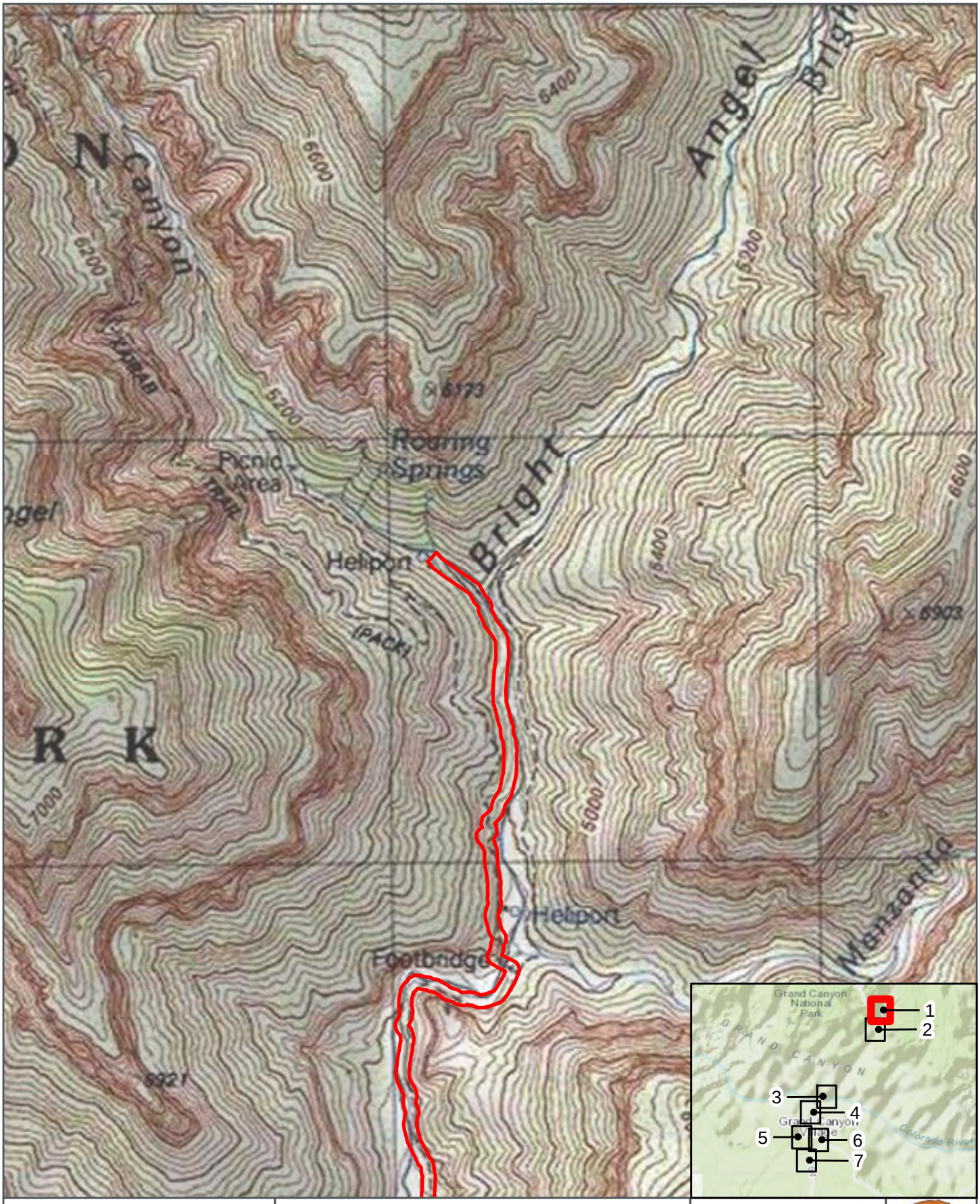


TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; FEMA; ASLD

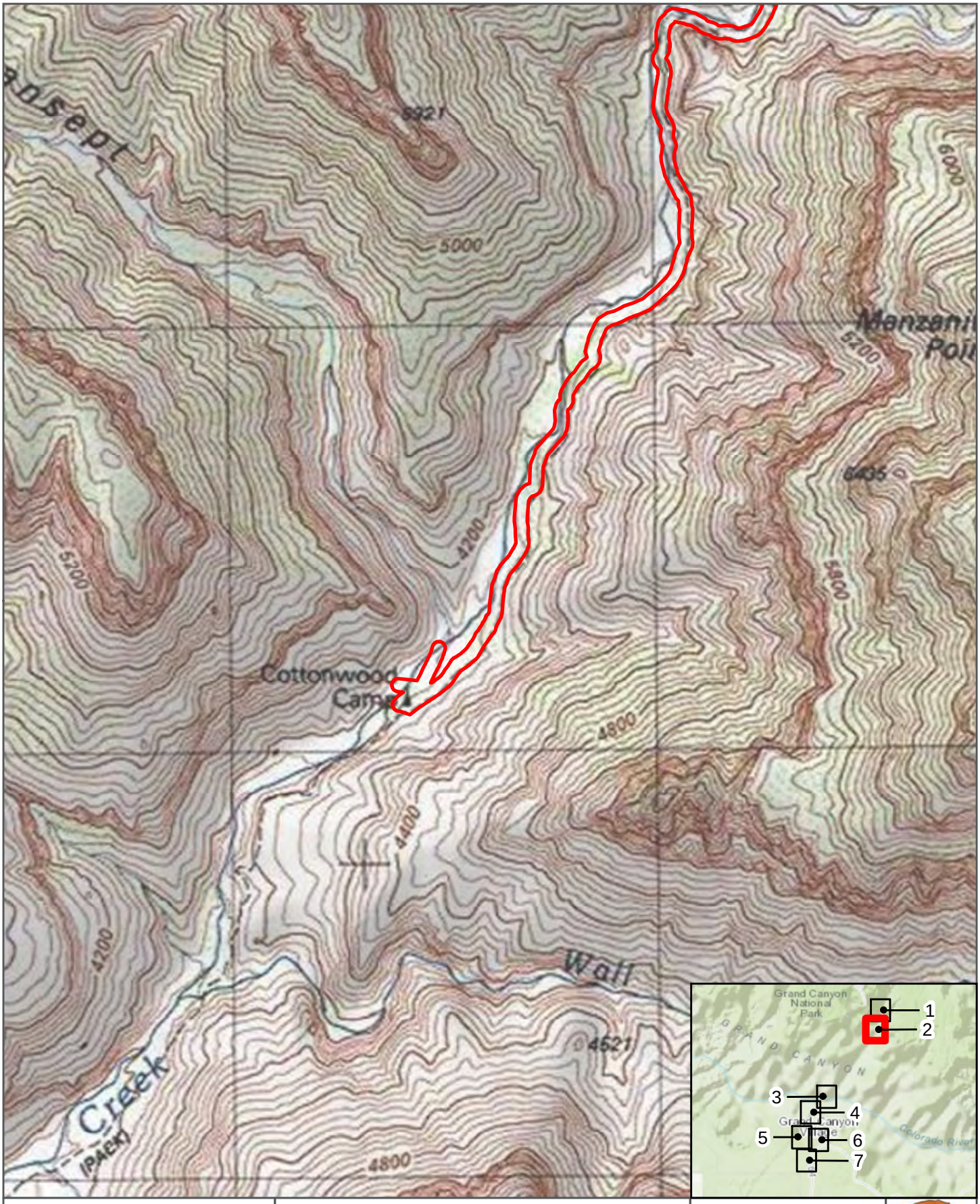
Study Area

USGS Quadrangle: Bright Angel Point, AZ (2018)
PLSS: Township 32N, Range 3E, Section 02 (Study Area)

TOPOGRAPHIC OVERVIEW

July 2021

Figure 4-1



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; FEMA; ASLD

Study Area

USGS Quadrangle: Bright Angel Point, AZ (2018)
PLSS: Township 32N, Range 3E, Section 02, 11 (Study Area)

TOPOGRAPHIC OVERVIEW

July 2021

Figure 4-2

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; FEMA; ASLD

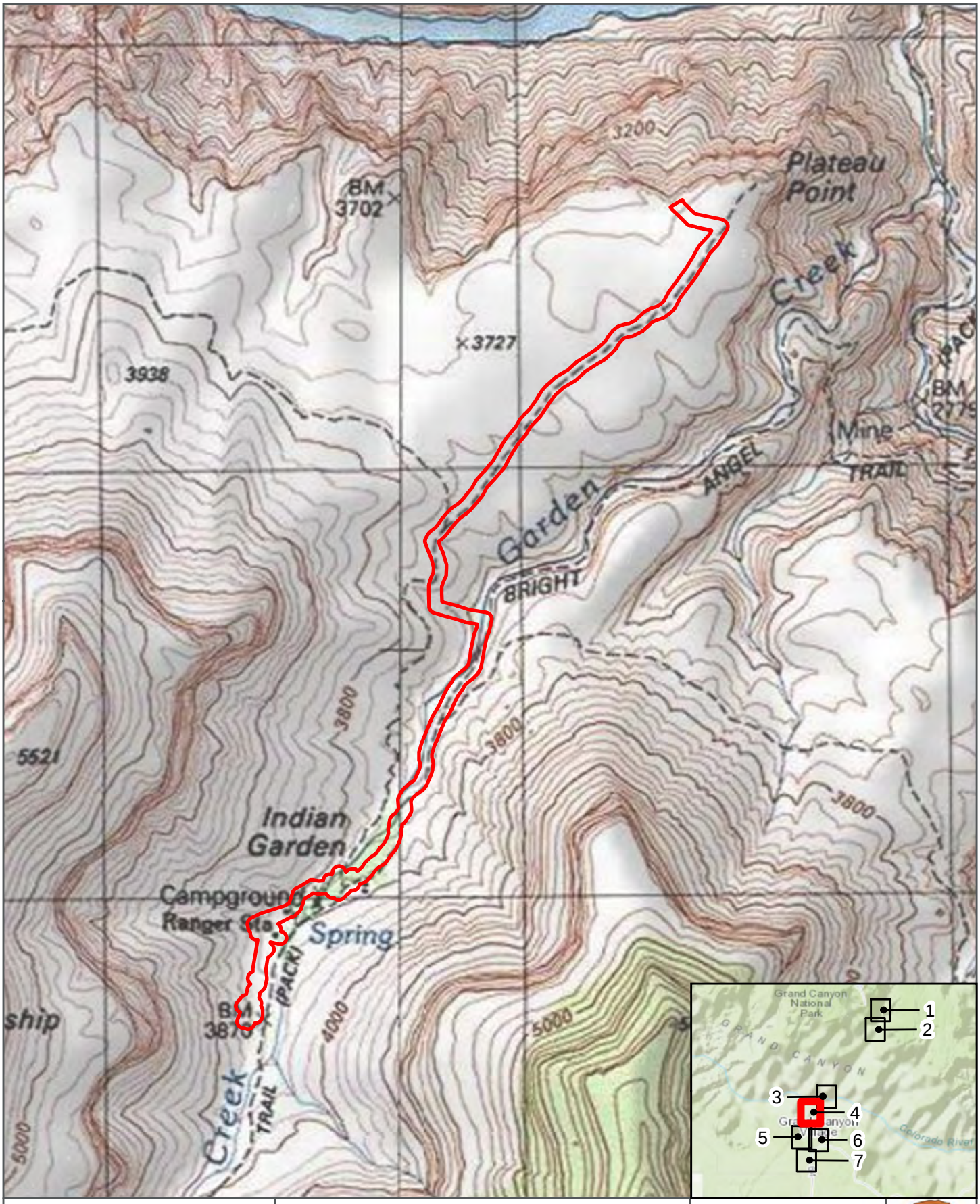
Study Area

USGS Quadrangle: Phantom Ranch, AZ (2018)
PLSS: Township 31N, Range 3E, Section 05, 06 (Study Area)

TOPOGRAPHIC OVERVIEW

July 2021

Figure 4-3



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; FEMA; ASLD

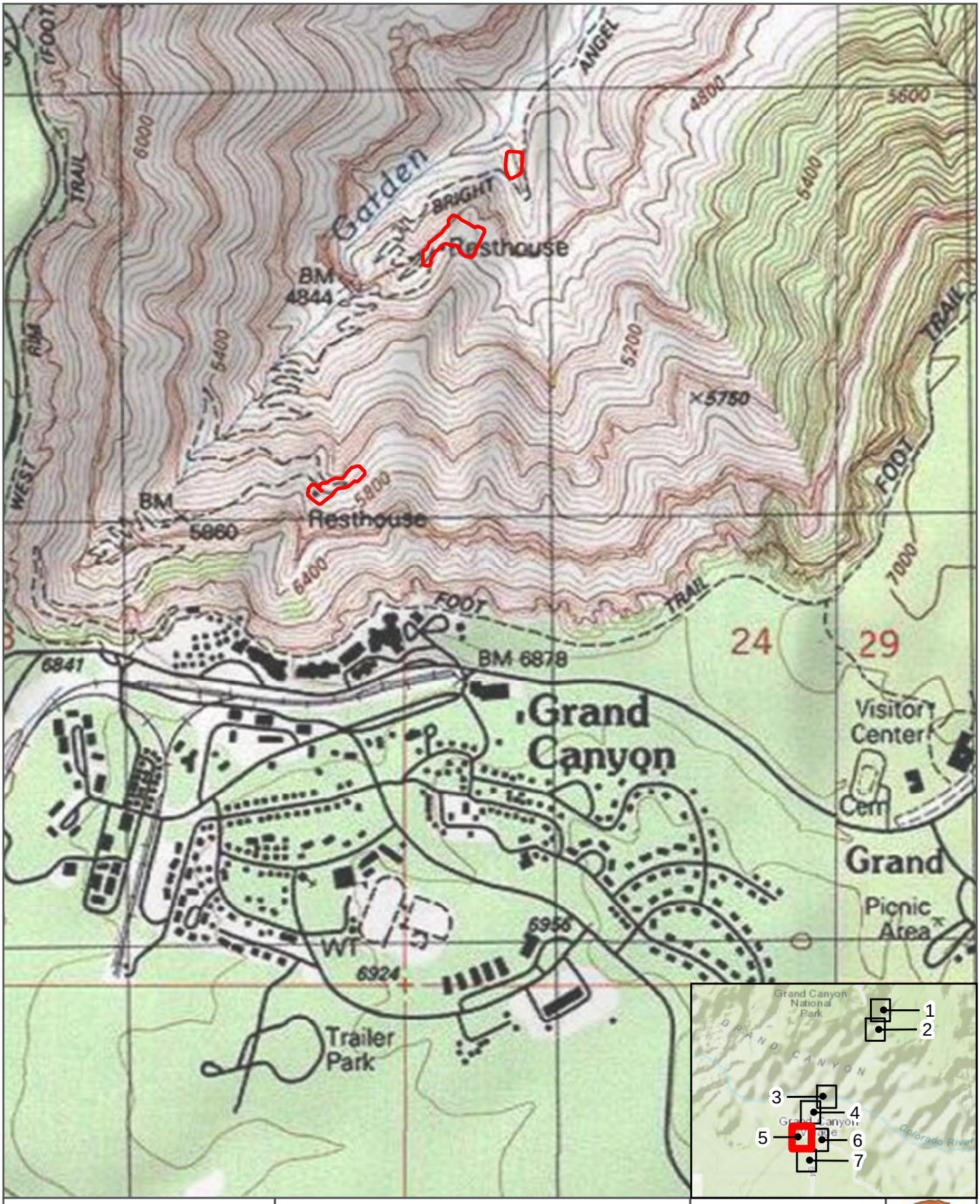
Study Area

USGS Quadrangle: Phantom Ranch, AZ (2018) and Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 3E, Section 07 and Township 31N, Range 2E, Section

TOPOGRAPHIC OVERVIEW

July 2021

Figure 4-4



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000 Feet

Source: USGS; FEMA; ASLD

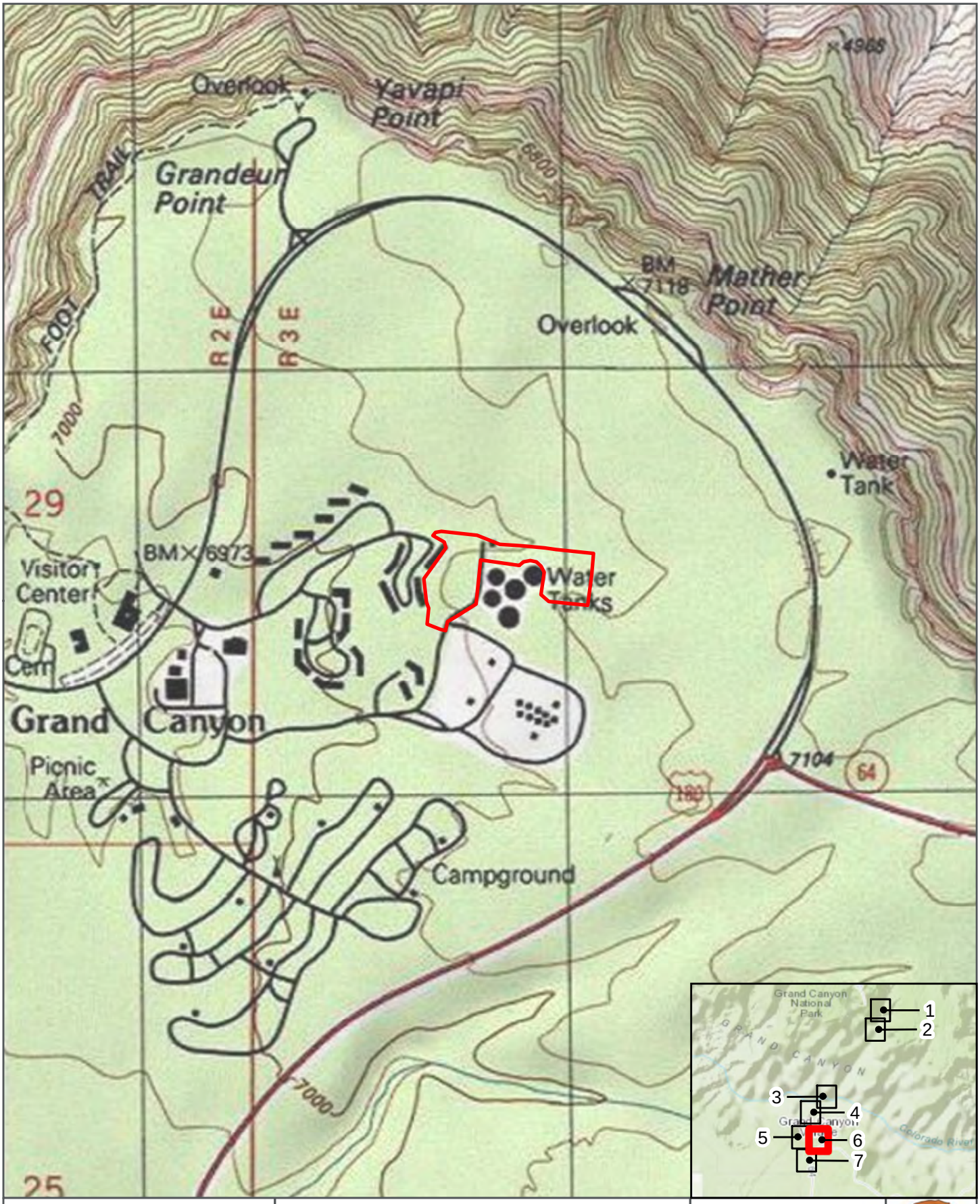
Study Area

USGS Quadrangle: Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 2E, Section 13, 23 (Study Area)

TOPOGRAPHIC OVERVIEW

July 2021

Figure 4-5



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000 Feet

Source: USGS; FEMA; ASLD

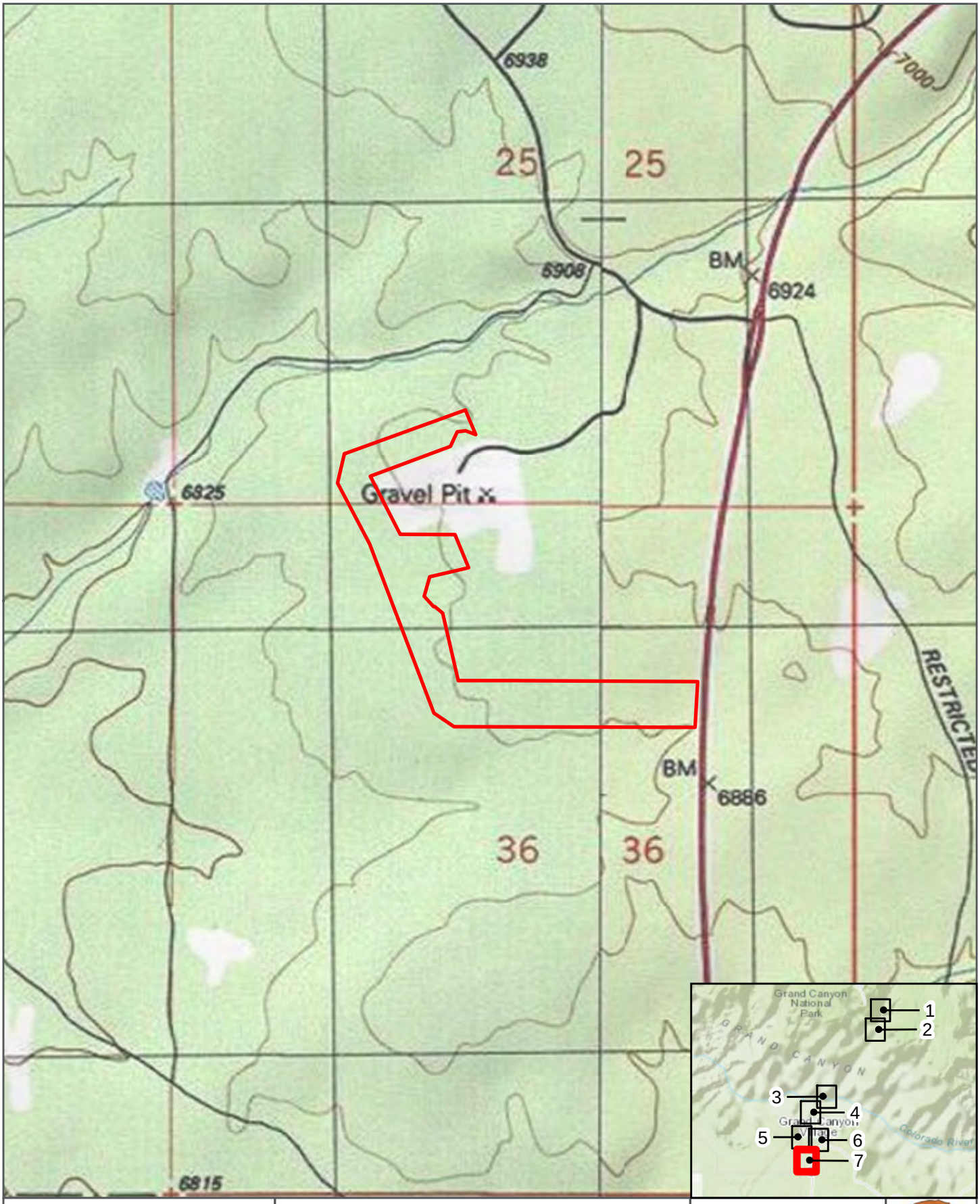
Study Area

USGS Quadrangle: Phantom Ranch, AZ (2018)
PLSS: Township 31N, Range 3E, Section 19 (Study Area)

TOPOGRAPHIC OVERVIEW

July 2021

Figure 4-6



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; FEMA; ASLD

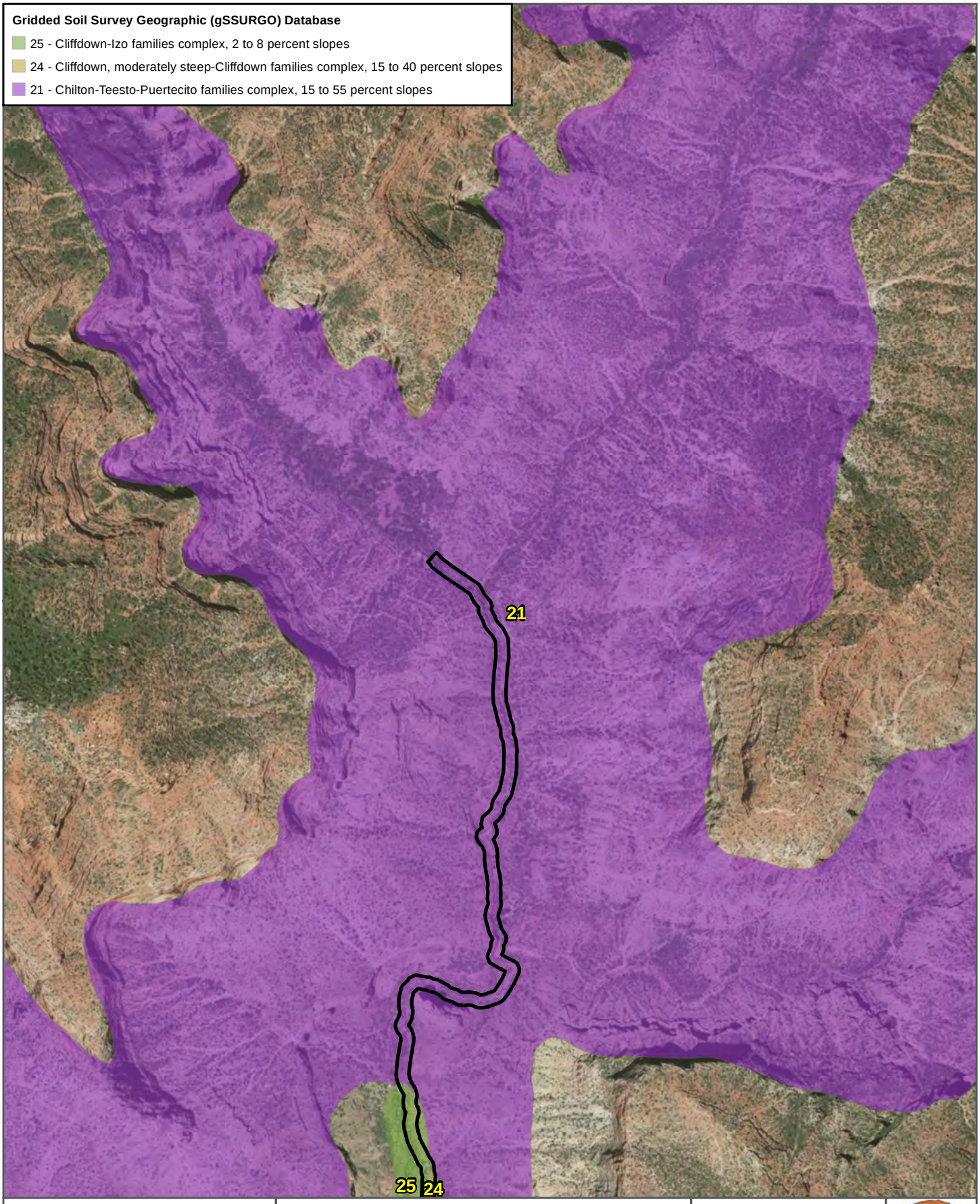
Study Area

USGS Quadrangle: Phantom Ranch, AZ (2018) and Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 2E, Section 25, 36 (Study Area)

TOPOGRAPHIC OVERVIEW

July 2021

Figure 4-7



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 550 1,100
Feet

Source: USDA, NRCS

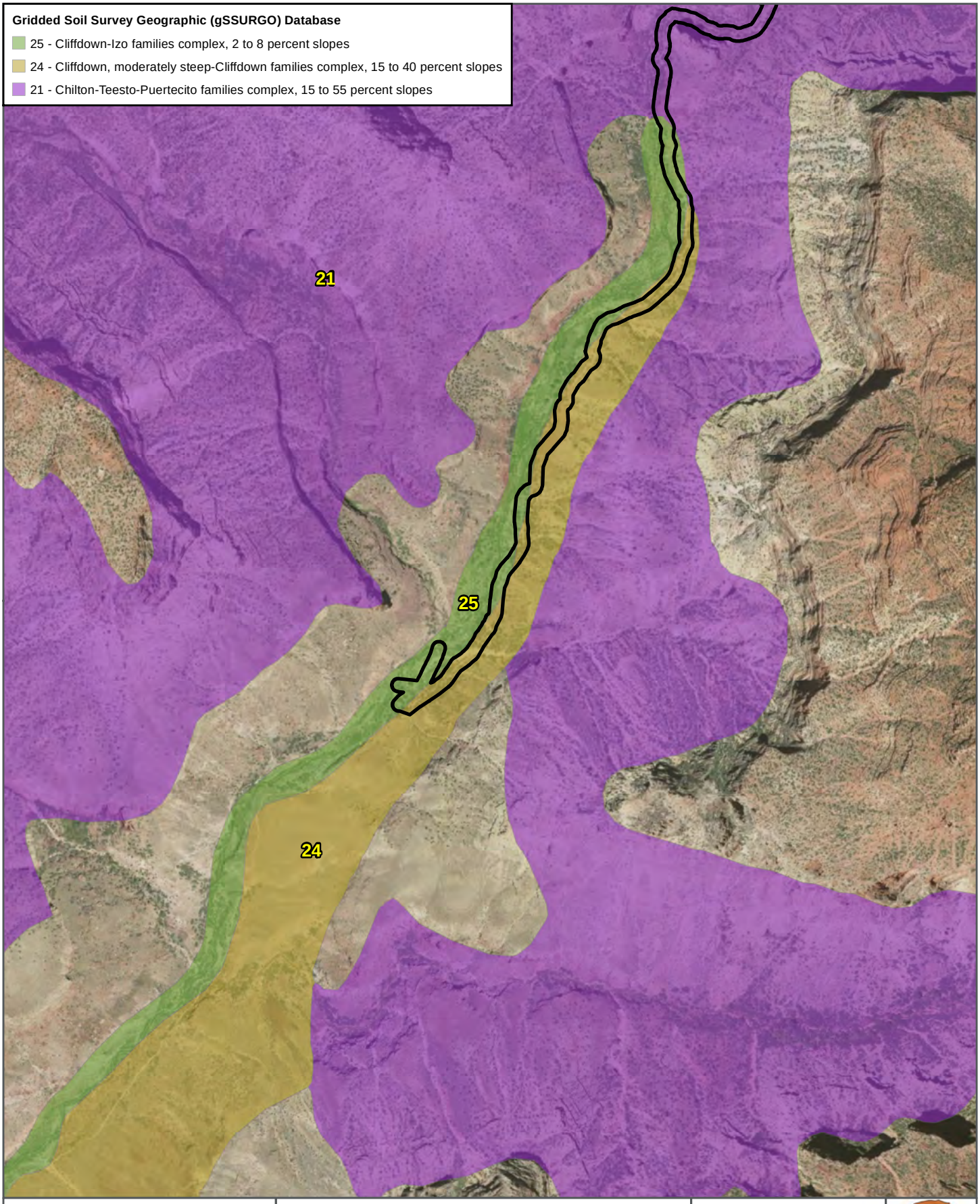
Study Area

USGS Quadrangle: Bright Angel Point, AZ (2018)
PLSS: Township 32N, Range 3E, Section 02 (Study Area)

SOILS

July 2021

Figure 5-1



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 550 1,100
Feet

Source: USDA, NRCS

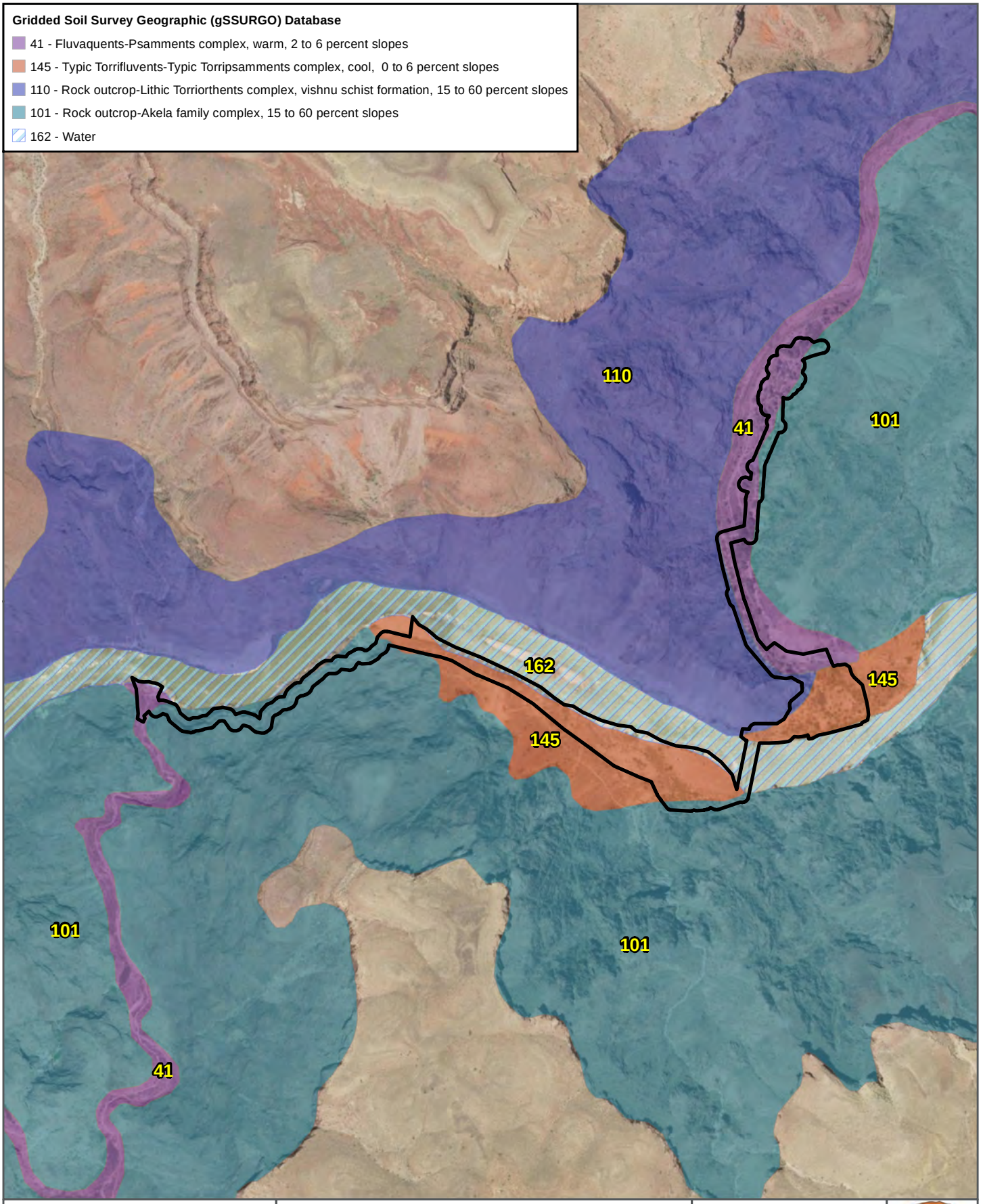
Study Area

USGS Quadrangle: Bright Angel Point, AZ (2018)
PLSS: Township 32N, Range 3E, Section 02, 11 (Study Area)

SOILS

July 2021

Figure 5-2



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 550 1,100
Feet

Source: USDA, NRCS

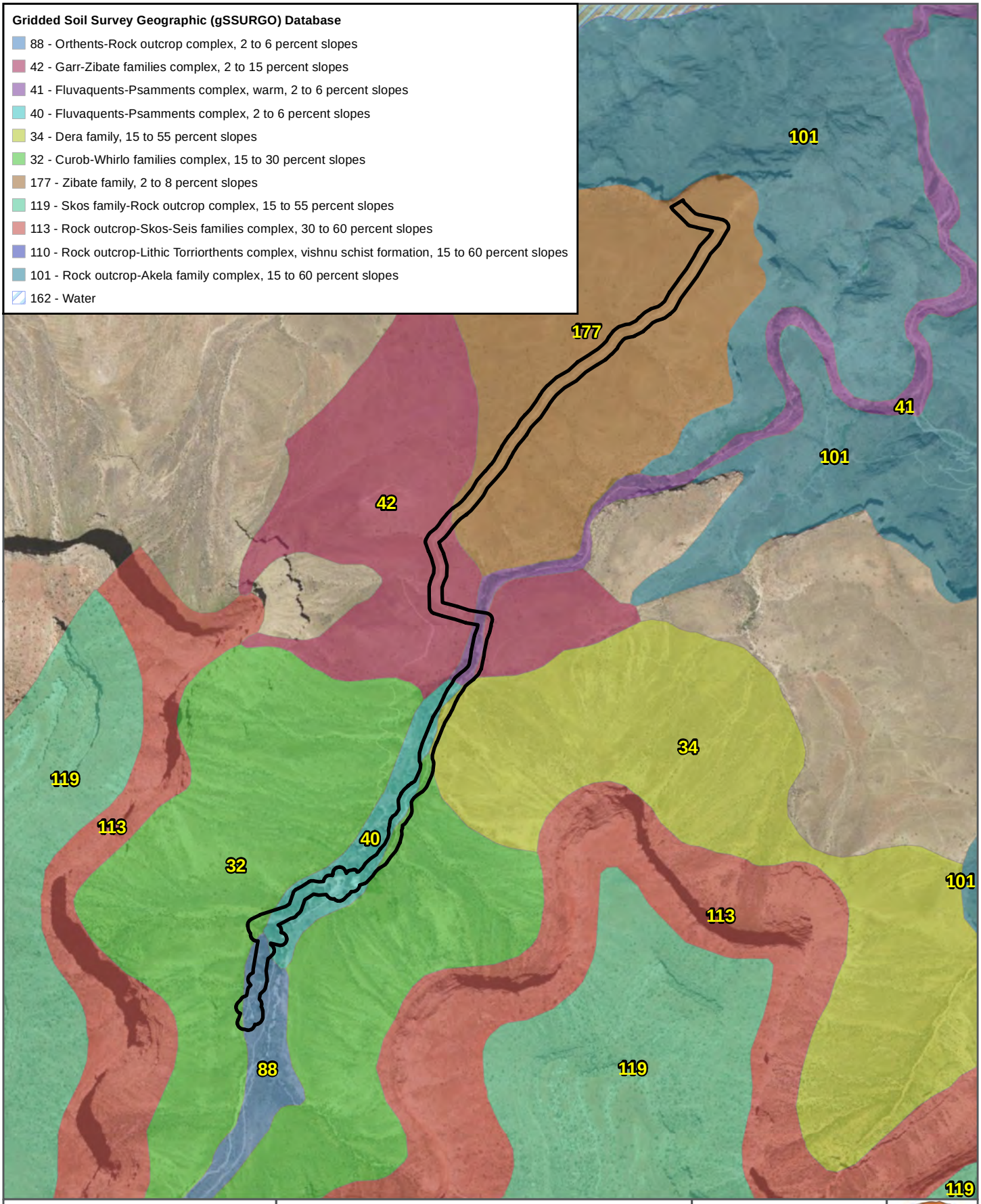
Study Area

USGS Quadrangle: Phantom Ranch, AZ (2018)
PLSS: Township 31N, Range 3E, Section 05, 06 (Study Area)

SOILS

July 2021

Figure 5-3



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 550 1,100
Feet

Source: USDA, NRCS

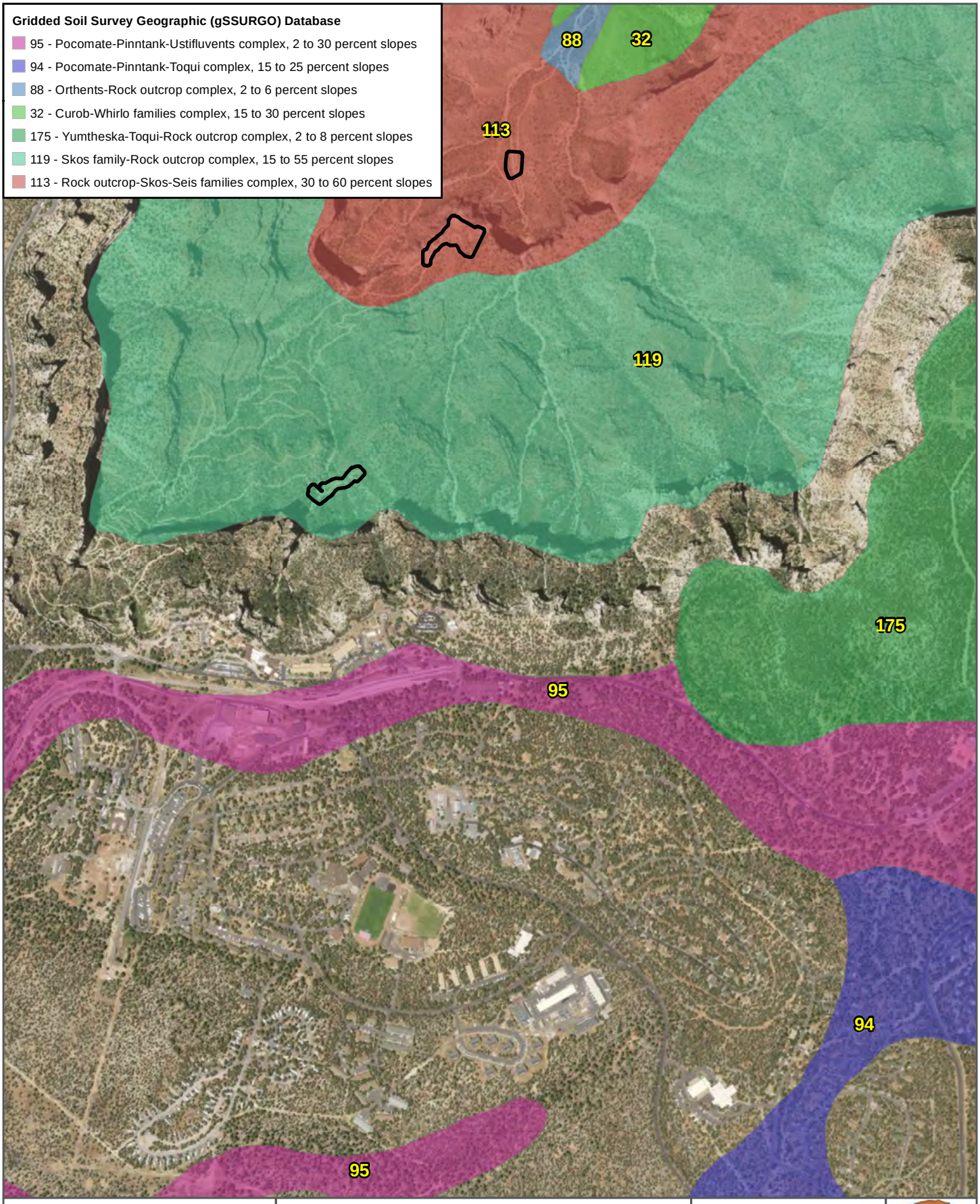
Study Area

USGS Quadrangle: Phantom Ranch, AZ (2018) and Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 3E, Section 07 and Township 31N, Range 2E, Section

SOILS

July 2021

Figure 5-4



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 550 1,100
Feet

Source: USDA, NRCS

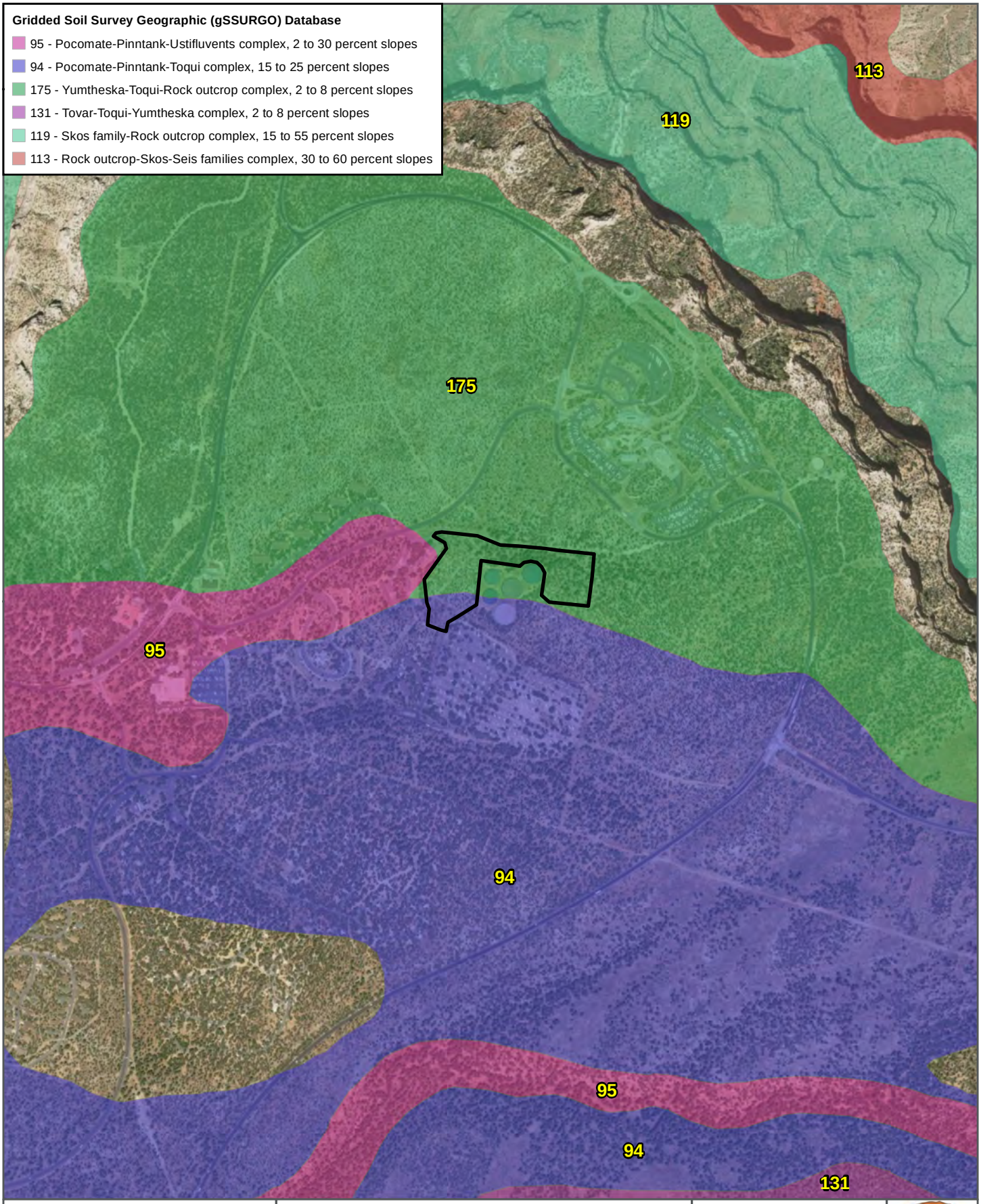
Study Area

USGS Quadrangle: Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 2E, Section 13, 23 (Study Area)

SOILS

July 2021

Figure 5-5



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT
GRAND CANYON NATIONAL PARK

0 550 1,100
Feet

Source: USDA, NRCS

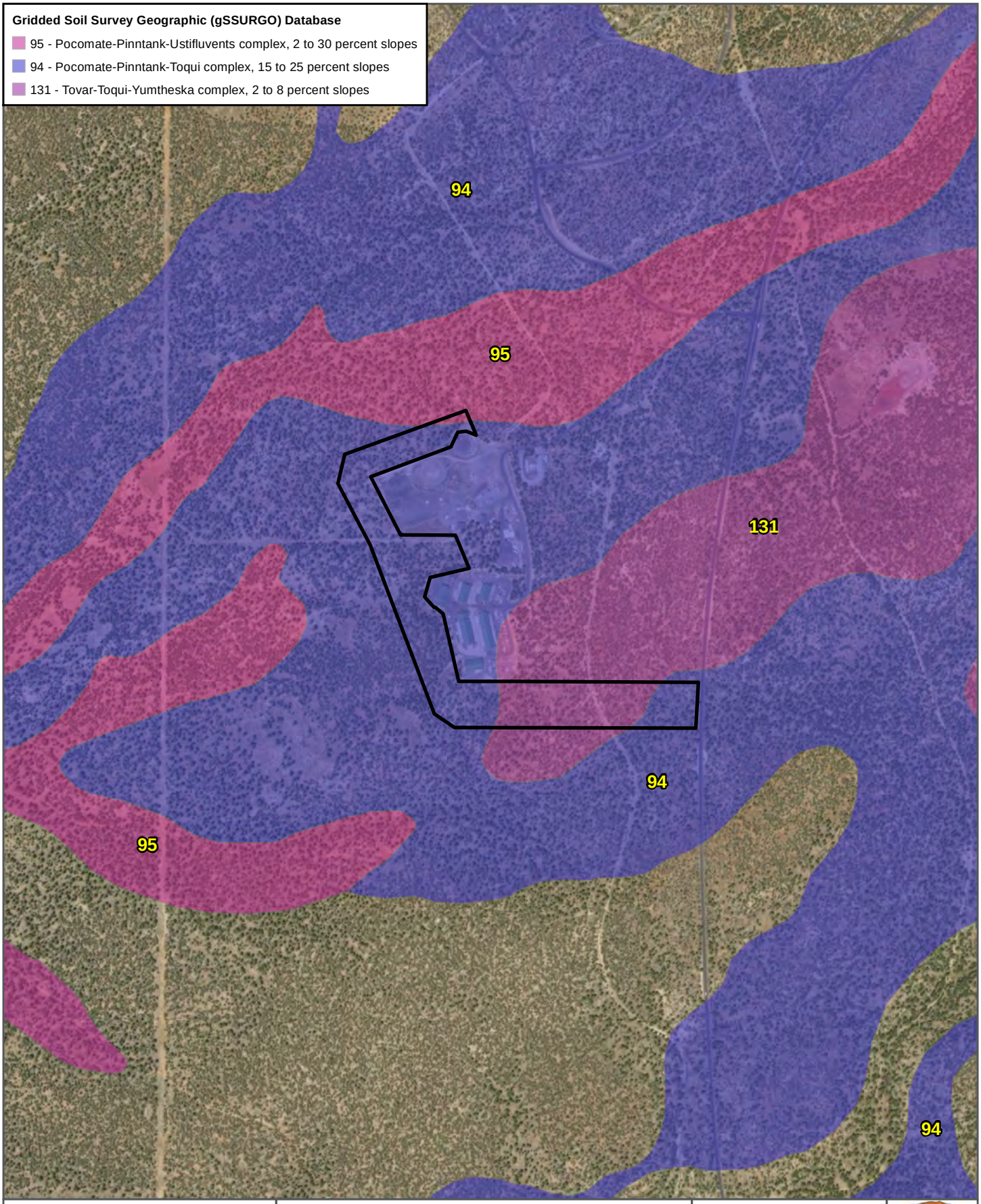
Study Area

USGS Quadrangle: Phantom Ranch, AZ (2018)
PLSS: Township 31N, Range 3E, Section 19 (Study Area)

SOILS

July 2021

Figure 5-6



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 550 1,100
Feet

Source: USDA, NRCS

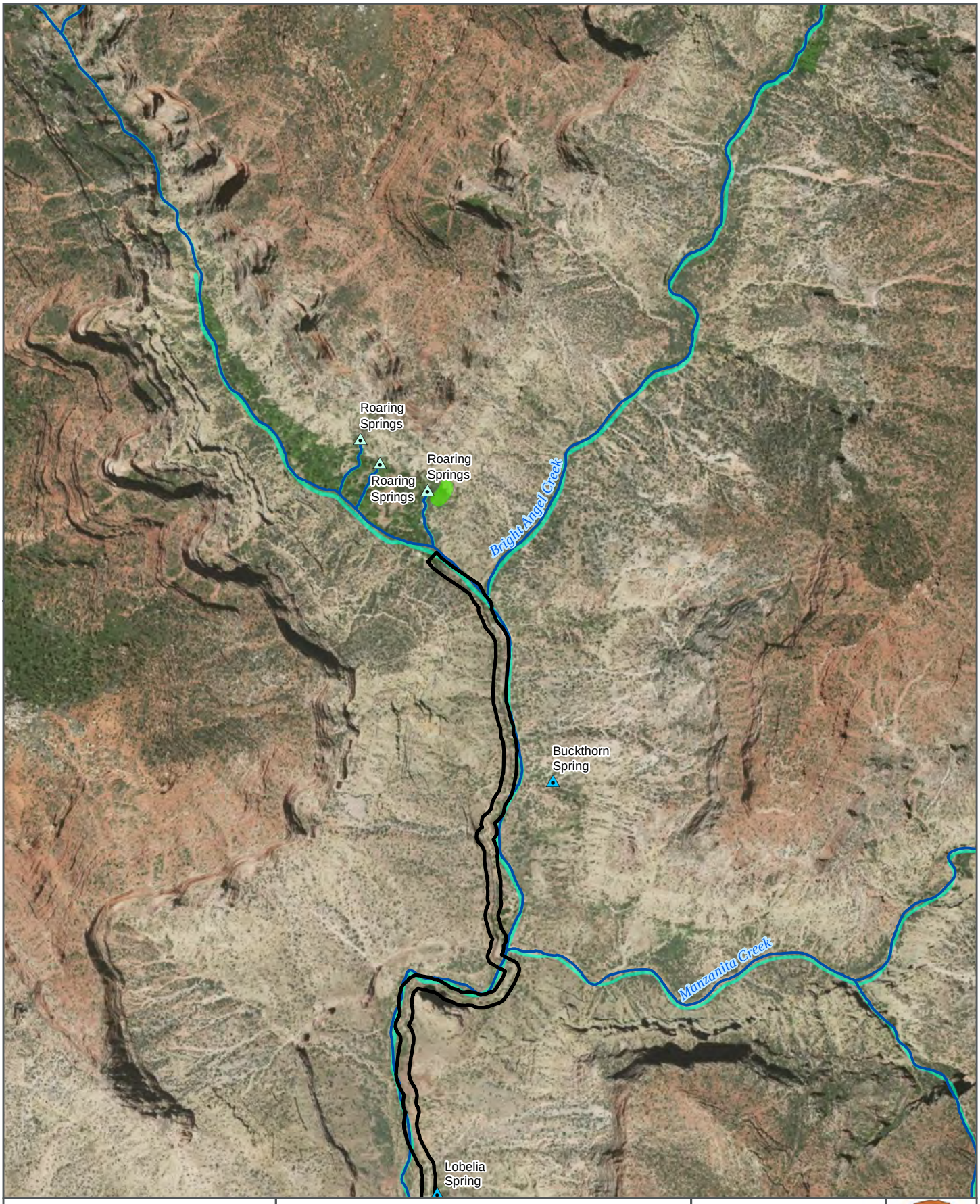
Study Area

USGS Quadrangle: Phantom Ranch, AZ (2018) and Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 2E, Section 25, 36 (Study Area)

SOILS

July 2021

Figure 5-7



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; EPA; USFWS

Study Area
Spring or Seep (NHD)
Spring (NPS)
Stream or River (NHD)
Freshwater Forested/Shrub Wetland (NWI)
Riverine (NWI)

USGS Quadrangle: Bright Angel Point, AZ (2018)
PLSS: Township 32N, Range 3E, Section 02 (Study Area)

NWI AND NHD

July 2021

Figure 6-1

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; EPA; USFWS

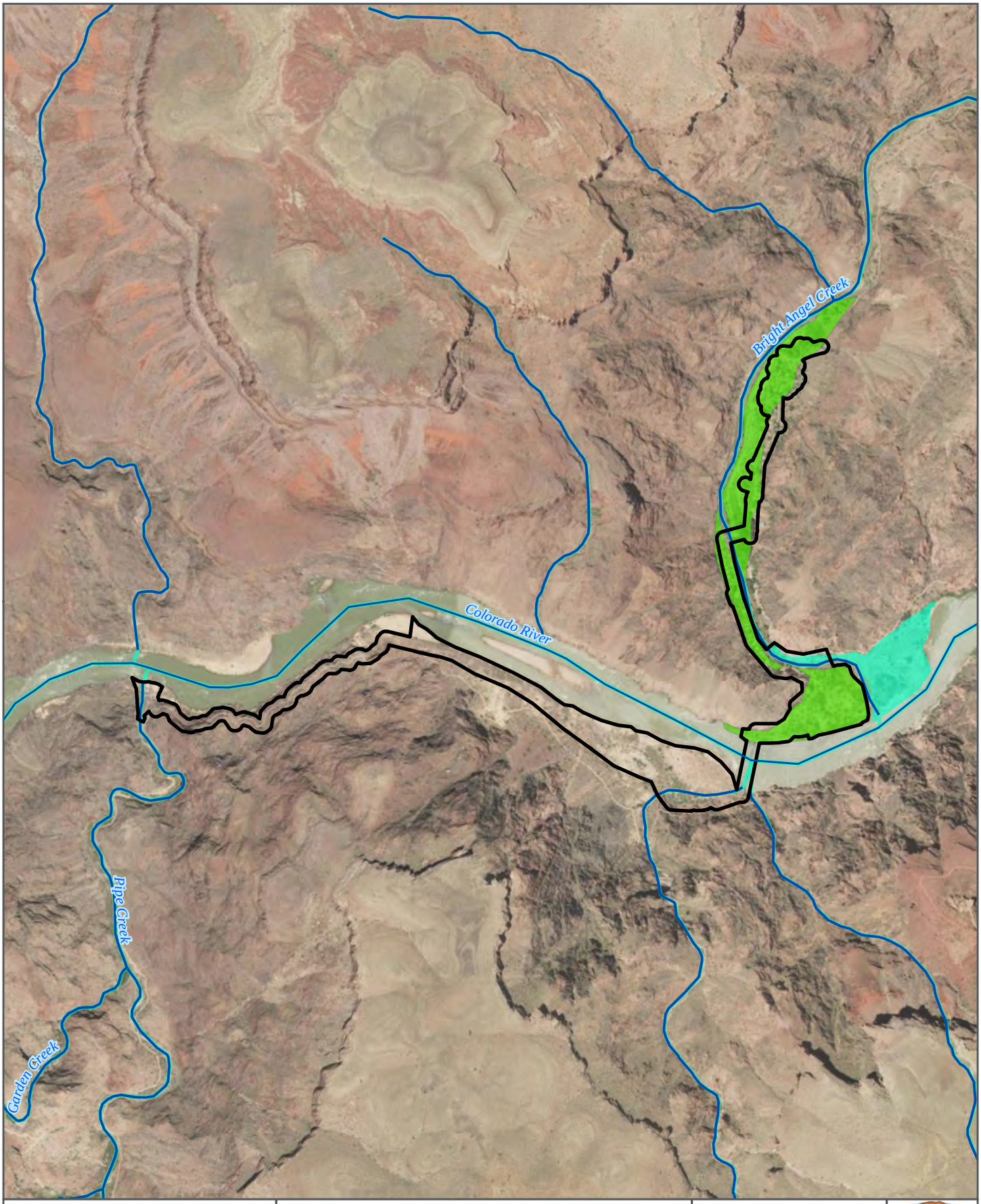
Study Area
Spring (NPS)
Stream or River (NHD)
Freshwater Forested/Shrub Wetland (NWI)
Riverine (NWI)

USGS Quadrangle: Bright Angel Point, AZ (2018)
PLSS: Township 32N, Range 3E, Section 02, 11 (Study Area)

NWI AND NHD

July 2021

Figure 6-2



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; EPA; USFWS

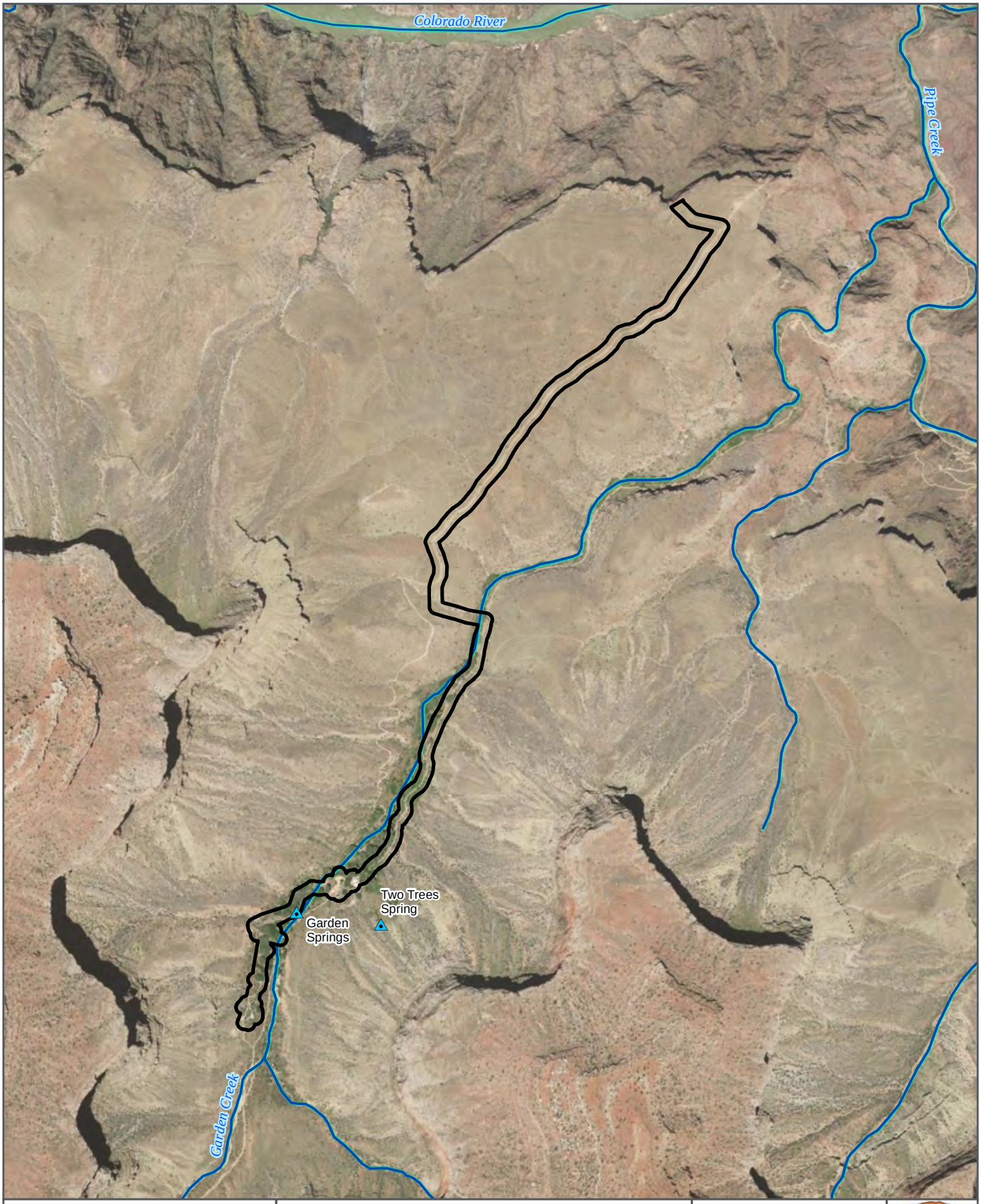
Study Area
Stream or River (NHD)
Freshwater Forested/Shrub Wetland (NWI)
Riverine (NWI)

USGS Quadrangle: Phantom Ranch, AZ (2018)
PLSS: Township 31N, Range 3E, Section 05, 06 (Study Area)

NWI AND NHD

July 2021

Figure 6-3



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000 Feet

Source: USGS; EPA; USFWS

Study Area
Spring (NPS)
Stream or River (NHD)
Riverine (NWI)

NWI AND NHD

USGS Quadrangle: Phantom Ranch, AZ (2018) and Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 3E, Section 07 and Township 31N, Range 2E, Section

July 2021

Figure 6-4

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; EPA; USFWS

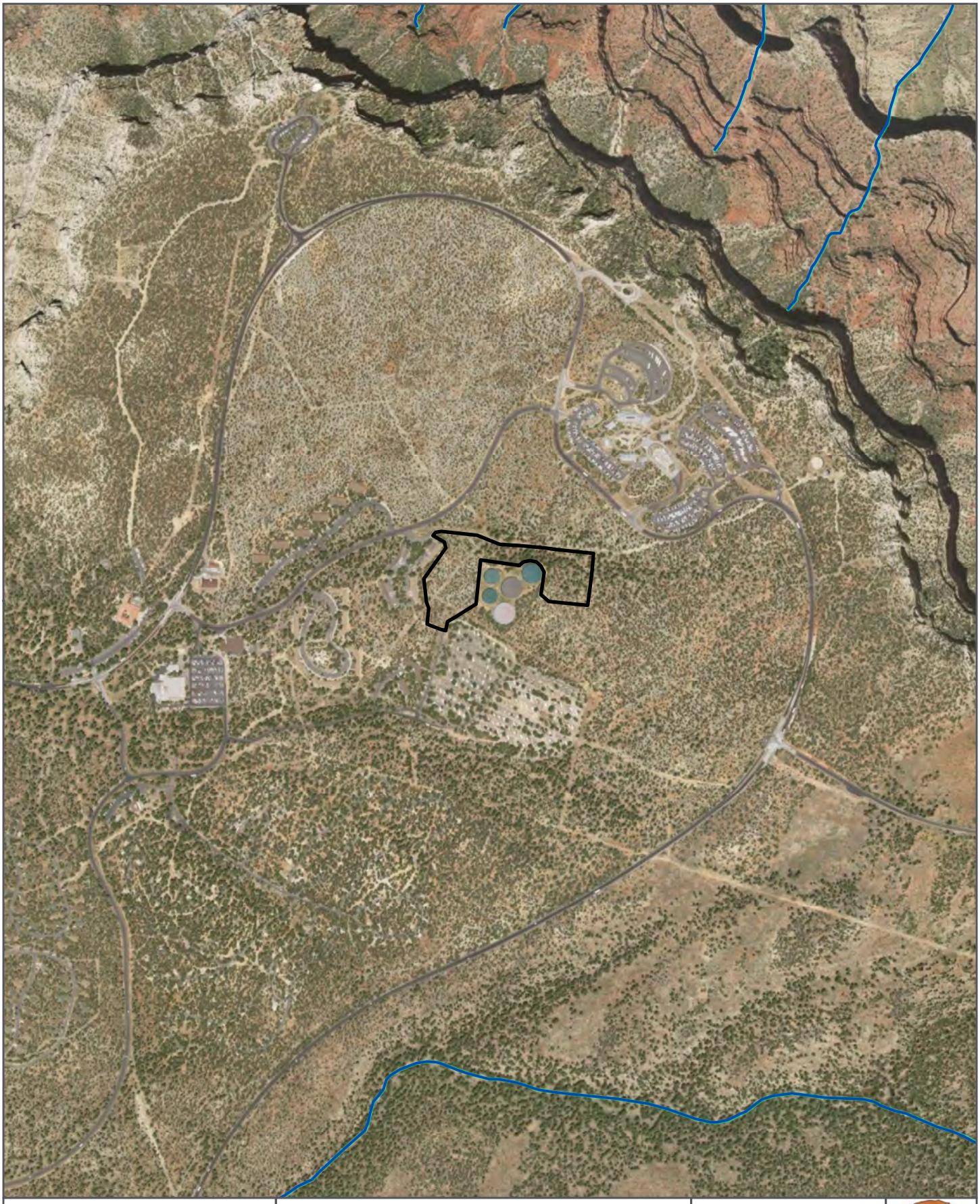
Study Area
Riverine (NWI)
Stream or River (NHD)

USGS Quadrangle: Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 2E, Section 13, 23 (Study Area)

NWI AND NHD

July 2021

Figure 6-5



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; EPA; USFWS

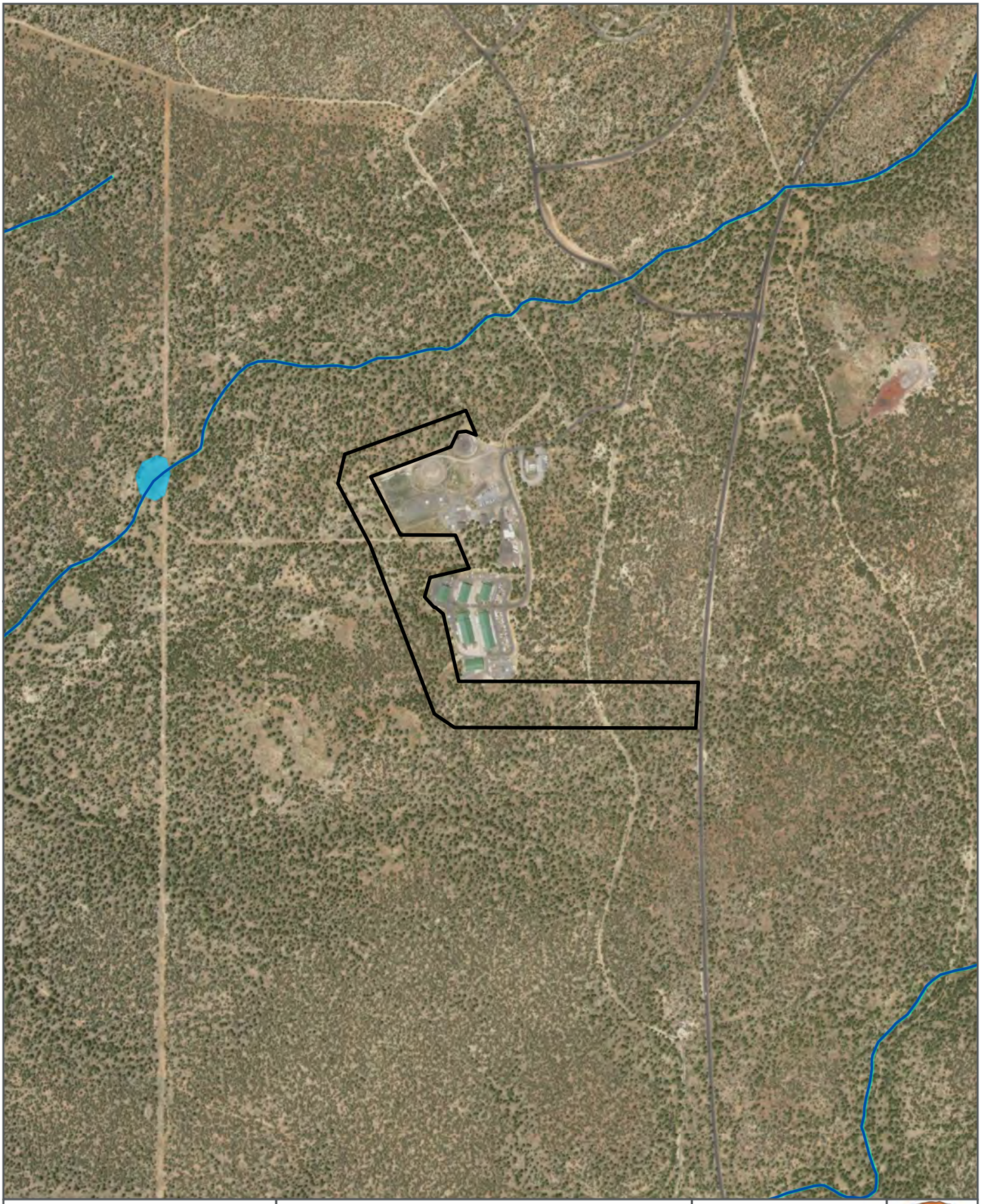
Study Area
Riverine (NWI)
Stream or River (NHD)

USGS Quadrangle: Phantom Ranch, AZ (2018)
PLSS: Township 31N, Range 3E, Section 19 (Study Area)

NWI AND NHD

July 2021

Figure 6-6



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS; EPA; USFWS

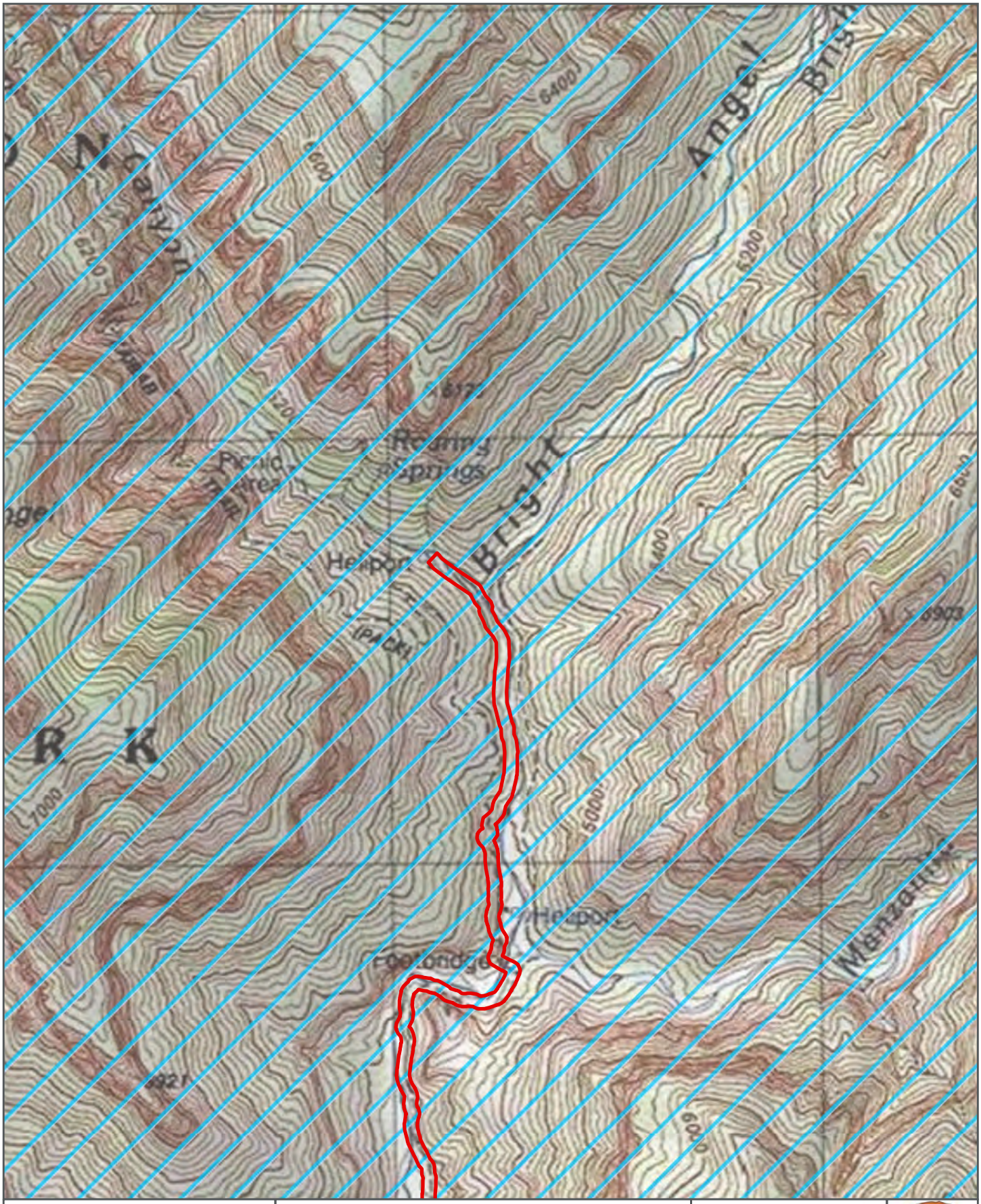
Study Area
Stream or River (NHD)
Freshwater Pond (NWI)
Riverine (NWI)

USGS Quadrangle: Phantom Ranch, AZ (2018) and Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 2E, Section 25, 36 (Study Area)

NWI AND NHD

July 2021

Figure 6-7



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS

Study Area

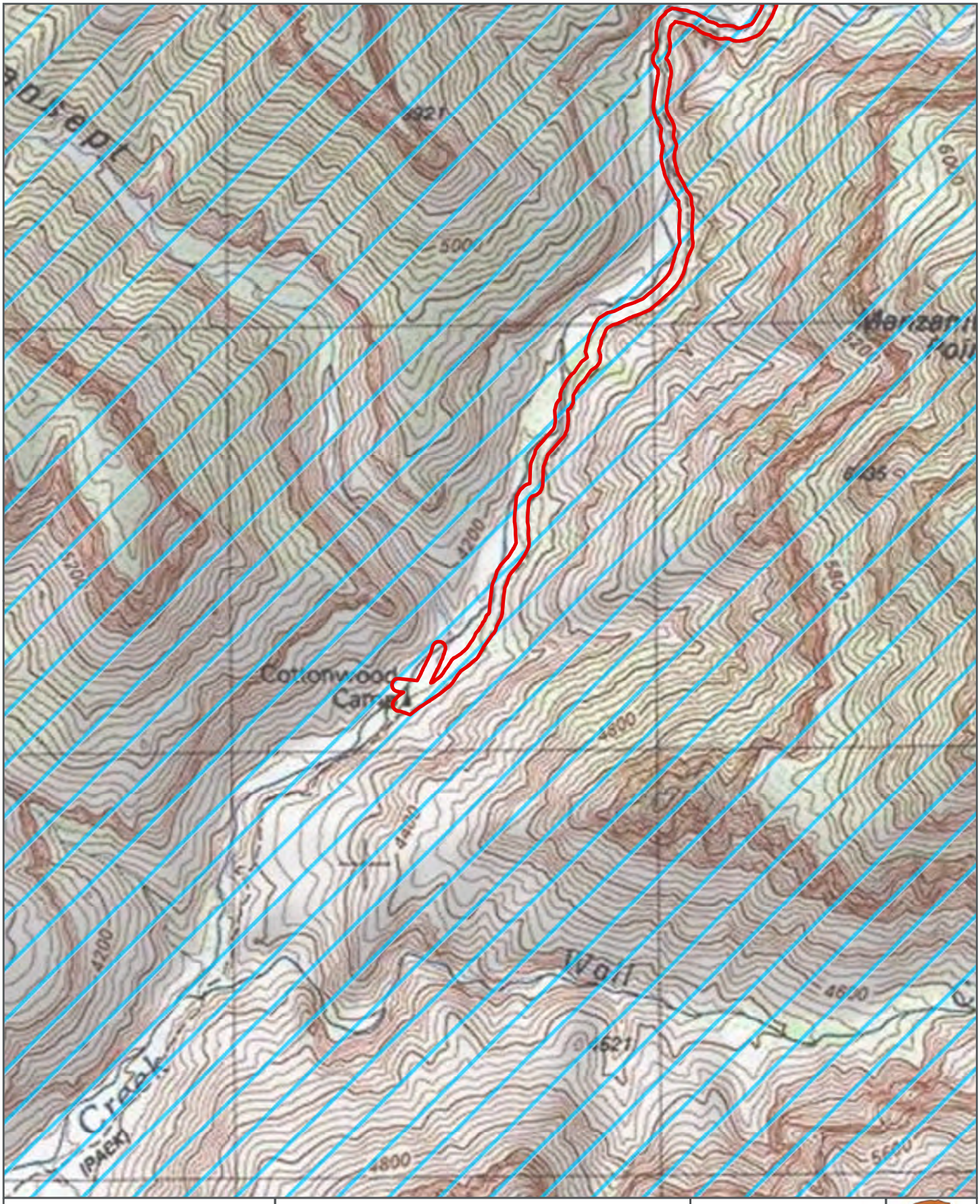
Area of Minimal Flood Hazard (X)

USGS Quadrangle: Bright Angel Point, AZ (2018)
PLSS: Township 32N, Range 3E, Section 02 (Study Area)

FEMA FLOOD HAZARD

July 2021

Figure 7-1



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS

Study Area

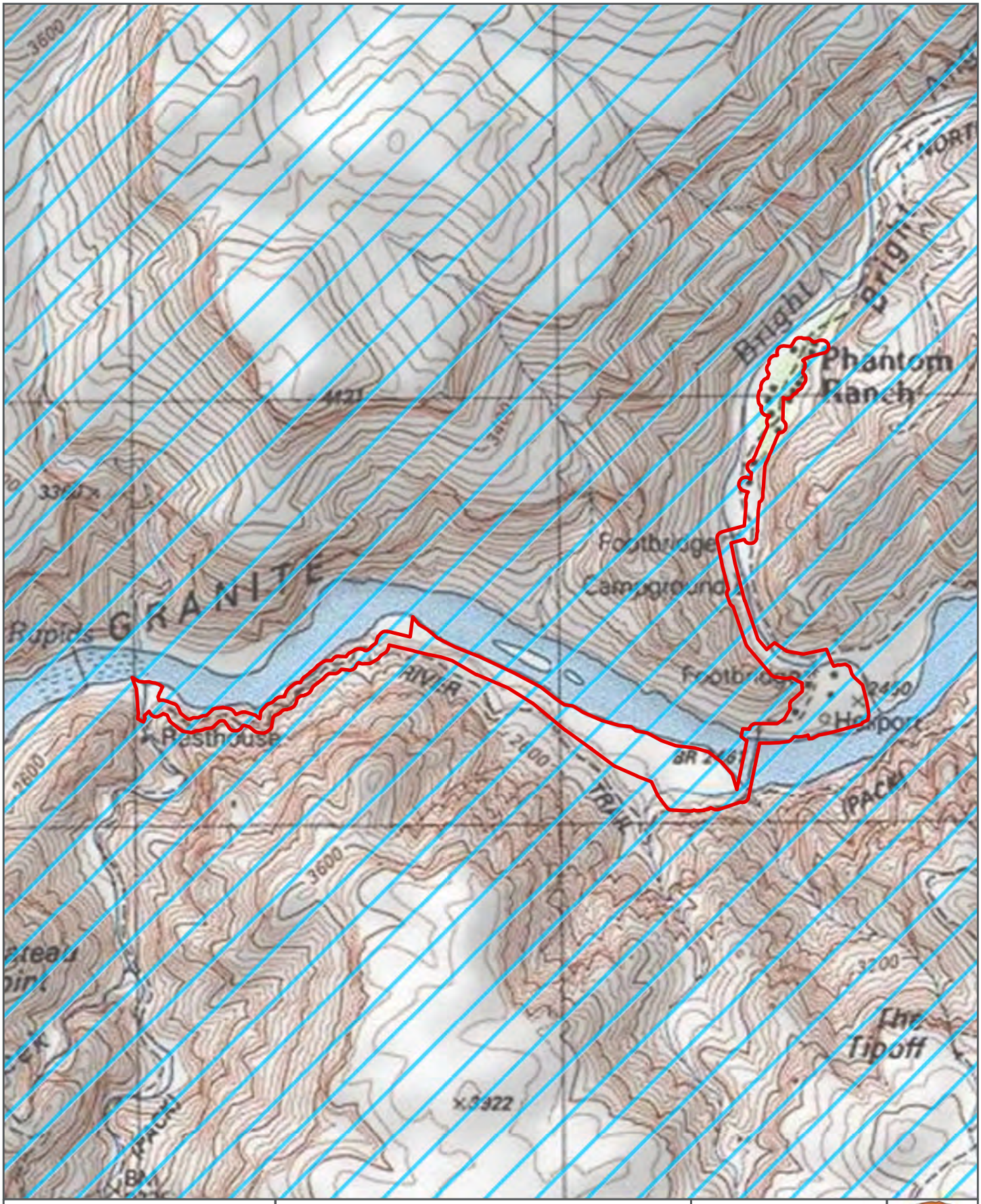
Area of Minimal Flood Hazard (X)

USGS Quadrangle: Bright Angel Point, AZ (2018)
PLSS: Township 32N, Range 3E, Section 02, 11 (Study Area)

FEMA FLOOD HAZARD

July 2021

Figure 7-2



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS

Study Area

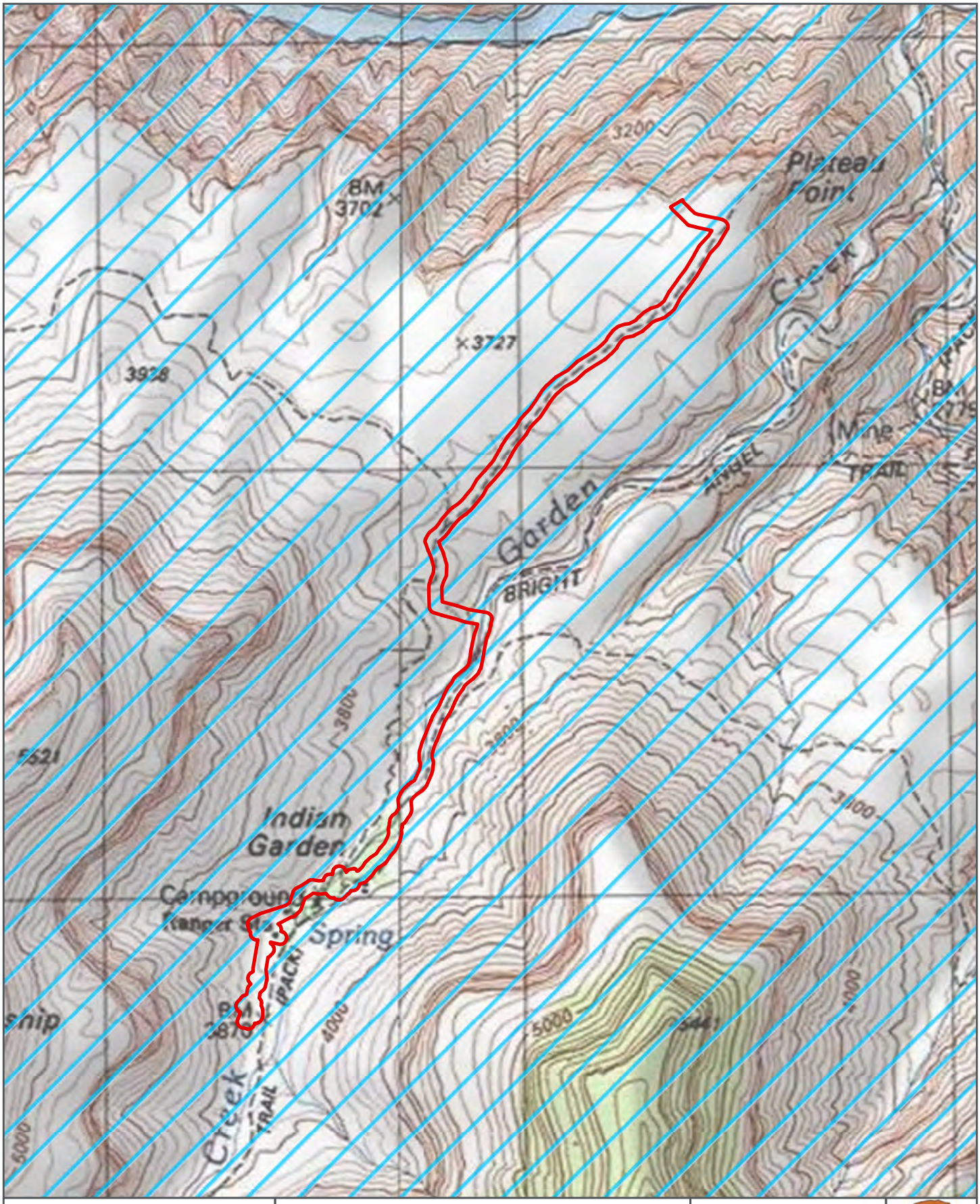
Area of Minimal Flood Hazard (X)

USGS Quadrangle: Phantom Ranch, AZ (2018)
PLSS: Township 31N, Range 3E, Section 05, 06 (Study Area)

FEMA FLOOD HAZARD

July 2021

Figure 7-3



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS

Study Area

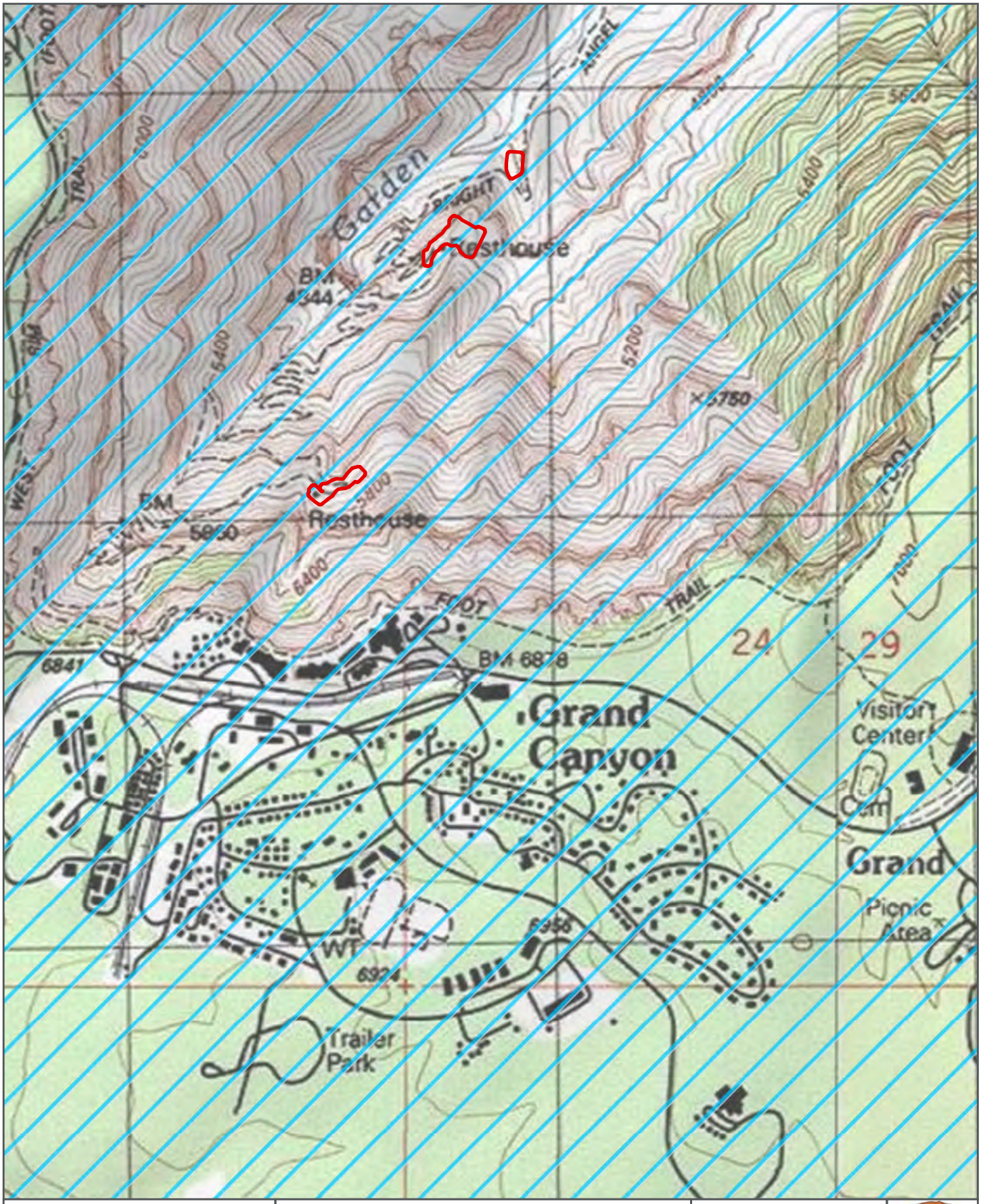
Area of Minimal Flood Hazard (X)

USGS Quadrangle: Phantom Ranch, AZ (2018) and Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 3E, Section 07 and Township 31N, Range 2E, Section 12, 13 (Study Area)

FEMA FLOOD HAZARD

July 2021

Figure 7-4



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS

Study Area

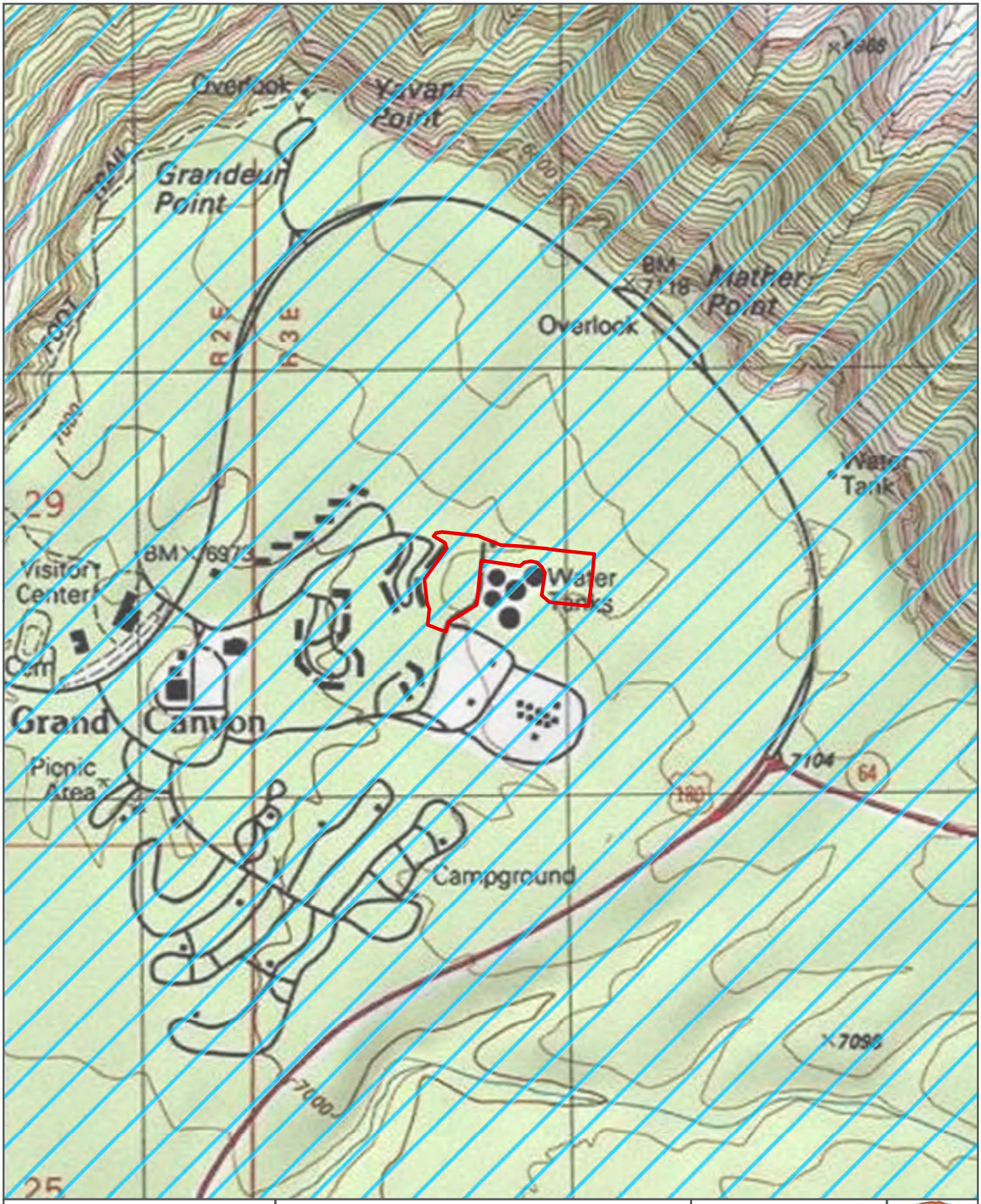
Area of Minimal Flood Hazard (X)

USGS Quadrangle: Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 2E, Section 13, 23 (Study Area)

FEMA FLOOD HAZARD

July 2021

Figure 7-5



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT
GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS

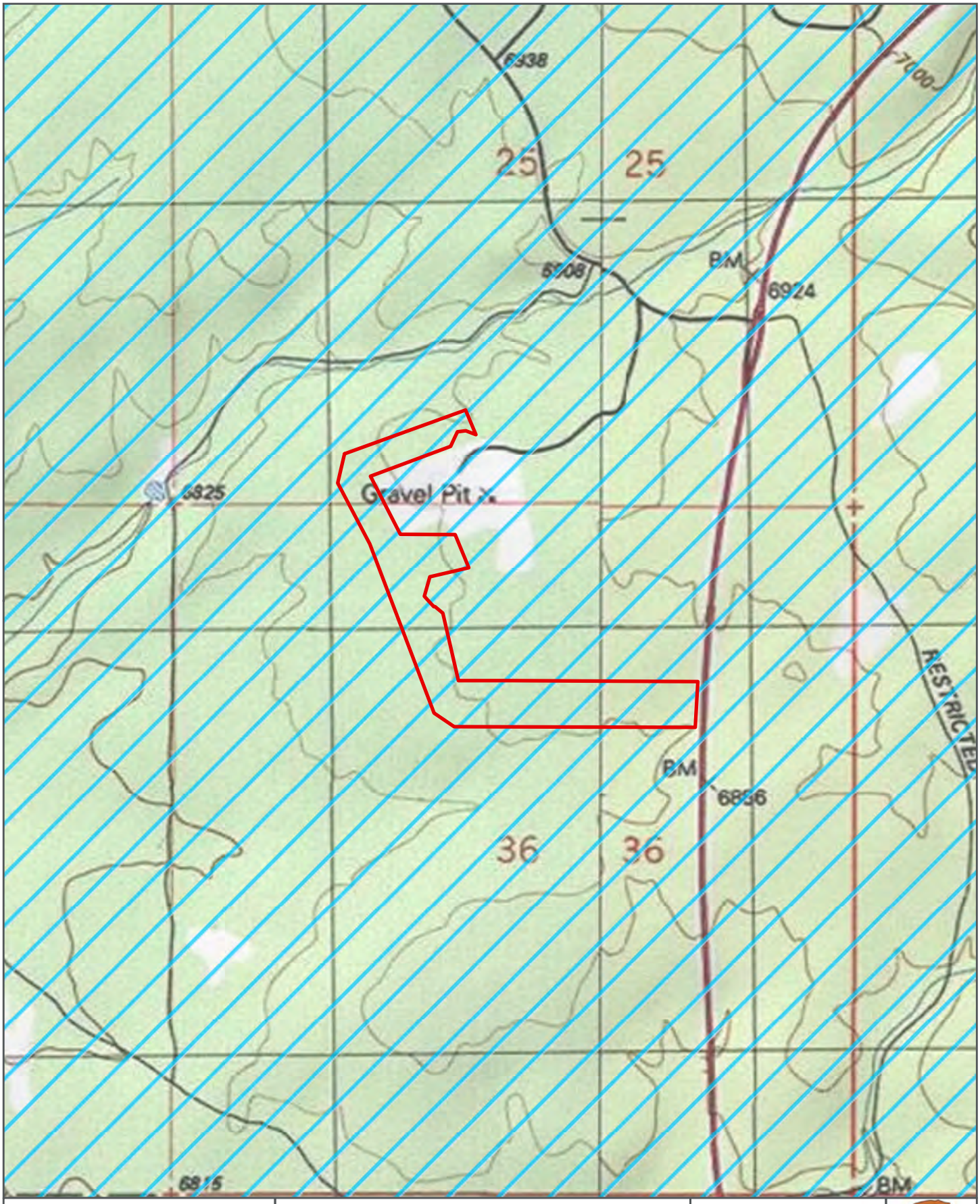
Study Area
Area of Minimal Flood Hazard (X)

USGS Quadrangle: Phantom Ranch, AZ (2018)
PLSS: Township 31N, Range 3E, Section 19 (Study Area)

FEMA FLOOD HAZARD

July 2021

Figure 7-6



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 500 1,000
Feet

Source: USGS

Study Area

Area of Minimal Flood Hazard (X)

USGS Quadrangle: Phantom Ranch, AZ (2018) and Grand Canyon, AZ (2018)
PLSS: Township 31N, Range 2E, Section 25, 36 (Study Area)

FEMA FLOOD HAZARD

July 2021

Figure 7-7

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 1 2
Miles

Source: USDA; USGS; NPS

Map Page

MAP PAGE INDEX

July 2021 | Figure 8

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

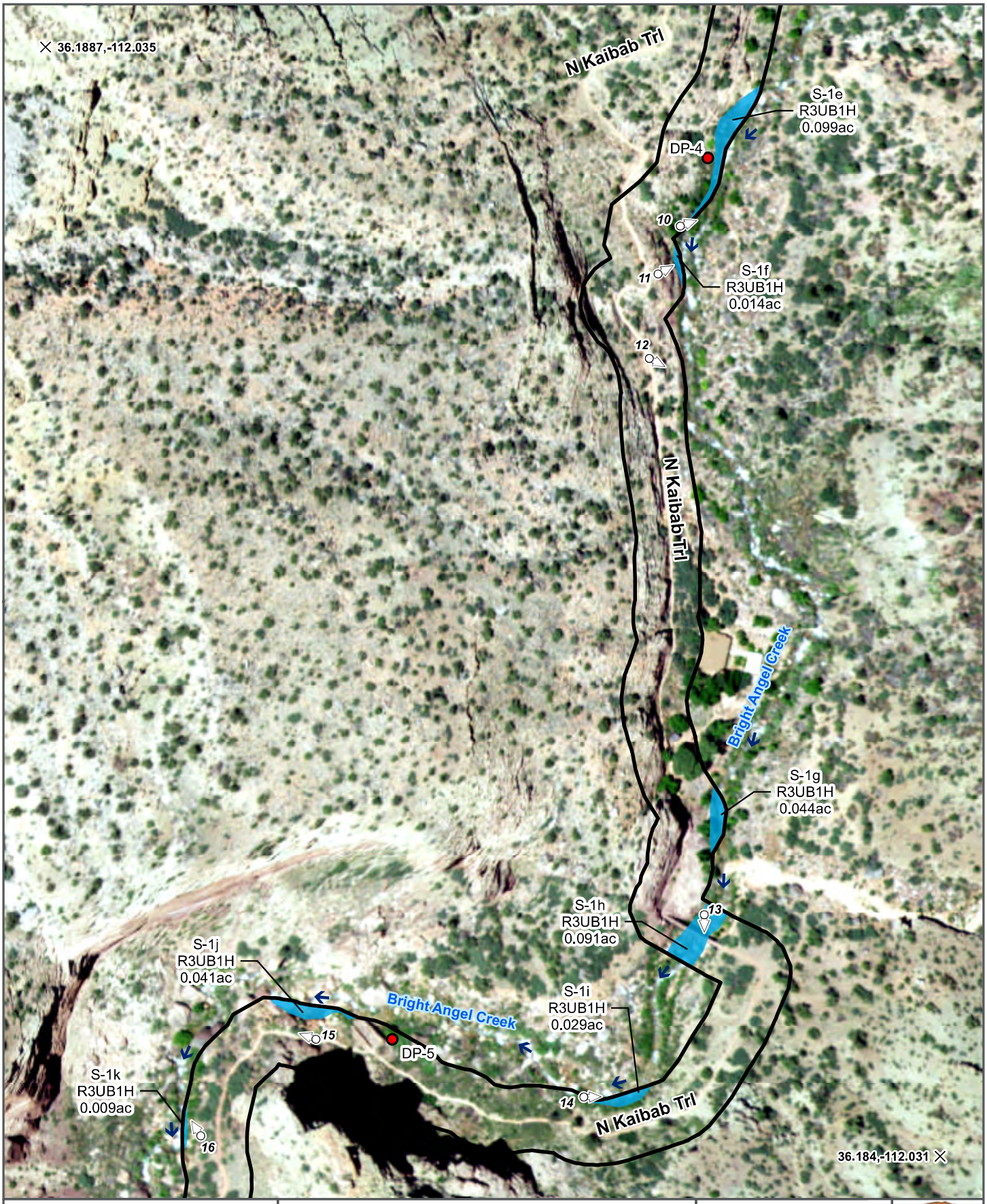
Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

- Study Area (138.5 acres)
- Map Reference Point
- Upland Sampling Point
- Wetland Sampling Point
- Photo Point Direction
- Direction of Flow
- Perennial Stream (3.02 acres)
- Wetland (2.59 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-1



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Upland Sampling Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-2

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

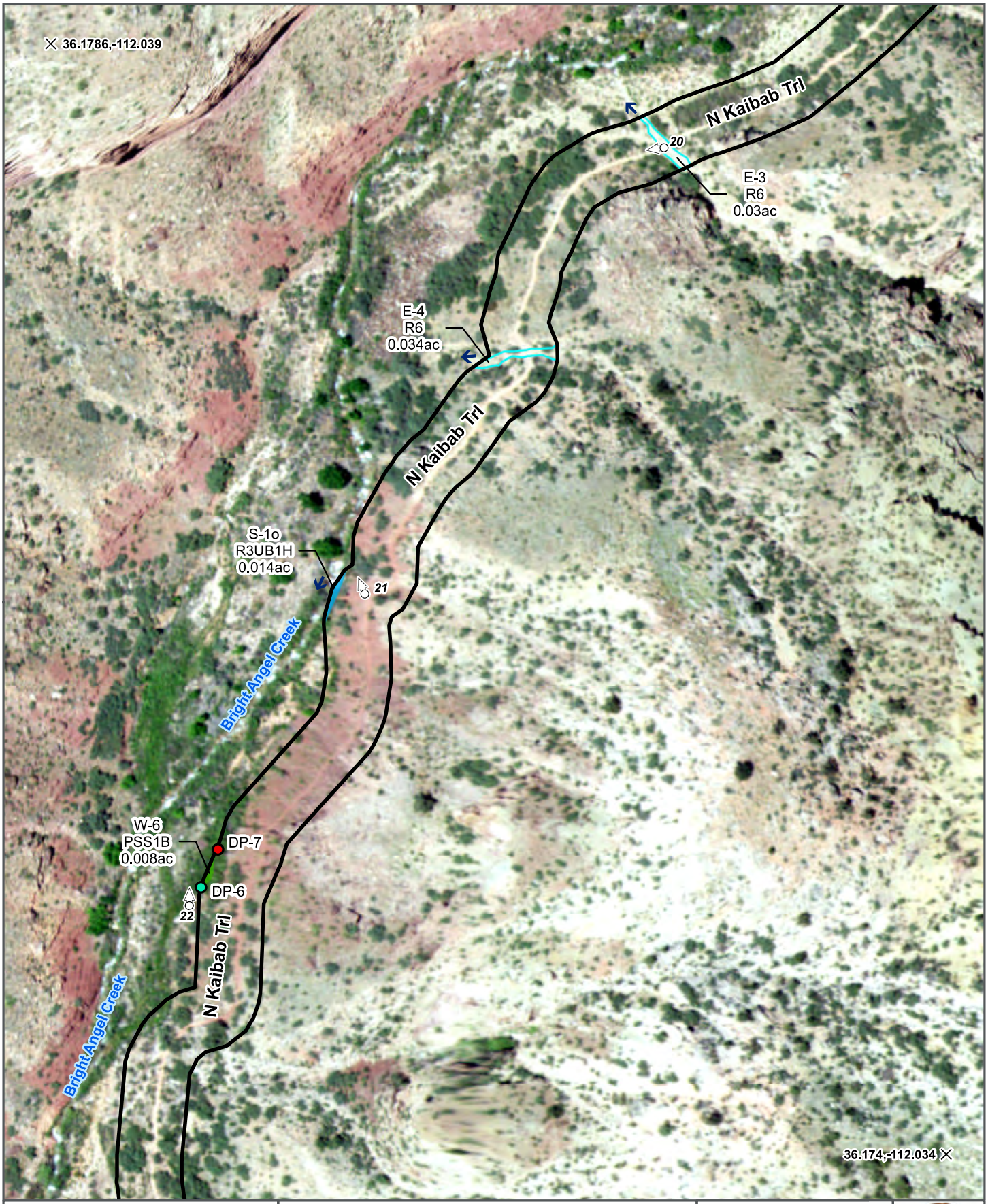
Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)
Ephemeral Stream (0.46 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-3



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Upland Sampling Point
Wetland Sampling Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)
Wetland (2.59 acres)
Ephemeral Stream (0.46 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-4

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)
Wetland (2.59 acres)
Ephemeral Stream (0.46 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-5

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

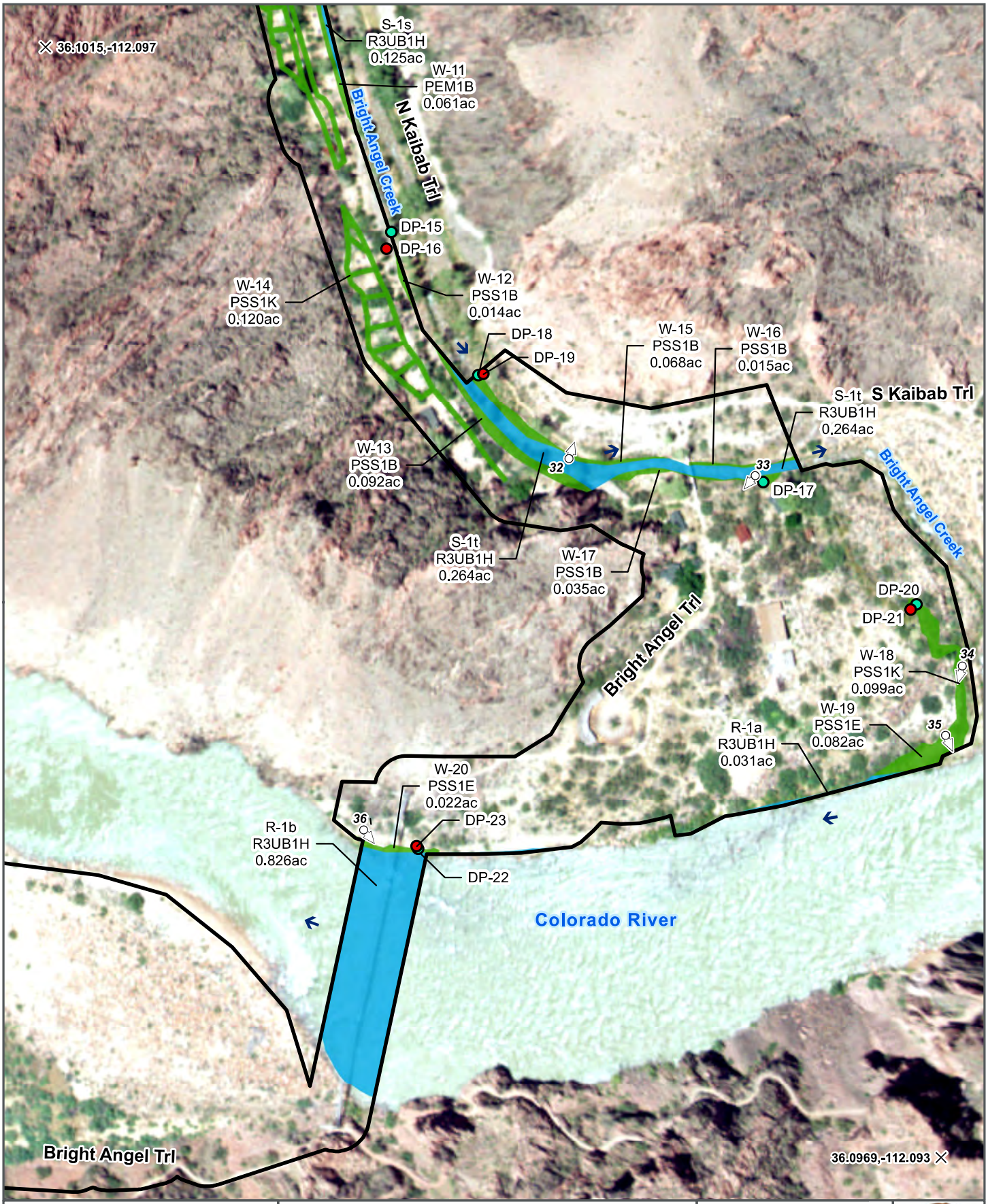
Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Upland Sampling Point
Wetland Sampling Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)
Wetland (2.59 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-6



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Upland Sampling Point
Wetland Sampling Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)
Wetland (2.59 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-7

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)
Wetland (2.59 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-8

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

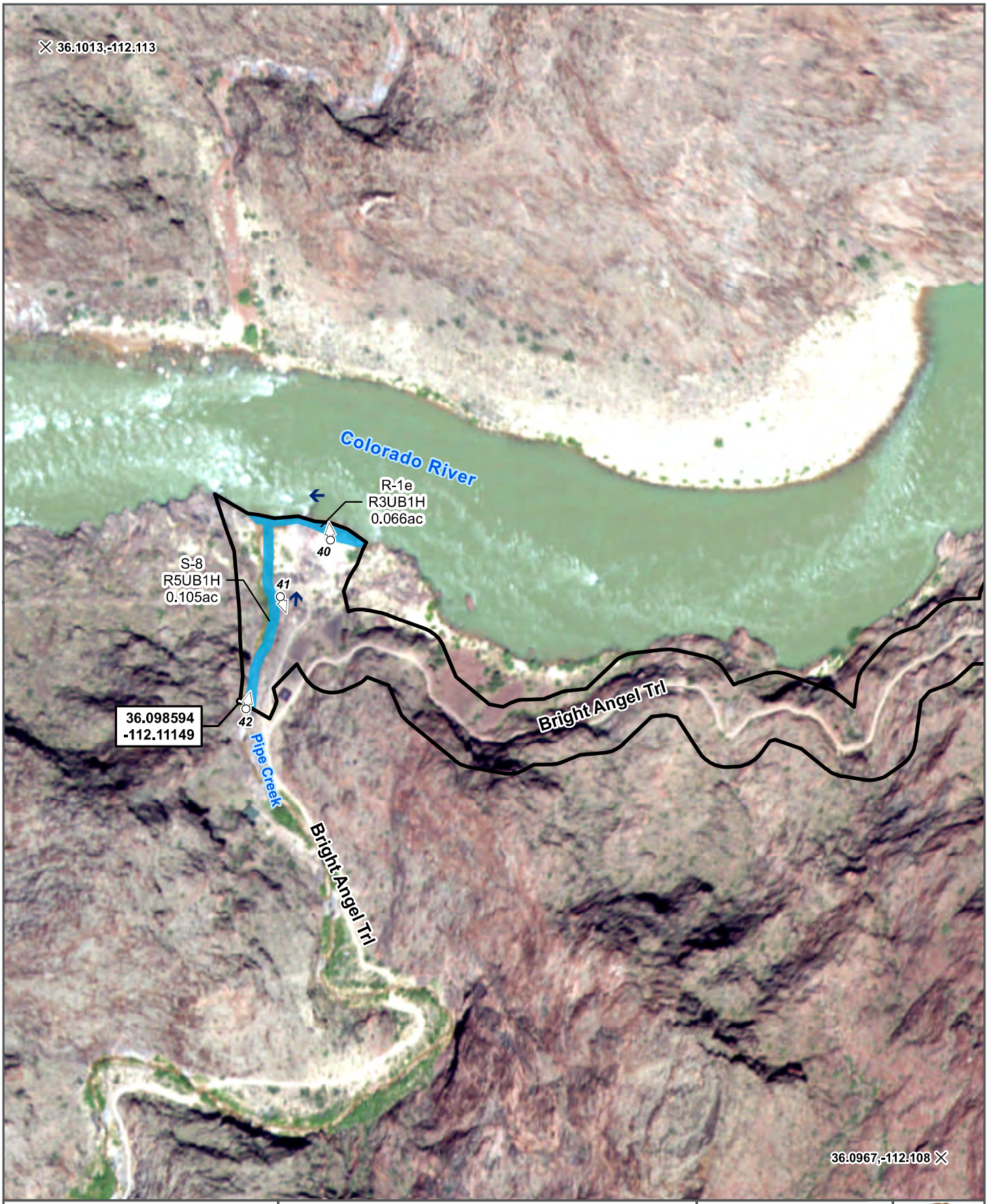
Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Upland Sampling Point
Wetland Sampling Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)
Wetland (2.59 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-9



TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-10

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-11

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction
Direction of Flow
Ephemeral Stream (0.46 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-12

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction
Direction of Flow
Perennial Stream (3.02 acres)
Wetland (2.59 acres)
Ephemeral Stream (0.46 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-13

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

- Study Area (138.5 acres)
- Map Reference Point
- Upland Sampling Point
- Wetland Sampling Point
- Photo Point Direction
- Direction of Flow
- Intermittent Stream (0.003 acres)
- Perennial Stream (3.02 acres)
- Wetland (2.59 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-14

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-15

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-16

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)
Map Reference Point
Photo Point Direction

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-17

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-18

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)

Photo Point Direction

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-19

TRANSCANYON WATER DISTRIBUTION PIPELINE REPLACEMENT GRAND CANYON NATIONAL PARK

0 50 100
Feet
1 inch = 200 feet

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Datum: North American 1983

Study Area (138.5 acres)

Aerial Imagery: NAIP, 6/20/2019
Created on: 5/12/2021
Revised on: 7/1/2021
Surveyed By:Tracy Hamilton, Tara Kent, Ryan Hammons, and Sirena Brownlee
Map Produced By: HDR

AQUATIC RESOURCES OVERVIEW

July 2021 | Figure 8-20