CBC Digital 395

R3-Johannesburg to Inyokern-162

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet

20260

11-03-11

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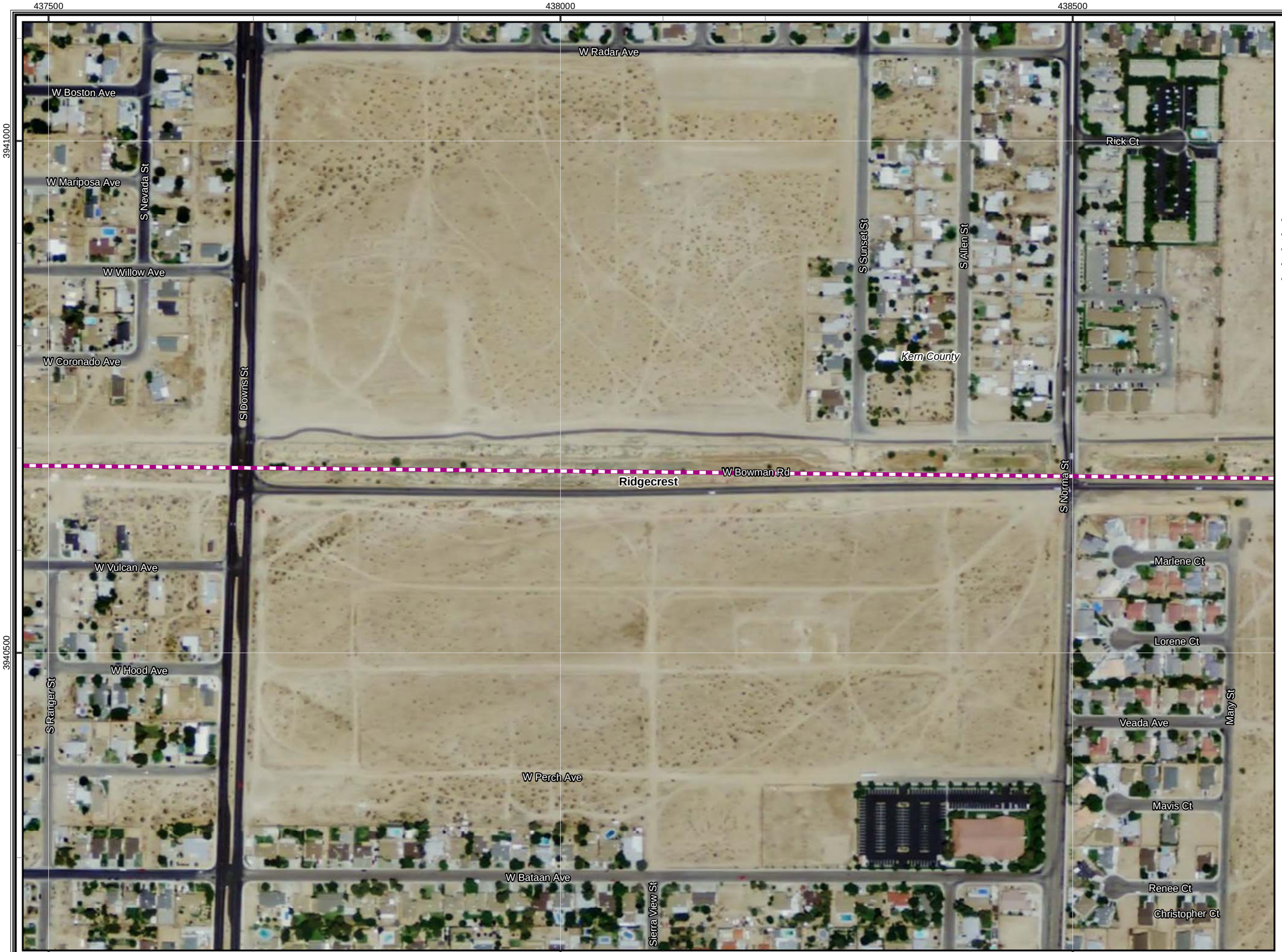


CBC Digital 395

R3-Johannesburg to Inyokern-163

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

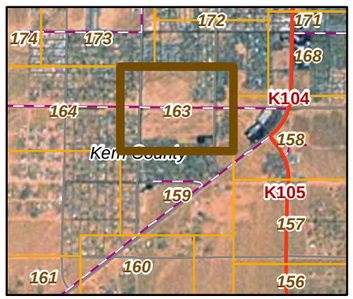
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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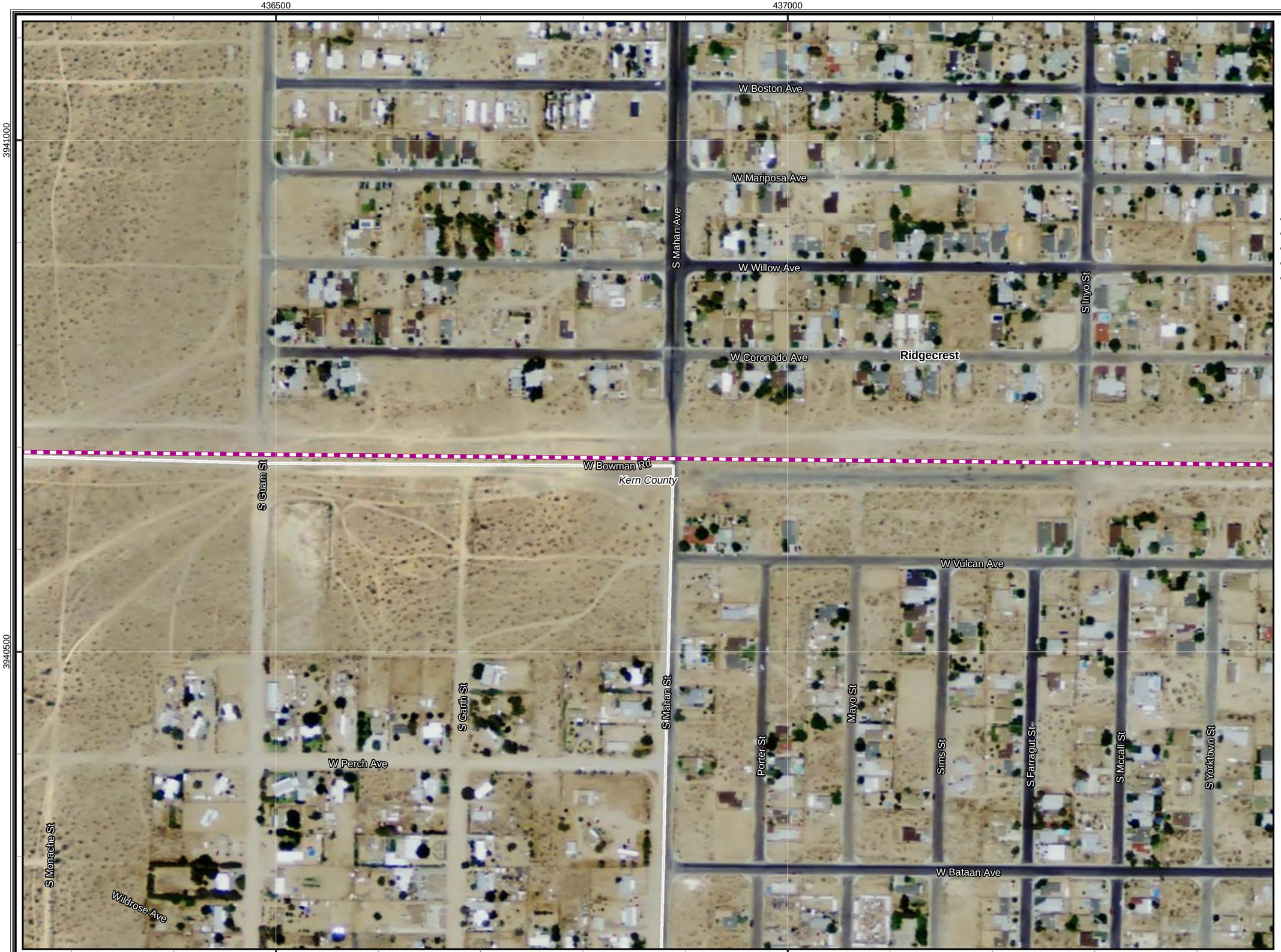
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-164

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

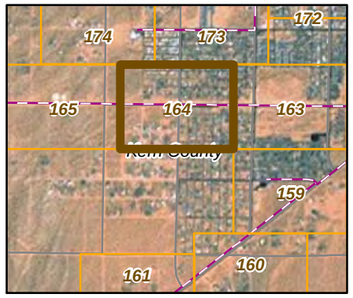
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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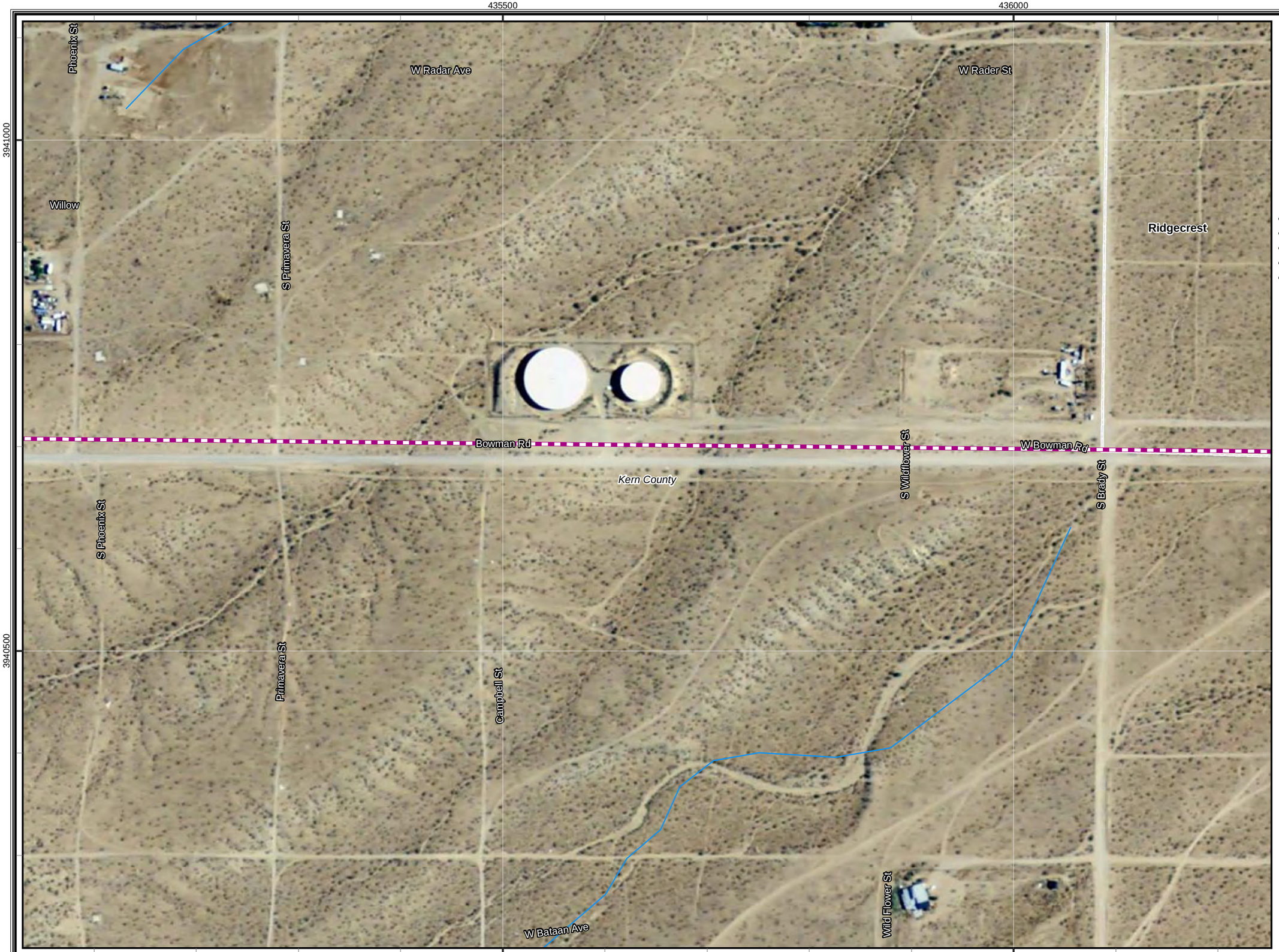
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-165

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

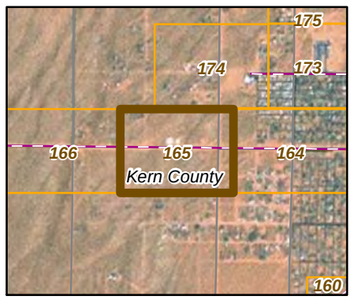
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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Chambers Group Inc.

CBC Digital 395

R3-Johannesburg to Inyokern-166

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

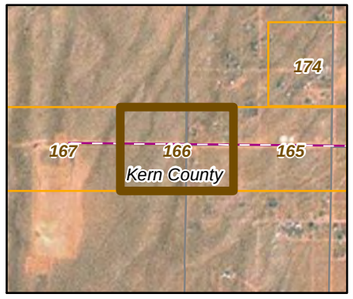
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R3-Johannesburg to Inyokern-167

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

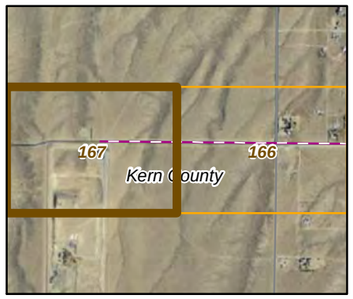
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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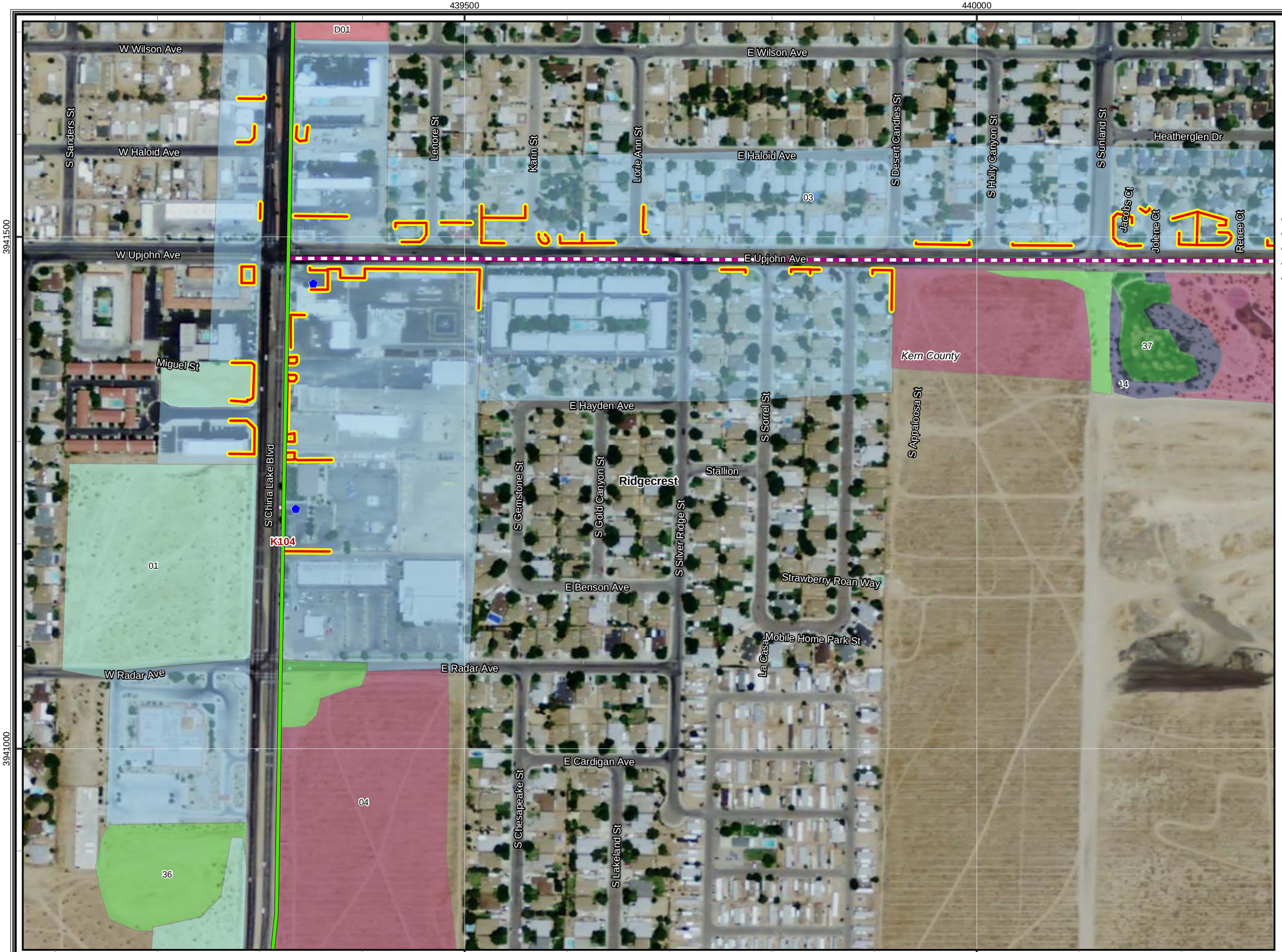
11-03-11

Chambers Group Inc.

CBC Digital 395

R3-Johannesburg to Inyokern-168



Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

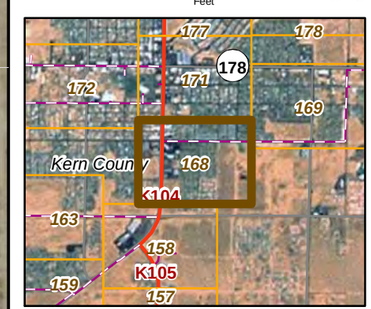
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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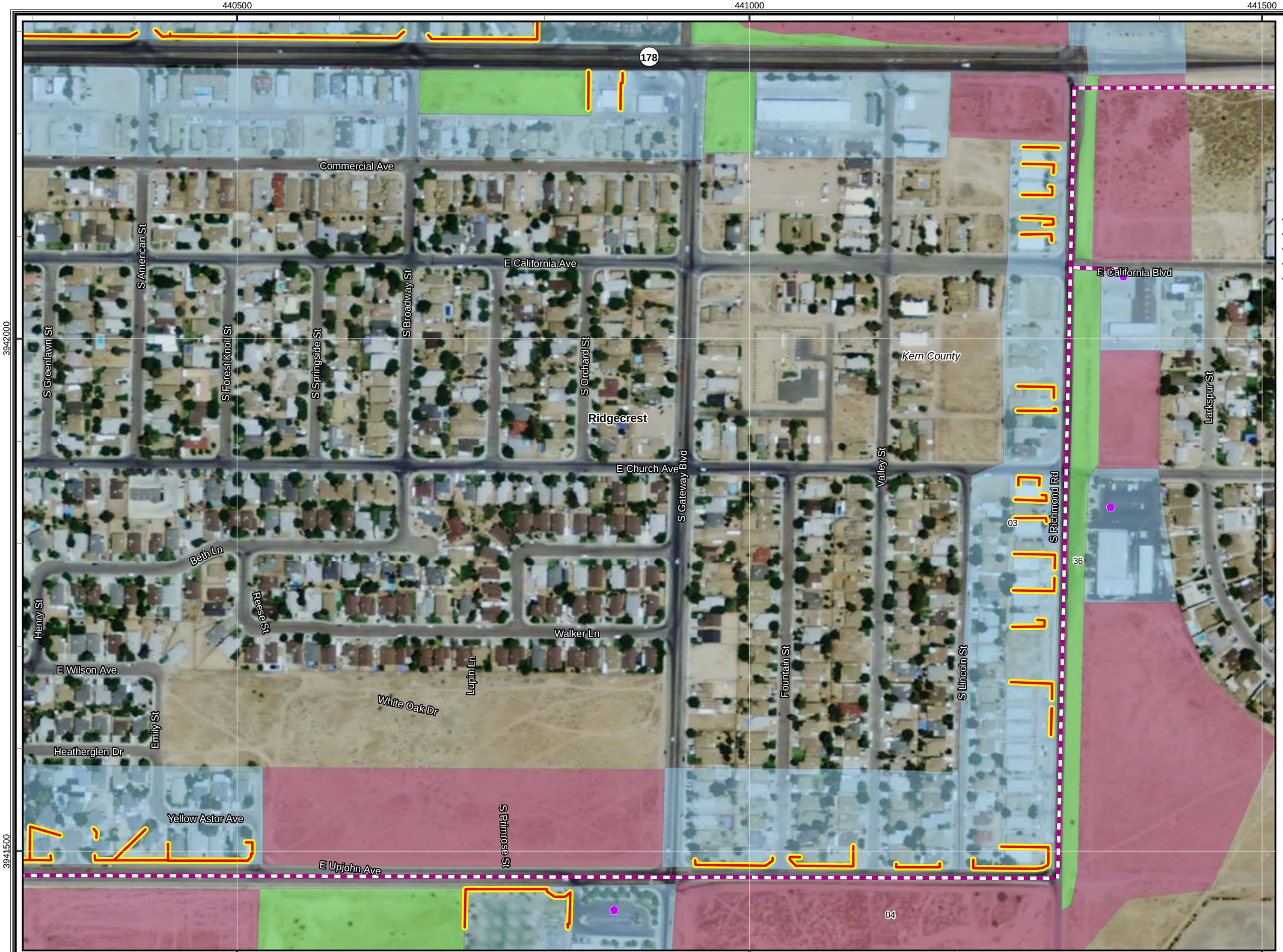
11-03-11

Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-169

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

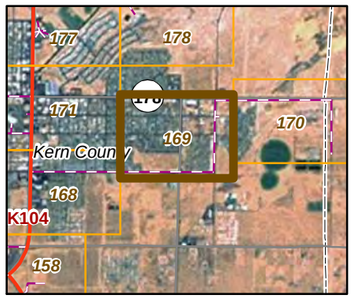
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R3-Johannesburg to Inyokern-170

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

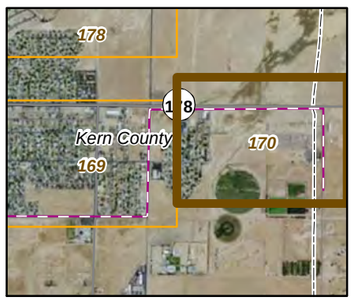
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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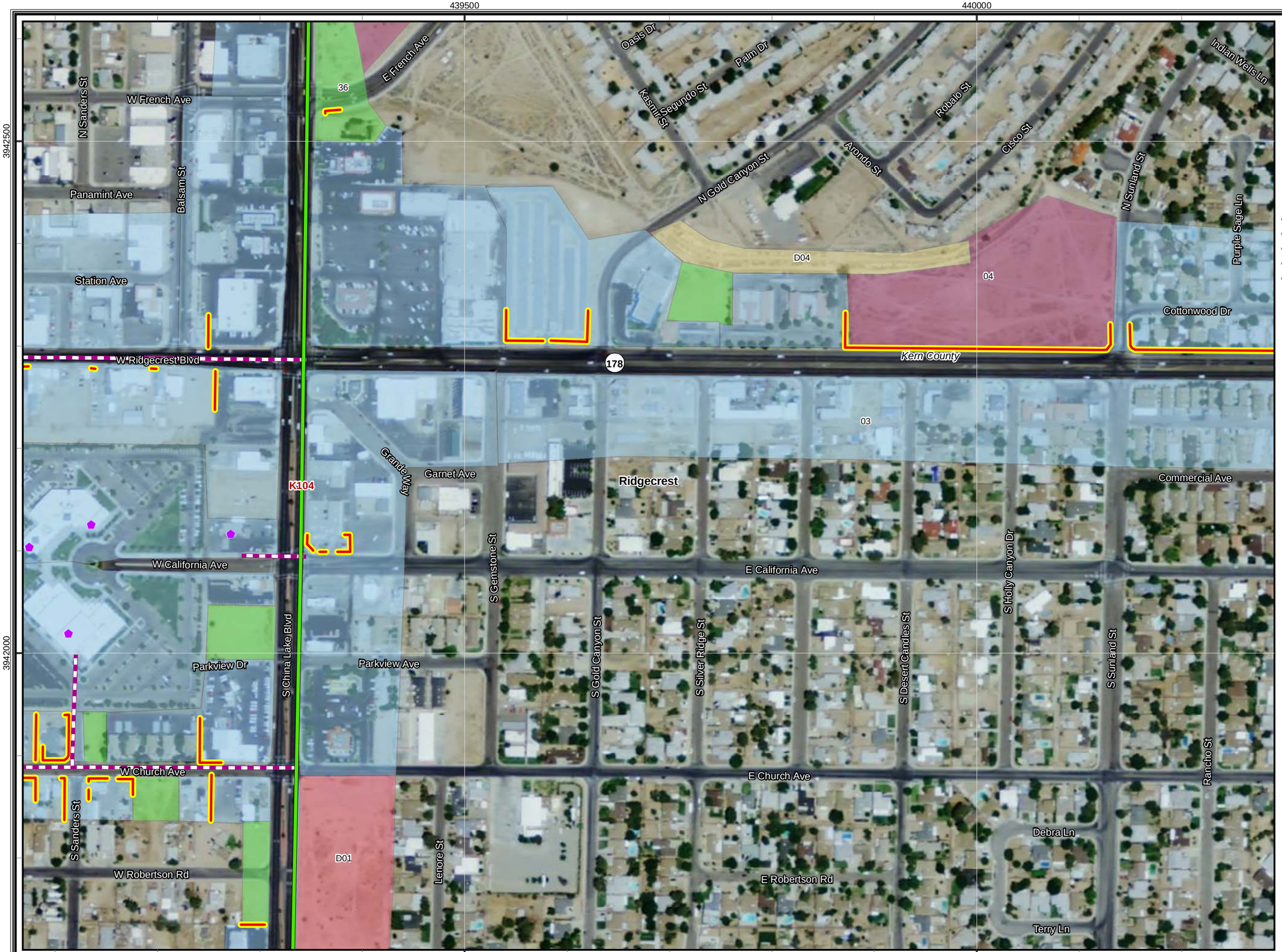
11-03-11

Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-171

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

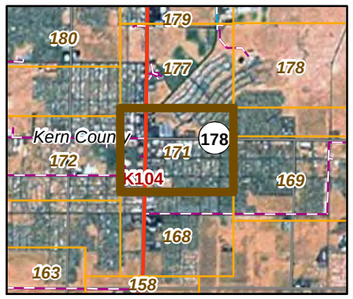
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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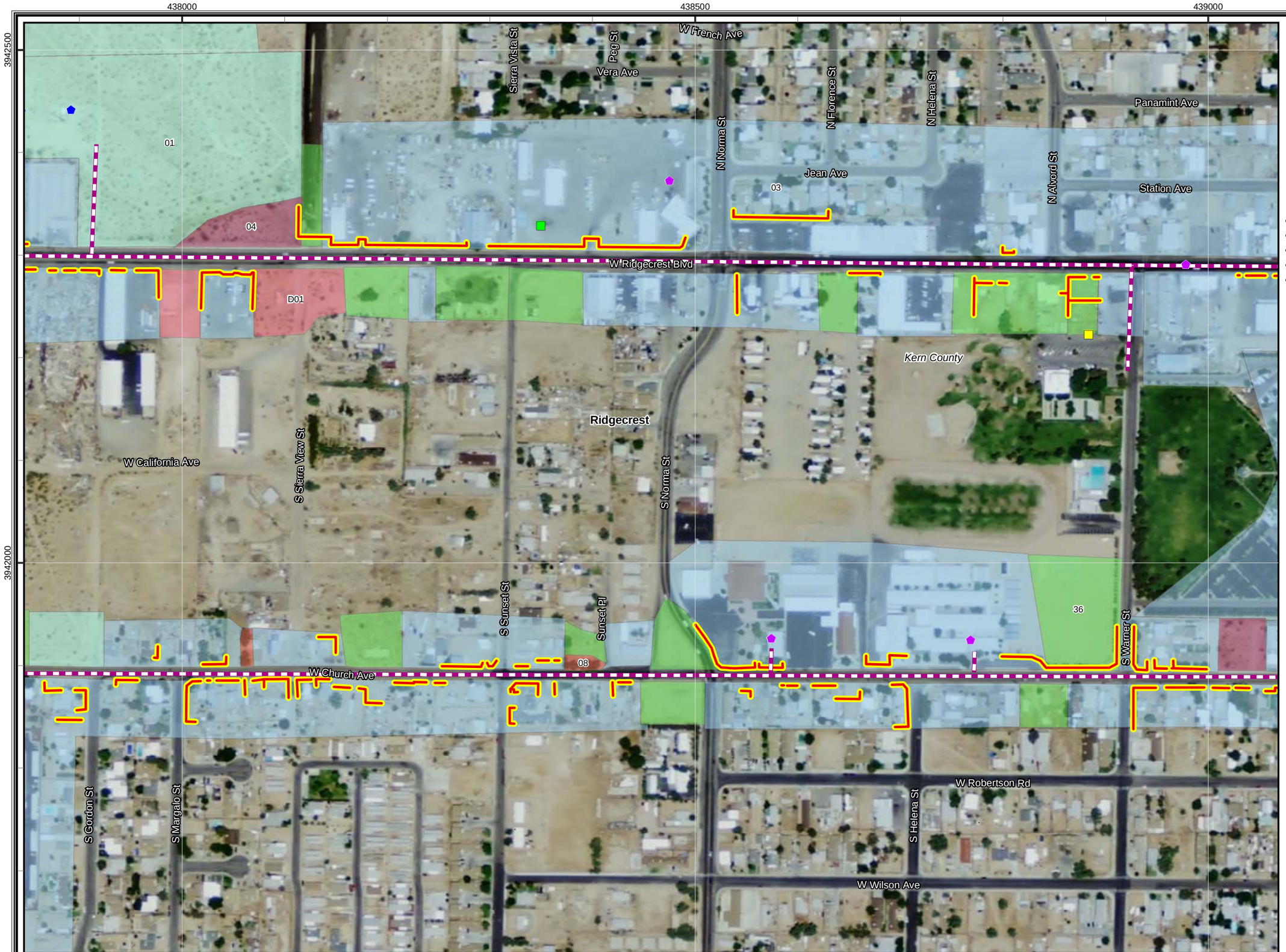
11-03-11

Chambers Group Inc.

CBC Digital 395

R3-Johannesburg to Inyokern-172



Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

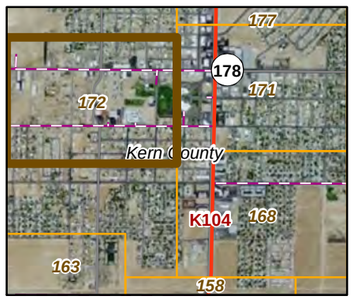
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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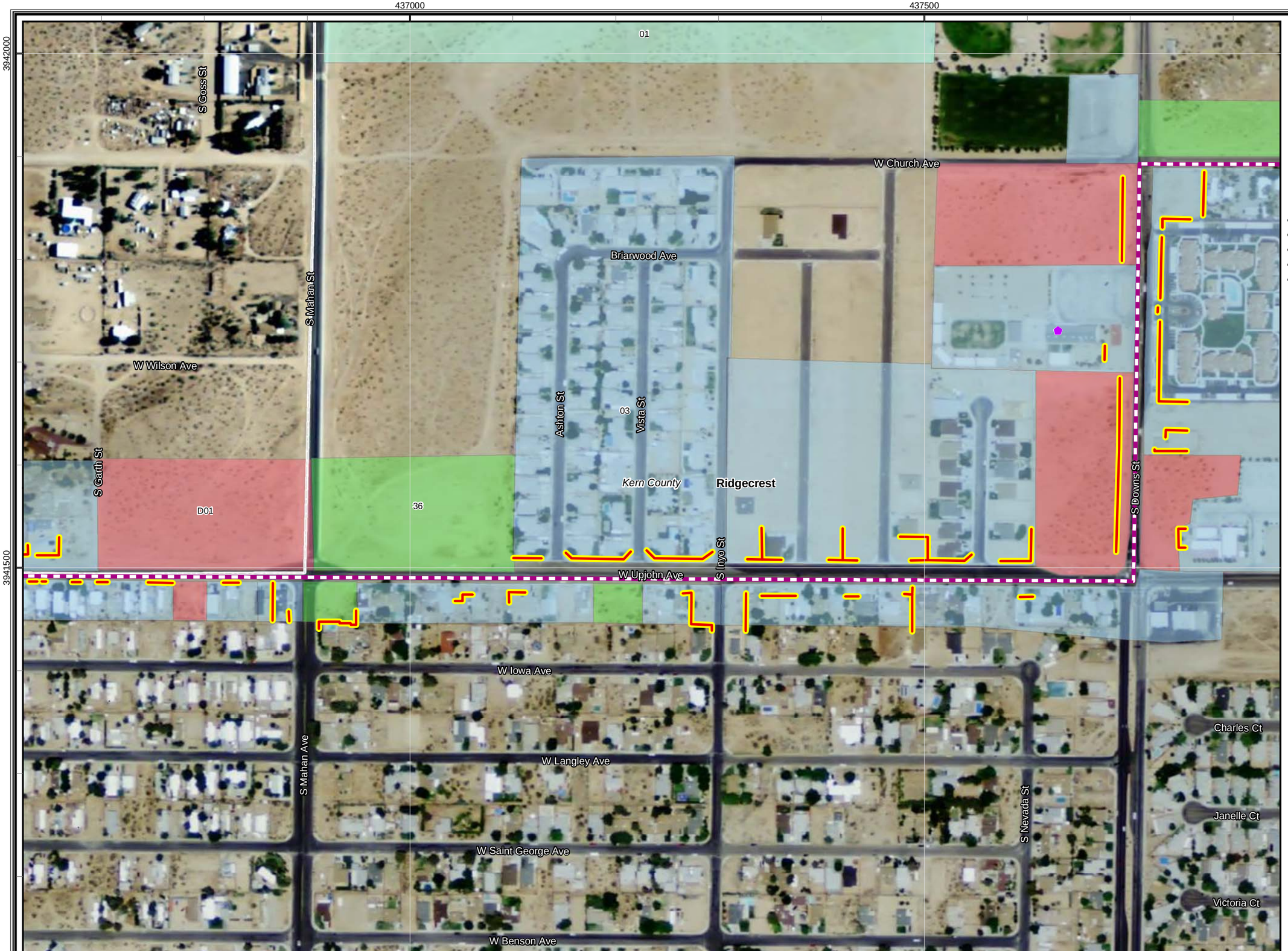
CBC Digital 395

R3-Johannesburg to Inyokern-173



Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

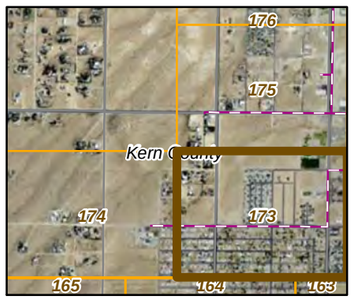
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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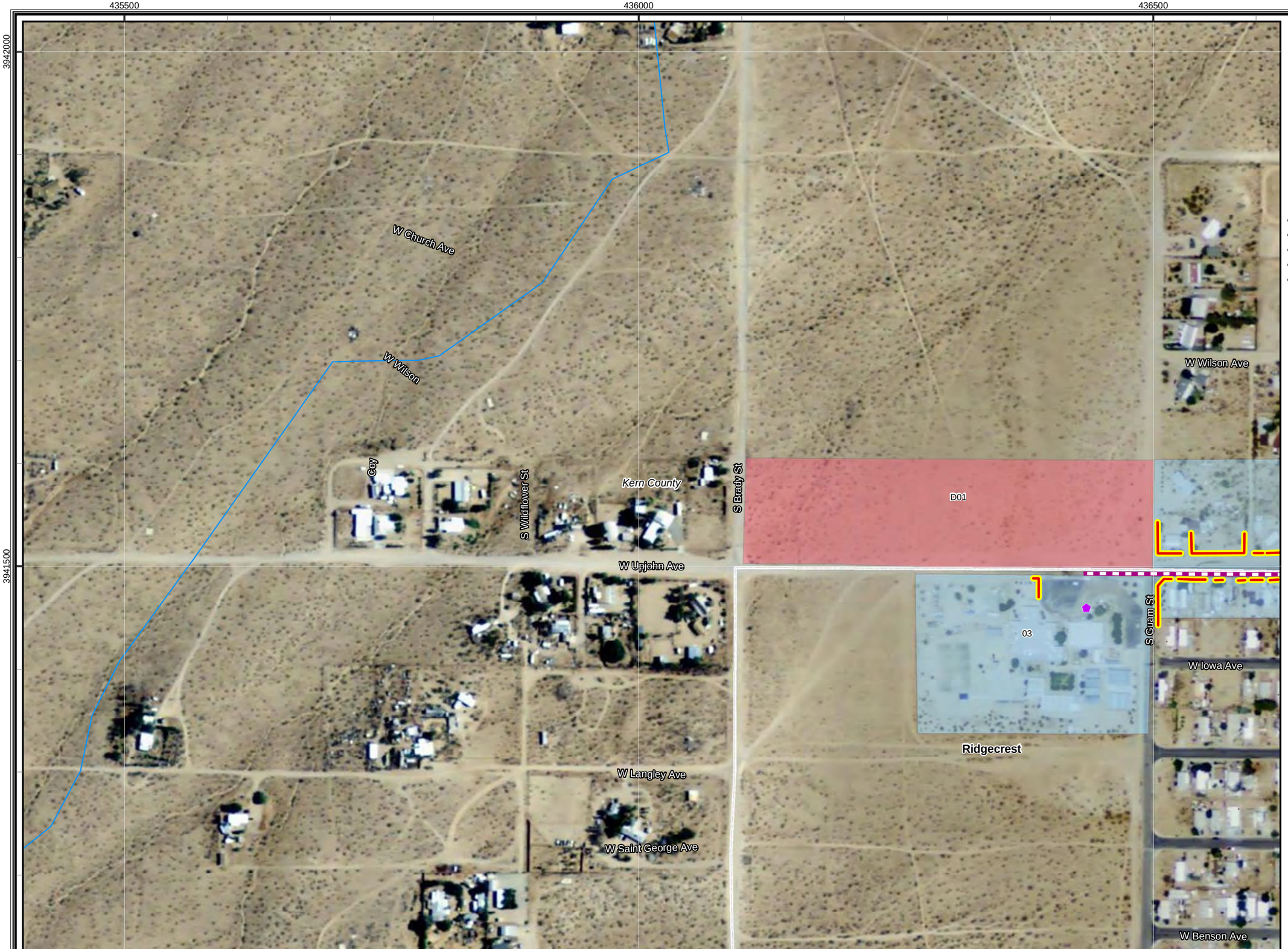
11-03-11

Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-174

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

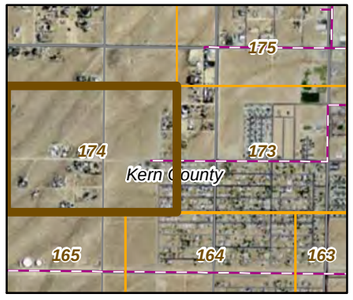
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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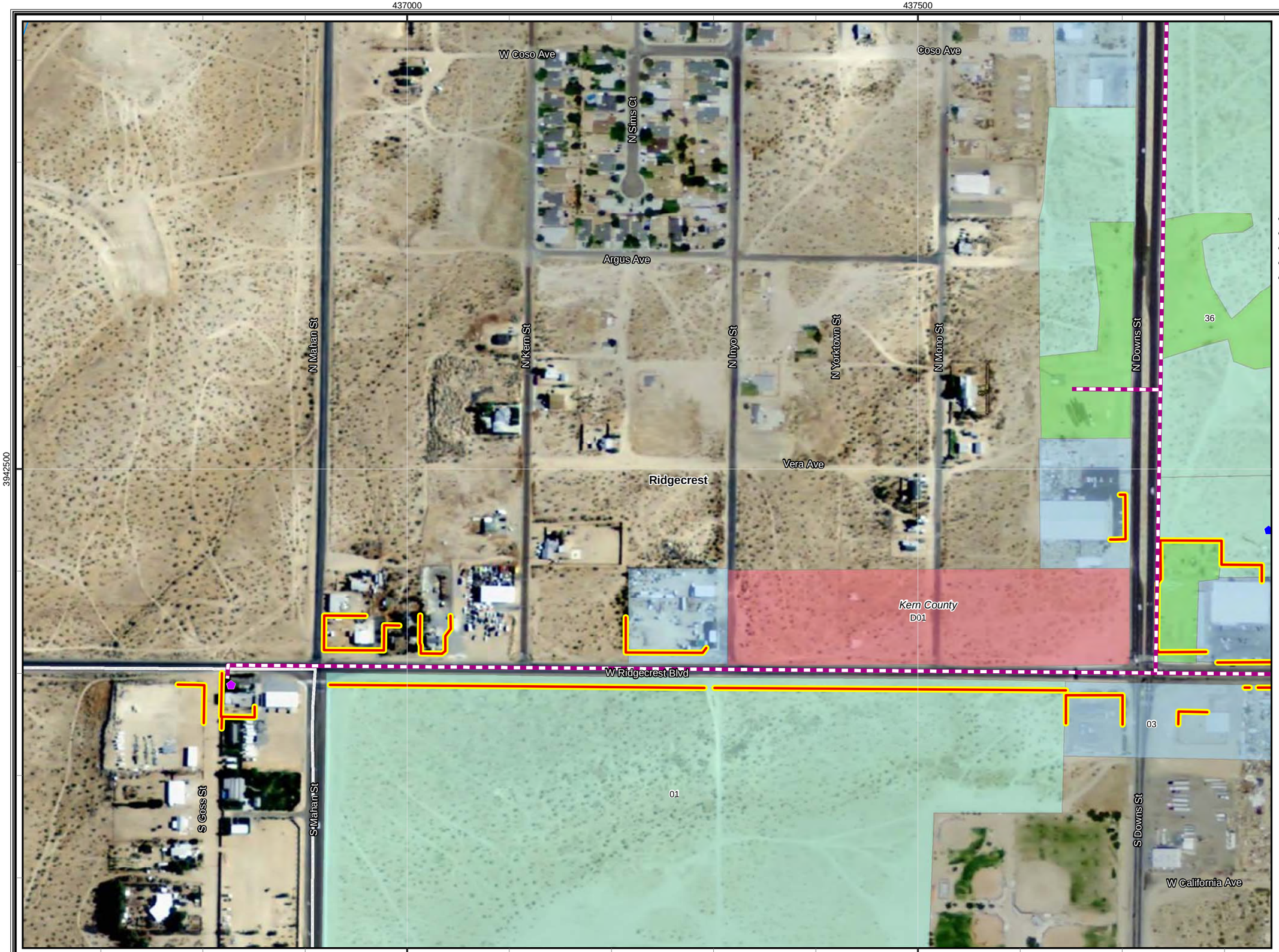
11-03-11

Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-175

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

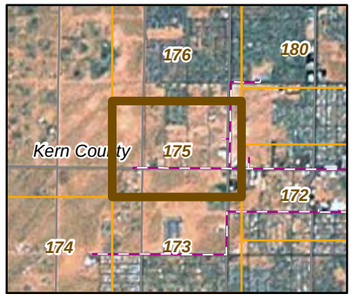
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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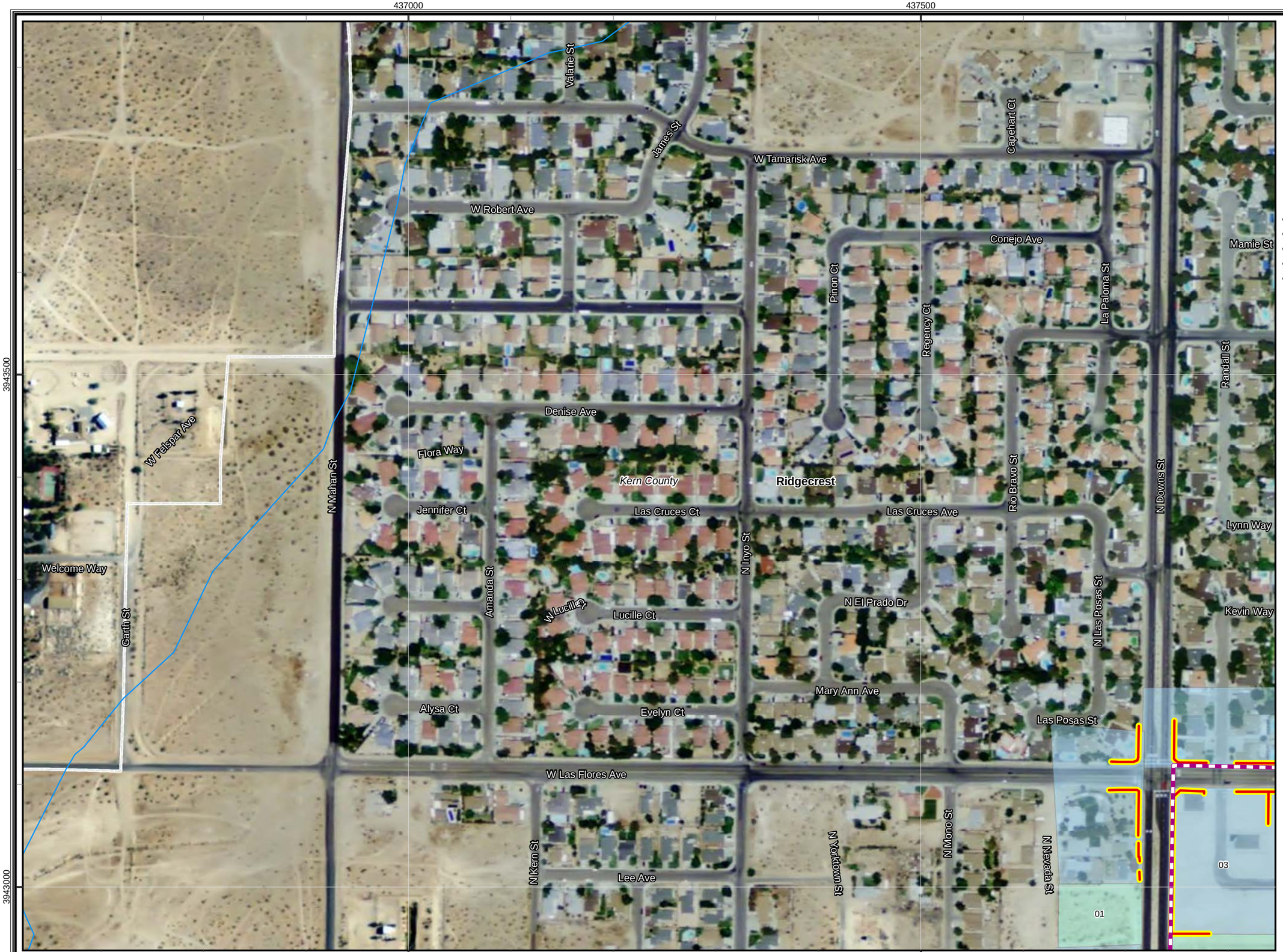
11-03-11

Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-176

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

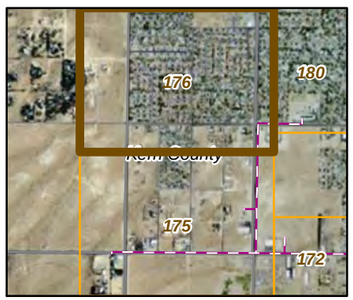
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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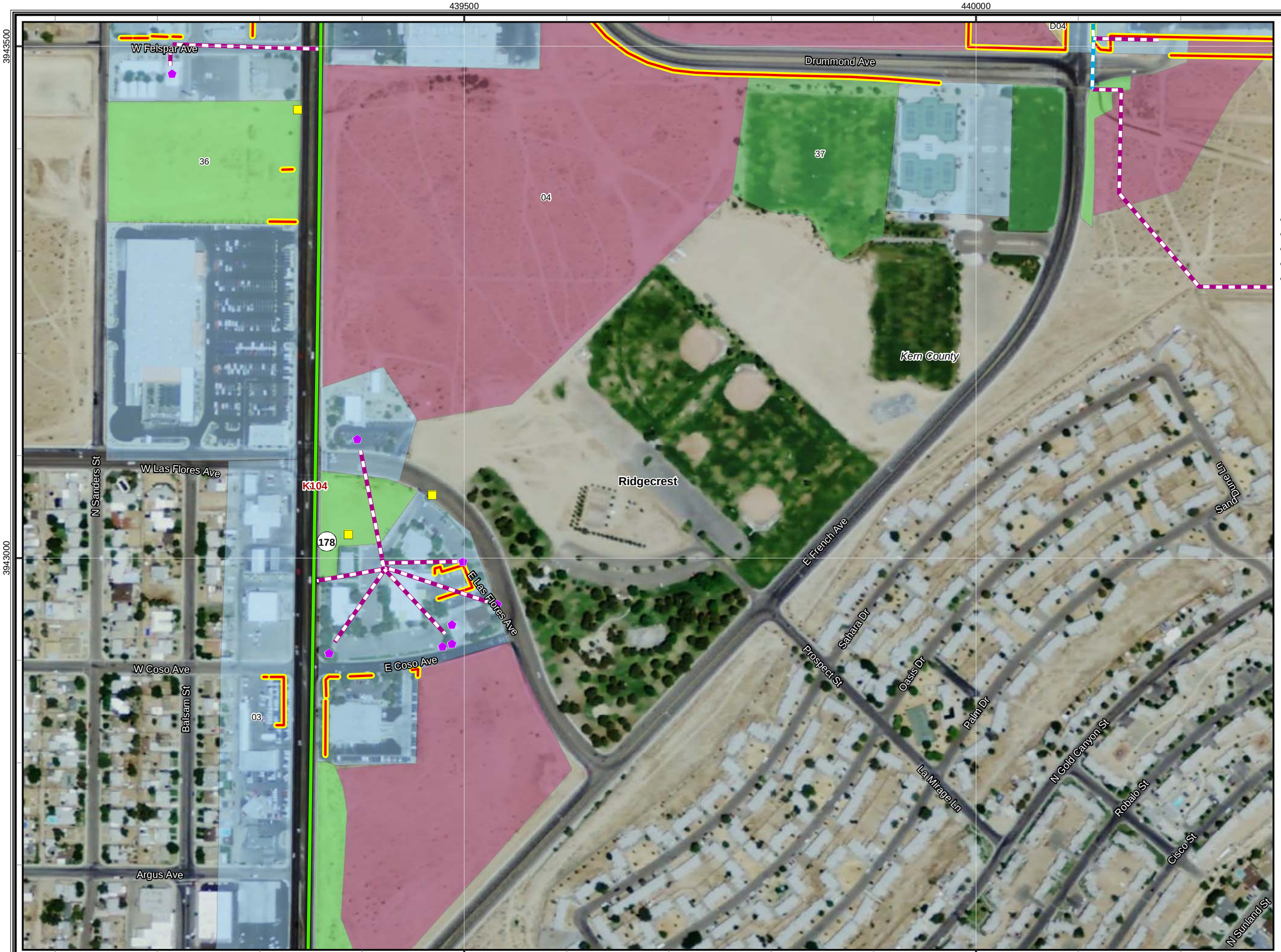
Chambers Group Inc.

CBC Digital 395

R3-Johannesburg to Inyokern-177



Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

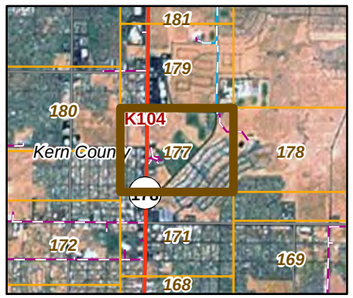
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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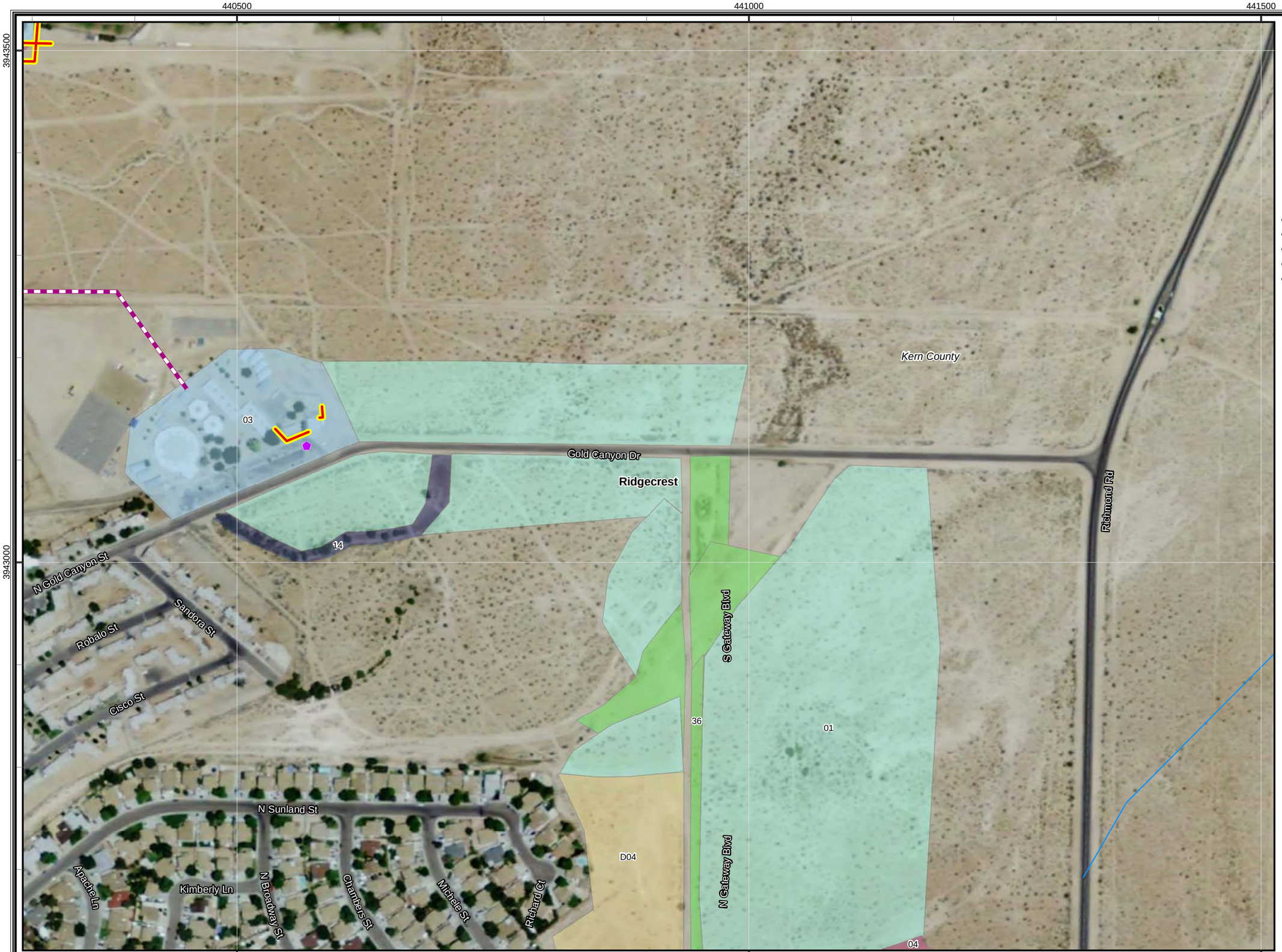


CBC Digital 395

R3-Johannesburg to Inyokern-178

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

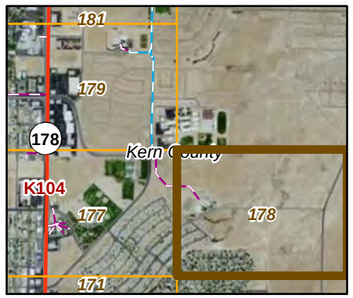
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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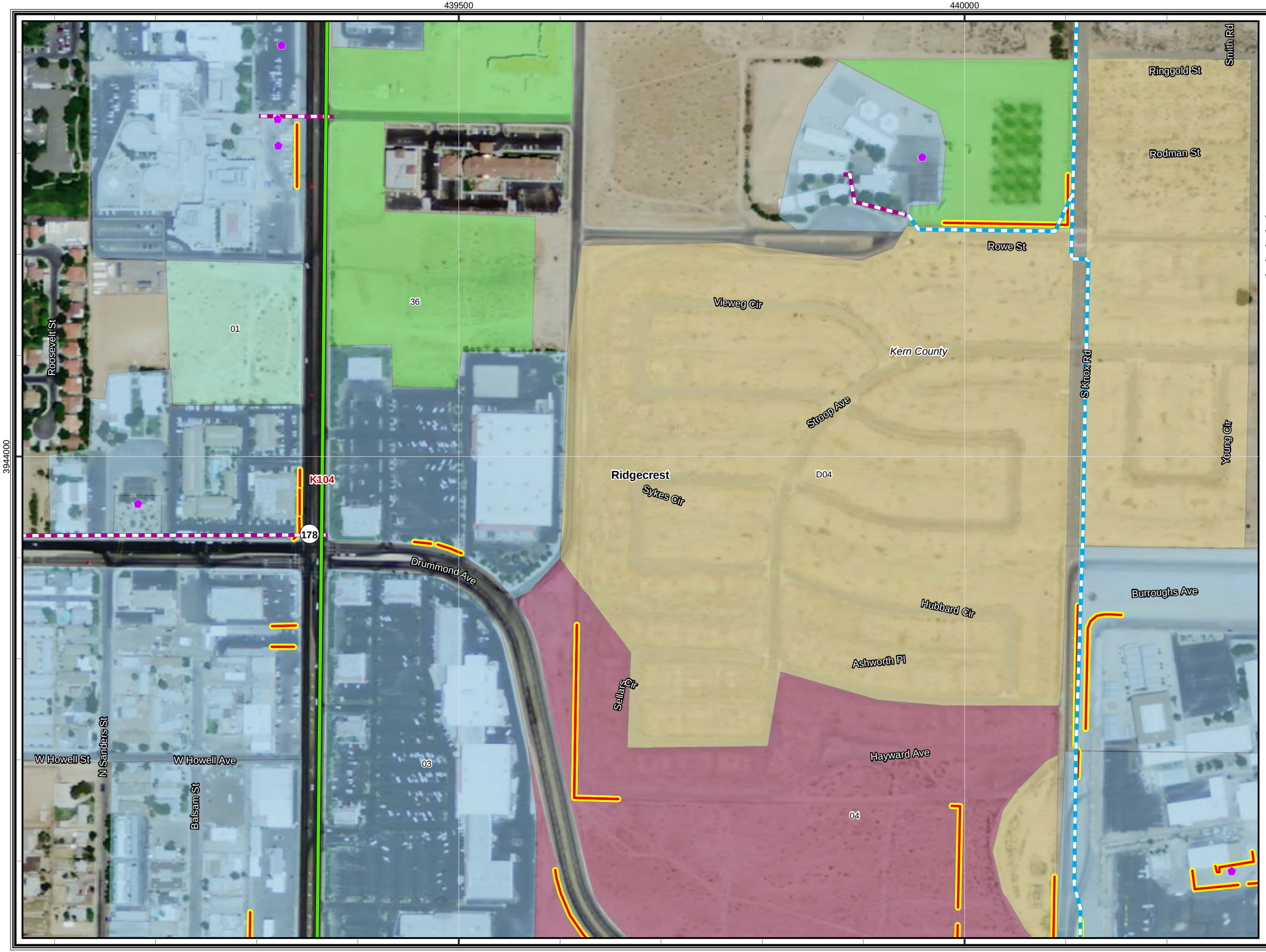


CBC Digital 395

R3-Johannesburg to Inyokern-179

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

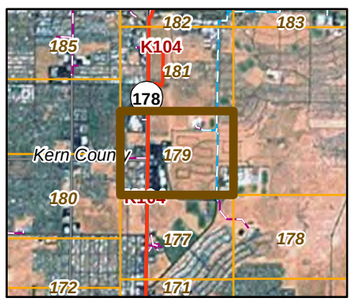
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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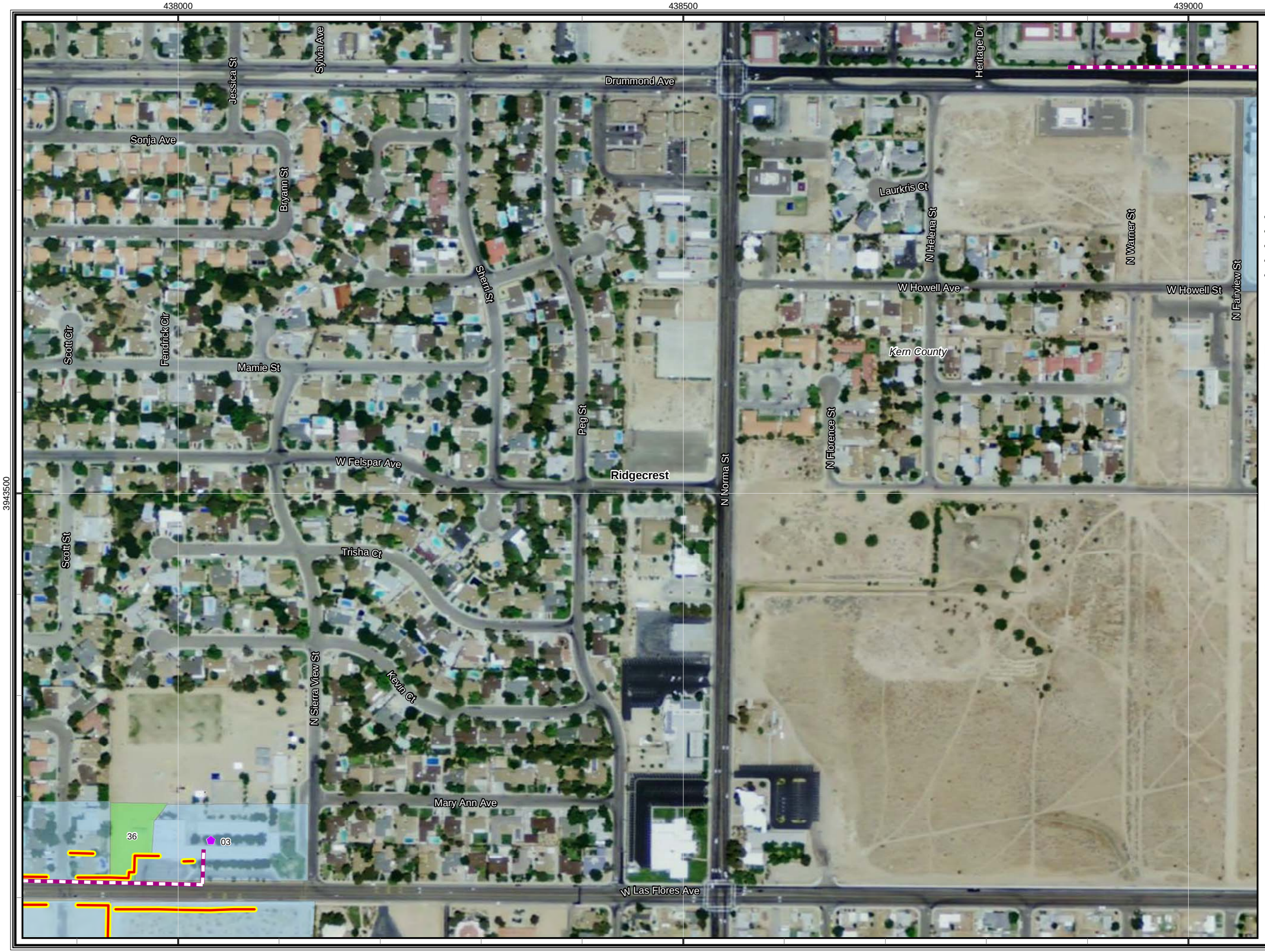
CBC Digital 395

R3-Johannesburg to Inyokern-180



Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

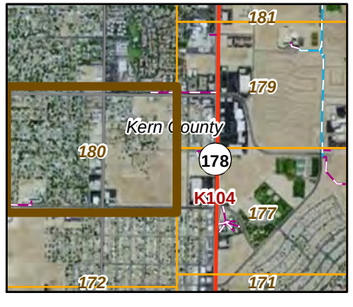
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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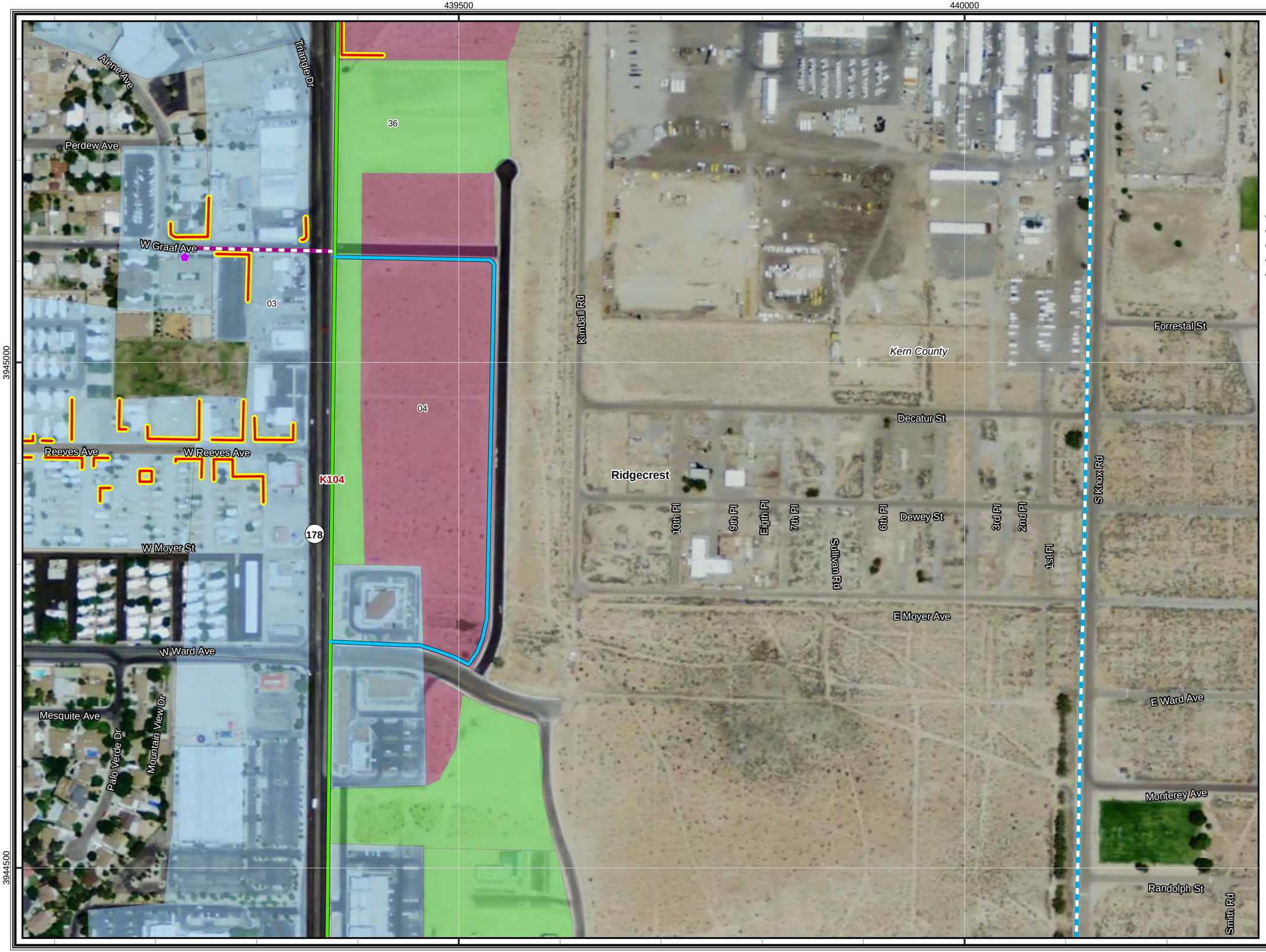
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-181

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

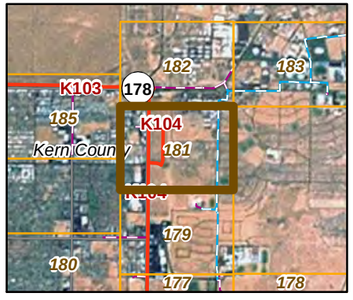
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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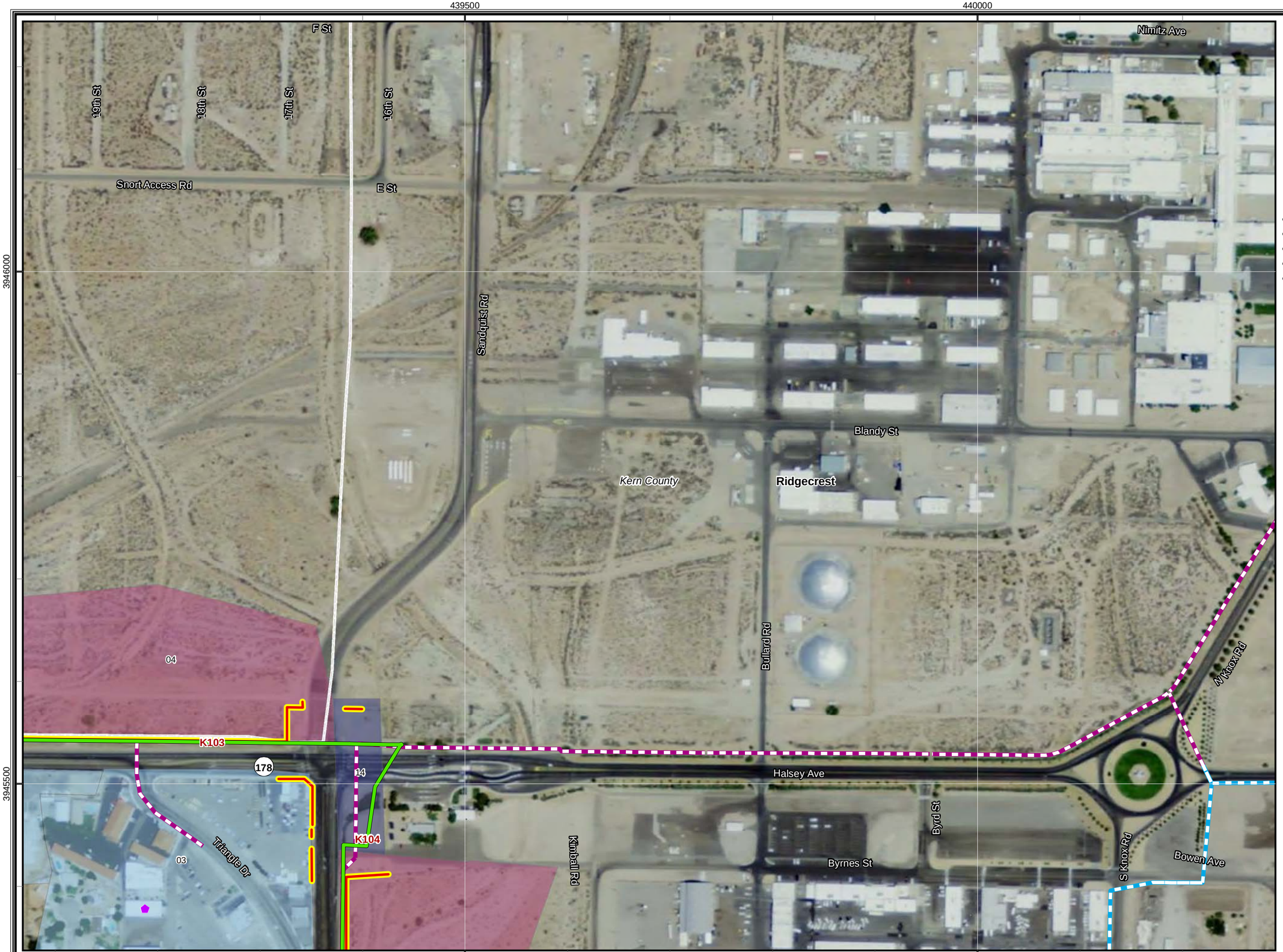
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-182

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

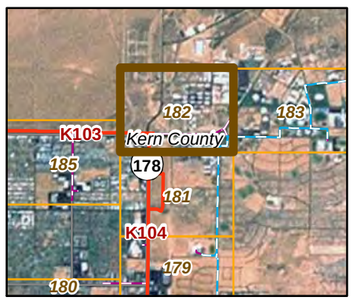
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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Chambers Group Inc.

440500
441000
441500
3946000
3945500
CBC Digital 395
R3-Johannesburg to Inyokern-183
Legend
Proposed Node / Facility
Project Staging Site
Staging Area
Laydown
Depot
Existing Facility
Anchor
POI
FOC Backbone Street Side from Barstow to Reno
Left Side
Right Side
Road Crossing
Dirt Road
Lease
Distribution Line
Aerial Distribution Line
Mohave Ground Squirrel
Known Populations:
Identified Core Areas
Other Known Populations
Mohave Ground Squirrel Records
Incidental Observations
Present
Regional Surveys
Not Detected, Regional Surveys
Present, Regional Surveys
Protocol Grids
Not Detected, Protocol Grids
Present, Protocol Grids
Desert Tortoise Critical Habitat
Desert Tortoise Fence
Status
Observed
Not Present
Existing ROW Fencing
Waterway
City Limit
1:3,500
0 50 100 200 300
Feet
182
183
184
178
181
K104
179
Kern County
San Bernardino County
20260
11-03-11
Chambers Group Inc.
McIntire St
Kirts Rd
Mitscher Rd
Nimitz Ave
N Knox Rd
Hussey Rd
Kern County
Dibb Rd
Blandy St
Ridgecrest
N Lauritsen Rd
Harpoon St
China Lake Naval Weapons Ctr
King Ave
Halsey Ave
E Inyokern Rd
Parsons Rd
Bowen Ave
Bard St
Burke Rd
Byrnes St

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R3-Johannesburg to Inyokern-184

442000

442500

3946500

3946000

Halsey St
N Richmond Rd
Midway Rd
Ridgecrest
Ticonderoga Ave
Coral Sea Cir
Kern County
Kearsarge Ave
Nimitz Ave
Leyte Rd
Shangrila Cir
Intrepid Rd
Sidewinder Rd
Essex Cir
Lexington Ave
Bogue Cir
Blue Ridge Rd

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

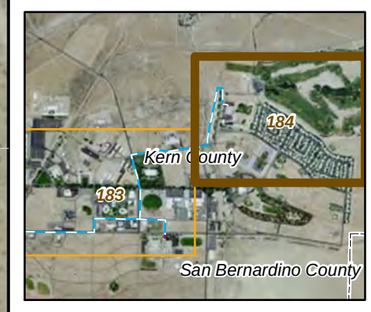
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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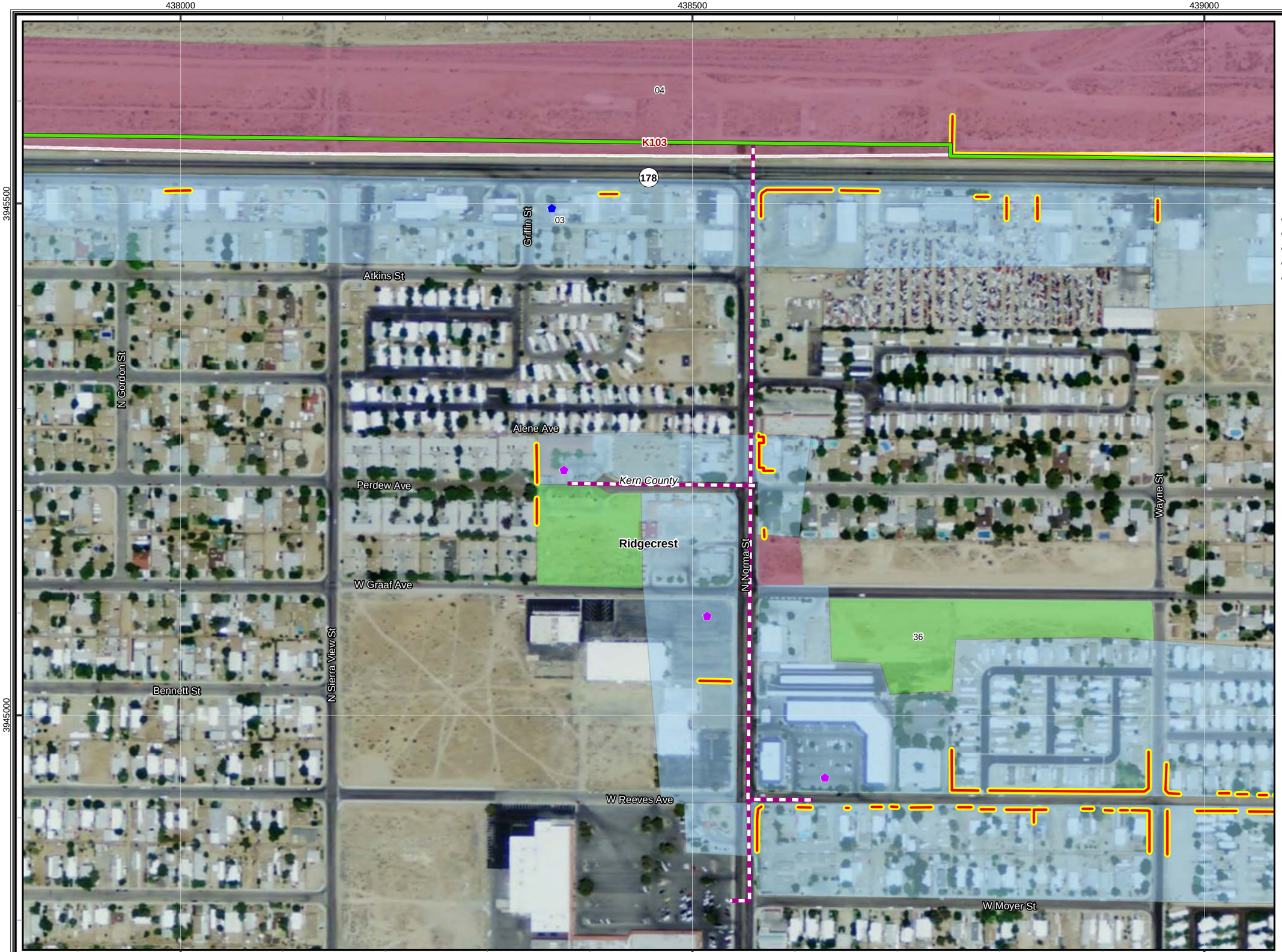
CBC Digital 395

R3-Johannesburg to Inyokern-185



Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

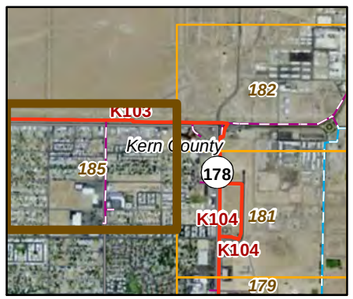
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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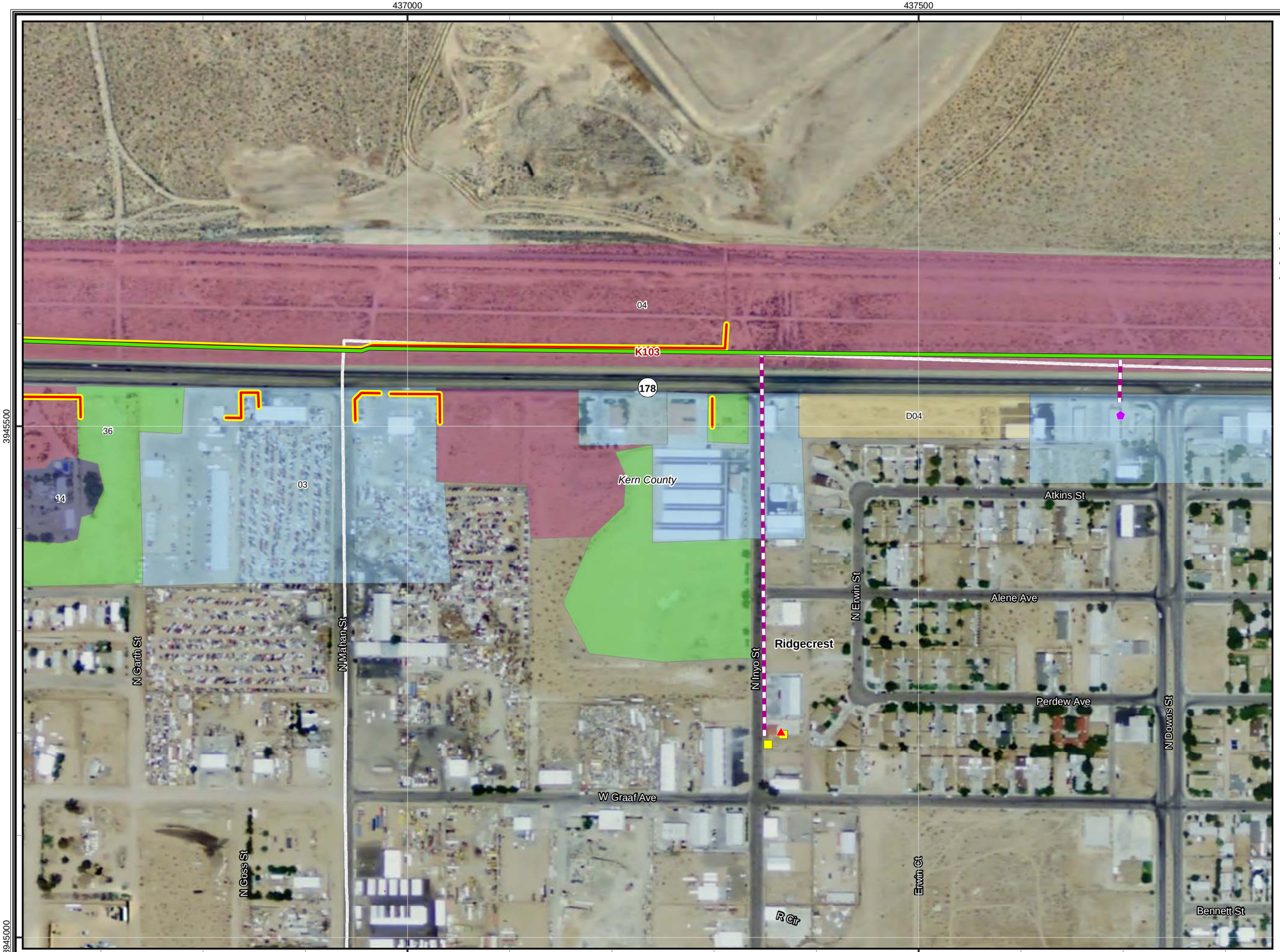
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-186

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

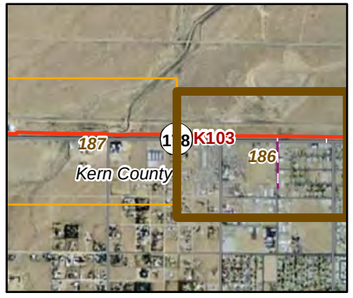
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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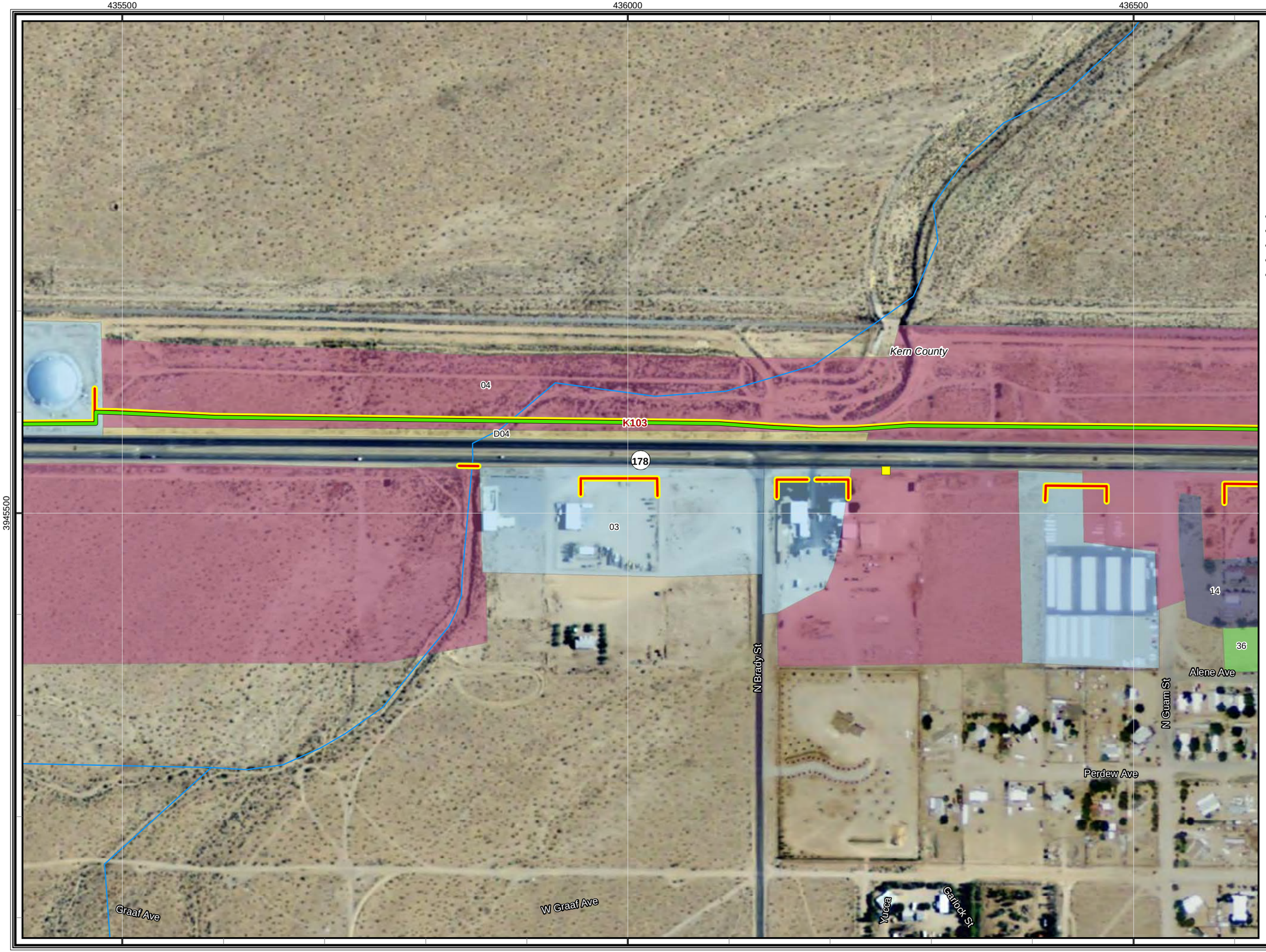
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-187

Legend

Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

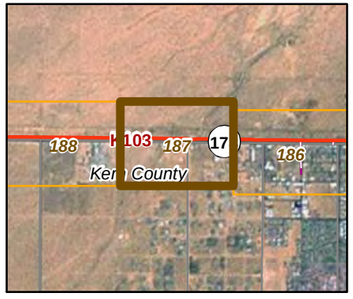
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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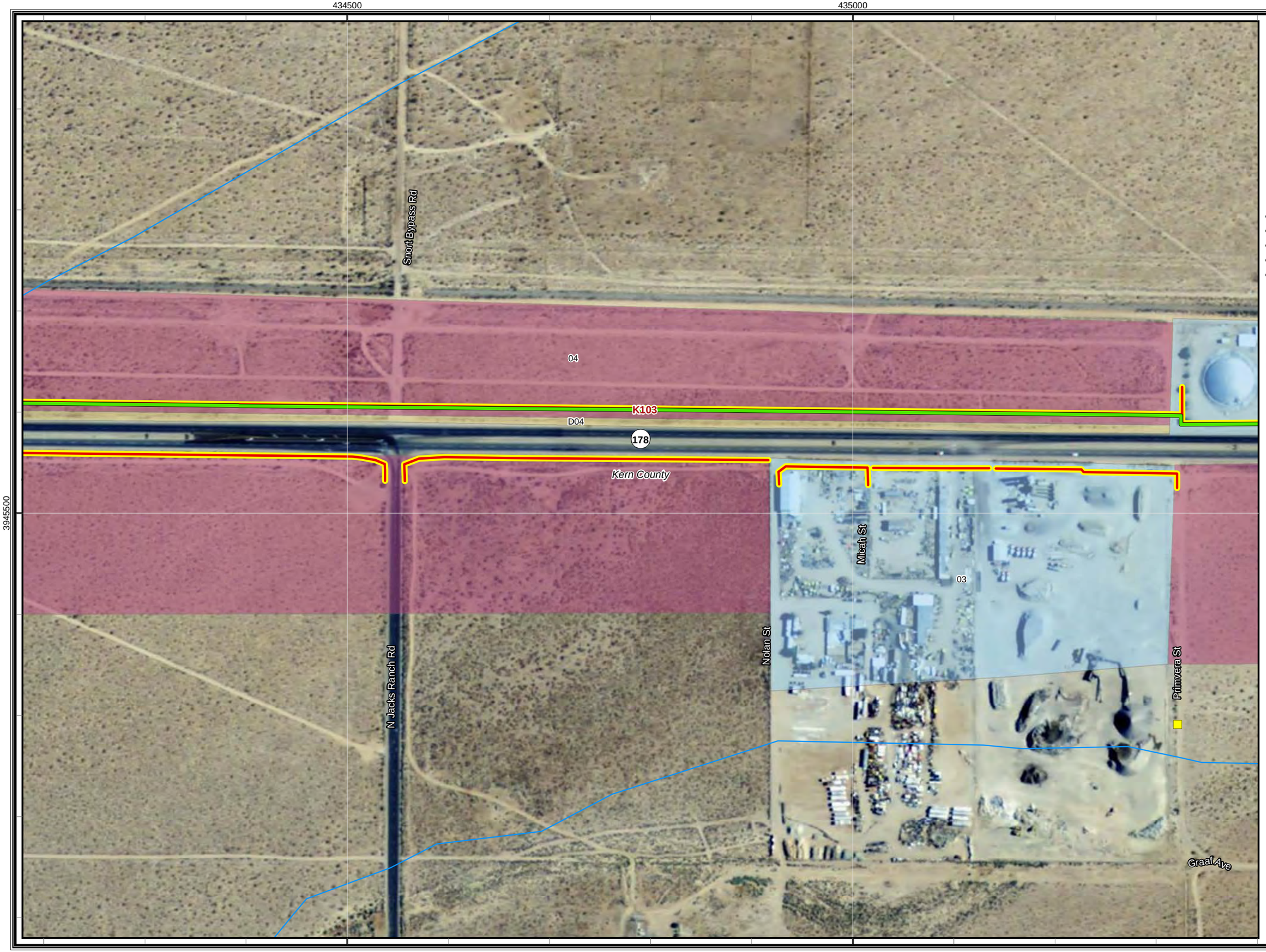


CBC Digital 395

R3-Johannesburg to Inyokern-188

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

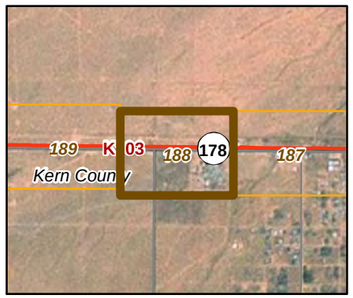
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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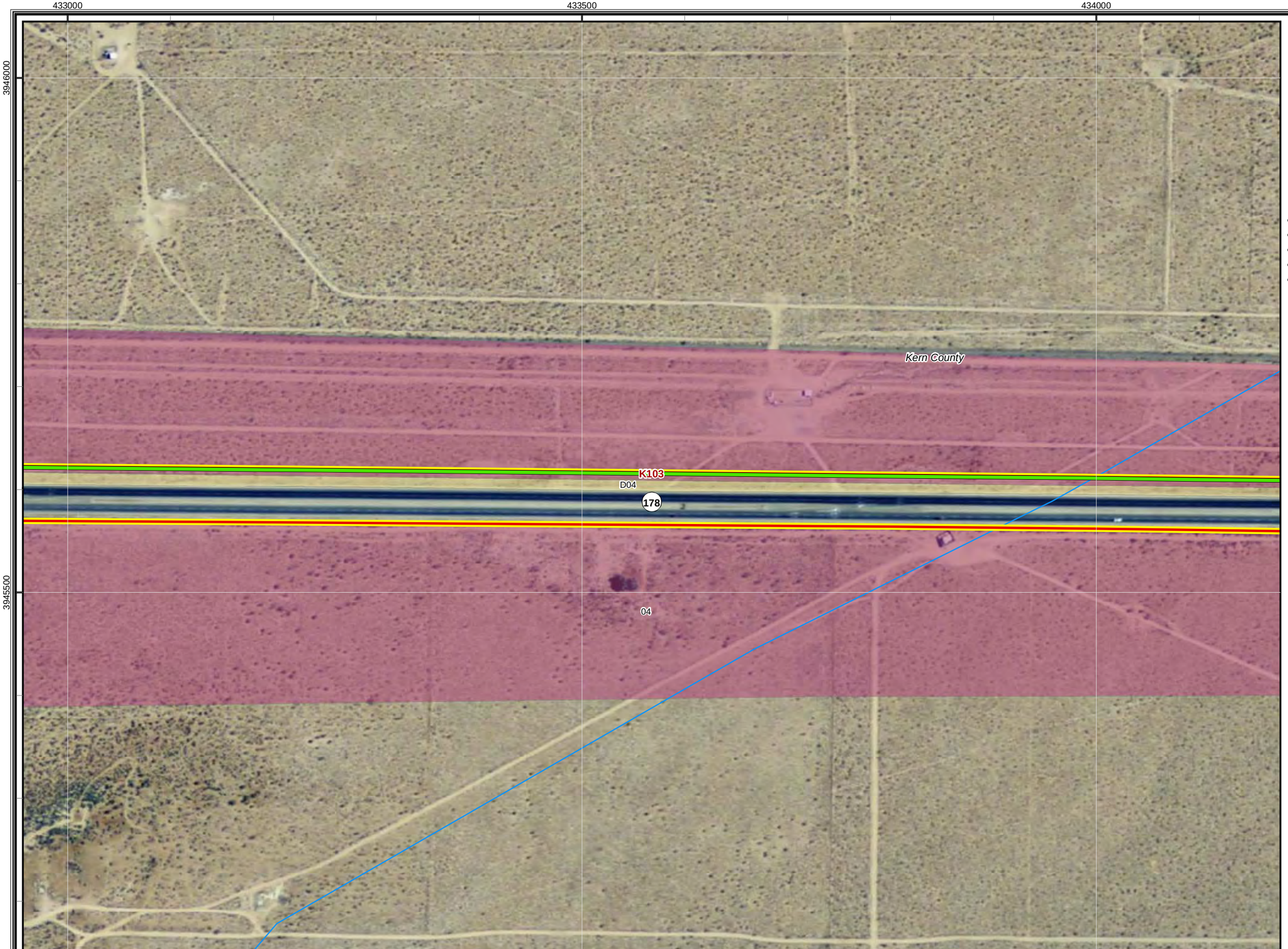
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-189

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

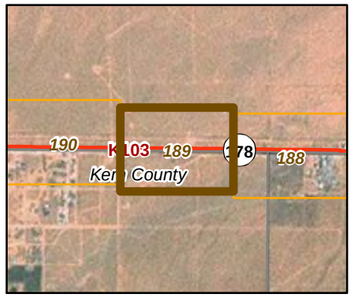
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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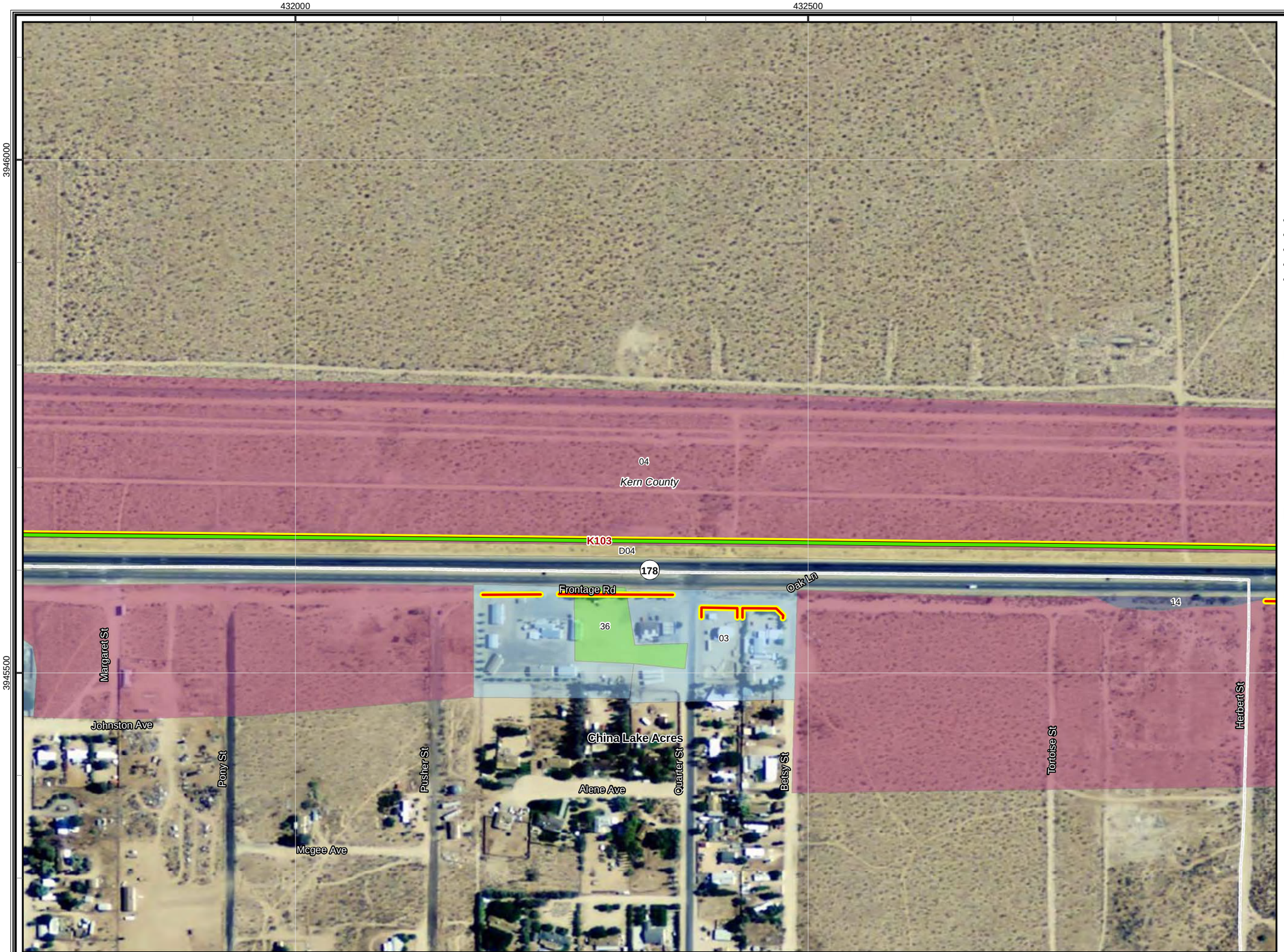
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-190

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

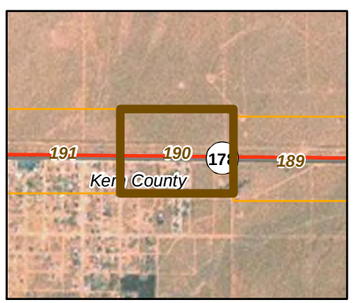
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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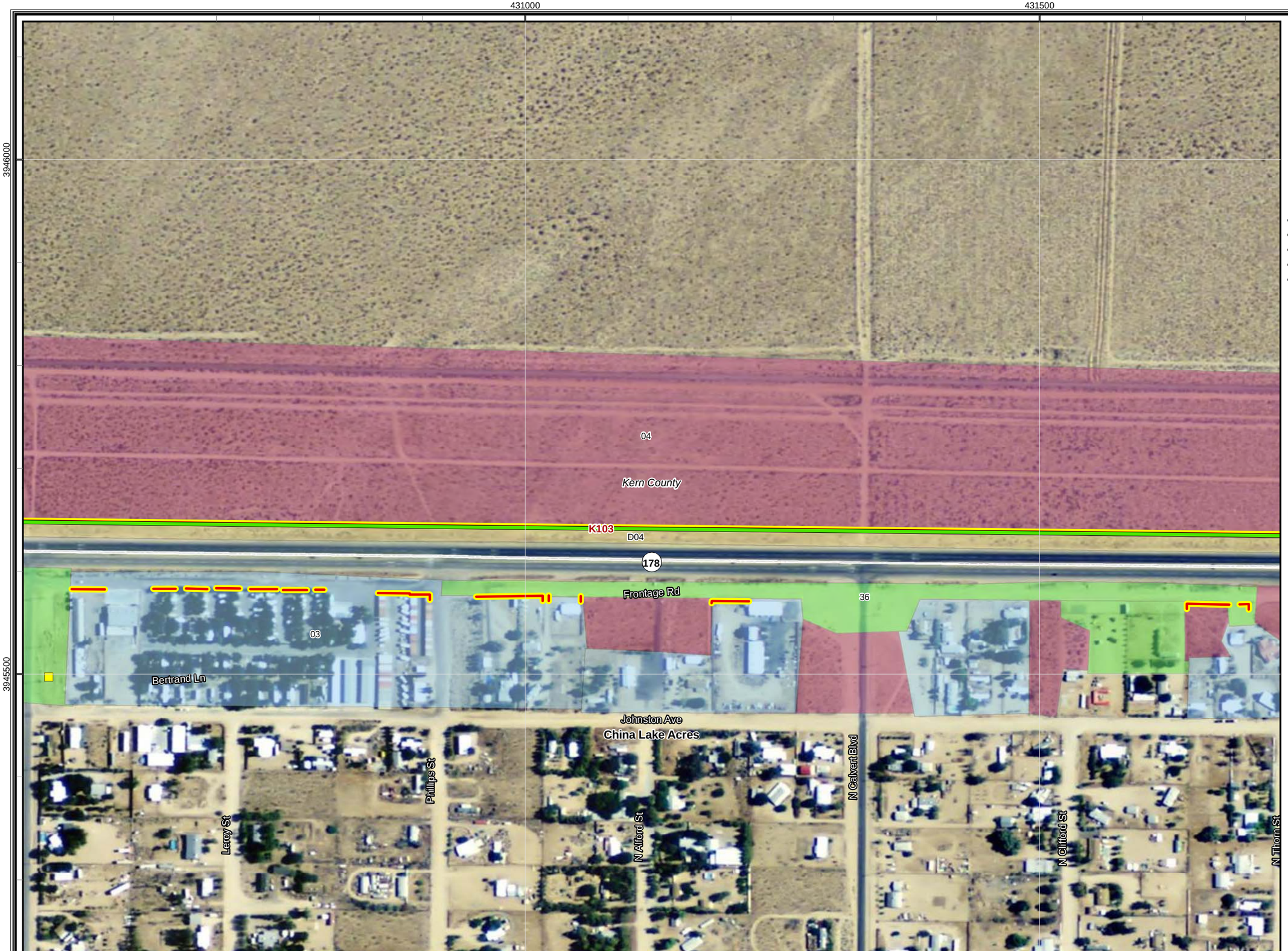
11-03-11

Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-191

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

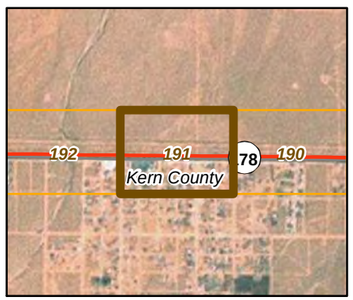
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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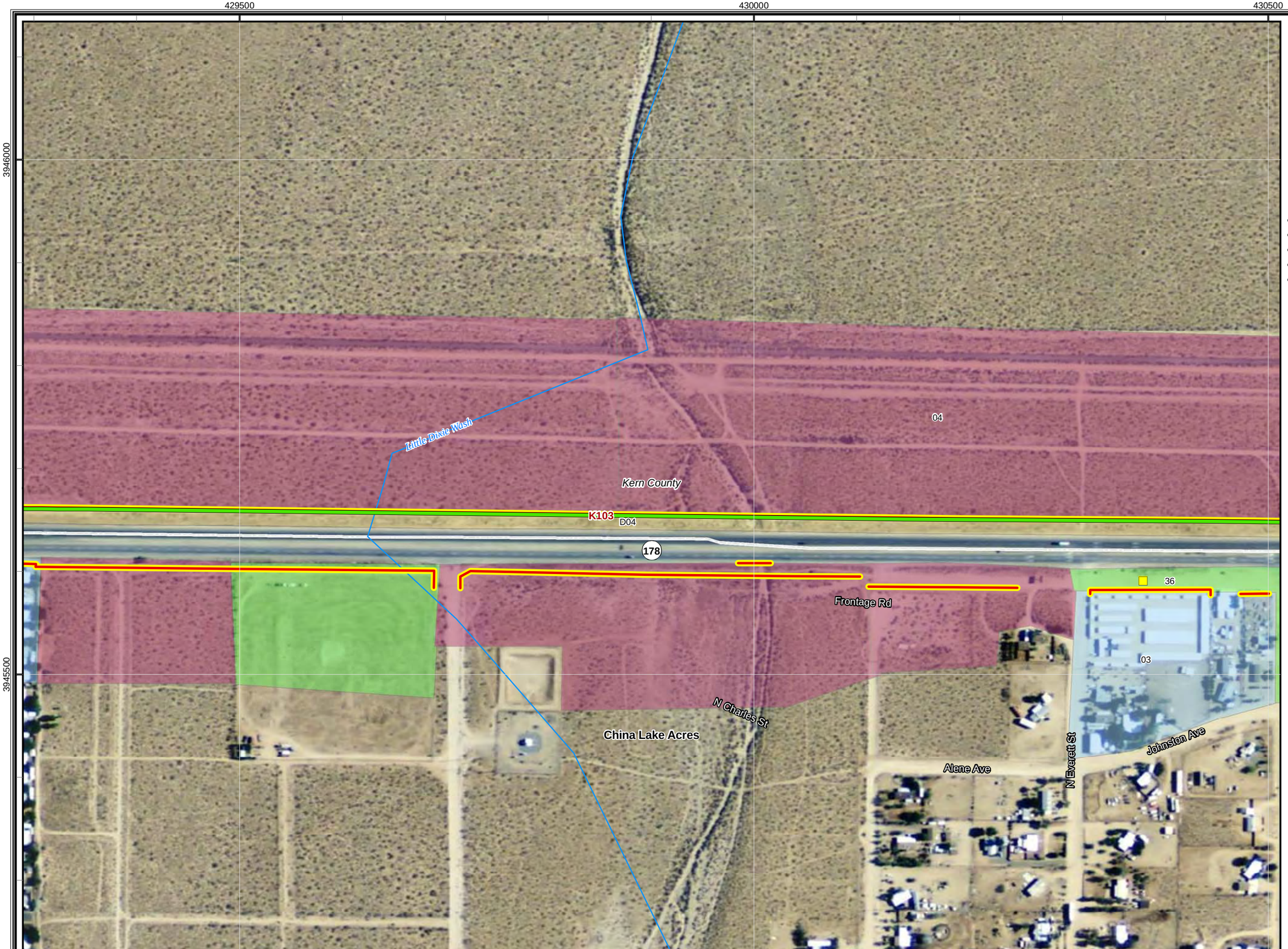
11-03-11

Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-192

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

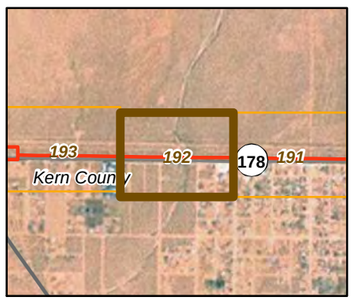
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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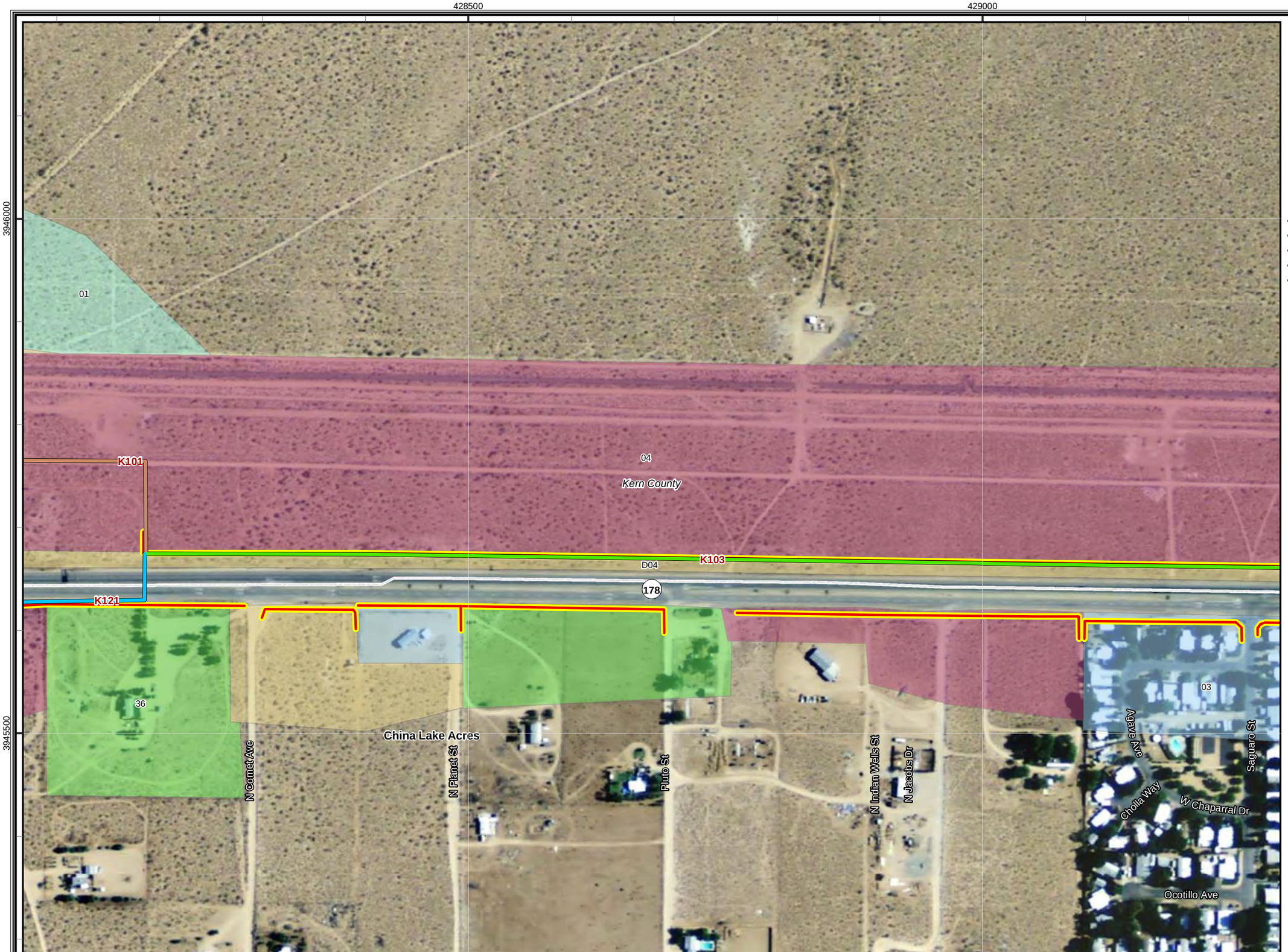


CBC Digital 395

R3-Johannesburg to Inyokern-193

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

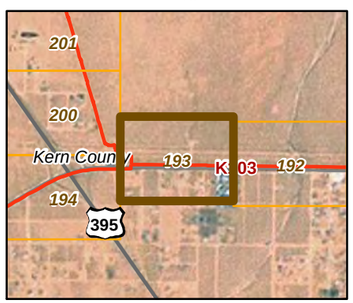
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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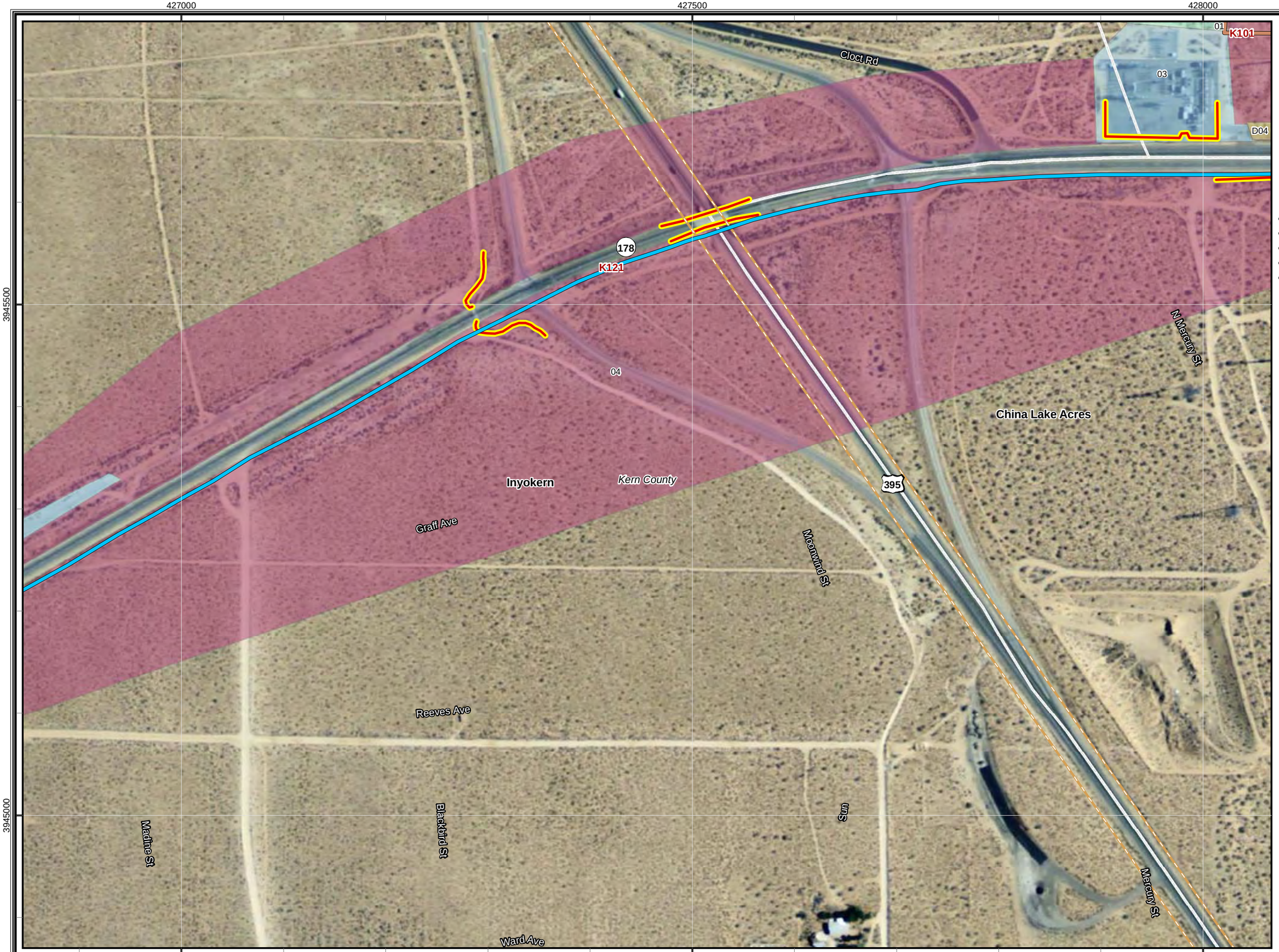


CBC Digital 395

R3-Johannesburg to Inyokern-194

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

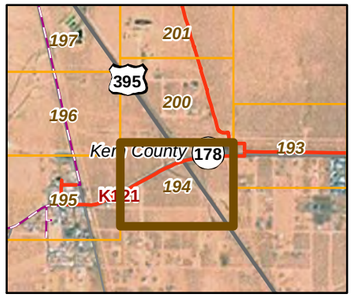
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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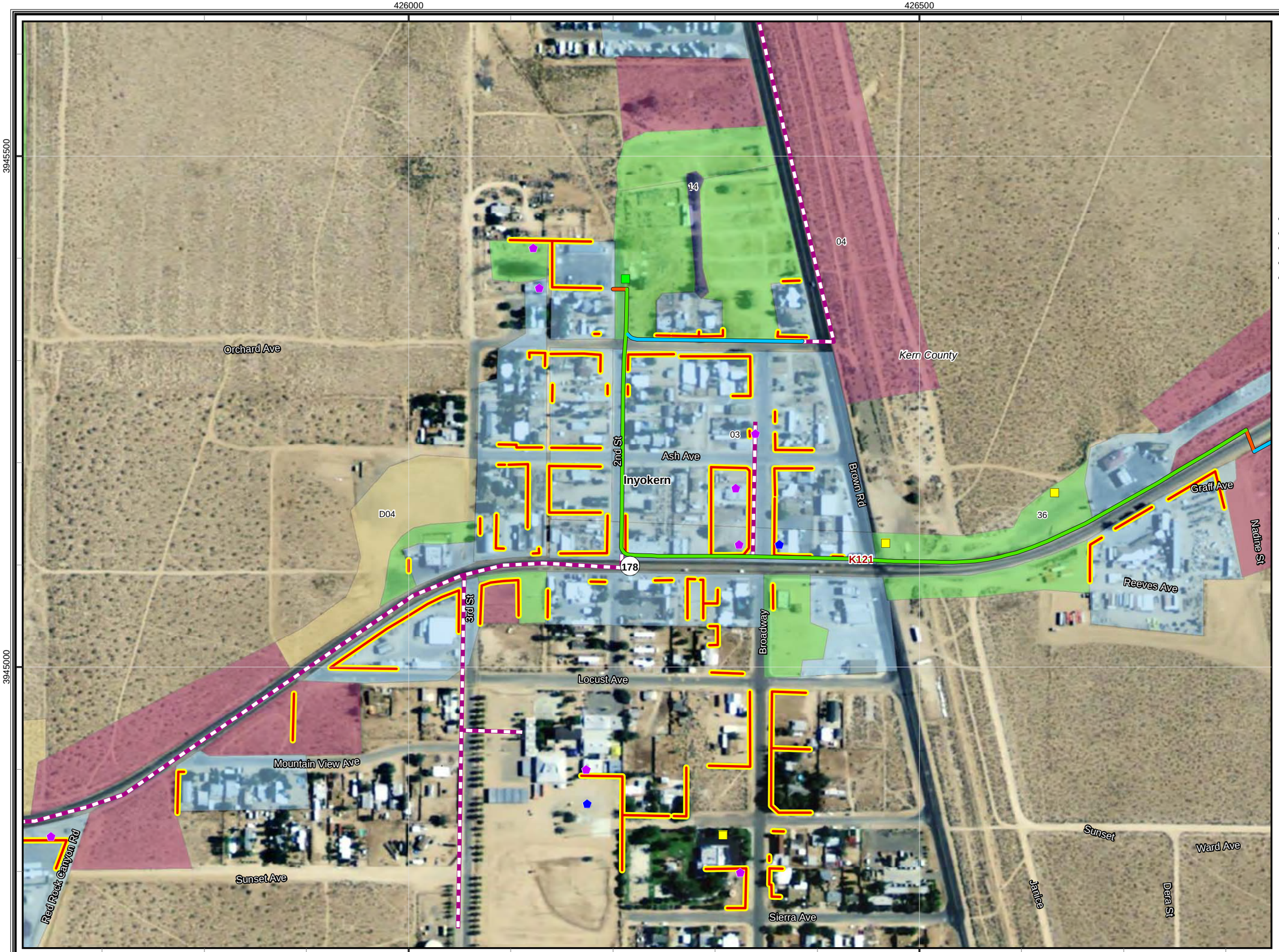


CBC Digital 395

R3-Johannesburg to Inyokern-195

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

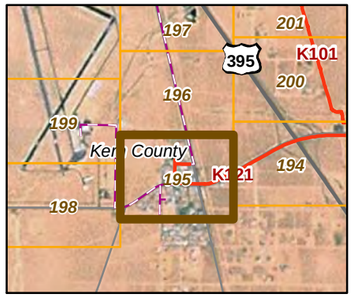
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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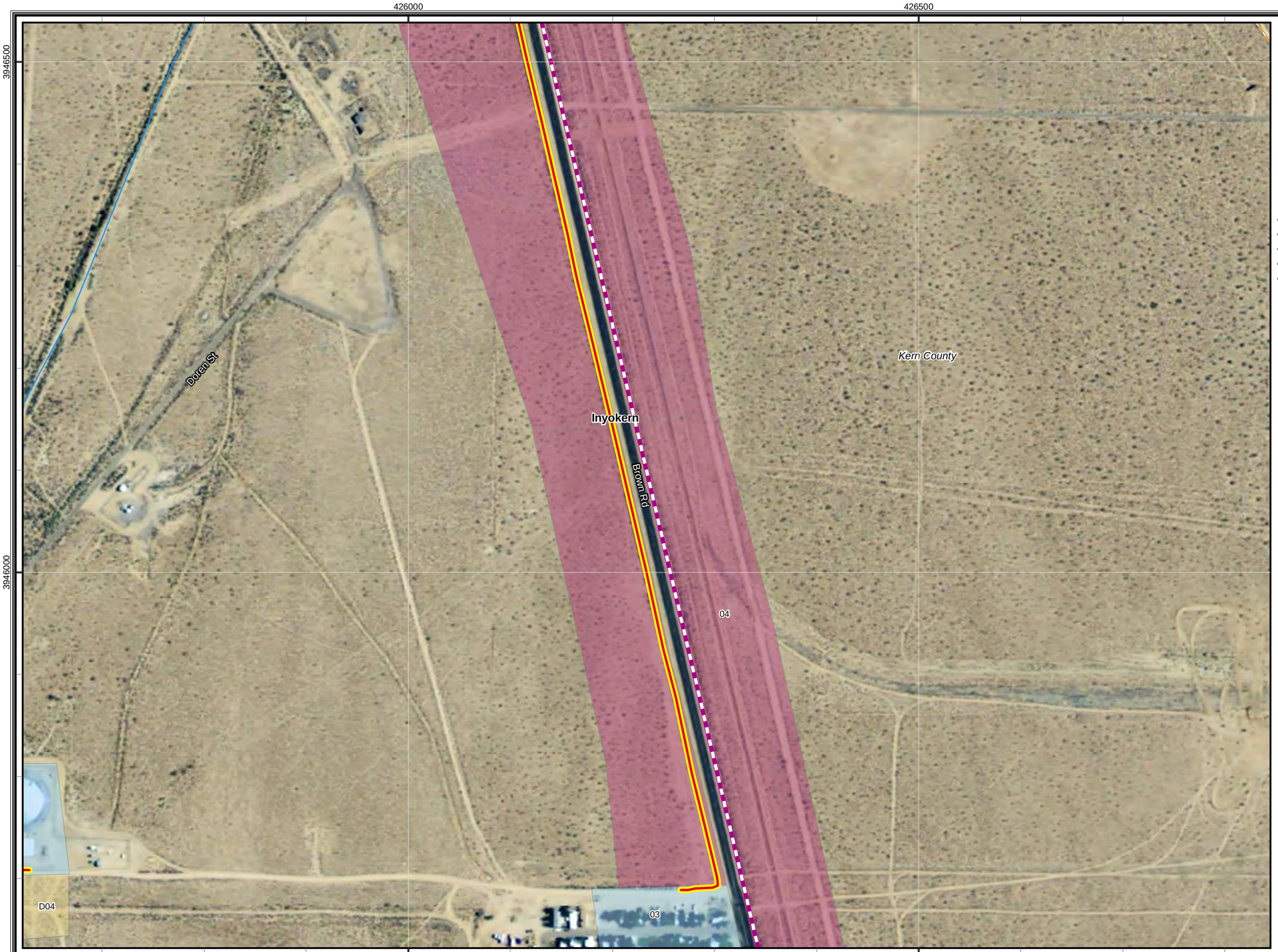
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-196

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

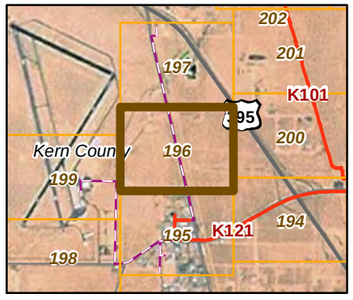
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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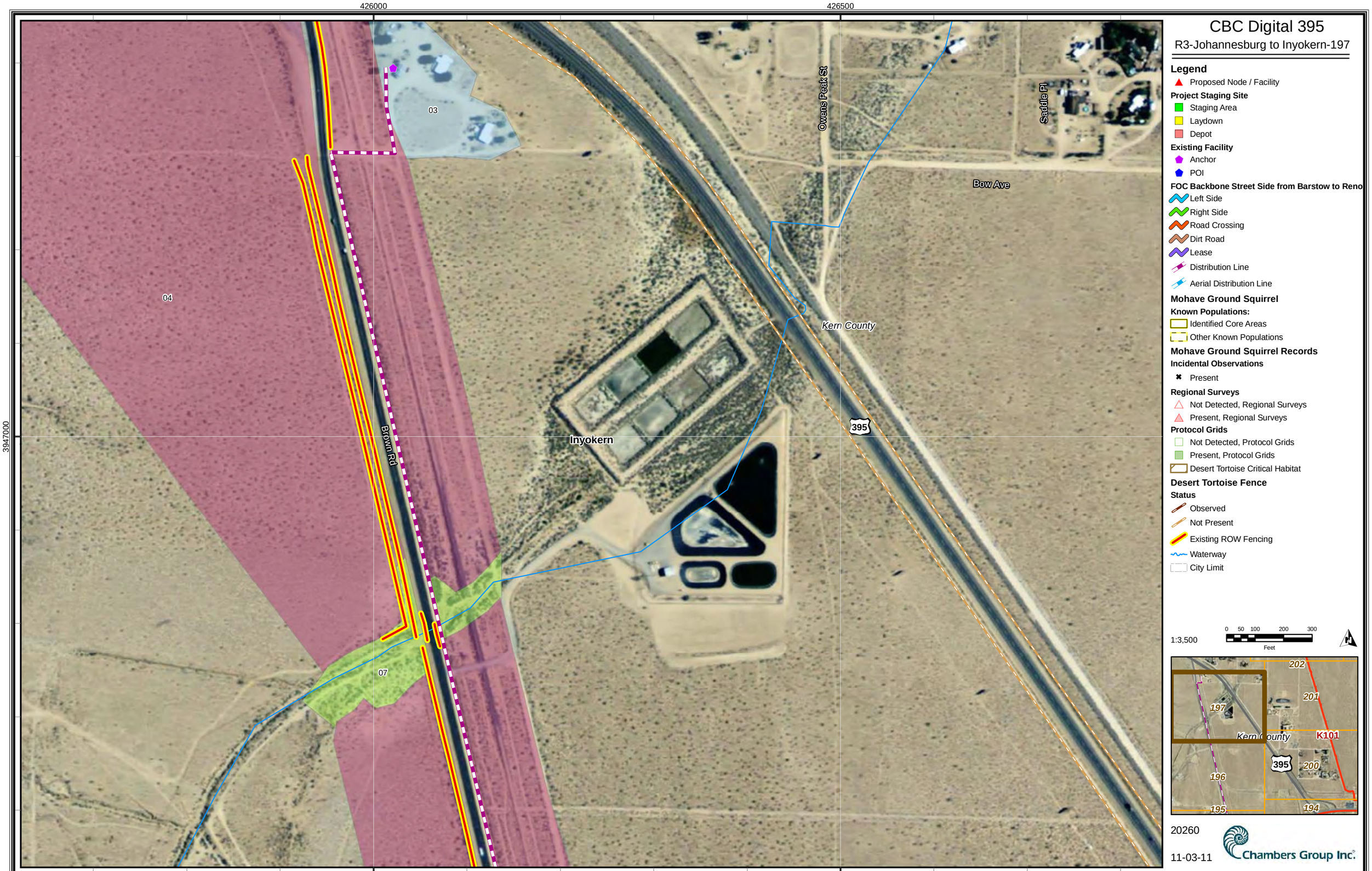
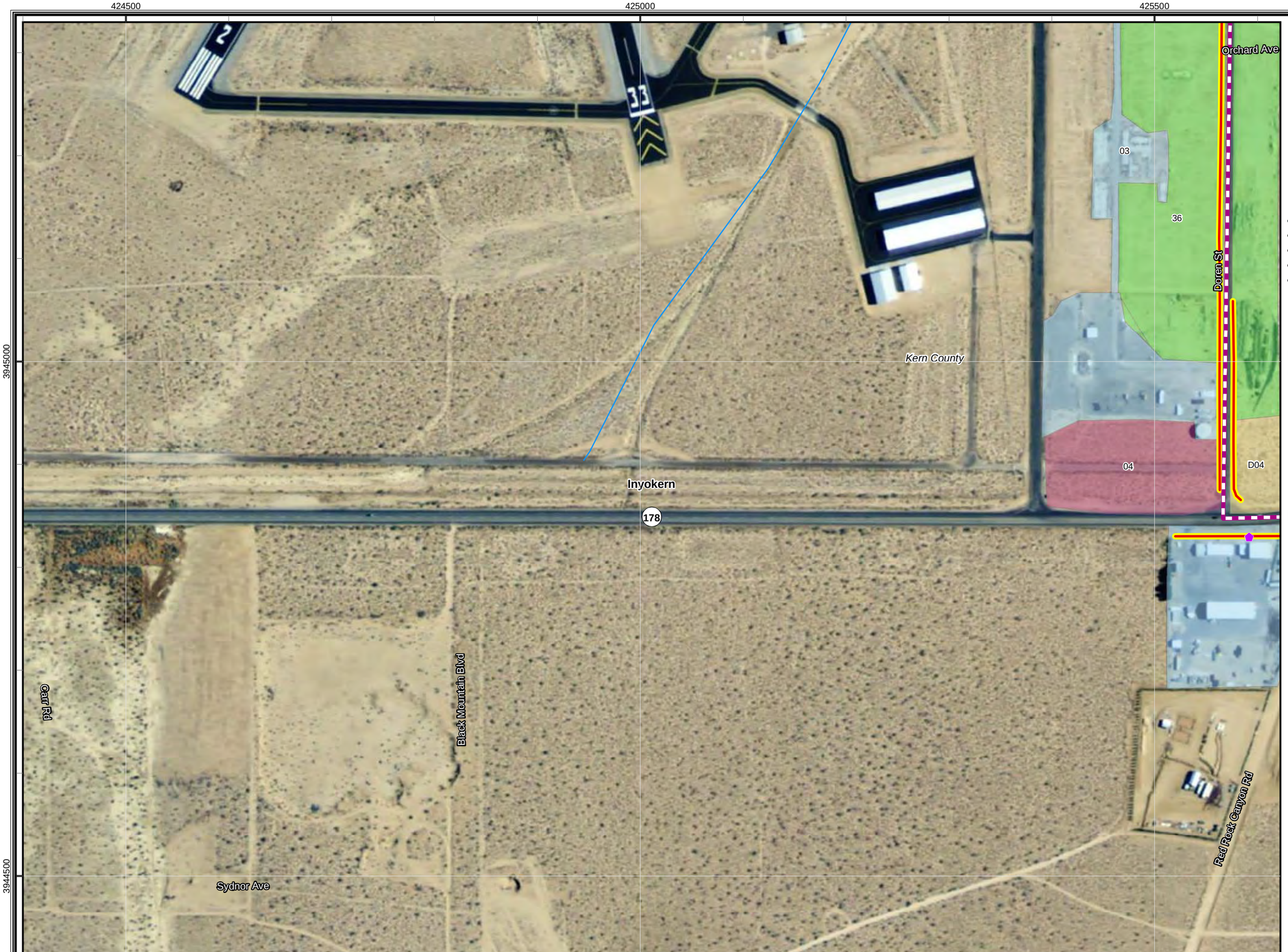

426000
426500
3947000
03
04
07
Owens Peak St
Saddle Pl
Bow Ave
Kern County
Inyokern
Brown Rd
395
CBC Digital 395
R3-Johannesburg to Inyokern-197
Legend
Proposed Node / Facility
Project Staging Site
Staging Area
Laydown
Depot
Existing Facility
Anchor
POI
FOC Backbone Street Side from Barstow to Reno
Left Side
Right Side
Road Crossing
Dirt Road
Lease
Distribution Line
Aerial Distribution Line
Mohave Ground Squirrel
Known Populations:
Identified Core Areas
Other Known Populations
Mohave Ground Squirrel Records
Incidental Observations
Present
Regional Surveys
Not Detected, Regional Surveys
Present, Regional Surveys
Protocol Grids
Not Detected, Protocol Grids
Present, Protocol Grids
Desert Tortoise Critical Habitat
Desert Tortoise Fence
Status
Observed
Not Present
Existing ROW Fencing
Waterway
City Limit
1:3,500
0 50 100 200 300
Feet
202
201
197
Kern County
K101
395
200
196
195
194
20260
11-03-11
Chambers Group Inc.



CBC Digital 395

R3-Johannesburg to Inyokern-198

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

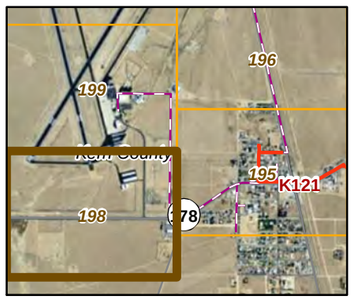
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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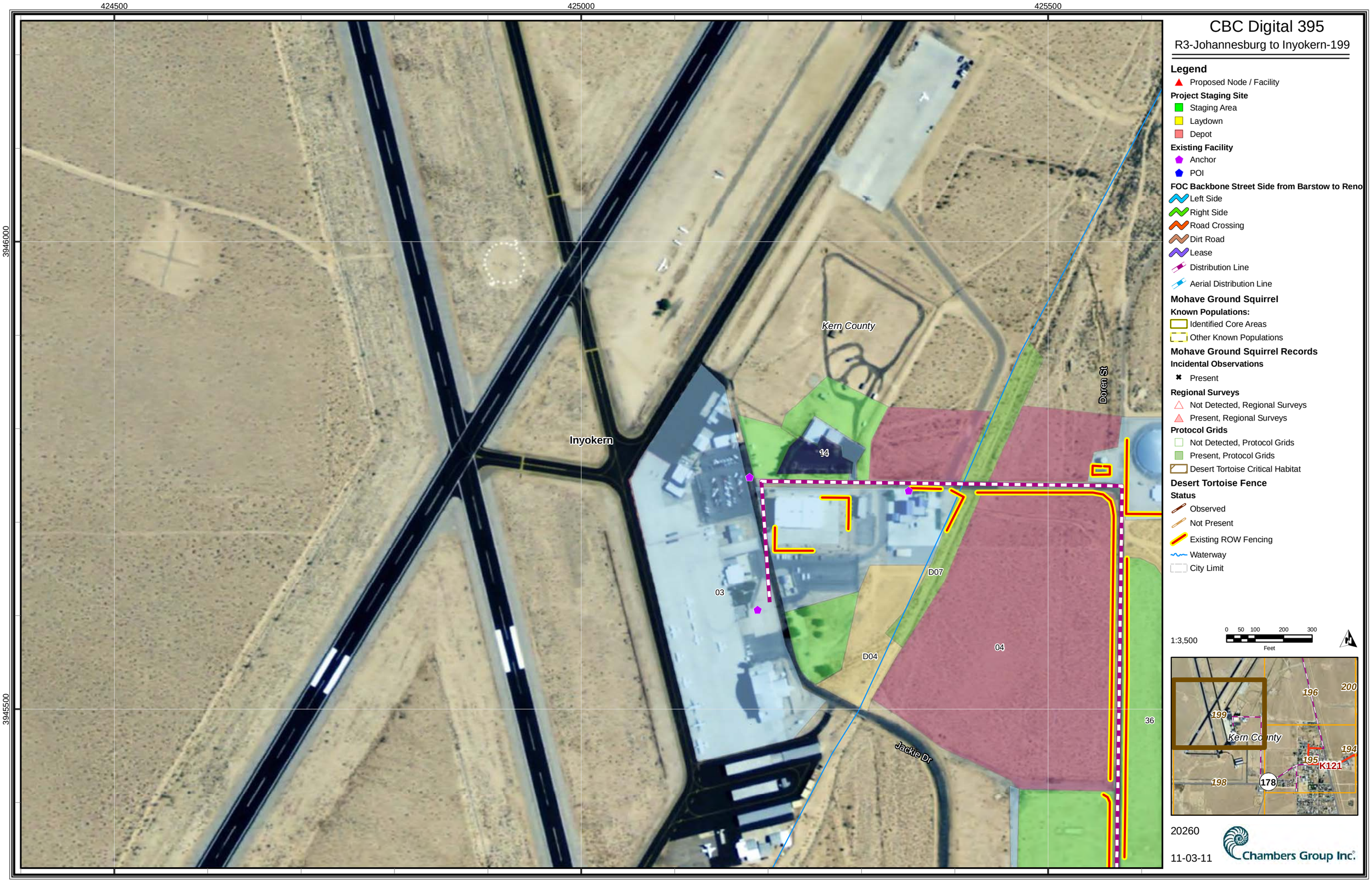
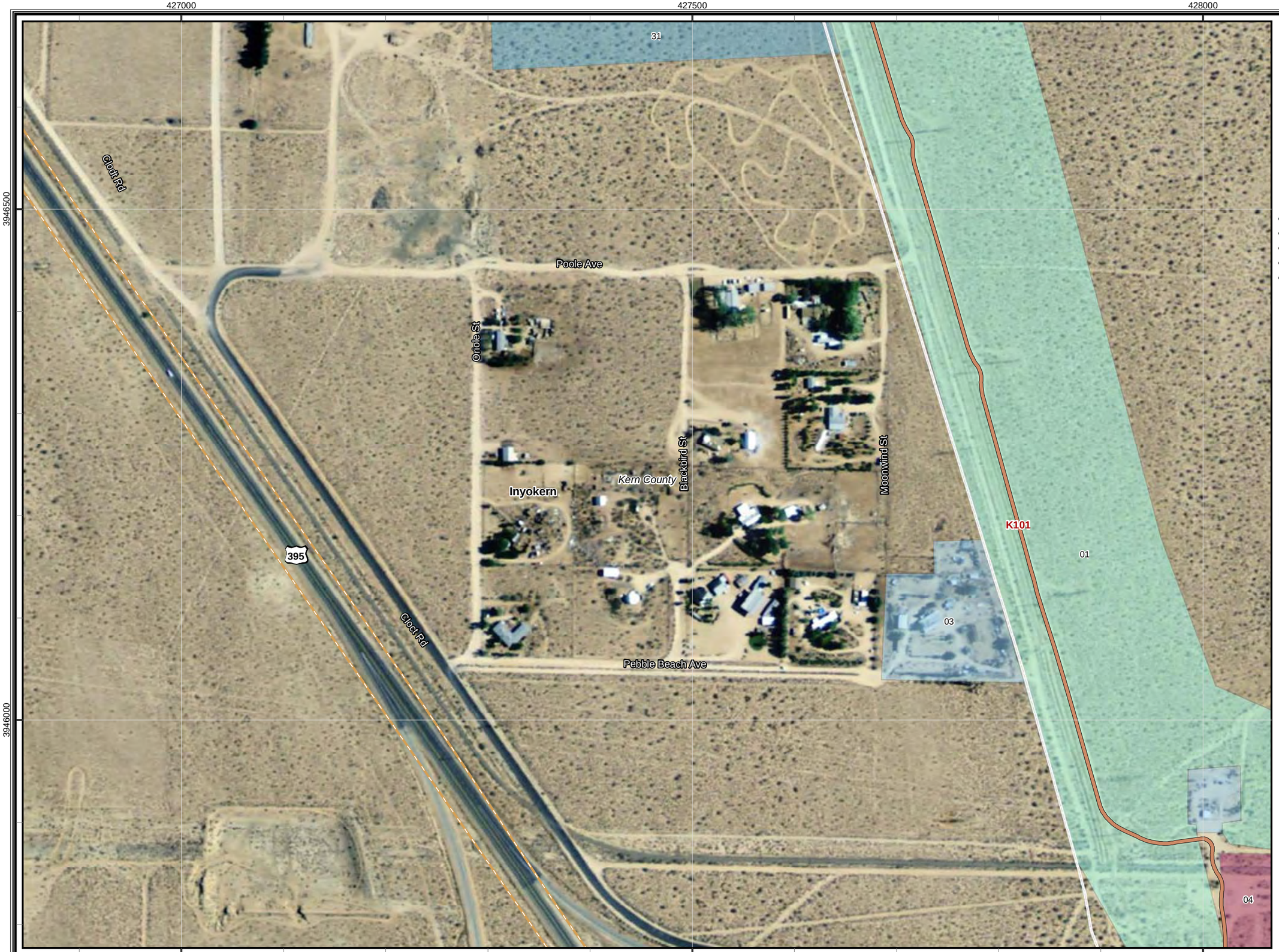

424500
425000
425500
3946000
3945500
Kern County
Inyokern
14
03
D07
D04
04
36
Doren St
Jackie Dr
CBC Digital 395
R3-Johannesburg to Inyokern-199
Legend
Proposed Node / Facility
Project Staging Site
Staging Area
Laydown
Depot
Existing Facility
Anchor
POI
FOC Backbone Street Side from Barstow to Reno
Left Side
Right Side
Road Crossing
Dirt Road
Lease
Distribution Line
Aerial Distribution Line
Mohave Ground Squirrel
Known Populations:
Identified Core Areas
Other Known Populations
Mohave Ground Squirrel Records
Incidental Observations
Present
Regional Surveys
Not Detected, Regional Surveys
Present, Regional Surveys
Protocol Grids
Not Detected, Protocol Grids
Present, Protocol Grids
Desert Tortoise Critical Habitat
Desert Tortoise Fence
Status
Observed
Not Present
Existing ROW Fencing
Waterway
City Limit
1:3,500
0 50 100 200 300
Feet
N
196
200
199
Kern County
194
195
K121
198
178
20260
11-03-11
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-200

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

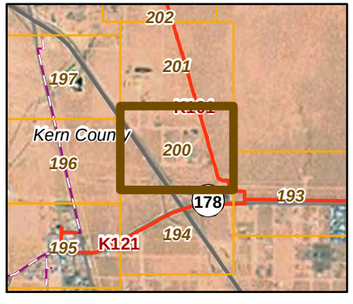
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-201

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

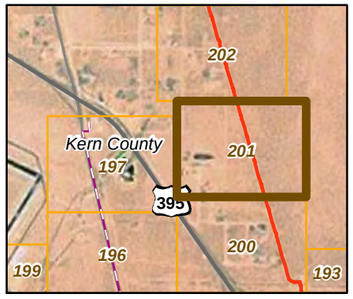
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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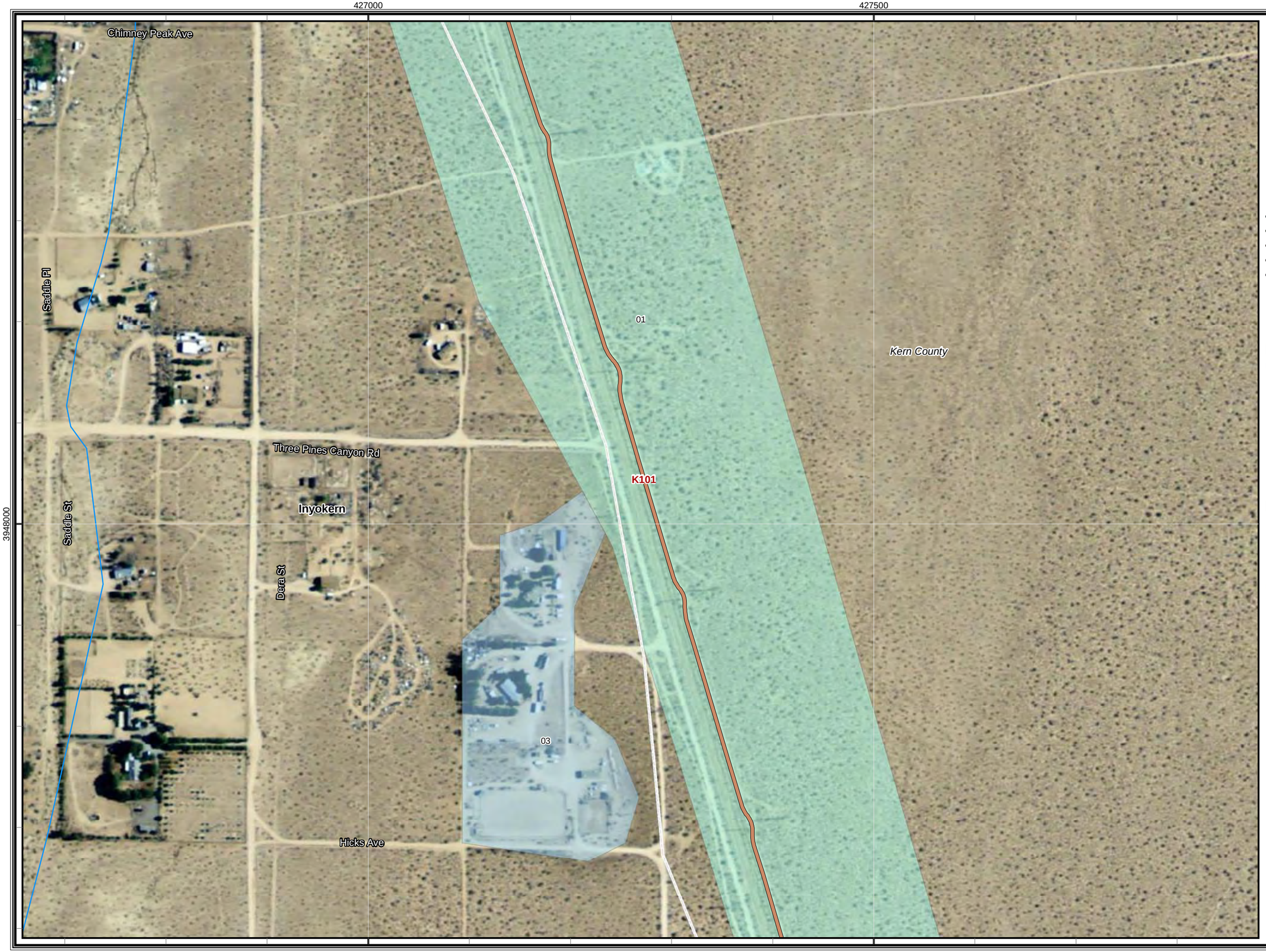
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-202

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

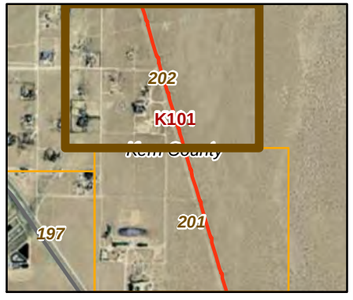
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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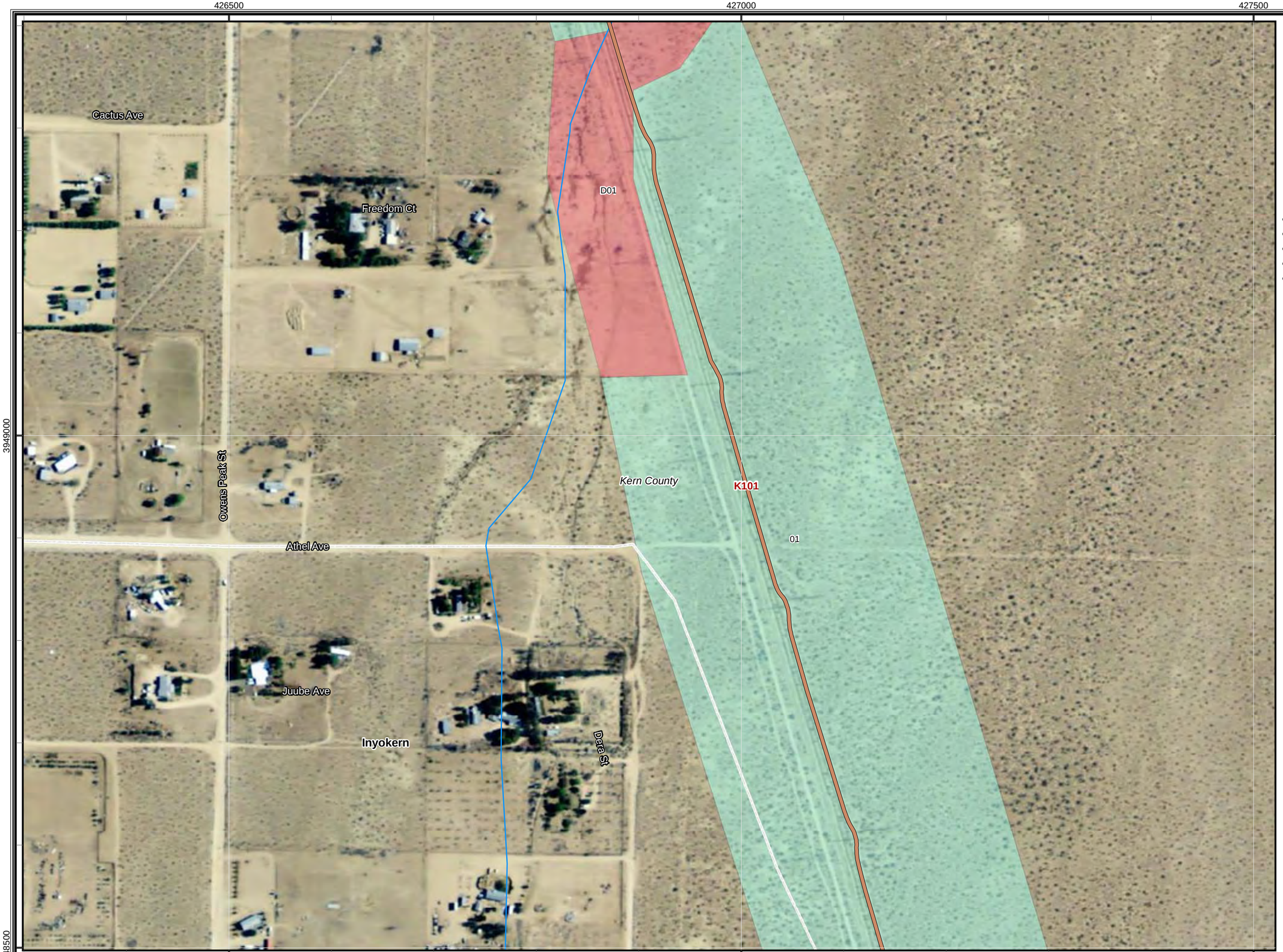


CBC Digital 395

R4-Inyokern to Olancha-203

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

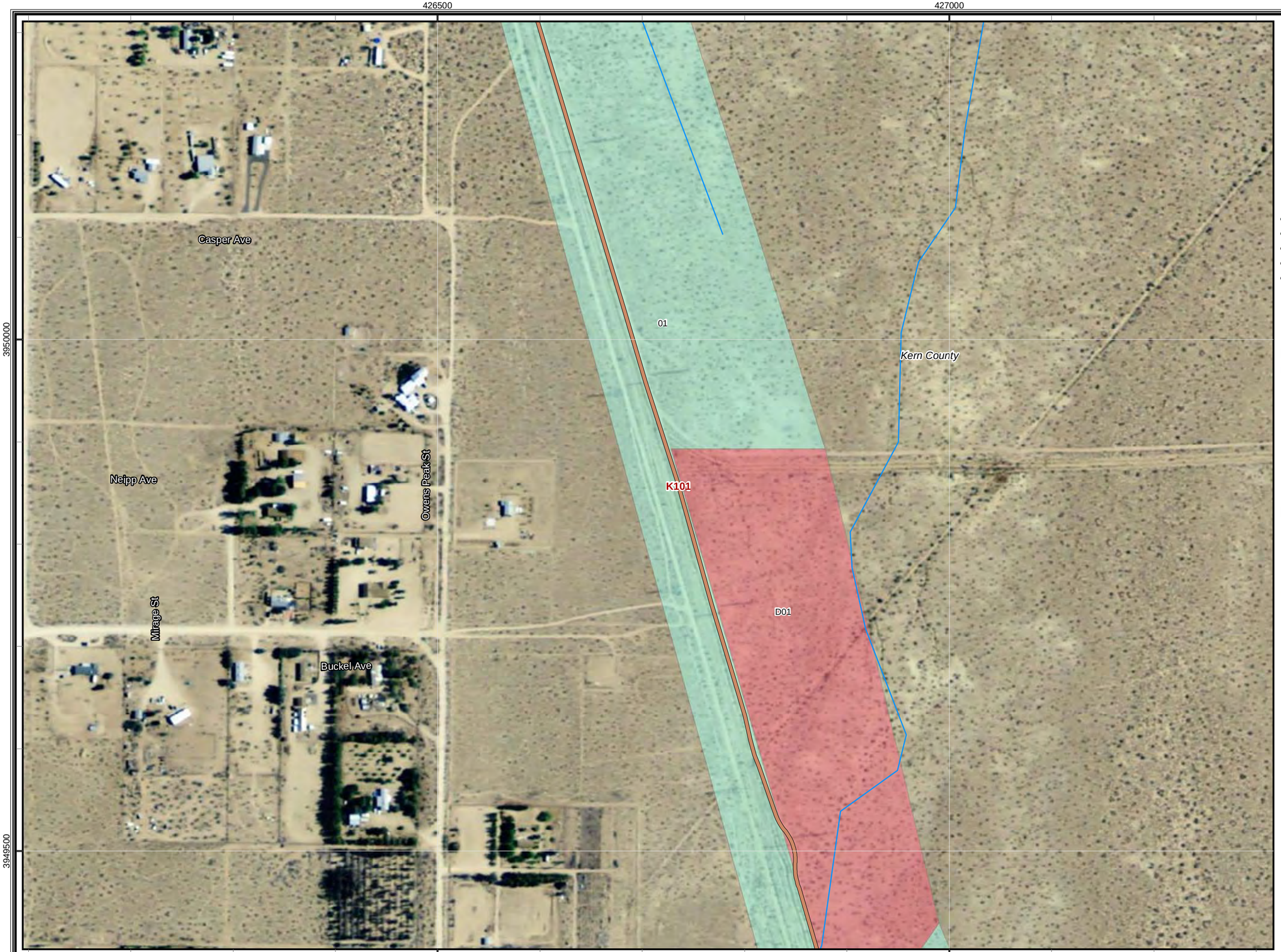
1:3,500

0 50 100 200 300
Feet

20260

11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-204

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

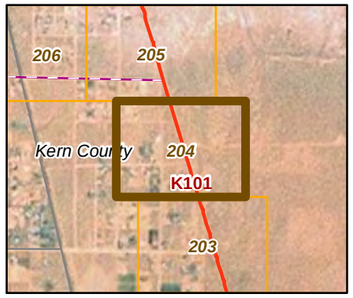
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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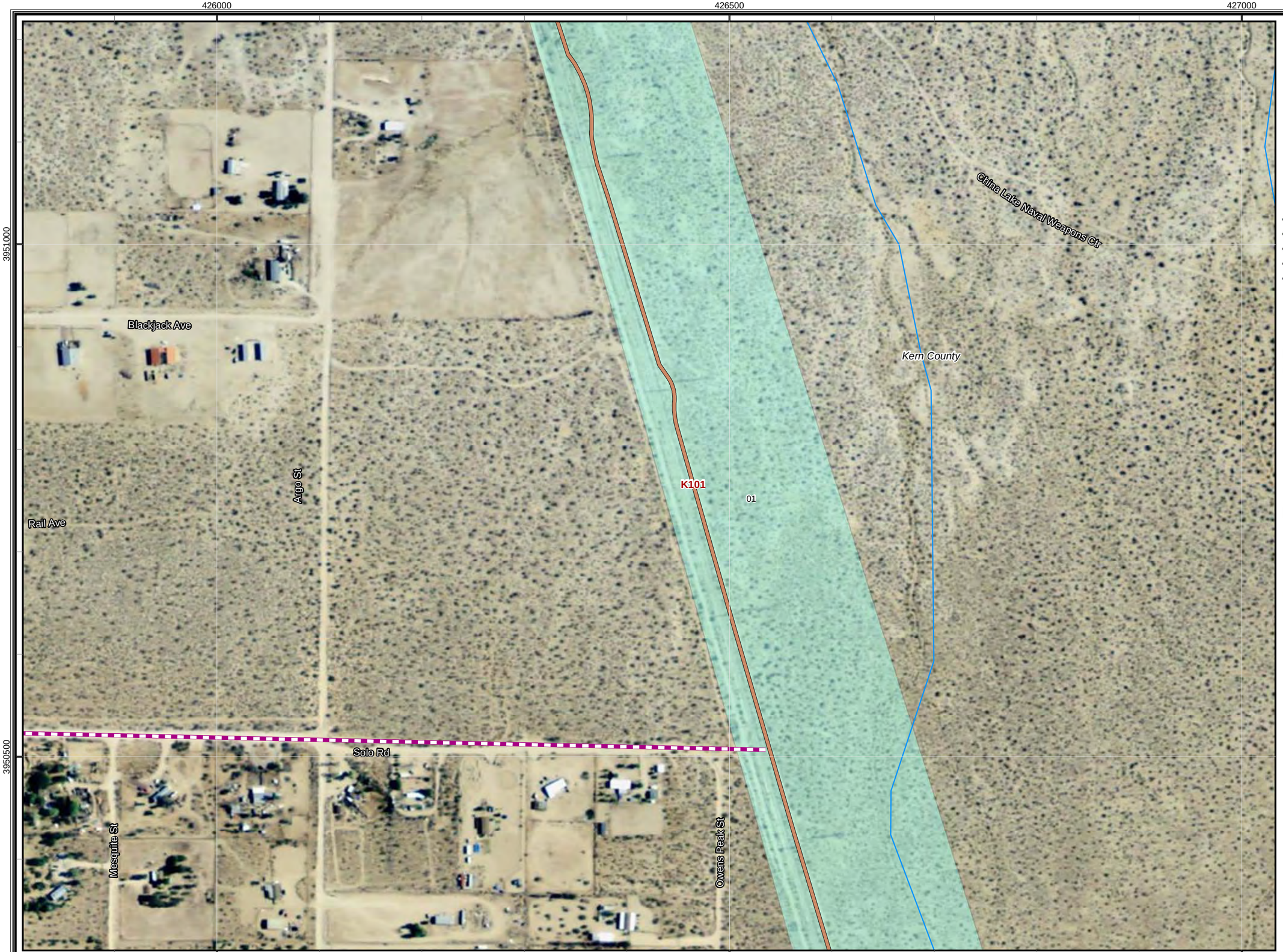
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-205

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

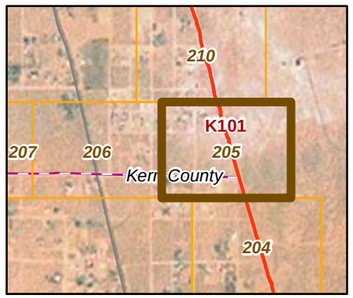
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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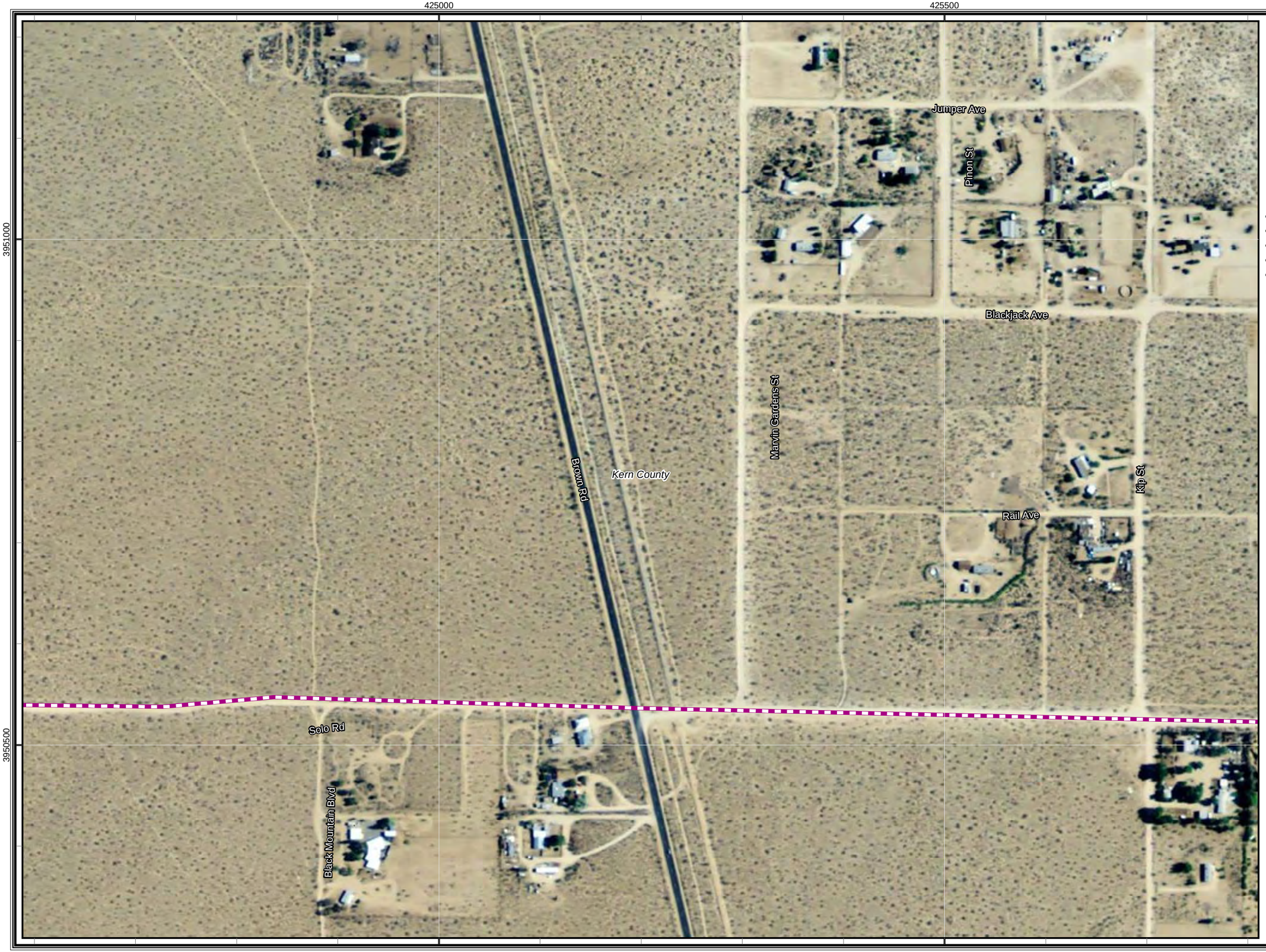
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-206

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

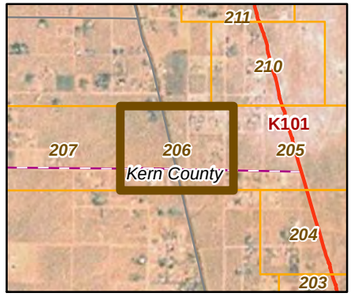
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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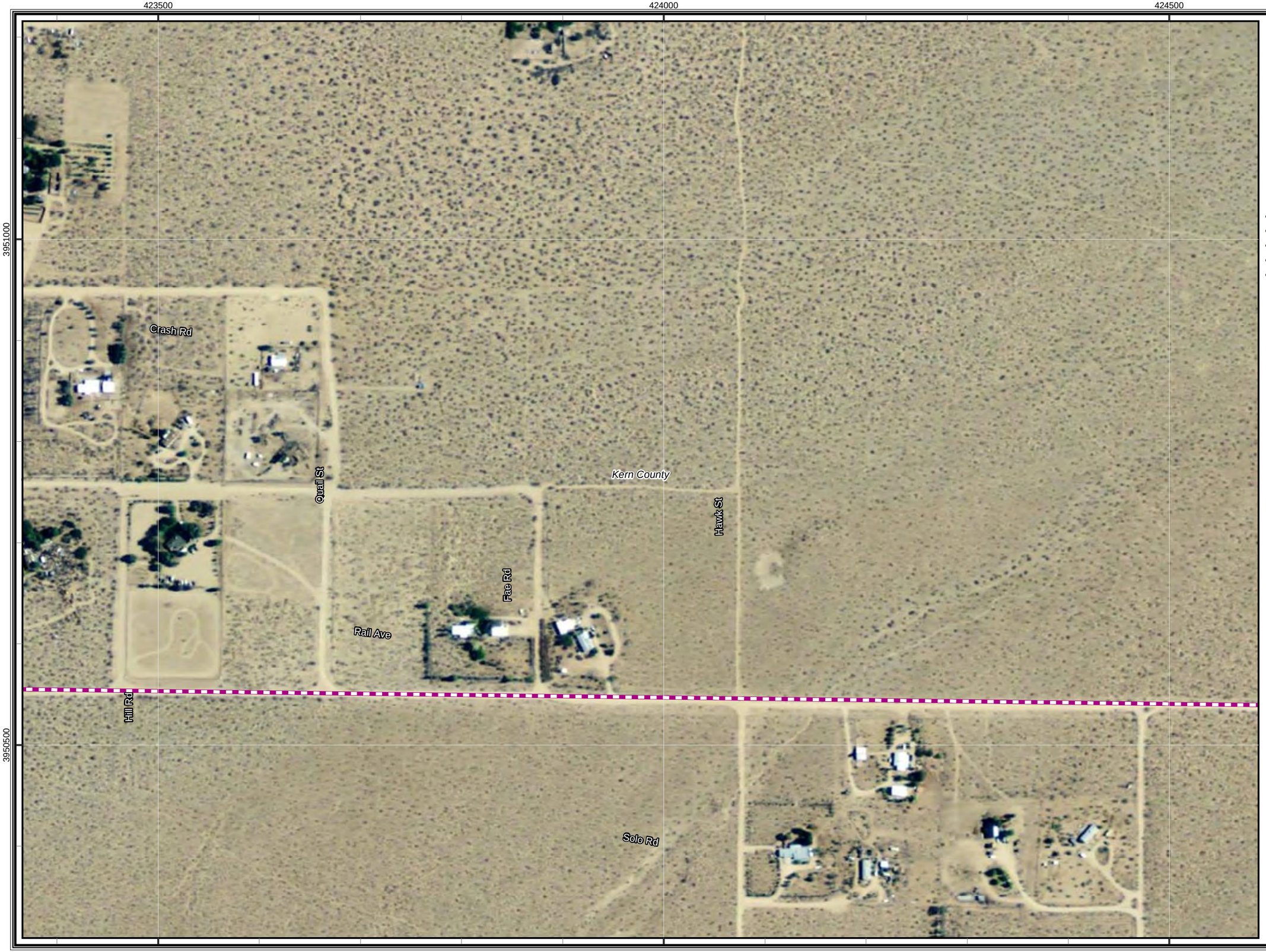
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-207

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

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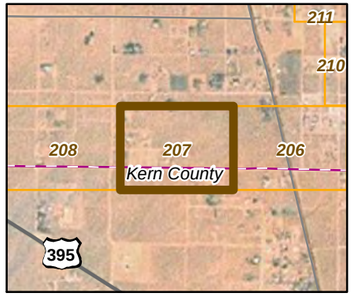
Feet



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CBC Digital 395

R4-Inyokern to Olancha-208

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

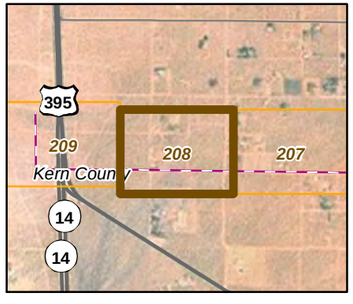
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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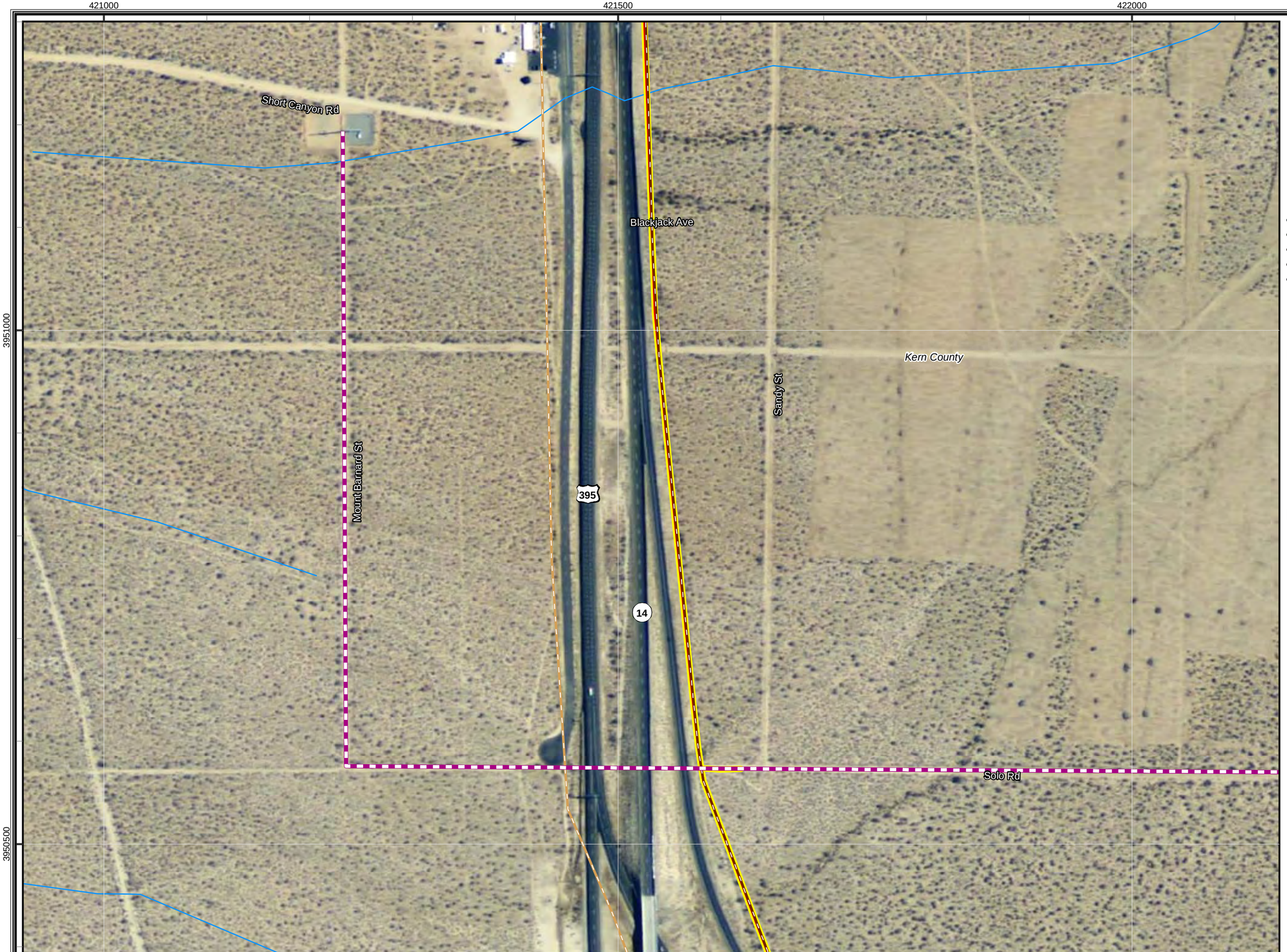


CBC Digital 395

R4-Inyokern to Olancha-209

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

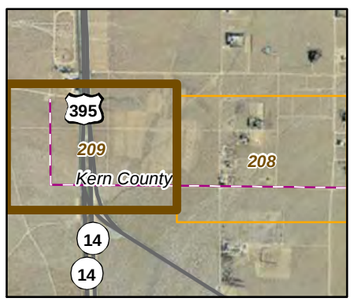
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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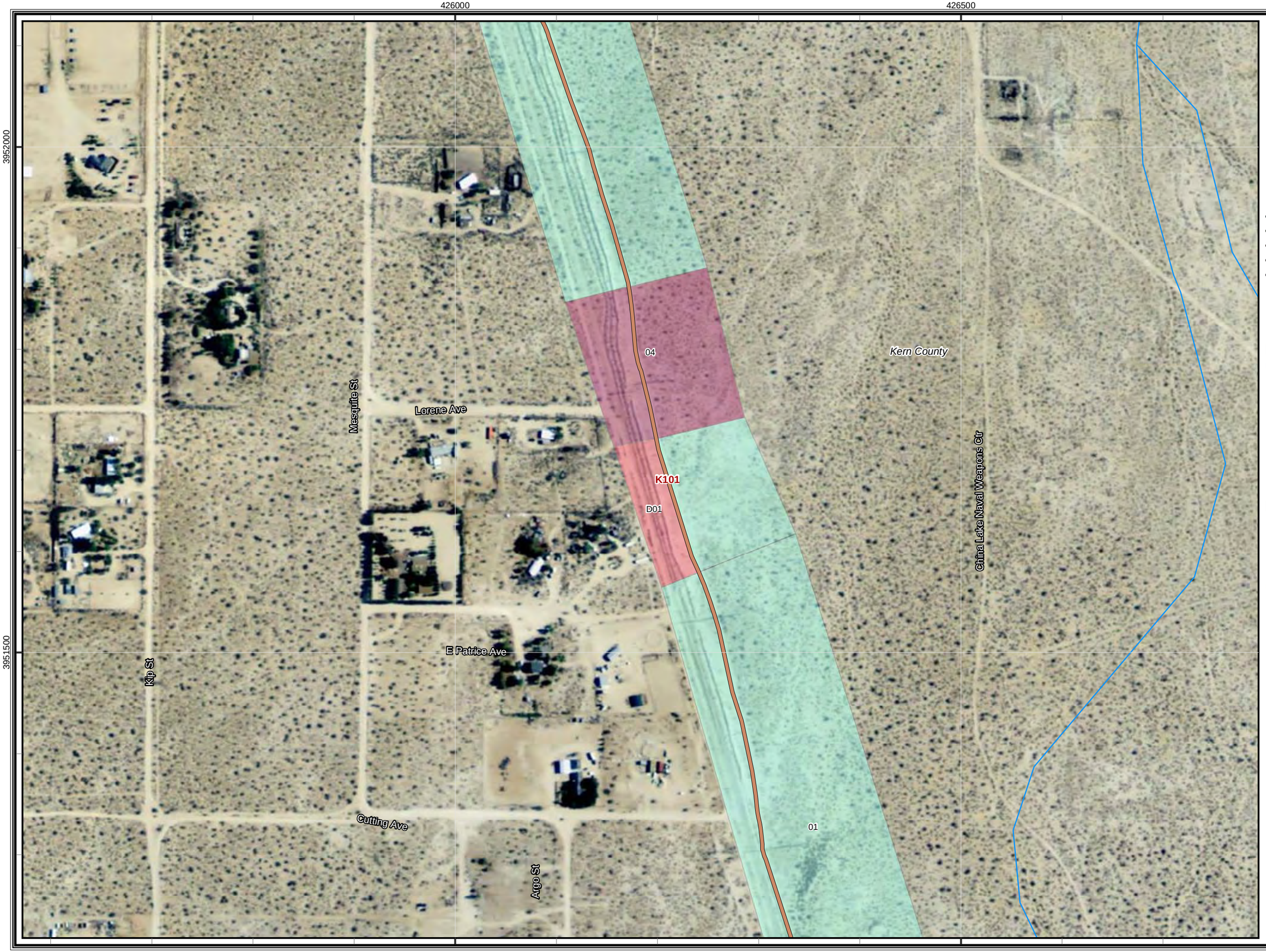


CBC Digital 395

R4-Inyokern to Olancha-210

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

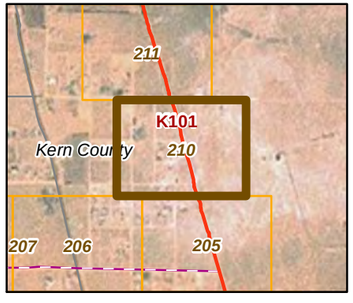
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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Chambers Group Inc.

CBC Digital 395

R4-Inyokern to Olancha-211

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

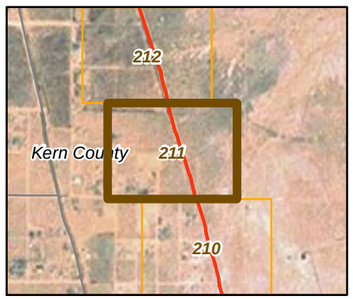
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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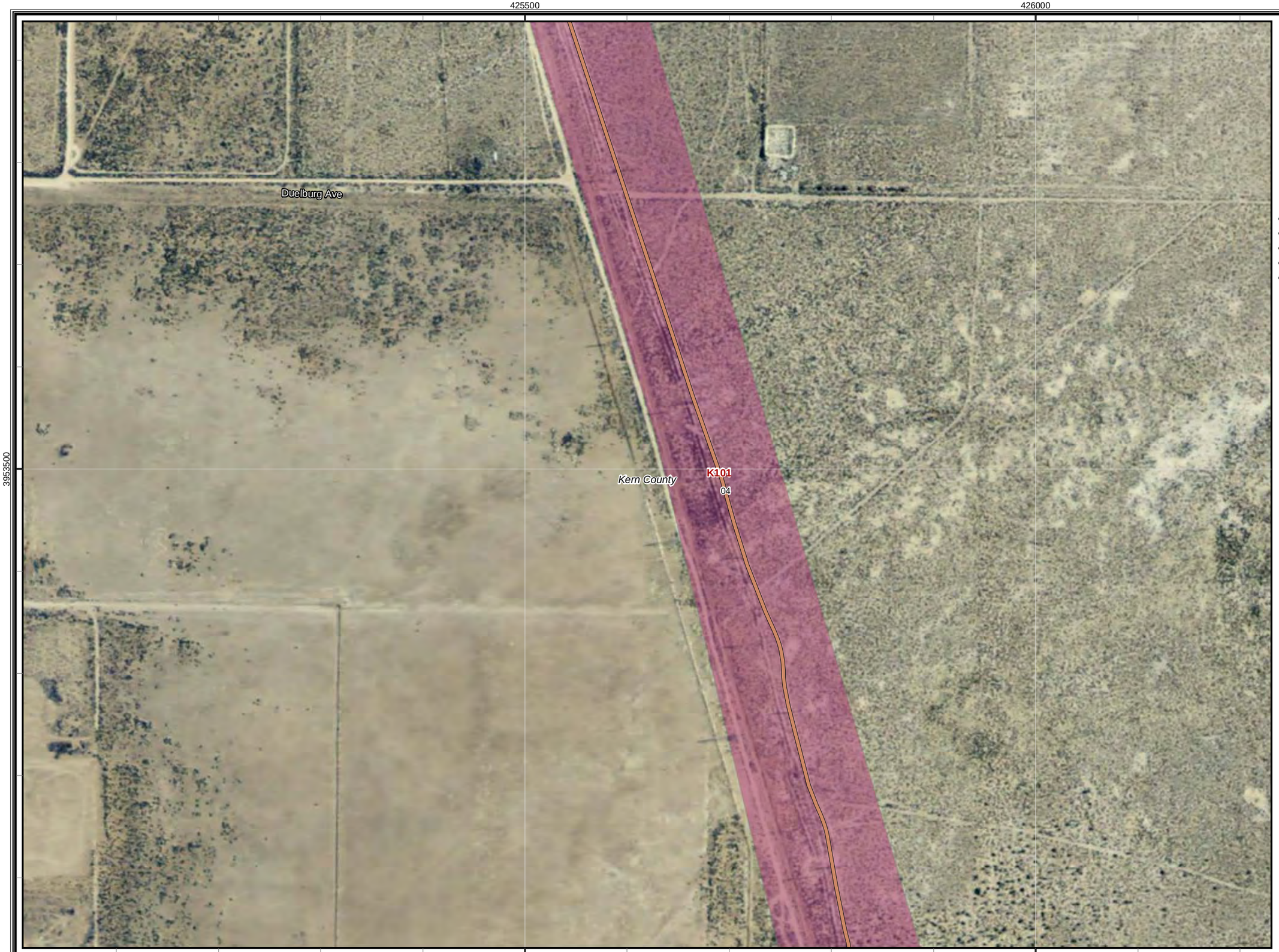


CBC Digital 395

R4-Inyokern to Olancha-212

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

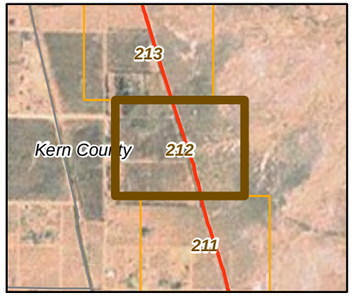
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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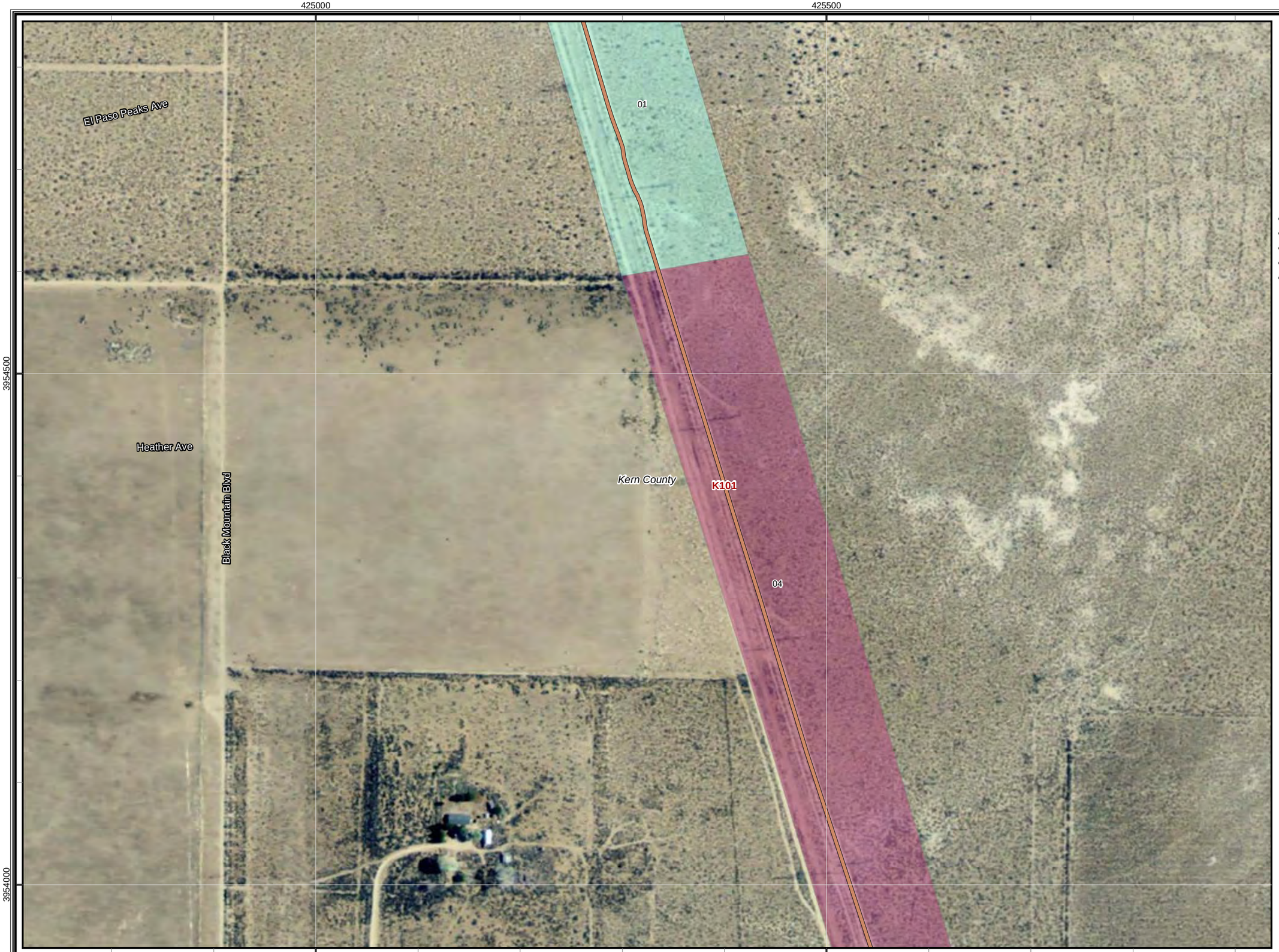


CBC Digital 395

R4-Inyokern to Olancha-213

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

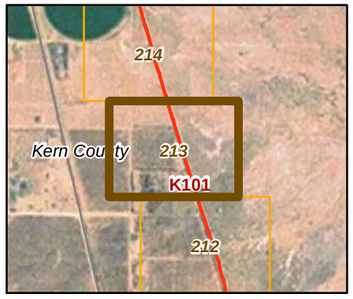
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-214

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

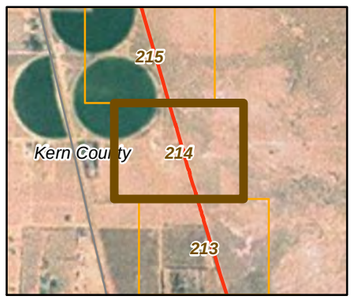
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-215

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

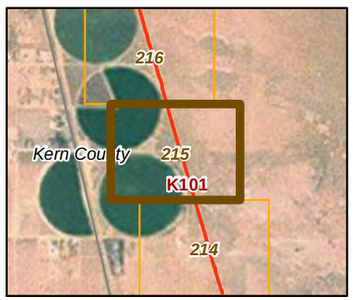
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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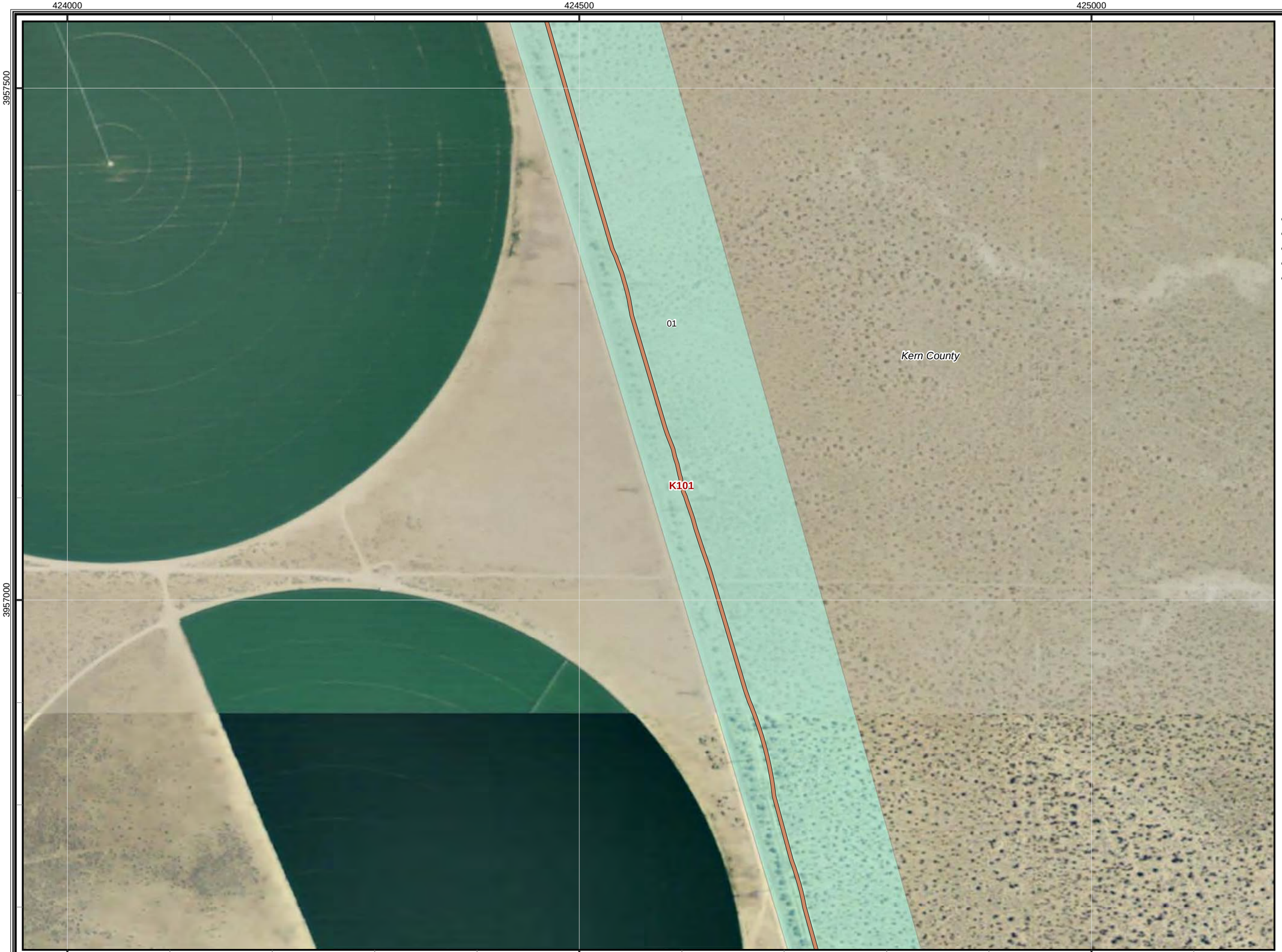


CBC Digital 395

R4-Inyokern to Olancha-216

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

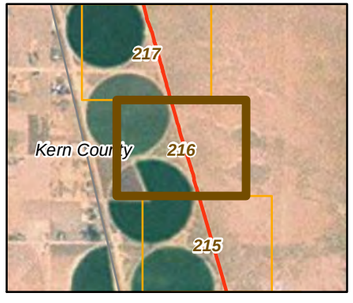
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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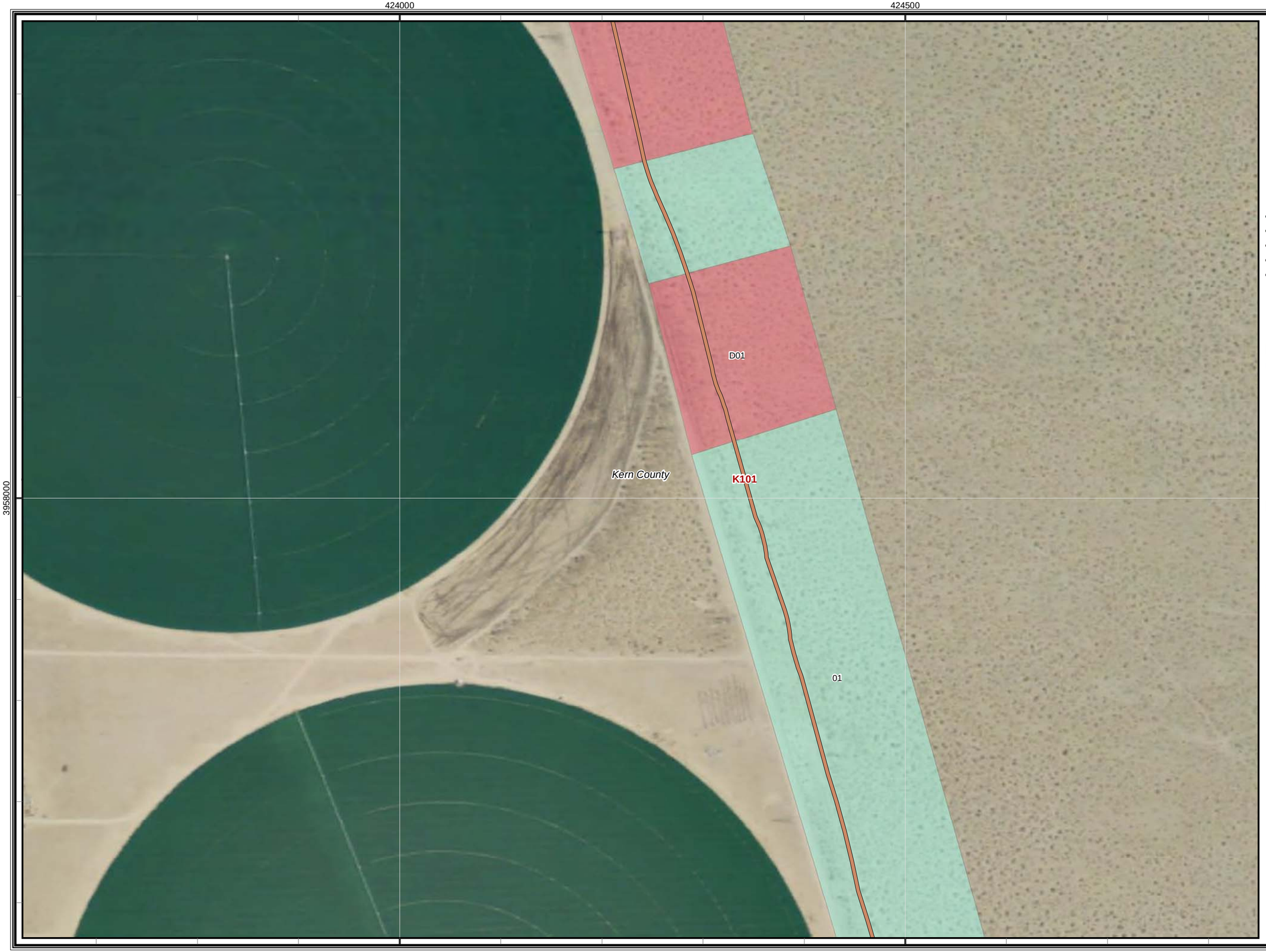


CBC Digital 395

R4-Inyokern to Olancha-217

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

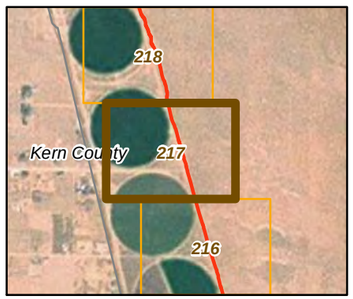
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-218

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

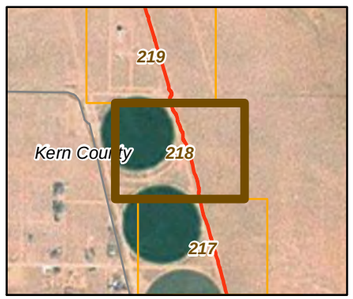
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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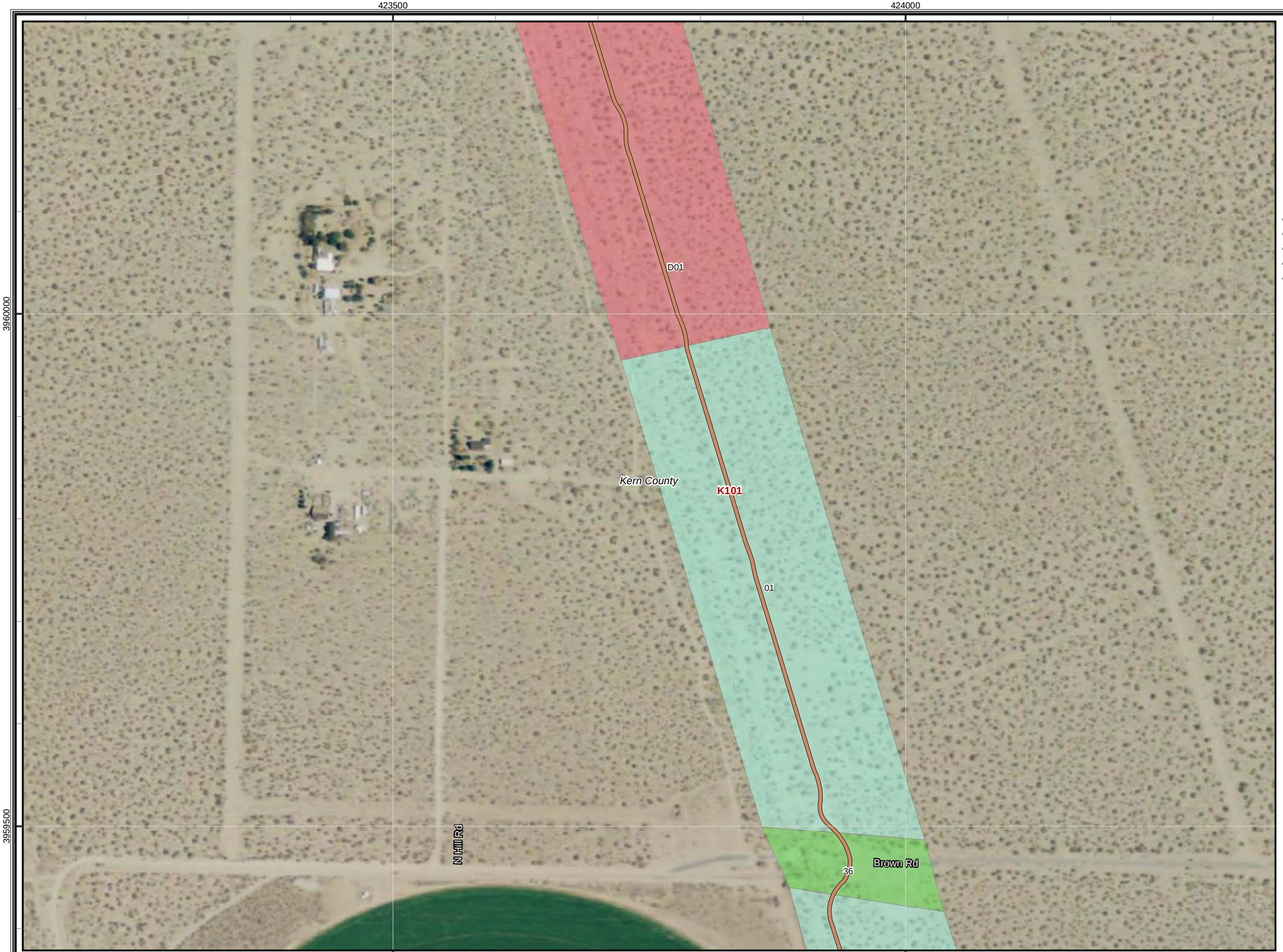


CBC Digital 395

R4-Inyokern to Olancha-219

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

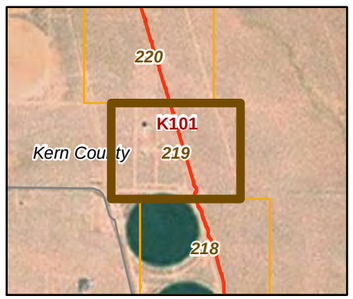
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-220

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

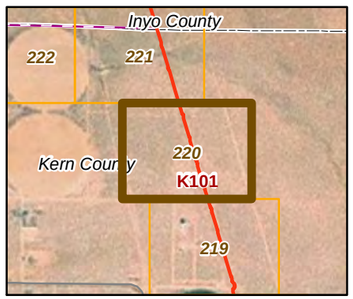
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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11-03-11

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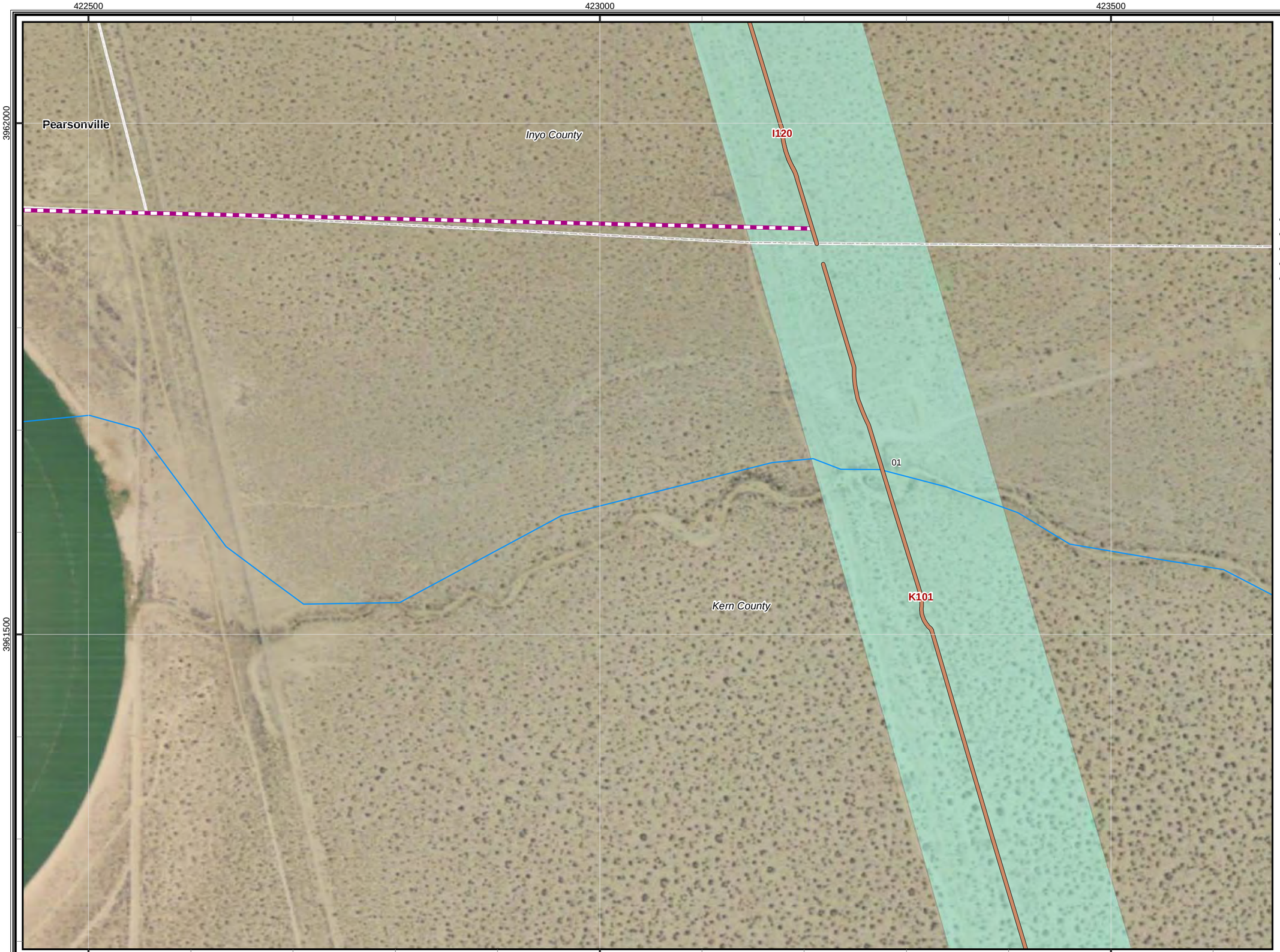


CBC Digital 395

R4-Inyokern to Olancha-221

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

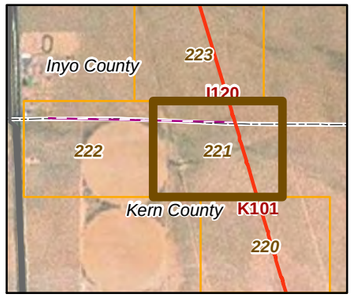
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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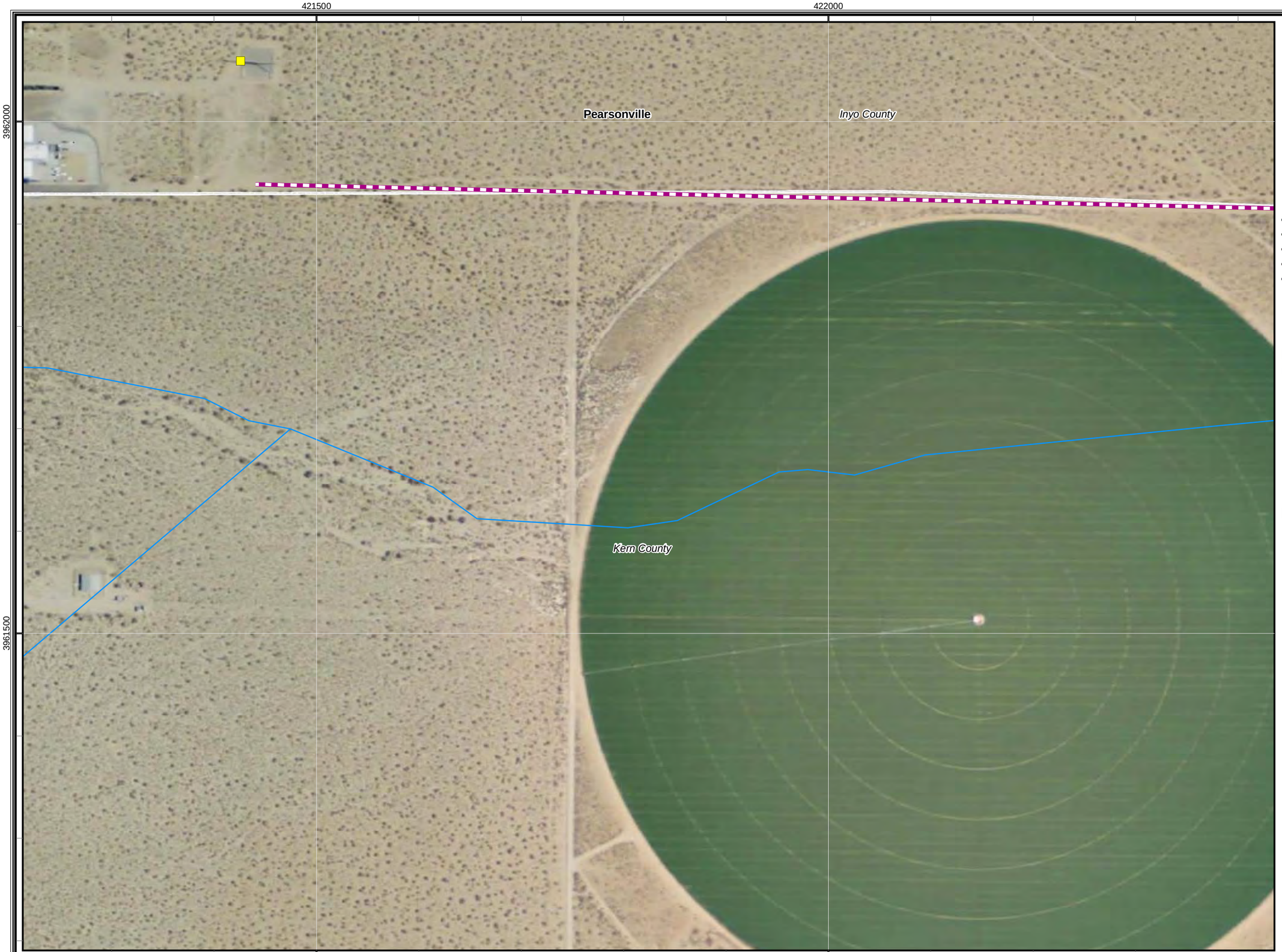
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-222

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

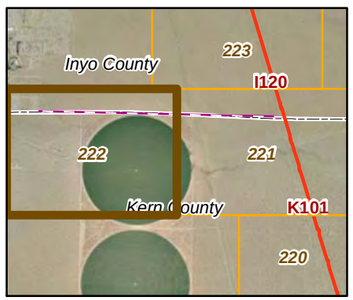
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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11-03-11

Chambers Group Inc.

CBC Digital 395

R4-Inyokern to Olancha-223

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

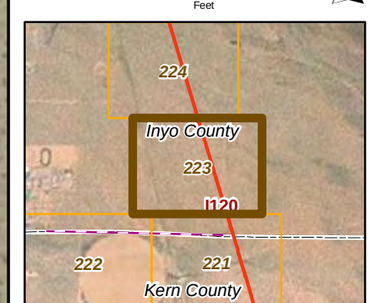
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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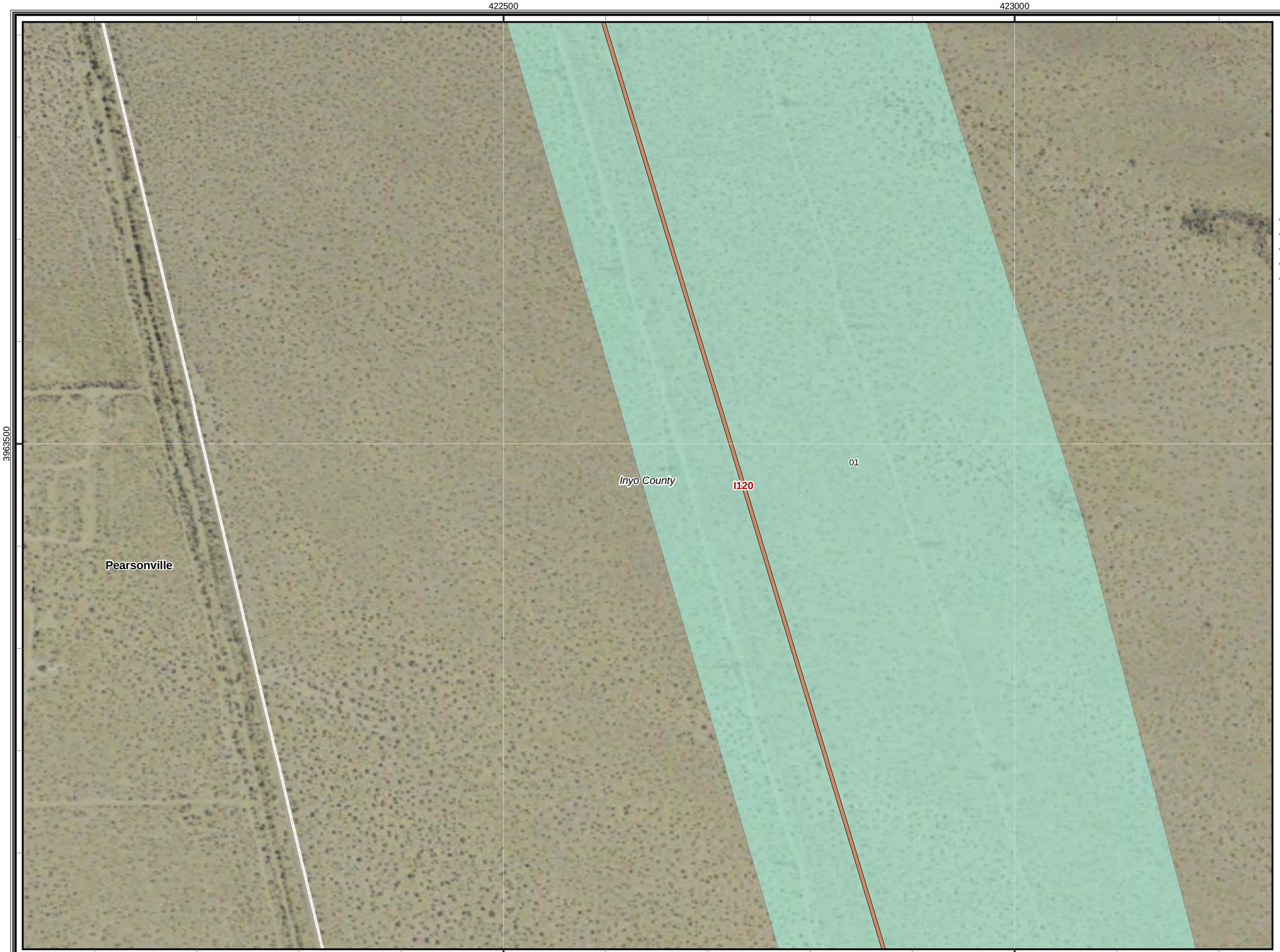


CBC Digital 395

R4-Inyokern to Olancha-224

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

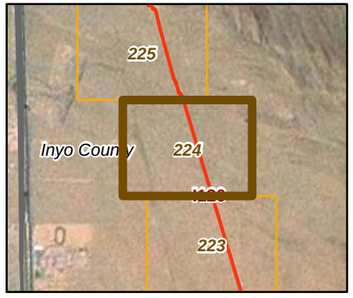
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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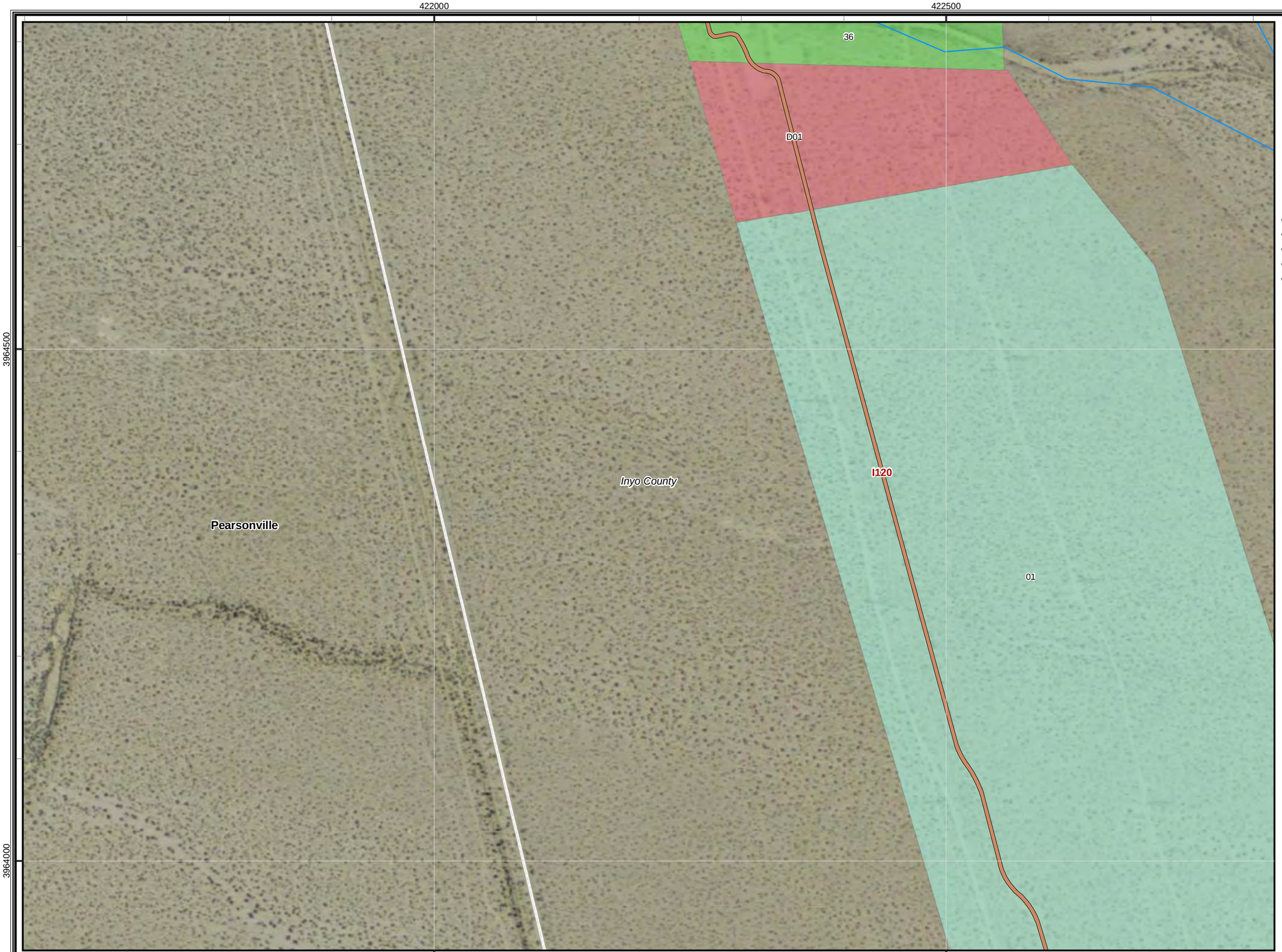


CBC Digital 395

R4-Inyokern to Olancha-225

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

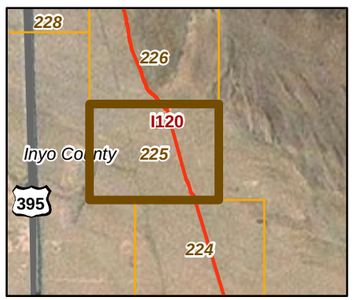
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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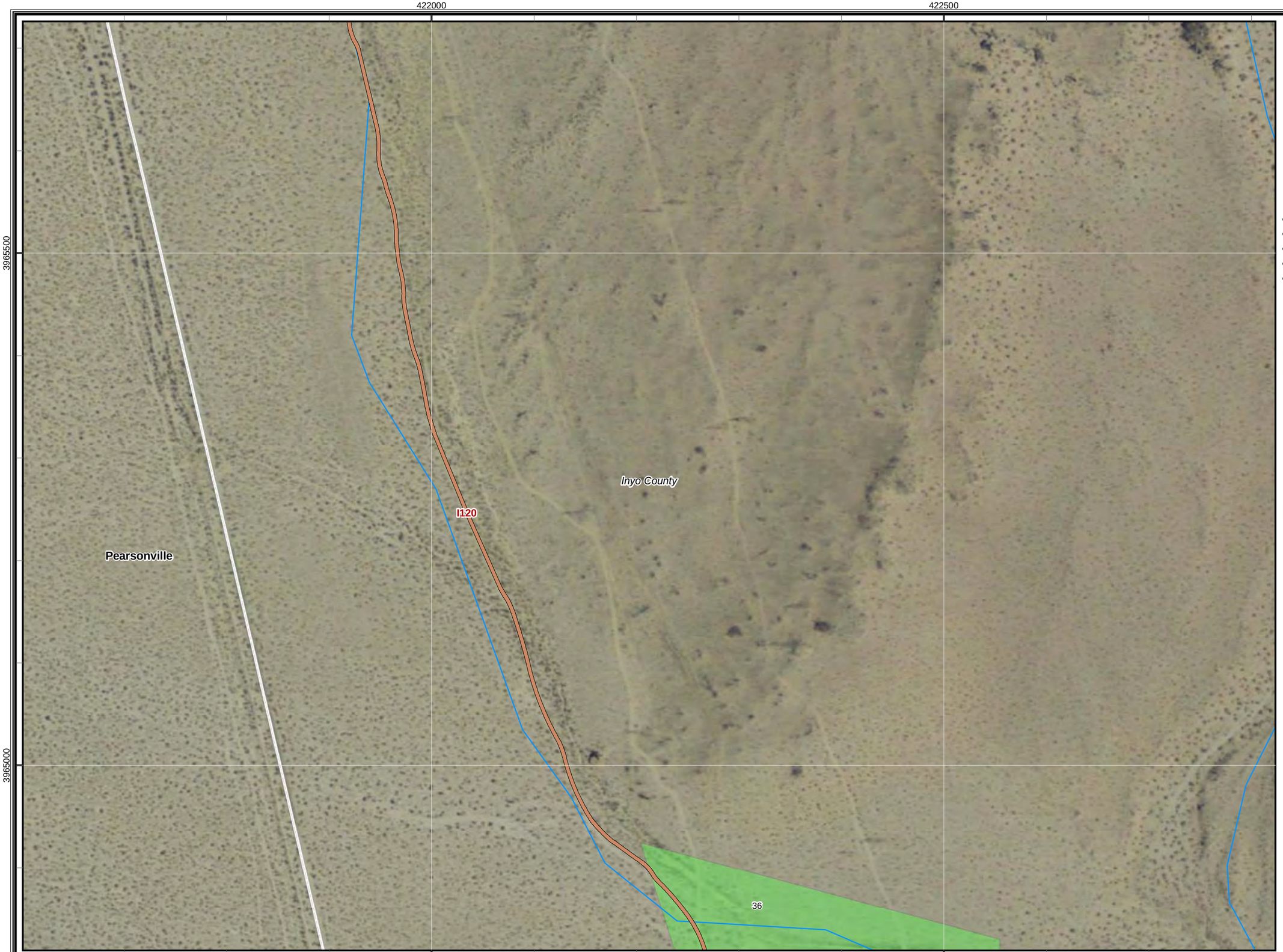
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-226

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

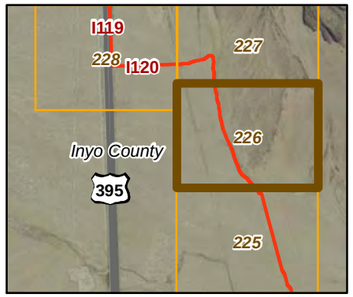
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-227

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

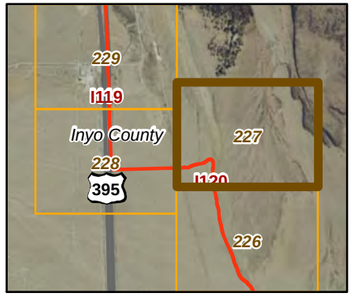
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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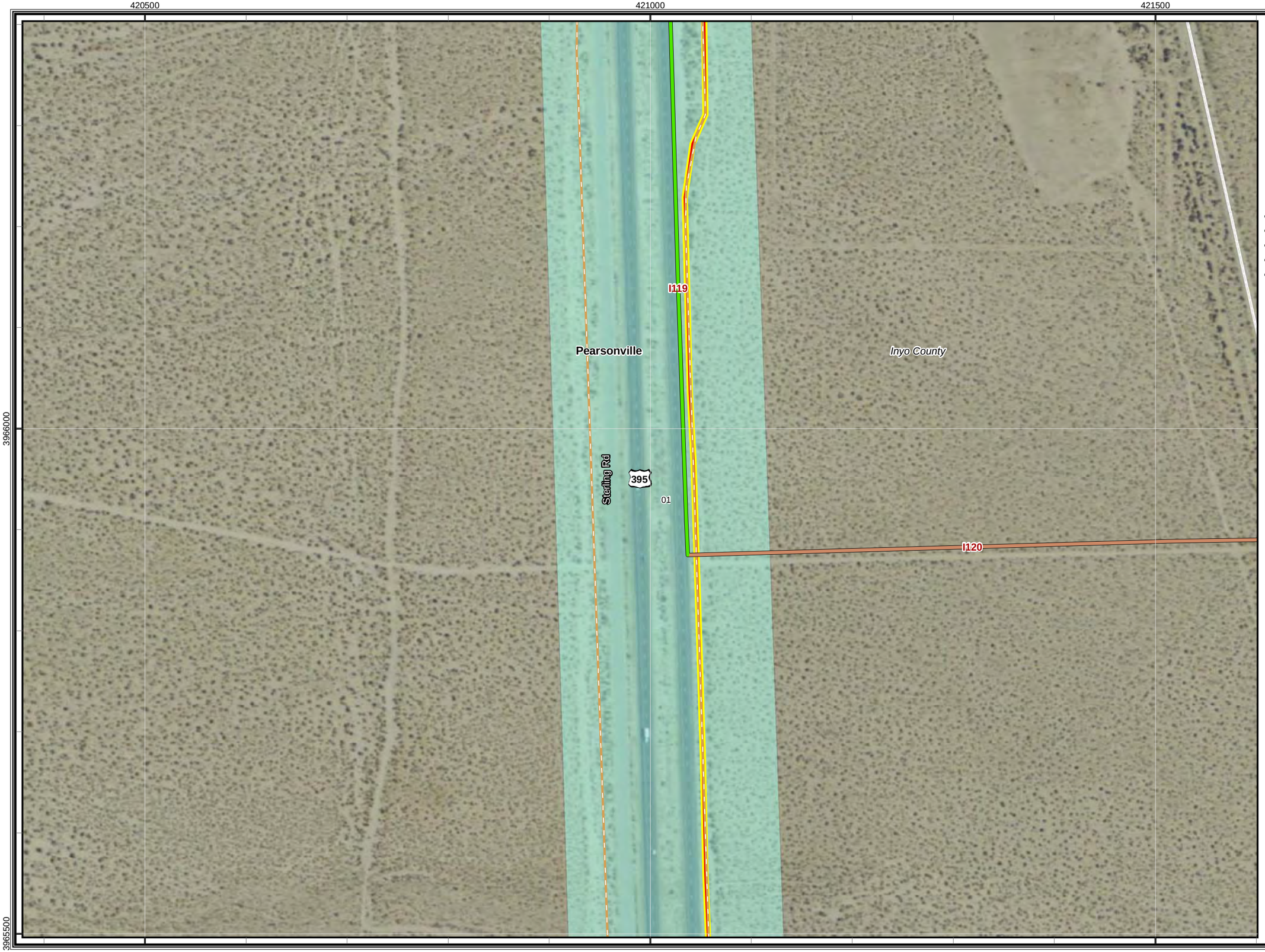


CBC Digital 395

R4-Inyokern to Olancha-228

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

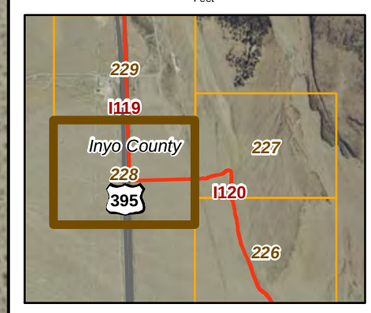
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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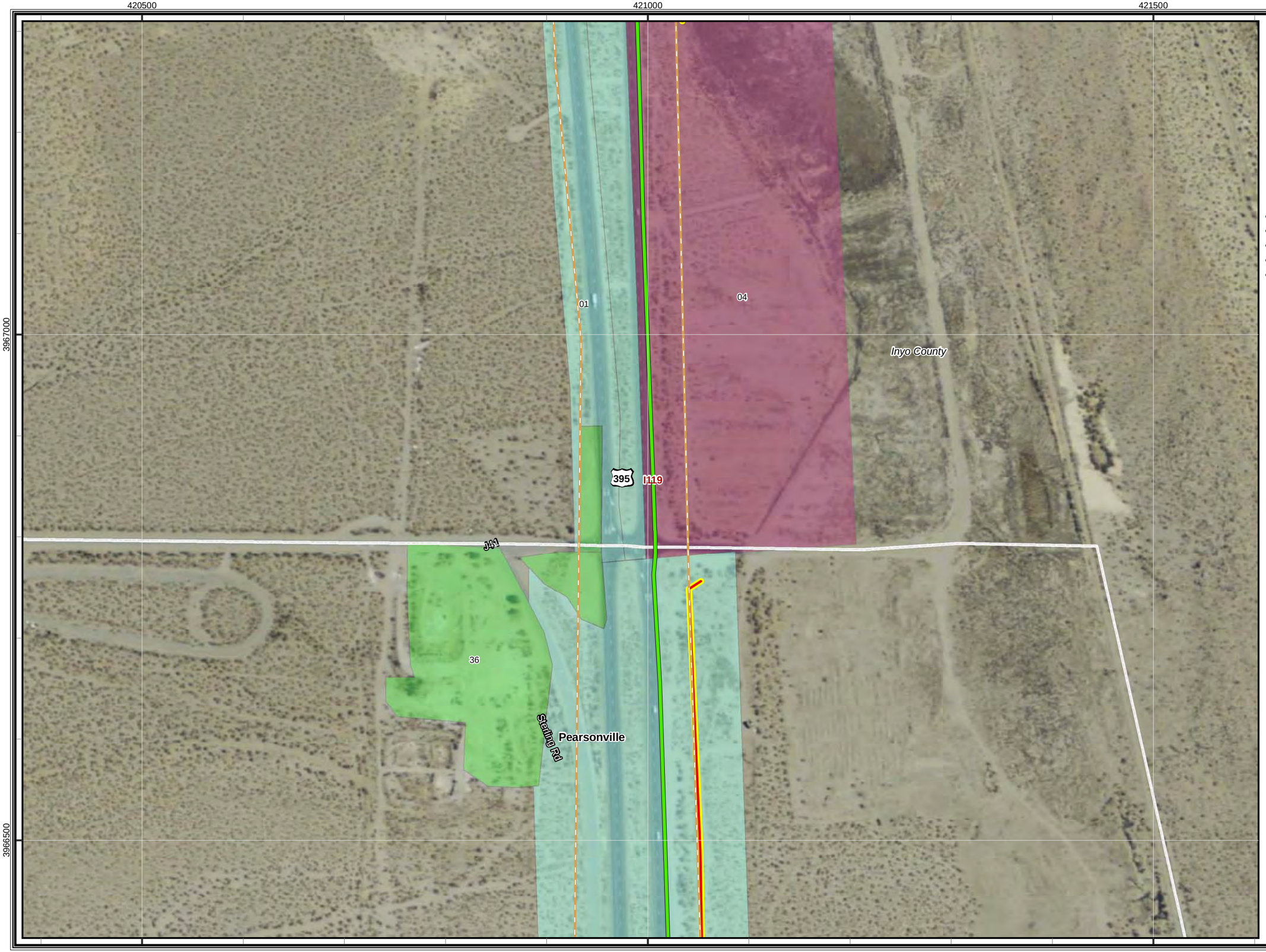


CBC Digital 395

R4-Inyokern to Olancha-229

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

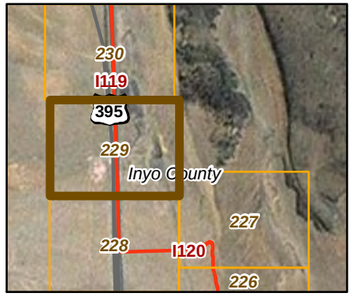
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-230

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

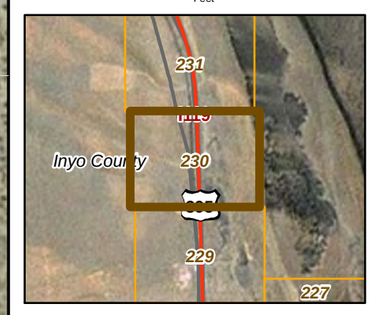
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-231

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

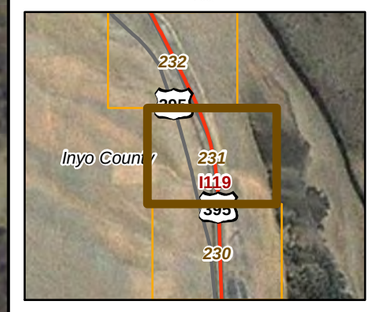
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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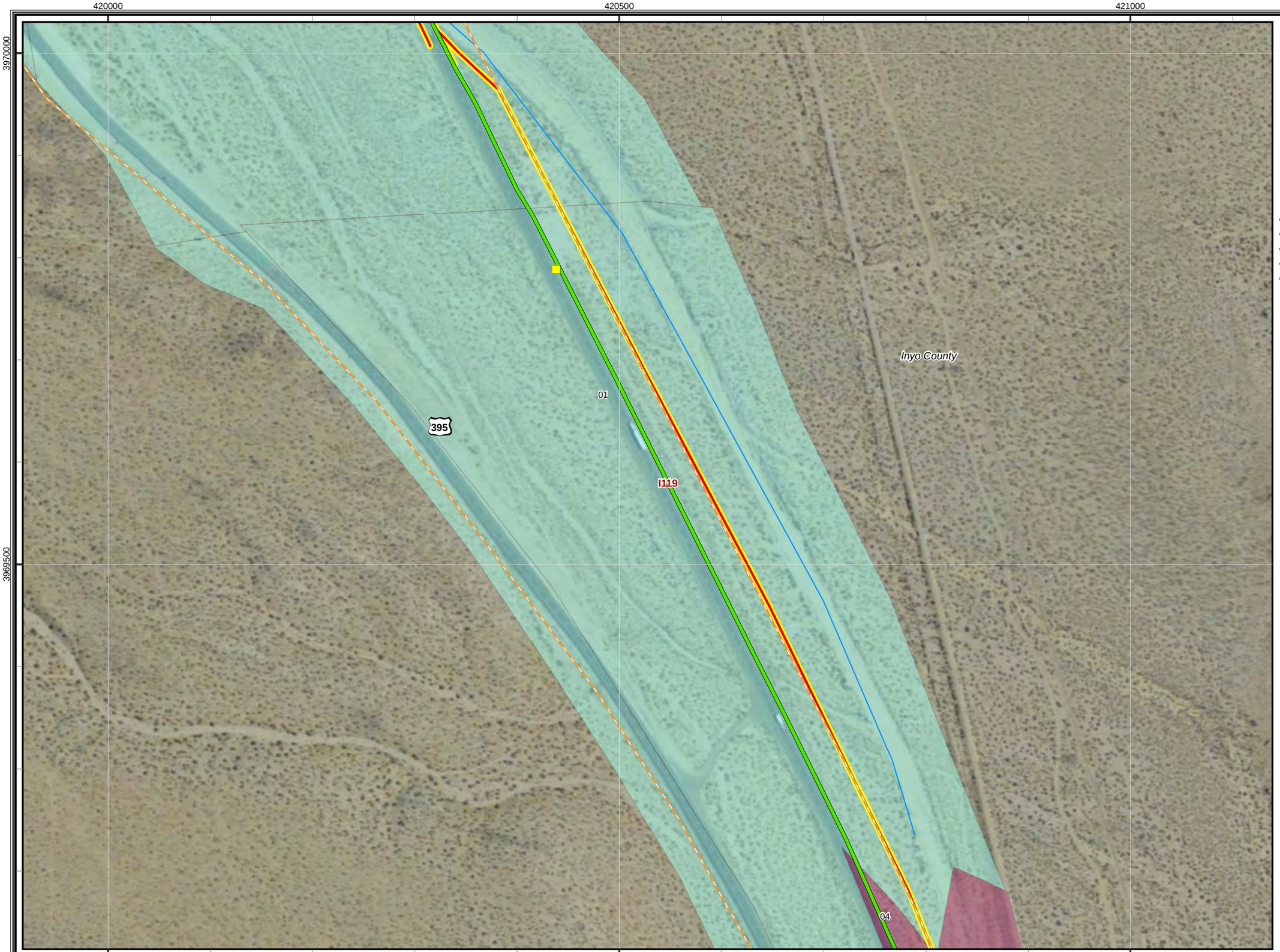


CBC Digital 395

R4-Inyokern to Olancha-232

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

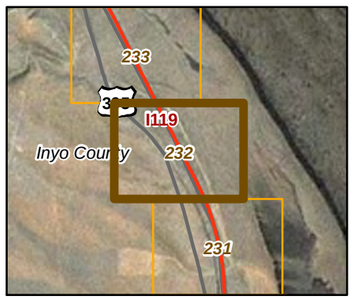
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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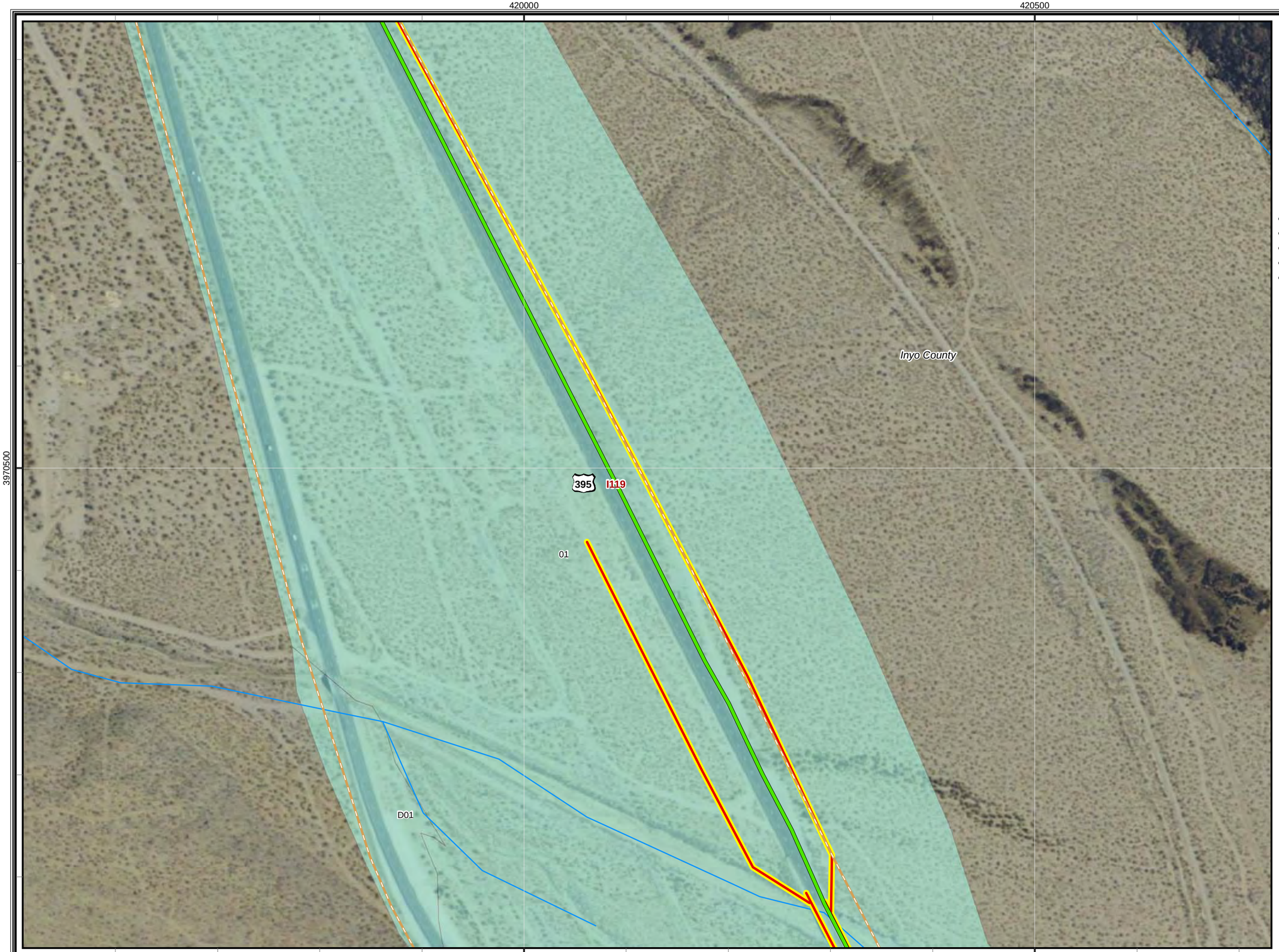


CBC Digital 395

R4-Inyokern to Olancha-233

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

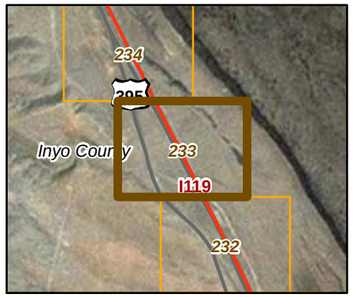
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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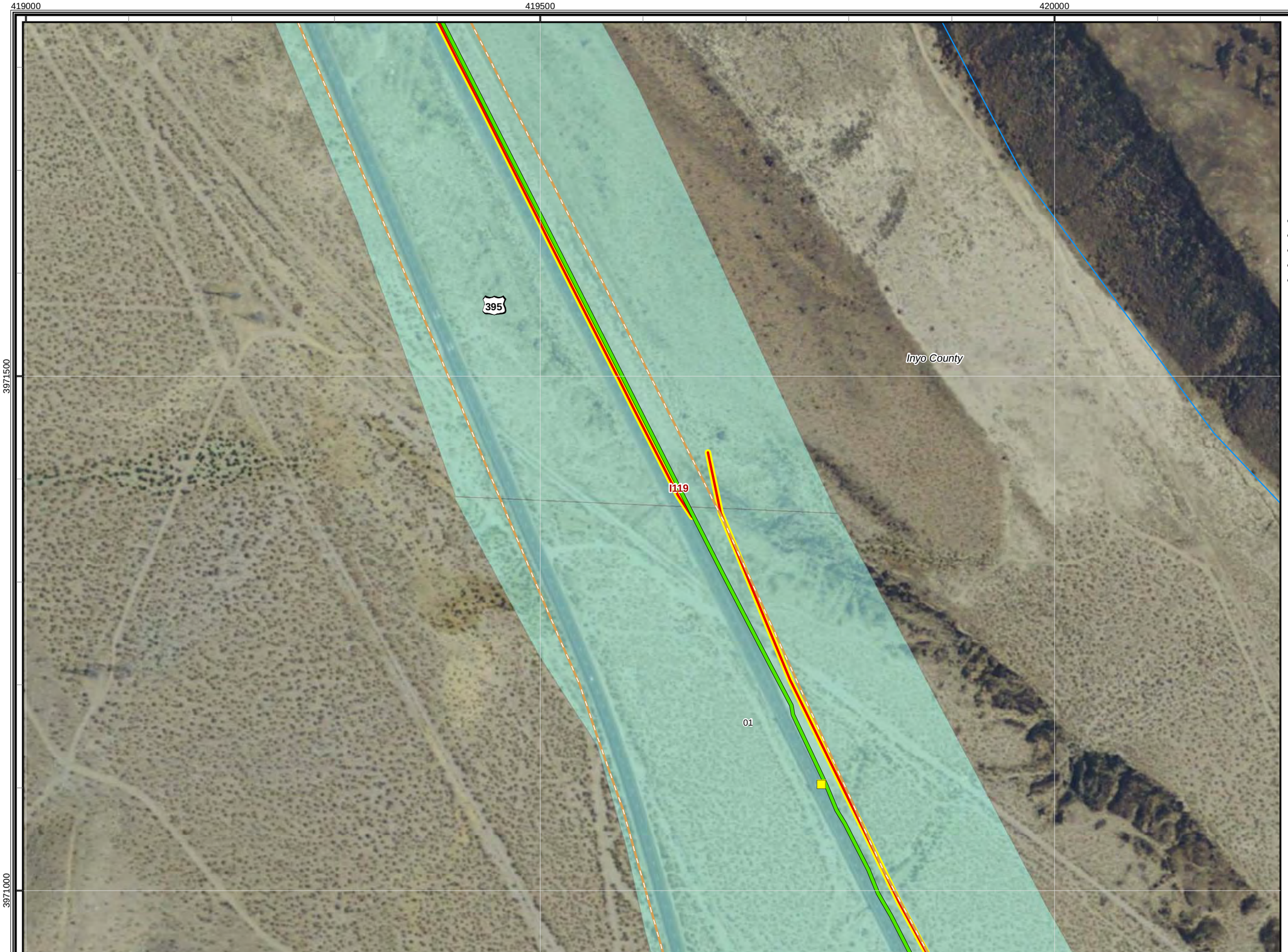


CBC Digital 395

R4-Inyokern to Olancha-234

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

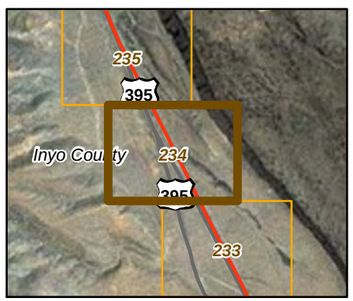
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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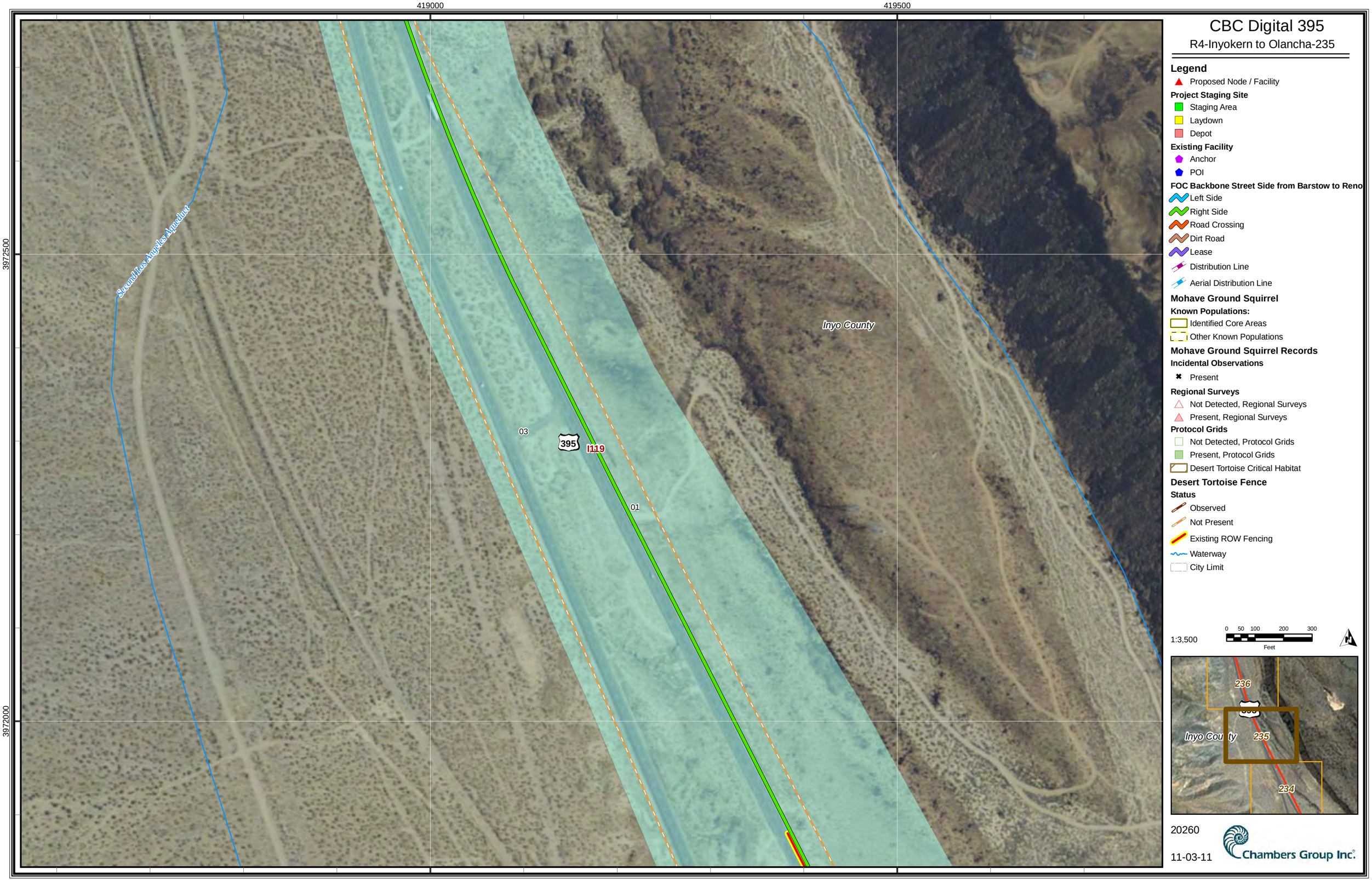
419000
419500
3972500
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Second Los Angeles Aqueduct
Inyo County
03
395
I119
01
CBC Digital 395
R4-Inyokern to Olancha-235
Legend
Proposed Node / Facility
Project Staging Site
Staging Area
Laydown
Depot
Existing Facility
Anchor
POI
FOC Backbone Street Side from Barstow to Reno
Left Side
Right Side
Road Crossing
Dirt Road
Lease
Distribution Line
Aerial Distribution Line
Mohave Ground Squirrel
Known Populations:
Identified Core Areas
Other Known Populations
Mohave Ground Squirrel Records
Incidental Observations
Present
Regional Surveys
Not Detected, Regional Surveys
Present, Regional Surveys
Protocol Grids
Not Detected, Protocol Grids
Present, Protocol Grids
Desert Tortoise Critical Habitat
Desert Tortoise Fence
Status
Observed
Not Present
Existing ROW Fencing
Waterway
City Limit
1:3,500
0 50 100 200 300
Feet
236
Inyo County
235
234
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11-03-11
Chambers Group Inc.

418500
419000
3973500
3973000
04
01
395
I119
Inyo County
Second Los Angeles Aqueduct
CBC Digital 395
R4-Inyokern to Olancha-236
Legend
Proposed Node / Facility
Project Staging Site
Staging Area
Laydown
Depot
Existing Facility
Anchor
POI
FOC Backbone Street Side from Barstow to Reno
Left Side
Right Side
Road Crossing
Dirt Road
Lease
Distribution Line
Aerial Distribution Line
Mohave Ground Squirrel
Known Populations:
Identified Core Areas
Other Known Populations
Mohave Ground Squirrel Records
Incidental Observations
Present
Regional Surveys
Not Detected, Regional Surveys
Present, Regional Surveys
Protocol Grids
Not Detected, Protocol Grids
Present, Protocol Grids
Desert Tortoise Critical Habitat
Desert Tortoise Fence
Status
Observed
Not Present
Existing ROW Fencing
Waterway
City Limit
1:3,500
0 50 100 200 300
Feet
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237
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Inyo County
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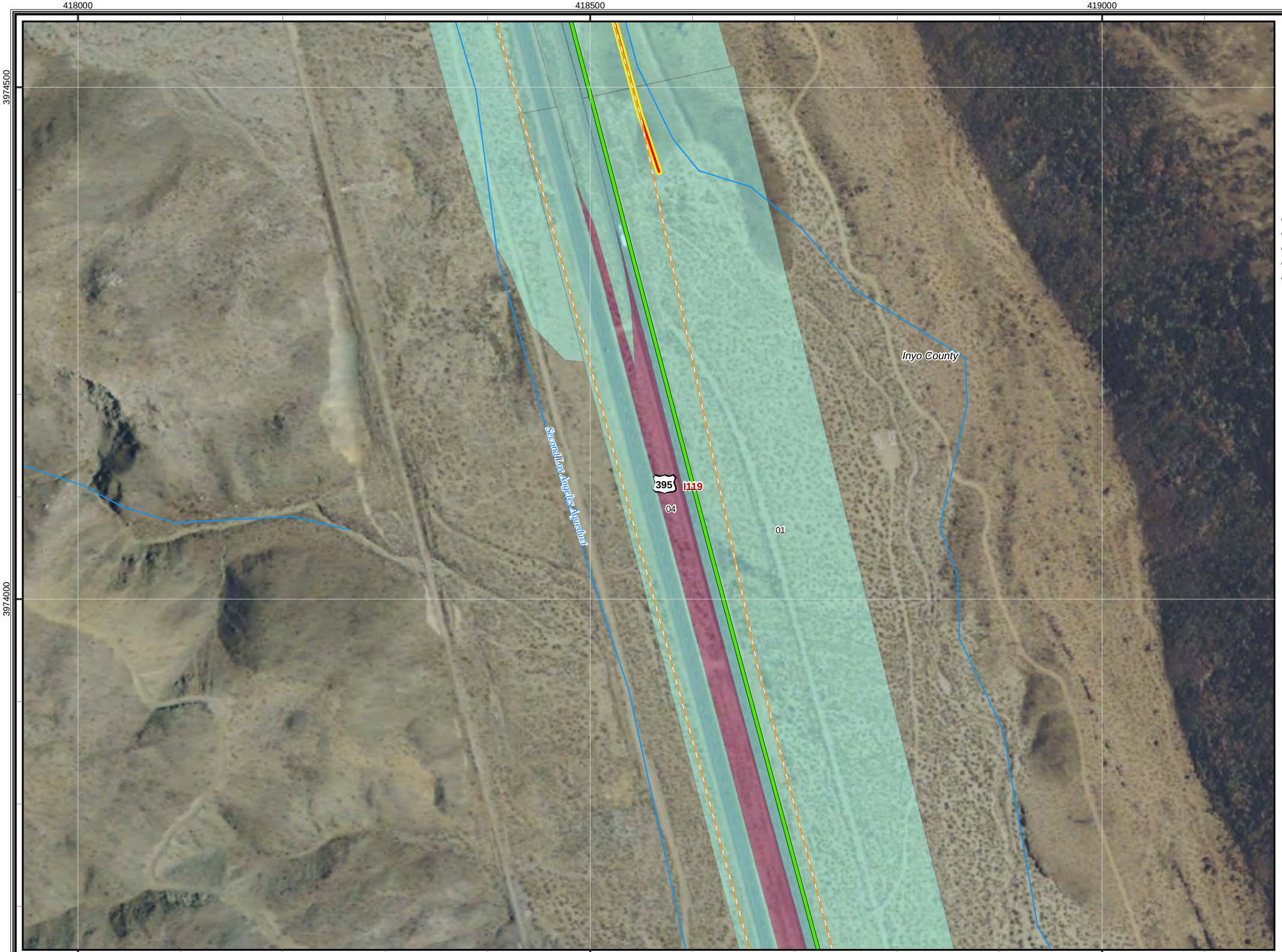
11-03-11
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-237

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

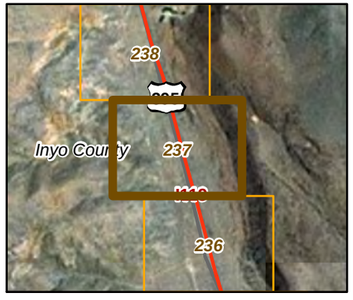
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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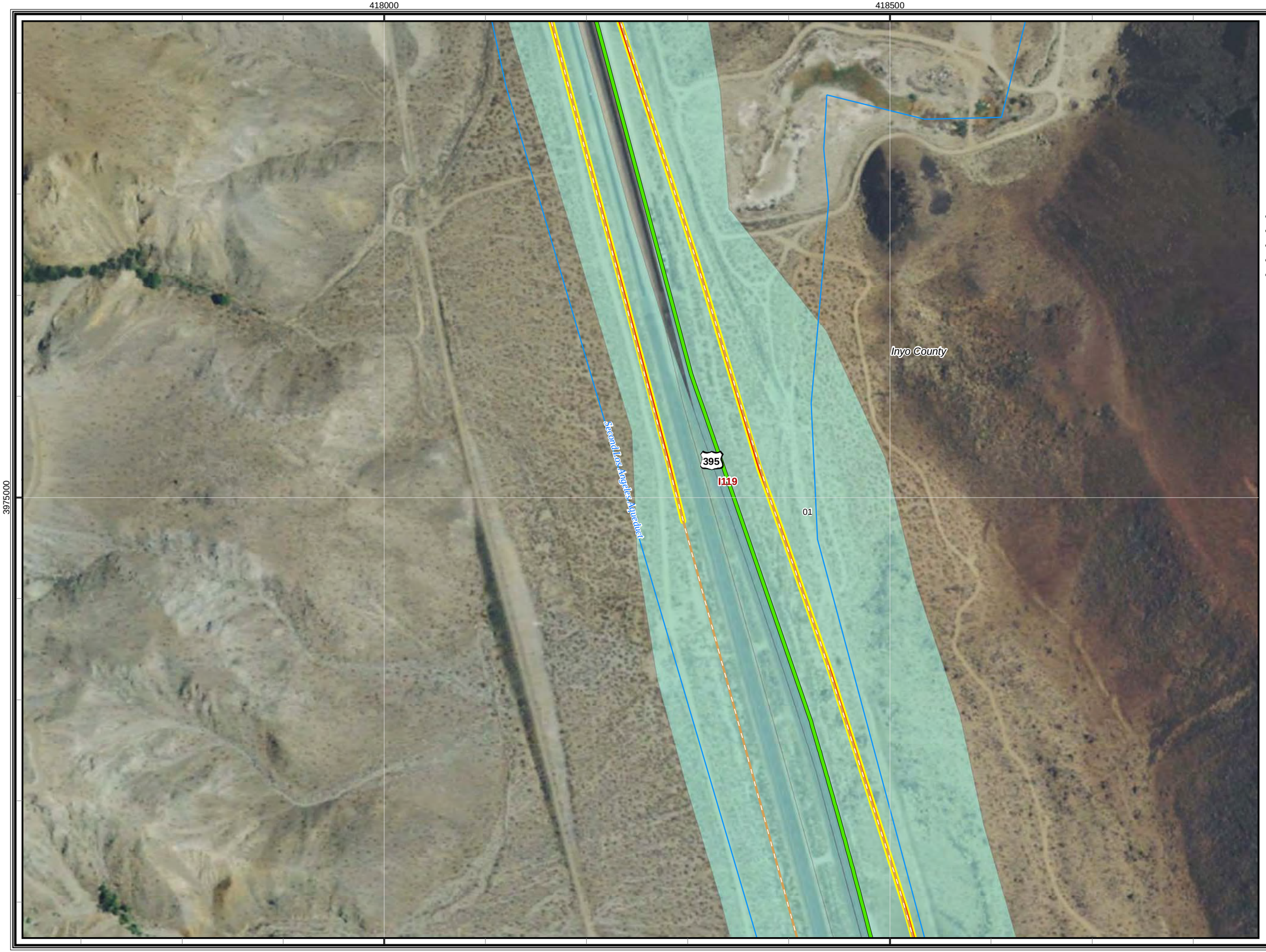
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-238

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

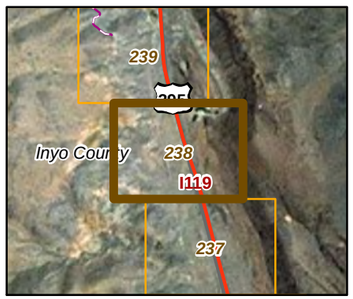
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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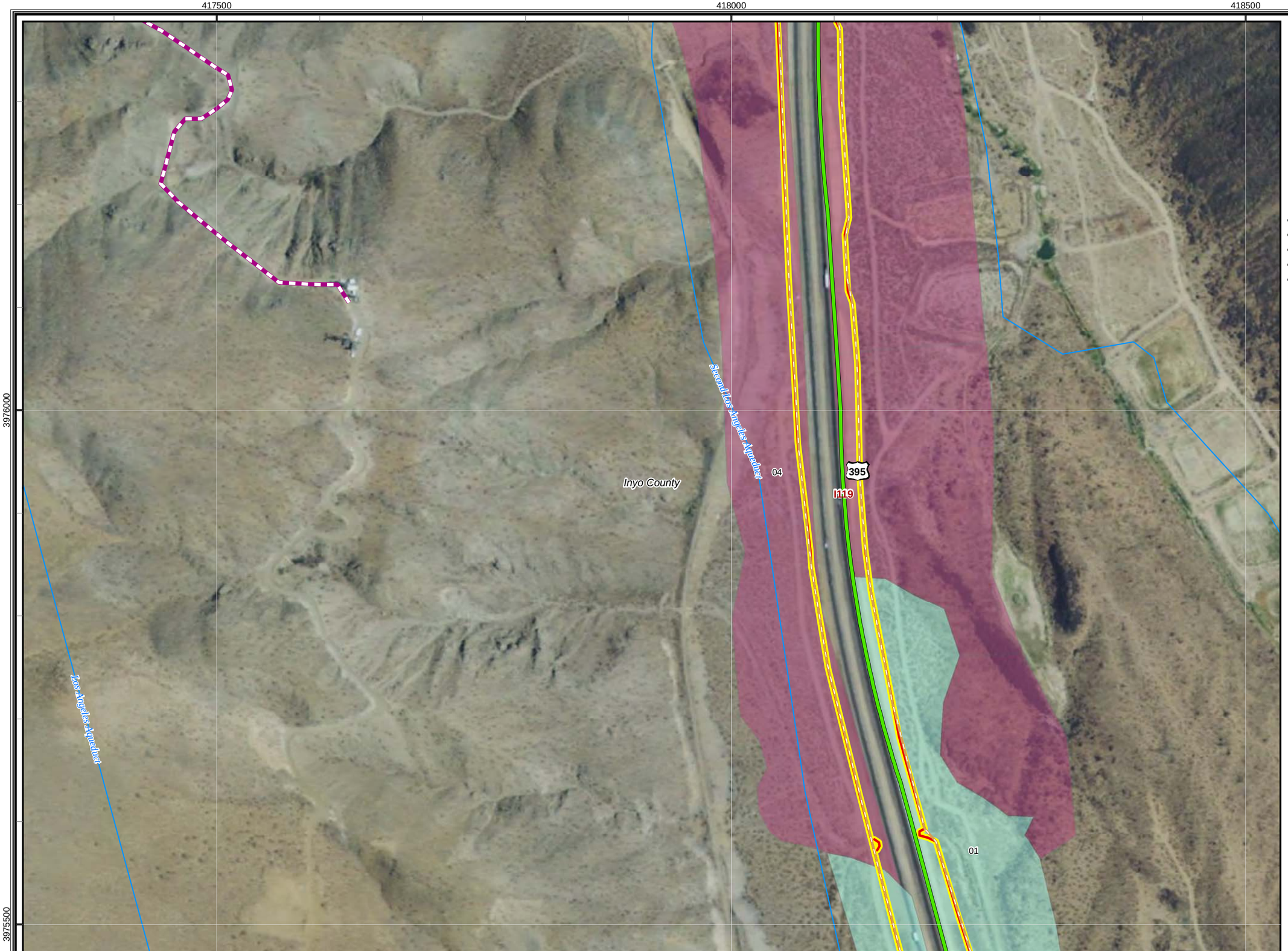
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-239

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

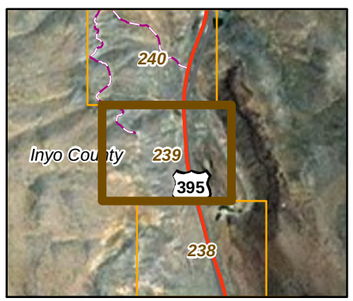
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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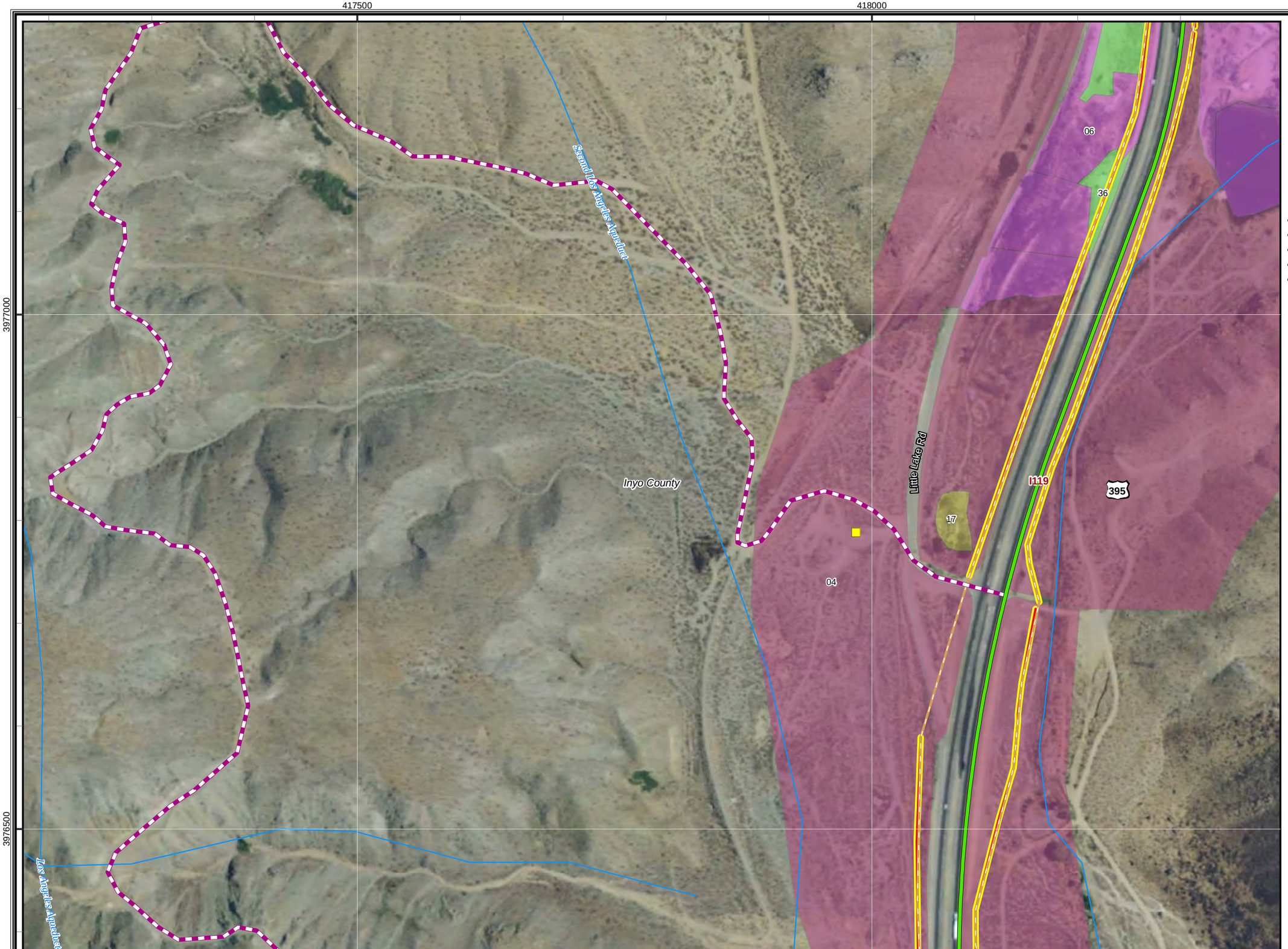


CBC Digital 395

R4-Inyokern to Olancha-240

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

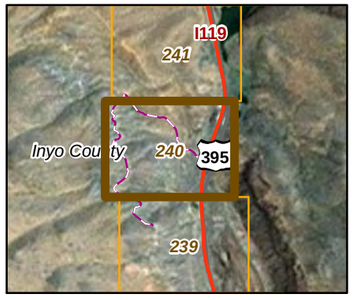
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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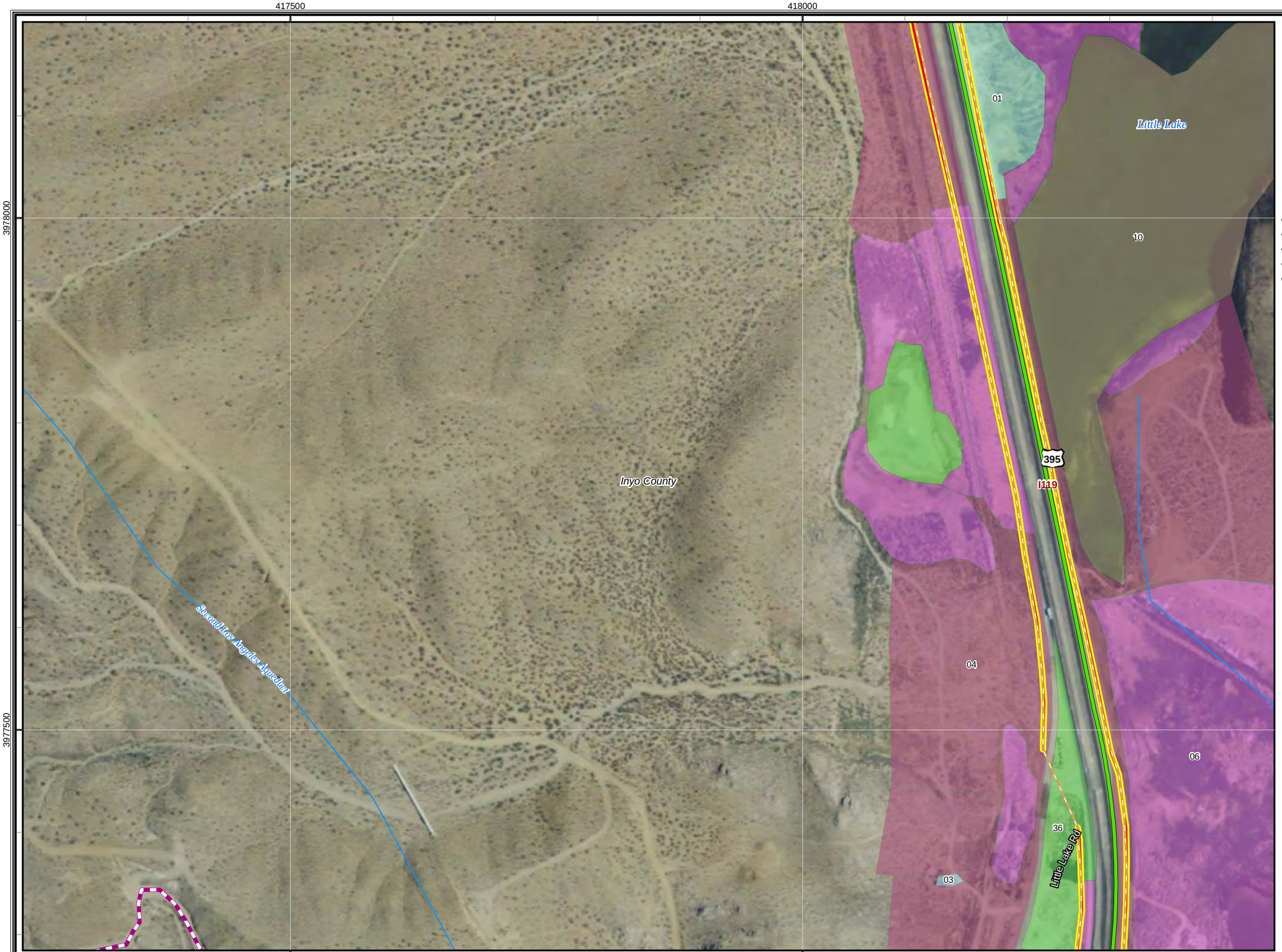
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-241

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

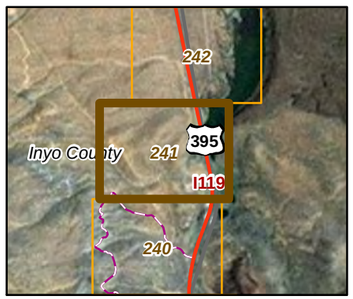
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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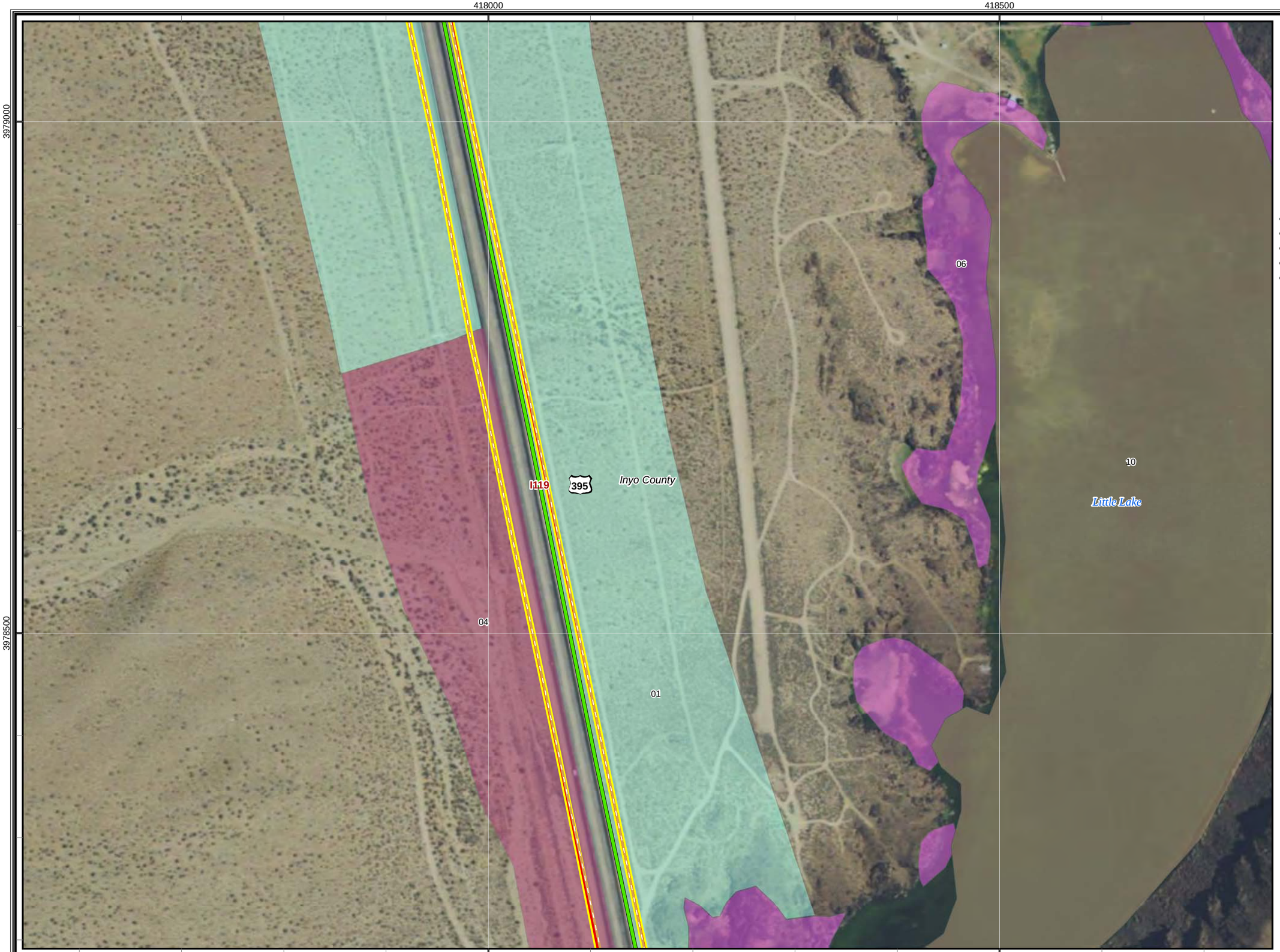


CBC Digital 395

R4-Inyokern to Olancha-242

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

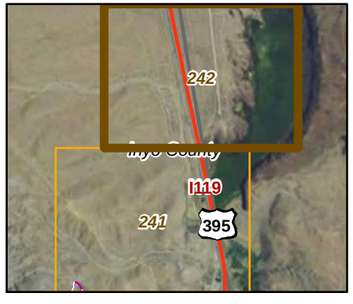
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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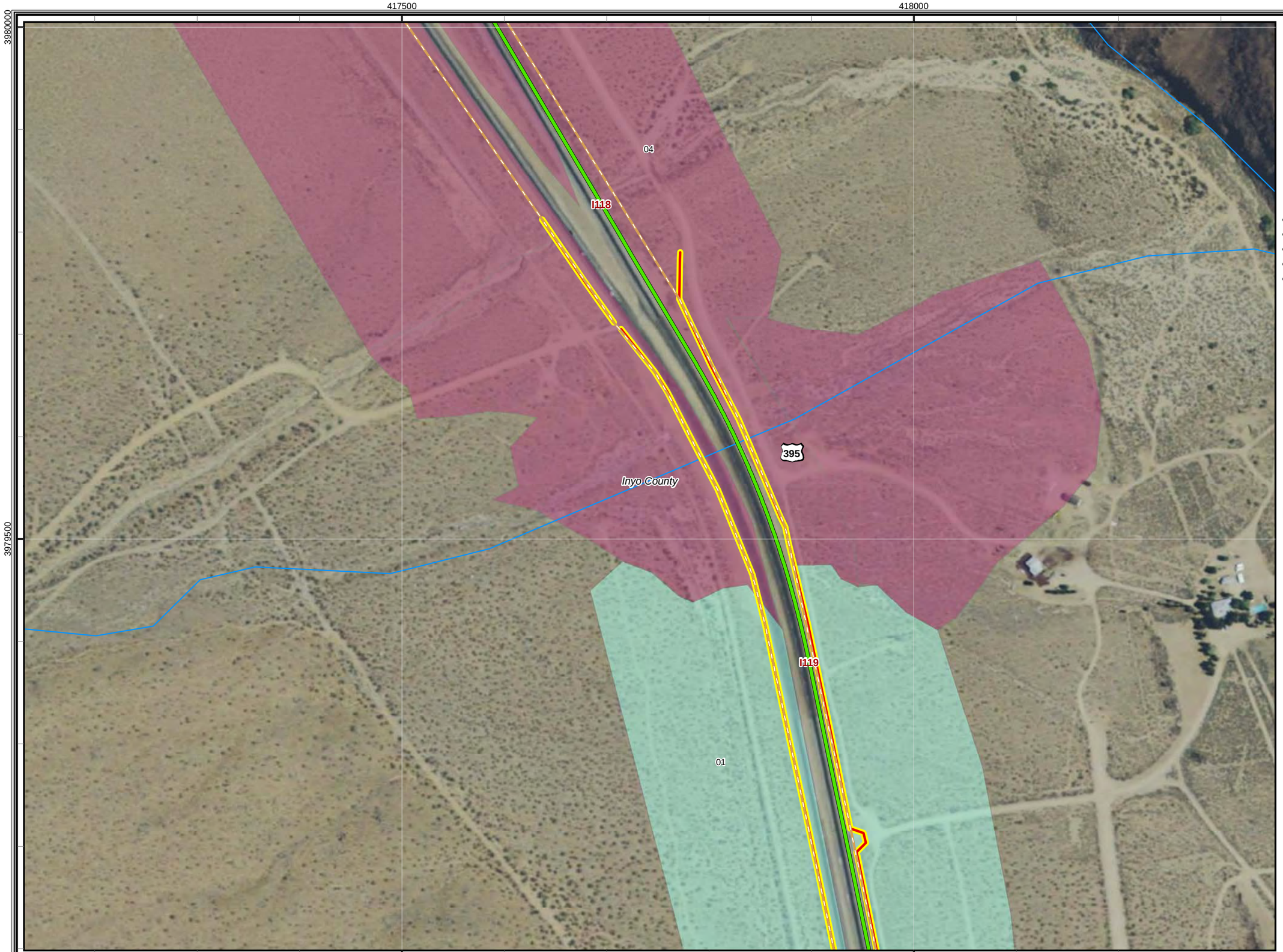


CBC Digital 395

R4-Inyokern to Olancha-243

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

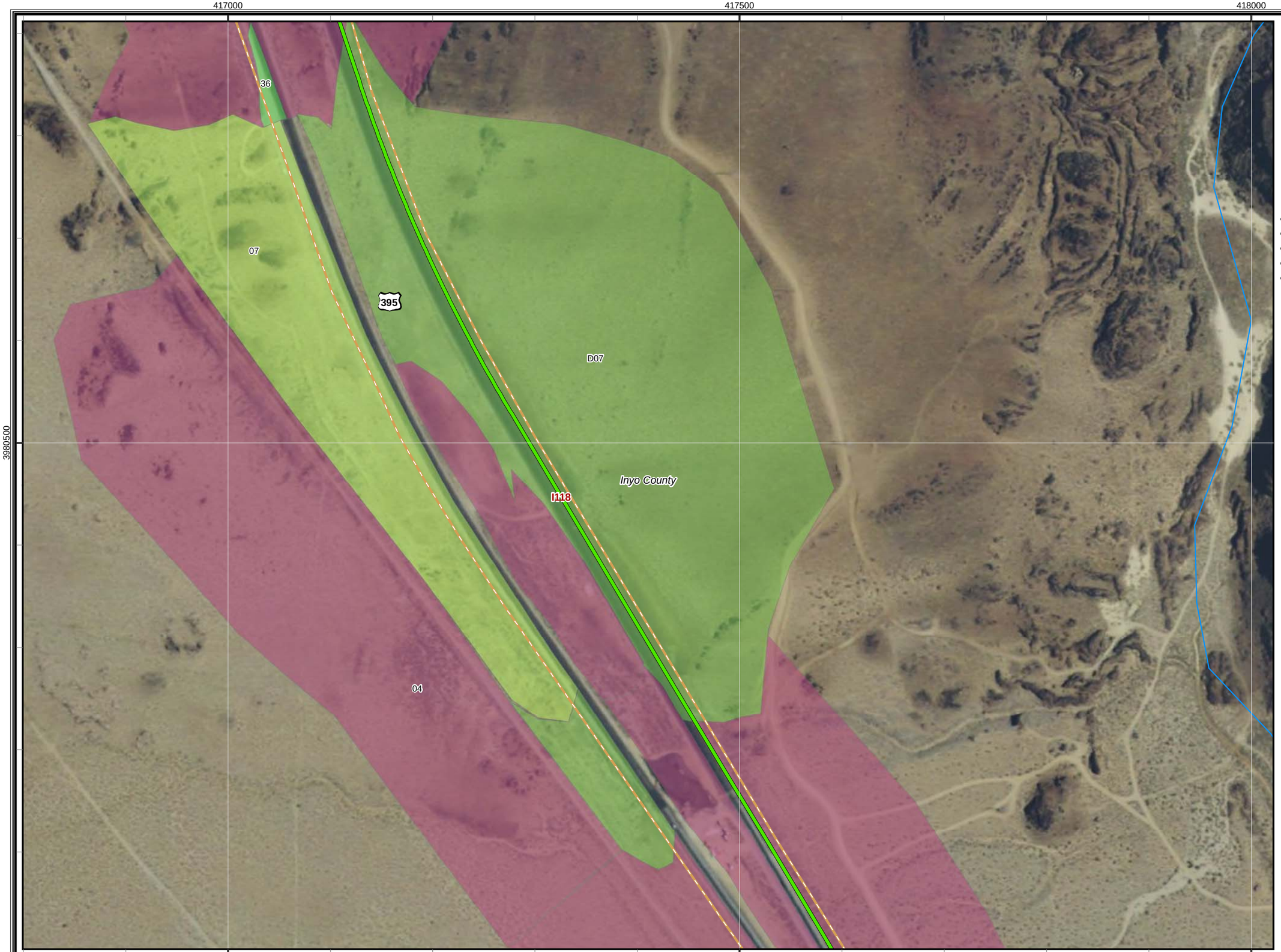
1:3,500

0 50 100 200 300
Feet

20260

11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-244

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

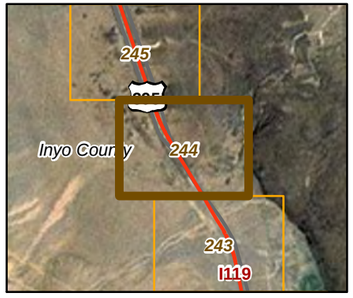
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-245

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

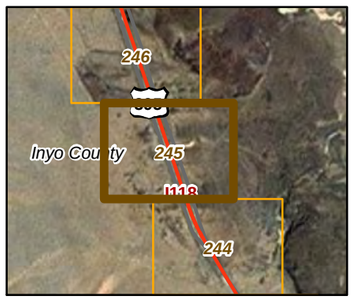
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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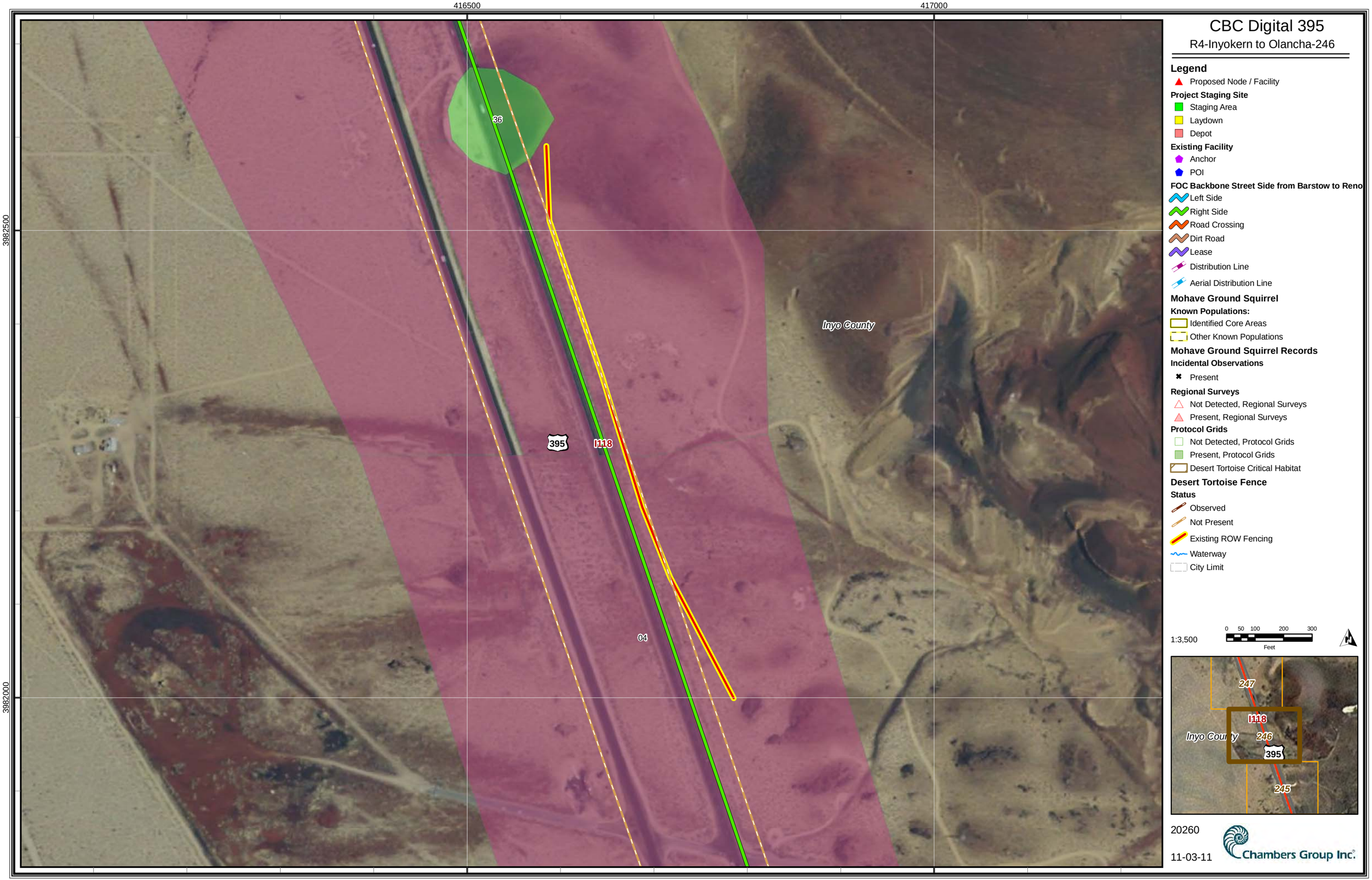
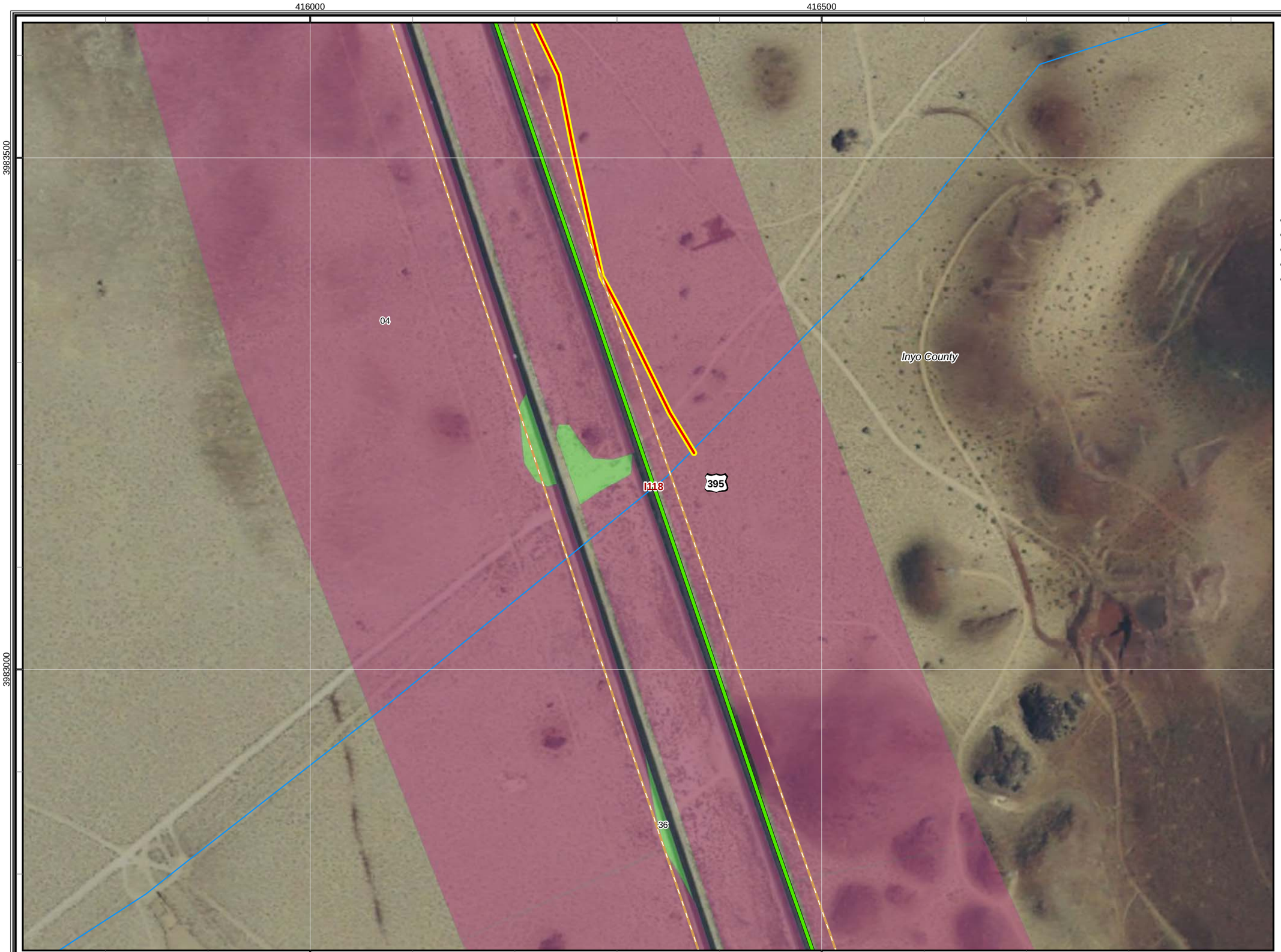

416500
417000
3982500
3982000
36
395
I118
04
Inyo County
CBC Digital 395
R4-Inyokern to Olancha-246
Legend
Proposed Node / Facility
Project Staging Site
Staging Area
Laydown
Depot
Existing Facility
Anchor
POI
FOC Backbone Street Side from Barstow to Reno
Left Side
Right Side
Road Crossing
Dirt Road
Lease
Distribution Line
Aerial Distribution Line
Mohave Ground Squirrel
Known Populations:
Identified Core Areas
Other Known Populations
Mohave Ground Squirrel Records
Incidental Observations
Present
Regional Surveys
Not Detected, Regional Surveys
Present, Regional Surveys
Protocol Grids
Not Detected, Protocol Grids
Present, Protocol Grids
Desert Tortoise Critical Habitat
Desert Tortoise Fence
Status
Observed
Not Present
Existing ROW Fencing
Waterway
City Limit
1:3,500
0 50 100 200 300
Feet
247
I118
Inyo County
246
395
245
20260
11-03-11
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-247

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

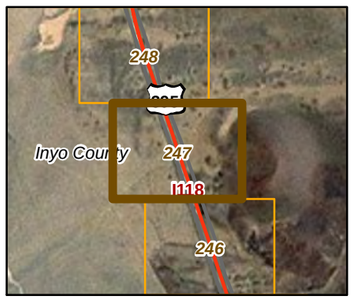
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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11-03-11

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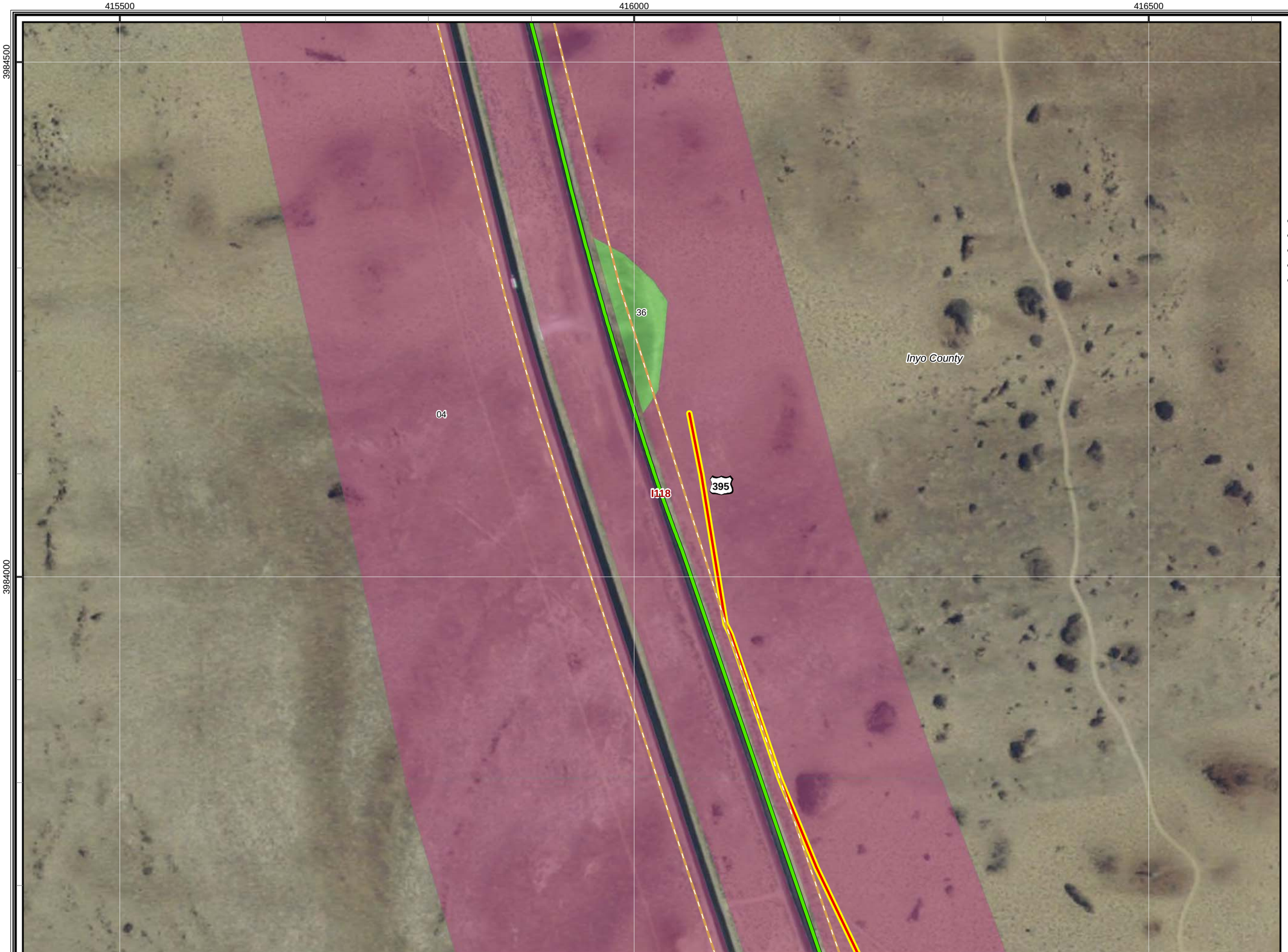
CBC Digital 395

R4-Inyokern to Olancha-248



Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

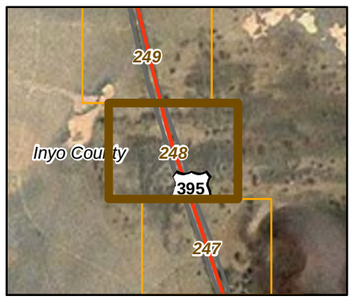
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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11-03-11

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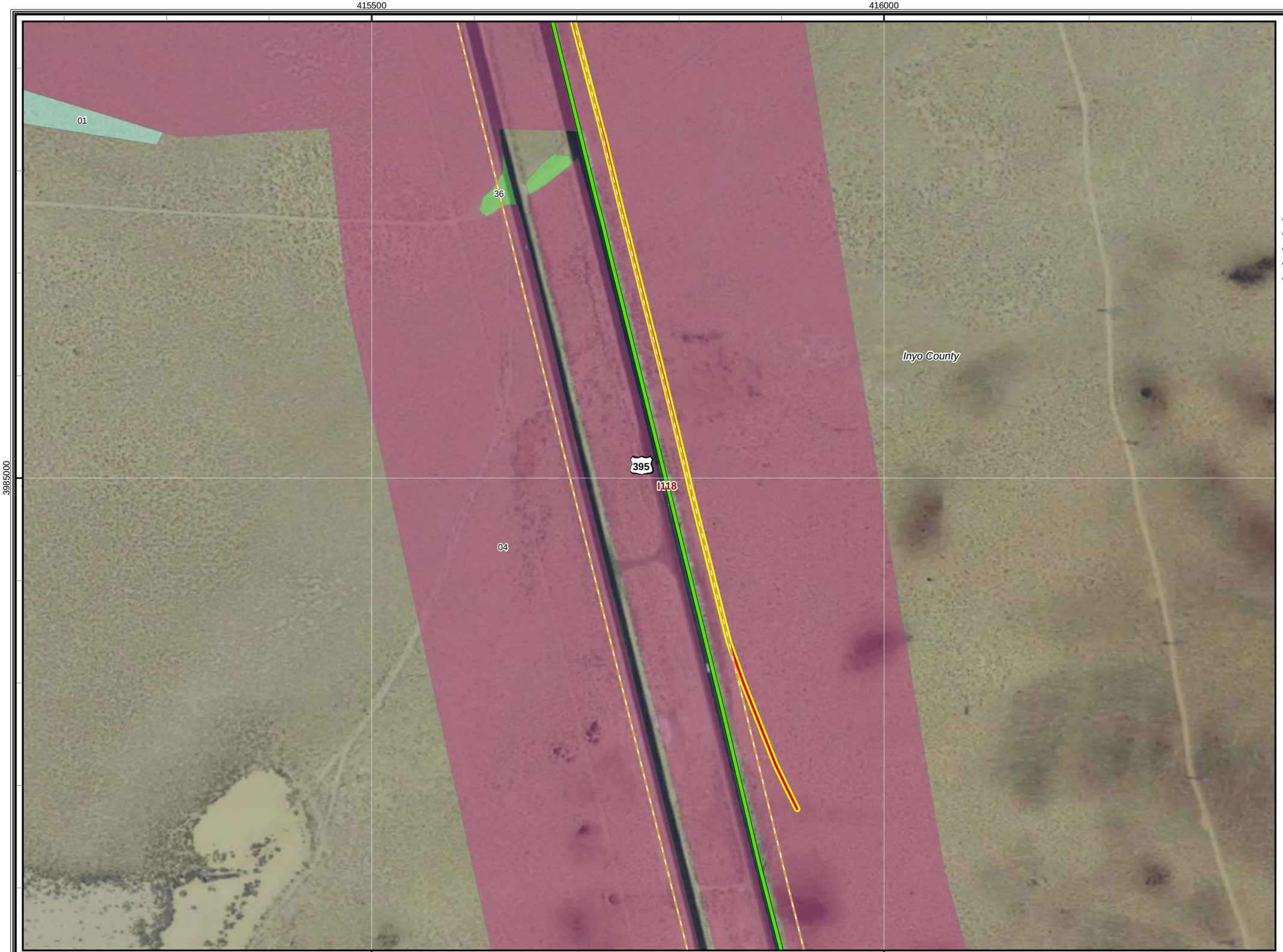


CBC Digital 395

R4-Inyokern to Olancha-249

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

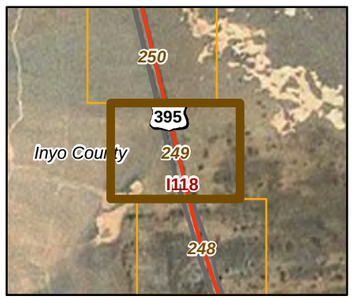
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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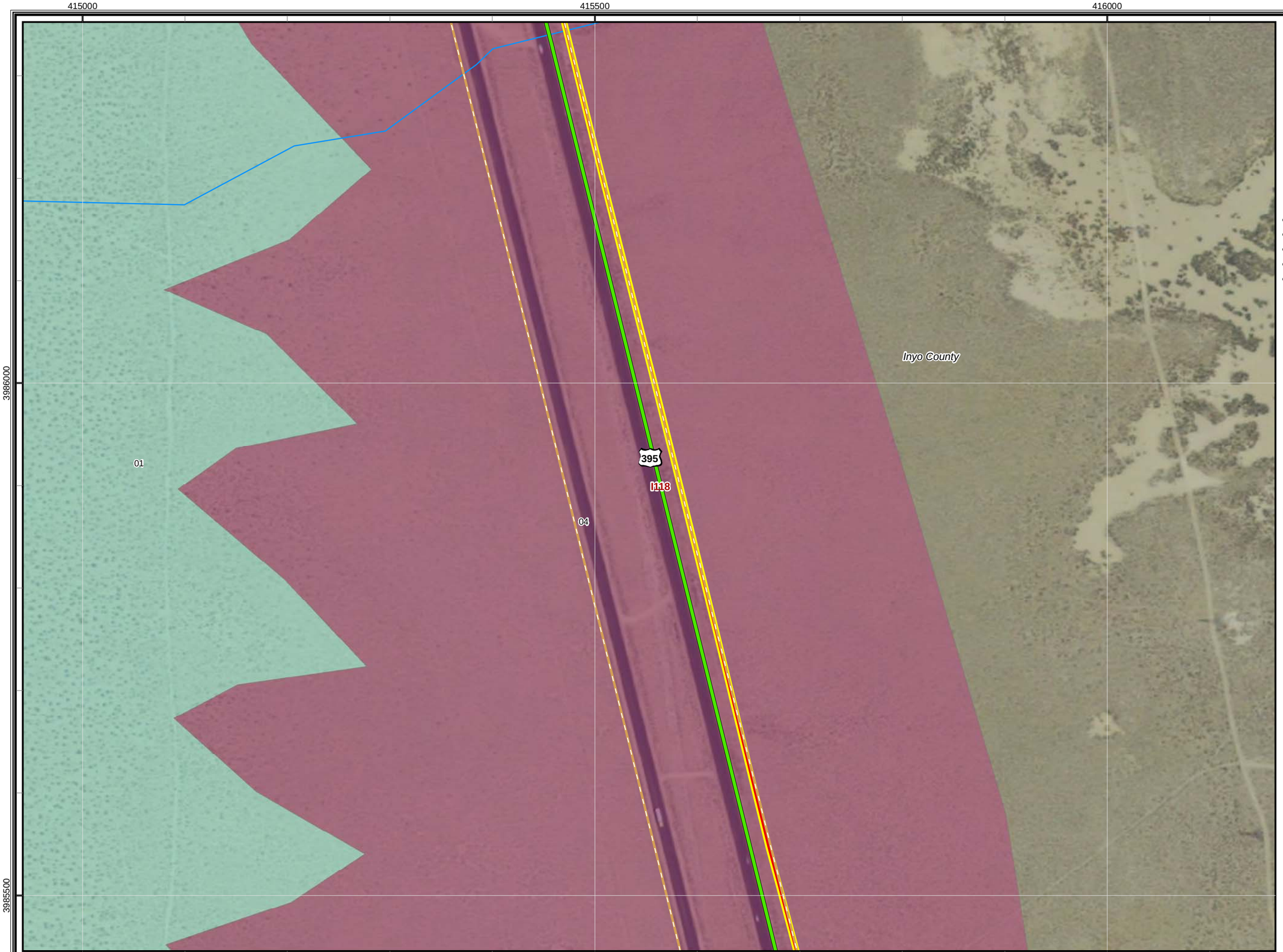
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-250

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

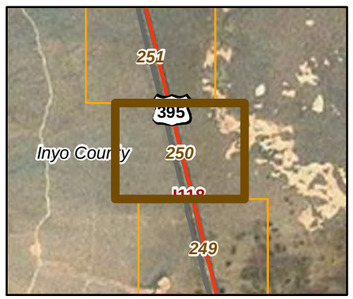
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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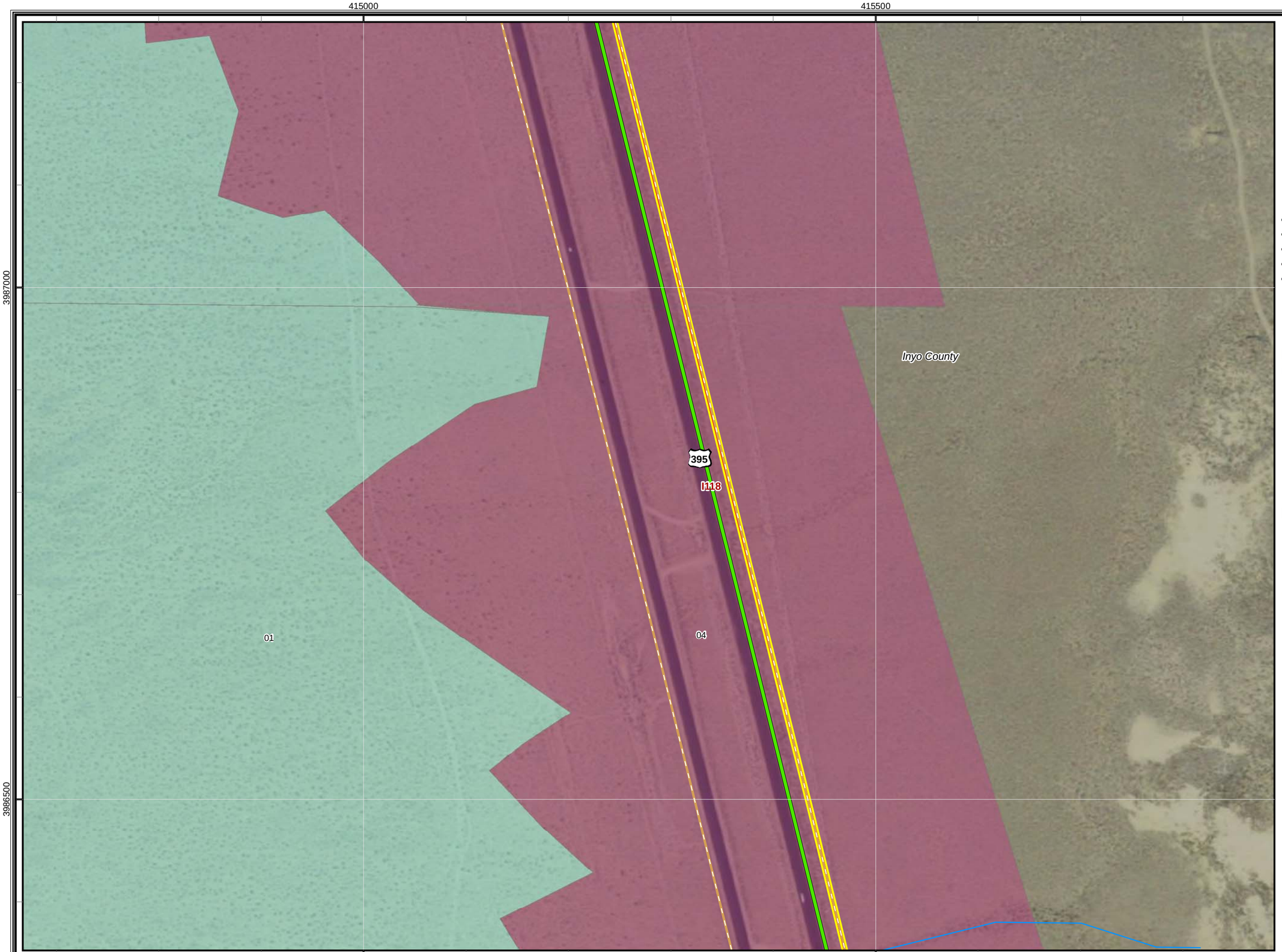
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-251

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

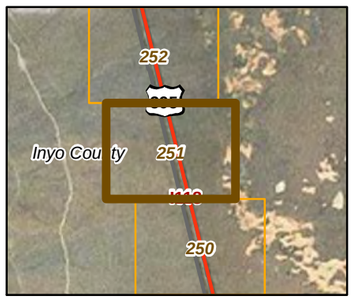
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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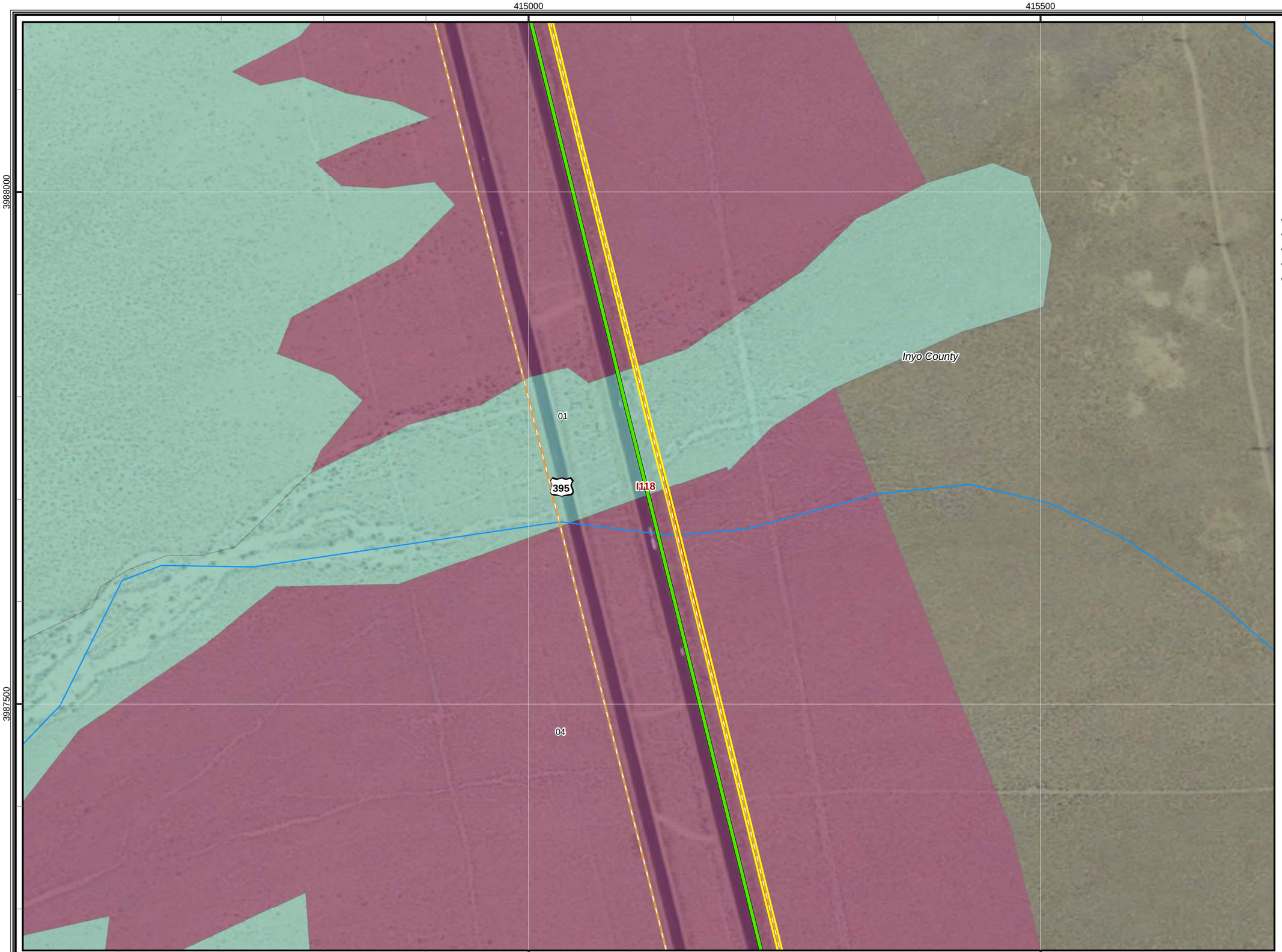


CBC Digital 395

R4-Inyokern to Olancha-252

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

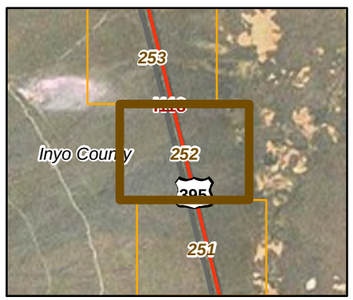
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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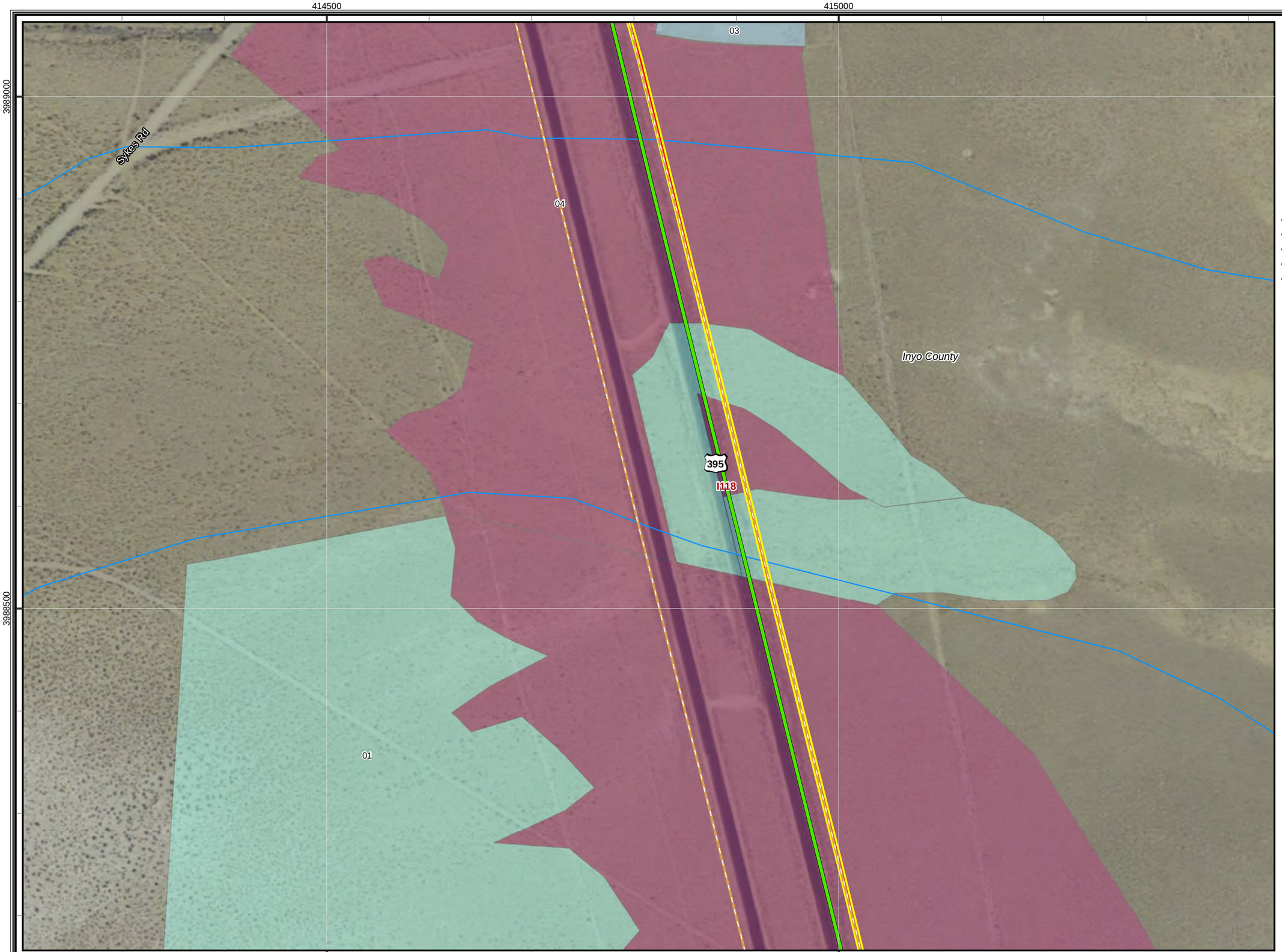
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-253

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

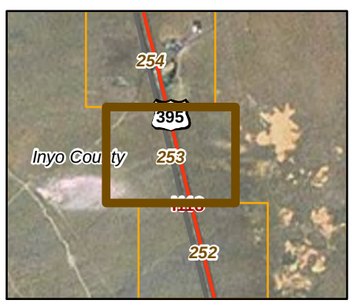
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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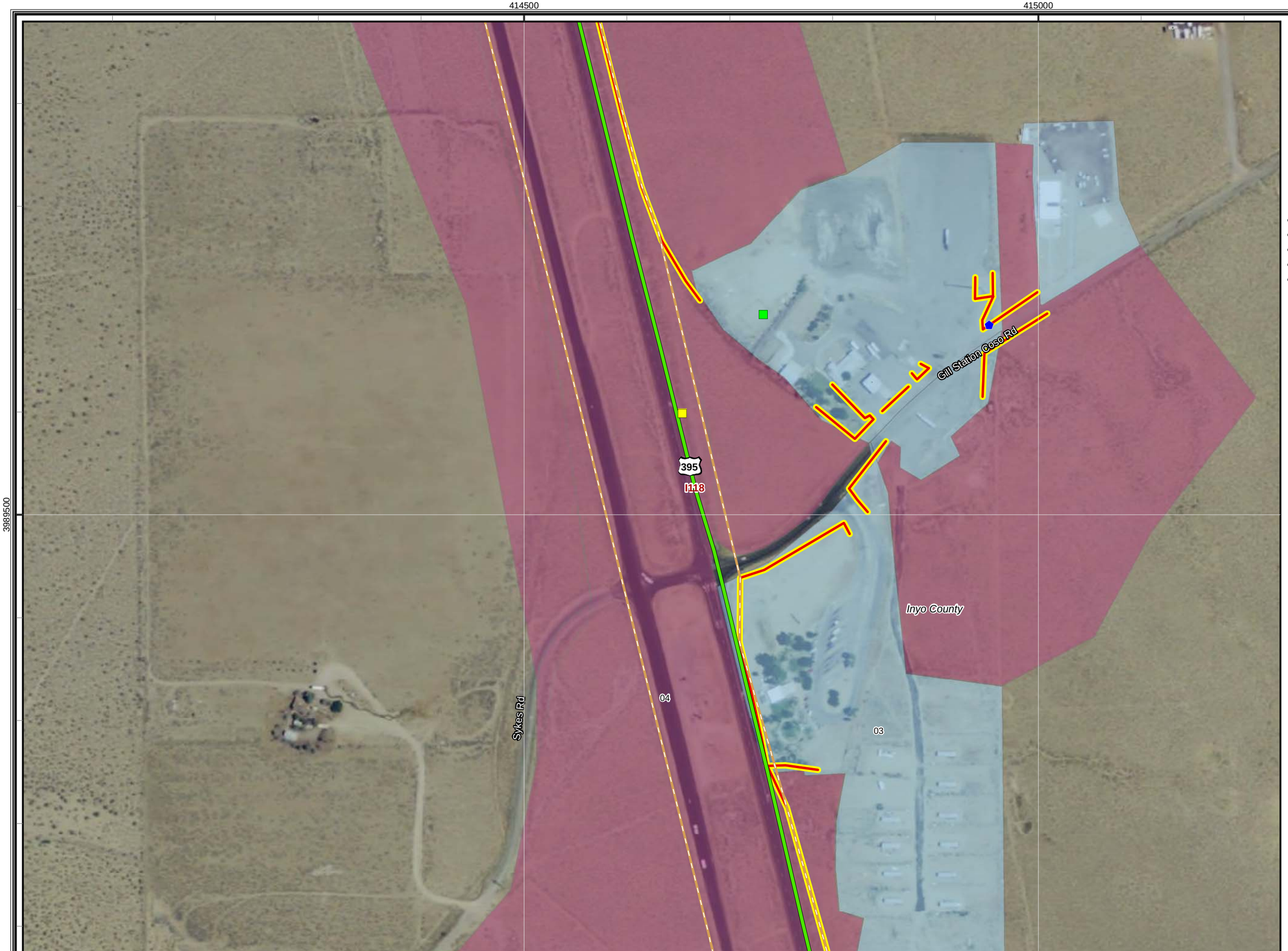
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-254

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

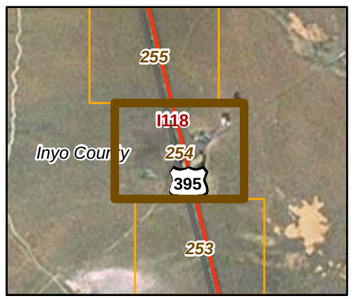
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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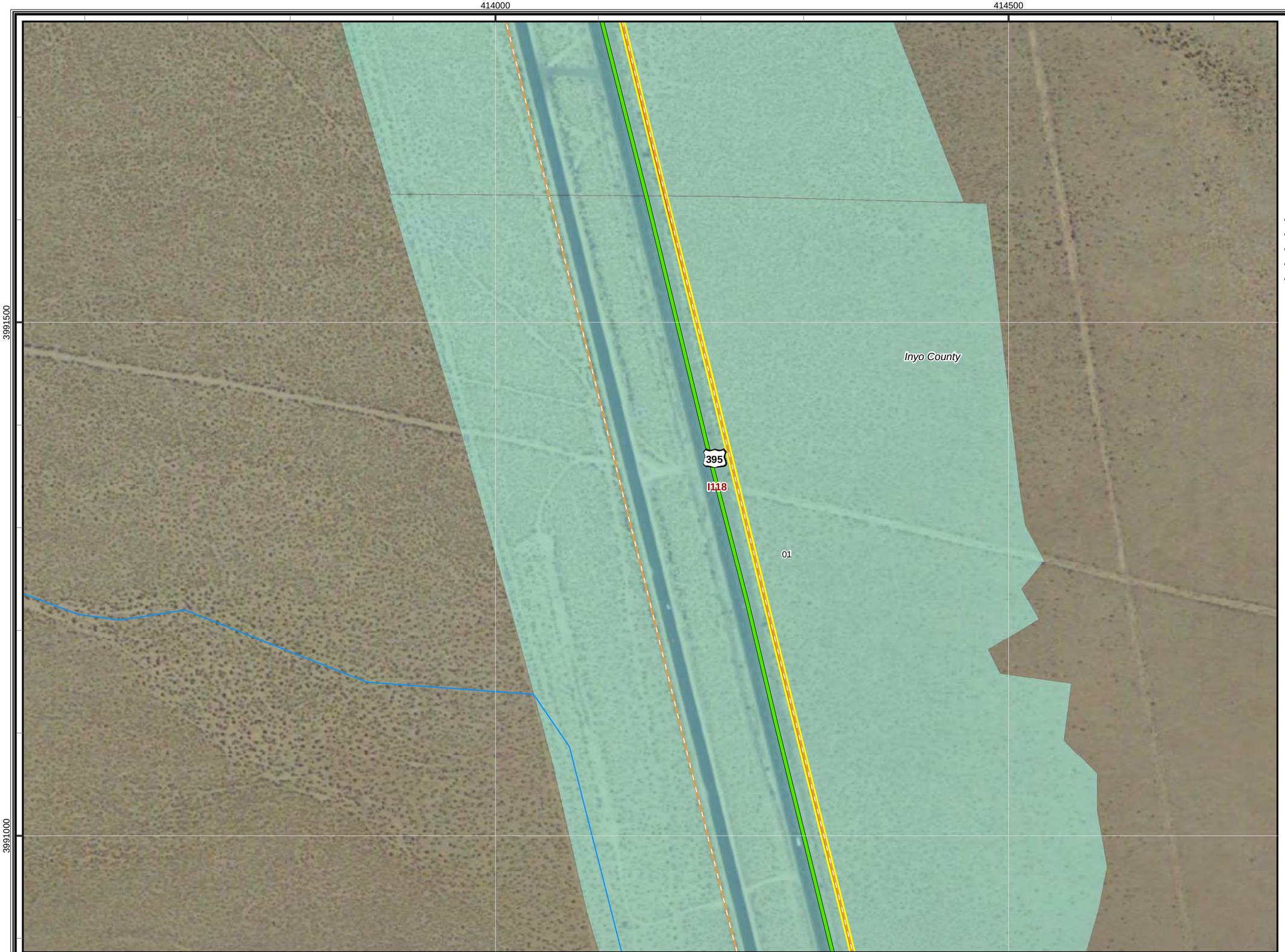
414000
414500
3990500
3990000
01
04
395
I118
Inyo County
CBC Digital 395
R4-Inyokern to Olancha-255
Legend
Proposed Node / Facility
Project Staging Site
Staging Area
Laydown
Depot
Existing Facility
Anchor
POI
FOC Backbone Street Side from Barstow to Reno
Left Side
Right Side
Road Crossing
Dirt Road
Lease
Distribution Line
Aerial Distribution Line
Mohave Ground Squirrel
Known Populations:
Identified Core Areas
Other Known Populations
Mohave Ground Squirrel Records
Incidental Observations
Present
Regional Surveys
Not Detected, Regional Surveys
Present, Regional Surveys
Protocol Grids
Not Detected, Protocol Grids
Present, Protocol Grids
Desert Tortoise Critical Habitat
Desert Tortoise Fence
Status
Observed
Not Present
Existing ROW Fencing
Waterway
City Limit
1:3,500
0 50 100 200 300
Feet
256
395
Inyo County
255
I118
254
20260
11-03-11
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-256

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

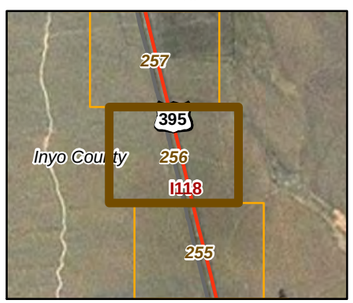
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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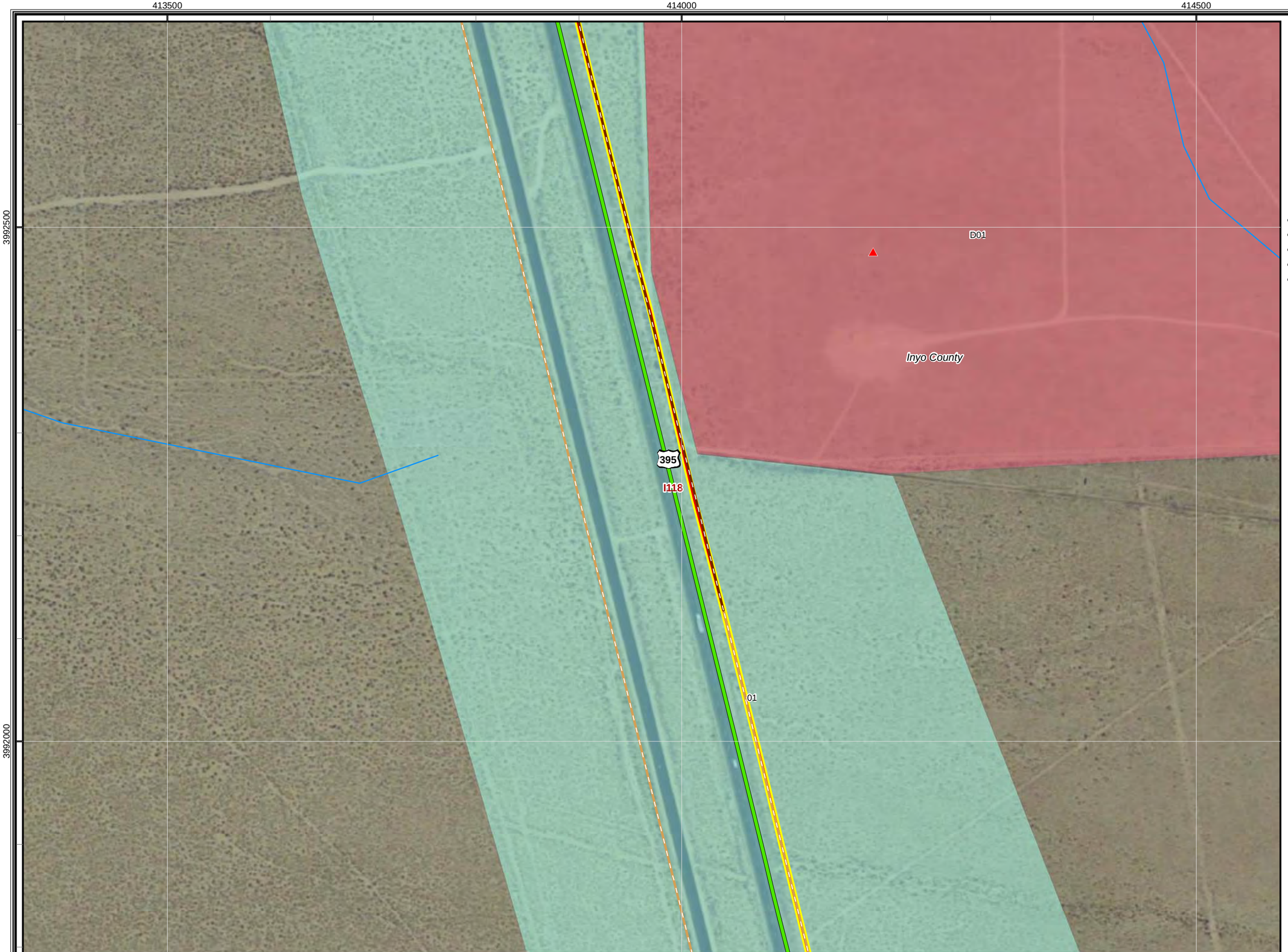


CBC Digital 395

R4-Inyokern to Olancha-257

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

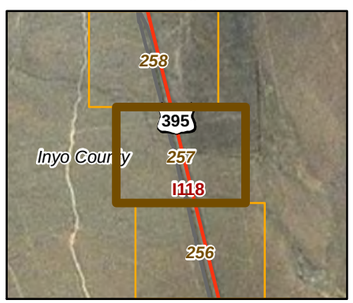
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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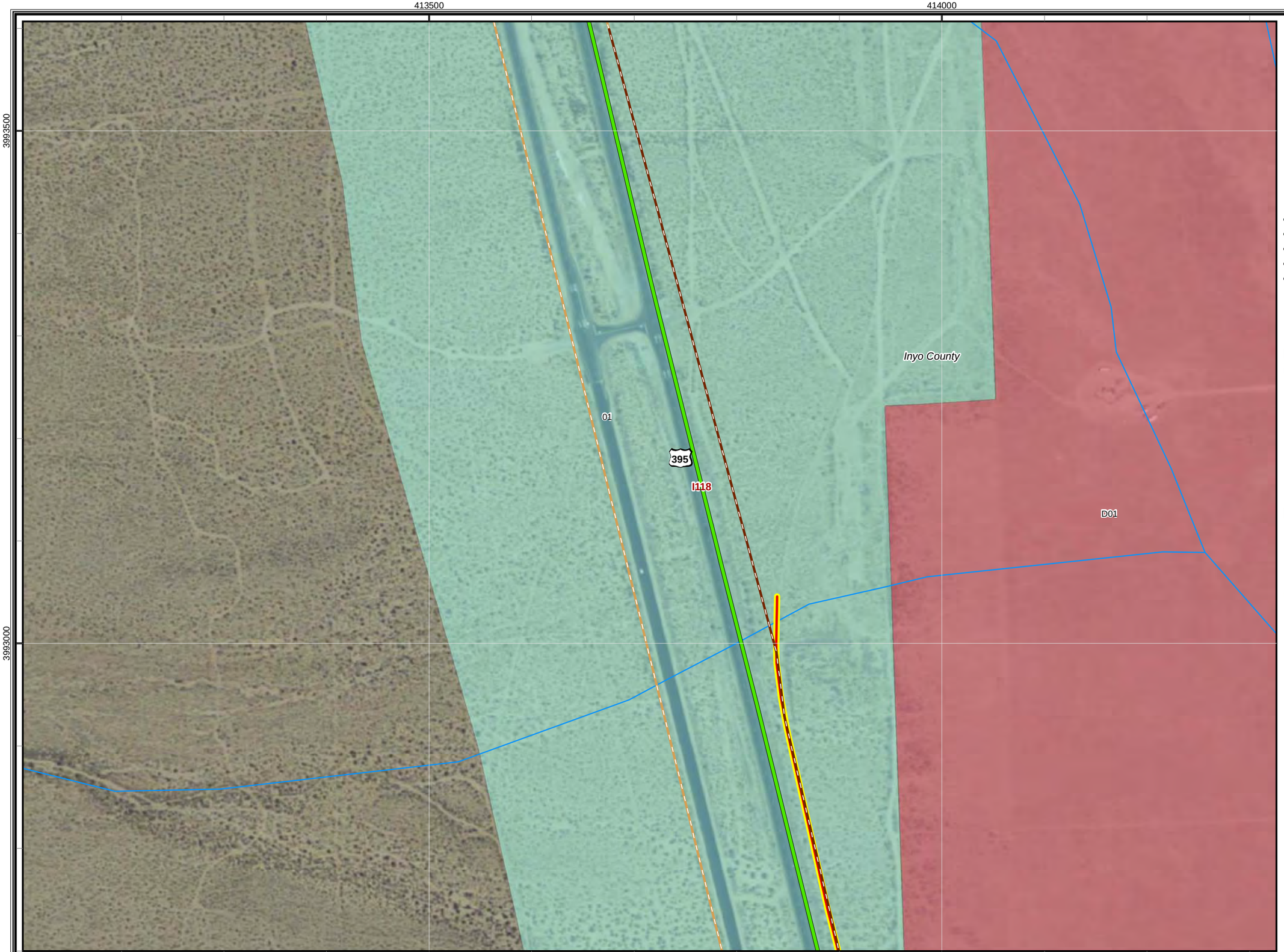


CBC Digital 395

R4-Inyokern to Olancha-258

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

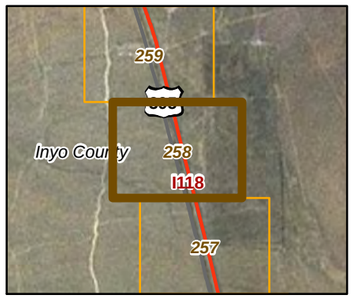
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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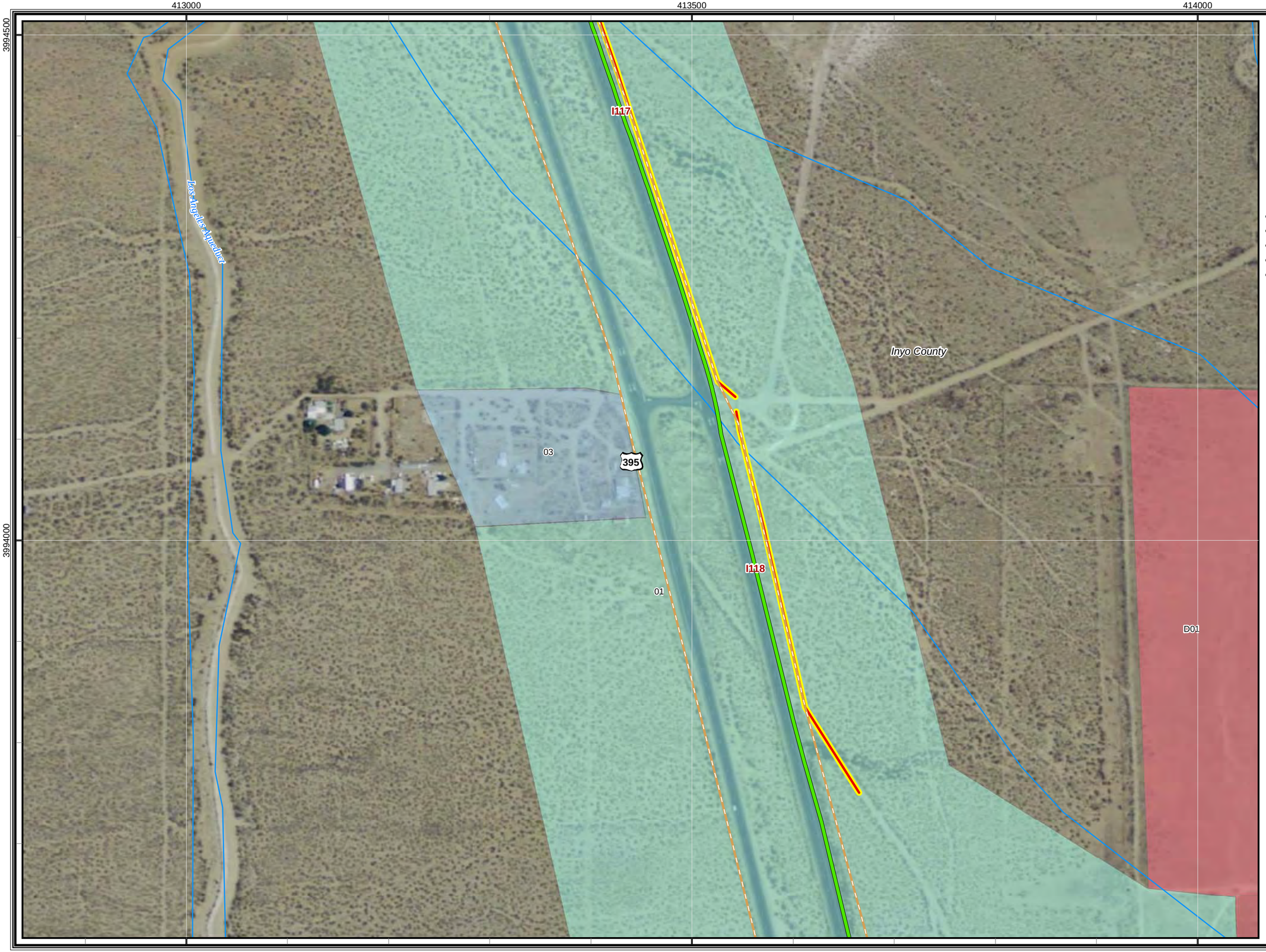


CBC Digital 395

R4-Inyokern to Olancha-259

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

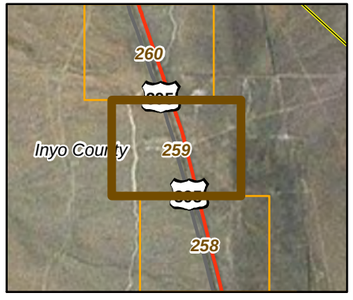
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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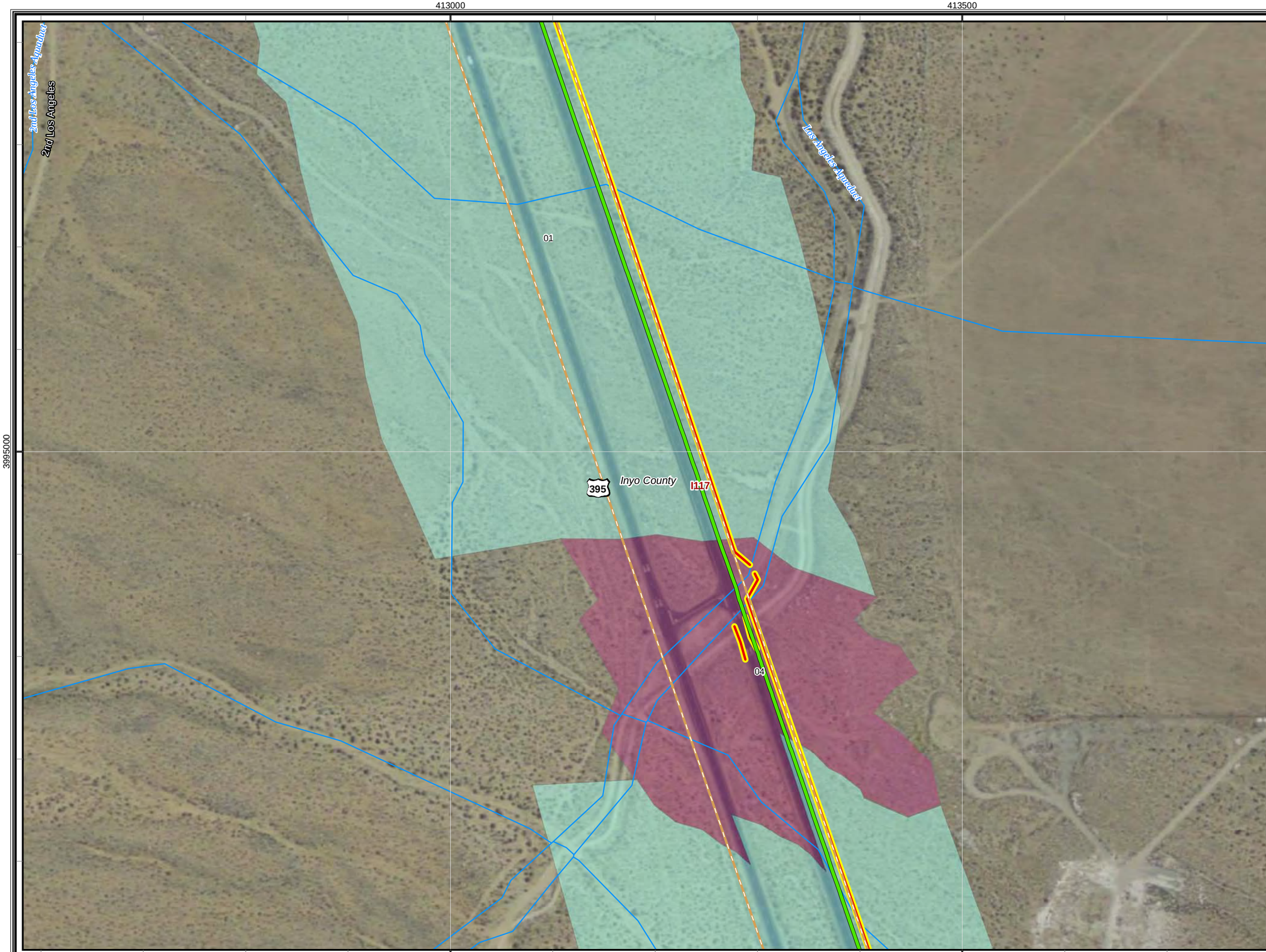

CBC Digital 395

R4-Inyokern to Olancha-260

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet

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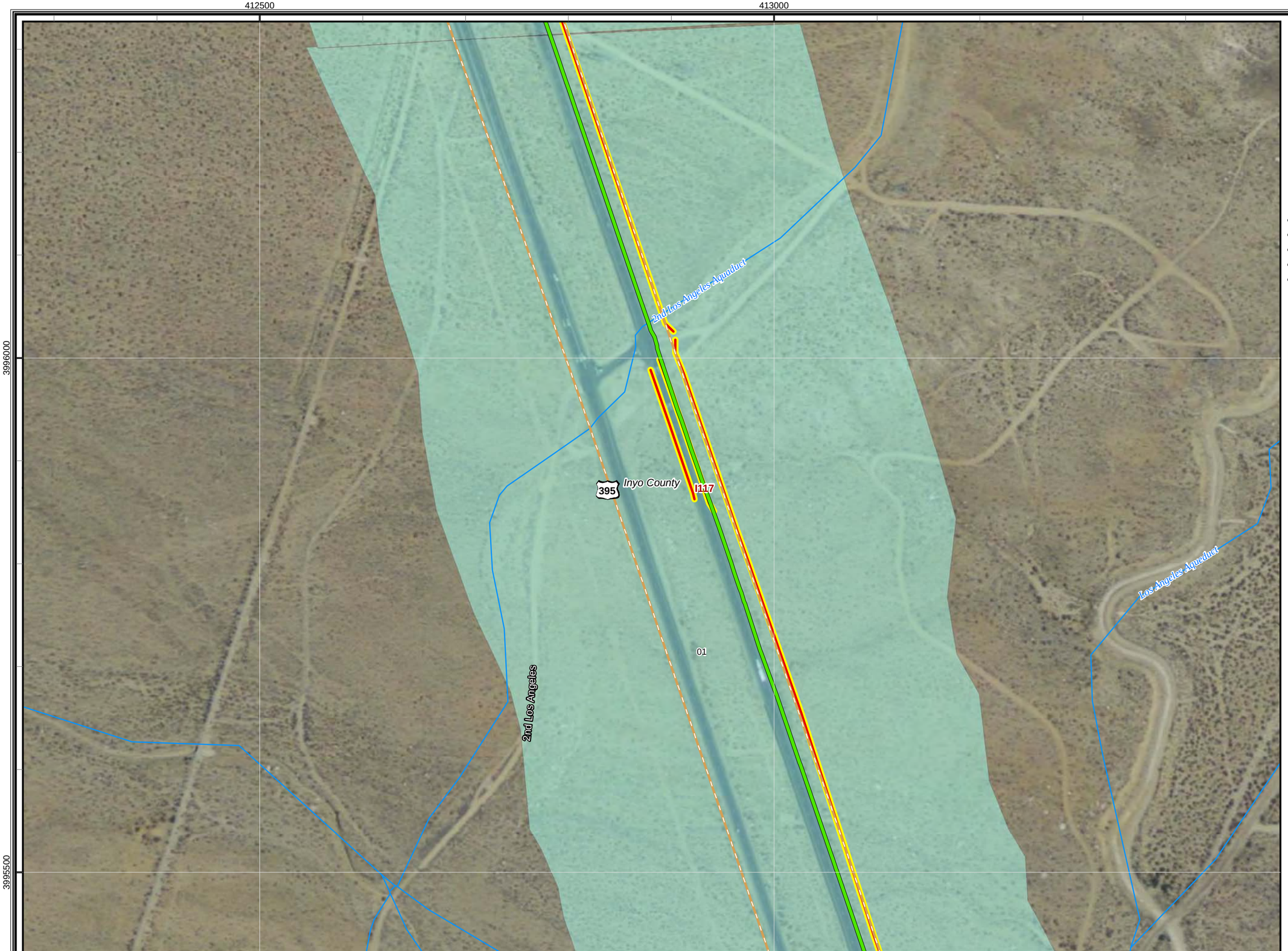
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-261

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

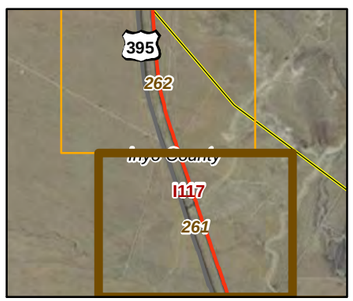
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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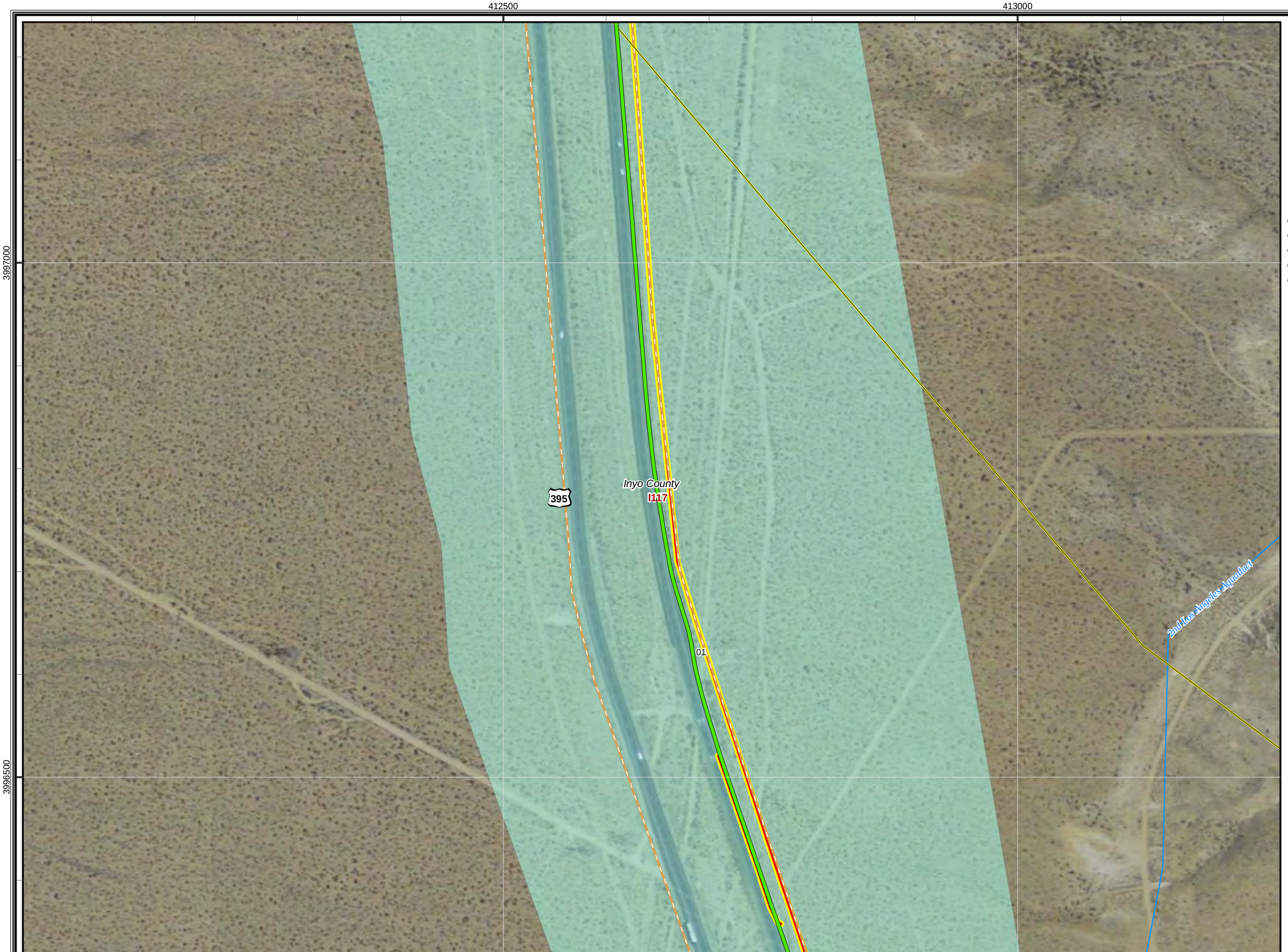


CBC Digital 395

R4-Inyokern to Olancha-262

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

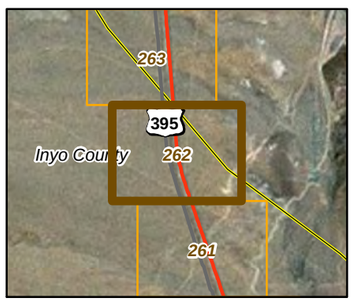
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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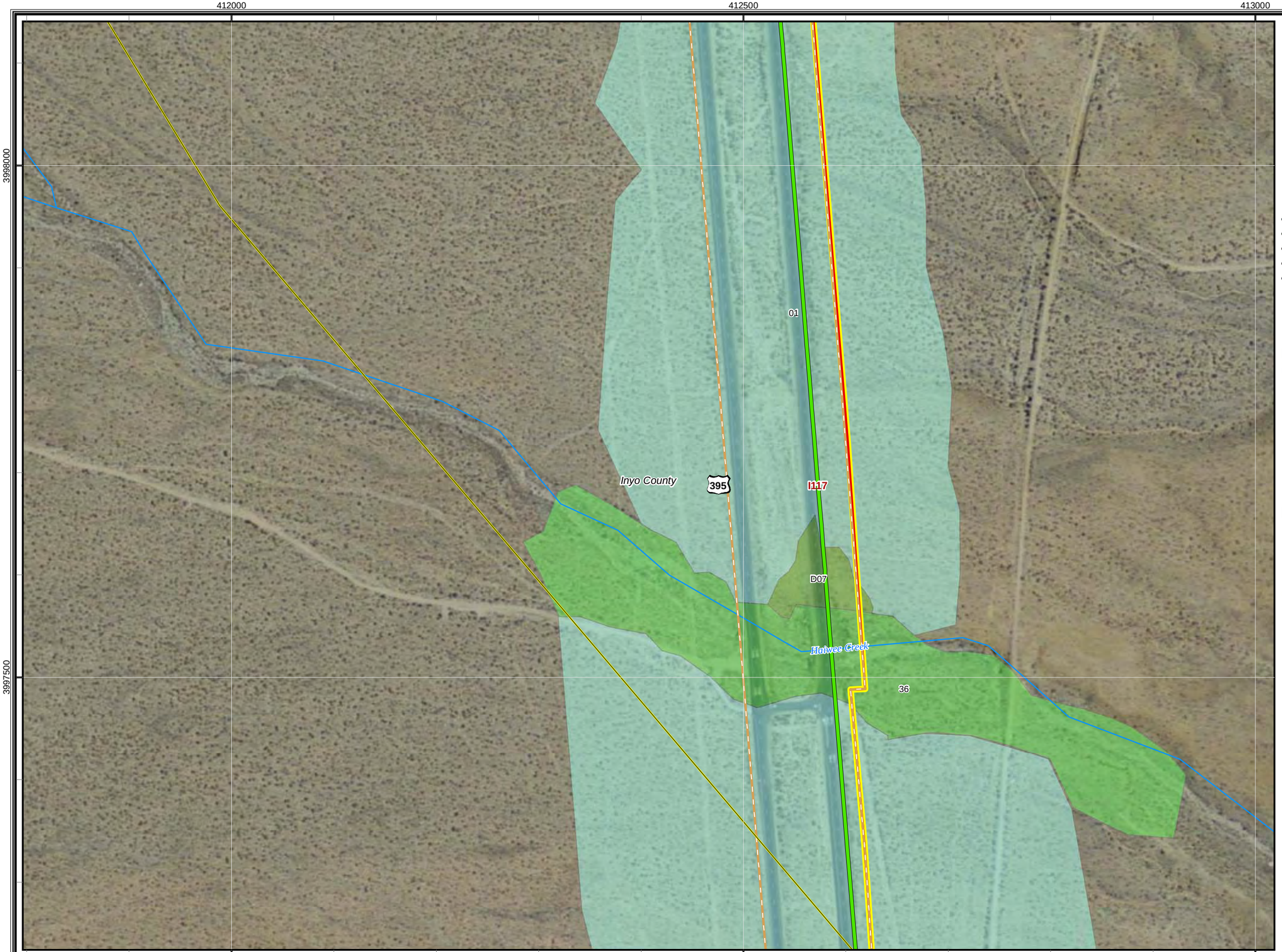


CBC Digital 395

R4-Inyokern to Olancha-263

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

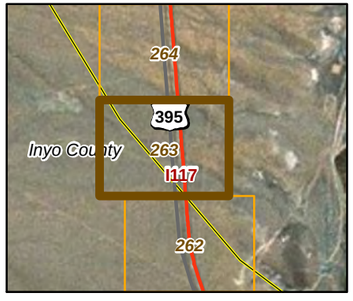
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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R4-Inyokern to Olancha-264

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

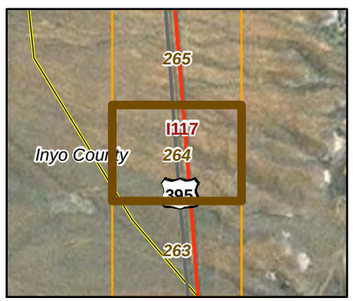
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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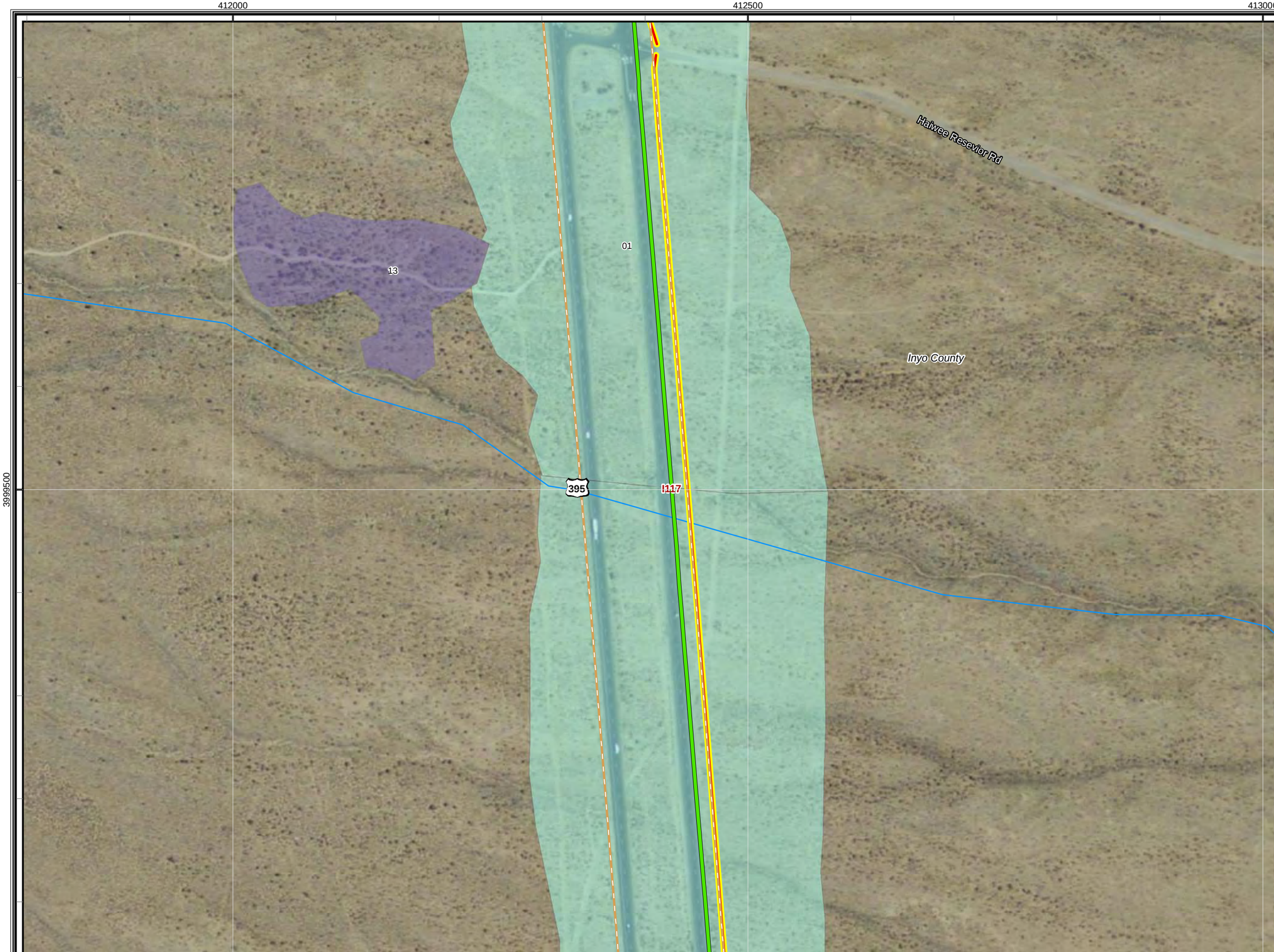


CBC Digital 395

R4-Inyokern to Olancha-265

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

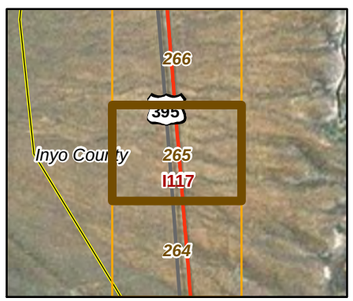
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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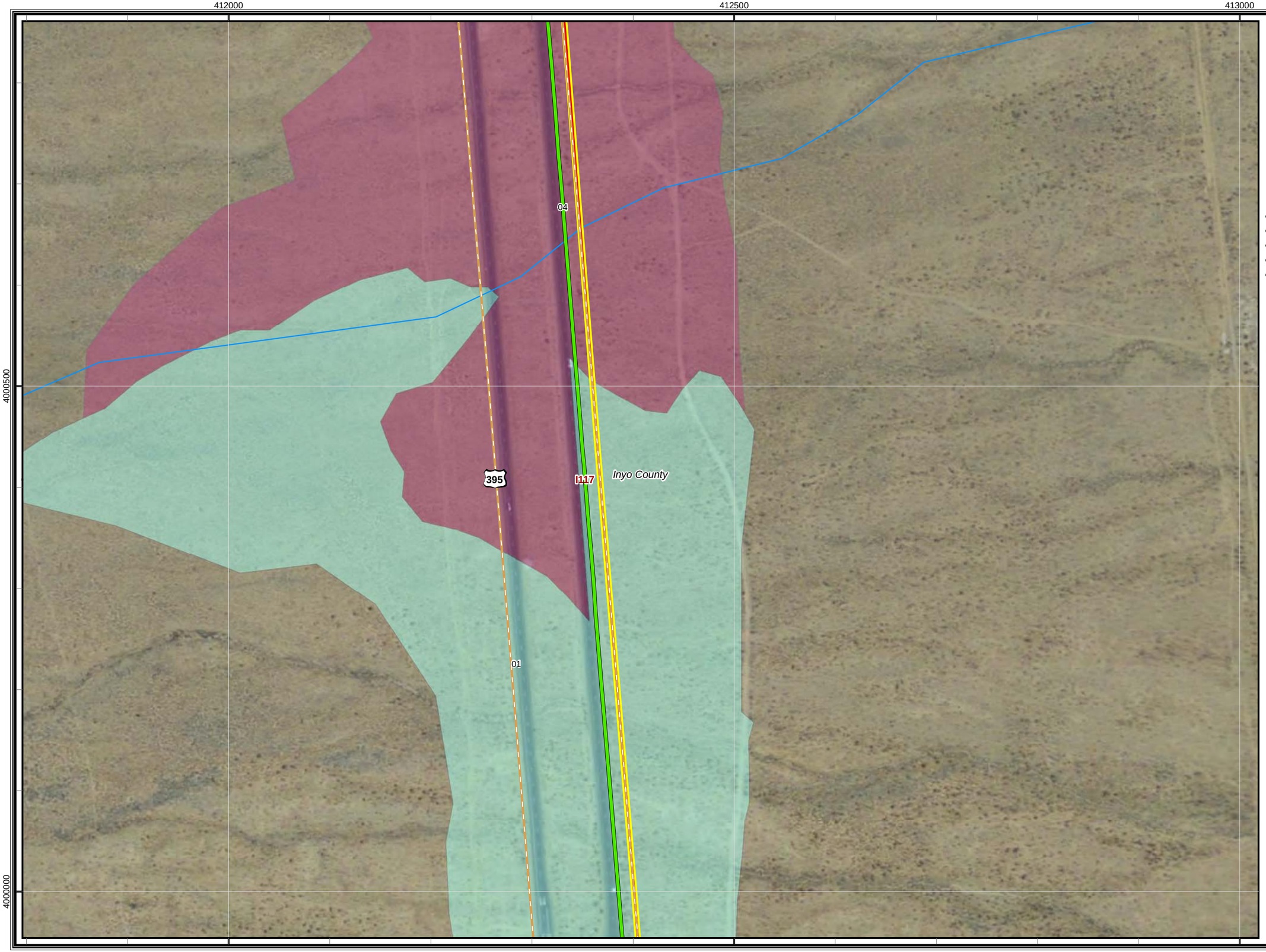


CBC Digital 395

R4-Inyokern to Olancha-266

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

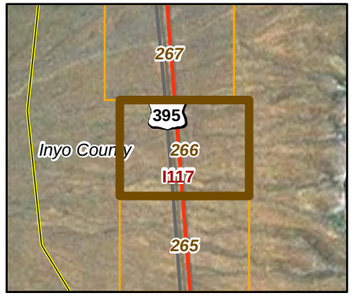
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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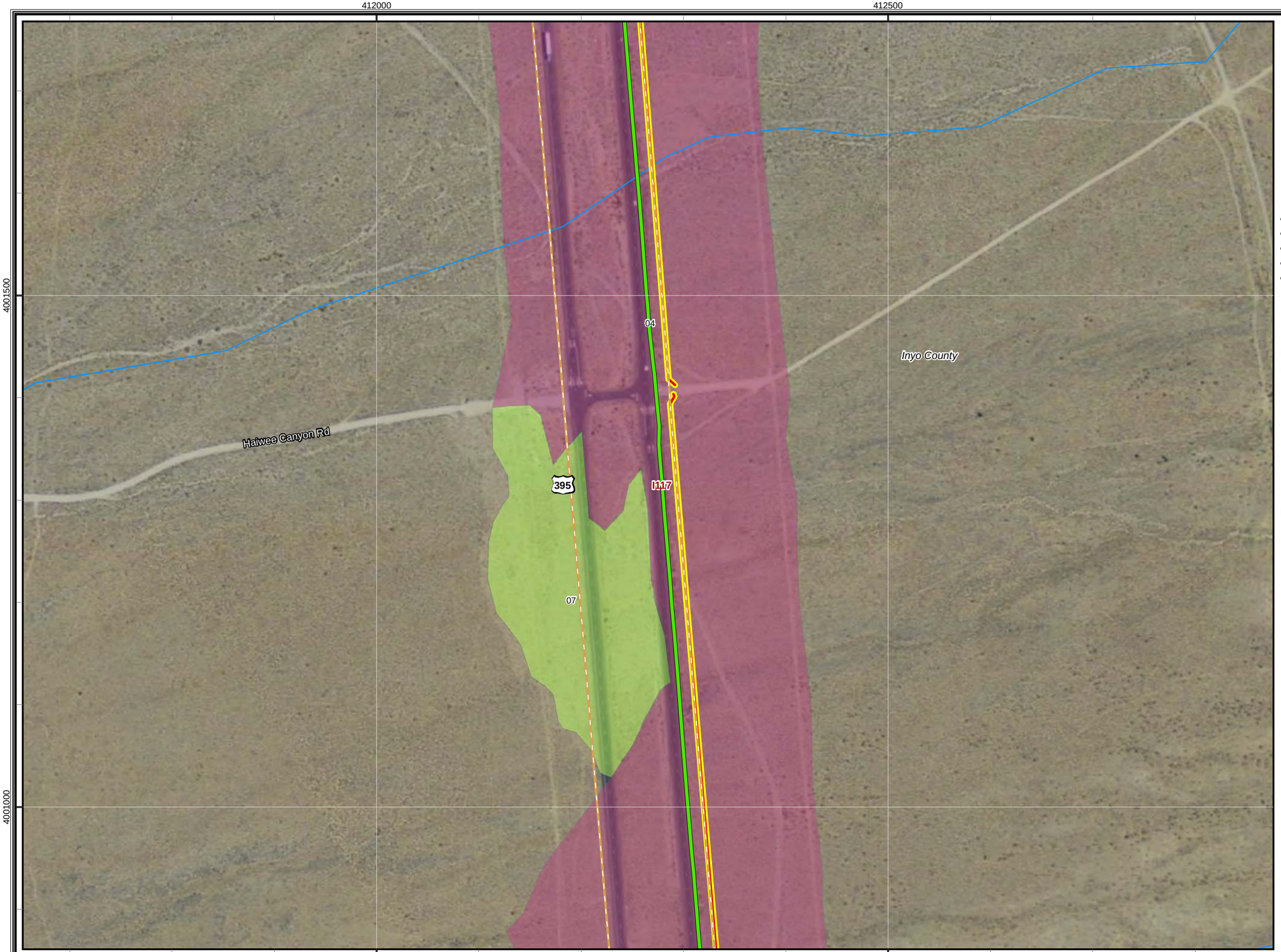


CBC Digital 395

R4-Inyokern to Olancha-267

Legend

Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

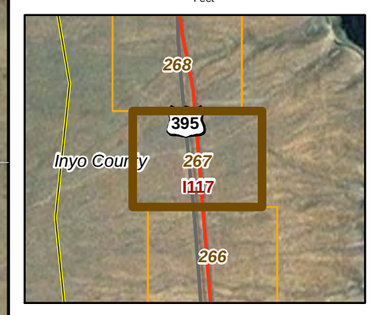
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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Chambers Group Inc.

CBC Digital 395

R4-Inyokern to Olancha-268

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

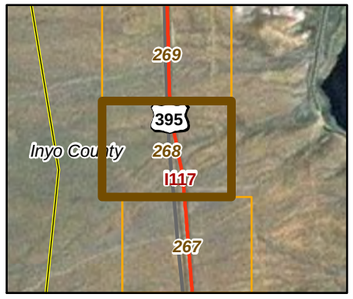
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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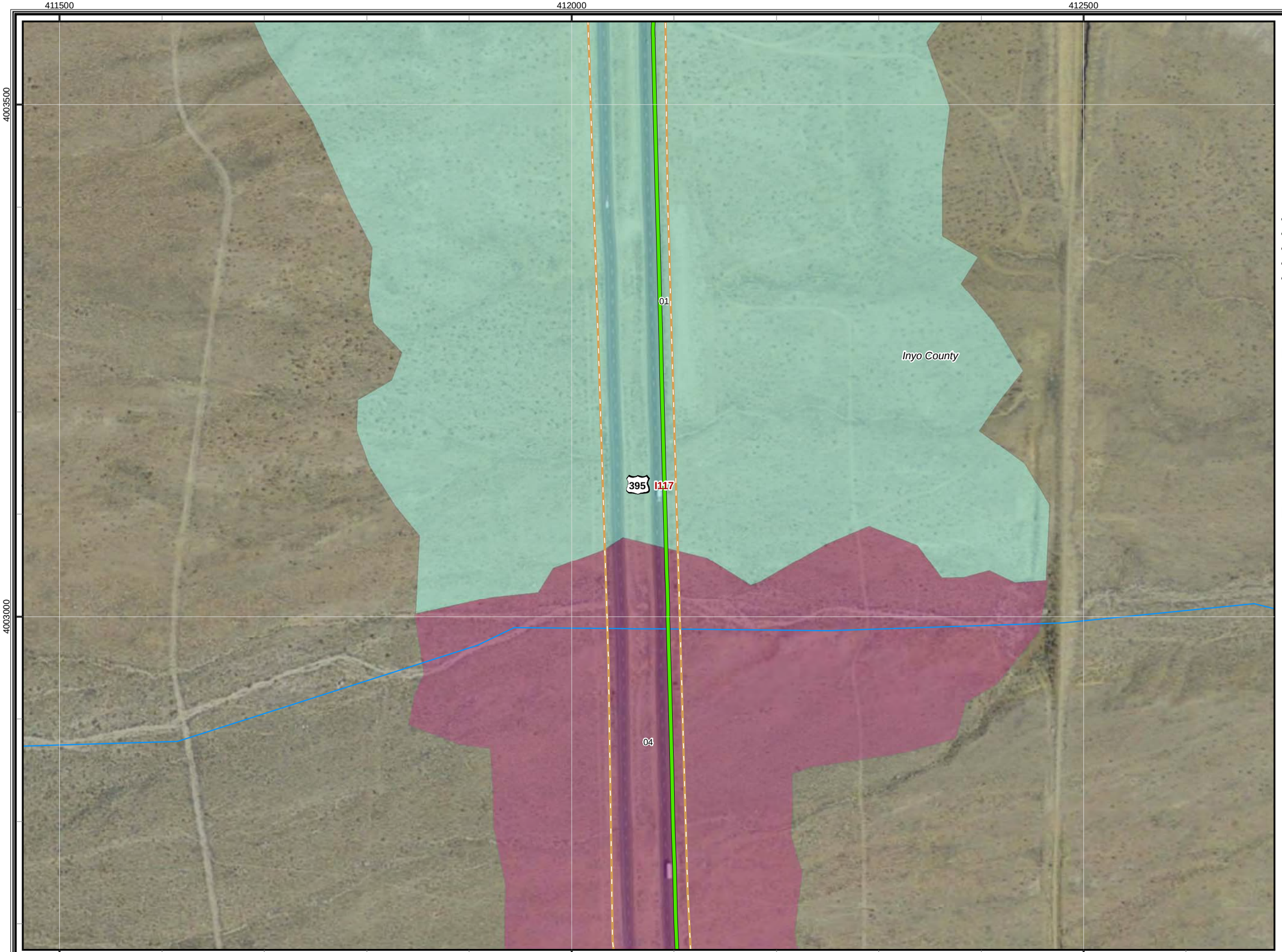


CBC Digital 395

R4-Inyokern to Olancha-269

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

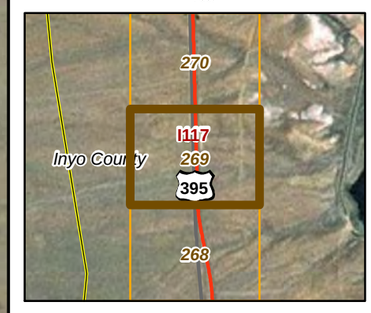
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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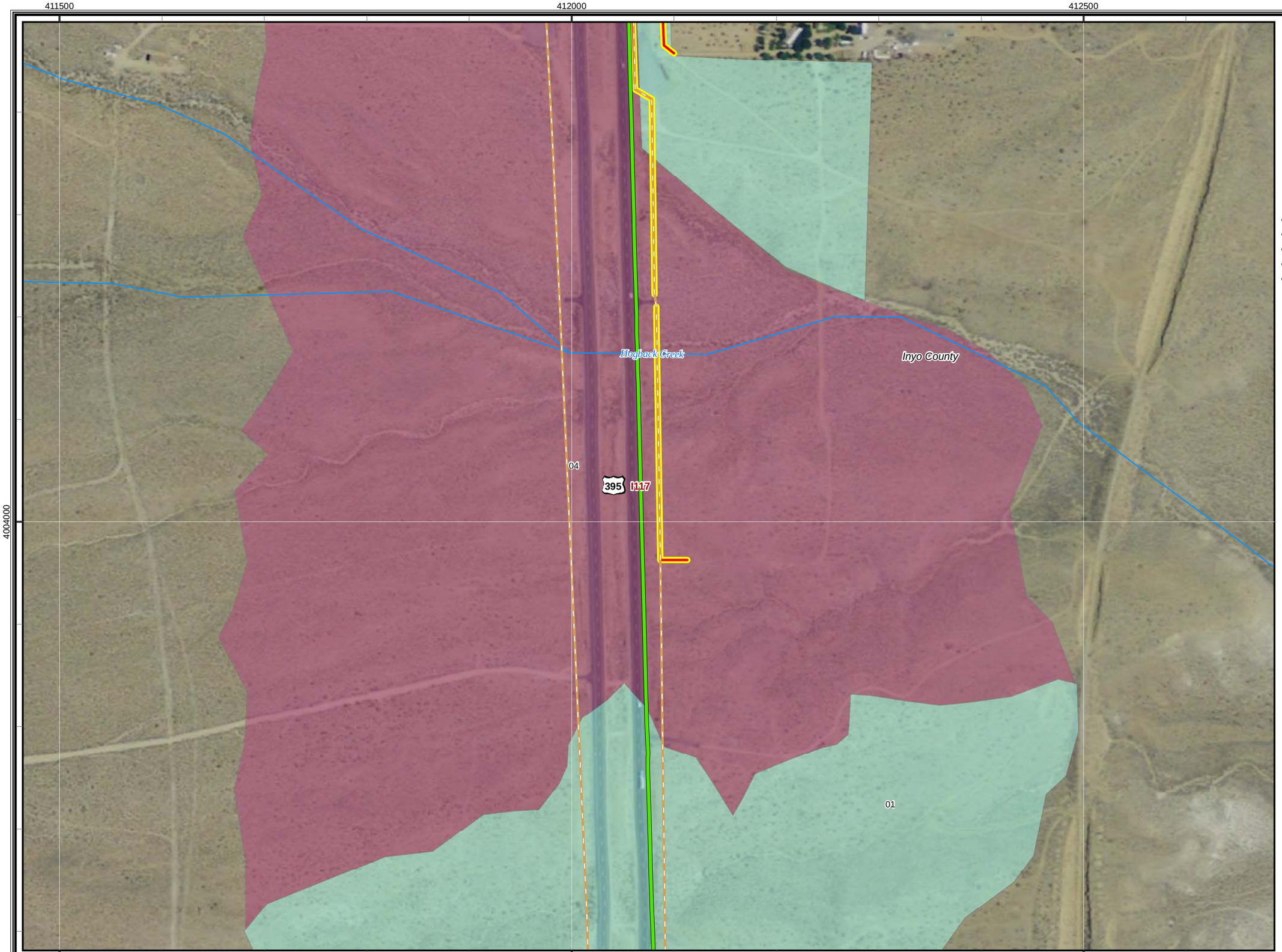


CBC Digital 395

R4-Inyokern to Olancha-270

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

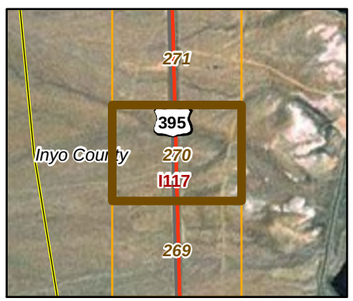
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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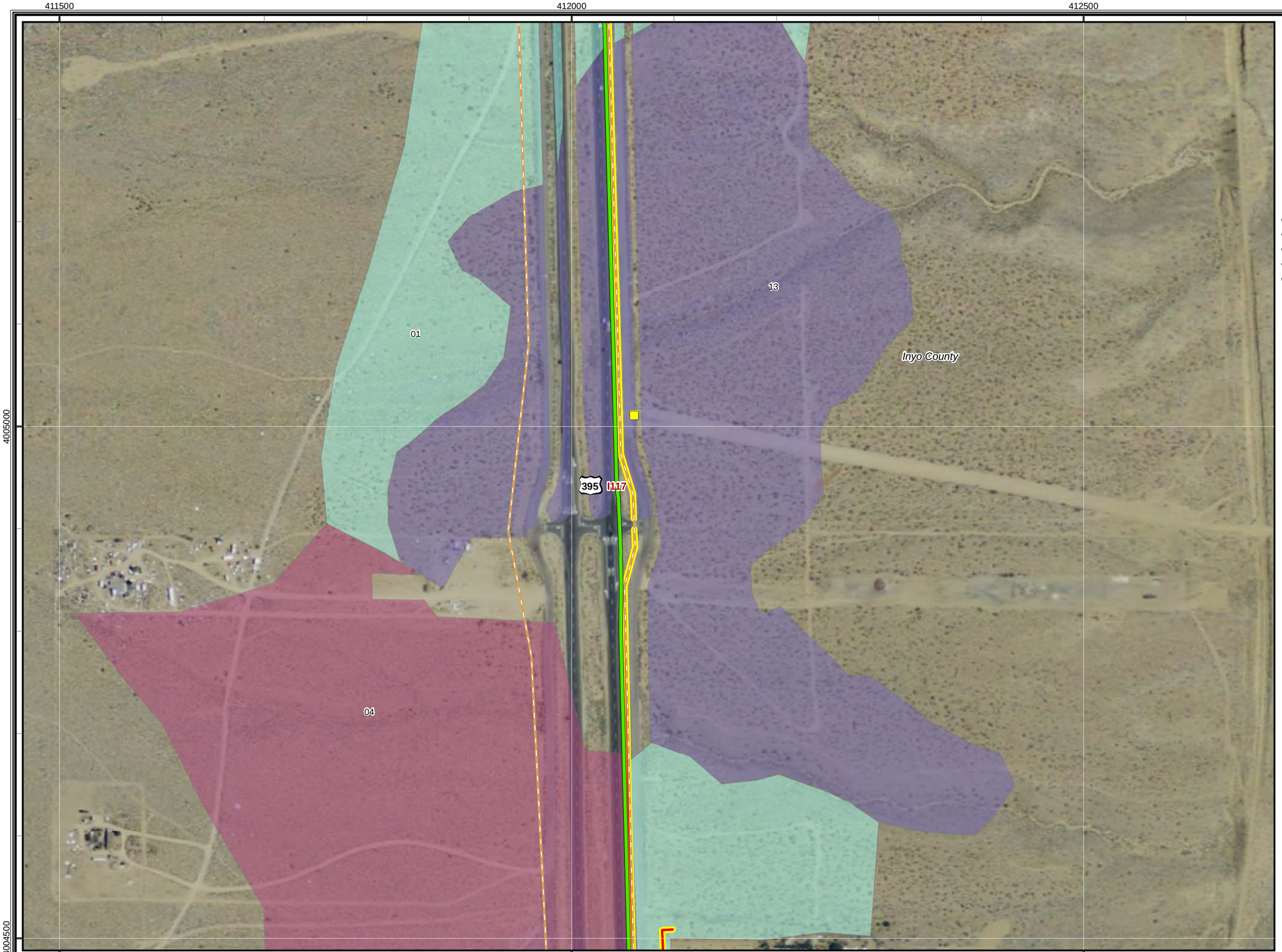


CBC Digital 395

R4-Inyokern to Olancha-271

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

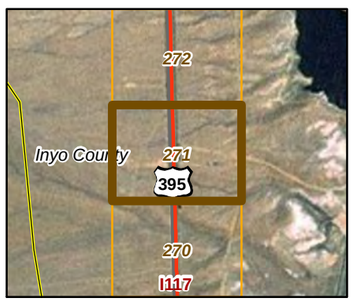
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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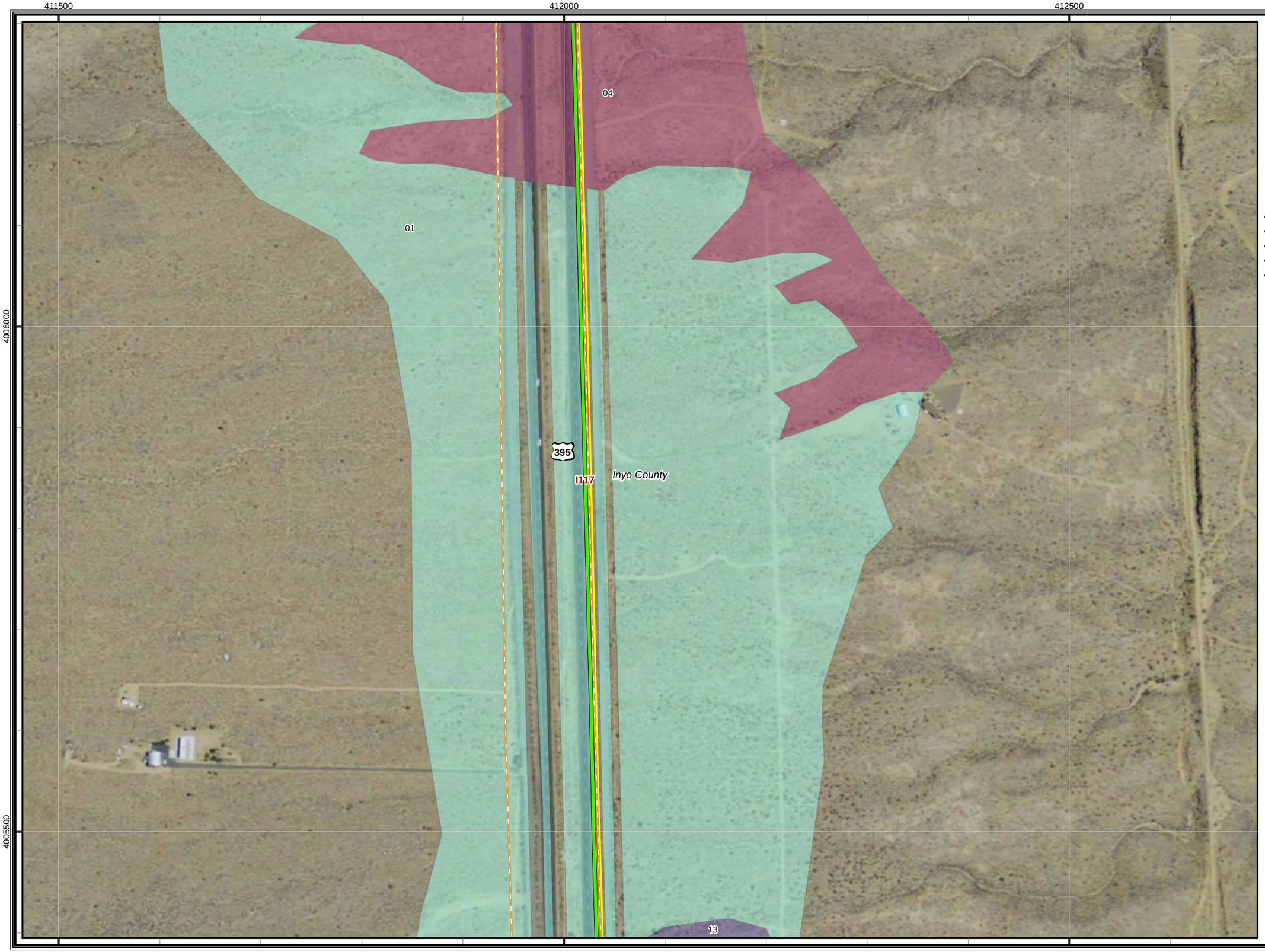
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-272

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

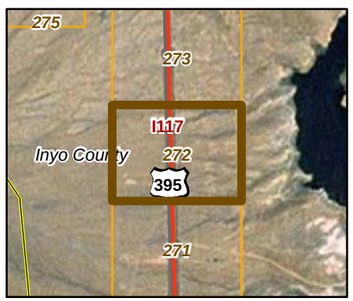
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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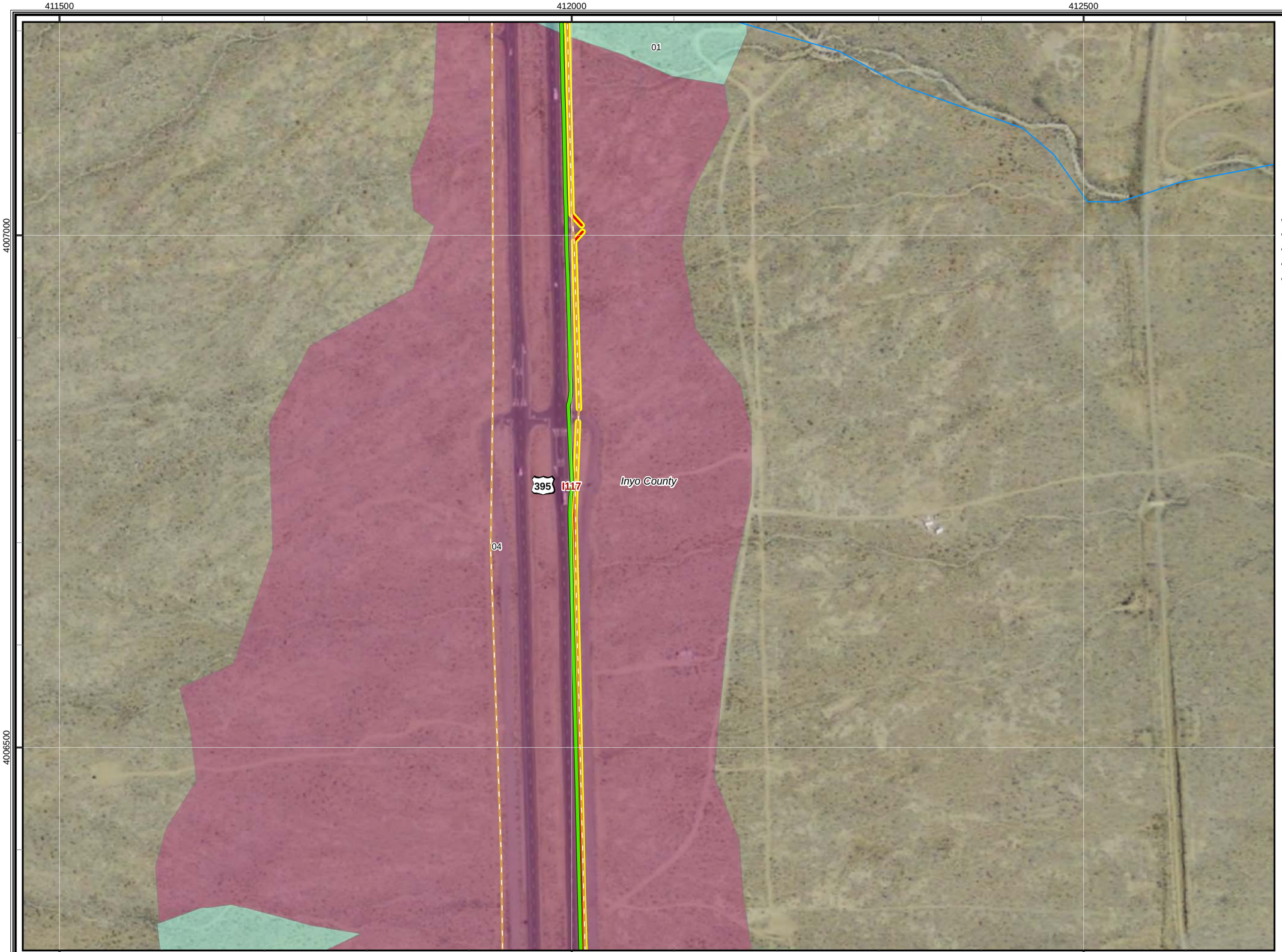


CBC Digital 395

R4-Inyokern to Olancha-273

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

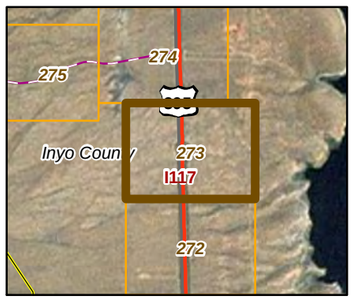
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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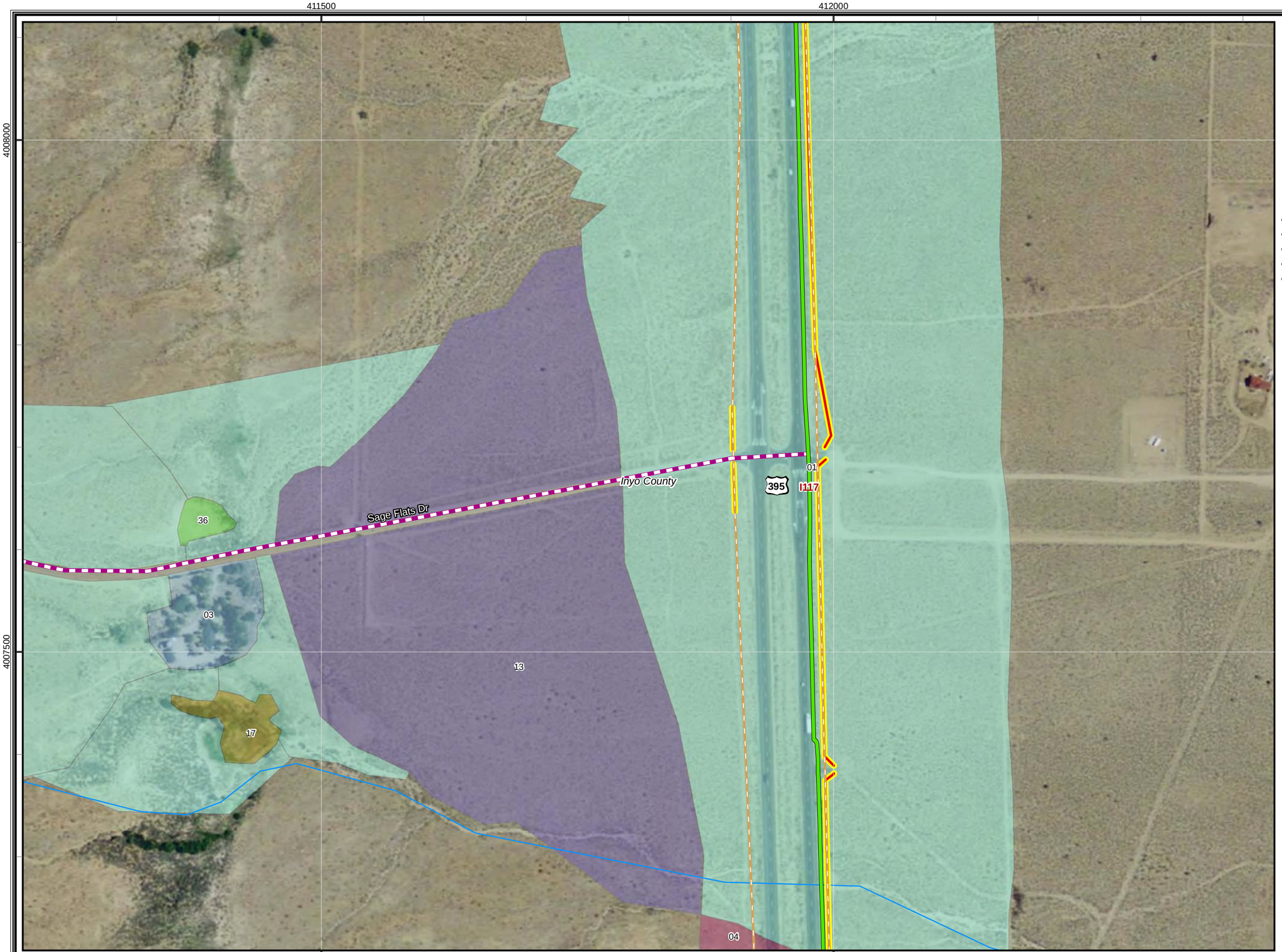


CBC Digital 395

R4-Inyokern to Olancha-274

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

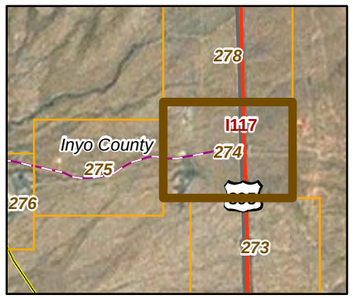
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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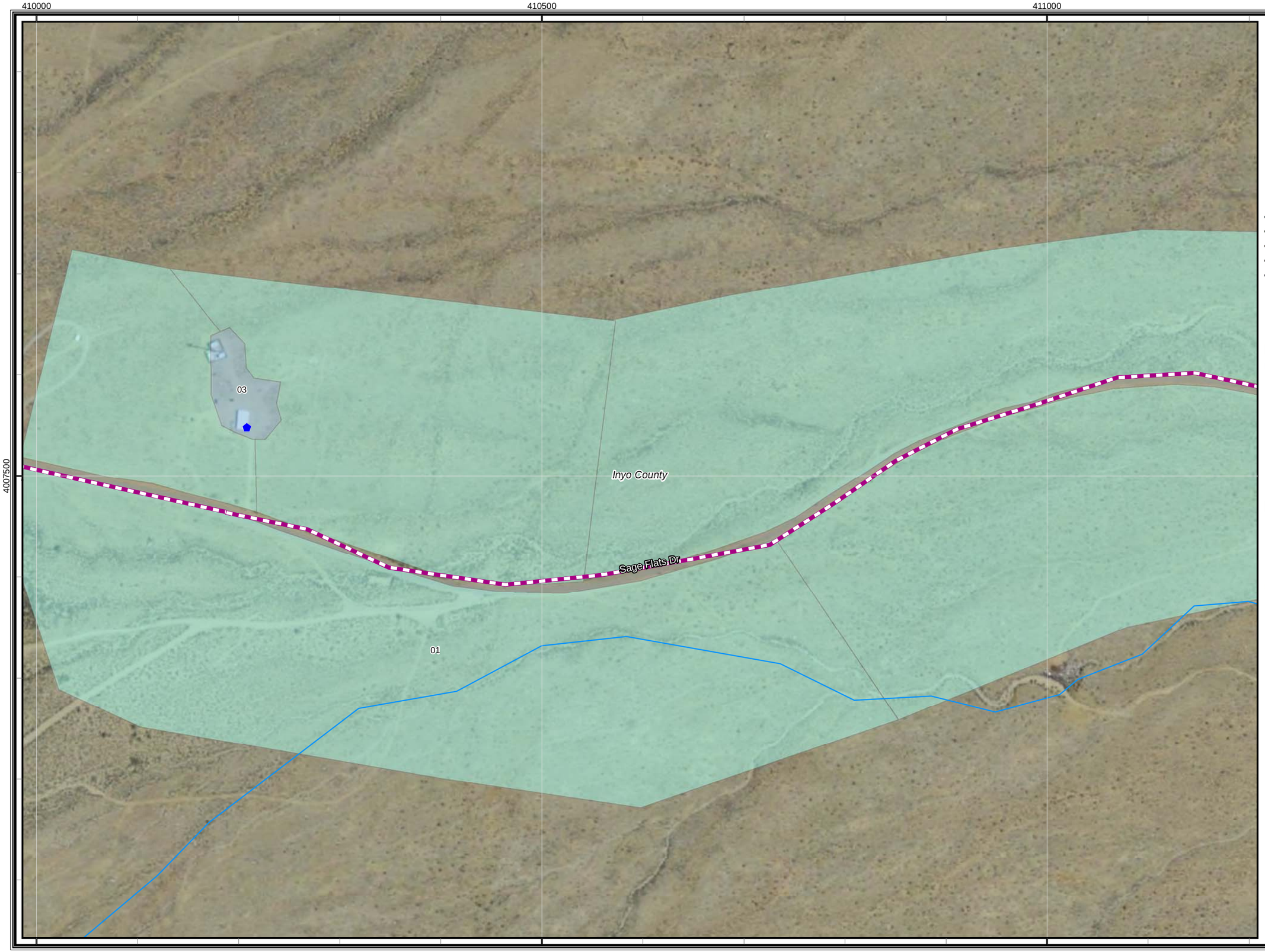


CBC Digital 395

R4-Inyokern to Olancha-275

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

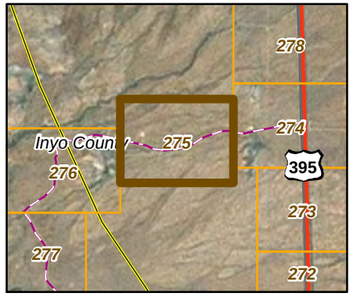
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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CBC Digital 395

R4-Inyokern to Olancha-276

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

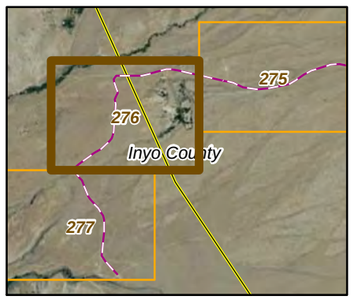
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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Chambers Group Inc.

CBC Digital 395

R4-Inyokern to Olancha-277

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

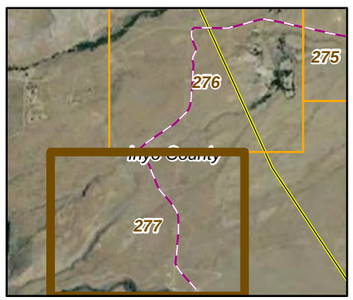
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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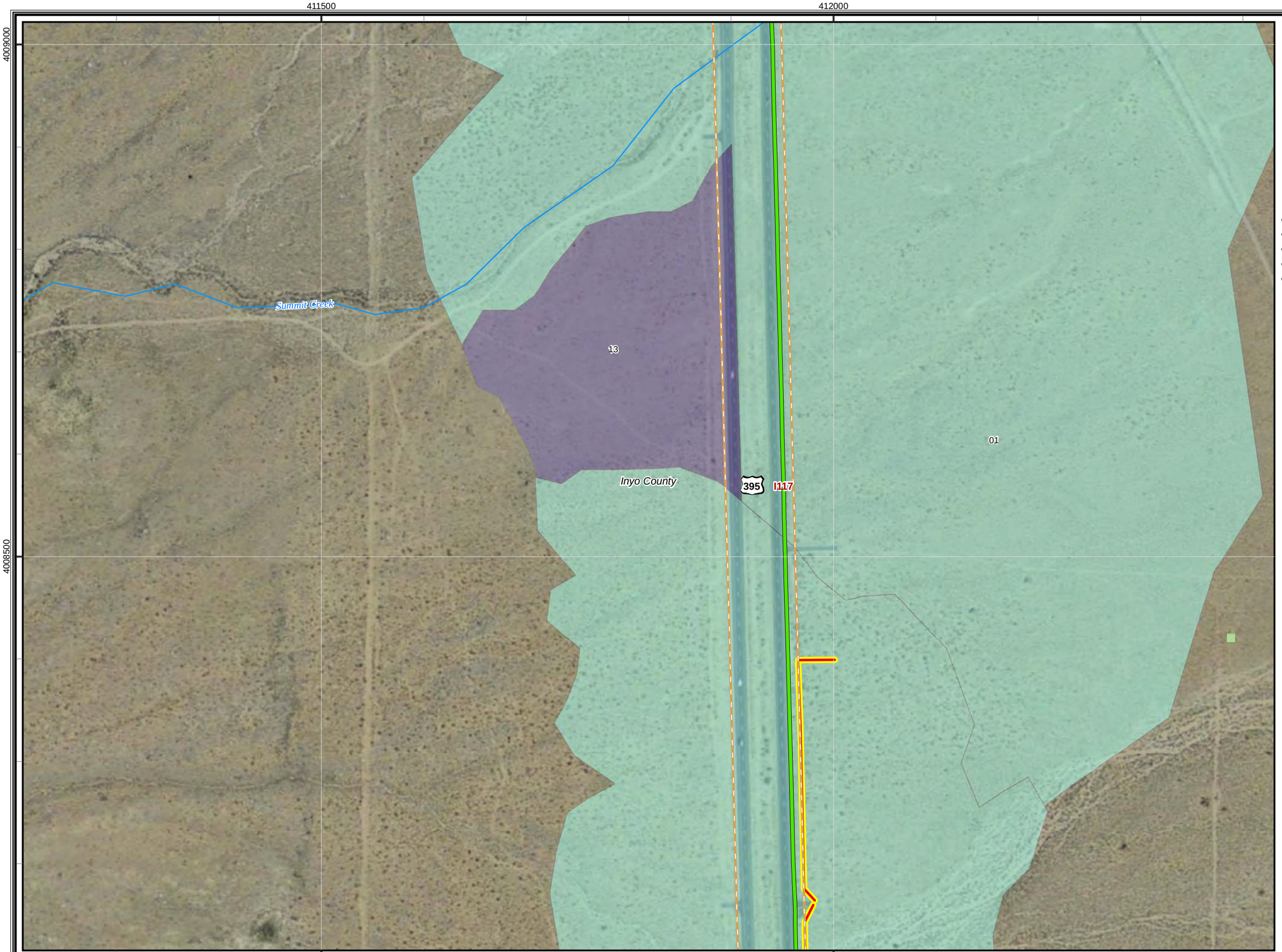


CBC Digital 395

R4-Inyokern to Olancha-278

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

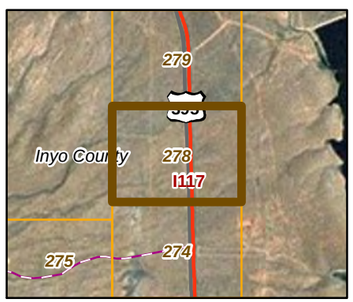
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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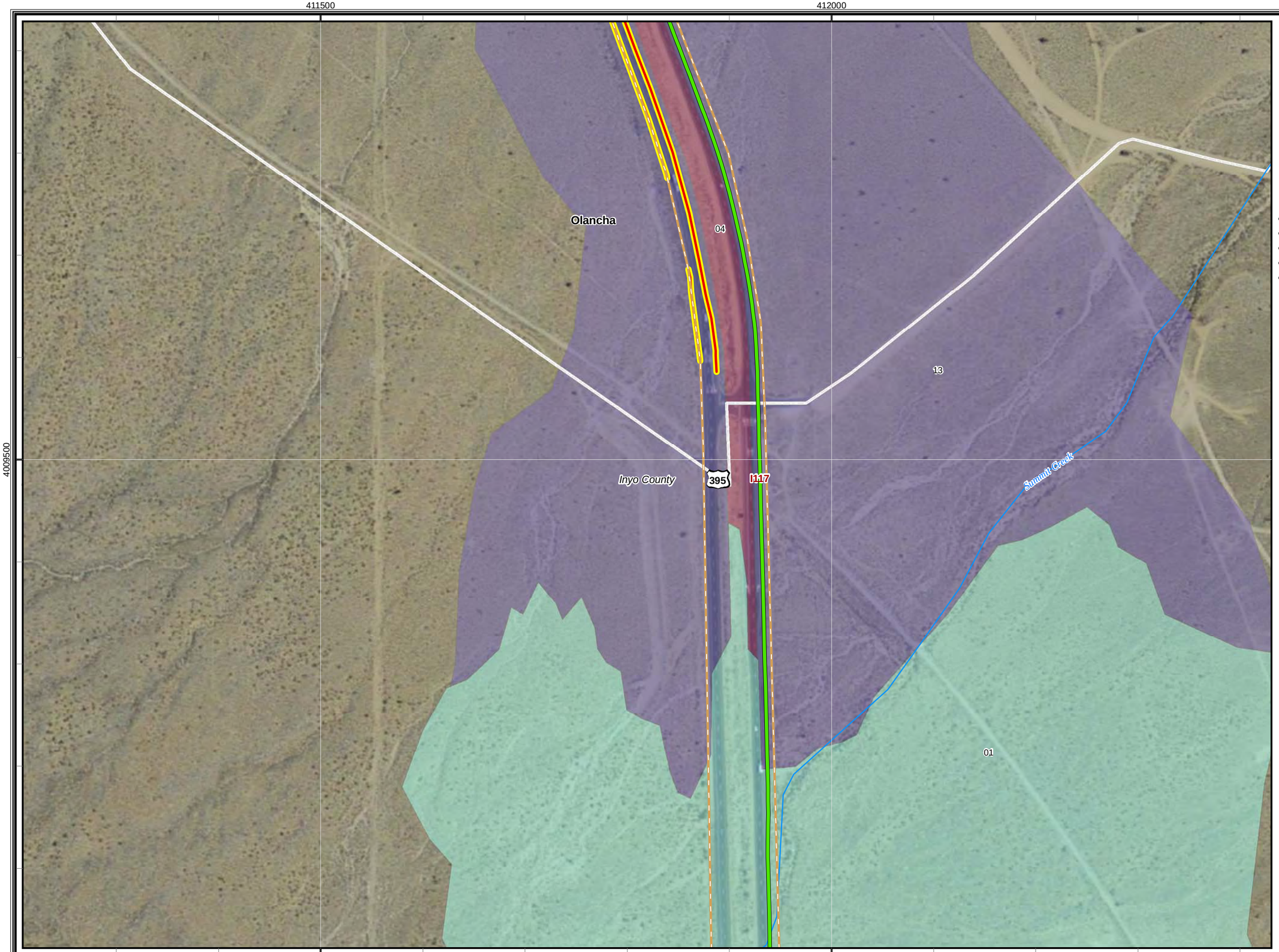
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-279

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

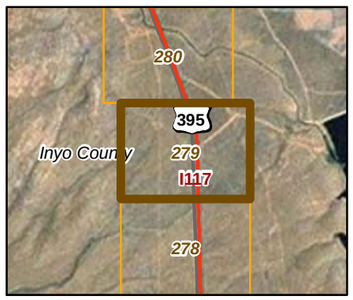
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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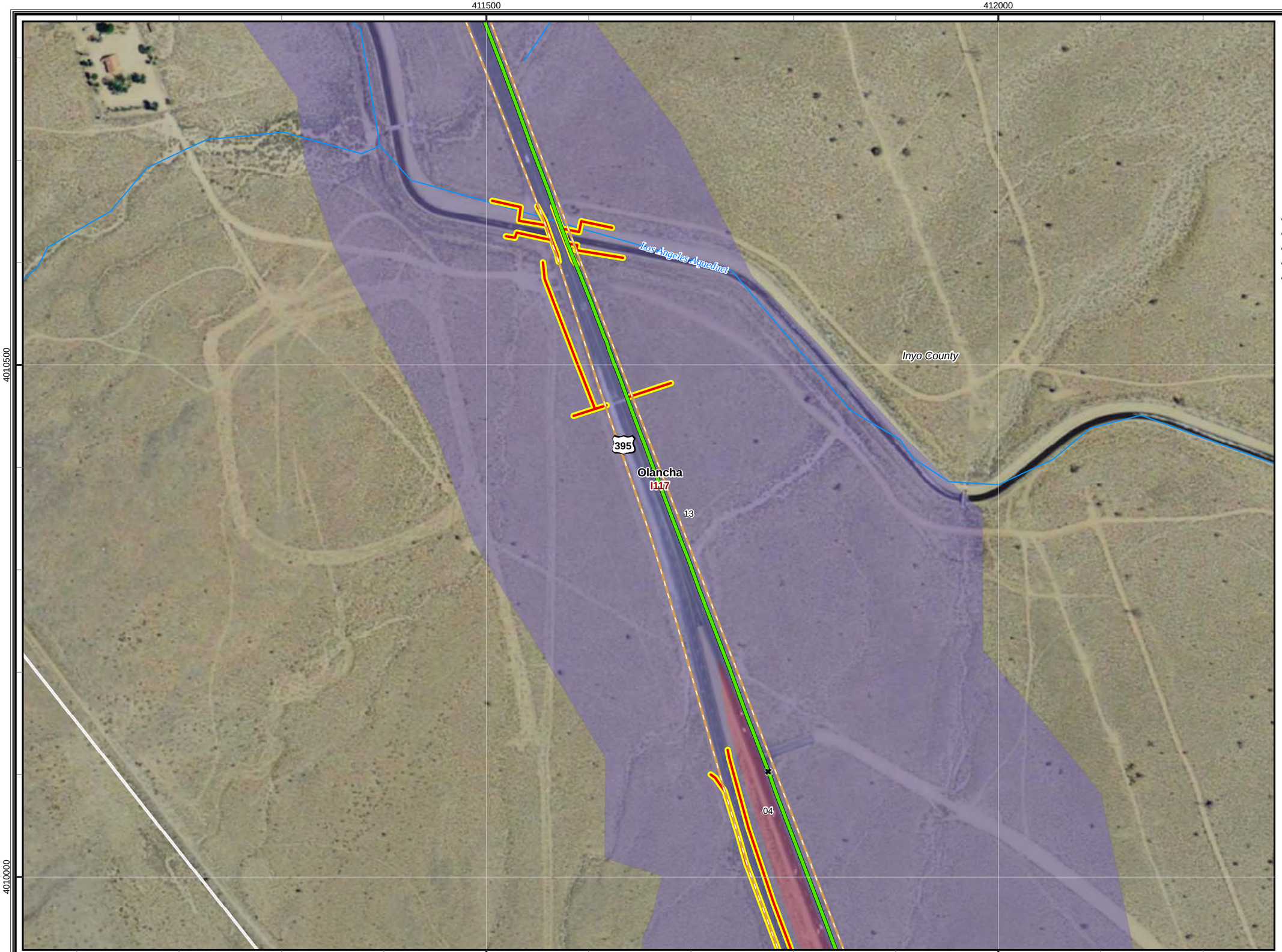
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-280

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

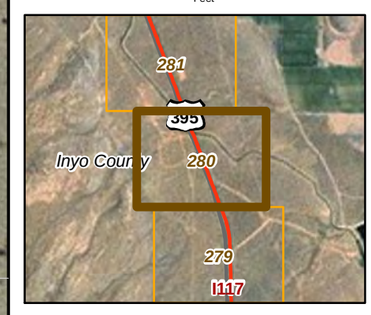
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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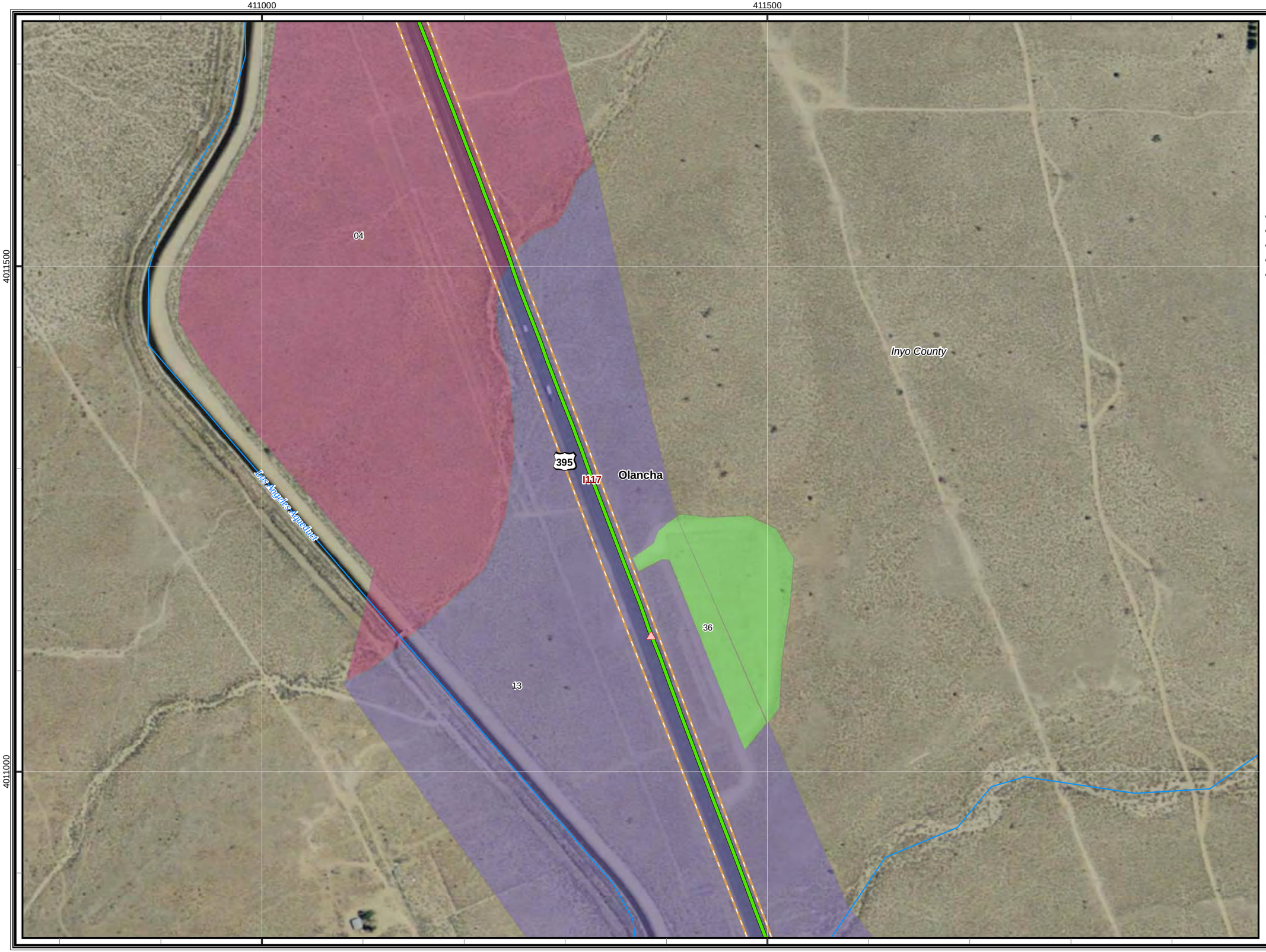
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-281

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

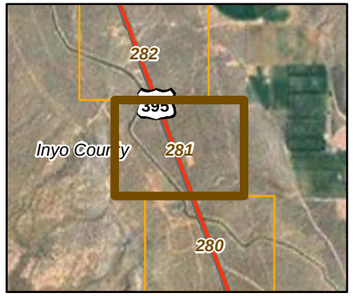
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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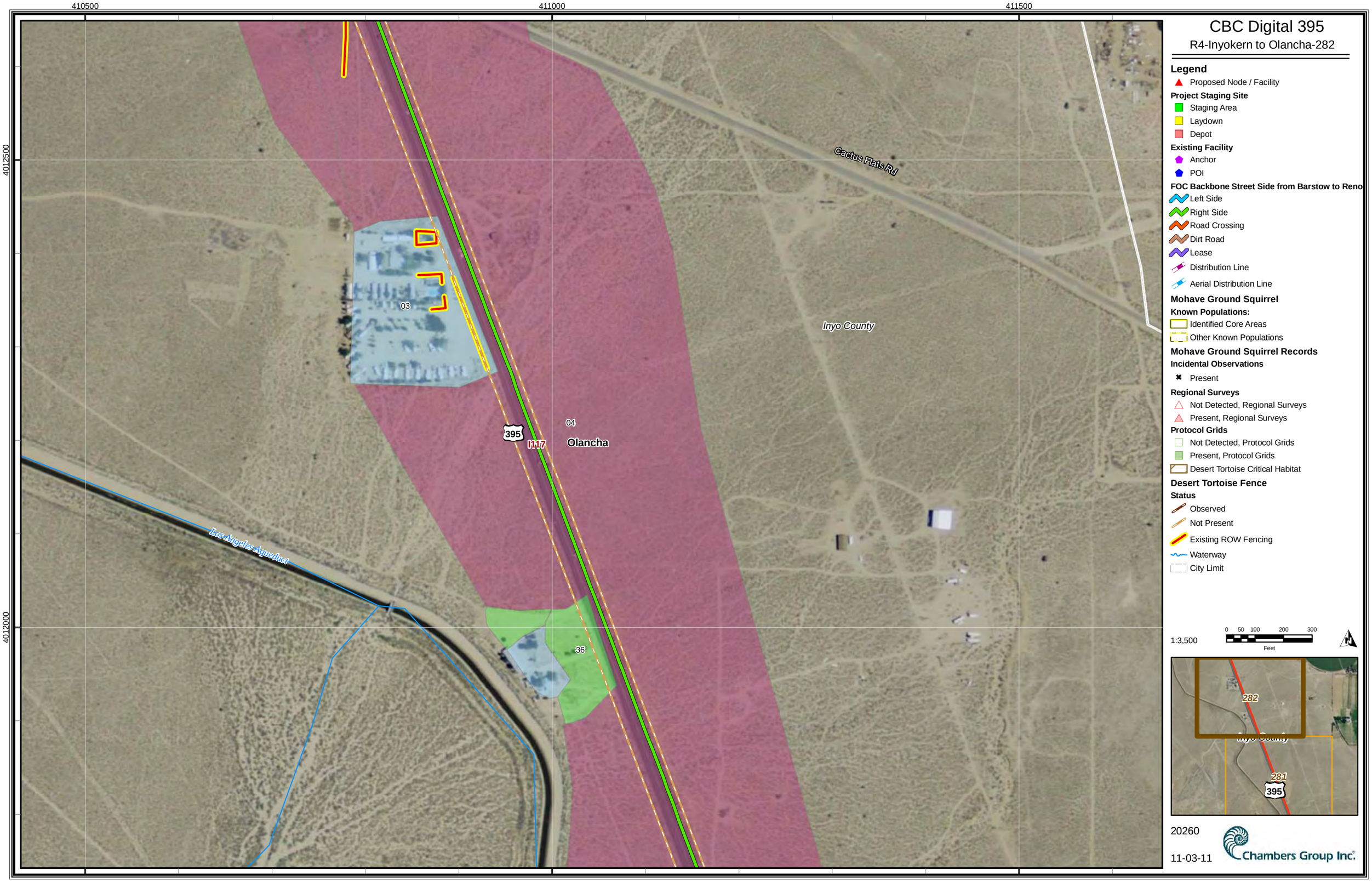
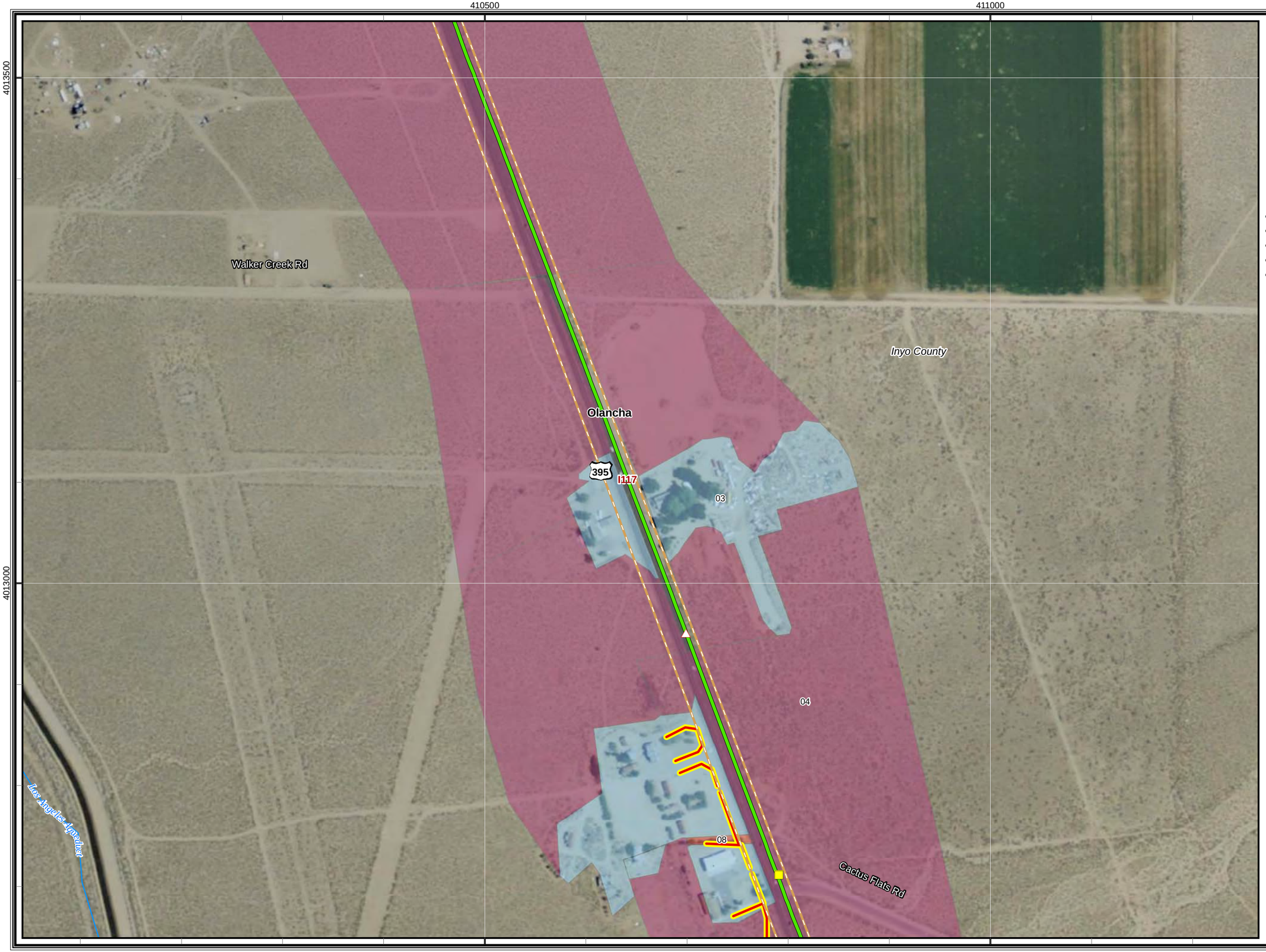

410500
411000
411500
4012500
4012000
Cactus Flats Rd
Inyo County
03
04
395
I-117
Olancha
36
Los Angeles Aqueduct
CBC Digital 395
R4-Inyokern to Olancha-282
Legend
Proposed Node / Facility
Project Staging Site
Staging Area
Laydown
Depot
Existing Facility
Anchor
POI
FOC Backbone Street Side from Barstow to Reno
Left Side
Right Side
Road Crossing
Dirt Road
Lease
Distribution Line
Aerial Distribution Line
Mohave Ground Squirrel
Known Populations:
Identified Core Areas
Other Known Populations
Mohave Ground Squirrel Records
Incidental Observations
Present
Regional Surveys
Not Detected, Regional Surveys
Present, Regional Surveys
Protocol Grids
Not Detected, Protocol Grids
Present, Protocol Grids
Desert Tortoise Critical Habitat
Desert Tortoise Fence
Status
Observed
Not Present
Existing ROW Fencing
Waterway
City Limit
1:3,500
0 50 100 200 300
Feet
282
281
395
20260
11-03-11
Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-283

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

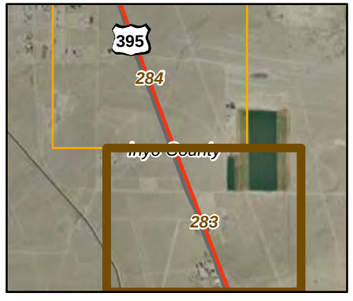
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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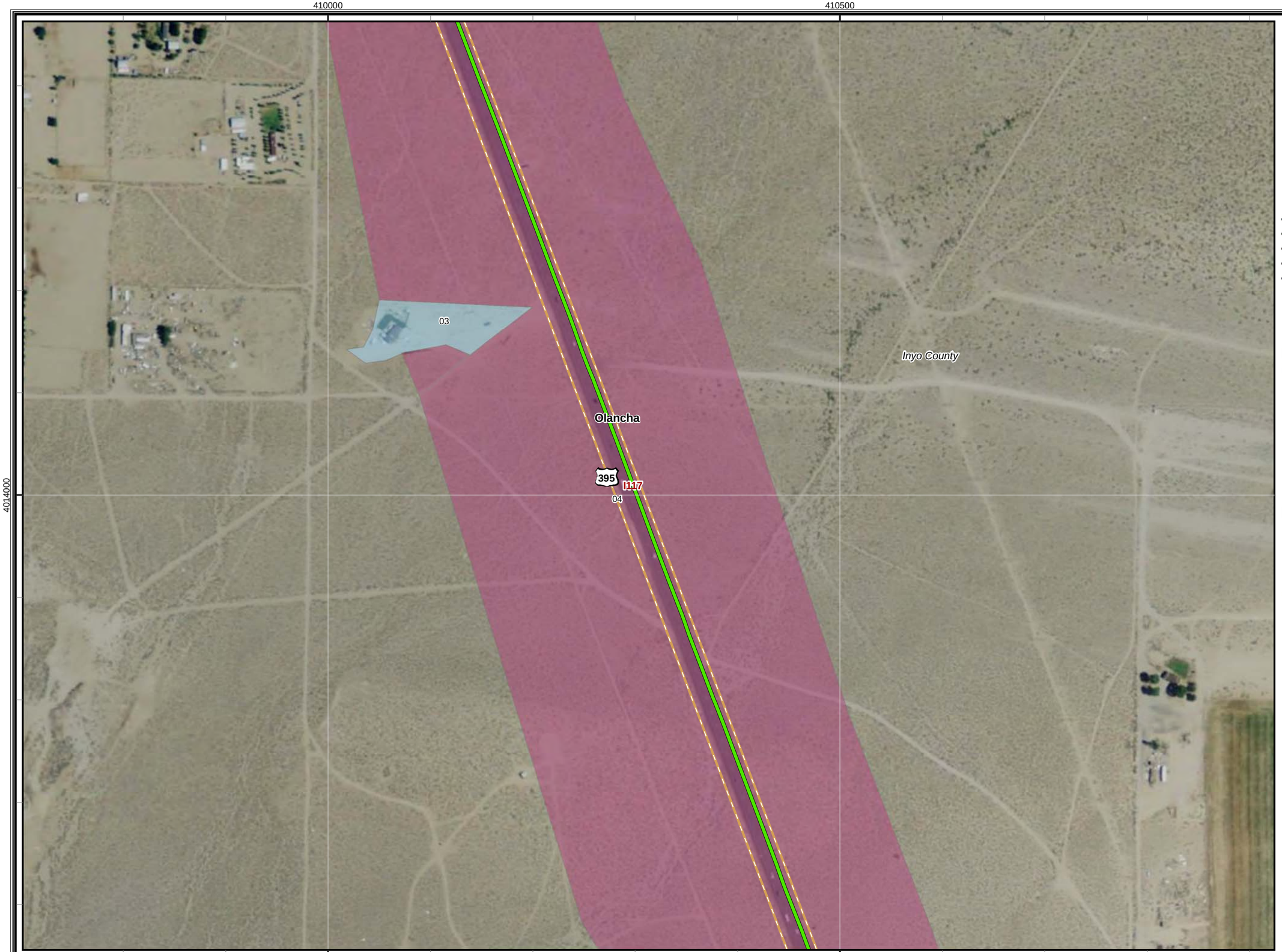
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-284

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

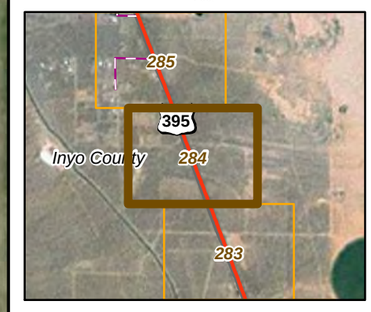
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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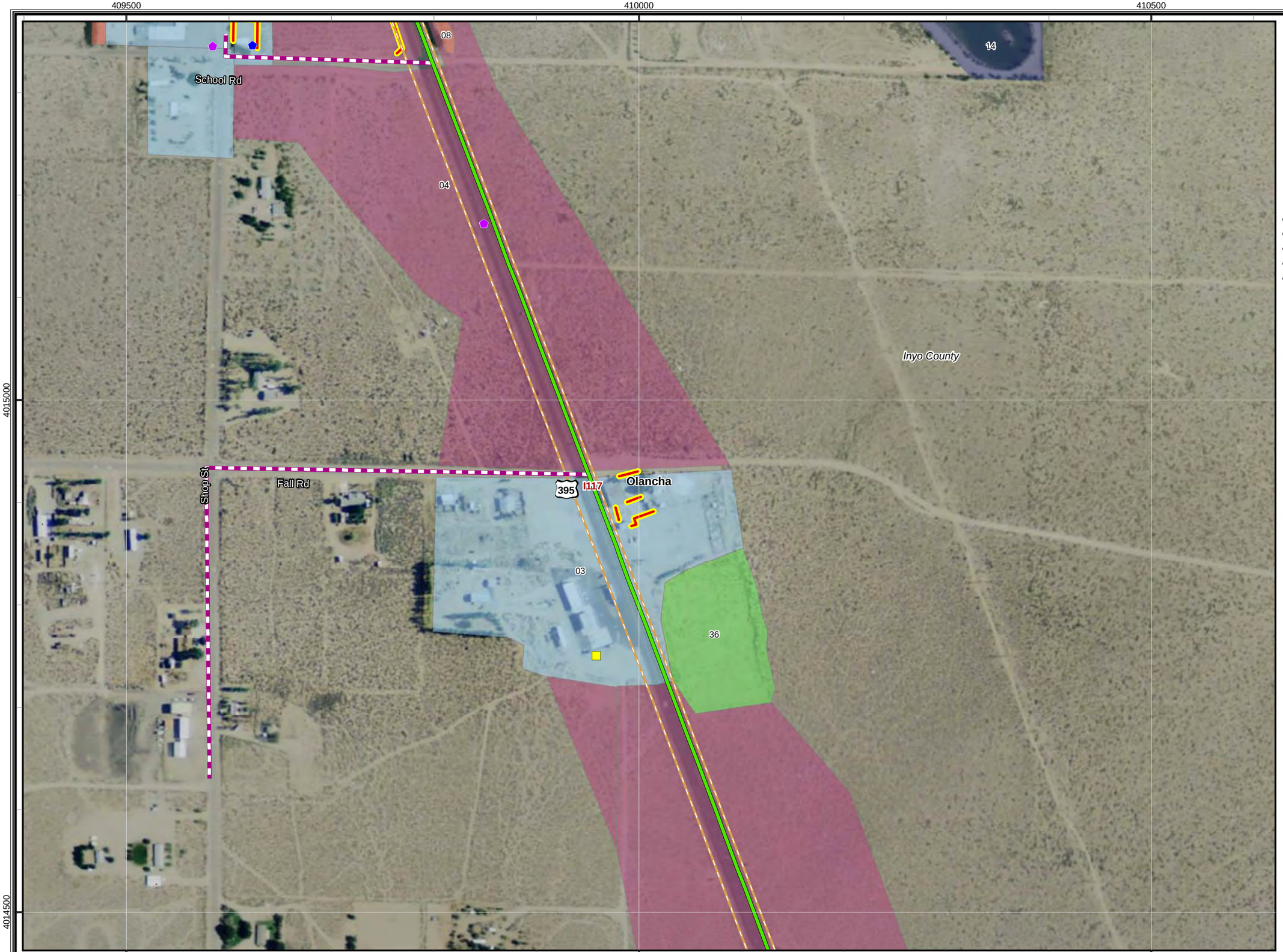
11-03-11

Chambers Group Inc.



CBC Digital 395

R4-Inyokern to Olancha-285

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

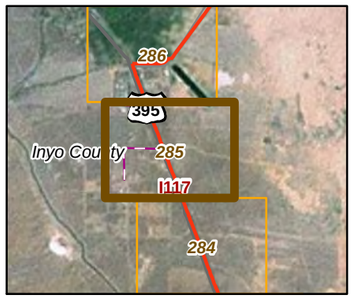
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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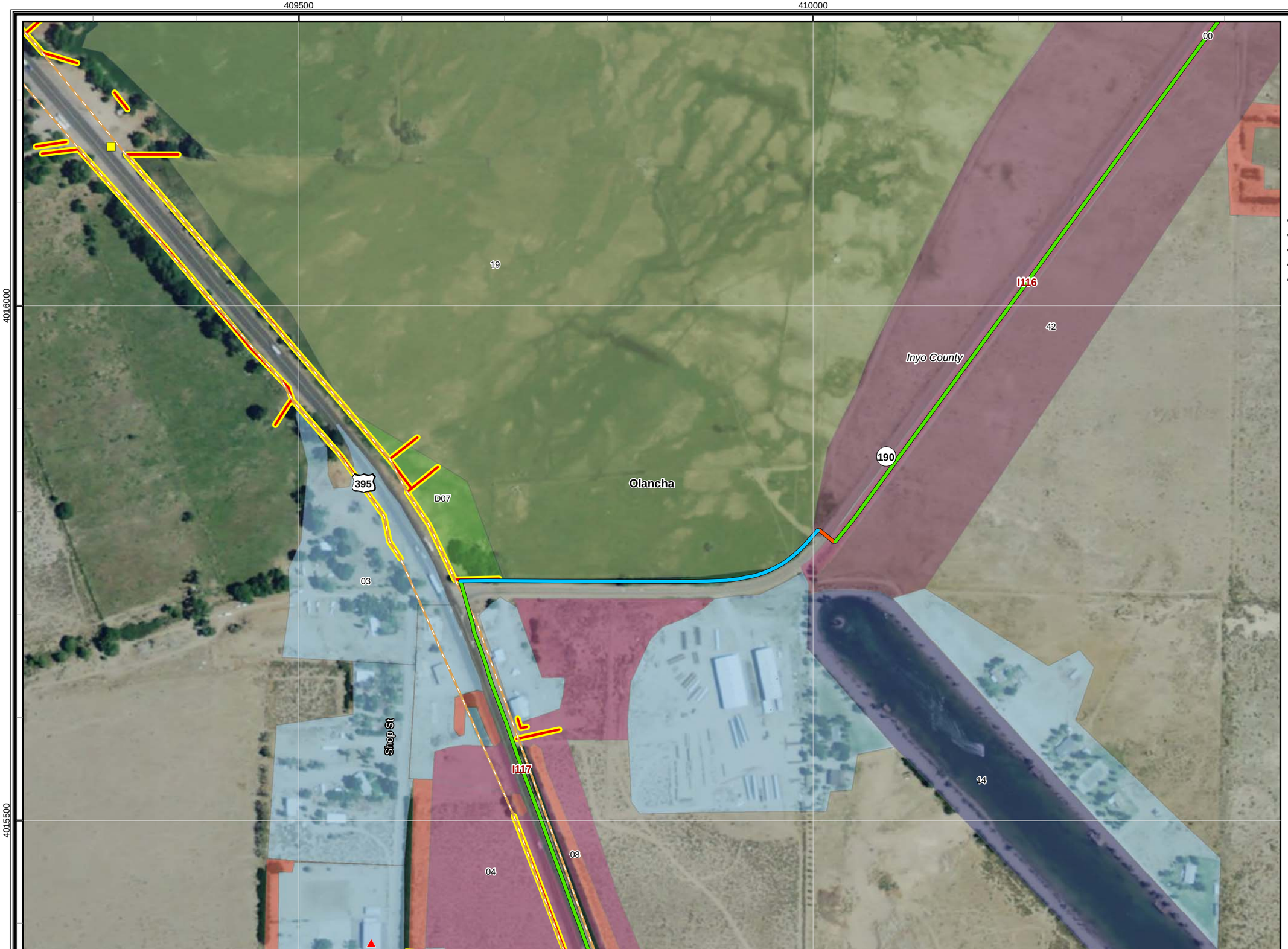


CBC Digital 395

R4-Inyokern to Olancha-286

Legend

- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot

Existing Facility

- Anchor
- POI

FOC Backbone Street Side from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Aerial Distribution Line

Mohave Ground Squirrel

Known Populations:

- Identified Core Areas
- Other Known Populations

Mohave Ground Squirrel Records

Incidental Observations

- Present

Regional Surveys

- Not Detected, Regional Surveys
- Present, Regional Surveys

Protocol Grids

- Not Detected, Protocol Grids
- Present, Protocol Grids
- Desert Tortoise Critical Habitat

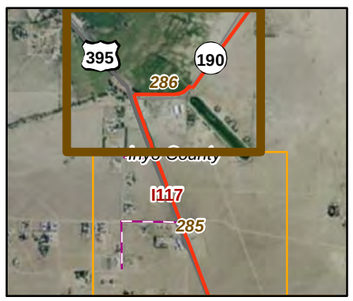
Desert Tortoise Fence

Status

- Observed
- Not Present
- Existing ROW Fencing
- Waterway
- City Limit

1:3,500

0 50 100 200 300
Feet



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BIOLOGICAL EVALUATION/ASSESSMENT

DIGITAL 395 MIDDLE MILE PROJECT

INYO NATIONAL FOREST

MAMMOTH
MONO LAKE
WHITE MOUNTAIN
RANGER DISTRICTS

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I. INTRODUCTION

The purpose of this biological evaluation/biological assessment (BE/BA) is to analyze the effects of the California Broadband Cooperative (CBC) Digital 395 Middle Mile Project (Proposed Project) implementation on species listed as threatened, endangered, or proposed by the U. S. Fish and Wildlife Service (USFWS) or Forest Service Region 5 sensitive animal and plant species. This biological evaluation/assessment (BE/BA) is prepared in compliance with the requirements of Forest Service Manual (FSM) direction 2670.

The Forest Service is directed by FSM 2672.4 to complete a biological evaluation for all Forest Service planned, funded, executed, or permitted programs and activities. The BE/BA process is completed to determine the effects of projects on federally listed species in compliance with requirements of the Endangered Species Act. It also provides a process and standard through which proposed, endangered, threatened, and sensitive species receive full consideration in the decision-making process to maintain species viability and meet recovery goals. For sensitive species, this document will evaluate whether the proposed action will result in a trend towards federal listing or a loss of viability. Threatened, endangered, and proposed species are identified by the USFWS (USFWS 2009). Sensitive species are listed by the Regional Forester of the Pacific Southwest Region (FSM 2672, Region-5 supplement 2600-92-3).

II. CURRENT MANAGEMENT DIRECTION

Project Area

The Proposed Project is located within the following Inyo National Forest Management Areas as designated in the Inyo National Forest Land and Resource Management Plan (LRMP) (USFS 1988): Mono Basin, Lee Vining, Walker-Parker, June Lake Loop, Glass Mountain, Upper Owens River, Mammoth, and Rock Creek-Pine Creek. Each of these Management Areas is under the direction of prescriptions that provide objectives for resource management within each particular area; a Management Area can be under the direction of multiple prescriptions (USFS 1988). The table below presents the prescriptions assigned to each of the Management Areas in which the Proposed Project is located.

Table 1. Inyo National Forest Management Areas and their Associated Prescriptions

Inyo National Forest Management Area	Management Area Prescription
Mono Basin	• 6 – Mono Basin National Forest Scenic Area
Lee Vining	• 12 – Concentrated Recreation Area
Walker-Parker	• 11 – Range Emphasis
June Lake Loop	• 11 – Range Emphasis • 12 – Concentrated Recreation Area • 14 – Potential Alpine Ski Area
Glass Mountain	• 9 – Uneven-aged Timber Management • 11 – Range Emphasis
Upper Owens River	• 9 – Uneven-aged Timber Management • 10 – High Level Timber Management • 12 – Concentrated Recreation Area
Mammoth	• 11 – Range Emphasis • 12 – Concentrated Recreation Area
Convict - McGee	• 12 – Concentrated Recreation Area
Benton - Casa Diablo	• 4 – Mule Deer Habitat Emphasis • 11 – Range Emphasis
Rock Creek - Pine Creek	• 4 – Mule Deer Habitat • 12 – Concentrated Recreation Area

Threatened, Endangered, and Proposed Species
Current direction is to manage National Forest System habitats and activities for threatened and endangered species to achieve recovery objectives so that special protection measures provided under the Endangered Species Act (ESA) are no longer necessary (FSM 2670.21). Section 7 of the ESA directs Federal departments and agencies to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats.

The LRMP further requires that populations of threatened and endangered species be considered as below viability until recovery is achieved. Emphasis will be placed on the protection and improvement of historic and potential habitat as necessary to meet recovery levels in cooperation with USFWS and California Department of Fish and Game (USFS 1988).

Sensitive Species
United States Department of Agriculture Regulation 9500-4 directs the Forest Service to avoid actions which may cause a sensitive species to become threatened or endangered (FSM 2670.12). Populations of all sensitive species of wildlife, fish, and plants must be maintained at viable levels in habitats distributed throughout their geographic range on National Forest System lands (FSM 2670.22). Standards and Guidelines of the Inyo National Forest (INF), as stated in the LRMP, require the development and implementation of a consistent, systematic, biologically sound strategy to manage sensitive species and their habitats so that federal listing does not occur (USFS 1988). Other applicable management direction and policy for threatened, endangered, and sensitive species is incorporated by reference from the following:

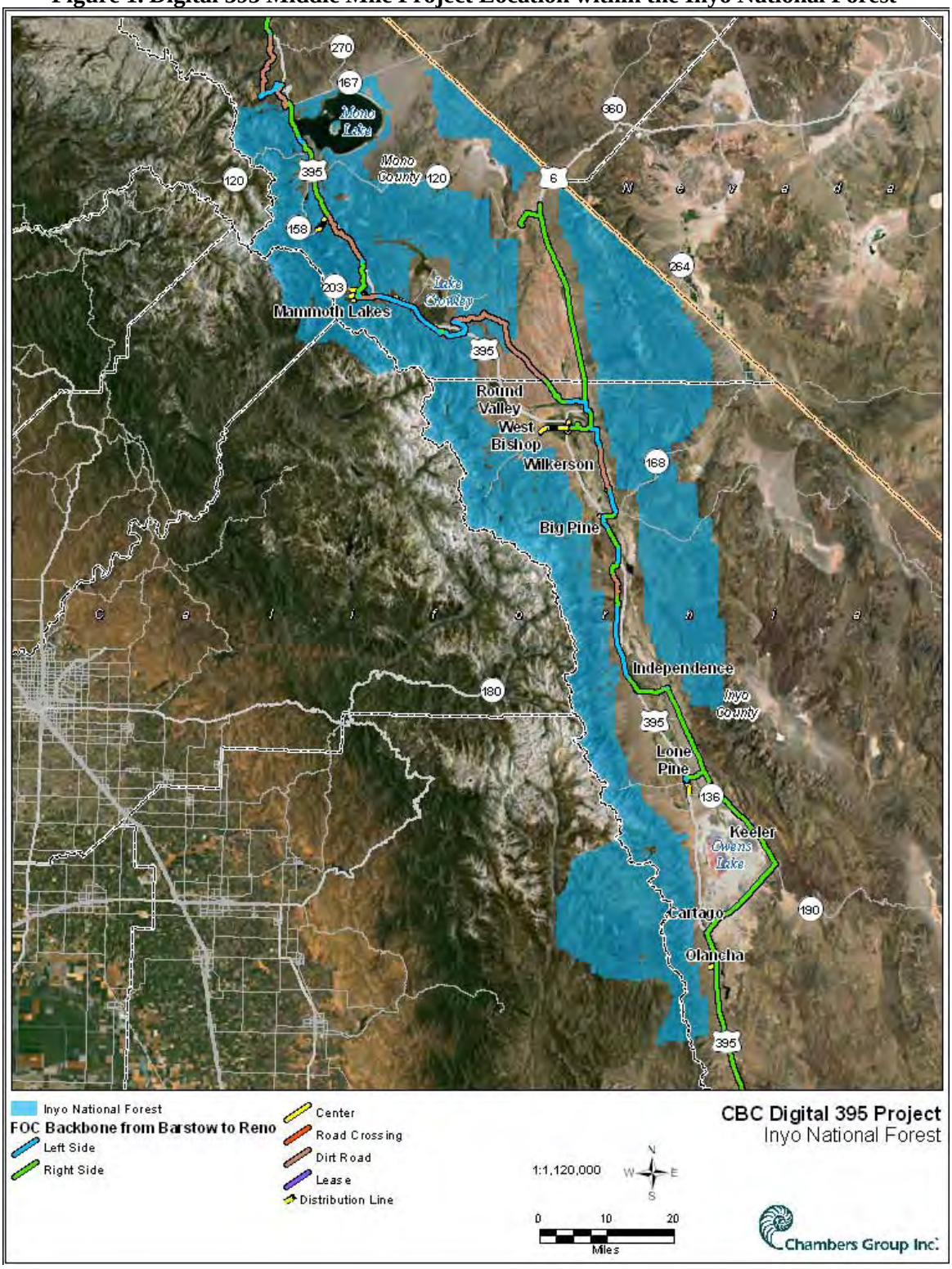
- Forest Service Manual and Handbooks (FSM/H 2670)
- National Forest Management Act, 1976 (NFMA)
- Endangered Species Act, 1973, as amended (ESA)
- National Environmental Policy Act, 1969 (NEPA)
- Inyo National Forest Land and Resource Management Plan, 1988 (LRMP)
- Sierra Nevada Forest Plan Amendment, 2004 (SNFPA)
- Recovery Plans for individual species
- Pacific Southwest Region (R5) Sensitive Species List
- Forest and Rangeland Renewable Resources Planning Act, 1974 (RPA)
- California Wilderness Act, 1984

III. DESCRIPTION OF PROPOSED PROJECT

The Proposed Project is to install approximately 593 miles of middle-mile fiber-optic cable and associated infrastructure to provide broadband service in unserved and underserved areas of the Eastern Sierra. In addition to internet services, high-capacity “dark” fiber also will be made available to the region’s last-mile providers, government agencies, and cellular and long-distance carriers. The purpose is to improve local internet services, provide diverse routing between northern and southern California and Nevada, and enhance public safety. The proposed action includes the installation of underground fiber optical cables (FOC) within the Inyo National Forest. For purposes of this document, the term “Proposed Project ROW” includes the footprint or area of direct placement/disturbance of the Proposed Project features (e.g., conduit, nodes, towers), as well as the construction footprint related to those features (e.g., boring, plowing, drilling, staging areas, pathway of construction-related equipment). Considering approximately 49.1 miles of the Proposed Project occur within the Inyo National Forest, and the Proposed Project ROW is considered to be 20 feet wide, it is anticipated that approximately 119 acres of disturbance may occur within the Proposed Project ROW within Inyo National Forest. No buildings or nodes are proposed to be built within the Inyo National Forest.

The Proposed Project will be located between Barstow, California, and Reno, Nevada, providing broadband services to the area commonly referred to as the Eastern Sierra. The Proposed Project route crosses through San Bernardino, Kern, Inyo, and Mono counties in California and Douglas, Carson City, and Washoe counties in Nevada. The Proposed Project route consists of a main backbone and various spurs that lead away from the main backbone. The various spurs along the Proposed Project route branch from the main backbone to connect to nodes within communities along the route. The main backbone of the Proposed Project route enters the Inyo National Forest in southern Mono County at Casa Diablo Road and generally follows US 395 northward, exiting the Inyo National Forest south of Mill Creek Powerhouse Road (Figure 1). Approximately 49.1 miles of route are within the Inyo National Forest.

Figure 1. Digital 395 Middle Mile Project Location within the Inyo National Forest



Construction Methods

Project construction methods currently are detailed in the following subsections for the Proposed Project route. Applicant Proposed Measures (APMs) to avoid and minimize construction impacts to sensitive resources will be conducted to the extent practicable and are based on data from surveys for biological resources as well as through coordination with the various jurisdictional Agencies.

Conduit Construction Strategy

Two types of conduit are included in this Proposed Project: FOC backbone and distribution lines. The FOC backbone will consist of one 1.50-inch duct, where one cable will initially be installed, and two 1.25-inch ducts for future use. The distribution line will consist of one 1.25-inch duct, where between 2 and 7 microducts will be installed.

Cable Plowing

Plows have been used for many decades as a trenchless method for installing underground pipeline and utility facilities. The process of cable/duct plowing involves a vibrating blade to split the ground and cut a narrow slit to insert a bundle of conduit. A typical plowing blade, which is up to 4 inches in width, acts like a knife during plowing and creates minimal, temporary disruption to the soil. Soil disturbance from the plow blade is anticipated to occur within a 4- to 6-inch width but may be up to 12 inches in width. As the ground is cut, the conduit is installed at the desired depth by feeding it down a chute located on the back of the blade. As the tractor passes the insertion point, the ground is then packed, restoring it to its original condition. Plowing will be contained within existing dirt roads and the disturbed portions of county roads or previously disturbed access roads, as well as adjacent to paved California Department of Transportation (Caltrans) roads. After the conduits are installed, the furrow is compacted back in place by the back end of the plow or a following compaction vehicle. This method is typically used in open areas with suitable terrain. Since most of the work in the Proposed Project is planned in existing road or utility ROWs/easements, conditions are mostly amenable to plow installation. The disturbed soil surface will be returned to the pre-construction conditions.

If pretreatment is required, disturbance to soils from the pretreatment activity may increase to six feet, not including the wheels/tracks of the equipment. Pretreatment may include the following two actions: pre-ripping and/or clearing/grubbing. Pretreatment is applicable only to plowing. For many sections of the US 395 route, two tractors will be used. Clearing would involve removing boulders or vegetation that cannot be avoided (e.g., there is no path around vegetation). Clearing and grubbing of vegetation is not anticipated for the Proposed Project; however, USFWS and any other appropriate agency will be contacted prior to vegetation clearing/grubbing if clearing/grubbing is necessary. A Caterpillar D8 will be used for “pre-ripping” hard soil and removing obstacles in advance of the plow. Where soil conditions allow (i.e., pre-ripping is not needed), the Proposed Project will use the much smaller DitchWitch vibratory plows to deploy the conduit. The plows will be configured to install a total of three 1.25-inch conduits to a depth of up to 42 inches, allowing for at least 36 inches of cover.

Trenching

Locations inaccessible to plowing or characterized by excessive rockiness or fracture rock will be constructed using trenching machines, excavators, or backhoes. The trenches are opened and then

backfilled after the conduit is installed in the trench. Soil disturbance from trenching is anticipated to occur within a 6-foot width, based on the terrain type and accounting for side-cast. The typical size bucket on a backhoe used for trenching will be 24 inches, up to a maximum of 36 inches. Typically, as soon as the conduits are installed, the trench will be refilled and compacted; when necessary, the refilled trench will be landscaped with a local, native seed source. Erosion and dust control measures also will be implemented. Occasions may arise when short sections of a trench will remain open until the next workday. These are likely to be splice box locations or short sections still open at the end of a work-day. Appropriate safety measures, such as barricades and/or trench covers, will be implemented. Trenches will not be left open overnight unless covered or barricaded for safety. In areas identified as sensitive habitat areas, trenches to be covered will be inspected prior to filling or covering to identify and protect desert tortoise, as well as other wildlife, from harm's way.

Horizontal Directional Drilling

Horizontal directional drilling (HDD) is a steerable, trenchless method of installing underground conduits and cables along a prescribed bore path by using a surface drilling rig, making minimal impact only at the entrance and exit pits of the bore. A HDD bore may extend from about 50 feet to over 2,500 feet, depending on the need and the substrate. HDD will be used to avoid open trenches and where plowing is not practical. HDD minimizes environmental disruption and will be used for consolidated substrate and/or solid rock conditions and for locations where roadways or rivers must be crossed and/or where environmentally sensitive areas must be avoided.

Guiding the HDD is a very important part of the drilling operation, as the drilling head is under the ground and is not visible from the ground surface. In most cases, a transmitter (called a sonde) that registers angle, rotation, direction, and temperature data will be located on the bore head. This information is encoded into an electro-magnetic signal and transmitted through the ground to the surface, where it is picked up by a hand-held receiver. When boring solid rock, a wireline system may be used. In this instance, information is transmitted through a cable fitted within the drill string. The bore head direction can be guided using this system.

Once the initial bore is complete, the small bore head is refitted with a reamer to enlarge the bore hole, and the process is reversed. While the reamer head is being retracted, conduits will be pulled back to the point of origin. At both ends, the boring pits allow for the construction of the bore; boring pits are open pit areas that will be approximately 3 feet wide by 10 feet long to allow for the entrance and exit of the bore. The bore itself will extend beyond the length of the element being avoided (e.g., stream, railroad). Directional drilling uses a bentonite/water mixture that is pumped down the drill stem to cool the drill head, lubricate the drill pipe, maintain the bore hole opening, and remove bore cuttings. Bentonite is a fine clay that, when mixed with water, provides the necessary lubricant and operating fluid for the drilling process. Directional bores may be employed to circumvent obstacles in the ground and other points that will occur intermittently in conjunction with construction of various phases. The minimum depth of the bore will be in compliance with the requirements of the regulatory Agencies. HDD activities will be contained within the Caltrans ROW/easement and mainly within existing roads, in which impacts will be less than the installation of cable by plowing or trenching. CBC will implement a

HDD Contingency and Resource Protection Plan. The bentonite will be removed from each bore site and properly disposed.

The Proposed Project will not have fluid pits onsite, but drying sites may be located onsite where the bentonite is temporarily dried and mixed. CBC will coordinate with the counties for these locations, which most likely will be county disposal sites. Bentonite will be properly disposed of offsite.

Construction Equipment

Because of the variety of equipment that may be employed to accomplish installation of the FOC in both newly constructed and existing conduit segments, and because each contractor has a slightly different equipment inventory, equipment may include: D8 Caterpillar, backhoe, 10-wheeler truck, semi-trailer truck, ¾-ton pickup truck, excavator, trencher, dozer/plow, loader, cable reel trailer, air blower device, air compressor, mechanical pusher/puller, and water truck. Equipment will stay within the confines of the Proposed Project ROW or access road to the ROW identified for the Proposed Project. Based on the Proposed Project schedule required to complete the Project, multiple crews likely will be working concurrently along the route.

Access Vaults

Additional underground components include buried access or splice vaults. Within the new construction portions of the route only, vaults will be placed approximately every 4,500 feet to enable access to the underground conduits. Approximately 55 vaults are proposed for installation within the Inyo National Forest (NF). The buried access vaults measure 48 inches in diameter and are 48 inches deep. With the exception of the flush metal manhole lids, the remaining body of the round, prefabricated structure will not be visible from the surface. The vaults will be installed with backhoes and vacuum excavation methods. They will be located within the existing road ROWs and a minimum of 20 to 30 feet from the edge of pavement (depending on type of highway), or nearest appropriate/accessible location, as stipulated by the recently (December 30, 2010) issued guidelines from Caltrans; vaults will be placed outside the State Highway ROW, as practicable.

Subsurface Warning Tape and Cable Locating Technology

Where methods permit, a continuous ribbon of Buried Cable Warning Tape will be placed above, and parallel to, the new conduit within the ground. The warning tape will be imprinted with a warning message as a final warning to excavators that fiber-optic cable is buried below. The tape will be impervious to soil acid, alkali, and/or other natural soil agents. Installation of the tape will occur simultaneously with the installation of the conduit. The subsurface tape may be magnetic, which will allow engineers to scan the road for the fiber cable location without having to resort to ground-disturbing activities, such as potholing, to locate the cable line. In all areas, a “tracer” wire will be installed as part of the plastic ducts. This tracer wire allows a tone to be induced on the wire so that the exact location of the conduit can be located with electronic equipment. This method is used by standard underground cable locating procedures prior to any future digging in the area (Underground Service Alert).

Marker Posts

Above-ground warning marker posts will be placed along the entire cable route at intervals of approximately 700 feet. An estimated 356 new marker poles will be installed within the Inyo National Forest. The posts will be contained within the Proposed Project ROW directly above or offset as required of the conduit/cable. Mechanical equipment consisting of a tractor with a power auger extension arm may be required for pole installation. Ground disturbance during the installation of marker posts is typically limited to a relatively small disturbance of earth as wide as 12 by 12 inches. This area of disturbance lies within the area of disturbance for installation of fiber-optic cable and conduit. These metal, poly-vinyl, or fiberglass posts are installed to provide visible evidence of the presence of buried cable, identify the owner of the cable, and provide a telephone number for emergency notifications. The location of the marker post may be adjusted to accommodate sensitive environments (e.g., sensitive vegetation communities) or physical limitations (e.g., rocks) present at the edge of the Caltrans ROW/easements; marker posts will be installed outside the clear recovery zone (CRZ), where practicable. Marker posts will be installed, as much as possible, in areas that lack vegetation. Locating the innerducts along with the associated markers away from the highway improves safety and lessens the adverse impacts to Caltrans maintenance and operations, including but not limited to delineator and sign installation and maintenance, as well as shoulder backing, grading, plowing, and repair operations.

Staging and Laydown Areas

Staging areas will be established outside the Proposed Project footprint, mainly in commercial property areas, to provide the locations to store material and large equipment for intermittent periods of time and to conduct fueling and maintenance work. Laydown areas are areas identified for vehicle parking and/or short-term placement of equipment, conduit, and cable. The general size of staging/laydown areas is approximately 100 feet wide by 100 feet long; the exact size will depend upon the individual locations. Temporary parking of vehicles (overnight) will occur within areas of the ROW or in laydown areas. The laydown areas generally are composed of previously disturbed/developed areas (e.g., dirt parking lots) that may contain sparsely scattered and disturbed vegetation, if any. In sensitive areas, the construction contractor will have laydown areas marked, and the areas will be cleared (surveyed) by the Project biologists prior to parking equipment. A detailed list of potential staging/laydown areas is provided in Appendix A. It is expected that more staging/laydown areas are identified than will actually be needed. Additional locations were identified to allow for options, should any of the staging/laydown areas prove to be inadequate. Eight potential staging and laydown areas have been identified for the Proposed Project within the Inyo National Forest.

Construction Schedule

The total duration of construction activity of the approximately 593-mile network is estimated at up to 24 months. Proposed Project construction is estimated to begin in early 2012. Construction crews generally will work 8- to 10-hour days, five days a week during daylight hours. Saturday work may be required in some areas, as needed; and the appropriate approval from the proper agency would be obtained prior to construction on weekends. No work is anticipated to occur on major holidays. The Proposed Project will avoid traffic control on State highways when peak volumes are anticipated (e.g., Fridays after 3:00 p.m.) and days preceding and following holiday weekends. The Proposed Project will avoid lane closures during times of inclement weather, including but not limited to rain, snow, and ice.

Based on the Proposed Project schedule required to complete the Proposed Project, multiple crews will likely be working concurrently along the route. During this period, various aspects of construction will be occurring simultaneously, including the following: conduit plowing, trenching, cable pulling, splicing, marker post installation, and final restoration of the roads and access roads. As it takes longer to install the conduit, the cable installation crews will not start work until the conduit installation has made sufficient progress. This will facilitate keeping the cable installation crews from catching up too soon to the conduit installation crews. This will create greater lag time between the cable and conduit crews at the beginning of construction. This lag time will likely shorten over the course of the construction period. Due to the use of multiple crews, it is possible that some of the laydown and staging areas will be used for more than one period of time.

Applicant-Proposed Measures

Applicant proposed measures are methods, measures, or practices that avoid, reduce, or minimize a project's adverse effects on various environmental resources. They can be applied before, during, or after construction of the project to reduce or eliminate potential environmental effects. Applicant-proposed measures would be employed by the Proposed Project applicant and/or the construction superintendent. Applicant-proposed measures are listed in Appendix B.

Operation and Maintenance

Operation and maintenance activities will be implemented along the Proposed Project ROW over the life of the Proposed Project. The utility owner will be required to apply for and obtain an encroachment permit to operate and maintain the facilities within the State Highway ROW; required every other year after construction completion. Existing access roads would be utilized for operation and maintenance activities. Surveyors would drive along the existing roads to inspect the line after rainstorm events and may stop and open the hatches to ground vaults and manholes. Ground-disturbing activities associated with ongoing operation and maintenance procedures are typically minor, if any. These activities would result mainly for repair of erosion control devices or cable conduits in the event of storm damage, landslides, or other emergencies. In most emergency situations, review of damaged areas will be accessed via public roads, private transmission access roads, and route access roads. No new habitat will be affected by maintenance activities, and maintenance activities will occur only within the Caltrans ROW/easements. The appropriate Agencies will be contacted if maintenance activities outside previously authorized areas are required.

IV. AFFECTED ENVIRONMENT

A literature review and a field reconnaissance survey were conducted to identify biological resources along the Proposed Project route. The results are described in detail in the Draft Biological Technical Report for the California Broadband Cooperative Digital 395 Middle Mile Project (Chambers Group 2011b) and are summarized in this section.

Literature Review

Prior to performing the biological field surveys, existing documentation relevant to the Proposed Project was reviewed. The most recent records of the California Natural Diversity Database (CNDDB 2010) managed by the California Department of Fish and Game (CDFG) and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPSEI) were reviewed for the California U.S. Geological Survey (USGS) 7.5-minute quadrangles containing and surrounding the Proposed Project route. These databases contain records of reported occurrences of Federal- and/or State-listed as endangered or threatened species, proposed endangered or threatened species, former Federal Species of Concern, California Species of Special Concern (CSC), or otherwise sensitive species or habitat that may occur within or in the immediate vicinity of the Proposed Project route. The USGS 7.5-minute quadrangles reviewed for this Proposed Project included: *Casa Diablo Mountain, Convict Lake, Crestview, June Lake, Lee Vining, Lundy, Old Mammoth, Toms Place,* and *Whitmore Hot Springs*. In addition, the United States Forest Service (USFS) sensitive species list for the Inyo National Forest also was reviewed. Species identified during the literature review to occur or have the potential to occur within the vicinity of the Proposed Project route were included in the consideration of species included in this report.

Biological Reconnaissance Surveys

Biological, reconnaissance-level surveys were conducted along the approximately 593-mile Proposed Project route, which includes 49.1 miles on Inyo National Forest lands, and within a 50-foot buffer (Survey Area) that would encompass the 20-foot width of the Proposed Project ROW. The surveys identified vegetation communities and habitats that potentially may support special-status species within the Proposed Project ROW. The survey was conducted by car and on foot between 0700 and 1700 hours on October 15, 2010, through December 2, 2010. Additional surveys along the optimized route were conducted in May and from June 8 through 10, 2011. Photographs were taken to document the existing conditions and habitats within the Proposed Project route. Weather conditions during the survey included temperatures ranging from approximately 19 to 89 degrees Fahrenheit with 0 to 100 percent cloud cover. Surveys were not conducted during storm events. Chambers Group, Inc. (Chambers Group) biologists Rebecca Alvidrez, Leslie Buena, Nichole Cervin, Heather Clayton, Sarah Harris, Jessie Miller, Paul Morrissey, Tyler Sears, and Tracy Treybig conducted the reconnaissance-level surveys.

Vegetation

Observed plant species were identified and recorded. Plant communities in the Proposed Project route were identified, qualitatively described, and mapped onto an aerial photograph. Plant communities were determined in accordance with the categories set forth in Holland (1986) or Sawyer et al. (2009). Plant nomenclature follows that of *The Jepson Manual: Higher Plants of California* (Baldwin et al. 2012). A map showing the location of vegetation communities for the Proposed Project within the Inyo National Forest is located in Appendix C. A list of the plant species observed during the surveys is included in the Draft Biological Technical Report for the Digital 395 Middle Mile Project (Chambers Group 2011b).

Wildlife

Wildlife and wildlife signs observed along the Proposed Project route, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (e.g., undisturbed native habitat, wildlife trails) or in habitats with the potential to support State- and/or Federal-listed or proposed listed species. Notes were made on the general habitat types, species observed, and the general conditions of the site. A list of the wildlife species observed or detected during the surveys is included in the Draft Biological Technical Report for the Digital 395 Middle Mile Project (Chambers Group 2011b).

The California Wildlife Habitat Relationship

The California Wildlife Habitat Relationship (CWHR) is a wildlife information system and predictive model for California's regularly occurring birds, mammals, reptiles, and amphibians and is a classification scheme used to describe wildlife habitats based on vegetation type, size, and density (CDFG 2005).

Based on existing vegetation information gathered during reconnaissance-level surveys, CWHR types present within the Proposed Project ROW within the Inyo National Forest are displayed in Table 2.

Table 2. CWHR types present in the Proposed Project ROW within the INF

CWHR Type	Observed Vegetation Communities	Acres
Sagebrush	Rabbitbrush Scrub	0.61
	Transitional Great Basin Mixed Scrub	19.61
	Disturbed Rabbitbrush Scrub	0.44
	Great Basin Mixed Scrub	25.07
	Blackbush Scrub	0.97
	Tobacco Brush Chaparral	0.01
Pinyon-Juniper	Great Basin Pinyon-Juniper Woodland	5.39
Lodgepole Pine	Lodgepole Pine Forest	0.01
Aspen	Aspen Forest	0.08
Sierran Mixed-Conifer	Sierran Mixed Conifer Forest	1.94
Eastside Pine	Eastside Jeffrey Pine Forest	29.06
Montane Riparian	Great Basin Cottonwood - Willow Riparian Forest	0.27
	Montane Riparian Forest	0.17
	Montane Black Cottonwood Riparian Forest	0.01
Annual Grasses	Ruderal/Disturbed	2.22
Urban	Developed	0.68
Perennial Grasses	Great Basin Grassland	0.57
	Turf Grass	0.01
Total Acres		**87.10**

Vegetation Communities Observed

The following vegetation communites were observed within the Proposed Project ROW during the Chambers Group field reconnaissance surveys. The vegetation communities observed are described below and associated with the appropriate CWHR type. Vegetation maps of the Proposed Project ROW within the Inyo National Forest are located in Appendix C of this report.

Annual grasses/ Barren

Ruderal/Disturbed

Areas classified as Ruderal are dominated by pioneering herbaceous species that readily colonize disturbed ground and are typically found in temporary, often frequently disturbed habitats (Barbour et al. 1999). The soils in Ruderal areas are characterized as heavily compacted or frequently disturbed. The vegetation in these areas is adapted to living in compact soils where water does not readily penetrate the soil. Disturbed areas are those areas that are either devoid of vegetation (cleared or graded), such as dirt roads, or those areas that are dominated by non-native, weedy species.

Aspen/ Sierran Mixed-Conifer/ Lodgepole Pine

Montane Riparian Forest

Montane Riparian Forest is typically characterized by open to dense, broadleaved, winter-deciduous, shrubby, riparian thickets usually dominated by any of several willow species and alder (*Alnus* sp.). This community is often found on relatively fine-textured alluvium landscapes along fairly low-gradient reaches of snowmelt-fed streams. Plant species observed on the Proposed Project site typical of this community include: quaking aspen, white alder (*Alnus rhombifolia*), and multiple willow species including red willow, narrow-leaved willow, and black willow (*Salix gooddingii*).

Eastside Pine

Jeffrey Pine Forest

The Jeffrey Pine Series consists of a tall, open forest dominated by Jeffrey pine (*Pinus jeffreyi*), with a sparse understory of montane chaparral or Big Sagebrush Scrub species. The Jeffrey Pine Series is usually found on dry, cold sites, especially on well-drained slopes, ridges, or cold air accumulation basins (Holland 1986). Elevations range from 6,500 to 9,000 feet above mean sea level (amsl). The understory within this community in the Proposed Project ROW is very minimal, mostly covered by a dense needle layer. The occasional shrub species scattered throughout this community on the Proposed Project ROW included rose (*Rosa* sp.), big sagebrush (*Artemisia tridentata*), antelope bush (*Purshia tridentata*), snowbrush (*Ceanothus velutinus*), and manzanita species (*Arctostaphylos* sp.).

Pinyon-Juniper

Great Basin Pinyon-Juniper Woodland

Great Basin Pinyon-Juniper Woodland is characterized by an open woodland dominated by western juniper (*Juniperus occidentalis*) and single-leaf pinyon (*Pinus monophylla*) as conspicuous canopy components. Shrub and herbaceous species in this community are typically seen in adjacent non-forested stands of Great Basin scrub communities. This community can be found on deep, well-drained soils or shallow, rocky, poorly drained soils.

Sagebrush

Great Basin Mixed Scrub

Great Basin Mixed Scrub is characterized by a moderately tall, fairly open shrubland with several species contributing to the canopy. Dominant species usually include big sagebrush and antelope bush with several perennial grasses between the shrubs. This community is typically found on deep, gravelly, well-drained sites, usually on alluvium landscapes derived primarily from granitic sources. This community also integrates on cooler or more shallow-soiled sites with Subalpine Sagebrush Scrub; with Great Basin Pinyon-Juniper Woodlands on residual upland sites; and with Big Sagebrush Scrub on slightly lower elevation, less fertile, or overgrazed sites (Holland 1986). Plant species observed on the Proposed Project ROW typical of this community include: big sagebrush, antelope bush, yellow

rabbitbrush (*Chrysothamnus viscidiflorus*), four-wing saltbush (*Atriplex canescens*), and wildrye (*Elymus* sp.).

Transitional Great Basin Mixed Scrub
This community represents an ecotone that is transitional between Great Basin Mixed Scrub and an Eastside Jeffrey Pine Forest. Transitional Great Basin Mixed Scrub is characterized by a moderately tall, fairly open shrubland with several species contributing to the canopy (Holland 1986). Dominant species typically include big sagebrush and antelope bush with several perennial grasses comprising the herbaceous vegetation. Mature Jeffrey pine trees are found scattered among shrubs, and this community tends to occur at higher elevations than the Great Basin Mixed Scrub community. Plant species observed on the Proposed Project route typical of this community include big sagebrush and other species characteristic of the Great Basin Mixed Scrub community, but with a presence of Ponderosa pine trees as well.

Urban

Developed
Developed areas are unvegetated areas that have been altered by humans and now display man-made structures such as houses, paved roads, buildings, parks, and other maintained areas.

V. SPECIES EVALUATED

PLANTS

Species considered in this analysis were identified from (1) a list of threatened, endangered, and proposed plant species potentially occurring in Mono County, California, available from the US Fish and Wildlife Service Office web page (http://ecos.fws.gov/tess_public/), and (2) a list of Inyo National Forest Sensitive Plants, dated October 2006, with distribution occurring in Mono County, California.

Threatened, Endangered and Candidate Species

- ***Astragalus lentiginosus* var. *piscinensis***

Sensitive Species

- ***Arabis bodiensis* Rollins**
- ***Arabis pinzlae* Roll.**
- ***Arabis tiehmii* Roll.**
- ***Astragalus johannis-howellii* Barnebyi**
- ***Astragalus lemmonii* A. Gray**
- ***Astragalus monoensis* Barneby**

- ***Astragalus ravenii* Barneby**
- ***Botrychium crenulatum* W.H.Wagner**
- ***Botrychium ascendens* W.H. Wagner**
- ***Botrychium lunaria* (l.) Sw.**
- ***Botrychium lineare* W.H. Wagner**
- ***Calochortus excavatus* Greene**
- ***Carex tiogana* Taylor & Mastrogiuseppe**
- ***Dedeckera eurekensis* Reveal & Howell**
- ***Draba asterophora* Pays. var. *asterophora***
- ***Draba incrassata* (Rollins) Rollins & R.A. Price**
- ***Draba monoensis* Roll. & Price**
- ***Epilobium howellii* P. Hoch**
- ***Helodium blandowii* (Web. & Mohr) Warnst.**
- ***Horkelia hispidula* Rydb.**
- ***Lupinus duranii* Eastw.**
- ***Lupinus lepidus* Douglas var. *culbertsonii* (E.Greene)**
- ***Lupinus padre-crowleyi* Smith**
- ***Phacelia inyoensis* (J.F. Macbr.) J. Howell**
- ***Phacelia monoensis* Halse**
- ***Polemonium chartaceum* H. Mason**
- ***Polyctenium williamsiae* Rollins**
- ***Potentilla morefieldii* B.Ertter**
- ***Senecio pattersonensis* Hoov.**
- ***Streptanthus oliganthus* Roll.**
- ***Trifolium dedeckerae* Gillett**

Astragalus lentiginosus var. *piscinensis* is restricted to a 6-mile stretch of alkaline flats paralleling Fish Slough (USDI 2005). The Proposed Project crosses into the Inyo National Forest approximately 8 miles northwest of Fish Slough. Although habitat to support this species was observed adjacent to the Proposed Project route within the Inyo National Forest, this species does not have the potential to occur in the Inyo National Forest due to its limited distribution.

Table 3 lists the plant species that do not have the potential to occur within the analysis area.

*Therefore, it is my determination there will be **no impact** and/or **no effect** to the species identified in Table 3 from the Proposed Project and no further analysis will be conducted.*

Table 3: Threatened, Endangered, and R5 Sensitive Plant Species on the Inyo National Forest without potential habitat in the Digital 395 Project Area.

Species	Status	Common name	Habitat	Habitat within ROW
Astragalus lentiginosus var. *piscinensis*	Threatened	Fish Slough milk-vetch	This species occurs on poorly drained saline soils of Playas at elevations between 3,710 and 4,265 feet amsl.	This species is restricted to a 6-mile stretch of alkaline flats paralleling Fish Slough (USDI 2005). The Proposed Project crosses into the Inyo National Forest approximately 8 miles northwest of Fish Slough. This species does not have the potential to occur in the Proposed Project ROW within Inyo National Forest due to its limited distribution.
Boechera (Arabis) pinzlae	Sensitive	Pinzl's rock cress	This species can be found in sandy soils or scree in Alpine Boulder and Rock Field, and Subalpine Coniferous Forest (scree or sandy) at elevations between 9,842 and 10,990 feet amsl	This species occurs outside the elevation range of the Proposed Project route within the INF.
Arabis tiehmii	Sensitive	Tiehm's rock cress	This species can be found in granitic soils in Alpine Boulder and Rock Field at elevations between 9,744 and 11,778 ft amsl	This species occurs outside the elevation range of the Proposed Project route within the INF.
Astragalus ravenii	Sensitive	Raven's milk-vetch	This species can be found in gravelly soils in Alpine Boulder and Rock Field and Upper Montane Coniferous Forest at elevations between 11,000 and 11,500 feet amsl	This species occurs outside the elevation range of the Proposed Project route within the INF.
Carex tiogana	Sensitive	Tioga Pass sedge	This species can be found in mesic soils and lake margins in Meadows and Seeps at elevations between 10,170 and 10,826 feet amsl	This species occurs outside the elevation range of the Proposed Project route within the INF.
Dedeckera eurekensis	Sensitive	July gold	This species can be found in carbonate soils in Mojavean Desert Scrub at elevations between 3,937 and 7,217 feet amsl	Habitat suitable for this species does not occur within the Proposed Project route within the INF.
Draba asterophora var. *asterophora*	Sensitive	Tahoe draba	This species occurs within Subalpine Coniferous Forest and Alpine Boulder and Rock Field habitats at elevations between 8,200 and 11,500 feet amsl.	This species occurs at elevations outside the range of the Proposed Project route in Mono County (S. Weis, USFS, personal communication dated 10-19-2011).
Draba incrassata	Sensitive	Sweetwater Mountains draba	This species can be found on rhyolitic talus in Alpine Boulder and Rock Field at elevations between 8,202 and 13,008 feet amsl	Habitat suitable for this species does not occur within the Proposed Project route within the INF.
Draba monoensis	Sensitive	Mono draba	This species can be found at elevations between 11,000 and 13,000 feet in Alpine Boulder and Rock Field and Meadows and Seeps	This species occurs outside the elevation range of the Proposed Project route within the INF.

Table 3: Threatened, Endangered, and R5 Sensitive Plant Species on the Inyo National Forest without potential habitat in the Digital 395 Project Area.

Species	Status	Common name	Habitat	Habitat within ROW
Horkelia hispidula	Sensitive	White Mountains horkelia	This species can be found in Alpine Dwarf Scrub, Great Basin Scrub, and Subalpine Coniferous Forest at elevations between 9,842 and 11,154 feet amsl	This species occurs outside the elevation range of the Proposed Project route within the INF.
Lupinus padre-crowleyi	Sensitive	Father Crowley's lupine	This species occurs in decomposed granitic soils of Riparian Scrub, Riparian Woodland, Great Basin Scrub, and Upper Montane Coniferous Forest habitats at elevations between 7,220 and 13,125 feet amsl.	This species is only known to occur south of Proposed Project route (S. Weis, USFS, personal communication dated 10-19-2011).
Phacelia monoensis	Sensitive	Mono phacelia	This species occurs in clay soils, often along roadsides, within Great Basin Scrub and Pinyon-Juniper Woodland habitats at elevations between 6,230 and 9,515 feet amsl.	This species occurs only in the White Mountains on INF (S. Weis, USFS, personal communication dated 10-19-2011).
Polemonium chartaceum	Sensitive	Mason's skypilot	This species occurs in Alpine Boulder and Rock Field and Subalpine Coniferous Forest habitat in elevations between 5,905 and 14,000 feet amsl.	Proposed Project route does not cross habitat at a high enough elevation for this species within the INF (S. Weis, USFS, personal communication dated 10-19-2011).
Polyctenium williamsiae	Sensitive	Williams combleaf	This species occurs in open/barren, sandy to sandy-clay substrates of mud margins and bottoms of seasonal lakes, on granitic slopes, areas of disturbance, roadsides, and drainage bottoms within Pinyon-Juniper Woodland, Sagebrush Scrub, and Mountain Sagebrush habitats at elevations between 5,670 and 8,930 feet amsl.	This species is known to occur in the Bodie Hills/Bodie Mountain areas, outside the Proposed Project route (S. Weis, USFS, personal communication dated 10-19-2011).
Potentilla morefieldii	Sensitive	Morefield's cinquefoil	This species can be found in carbonate soils in Alpine Boulder and Rock Field at elevations between 10,711 and 13,123 feet amsl	This species occurs outside elevation range of the Proposed Project route within the INF.
Senecio pattersonensis	Sensitive	Mount Patterson senecio	This species can be found in Alpine Boulder and Rock Field at elevations between 9,514 and 12,204 feet amsl	This species occurs outside the elevation range of the Proposed Project route within the INF.
Trifolium dedeckerae	Sensitive	Dedecker's clover	This species occurs on granitic or rocky soils of Upper Montane Coniferous Forest, Pinyon-Juniper Woodland, Subalpine Coniferous Forest, and Lower Montane Coniferous Forest habitats at elevations between 6,890 and 11,480 feet amsl.	This species occurs in the White Mountains in Mono County (S. Weis, USFS, personal communication dated 12-9-11).

The Project area contains potential habitat for the following plant species: *Arabis bodiensis, Astragalus johannis-howellii, Astragalus lemmonii, Astragalus monoensis, Botrychium crenulatum, Botrychium ascendens, Botrychium lunaria, Calochortus excavatus, Epilobium howellii, Lupinus duranii, Lupinus lepidus* var. *culbertsonii, Phacelia inyoensis, Streptanthus oliganthus, and Helodium blandowii.* Brief descriptions of each of these plant species with potential habitat present are provided below.

Sensitive Plant Species

Bodie Hills rock cress (*Boechera bodiensis*)
Bodie Hills rock cress is a perennial herb that flowers between June and July. This species occurs in Great Basin Scrub, Subalpine Coniferous Forest, Alpine Boulder and Rock Field, and Pinyon-Juniper Woodland habitats at elevations between 8,640 and 11,580 feet amsl. The known range of this species includes Fresno, Inyo, Mono, and Tulare counties in California, and Mineral County in Neveda. Threats to this species include mineral exploitation and development, road construction, and road maintenance. The Proposed Project does not cross a known occurrence of occupied Bodie Hills rock cress habitat within the Inyo NF. There is not a known occurrence of occupied Bodie Hills rock cress habitat in the Inyo NF within 3 miles of the Proposed Project. Bodie Hills rock cress is known to occur mostly in the Bodie Hills area, which lacks connectivity to the Proposed Project ROW within the Inyo NF. The Proposed Project crosses approximately 62 acres of fragmented habitat suitable for Bodie Hills rock cress along the 49.1 miles of Proposed Project ROW within the Inyo National Forest, although most of it is below 8,000 feet amsl.

Long Valley milk-vetch (*Astragalus johannis-howellii*)
Long Valley milk-vetch is a perennial herb that flowers between June and August. This species occurs in sandy loam, usually in swales, in the vicinity of former or present hot springs within Great Basin Scrub habitat at elevations between 6,690 and 8,300 feet amsl. The known range of this species includes Nevada and Mono County in California. Threats to Long Valley milk-vetch include grazing, mining, and vehicles. The Proposed Project does not cross a known occurrence of occupied Long Valley milk-vetch habitat within the Inyo NF. However, there is a known occurrence of occupied Long Valley milk-vetch habitat (137.8 acres) approximately 0.06 mile east of the Proposed Project route along US 395 at Dry Creek Road; connectivity exists between the occupied habitat and the habitat within the Proposed Project ROW near this occurrence. There is an additional population approximately one mile north of the Mammoth/Yosemite Airport; habitat within the Proposed Project ROW near this occurrence is fragmented by development. The Proposed Project crosses approximately 25 acres of fragmented habitat for Long Valley milk-vetch along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

Lemmon's milk-vetch (*Astragalus lemmonii*)
Lemmon's milk-vetch is a perennial herb that flowers between May and August. This species occurs within Great Basin Scrub, Meadow and Seep, and Marsh and Swamp habitats, usually near lake shores at elevations between 3,300 and 7,215 feet amsl. Its known ranges include Inyo, Lassen, Modoc, Mono, Plumas, Shasta, and Sierra counties in California and Nevada and Oregon. This species occurs near the Proposed Project route south of Mammoth Lakes, California, in the Inyo NF (S. Weis, USFS, personal

communication dated 10-19-2011), however, the Proposed Project does not cross a known occurrence of occupied Lemmon's milk-vetch habitat. Land conversion and pipeline construction are some of the threats to Lemmon's milk-vetch. There is a known occurrence of occupied Lemmon's milk-vetch habitat (0.64 acre) approximately 0.64 mile east of the Proposed Project route north of the Mammoth/Yosemite Airport; connectivity exists between the occupied habitat and the habitat within the Proposed Project ROW near this occurrence, but the habitat is fragmented by development. The Proposed Project crosses approximately 25 acres of fragmented habitat for Lemmon's milk-vetch along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

Mono milk-vetch (*Astragalus monoensis*)
Mono milk-vetch is a perennial herb that flowers between June and August. This species occurs in pumice, sandy, or gravelly soils within Great Basin Scrub and Upper Montane Coniferous Forest habitats at elevations between 6,920 and 11,005 feet amsl. The known range of this species includes Inyo and Mono counties in California. Threats to Mono milk-vetch include road maintenance, sheep grazing, and off-highway vehicles. The Proposed Project route crosses two known populations of Mono milk-vetch within the Inyo National Forest. The Proposed Project ROW intersects two populations of Mono milk-vetch within the Inyo National Forest; both populations are along the US 395 just north of the city of Mammoth Lakes, California. Of the approximate 60 acres of habitat occupied by Mono milk-vetch that the Proposed Project crosses, approximately 0.48 percent (0.03 acre at US 395/Dry Creek Road Population; 0.26 acre at the US 395 population approximately 0.5 miles further north) is within the Proposed Project ROW.

scalloped moonwort (*Botrychium crenulatum*)
Scalloped moonwort is a perennial herb with sporangia appearing between June and September. This species occurs within Lower Montane Coniferous Forest, Upper Montane Coniferous Forest, Meadow and Seep, Bogs and Fens, and Fresh Water Marsh and Swamp habitats at elevations between 4,160 and 10,760 feet amsl. Its known range includes Butte, Colusa, Lake, Lassen, Los Angeles, Mono, Modoc, Placer, Plumas, San Bernardino, Shasta, Tehama, and Tulare counties in California and Arizona, Idaho, Nevada, Oregon, Utah, Washington, and Wyoming. Scalloped moonwort is threatened by foot traffic, grazing, trampling, road deconstruction, and recreational activities. The Proposed Project does not cross a known occurrence of occupied scalloped moonwort habitat within the Inyo NF. There is a known occurrence of occupied scalloped moonwort habitat (37.56 acres) approximately three mile west of the Proposed Project route just southwest of Convict Lake and another of similar size along the shore of Tioga Lake in Yosemite; connectivity does not exist between the occupied habitats and the habitat within the Proposed Project ROW near these occurrence (separated by a mountainous ridges). The Proposed Project crosses approximately 31 acres of fragmented habitat for scalloped moonwort along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

upswept moonwort (*Botrychium ascendens*)
Upswept moonwort is a perennial herb with sporangia appearing between July and August. This species occurs in mesic soils of Lower Montane Coniferous Forest and Meadow and Seep habitats at elevations between 4,920 and 7,495 feet amsl. Its known range includes Butte, El Dorado, Lassen, Mono, Modoc, Plumas, Shasta, Tehama, and Tulare counties in California and Idaho, Nevada, Oregon, Washington,

and Wyoming. Possible threats to upswept moonwort include logging and foot traffic. The Proposed Project does not cross a known occurrence of occupied upswept moonwort habitat within the Inyo NF. There is a known occurrence of occupied upswept moonwort habitat (37.56 acres) 2.98 miles west of the Proposed Project route just southwest of Convict Lake (same location as scalloped moonwort); connectivity does not exist between the occupied habitat and the habitat within the Proposed Project ROW near this occurrence (separated by a mountainous ridge). The Proposed Project crosses approximately 31 acres of fragmented habitat for upswept moonwort along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

narrowleaf grapefern/slender moonwort (*Botrychium lineare*)
Narrowleaf grapefern is a perennial herb with sporangia appearing in late June or July. Slender moonwort can be found within Meadow and Seep and Upper Montane Coniferous Forest habitats. It is known from approximately 10 occurences through its range (Idaho, Washington, Montana, California, Oregon, Colorado, Quebec, and New Brunswick), with only 1 in California from the Piute Pass area (Mount Henry – above 10,000 feet amsl), so the elevational requirements are largely unknown (higher elevation sites). Possible threats to this herb are fire suppression activies, grazing, mining, non-native species, urbanization, and logging. The Proposed Project does not cross a known occurrence of occupied slender moonwort habitat within the Inyo NF. The only known occurrence of occupied slender moonwort habitat in California is approximately 20 miles from the Proposed Project route. However, this species shares many similarities (morphology and habitat preference) with the other *Botrychium* spp., thus it may be found within the Inyo NF near suitable/occupied moonwort habitat. The Proposed Project crosses approximately 31 acres of fragmented habitat for slender moonwort along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

common moonwort (*Botrychium lunaria*)
This perennial herb has sporangia that typically appear in August. Common moonwort can be found within Meadow and Seep, Subalpine Coniferous Forest, and Upper Montane Coniferous Forest habitats at elevations between 6,494 and 11,152 feet amsl. The known range of this species in California includes Mono, Modoc, Nevada, Sierra, Tulare, and Tuolumne counties. Possible threats to this herb are logging, fire, and competition with non-native species. The Proposed Project does not cross a known occurrence of occupied common moonwort habitat within the Inyo NF. The nearest known occurrence of occupied common moonwort habitat (1,986.15 acres) is approximately 6.70 miles from the Proposed Project route outside of the Inyo NF. However, this species shares many similarities (morphology and habitat preference) with the other *Botrychium* spp., thus it may be found within the Inyo NF near suitable/occupied moonwort habitat. The Proposed Project crosses approximately 31 acres of fragmented habitat for common moonwort along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

Inyo County star tulip (*Calochortus excavatus*)
This perennial, bulbiferous herb flowers between April and July. Inyo County star-tulip occurs in alkaline soils of Great Basin Scrub and Meadow and Seep habitats at elevations between 3,770 and 6,560 feet amsl. This species' known range includes Inyo and Mono counties in California. Threats to this species include groundwater pumping, development, competition from non-native plants, grazing,

and road maintenance. The Proposed Project ROW intersects one large population of Inyo County star tulip within the Inyo National Forest; Crowley Lake Drive divides this population (immediately south of Crowley Lake). Of the approximate 1,987 acres of habitat occupied by Inyo County star tulip at the Crowley Lake Drive population that the Proposed Project crosses, approximately 0.32 percent (6.42 acres) is within the Proposed Project ROW.

subalpine fireweed (*Epilobium howellii*)
This perennial, stoloniferous herb blooms between July and August. It can be found in mesic soils within Meadow and Seep and Subalpine Coniferous Forest habitats at elevations between 6,561 and 10,236 feet amsl. This species is endemic to California and is known to exist in Alpine, El Dorado, Fresno, Madera, Mono, Nevada, Sierra, and Tuolumne counties. Threats to this herb include off-highway vehicles, overgrazing, logging, and road/trial maintenance. The Proposed Project does not cross a known occurrence of occupied subalpine fireweed habitat within the Inyo NF. However, there is a known occurrence of occupied subalpine fireweed habitat (0.43 acre) approximately one mile west of the Proposed Project route along Mammoth Creek in Mammoth Lakes, California; habitat within the Proposed Project ROW near this occurrence is fragmented by residential development. The Proposed Project crosses approximately 31 acres of fragmented habitat for subalpine fireweed along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

Mono Lake lupine (*Lupinus duranii*)
Mono Lake lupine is a perennial herb that flowers between May and August. This species occurs on volcanic pumice, on gravelly substrates within Subalpine Coniferous Forest, Great Basin Scrub, and Upper Montane Coniferous Forest habitats at elevations between 6,560 and 9,840 feet amsl. The known ranges include Inyo and Mono counties in California. Off-highway vehicles are threats to Mono Lake lupine. The Proposed Project ROW intersects several areas with populations of Mono Lake lupine within the Inyo National Forest; these populations are along the US 395 near the June Lake Junction. Of the approximate 1,143 acres of habitat occupied by Mono milk-vetch that the Proposed Project crosses, approximately 1.15 percent (1.22 acres at US 395/Highway 158 Junction; 2.28 acres at the US 395/Obsidian Dome Road populations) is within the Proposed Project ROW.

Hockett Meadows lupine (*Lupinus lepidus* var. *culbertsonii*)
This perennial herb flowers between July and August. This species occurs on mesic, rocky soils within Upper Montane Coniferous Forest and Meadow and Seep habitats at elevations between 8,005 and 9,842 feet amsl. Known ranges include Mono and Tulare counties. A limited distribution is the major threat to Hockett Meadows lupine. The Proposed Project does not cross a known occurrence of occupied Hockett Meadows lupine habitat within the Inyo NF. In fact, there is not a known occurrence of occupied Hockett Meadows lupine habitat in the eastern Inyo NF, which lacks connectivity to the Proposed Project ROW within the Inyo NF. The Proposed Project crosses approximately 31 acres of fragmented habitat suitable for Hockett Meadows lupine along the 49.1 miles of Proposed Project ROW within the Inyo National Forest, although most of it is below 8,000 feet amsl.

Inyo phacelia (*Phacelia inyoensis*)
Inyo phacelia is an annual herb that flowers between April and August. This species occurs on alkaline soils of Meadow and Seep habitat at elevations between 3,000 and 10,500 feet amsl. This species occurs in Long Valley (S. Weis, USFS, personal communication dated 10-19-2011), and its known range includes Inyo and Mono counties in California. Vehicles, trampling, and grazing are some threats to the Inyo phacelia. The Proposed Project does not cross a known occurrence of occupied Inyo phacelia habitat within the Inyo NF. However, there is a known occurrence of occupied Inyo phacelia habitat (1.88 acres) 3.79 miles east of US 395/Deadman Creek Road (which is along the Proposed Project route); habitat within the Proposed Project ROW near this occurrence lacks connectivity (continuous wetland feature), as do other occurrences within five miles of the Proposed Project route. The Proposed Project crosses less than one acre of fragmented habitat for Inyo phacelia along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

Masonic Mountain jewel-flower (*Streptanthus oliganthus*)
Masonic Mountain jewel-flower is a perennial herb that flowers between June and July. This species occurs in volcanic or granitic, rocky soils within Pinyon-Juniper Woodland habitat at elevations between 6,495 and 10,005 feet amsl. The known range of this species includes Inyo, Mono, and Tuolumne counties in California as well as Nevada. Masonic Mountain jewel-flower is threatened by mining, grazing, and vehicles. The Proposed Project does not cross a known occurrence of occupied Masonic Mountain jewel-flower habitat within the Inyo NF. However, there is a known occurrence of occupied Masonic Mountain jewel-flower habitat (4.95 acres) 0.35 mile west of the Proposed Project route just north of Lundy Lake Road, which is north of Mono Lake; habitat connectivity is present between this occurrence and the nearest habitat along the Proposed Project ROW. The Proposed Project crosses approximately six acres of fragmented habitat for Masonic Mountain jewel-flower along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

Blandow's bog moss (***Helodium blandowii***)
Blandow's bog moss is a CNPS List 2.3 and USFS Sensitive species. This moss has no flowering period. This species occurs in damp soil within Subalpine Coniferous Forest and Meadow and Seep habitats at elevations between 6,105 and 8,855 feet amsl. The known range includes Fresno, Mono, and Siskiyou counties in California. Grazing is a possible threat to Blandow's bog moss. The Proposed Project does not cross a known occurrence of occupied Blandow's bog moss habitat within the Inyo NF. However, there is a known occurrence of occupied Blandow's bog moss habitat (0.37 acre) 3.35 miles southwest of the Proposed Project route along Hilton Creek south of Crowley Lake; habitat connectivity is present (Hilton Creek passes through the Proposed Project ROW); however, residential development south of Crowley Lake fragments the suitable habitat nearest to the Proposed Project ROW. The Proposed Project crosses approximately 31 acres of fragmented habitat for Blandow's bog moss along the 49.1 miles of Proposed Project ROW within the Inyo National Forest.

WILDLIFE

Species considered in this analysis were identified from (1) a list of threatened, endangered, and proposed species potentially occurring in Mono County, California, available from the US Fish and

Wildilfe Service web page (http://ecos.fws.gov/tess_public), and (2) The Pacific Southwest Regional Forester's list of sensitive animals (USFS 1998, amended 10/2007). Animal species considered were identified on the following two lists.

Federally-Listed Species

Federally listed species considered in this document include:

- **Sierra Nevada bighorn sheep (*Ovis canadensis californiana*) - Endangered**
- **Owens tui chub (*Siphateles bicolor snyderi*) - Endangered**
- **Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) - Threatened**
- **Paiute cutthroat trout (*Oncorhynchus clarki seleniris*) - Threatened**
- **greater sage-grouse (*Centrocercus urophasianus*) – Candidate**
- **Pacific fisher (*Martes pennanti*) - Candidate**
- **Yosemite toad (*Bufo canorus*) – Candidate**
- **mountain yellow-legged frog (*Rana muscosa*) – Candidate**

Sensitive Species

Region 5 sensitive animal species that are considered in this document include:

- **northern goshawk (*Accipiter gentilis*)**
- **Swainson's hawk (*Buteo swainsoni*)**
- **greater sage-grouse (*Centrocercus urophasianus*)**
- **western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)**
- **willow flycatcher (*Empidonax trailii*)**
- **bald eagle (*Haliaeetus leucocephalus*)**
- **great gray owl (*Strix nebulosa*)**
- **California spotted owl (*Strix occidentalis occidentalis*)**
- **pallid bat (*Antrozous pallidus*)**
- **Townsend's big-eared bat (*Corynorhinus townsendii*)**
- **California wolverine (*Gulo gulo luteus*)**
- **western red bat (*Lasiurus blossevilii*)**
- **American marten (*Martes americana*)**
- **Sierra Nevada red fox (*Vulpes vulpes necator*)**
- **Panamint alligator lizard (*Elgaria panamintina*)**
- **Inyo Mountains salamander (*Batrachoseps campi*)**
- **Kern Plateau slender salamander (*Batrachoseps* sp.)**
- **Yosemite toad (*Bufo canorus*)**
- **mountain yellow-legged frog (*Rana muscosa*)**
- **northern leopard frog (*Rana pipiens*)**

- **Volcano Creek golden trout (*Oncorhynchus mykiss aguabonita*)**
- **Owen's Valley springsnail (*Pyrgulopsis owensensis*)**
- **Wong's springsnail (*Pyrgulopsis wongi*)**

Habitat requirement parameters for threatened, endangered, proposed, and sensitive (TEPS) species were determined from a variety of sources, including: USFWS Recovery Plans for bald eagle, peregrine falcon, and Sierra Nevada bighorn sheep (USFWS 1986, 1982, 2007); Habitat Evaluation Criteria for Management Indicator Species on the Inyo National Forest (USFS 2008); Wildlife Habitat Capability Models and Habitat Quality Criteria for the Western Sierra Nevada (Hurley 1981); Wildlife Habitat Relationship Models (Zeiner et al. 1990); A Literature Review for Management of the Marten and Fisher on National Forests in California (USFS 1991); The Scientific Basis for Conserving Forest Carnivores (Ruggiero et al. 1994); Ecology of American Martens on the Inyo National Forest (Kucera 1996); Management Recommendations for the Northern Goshawk in the Southwestern United States (Reynolds 1992); and mammalian, avian, and herpetological field guides.

Table 4 lists the wildlife species which do not have the potential to occur within the analysis area.

*Therefore, it is my determination there will be **no impact** and/or **no effect** to these species from the proposed project and no further analysis will be conducted.*

Table 4: Threatened, Endangered, and R5 Sensitive Wildlife Species on the Inyo National Forest without potential habitat in the Digital 395 Project Area.

Species	Status	Habitat	Habitat located within the project area
Sierra Nevada bighorn sheep	Endangered	Occurs only in the Eastern Sierra Nevada from Olancha, CA, area north to Virginia Lakes area (Bridgeport RD, H-T NF) within alpine and subalpine zones with open slopes where the land is rocky, sparsely vegetated, and characterized by steep slopes and canyons (USDA Forest Service 2001). 4,000 to 12,000 feet.	The Proposed Project ROW is outside the occupied range of SNBS.
Owens tui chub	Threatened	Occurs only in portion of Little Hot Creek that occurs on the INF.	Little Hot Creek is not located in the Proposed Project ROW within the Inyo National Forest.
Lahontan cutthroat trout	Threatened	Occupies clear, cold water mountain meadow streams. Occurs only within O'Harrel Creek on the INF.	O'Harrel Creek is not located in the Proposed Project ROW within the Inyo National Forest.
Paiute cutthroat trout	Threatened	Occupies low gradient meadow streams with an average water depth of one-half foot. PCT occur only in Cottonwood and Cabins creeks on the INF.	Cottonwood and Cabins creeks are not located within the Proposed Project ROW within the Inyo National Forest.

Species	Status	Habitat	Habitat located within the project area
Pacific fisher	Candidate	Occupies moderate canopy cover and conditions associated with late-successional forests; requires large home ranges.	Although potentially suitable habitat may be present within the Proposed Project ROW, the CNDDB record of occurrence dates to 1973. Additionally, this species is known to occur on the western slopes of the Sierra Nevada Mountains.
Yosemite toad	Candidate/ Sensitive	Endemic to the Sierra Nevada mountain range and occurs in wet montane meadows from Ebbetts Pass in Alpine County south to Evolution Lake/Darwin Canyon of Fresno County. Elevation range from 6,435 to 11,385 feet.	Suitable habitat is not located within the Proposed Project ROW within the Inyo National Forest.
mountain yellow-legged frog	Candidate/ Sensitive	Ranges throughout the Sierra Nevada mountains in deep, high, mountain lakes.	The Proposed Project ROW within the Inyo National Forest is not located within the identified range of the mountain yellow-legged frog (Zeiner et al. 1990).
Swainson's hawk	Sensitive	This species breeds locally from southwest Canada through the western U.S. to northern Mexico, with isolated populations in northern Illinois and the Sacramento and San Joaquin valleys of California. Swainson's hawk forages in open stands of grass-dominated vegetation, sparse shrublands, and small open woodlands. It typically nests in scattered trees within these grassland, shrubland, or agricultural landscapes.	This species is a rare transient on the Inyo National Forest lands. Swainson's hawk can be observed during the spring and fall migrations, but no nesting areas are known on the forest. This species is more likely found in the Owens Valley, not located on Forest System Lands (L. Murphy, USFS, personal communication dated 10-19-2011).
western yellow-billed cuckoo	Sensitive	Occupies deciduous riparian thickets or forests with dense, low-level or understory foliage up to 4,600 feet in elevation within the Owens Valley (USDA Forest Service 2001). Willow appears to be an important habitat component (Ibid.).	The Proposed Project ROW is outside the suitable elevation range within the Inyo National Forest.
willow flycatcher	Sensitive	With the exception of the southern and southeastern U.S., all subspecies breed coast to coast from southern Canada to northern Mexico and winter south of the U.S. The three recognized subspecies that breed in California (*E.t. brewsteri, E.t. adastus*, and *E.t. extimus*) are all considered state-endangered on their breeding grounds. This species is a widespread migrant and localized breeder in California that breeds in willow thickets and other dense riparian growth, often with a high percentage of canopy cover. It is generally found along permanent or nearly permanent streams, but it also occurs where soils are merely saturated without the presence of surface water. It prefers multi-storied canopies in combination with open patches to forage over.	No potential habitat for willow flycatcher occurs within the Proposed Project ROW, as no riparian vegetation is present suitable for willow flycatchers (willow, alder, etc.).

Species	Status	Habitat	Habitat located within the project area
bald eagle	Sensitive	Nests in large, old-growth, or dominant live tree with open branchwork, most frequently in stands with less than 40% canopy. Requires large bodies of water or free-flowing rivers adjacent to snags or other perches for foraging. 0 to 9,000 feet amsl	Appropriate nesting and foraging habitat is not present within Proposed Project ROW within the Inyo National Forest.
great gray owl	Sensitive	The species is found from Alaska, across Canada, and into the northern Rocky Mountains and eastern Sierra Nevada. The species habitat in northern Canada and Alaska is generally comprised of taiga interspersed with open spaces. In the southern parts of its range, the great gray owl inhabits deciduous or coniferous forests adjacent to meadows and similar open spaces up to approximately 9,000 feet in elevation.	No potential habitat for great gray owl occurs within the Proposed Project ROW. The conifer forest present is not located adjacent to large montane meadow systems, and no known occurrences of great gray owl are reported in or near the Proposed Project ROW (L. Murphy, USFS, personal communication dated 10-19-2011).
California spotted owl	Sensitive	Found in five vegetation types in the Sierra Nevada: foothill riparian/hardwood, ponderosa pine/hardwood, mixed-conifer forest, red fir forest, and the east side pine forest. Stands have at least 40% canopy cover and higher than average downed woody material and snags. 7,700 to 10,000 feet amsl	Suitable habitat is not located within the Proposed Project ROW within the Inyo National Forest.
pallid bat	Sensitive	The pallid bat ranges from southern British Columbia, California east to central Texas and Kansas, Mexico, and Baja California (USDA 2001). It occurs in a wide variety of habitats including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. It is most common in open, dry habitats with rocky areas for roosting. Pallid bats are most abundant below 6,000 feet in elevation in the arid Sonoran life zones but have been recorded up to 10,000 feet amsl in the Sierra Nevada (USDA 2001).	No known occurrences of pallid bat have occurred in the Proposed Project ROW. In potential foraging habitat, however, construction will not be conducted at night and will be limited in duration so no impacts to this species are expected (L. Murphy, USFS, personal communication dated 10-19-2011).
Townsend's big-eared bat	Sensitive	Within California, the Townsend's big-eared bat is found throughout the state in a variety of habitats from sea level to 10,000 feet amsl. Juniper/pine and mixed coniferous forests are commonly used; however, it is not found in the subalpine and alpine habitats (Zeiner et al. 1990).	No known occurrences of Townsend's big-eared bat are reported in the Proposed Project ROW. In potential foraging habitat, however, construction will not be conducted at night and will be limited in duration so no impacts to this species are expected (L. Murphy, USFS, personal communication dated 10-19-2011).

Species	Status	Habitat	Habitat located within the project area
California wolverine	Sensitive	Habitat for the species includes mixed conifer, red fir, and lodgepole habitats; and it may also use subalpine conifer, alpine dwarf-shrub, wet meadow, and montane riparian habitats. California wolverines prefer areas with low human disturbance; and, although largely nocturnal, they may be active at any point in the day.	There is no potential habitat for wolverine within the Proposed Project ROW. There is no alpine or subalpine habitat suitable for wolverine.
western red bat	Sensitive	Occupies riparian and deciduous wooded habitats below 3,000 feet elevation (USDA Forest Service 1998).	The Proposed Project ROW is outside the elevation range for this species within the Inyo National Forest.
American marten	Sensitive	Martens prefer coniferous forest habitat with large diameter trees and snags, large downed logs, moderate-to-high canopy closure, and an interspersion of riparian areas and meadows (USDA 2001). The species' core elevation range is from 5,500 to 10,000 feet amsl, and they are most often found in the Sierra Nevada above 7,200 feet.	The presence of the American marten within the Proposed Project ROW is not likely because habitat lacks the vegetation diversity required of the marten and contains limited preferred habitat attributes. The habitat fragmentation in this area adds to the lack of diversity, and habitat attributes would limit marten use in this area. Additionally, the proximity of the Proposed Project route to the highway and other human disturbances decreases the potential of the marten to occur within the Proposed Project ROW. Additionally, construction will be limited in duration within areas that could potentially support the American marten (L. Murphy, USFS, personal communication dated 10-19-2011).
Sierra Nevada red fox	Sensitive	Sierra Nevada red fox prefer areas with low human disturbance. They typically occupy red fir and lodgepole pine forests in the subalpine zone and alpine fell fields of the Sierra Nevada at elevations ranging from 4,000 to 12,000 feet; however, they are seldom sighted below 5,000 feet and most often above 7,000 feet (USDA 2001). This species uses forested areas in proximity to meadows, riparian areas, and brush fields.	No potential habitat for Sierra Nevada red fox occurs within the Proposed Project ROW. The Proposed Project ROW lacks any pine forests in subalpine or alpine zones, and therefore is not suitable for Sierra Nevada red fox. (L. Murphy, USFS, personal communication dated 10-19-2011).
Panamint alligator lizard	Sensitive	Found in riparian areas in drier habitat types: rocky canyon bottoms near streams and springs, with creosote bush, sagebrush, and at the lower edge of the pinyon-juniper zone (Mahrdt and Beaman unknown date). Also found in dense vegetation near damp soil, and also in rock talus outside of riparian areas (Mahrdt and Beaman unknown date.). 2,500 to 7,500 feet amsl	The Proposed Project ROW within the Inyo National Forest is not located within the identified range of the Panamint alligator lizard (Zeiner et al. 1990).
Inyo Mountains salamander	Sensitive	Endemic to the Inyo Mountains.	The Proposed Project ROW within the Inyo National Forest is not located in the Inyo Mountains.

Species	Status	Habitat	Habitat located within the project area
Kern Plateau slender salamander	Sensitive	Ranges in the southern Sierra Nevada mountains.	The Proposed Project ROW within the Inyo National Forest is not located within the southern Sierra Nevada mountains.
northern leopard frog	Sensitive	Perennial lotic water features associated with moist, dense, grassy or forb habitat.	The Proposed Project ROW within the Inyo National Forest is not located within the identified range of the northern leopard frog (Zeiner et al. 1990).
Volcano Creek golden trout	Sensitive	This fish is managed as a Sensitive species in its native habitat within the Kern River on the Kern Plateau.	The Kern River is not located within the Proposed Project ROW within the Inyo National Forest.
Owen's Valley springsnail	Sensitive	Occurs within un-altered spring habitat with cool, clean water along the Sierra Nevada and White Mountains escarpment.	This species is found within the Owens River drainage in Owens Valley. The Proposed Project ROW within the Inyo National Forest is not located within the Owens Valley drainage system (Hershler 1994). The Proposed Project route also does not cross any springs within the Inyo National Forest.
Wong's springsnail	Sensitive	Habitat includes perennial seeps and small to moderate-sized springs and spring runs with flowing water. Occupied springs are not associated within drainages and are typically located above waterways (L. Sims, USFS, personal communication dated 10-19-2011).	Found in the Owens River drainage basin and in various basins to the north, south, and east of the Owens Valley basin. It occurs in the Pine Creek area, Birchim Canyon, Owens Valley, and Inyo County in California and in Nevada. The Proposed Project does not cross any springs within the INF, nor does it cross headwaters supplying those springs or cross upstream waters of documented occurrences of the Wong's springsnail; therefore, the Proposed Project route avoids impacts to this species' waterways (L. Sims, USFS, personal communication dated 10-19-2011).

The Proposed Project area contains potential habitat for the following sensitive wildlife species: greater sage-grouse and northern goshawk. Brief descriptions of each of these wildlife species with potential habitat present are provided below.

Sensitive Wildlife Species

Greater Sage-Grouse

Greater sage-grouse (*Centrocercus urophasianus*) rely primarily on one particular plant type — sagebrush — to meet their life requirements. Leks, or breeding display sites, typically occur in open areas surrounded by sagebrush; these sites include but are not limited to landing strips, old lakebeds, low sagebrush flats and ridge tops, roads, cropland, and burned areas (Connelly et al. 2000). A common feature of leks sites is that they have less herbaceous and shrub cover than surrounding habitats (Schroeder et al. 1999). Brood-rearing areas include sagebrush, riparian meadows; greasewood bottoms; alfalfa, grain, and irrigated pastures; and trails. The common feature of brood areas is that they are rich

in forbs and insects. Winter ranges are dominated by 6 to 43 percent cover of sagebrush, primarily big sagebrush, low sagebrush, and/or silver sagebrush (Schroeder et al. 1999). Sagebrush is essential to the survival of sage-grouse during the winter and dominates the diet during late autumn, winter, and early spring. Insects, beetles, and ants are important for juveniles; and intake of forbs increases as the juveniles age. Breeding occurs from March to early April, and young hatch in early April to late July (Schroeder et al.1999). The nest site tends to be in sagebrush stands with the mean height of 29 to 80 cm, and nests tend to be under the tallest sagebrush in the stand (Connelly et al. 2000).

On March 4, 2010, the U.S. Fish and Wildlife Service published a 12-month finding for the petition to list greater sage-grouse as a Threatened and Endangered species (USDI 2010b). The finding identified the western-wide population of sage-grouse was warranted but was precluded from listing. The Mono Basin population (or Bi-State population, as referred to in the finding) is listed as a Distinct Population Segment (DPS) and also is warranted but precluded from listing (USDI 2010b). The sage-grouse is currently considered a candidate species under the Endangered Species Act and will continue to be a Forest Service Pacific Southwest Region sensitive species.

A portion of the Proposed Project ROW is located within the Long Valley area, where a large sage grouse population is known to occur. Breeding and nesting occur adjacent to the Proposed Project ROW and sage grouse have been observed using the sagebrush adjacent to the Proposed Project ROW location (personnel communication with Richard Perloff, wildlife biologist on the Mammoth Ranger District, April 11, 2012). Of the available 41,550 acres of suitable sage grouse nesting habitat within the Inyo National Forest, 7.5 acres (0.01 percent) of this suitable habitat are anticipated to be impacted by the Proposed Project (Figure 2).

Northern Goshawk

The northern goshawk is found throughout most of North America, with a few isolated populations in the southeastern and central United States. Within the Sierra Nevada goshawks breed from 2,460 feet amsl in the ponderosa pine/mixed-conifer vegetation types through 10,000 feet in the red fir and lodgepole pine vegetation types. On the eastern slope of the Sierra Nevada, goshawks are found in the eastside pine and aspen vegetation types (USDA 2001).

Goshawks prey on a variety of species, particularly small mammals and birds in timber areas. Foraging has been documented to occur in heavy-canopied forests with open understories. Goshawks generally use perches to identify prey while hunting, so they probably do not forage in expansive treeless areas.

The nesting cycle begins with courtship and nest building during February and March and concludes in late August to early September when fledglings become independent. Stick nests are often built in trees on north- or northwest-facing slopes of less than 30 percent slope and near water (Reynolds et al. 1992).

A portion of the Proposed Project ROW intersects the Shady Rest Protected Activity Center (PAC) north of the town of Mammoth Lakes. This PAC has been surveyed over the last several years for the presence of goshawks and the last recorded active nest was found in 2009. Follow-up surveys in 2010 and 2011 did not detect any active nest sites, but the area still provides for suitable nesting habitat (Inyo

National Forest goshawk survey data 2011). Of the available 259,620 acres of modeled, potential goshawk habitat within the Inyo National Forest, 7 acres (0.01 percent) are anticipated to be impacted by the Proposed Project and are found within the Shady Rest PAC (Figure 3).

Figure 2. Suitable sage grouse habitat found within the Proposed Project ROW.

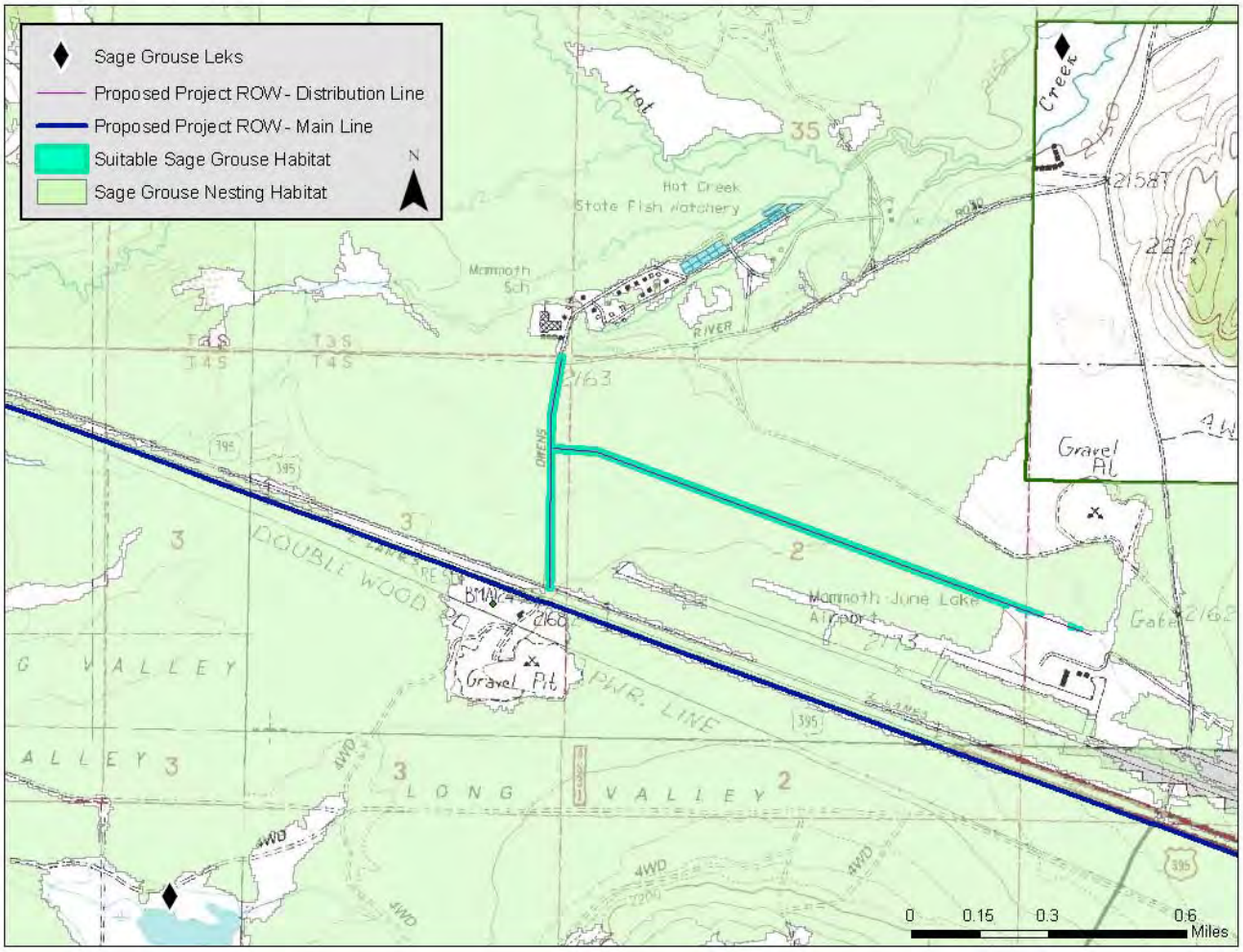
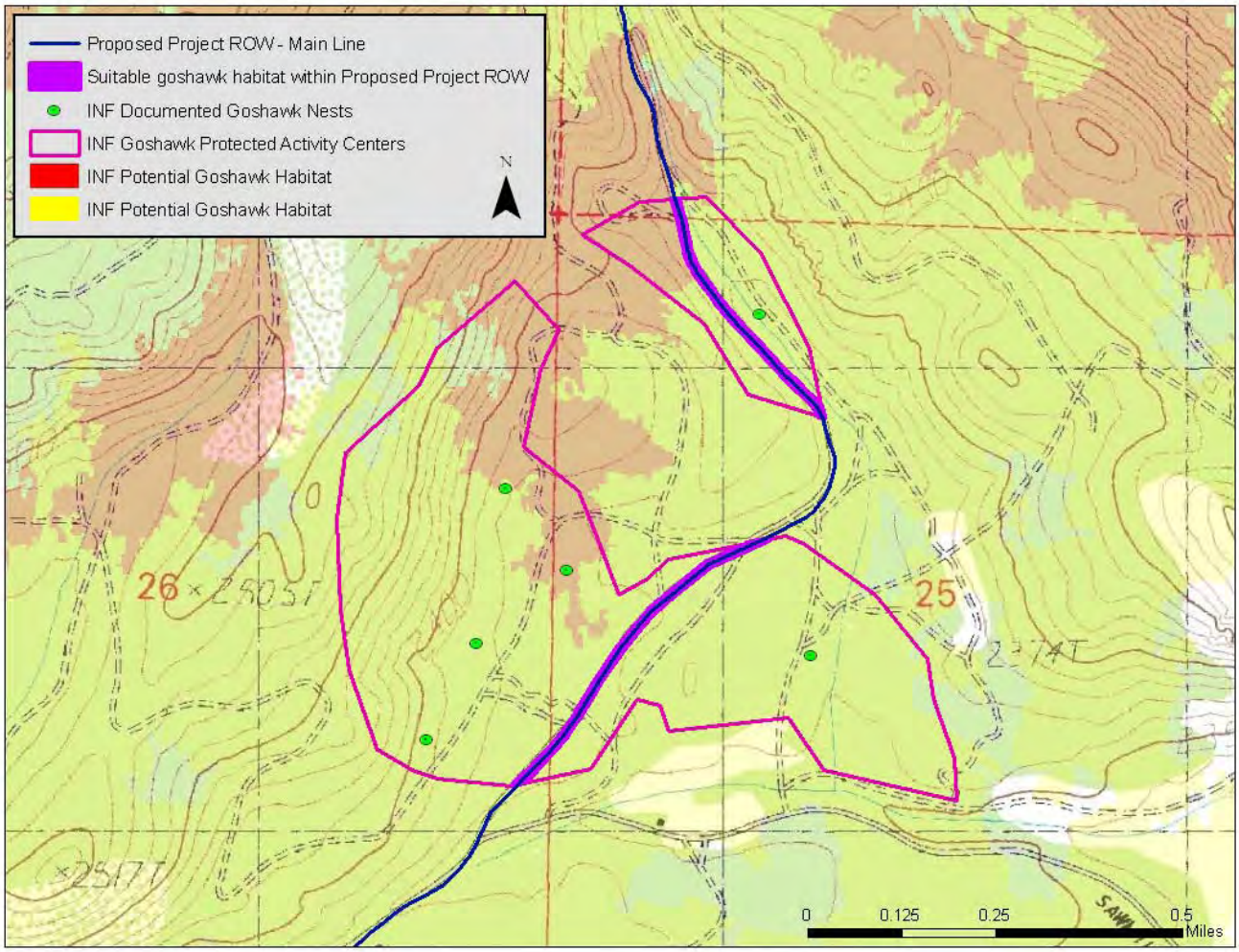


Figure 3. Suitable northern goshawk habitat and the Shady Rest Protected Activity Center within the Proposed Project ROW



VI. EFFECTS OF THE PROPOSED ACTION

Direct effects, including loss or alteration of habitat; degradation or destruction of vegetation; and/or harassment, injury, or mortality of wildlife species, may result from Project construction and operation and maintenance (O&M) activities. Minimal disturbance to vegetation will occur from the utilization of the plow when pre-ripping does not occur. Crushed vegetation may occur along portions of shoulder vegetation from the tractor pulling the plow; however, the root systems will remain relatively undisturbed, and vegetation is expected to recover after construction. Indirect effects may include invasion by non-native and invasive weed species, alteration of vegetation community distribution, or long-term consideration of noise and dust created during construction and O&M activities. However, some of these impacts are reduced through the implementation of mitigation measures found in Appendix B. The Proposed Project ROW ground disturbance impacts (permanent and temporary) are discussed in more detail below. Permanent ground impacts were considered for the permanent placement of nodes. Temporary ground impacts were considered for construction activities within the Proposed Project ROW for conduit/cable placement, including laydown and staging areas and access roads. Effects would be anticipated to be greatest during Project construction, when equipment and personnel would be most active within the USFS lands, and would diminish as the presence of equipment and personnel were reduced and the long-term O&M activities were initiated.

For both plant and wildlife species, the cumulative effects analysis considers the Proposed Project's direct and indirect effects when added with the direct and indirect effects resulting from past, present, and reasonably foreseeable projects likely to occur over the next 10 years. The present and reasonably foreseeable projects were selected from the following sources that are currently available:

1. List of cumulative projects identified in the 2011 Public Review Draft EA/IS;
2. USFS (Inyo) Schedule of Proposed Action (SOPA) projects for July 2011 to September 2011;
3. Inyo National Forest Motorized Travel Management; and
4. BLM (Barstow, Bishop, Ridgecrest, Carson City/Sierra Front Office) list of projects.

Only cumulative projects that provided enough information to determine potential environmental effects were considered (Appendix D). As a result, any projects that appeared idle for one year or more were removed from the analysis as they are no longer considered reasonably foreseeable. Any projects that are partially or wholly complete (i.e., ground-disturbing activities completed) were included in the baseline conditions for the cumulative analysis. The remaining list includes projects that are presently being planned or constructed, as well as those where the initial scoping process has not yet been completed.

Available environmental documents for current and proposed projects were reviewed for impacts and proposed mitigation information. The analysis considered only the results of the direct and indirect effects of the project and not areas of the Proposed Project ROW where no impacts occurred. The resulting analysis focuses on whether the Proposed Project will have a substantial incremental cumulative effect on any of the species evaluated or cause a decline in viability of that species. The cumulative projects considered for both plant and wildlife species are identified in the individual

discussions. If cumulative projects provided limited project information beyond project location, general project location information was used in the cumulative analysis.

Forest Sensitive Species

Sensitive Plant Species

For the purposes of this document, the plant species with habitat or potential habitat present within the Proposed Project route will be grouped as "sensitive plant species" for analysis because the impacts to each of these species are expected to be similar; these species include: *Boechera bodiensis, Astragalus johannis-howellii, Astragalus lemmonii, Astragalus monoensis, Botrychium crenulatum, Botrychium ascendens, Botrychium lineare, Botrychium lunaria, Calochortus excavatus, Epilobium howellii, Lupinus duranii, Lupinus lepidus* var. *culbertsonii, Phacelia inyoensis, Streptanthus oliganthus, and Helodium blandowii.* The Proposed Project ROW in the Inyo National Forest contains approximately 1.2 acres of known habitat for *Lupinus duranii*, approximately 0.29 acre of known habitat for *Astragalus monoensis*, and approximately 0.31 acre of known habitat for *Calochortus excavates*. No other occurrences within the Proposed Project ROW in the Inyo National Forest are known.

Direct Effects

The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas or areas dominated by weedy and non-native plants species; however, sensitive plant species may occur along the Proposed Project ROW. Vegetation, including potential sensitive plant species, may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species.

To minimize impacts, measures identified in the Mitigation, Monitoring, and Reporting Plan (MMRP) will be implemented during construction (Appendix B of this report). The measures in the MMRP include sensitive plant surveys prior to construction. Construction activities will minimize impacts to sensitive plant species by (1) minor re-routing of the cable alignment or by (2) using HDD methods to prevent surface disturbance of sensitive species observed. HDD bore pits will be located outside the plant population, and the conduit will be bored under the population at a depth to avoid impact to the plants. HDD methods also will be used in areas with known sensitive species populations which may not be evident outside annual blooming periods. Additionally, the likelihood of introducing non-native plant species will be minimized by the cleaning of construction equipment and vehicles prior to operation in areas containing sensitive plant species, avoiding and/or minimizing off-road travel, and minimizing disturbance to the smallest extent possible to perform construction safely. Lastly, a monitoring biologist would be present during construction activities in habitat with a potential to contain sensitive species.

Where practicable, construction activities will either avoid special-status plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance. Where avoidance is not possible, minimization practices would be employed. CBC staff, contractors, and appropriate personnel at the project site (e.g., Caltrans) will complete environmental awareness training. The MMRP provides detailed descriptions of Applicant Proposed Measures (APM) and

Mitigation Measures (MM) regarding measures for special-status species, specifically APM-Bio-7, APM-Bio-13, and MM-Bio-2; and these measures are included below.

Project Biologist and Biological Monitors

A Project Biologist will be retained to oversee aspects of construction monitoring that pertain to protecting biological resources and to ensure compliance with avoidance and minimization measures. The Project Biologist will be responsible for the biological resources portion of the contractor education program, described below, and will monitor construction activities in areas supporting listed and/or proposed species and critical habitats. The Project Biologist will be responsible for scheduling and/or implementing pre-construction surveys and will have the authority to stop construction activities that threaten significant biological resources for which no avoidance, minimization, or compensation procedures have been established in this document. Biological Monitors familiar with the identification of listed and/or proposed species and critical habitats shall be present in areas requiring conservation measures.

Environmental Awareness Training

> "APM-Bio-7: California Broadband Cooperative staff and contractors as well as appropriate Caltrans personnel will complete an environmental awareness training on the protected species in and around the Project route and on required environmental protection measures. Training shall explain the need for and implementation of minimization measures. The format of the training seminar shall be discussed with the California Broadband Cooperative beforehand. The Project Biologist or Biological Monitor shall provide the necessary training, including a course outline and supplementary materials, for the California Broadband Cooperative staff and contractors, and a class roster to the California Broadband Cooperative to certify which persons completed the training.
>
> The training shall include: supporting written material and electronic media, including photographs of protected species; the locations and types of sensitive biological resources within the Project alignment and adjacent areas, and explain the reasons for protecting these resources; inform participants that no snakes, other reptiles, bats, or any other wildlife shall be harmed or harassed, with special emphasis on special-status species; including information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures; a discussion of fire prevention measures to be implemented by workers during Project activities; specific requirements regarding smoking and disposal of cigarettes; identify the Project Biologist(s) and Biological Monitor(s) for contact or further comments and questions about the material discussed in the program; direct trainees to report all observations of listed species and their sign to the Project Biologist for inclusion in the compliance reports; a discussion of the Project Biologist's and Biological Monitor's stop work authority; and a training acknowledgment

> form to be signed by each worker indicating that they received training and shall abide by the guidelines."

The Project Biologist will conduct an environmental awareness training for biological resources for CBC staff and contractors, which will include information on protected species that are known to occur or that have a potential to occur in and around the Proposed Project route. The training also will include additional required environmental protection measures. The training will focus on distribution, behavior, ecology, sensitivity to humans, legal protection, penalties for violation of state and federal laws, reporting requirements on listed species, and Project-specific mitigation measures. The Project Biologist will provide a course outline and supplementary materials for the CBC staff and contractors and maintain a class roster to certify to the CBC which persons completed the training. Follow-up tailgate trainings for each listed species will be conducted in the field by a Project Biologist or Biological Monitor immediately prior to construction activities within that species habitat.

Pre-Construction Surveys

> "APM-Bio-13: The Project Biologist shall conduct a clearance survey for special-status plant species immediately prior to construction in appropriate habitat. If planned construction activities may result in an impact to special-status plant species, the following measures will be taken: (1) a minor re-route of the cable would be made to avoid the plant(s) and a suitable buffer area to prevent root damage or other incidental damage; or (2) in areas that cannot be avoided by a minor re-route, the cable shall be installed using horizontal directional drilling methods to eliminate surface disturbance. A biological monitor shall be present during construction activities occurring within the vicinity of these special-status plant populations and shall be responsible for designating an appropriate buffer area or bore depth to minimize potential adverse impacts to the plants and their roots."

Minor re-routes would occur within the Proposed Project ROW, whenever practicable. Prior to construction, the Project Biologist(s) and Biological Monitor(s) shall conduct a survey of the Proposed Project ROW to identify special-status plant species and document the locations of individuals within the Proposed Project ROW. Based on the schedule of this project, it is not feasible for these surveys to always occur during a time frame that will be in the appropriate season for the species; only species that are identifiable at the time of the survey will be documented. A pre-construction survey will be conducted for the list of species with a potential to occur in each specific Proposed Project ROW construction segment; the Proposed Project currently consists of 87 separate construction segments. The list of species for each construction segment will be determined based on information from the Biological Technical Report, Biological Assessment/Opinion, Biological Evaluations, other biological reports for the Proposed Project, and information from the relevant resource Agencies regarding locations of known, assumed, or suspected populations.

Prior to beginning the pre-construction survey, a Project Biologist qualified to identify plant species and familiar with recognizing special-status species in the Proposed Project area to be surveyed will review

the species listed for the construction segment. The Project Biologist then will attempt to locate a reference site with a known population of the special-status plant within a reasonable distance/close proximity to the Proposed Project route (e.g., within 5 miles). The reasonable distance may be coordinated with the appropriate Agencies to define the parameter if a general distance is not agreed upon. In addition, the time frame of when the reference population was found will be within a reasonable time frame (to be determined with the appropriate Agencies). If no known occurrences are found within a reasonable distance from the Proposed Project route, the Project Biologist will rely on professional judgment to determine whether the species has a potential to occur in the construction segment. The Project Biologist will coordinate with the appropriate resources Agencies regarding these judgments.

If the reference population is located, the Project Biologist will take pictures of the species from various angles and provide a reference to scale/size to adequately depict the species. The Project Biologist would document the reference location and create a reference page for the species with the scientific name, common name, pictures from the reference site, date of when the pictures were taken, and identification of the reference site. The Project Biologist would then share this information with the Monitoring Biologist, Project personnel working in the particular construction segment, and the appropriate Agencies. If any new locations of special-status species are found within the Proposed Project ROW, the location will be documented and mapped; and the appropriate Agencies would be notified. Avoidance methods will be employed first for any special-status species found.

If avoidance methods are not feasible, minimization measures then would be employed.

> "MM-Bio-2: If special-status plant species, such as Joshua trees, cacti, and succulents are within an impact area and cannot be avoided, the restoration specialist shall remove and temporarily relocate the species ahead of construction, to a "nursery area" until safe to return to the immediate area where the special-status vegetation was originally found. The "nursery area" will be located outside of desert tortoise critical habitat. If the "nursery area" is located within desert tortoise suitable habitat, the "nursery area" will be located within a previously disturbed area or an area devoid of vegetation (i.e., laydown or staging areas). If unforeseen circumstances require disturbance of vegetation beyond the final Proposed Project route, California Broadband Cooperative shall notify the appropriate Agencies immediately. Surface stabilization and reclamation within and along the boundaries of the Proposed Project Right-of-way shall be accomplished by removing construction debris from the Project area and returning the soil to its original grade."

If the reference population is not located, the Project Biologist would assess the habitat present and rely on professional judgment to determine whether the special status species has a potential to occur in the construction segment and employ the appropriate minimization measures. The Project Biologist would document that an attempt was made to locate the reference population and it was not located.

Indirect Effects

The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and it is not expected that vegetation will be altered or removed to perform maintenance activities. If a sensitive plant species is present or adjacent to the Proposed Project ROW during O&M activities, those individuals may be disturbed; however, maintenance activities are expected to occur in localized and more disturbed areas. In addition, indirect effects may include habitat alteration or fragmentation if invasive plant species replace native plants and habitat; however, applicant-proposed measures and mitigation measures such as vehicle and equipment cleaning, the limiting of off-road travel, and minimization of the size of the disturbances are presented in detail in the MMRP in Appendix B and will be incorporated to avoid this effect.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within the temporary and permanent Proposed Project area in the Proposed Project ROW. Cumulative projects that may affect sensitive plants include the Inyo National Forest Motorized Travel Management Implementation. According to the USFS, approximately 6 miles of unauthorized routes occur in *Lupinus duranii* and *Astragalus monoensis* populations that will not be used as part of the Motorized Travel Management plan. The Motorized Travel Management plan will incorporate mitigation measures to protect the *Lupinus duranii* and *Astragalus monoensis* populations on 29 roads included in that plan (S.Weis, USFS, personal communication dated 10-19-2011). Mitigations of the Motorized Travel Management plan include 1 barrier, 4 drainage repairs, 1 hardening, and signage on 23 routes (S.Weis, USFS, personal communication dated 10-19-2011).

As noted, the Proposed Project may result in direct or indirect effects to small areas of potentially suitable habitat respective to each species from disturbance of root systems and introduction of invasive vegetation species. The effects may be adverse but would be limited in the total area of effect and will be minimized or avoided through the implementation of the proposed mitigation measures. Although the Proposed Project would potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of the above listed plant species.

Sensitive Wildlife Species

Greater Sage-Grouse

Direct Effects

The greater sage-grouse depend on sagebrush habitat for breeding and foraging; the Proposed Project ROW does contain approximately nine acres of known breeding (lekking or nesting) sites within Inyo National Forest. The Proposed Project may directly affect greater sage-grouse by temporarily disturbing potential foraging habitat (i.e., sagebrush). The Proposed Project ROW crosses through approximately 7.5 acres of sagebrush habitat within the Inyo National Forest, shown in Figure 2 and the Proposed Project has the potential to affect vegetation within this habitat. Vegetation may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species. In addition, greater sage-grouse foraging in this area may be directly impacted by temporary human presence, noise,

and vibration from construction activities and equipment, which temporarily may cause an individual to avoid areas during construction that may otherwise serve as foraging habitat. However, the majority of work will be located within and immediately adjacent to previously disturbed lands (roads and access roads). Direct effects to sage-grouse would be minimized by the following measures: a Limiting Operating Period (LOP) would be established for the distribution lines found within suitable and occupied sage grouse habitat. This LOP will extend from April 15th through June 15th. Further minimizing measures include: limiting or temporarily halting construction activity if the species is observed within 100 feet of a construction area; implementing daily work procedures to minimize impacts to the species, conducting pre-construction surveys, implementing speed limits, and covering open trenches at the end of the workday. Additionally, measures to avoid and/or minimize the spread of non-native plant species to sage-grouse habitat include cleaning construction equipment and vehicles prior to operation in areas containing sensitive plant species; avoiding and/or minimizing off-road travel; beginning daily Project operations in unvegetated areas or areas vegetated by native plants, as identified by the Biological Monitor, whenever feasible, prior to operating in areas dominated by non-native vegetation; and minimizing disturbance to the smallest extent possible to perform construction safely.

Indirect Effects

The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed to perform maintenance activities. The Proposed Project would result in short-term, temporary increases in human activity during times of maintenance; but this would occur in specific locations and for brief periods of time and is not expected to result in an effect that would disrupt the foraging behaviors of the greater sage-grouse over the long-term. Potential long-term effects may include habitat alteration or fragmentation if invasive plant species replace native plants and habitat; however, applicant-proposed measures and mitigation measures will be incorporated and would help reduce the potential of invasive plants encroaching in this area. These measures include cleaning construction equipment and vehicles prior to operation in areas containing sensitive plant species; avoiding and/or minimizing off-road travel; beginning daily Project operations in unvegetated areas or areas vegetated by native plants, as identified by the Biological Monitor, whenever feasible, prior to operating in areas dominated by non-native vegetation; and minimizing disturbance to the smallest extent possible to perform construction safely. Incorportation of these measures will reduce the likelihood of introducing non-native vegetation to sage-grouse habitat, therefore minimizing the potential for long-term habitat alteration or fragmentation due to the spread of invasive plant species. A complete description of avoidance and minimization measures can be found in Appendix B.

Cumulative Effects

Potential project effects to the greater sage-grouse may include a disturbance of foraging behavior as a result of construction activities and temporary habitat disturbance due to Proposed Project construction. Indirect effects to habitat may occur, but the area of effect would be limited based on the Proposed Project design and minimization measures. Cumulative projects identified that may affect the species include development projects within the June Lake and Mammoth Lakes areas if greater sage-grouse forage in those areas; however, these cumulative projects would be expected to avoid impacts to the

greater sage-grouse. Therefore, the Proposed Project may contribute some cumulative effect on the greater sage-grouse, given that the Proposed Project may have some direct or indirect effects; however, the Proposed Project's contribution to cumulative impacts will be minimized by limiting or temporarily halting construction activity if the species is observed within 100 feet of a construction area, implementing daily work procedures to minimize impacts to the species, conducting pre-construction surveys, implementing speed limits, and covering open trenches at the end of the workday. Based on the above assessment, the Proposed Project is not expected to have a substantial incremental cumulative effect; and the overall effects are not expected to cause a decline in the population of this species.

Northern Goshawk

Direct Effects

The Proposed Project ROW crosses through approximately 7 acres of northern goshawk habitat within the Shady Rest Protected Activity Center (Figure 3). The northern goshawk may be affected by the Proposed Project by temporary human presence, noise, and vibration from construction equipment that may cause an individual to flush from an area or avoid areas during construction that may otherwise serve as breeding or foraging habitat or part of a home territory. Surveys will be conducted of the PAC before work begins at this site. Surveys will follow the Pacific Southwest Region Northern Goshawk Survey Protocol (2000). If active nest sites are not found within this area, then construction can proceed. If an active nest site is recorded then a Limiting Operating Period (LOP) will be established from February 15th to September 15th, as per the Sierra Nevada Forest Plan Amendment direction (USDA 2004) in order to reduce disturbance during the breeding, nesting, and juvenile dispersal periods.

However, the majority of work will be located within and immediately adjacent to previously disturbed lands (roads and access roads). The Proposed Project would not include the removal of any conifer trees, especially in northern goshawk nesting habitat; therefore, no direct effects would occur to suitable goshawk habitat. Addtionally, if construction activities take place during the nesting season, nesting surveys will be conducted and appropriate buffers assigned by the Project Biologist if a nothern goshawk nest is observed within 500 feet of the Proposed Project ROW.

Indirect Effects

The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. No trees are expected to be removed. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and it is not expected that vegetation will be altered or removed to perform maintenance activities. The Proposed Project would result in short-term, temporary increases in human activity during times of maintenance; but this would occur in specific locations and for brief periods of time and is not expected to result in an effect that would disrupt the breeding or foraging behaviors of the northern goshawk.

Cumulative Effects

Potential project effects to northern goshawk include temporarily disturbing foraging and breeding behavior of northern goshawk as a result of construction activity, noise and vibration from construction equipment, and increased human presence. Indirect effects to habitat may be adverse but temporary, and

the area of effect would be limited based on the Proposed Project design and minimization measures. Cumulative projects identified that may affect the species include hazardous fuels reduction projects. These cumulative projects would be expected to avoid impacts to northern goshawk; potential impacts of these cumulative projects would be limited. Therefore, the Proposed Project may contribute some cumulative effect on northern goshawk, given that the Proposed Project may have some direct or indirect effects; however, the Proposed Project's contribution to cumulative impacts will be minimized by nesting bird surveys and implementation of appropriate buffers. Based on the above assessment, the Proposed Project is not expected to have a substantial incremental cumulative effect; and the overall effects are not expected to cause a decline in the population of this species.

VII. DETERMINATION

Sensitive Plants

The proposed action **may impact individuals but will not lead toward federal listing or a loss of viability** to sensitive plant species located within the Proposed Project route. The majority of the Proposed Project would be constructed along disturbed roadsides, other unvegetated areas, or areas with non-native plant species. A weed risk assessment has been conducted, and mitigation measures identified in this assessment in conjunction with the Project MMRP will minimize or avoid the spread of weedy species. A pre-construction survey for sensitive plant species shall be conducted, and the locations of identified plants documented. Construction activities will avoid sensitive plant species occurrences either by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. The MMRP provides a detailed description of avoidance and minimization measures and is presented in Appendix B.

Greater Sage-Grouse

The proposed action **may impact individuals but will not lead toward federal listing or a loss of viability** to the greater sage-grouse. The Proposed Project has the potential to affect 7 acres of occupied sagebrush habitat; and the vegetation within greater sage-grouse habitat may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species. However, Project-proposed minimization and mitigation measures will reduce the potential of invasive weeds spreading in suitable habitat. Additionally, impacts from the Proposed Project will be short-term and temporary because the majority of work will be located within and immediately adjacent to previously disturbed lands (roads and access roads). A LOP would be implemented, further reducing direct effects during breeding and nesting season and a biological monitor will be present in suitable habitat for the species to observe for greater sage-grouse and notify crews to stop work if the species is observed, and the Proposed Project will implement avoidance and minimization measures as outlined in Appendix B.

Northern Goshawk

The proposed action **may impact individuals but will not lead toward federal listing or a loss of viability** to the northern goshawk species because the Proposed Project will have short-term effects to goshawks located in the adjacent areas. These effects are the result of humans and equipment being present in the area and causing disturbances to goshawks from noise. However, these effects would be minimized by the implementation of a LOP, in which no disturbance will occur during nesting or chick-rearing seasons, if goshawks are found to be nesting within this area.

A biological monitor will be present in suitable habitat for the species to observe and notify crews to stop work if the species is observed. No effects to goshawk habitat would occur, as no trees would be removed or altered. The Proposed Project will implement avoidance and minimization measures as outlined in Appendix B.

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APPENDIX A – STAGING AREAS (Inyo NF)

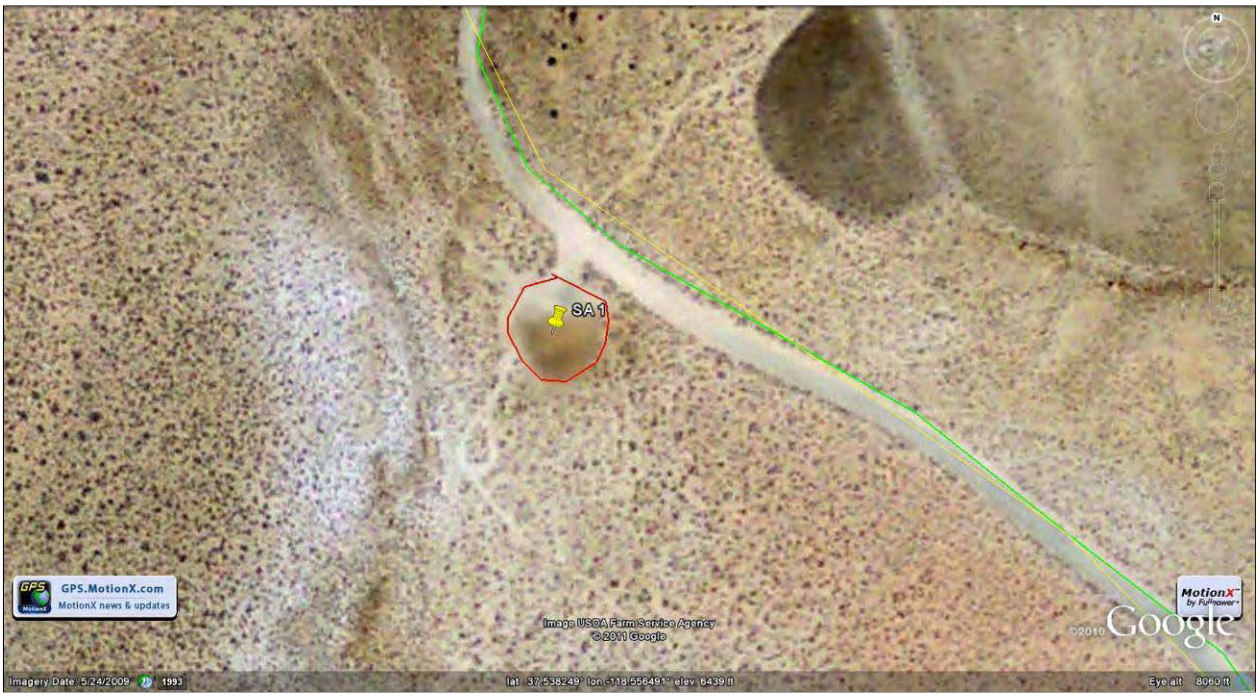
Staging Areas Appendix E

Site #	Use Type	County	Land Status/ Ownership	Latitude	Longitude	Dimensions	Surface	Current Use	Proposed Use
M-123-01	Laydown	Mono	Inyo National Forest	37.538249	-118.556491	125 x 125	Dirt	Open Space	Equipment and Material Storage
M-01	Laydown	Mono	Inyo National Forest	37.551900	-118.641202	75 x 100	Dirt	Clearing / Turnout	Equipment and Material Storage
M-120	Staging Area	Mono	Inyo National Forest	37.560648	-118.673182	40 x 300	AC	Staging of bulk materials	Material and Equipment Storage
M-123-02	Laydown	Mono	Inyo National Forest	37.566544	-118.564382	100 x 125	Dirt	Open Space	Equipment and Material Storage
M-117-02	Depot	Mono	Inyo National Forest	37.629100	-118.866256	100 x 200	Gravel / Dirt	Yard Parking and Storage	Equipment and Material Storage

Site #	Use Type	County	Land Status/ Ownership	Latitude	Longitude	Dimensions	Surface	Current Use	Proposed Use
M-113-01	Laydown	Mono	Inyo National Forest	37.769520	-119.090890	75 x 200	Asphalt	Resort Parking	Equipment and Material Storage
M-124-01	Laydown	Mono	Inyo National Forest	37.774517	-119.013867	75 x 100	Dirt	Clearing / Turnout	Equipment and Material Storage
M-111-02	Laydown	Mono	Inyo National Forest	37.965797	-119.120860	60 x 250	Asphalt	Visitor Center Parking	Equipment and Material Storage

MONO

M-123-01


SA 1
GPS.MotionX.com
MotionX news & updates
Image USDA Farm Service Agency
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by Fullpower
©2010 Google
Imagery Date: 5/24/2009
1993
lat 37.538249° lon -118.556491° elev 6439 ft
Eye alt 8060 ft

M-01

© 2010 Google
Image USDA Farm Service Agency
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Imagery Date: 5/24/2009
lat 37.551888° lon -118.641265° elev 7013 ft
Eye alt 8691 ft

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Google
lat 37.552396° lon -118.641202° elev 7020 ft
Eye alt 7020 ft

M-120

Tuff Campground Rd
Crowley Lake Dr
395
Asphalt Parking
Rock Creek Rd
Image USDA Farm Service Agency
© 2011 Google
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Imagery Date: 5/24/2009
1993
lat 37.561077° lon -118.673254° elev 7035 ft
Eye alt 10415 ft

M-123-02

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MotionX news & updates
Image USDA Farm Service Agency
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Imagery Date: 5/24/2009
1993
lat 37.566544° lon -118.564382° elev 6809 ft
Eye alt 8666 ft

M-117-02

395
Image © 2011 DigitalGlobe
Image USDA Farm Service Agency
© 2010 Google
©2010 Google
Imagery Date: 5/24/2009
lat 37.628058° lon -118.866256° elev 7122 ft
Eye alt 10485 ft

M-113-01

37.769520 -119.090890
Image USDA Farm Service Agency
© 2010 Google
©2010 Google
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Eye alt 9497 ft

M-124-01

37.774517 -119.013867
Image USDA Farm Service Agency
© 2010 Google
©2010 Google
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Eye alt 9560 ft

M-111-02

37.965797 -119.12086
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Image USDA Farm Service Agency
Google
Imagery Date: 5/24/2009
1993
37°57'57.86" N 119°07'14.91" W elev 6714 ft
Eye alt 8531 ft

APPENDIX B – MITIGATION MONITORING AND REPORTING PLAN (MMRP)

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DRAFT MITIGATION MONITORING AND REPORTING PLAN (MMRP)

This Draft Mitigation Monitoring and Reporting Program (MMRP) has been developed in accordance with requirements of the California Environmental Quality Act (CEQA) for the Digital 395 Middle Mile Project. When adopting a Mitigated Negative Declaration containing mitigation measures, an agency must adopt a program for reporting or monitoring mitigations measures identified in the document as a condition of approval (CEQA guidelines Section 15091(d) and 15097).

The Mitigation Monitoring and Reporting Program includes:

- Identification of the person or Agency responsible for implementing the mitigation;
- Brief description of the monitoring methods;
- Timing of monitoring activities; and
- Explanation of how compliance with the mitigation will be verified and documented (such as the type of report that documents what type of monitoring occurred and the results of that monitoring).

In an effort to avoid and minimize the potential for Project-related impacts, Applicant Proposed Measures (APMs) also are provided as a part of the Proposed Project and are included as part of the MMRP. The APMs and Mitigation Measures (MMs) are listed according to resource area. Specific avoidance, minimization, and mitigation measures with respect to special-status species will be modified in cooperation with the appropriate agencies. The Proposed Project will incorporate these environmental protection measures as part of the Project and shall be carried forward and implemented in accordance with Project activities.

MITIGATION MONITORING AND REPORTING PROGRAM APPLICANT PROPOSED MEASURES (as of April 24, 2012) California Broadband Cooperative - Digital 395 Middle Mile Project			
Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
AIR QUALITY RESOURCES			
APM-AQ-1: For land preparation and excavation, the following dust control measures should be implemented: ▪ All soil excavated or graded should be sufficiently watered to prevent excessive dust. Watering should occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations. ▪ All clearing, grading, earth moving and excavation activities should cease a) During periods of winds greater than 20 mph (averaged over one hour), if disturbed material is easily windblown, or b) When dust plumes of 40% or greater opacity impact public roads, occupied structures, or neighboring property. ▪ All fine material transported offsite should be either sufficiently watered or securely covered to prevent excessive dust. ▪ If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed. ▪ Areas disturbed by clearing, earth moving, or excavation activities should be minimized at all times. ▪ Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown, fugitive dust. ▪ Where acceptable to the fire department, weed control should be accomplished by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.	Throughout active construction	Engineering Inspector to verify during construction.	Throughout active construction
APM-AQ-2: For building construction, the following dust	Throughout active construction	Engineering Inspector to verify during	Throughout active construction

MITIGATION MONITORING AND REPORTING PROGRAM APPLICANT PROPOSED MEASURES (as of April 24, 2012) California Broadband Cooperative - Digital 395 Middle Mile Project			
Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
control measures should be implemented: ▪ Once initial leveling has ceased all inactive soil areas within the construction site should either be seeded and watered until plant growth is evident, treated with a dust palliative, or watered twice daily until soil has sufficiently crusted to prevent fugitive dust emission. ▪ All active disturbed soil areas should be sufficiently watered to prevent excessive dust, but no less than twice per day.		construction.	
NOISE			
APM-N-1: A Type 1 sound level meter and acoustic calibrator shall be used to acquire noise data. The sound level meter shall be calibrated and certified by the manufacturer or other independent acoustical laboratory. Annual recalibration by the manufacturer or other independent acoustical laboratory is required. The sound level meter shall be capable of taking measurements using the A-weighting network and the slow response settings. The measurement microphone shall be fitted with a windscreen.	During construction.	Construction Monitor to verify noise levels are not excessive at sensitive receptors.	During construction activities.
WATER RESOURCES			
APM-W-1: To avoid impacts to streams, the conduit will be installed using horizontal directional drilling at stream crossings. Horizontal directional drilling uses a bentonite/water mixture that is pumped down the drill stem to run the drill head, lubricate the drill pipe, maintain the borehole, and remove bore cuttings. Bentonite is a fine clay that, mixed with water, provides the lubricant and operating fluid for the horizontal directional drilling process. Directional drilling eliminates disturbance to streams; however, if a fracture of the rock (substrate) occurs during horizontal directional drilling (frac-out), drilling fluids have the potential to be released into the stream. To protect stream resources in the event of a frac-out, the California Broadband Cooperative has prepared, and will implement, a Horizontal Directional Drilling Contingency and Resource Protection Plan. Resource protection measures in the plan	Included in Project specifications; prior to and during construction activities.	Construction Monitor to identify stream crossings. Engineering Inspector to verify horizontal directional drilling method is implemented and that Best Management Practices in the Horizontal Directional Drilling Contingency and Resource Protection Plan are implemented.	Horizontal directional drilling method documentation following horizontal directional drilling implementation.

MITIGATION MONITORING AND REPORTING PROGRAM APPLICANT PROPOSED MEASURES (as of April 24, 2012) California Broadband Cooperative - Digital 395 Middle Mile Project			
Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
include: ▪ During drilling operations, visual inspection along the bore path of the alignment shall take place at all times. In addition, at stream crossings with flowing water the stream shall be monitored upstream and downstream of the crossing; ▪ Specification of onsite equipment required to clean up and contain a drilling fluid release; ▪ Designation of responsibilities and reporting procedures in the event of a drilling fluid release; and/or ▪ Specific response procedures in the event of a drilling fluid release.			
APM-W-2: To minimize the potential that waterbodies crossed by or adjacent to the Project route would be degraded by leaks and spills from fuels and lubricants used in Project equipment, the California Broadband Cooperative will prepare a Spill Prevention and Pollution Plan and will implement the Best Management Practices specified in the plan in order to avoid introducing pollutants to waterbodies. The Spill Prevention and Pollution Plan will include: ▪ Measures to ensure that petroleum products are not discharged into drainages or bodies of water; ▪ A description of potentially hazardous and non-hazardous materials that could accidentally be spilled during construction (fuels, equipment lubricant, human waste and chemical toilets, and bentonite), potential spill sources, potential spill causes, proper storage and transport methods, spill containment, spill recovery, Agency notification, and responsible parties; ▪ Hazardous substances shall be stored in staging areas that are located at least 100 feet from ephemeral and intermittent streams and 300 feet from perennial streams, lakes and wetlands. Refueling and vehicle maintenance shall be performed at least 100 feet from ephemeral and	Included in Project plans and specifications; prior to and during construction activities.	The Engineering Inspector will be responsible for the daily inspection of Spill Prevention and Pollution Plan implementation and Best Management Practices effectiveness, and if necessary provide input and recommendations for increased effectiveness.	Best Management Practices of an approved Spill Prevention and Pollution Plan will be installed prior to the start of construction for that day.

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intermittent streams and 300 feet from perennial streams, lakes and wetlands (i.e., hazardous substances, refueling, and vehicle maintenance will occur outside of Riparian Conservation Areas); and ▪ Sedimentation fences, certified weed-free hay bales, sand bags, water bars, and baffles will be used as additional sources of protection for waters and ditches.			
APM-W-3: To minimize the potential that waterbodies crossed by or adjacent to the Proposed Project route would be degraded by pollutants and sediment erosion associated with Project construction the California Broadband Cooperative will prepare and implement a Storm Water Pollution Prevention Plan. The Storm Water Pollution Prevention Plan addresses, at a minimum: ▪ Identification of potential sources of pollutants and toxic materials; ▪ Identification of Best Management Practices for storm water contact minimization, construction material distribution and access, equipment storage, vehicle maintenance and cleaning areas; ▪ Erosion and sediment control measures for wet- and dry-season activities; ▪ Temporary and permanent erosion control techniques, sediment control on public roads, wind erosion, and non-stormwater management techniques; and ▪ Waste management/disposal methods.	Included in Project plans and specifications; prior to and during construction activities.	The Engineering Inspector will be responsible for the daily inspection of Storm Water Pollution Prevention Plan implementation and Best Management Practices effectiveness, and if necessary provide input and recommendations for increased effectiveness.	Best Management Practices of an approved Storm Water Pollution Prevention Plan will be installed prior to the start of construction for that day.
BIOLOGICAL RESOURCES			
APM-Bio-1: The Applicant shall designate one or more Project Biologists. For the purposes of this document, Project Biologist refers to the qualified, authorized, or approved person assigned to monitor measures identified in the Mitigation Monitoring and Reporting Plan and to document compliance with these measures. The biologist must be qualified in the respective field of biology and must be acceptable to the appropriate jurisdictional Agency. The	Throughout active construction and until final compliance report completed and accepted	To be designated by the Applicant.	Throughout active construction and at reporting intervals.

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Project Biologist also will oversee other biologists, including biological monitors. Within the range of the desert tortoise, at least one designated Project Biologist shall meet the current United States Fish and Wildlife Service Authorized Biologist qualifications criteria, demonstrate familiarity with protocols and guidelines for the desert tortoise, be approved by the United States Fish and Wildlife Service, obtain training such as that offered through the Desert Tortoise Conservation Center in Las Vegas; and possess a California Endangered Species Act Memorandum of Understanding pursuant to Section 2081(a) for desert tortoise. The lead authorized biologist will be responsible for compliance with the Biological Opinion.			
▪ Project Biologist(s) or Biological Monitor(s) shall inspect work sites daily, and shall be on site as needed according to Applicant Proposed Measures and Mitigation Measures in this Mitigation Monitoring and Reporting Plan. Project Biologists and Biological Monitors shall be familiar with sensitive species and the minimization measures for this Proposed Project. The Project Biologist(s) shall be responsible for overseeing and training Biological Monitors; advise the Applicant and Contractor on compliance with biological mitigation measures; notify the Applicant of non-compliance with biological resources conditions; respond directly to inquiries of the lead agencies or resource agencies regarding biological resource issues; maintain written records of tasks related to compliance and reporting for biological resource measures; prepare monthly, annual, and final compliance reports; establish and enforce speed limits at Project work areas; and maintain the ability for regular, direct communication with representatives of California Department of Fish and Game, United States Fish and Wildlife Service,			

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Bureau of Land Management, and United States Forest Service, including notifying these agencies of dead or injured special-status species and reporting special-status species observations.			
▪ **Daily logs.** The Project Biologist(s) and Biological Monitor(s) shall maintain written records of daily activities, observations, and communications with the Applicant or construction personnel in a bound log book. These log books shall be made available for review to the lead agencies, California Department of Fish and Game, United States Fish and Wildlife Service, Bureau of Land Management, and United States Forest Service at any time during or following Project implementation.	Throughout active construction and until final compliance report completed and accepted	To be designated by the Applicant.	Throughout active construction and at reporting intervals
▪ **Stop Work Authority.** The Project Biologist(s) and Biological Monitor(s) shall have written authority to require a halt to activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued.	Throughout active construction and until final compliance report completed and accepted	To be designated by the Applicant.	Throughout active construction and at reporting intervals
APM-Bio-2: Project Biologist(s) or Biological Monitor(s) shall clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with mitigation measures; inspect active construction areas for trench closure and any needed installation of structures that prevent wildlife entrapment or allow escape at the end of each work day and during periods of construction inactivity; inspect areas where animals may have become trapped prior to construction commencing each day; monitor vehicle speeds in and around work areas for conformance with posted speed limits; direct construction personnel on appropriate buffer areas around work sites to minimize wildlife disturbance; periodically inspect areas with high vehicle activity (e.g., equipment and materials staging areas, construction personnel parking lots) for animals in harm's way.	Throughout active construction and until final compliance report completed and accepted	To be designated by the Applicant.	Throughout active construction and at reporting intervals
APM-Bio-3: The Contractor shall undertake the following			

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measures to manage construction sites and related facilities to avoid or minimize impacts to biological resources:			
▪ **Limit Disturbance Areas.** The boundaries of areas to be disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be clearly delineated with stakes and flagging prior to construction activities in consultation with the Project Biologist. Spoils and topsoil shall be stockpiled in areas already disturbed or to be disturbed by construction, so that stockpile sites do not add to total disturbance footprint. Disturbances, Project vehicles, and equipment shall be confined to the designated work areas. Parking areas, staging and disposal site locations shall similarly be located in areas without native vegetation or special-status species habitat.	Prior to and during construction	The Contractor shall identify and clearly mark in the field areas of disturbance.	This shall be ongoing as the Proposed Project progresses along the alignment,
▪ **Minimize Access Impacts.** Where new access routes may be needed, or existing routes may need improvements, the improvements shall not extend beyond the flagged impact area as described above. Vehicles passing or turning around shall do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged and/or staked) prior to the onset of construction.	Prior to and during construction	The Contractor shall identify and clearly mark in the field areas of disturbance.	This shall be ongoing as the Proposed Project progresses along the alignment,
▪ **Minimize Traffic Impacts.** Vehicular traffic during Project construction and operation shall be confined to existing designated routes of travel to and from work sites, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit within any part of the Project area shall be designated and enforced by the Project Biologist.	Prior to and during construction	Project personnel are responsible for implementing this measure. The Contractor shall post the appropriate speed limit as determined by the Project Biologist.	This shall be ongoing as the Proposed Project progresses along the alignment,
▪ **Minimize Impacts of Alignments, Roads, Staging Areas.** Staging areas for construction equipment, supplies, personnel parking, and other ancillary	Included in Project plans and specifications. Surveys for biological resources shall be performed prior to	The Engineering Inspector to determine and verify the appropriate disturbance. The Project Biologist	Documentation of the Alignments, Roads, Staging Areas. Staging areas for construction equipment,

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functions shall be designed and maintained with the goal of minimizing impacts to native plant communities and sensitive biological resources. Sites within the range of the desert tortoise shall be either fenced to exclude desert tortoises from entering the area, or shall be inspected periodically to determine whether a tortoise is within the area. Equipment and supplies (e.g., conduit) shall be inspected for desert tortoise prior to moving. The Project Biologist or Biological Monitor shall evaluate potential for special-status plants or wildlife at every potential disturbance site; specifically, site selection of an area to be permanently or temporarily disturbed shall avoid streambeds, washes, or sensitive habitat types wherever feasible. Where these sites cannot feasibly be avoided, the Project Biologist shall outline site-specific requirements to minimize impacts to habitat and wildlife. These requirements shall include, but would not be limited to, pre-construction clearance surveys, onsite monitoring, and post-construction remediation.	and during construction.	and Biological Monitors shall perform surveys for biological resources.	supplies, personnel parking, and other ancillary functions shall be made by the Engineering Inspector. The Project Biologist shall report the findings of surveys.
▪ **Avoid Use of Toxic Substances.** Any soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants.	Included in Project plans and specifications.	The Engineering Inspector to determine and verify the appropriate substance use.	Documentation of the implemented substances.
▪ **Minimize Standing Water.** Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract desert tortoises and common ravens to construction sites. A Biological Monitor shall patrol these areas to ensure water does not puddle and shall take appropriate action to reduce water application where necessary.	During times of active construction.	The Contractor will be responsible for implementing watering measures and using the proper amount. The Project Biologist will be responsible for providing direction as-needed for watering amounts.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations.
▪ **Monitor Ground-Disturbing Activities Prior to Pre-Construction Site Mobilization.** If pre-construction	Included in Project plans and specifications. Prior to the start of	The Engineering Inspector to determine necessary pre-construction	The Engineering Inspector to document pre-construction

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site mobilization requires ground-disturbing activities such as for geotechnical borings or hazardous waste evaluations, a Designated Biologist or Biological Monitor shall be present to monitor any actions that could disturb soil, vegetation, or wildlife.	construction.	methods. The Project Biologist and Biological Monitors shall be present during such activities.	activities that occur. The Project Biologist shall report observations as they relate to biological resources.
▪ **Cover all open trenches.** All open trenches will be covered at the end of the work day.	During construction activities.	The Contractor is responsible for implementing the covering of trenches while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document the trench coverings upon completion of the end of the day inspection.
APM-Bio-4: The Project Biologist shall be responsible for preparing and submitting monthly compliance memos, annual compliance reports, and completion compliance report to the lead agencies, Applicant, California Department of Fish and Game, United States Fish and Wildlife Service, Bureau of Land Management, and United States Forest Service, as appropriate. Each report shall summarize work progress during the report period; discuss implementation of all biological avoidance and minimization measures, summarize observations of special-status plants or animals, Applicant and contractor communications addressing biological resources, Agency communications, and describe measures taken to avoid or minimize impacts to biological resources.	Throughout active construction and until final compliance report completed and accepted.	Project Biologist	Monthly compliance memos shall be submitted no later than two weeks following the end of each calendar month. Annual compliance reports shall be submitted no later than the 30th of January following the end of each calendar year. The Project completion report shall be submitted no later than 30 days following the completion of Project construction.
APM-Bio-5: Trash and food items wrappers, cans, bottles, and ALL food scraps will be contained in closed containers in a manner that wildlife cannot access it and removed daily to reduce attractiveness to opportunistic predators such as common ravens (*Corvus corax*), coyotes (*Canis latrans*), and feral dogs. Feeding of wildlife is strictly prohibited.	During construction activities.	Project personnel are responsible for implementing this measure.	The Biological Monitor will document upon completion of the daily inspection.
APM-Bio-6: Pets and firearms shall be prohibited from the construction site. If guard dogs are to be used, the Contractor shall ensure that such animals do not affect any special-status species.	During construction.	The Contractor will be responsible for assuring that domestic animals that could harm special-status species are not on site during construction.	The Biological Monitor will verify that no dogs or other domestic animals that could harm special-status species are on site.
APM-Bio-7: California Broadband Cooperative staff and contractors as well as appropriate Caltrans personnel will	Prior to and as-needed for new personnel during construction	A Biologist familiar with special-status species and the minimization	The training would be conducted prior to all personnel working on

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complete an environmental awareness training on the protected species in and around the Project route and on required environmental protection measures. Training shall explain the need for and implementation of minimization measures. The format of the training seminar shall be discussed with the California Broadband Cooperative beforehand. The Project Biologist or Biological Monitor shall provide the necessary training, including a course outline and supplementary materials, for the California Broadband Cooperative staff and contractors, and a class roster to the California Broadband Cooperative to certify which persons completed the training. The training shall include: supporting written material and electronic media, including photographs of protected species; the locations and types of sensitive biological resources within the Project alignment and adjacent areas, and explain the reasons for protecting these resources; inform participants that no snakes, other reptiles, bats, or any other wildlife shall be harmed or harassed, with special emphasis on special-status species; including information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures; a discussion of fire prevention measures to be implemented by workers during Project activities; specific requirements regarding smoking and disposal of cigarettes; identify the Project Biologist(s) and Biological Monitor(s) for contact or further comments and questions about the material discussed in the program; direct trainees to report all observations of listed species and their sign to the Project Biologist for inclusion in the compliance reports; a discussion of the Project Biologist's and Biological Monitor's stop work authority; and a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines**.**	activities.	measures for this Project would perform the training.	Project site.
APM-Bio-8: Horizontal directional drilling or bridge	Included in Project plans and	The Engineering Inspector is to	Documentation of the

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attachments will be used to install the conduit at locations where the route crosses perennial waterbodies. Wetlands, including transmontane alkali marsh, will be avoided. If avoidance is not feasible, conduit will be installed using horizontal directional drilling, as described in the Project description of the Joint Environmental Assessment/Mitigated Negative Declaration.	specifications.	determine and verify the appropriate method, either horizontal directional drilling or bridge attachment.	implemented construction method for a perennial waterbody.
APM-Bio-9: No in-stream construction is proposed. No trenching or plowing activities are proposed to occur within seasonal or perennial aquatic habitat containing protected fish species. The selected construction techniques would be limited to horizontal directional drilling operations under water ways and ephemeral streams with the potential to support these species.	Included in Project plans and specifications.	The onsite Biological Monitor will identify the appropriate Best Management Practices for individual locations. The Engineering Inspector is to verify appropriate techniques.	Documentation of the implemented construction method upon completion.
APM-Bio-10: Where work is required in the vicinity of seasonal or perennial aquatic habitats, the Spill Prevention and Pollution Plan will include Best Management Practices to avoid introducing contaminants into waterbodies.	Included in Project specifications and during construction.	The Contractor will prepare the Spill Prevention and Pollution Plan and provide appropriate Best Management Practices for stream protection.	Engineering Inspector to verify in the field upon completion of installation of Best Management Practices.
APM-Bio-11: Within 100 feet of the upper limit of the bank of an aquatic habitat containing protected fish, mollusk and crustacean species, a Biological Monitor shall be present on the site during construction. Daily inspections of construction Best Management Practices shall occur, and the Biological Monitor shall report deficient sediment control devices to the Contractor for prompt repair. Horizontal directional drilling or bridge attachments would be used to install conduit where the route crosses waterbodies. A Spill Prevention and Pollution Plan has been prepared that includes Best Management Practices to avoid introducing contaminants into waterbodies.	Prior to and during construction activities.	Biological Monitor to submit daily inspection logs, and provide recommendations to the Contractor. The Contractor will prepare the Spill Prevention and Pollution Plan and provide appropriate Best Management Practices for aquatic habitat protection. The Engineering Inspector is to verify appropriate techniques for responses.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring within 100 feet of aquatic habitat containing protected fish species. The Biological Monitor would notify the appropriate resource agencies immediately if a special-status fish species were observed in the immediate vicinity of the day's construction area.
APM-Bio-12: The contractor will implement the following control measures for invasive and noxious weeds (non-native vegetation):	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field
▪ Contractor vehicles and equipment will be cleaned	Prior to and during construction	The Biological Monitor will be	The Biological Monitor will record

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inside and out prior to arrival at the work site in an effort to limit the introduction of non-native vegetation onto the Project corridor. Exterior cleaning will consist of pressure washing vehicles and equipment, with attention paid to the tracks, feet, and/or tires and on the undercarriage, with special emphasis on axles, frame, cross members, motor mounts, and on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out, and refuse will be disposed of in waste receptacles to be disposed of at an approved offsite location. The Contractor, with oversight from the Monitoring Biologist, will inspect vehicles and equipment in an effort to increase the potential that they are free of soil and debris capable of transporting non-native vegetation seeds, roots, or rhizomes. Seeds and plant parts that result from the cleaning will be collected and bagged for disposal at an approved offsite location. If noxious or invasive weeds are within the Project area, vehicles will be cleaned before moving on to areas that are weed free.	activities.	responsible to oversee and provide recommendations for the purposes of decreasing the likelihood that non-native vegetation enters the Project.	cleaning methods and if non-native vegetation debris was collected from vehicles, equipment, or construction personnel, and where disposal of the materials will occur, following cleaning.
▪ Project personnel will inspect, remove, and dispose of non-native vegetation seeds and plant parts found on their clothing and personal equipment. Plant materials gathered from Project personnel will be bagged to be disposed of at an approved offsite location.	Prior to and during construction activities.	The Biological Monitor will be responsible to oversee and provide recommendations for the purposes of decreasing the likelihood that non-native vegetation enters the Project.	The Biological Monitor will record if non-native vegetation debris was collected from vehicles, equipment, or construction personnel and where disposal of the material will occur, following cleaning.
▪ Contractors will avoid or minimize all types of off-road travel that may result in the collection and dispersion of non-native vegetation by construction vehicles and equipment.	During construction activities.	The Biological Monitor will be responsible to oversee and provide recommendations for the purposes of decreasing the likelihood that non-native vegetation enters the Project.	The Biological Monitor will record instances of off-road vehicle use.
▪ The Contractor will select unvegetated areas or paved areas or other incidental disturbance for equipment staging. In order to minimize spread of	During construction activities.	The Biological Monitor will be responsible for identifying areas containing non-native vegetation and	The Biological Monitor will document recommendations made to the Contractor and when the

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weed seed or propagules from weedy areas into native vegetation, the contractor will begin daily Project operations in unvegetated areas or areas vegetated by native plants, as identified by the Biological Monitor, whenever feasible prior to operating in areas dominated by non-native vegetation. If this is not feasible, vehicles will be cleaned of any non-native vegetation seeds and plant parts, as described in sections of APM-Bio-10 above before moving to areas vegetated by native plants.		provide recommendations for delayed work in that area.	Contractor implements the recommendations.
▪ The Contractor will limit the size of vegetation and/or ground disturbance to the amount necessary to perform the activity safely and as designed so as to minimize exposed soil to non-native vegetation establishment.	During construction activities.	The Contractor will be responsible for oversight of Project activities being conducted in a safe manner and as designed.	The Biological Monitor will record daily logs of ground-disturbing activities.
▪ The Contractor, in conjunction with the Biological Monitor, will evaluate where native vegetation needs to be established and/or protected.	During construction activities.	The Biological Monitor will be responsible for identifying and recommending areas of native vegetation to be protected.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations.
▪ Resource agencies will be consulted regarding measures to prevent the spread of non-native vegetation. This coordination will include identification of species on the involved Agency non-native lists (e.g., Inyo National Forest).	During construction activities.	The Biological Monitor will be responsible for coordination with resource agencies.	The Biological Monitor will document coordination with resource agencies.
▪ The Contractor will utilize straw and/or hay bales for Best Management Practices, such as sediment control or mulch distribution, from State-cleared sources that are free of primary noxious weeds.	During construction activities.	The Contractor will be responsible for purchasing the appropriate straw and/or hay bales.	Records of sale from State-cleared sources will be submitted to California Broadband Cooperative by the Contractor.
APM-Bio-13: The Project Biologist shall conduct a clearance survey for special-status plant species immediately prior to construction in appropriate habitat**.** If planned construction activities may result in an impact to special-status plant species, the following measures will be taken: (1) a minor re-route of the cable would be made to avoid the plant(s) and a suitable buffer area to prevent root damage or other	Prior to construction activities in areas with documented special-status plant species.	The Biological Monitor would verify that special-status plant species are present and recommend realignment or the use of horizontal directional drilling in that area.	Following the documentation of special-status plant occurrence on or adjacent to the alignment and subsequent decision that potential impacts to rare plant species cannot be avoided.

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incidental damage; or (2) in areas that cannot be avoided by a minor re-route, the cable shall be installed using horizontal directional drilling methods to eliminate surface disturbance. A biological monitor shall be present during construction activities occurring within the vicinity of these special-status plant populations and shall be responsible for designating an appropriate buffer area or bore depth to minimize potential adverse impacts to the plants and their roots. If re-alignment shall occur on BLM managed lands, a BLM botanist must be contacted.			
▪ Starting in spring, a qualified botanist must flag the sections of the alignment that cross known occupied habitat on BLM lands for *Calochortus excavates* (Segment I108), *Sidalcea covillei* (Segment I108), *Streptanthus oliganthus* (Segment M100), and *Orthotrichum shevockii* (Segment M129).	Prior to construction activities in areas with documented special-status plant species.	The Biological Monitor would verify that special-status plant species are present and recommend realignment or the use of horizontal directional drilling in that area.	Following the documentation of special-status plant occurrence on or adjacent to the alignment and subsequent decision that potential impacts to rare plant species cannot be avoided.
APM-Bio-14: Nesting bird surveys will be conducted during the nesting season within 100 feet (500 feet for raptors) of the proposed construction corridor, access routes, and staging areas, and an appropriate buffer determined by the onsite Project Biologist or Biological Monitor to these areas prior to the commencement of equipment operation. To the extent possible, work will be scheduled to avoid the habitat supporting the densest populations of breeding birds during nesting, especially those classified as "wet meadow" and "montane riparian" habitats.	Nesting bird surveys would be performed within 48 hours prior to the onset of construction. The typical nesting season is between March 15 and September 15 with most nesting activities occurring between March and July.	A biologist familiar with the avian species that may nest within the Project corridor.	Active bird nests that are located will be identified on a map following the nesting bird surveys.
▪ Nesting bird surveys will be conducted during the nesting season for northern goshawk within protected activity center areas prior to construction activities in these areas. If no nesting northern goshawk are found in these areas, construction may proceed.	Nesting bird surveys would be performed within 48 hours prior to the onset of construction between February 15 and September 15. Surveys will follow the Pacific Southwest Region Northern Goshawk Survey Protocol (2000) in order to determine goshawk occupancy and status of nesting within the Protected Activity Center.	Biological Monitor to submit daily monitoring logs.	Active bird nests that are located will be identified on a map following the nesting bird surveys. If nesting northern goshawk are found, the appropriate mitigation measure would be implemented. The location of all newly discovered nest sites will be reported to the Inyo National Forest wildlife biologist. This

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			information includes the GPS location of the nest, information of the number of birds seen, the dates surveys took place, and the names of surveyors..
APM-Bio-15: The following measures will be taken to minimize and avoid impacts to the greater sage-grouse:	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field
▪ Prior to the initiation of any construction within the range of the greater sage-grouse, the California Department of Fish and Game, Nevada Department of Wildlife and United States Forest Service biologists will be contacted to identify any known or potential greater sage-grouse lekking or breeding habitat within the Project alignment; the Project Biologist shall identify those areas for the Contractors and implement the appropriate specific seasonal and daily work procedures to avoid or minimize any potential impacts to greater sage-grouse.	Prior to and during construction activities.	The Project Biologist will be responsible for coordinating with the California Department of Fish and Game, Nevada Department of Wildlife, and United States Forest Service and working with the Contractor to implement appropriate avoidance and minimization measures.	The Project Biologist will document the results of the agency coordination and document the implemented avoidance and minimization measures.
▪ To protect nesting greater sage-grouse **no work or staging** shall occur from February 15 through July 30 in areas of known sage-grouse lekking, to include: ▪ along the backbone from Conway Summit to the intersection of US 395 and Green Creek Road. ▪ along Burcham Flat Road, within 3 miles of an active lek.	During construction activities.	The Contractor will be responsible for avoiding construction from February 15 to July 30 along the backbone from Conway Summit to the intersection of US 395 and Green Creek Road and within 3 miles of an active lek along Burcham Flat Road.	Location of construction between February 15 and July 30 will be documented by the Contractor.
▪ To protect nesting greater sage-grouse **no work or staging** shall occur from April 15th to June 15th in areas of known nesting to include: ▪ Distribution line located north of Highway 395 to the Mammoth Airport in the Long Valley area.	During construction activities.	The Contractor will be responsible for avoiding construction from April 15th to June 15th in areas of known nesting.	Location of construction between April 15 and June 15 will be documented by the Contractor.
▪ Prior to construction activities at work sites, the Project Biologist will conduct pre-construction wildlife surveys at the site and surrounding buffer area.	Prior to the start of construction.	The Project Biologist and/or Biological Monitor shall perform pre-construction surveys.	The Project Biologist will be responsible for the documentation of the findings of those surveys.
▪ Speed limits within greater sage-grouse habitat and	During construction activities.	The Project Biologist will provide	The Biological Monitor will

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known breeding areas (i.e., Burcham Flat Road, a known lek and nesting area for the species) will be limited to a pace that does not interfere with breeding displays or breeding and nesting activities. Speed limits will be clearly identified in these areas. Construction personnel will obey posted speed limit signs for the Project at all times when on the Project.		recommendations for speed limits based on the biology and mobility of this species. The Contractor will be responsible for posting those speed limits and making Project personnel aware of the posted speed limits. The Biological Monitor will be responsible for bringing awareness to these areas daily as applicable.	document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in greater sage-grouse habitat.
▪ All open trenches will be covered at the end of the workday.	During construction activities.	The Contractor is responsible for implementing the covering of trenches, while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document the trench coverings upon completion of the end of the day inspection.
▪ No vegetation removal activities within 3 miles of an active lek will take place during greater sage-grouse lekking/nesting season between February 15 and July 30.	During construction activities.	The Biological Monitor is to provide identification of greater sage-grouse habitat. The Contractor is responsible for avoiding vegetation removal within 3 miles of an active lek between February 15 and July 30.	Location of vegetation removal between February 15 and July 30 will be documented by the Contractor.
▪ Any greater sage-grouse nest encountered during Project activities will be protected under the guidelines of local, State, and Federal laws.	During construction activities.	The Project Biologist will be responsible for the oversight of greater sage-grouse nests that are encountered and provide recommendations for protection.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in the vicinity of greater sage-grouse nests.
APM-Bio-16: Prior to ground-disturbing activities at work sites, the Project Biologist or Biological Monitor will conduct pre-construction wildlife surveys at the site and surrounding buffer area. Pre-construction surveys address potential occurrence of mammalian species, with particular attention afforded to burrowing species. Wherever possible, any mammal species, whether a sensitive species or not, will be allowed to leave the work site prior to construction.	Prior to ground-disturbing construction activities.	The Project Biologist and/or Biological Monitor shall perform pre-construction surveys.	The Biological Monitor to record observations and interactions with mammalian species.

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Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
▪ If a Sierra Nevada red fox den is found in the project area, work within a ¼ mile buffer would be immediately halted until after June 30th with clearance from the Bridgeport District wildlife biologist.	Prior to ground-disturbing construction activities.	The Project Biologist and/or Biological Monitor shall perform pre-construction surveys.	The Biological Monitor to record observations and interactions with mammalian species.
APM-Bio-17: Populations of Sierra Nevada bighorn sheep are known to occur along the Proposed Project route adjacent to the proposed line in the Humboldt-Toiyabe National Forest in Mono and Douglas Counties. The following measures will be taken to minimize and avoid impacts to Sierra Nevada bighorn sheep:	During construction activities.	Biological Monitor to submit daily monitoring logs.	Biological Monitor to verify in the field.
▪ Speed limits within known Sierra Nevada bighorn sheep breeding areas will be limited to a pace that does not interfere with breeding displays or breeding and will be clearly identified within these areas. Construction personnel will obey posted speed limit signs for the Project at all times when on the Project.	During construction activities.	The Biological Monitor will provide recommendations for speed limits based on the biology and mobility of this species. The Contractor will be responsible for posting those speed limits and making Project personnel aware of the posted speed limits. The Biological Monitor will be responsible for bringing awareness to these areas daily as applicable.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in Sierra Nevada bighorn sheep breeding areas.
▪ Construction within or in the vicinity of Sierra Nevada bighorn sheep herds during the lambing season and/or near lambing herds will be postponed until after the lambing season.	During construction activities.	The Project Biologist or Biological Monitor will be responsible for providing avoidance recommendations to the Contractor.	The Project Biologist will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Project Biologist or Biological Monitor shall record all Sierra Nevada bighorn sheep observations throughout the Project alignment and daily Project activities occurring in Sierra Nevada bighorn sheep lambing areas for inclusion of Project compliance reports.
APM-Bio-18: The following measures will be taken to minimize and avoid impacts to mule deer:	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field
▪ Speed limits within known mule deer breeding	During construction activities.	The Project Biologist will provide	The Biological Monitor will

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areas and migration routes will be limited to a pace that does not interfere with breeding or migration and will be clearly identified within these areas. Construction personnel will obey posted speed limit signs for the Project at all times when on the Project.		recommendations for speed limits based on the biology and mobility of this species. The Contractor will be responsible for posting those speed limits and making Project personnel aware of the posted speed limits. The Biological Monitor will be responsible for bringing awareness to these areas daily as applicable.	document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in mule deer breeding areas.
▪ Where feasible, construction activities within migration corridors for mule deer will be avoided during the winter season (i.e., November 1-March 31).	During construction activities.	The Project Biologist and Contractor will be responsible for identifying and avoiding mule deer migration corridors during the winter season.	The Biological Monitor to document avoidance, where feasible..
APM-Bio-19: Prior to initiating conduit installation on any bridge, the Project Biologist will conduct pre-construction bat roost surveys at the bridge site.	Prior to construction activities.	The Project Biologist or Biological Monitor and the Agency would determine the course of action in an effort to minimize impacts to special-status bats or roost site.	Biological Monitor to verify in the field.
APM-Bio-20: The following measures will be taken to minimize and avoid impacts to the desert tortoise, following the most up-to-date guidance available, currently "Desert Tortoise – Authorized Biologist and Monitor Responsibilities and Qualifications":	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field
▪ Speed limits within desert tortoise habitat will be limited to a pace that does not endanger the desert tortoise and in no circumstances will exceed 20 mph on any unpaved road. Under no circumstances, except an emergency, will any Project personnel drive off-road outside of the Proposed Project ROW in desert tortoise habitat. Construction personnel will obey posted speed limit signs for the Project at all times when on the Project.	During construction activities.	The Project Biologist will provide recommendations for speed limits. The Contractor will be responsible for posting those speed limits and making Project personnel aware of the posted speed limits. The Project Biologist and Biological Monitor will be responsible for bringing awareness to these areas daily as applicable.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in desert tortoise habitat.
▪ Pre-construction surveys for desert tortoise shall be conducted within the Proposed Project Right of Way and the required buffer areas. The Project	Between February 15 and November 15, the survey shall occur within 48 hours prior to ground disturbance.	The Project Biologist will conduct the survey.	The Project Biologist will document the methodology and results of the survey and will identify the location

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Biologist and desert tortoise monitors shall walk parallel 30-foot wide linear transects covering 100 percent of the site and within a 50-foot buffer.	Between November 16 and February 14, the survey may be performed several days or several weeks prior to disturbance.		of any tortoises or borrows observed.
▪ Special habitat features, such as burrows/pallets, identified during pre-construction surveys shall be marked, recorded, and avoided to the extent possible. Burrows that are found shall be checked for desert tortoises and eggs by the Project Biologist. When desert tortoises are found, the burrows shall be flagged so that equipment operators and drivers shall clearly see the flagging and avoid the burrows. Unoccupied burrows shall be flagged in a manner that contrasts with occupied burrows.	Prior to construction	The Project Biologist shall conduct the survey.	The Project Biologist shall document the flagging of borrows and any other actions taken to ensure borrows are avoided by construction activities.
▪ Encounters with desert tortoises shall be immediately reported to the Project Biologist. The Project Biologist shall maintain a record of desert tortoises encountered during Project activities. Information recorded for each desert tortoise shall include: the location (narrative, vegetation type, and maps); date of observation; general condition of health, including apparent injuries and state of healing; whether the desert tortoise voided its bladder; if moved, location moved from and location moved to; digital photographs of each handled tortoise; and diagnostic markings (i.e., identification numbers or marked lateral scutes).	During construction	The Project Biologist shall keep record.	The Project Biologist shall record all encounters with desert tortoises and the actions resulting from those encounters.
▪ All open holes shall be covered, fenced, or inspected by the Biological Monitor at the beginning, middle, and end of each day. Ramps shall be constructed at the ends of trenches, and, where feasible, at about 100-foot intervals along the trench to allow entrapped tortoises to escape. The Biological Monitor will inspect trench/hole closures each night after they have been filled or covered to verify no refuge for desert tortoise	During construction activities.	The Contractor is responsible for implementing the covering of trenches while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document the trench coverings upon completion of the end of the day inspection.

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Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
remains.			
▪ If trenches/holes cannot be closed (covered) and are located in habitat appropriate for desert tortoise, silt fencing will be installed around the area to prevent desert tortoise from entering the construction area. The Biological Monitor will perform an inspection of a completed silt fence. Following construction and removal of the silt fence, the ground will be returned to its pre-disturbance condition.	During construction activities.	The Project Biologist will provide the recommendation for silt fence installation. The Contractor is responsible for implementing the installation of silt fencing while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor will document the silt fence installations upon completion of the inspection.
▪ Any conduit or similar structure with a diameter greater than 3 inches, stored less than 8 inches aboveground for one or more nights, shall be inspected for tortoises before the material is moved, buried, or capped. As an alternative, all such structures may be capped before being stored or placed on pipe racks.	During construction.	The Biological Monitor is responsible for inspecting structures for the presence of tortoises; the Contractor is responsible for capping and/ or storing materials above 8 inches above ground.	The Biological Monitor will document at the end of each day.
▪ The Biological Monitor will perform daily inspections for the presence of desert tortoise in each trench/hole wherever silt fence is installed for desert tortoise protection. Priority of inspections will occur for areas scheduled for construction activities that day, then followed by areas not scheduled for construction. Encounters with desert tortoises shall immediately be reported to the Project Biologist.	During construction activities.	The Contractor is responsible for implementing the installation of silt fencing, while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document the silt fence installations upon completion of the daily inspection.
▪ In an effort to mitigate impacts to the desert tortoise, California Broadband Cooperative will install new desert tortoise exclusionary fencing in locations along the Proposed Project route identified by the United States Fish and Wildlife Service as preferred locations for fence installation. The exact length, location, and responsibility of maintenance of this new exclusionary fencing will be determined in a collaborative effort with the California Broadband Cooperative, National Telecommunication and Information	Prior to construction activities.	The Contractor is responsible for implementing the installation of exclusionary fencing, while it will be the Biological Monitor who is responsible for a daily inspection of the exclusion coverings.	The Biological Monitor will document the exclusionary fence installations upon completion of the daily inspection.

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Administration, United States Fish and Wildlife Service, California Department of Fish and Game, and Caltrans based on experience, expertise, and available funding. New exclusionary fencing will be attached to existing Caltrans right-of-way fencing.			
▪ Desert tortoise fencing is present along portions of the Proposed Project. Desert tortoise fence located along the Proposed Project will be inspected on a daily basis.	During construction.	The Project Biologist to conduct fence inspections. In areas where desert tortoise fence has been inspected and determined to be intact, a Biological Monitor will not be required. However, if there is a breach in the desert tortoise fence, a Biological Monitor will be required.	The Project Biologist shall document the inspection of desert tortoise fencing.
▪ Project-related damage to existing desert tortoise fencing shall be repaired immediately following construction in that area so that tortoises do not travel through damaged sections and into the highway.	During construction.	The Project Biologist to conduct fence inspections. The Contractor is responsible for repairing damages to existing tortoise fencing.	The Project Biologist shall document the inspection of desert tortoise fencing including observations of trapped animals, repairs, tortoises, tortoise burrows, and carcasses observed.
▪ A written status report shall be submitted to the California Department of Fish and Game and United States Fish and Wildlife Service every 30 days until construction in desert tortoise habitat is completed	Every 30 days during construction in desert tortoise habitat.	The Project Biologist is responsible for the report.	The report will document all actions taken to protect desert tortoise and all observations and interactions with desert tortoise during the prior 30-day period.
▪ A summary report describing the effectiveness and practicality of mitigation measures; the number of desert tortoises observed, moved from site, and accidentally killed or injured; and the specific information on each tortoise encountered shall be prepared after the completion of construction in desert tortoise habitat.	90 days after the completion of construction in desert tortoise habitat.	The Biological Monitor is responsible for the report.	The report shall describe the effectiveness and practicality of mitigation measures; the number of desert tortoises observed, moved from site, and accidentally killed or injured; and the specific information on each tortoise
▪ Desert tortoises commonly seek shade during the hot portions of the day. Employees working within the geographic range of this species will be required to check under their equipment or vehicle before it is moved. If desert tortoises are encountered, the vehicle is not to be started/	During construction activities.	All Project personnel are responsible for implementing this measure.	The Biological Monitor will document upon completion of the daily inspection.

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moved until such animals have voluntarily moved to a safe distance away from the parked vehicle. If a desert tortoise is present and has not moved voluntarily after time, construction will be immediately halted and the Biological Monitor will be contacted.			
CULTURAL RESOURCES			
APM-CR-1: Construction will occur only in portions of the Project Area that have been surveyed or a record search has been completed in compliance with Section 106 of the National Historic Preservation Act. Prior to construction, a Construction Phase Monitoring Plan will be developed that will indicate areas not needing monitoring, inventory all sites and areas needing monitoring, the level of monitoring that must take place within or near a site or area to be monitored, and plans for daily communication and for the discovery of unexpected finds.	Included in Project specifications and during construction activities	Cultural Resources Monitor in coordination with the Monitoring Phase Lead Archaeologist	Cultural Resources Monitor to identify prior to construction activities, based on the Construction Phase Monitoring Plan.
APM-CR-2: Impacts to identified cultural resources within the Project Area shall be minimized through avoidance and minimization measures which include: re-routing of the fiber-optic line and associated components or directional boring beneath the site with an archaeological monitor present at the bore rig site and bore pits, as feasible.	Included in Project specifications and during construction activities	Cultural Resources Monitor to submit daily monitoring logs	Cultural Resources Monitor to verify in the field
APM-CR-3: Site boundaries and a buffer zone, as defined and agreed upon by the lead or jurisdictional Agency, will be provided for insuring avoidance of impacts to archaeological sites by designating these boundaries and buffer zones using flagging tape and/or fencing. Flagging and/or fencing will not occur too far in advance of construction activities; timing will be coordinated with the appropriate land managing Agency. Monitoring will be conducted prior to construction to insure flagging has not been removed and will be conducted by a qualified archaeologist.	Prior to construction activities	Cultural Resources Monitor to submit daily monitoring logs	Cultural Resources Monitor to verify in the field
APM-CR-4: A qualified archaeological monitor will be present during ground-disturbing activities within the Project area in areas determined likely to contain cultural resources. The monitor will be empowered to temporarily halt or redirect	During construction activities; and in the event of discovery	Cultural Resources Monitor to submit daily monitoring logs	Cultural Resources Monitor to verify in the field

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construction activities until the deposit is recorded and evaluated by a qualified archaeologist and the appropriate avoidance and minimization measures have been agreed upon in conjunction with the lead Agency and local Agency jurisdiction.			
APM-CR-5: Phased mitigation procedures to meet Section 106 review and compliance are outlined in the finished Programmatic Agreement.	Prior to and during construction	The Applicant and appropriate Agencies will follow procedures outlined in the final Programmatic Agreement.	The Project Archaeologist will document compliance with the final Programmatic Agreement.
APM-CR-6: Prior to construction, the Applicant shall designate a certified Project Paleontologist to supervise monitoring of construction excavations and to produce a Paleontological Resource Management Plan for the Proposed Project. This Paleontological Resource Management Plan shall be prepared and implemented under the direction of the Project Paleontologist and would address and incorporate measures identified in this Mitigation Monitoring and Reporting Plan. Paleontological monitoring shall include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present. The monitor shall have authority to temporarily divert grading away from exposed fossils in order to recover the fossil specimens. The Paleontological Resource Management Plan may require field surveys for specific areas along the Project route based on the sensitivity of the area. The Paleontological Resource Management Plan may require the Applicant to have a formal agreement with a recognized museum repository and the Project Paleontologist to curate any fossil collections, maintain appropriate field and laboratory documentation, and prepare the final Paleontological Resource Recovery Report in a timely manner following construction. More specific guidelines for paleontological resource monitoring will be identified in the Project Paleontological Resource Management Plan. The Project Paleontologist shall document interim results of the construction monitoring program with monthly progress reports.	Prior to construction	To be designated by Applicant. Project Paleontologist to prepare and implement measures from the Paleontological Resource Management Plan.	Throughout active construction and at reporting intervals.

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APM-CR-7: Workers Environmental Awareness Program training shall be provided to construction supervisors and crew for awareness of requirements regarding the protection of archaeological and paleontological resources and procedures to be implemented in the event that artifacts, human remains, or fossil remains are encountered by ground-disturbing activities.	Prior to and as-needed for new personnel during construction activities.	The Project Archaeologist and Paleontologist familiar with the minimization measures for this Project would perform the training.	The training would be conducted prior to all personnel working on Project site in areas of concern.
APM-CR-8: Ground-disturbing activities shall be monitored on a full-time basis by a paleontological construction monitor only in those parts of the Project area where these activities may disturb previously undisturbed strata in rock units of high sensitivity. The areas that will require full-time monitoring include: ▪ Segment Hinkley to Kramer Junction: older alluvium; ▪ Segment Kramer Junction to Atolia-Quaternary: older alluvium north of Kramer Junction Quaternary non-marine terrace deposits; ▪ Segment Searles to Ridgecrest: Quaternary lake deposits and alluvium one mile on either side; ▪ Segment Ridgecrest to Inyokern: Quaternary lake deposits and alluvium one mile on either side of Quaternary lake deposits; ▪ Segment Inyokern to Little Lake: Quaternary nonmarine deposits; ▪ Segment Little Lake to Olancha: Quaternary alluvium adjacent to Owens Lake; ▪ Segment Olancha to Keeler: Quaternary alluvium adjacent to Owens Lake; ▪ Segment Keeler to Owenyo: Quaternary lake deposits; ▪ Quaternary alluvium adjacent to Owen Lake; ▪ Segment Lone Pine Quaternary lake deposits; ▪ Segment Owenyo to Independence: Quaternary alluvium where route crosses Owens River; and ▪ Segments in the Mono Basin-Quaternary lake deposits.	During construction	The Project Paleontologist to decide the level of monitoring required for the area.	Level of monitoring to be identified prior to construction activities. Project Paleontologist to keep notes regarding monitoring.

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The Project Paleontologist, upon conferring with the Paleontological Monitor(s), can reduce the amount of monitoring if it is determined that a large portion of a segment is in top soil or fill. The areas that will require part-time or spot checking monitoring: ▪ All areas with Quaternary alluvium The areas that will require no monitoring: ▪ Areas where volcanic, granitic, or metamorphic rocks are present.			
AESTHETIC AND VISUAL RESOURCES			
APM-AVR-1: Staging and material and equipment storage areas, including storage sites for excavated materials will be appropriately located away from areas of high public visibility to the extent possible.	Included in Project specifications, prior to construction activities	Engineering Inspector	Prior to construction activities
LAND USE			
APM-LU-1: Prepare Construction Notification Plan. Prior to construction, California Broadband Cooperative shall prepare and submit a Construction Notification Plan to the National Telecommunications and Information Administration and the California Public Utilities Commission for approval. The Plan shall identify the procedures that address at a minimum the following components:	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities
▪ **Public notice mailer.** Prior to construction, a public notice mailer shall be prepared for construction activities that would restrict, block, or require a detour to access existing residential properties, retail and commercial businesses, wilderness and recreation facilities, and public facilities (e.g., schools and reserves). This notice shall state the type of construction activities that will cause the restriction, block, or detour and the location and duration of construction in these areas. California	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities

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Broadband Cooperative shall mail the notice to all residents or property owners within 300 feet of the right-of-way who could be impacted by this restriction, block or detour and also to specific public agencies with facilities that could be impacted by this restriction, block, or detour. If construction delays of more than seven days occur in these areas, an additional notice shall be prepared and distributed.			
▪ **Newspaper advertisements.** Prior to construction within a route segment, one round of newspaper advertisements shall be placed in local newspapers and bulletins. The advertisement shall state when and where construction will occur and provide information on the public liaison person and hotline identified below. If construction is delayed as noted above, an additional round of newspaper ads shall be placed to discuss the status and schedule of construction.	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities
▪ **Public venue notices.** Prior to construction, notice of construction shall be posted at public venues, such as trail crossings, rest stops, resource management offices, and other public venues to inform residents and visitors of the purpose and schedule of construction activities that will cause the restriction, block, or detour at the public venue. For public road closures, California Broadband Cooperative shall post information about the road detour at applicable resource management offices and post the notice within two miles north and south of the detour. For recreation facilities and reserves, the notice shall be posted along the access routes to known recreational destinations that would be restricted, blocked, or detoured and shall provide information on alternative recreation areas that may be used during the closure of these facilities.	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities

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▪ Public liaison person and toll-free information hotline. California Broadband Cooperative shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. California Broadband Cooperative shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities
INFRASTRUCTURE			
APM-I-1: Roadway Capacity Maintenance. California Broadband Cooperative and its construction contractors shall maintain the maximum possible amount of travel lane capacity on roads during non-construction periods and shall provide traffic control during construction along public roads and highways.	During construction activities	Engineering Inspector	During construction activities
APM-I-2: Prepare Transportation Management Plans. Prior to the start of construction, California Broadband Cooperative shall submit Traffic Management Plans to all agencies with jurisdiction over public roads that would be affected by construction activities. Traffic Management Plans shall define the locations of all roads that would need to be temporarily closed due to construction activities. The Traffic Management Plans shall define the use of flag persons, warning signs, lights, barricades, cones, etc. according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the *Work Area Traffic Control Handbook* (WATCH). Shoulder or lane closures shall be accomplished in accordance with the 2010 Caltrans Standard Plans.	Prior to and during construction activities	Engineering Inspector	Prior to and during construction activities

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A lane closure shall be required when personnel are working or equipment is operated within six feet of the traveled way. A shoulder closure shall be used when personnel or equipment for the work are located outside of six feet from the traveled way. Any traffic control that deviates from 2010 Caltrans Standard Plans shall require a traffic control plan being submitted for approval 14 days prior to the start of work.			
APM I-3: Prepare Recycling Program. Prior to the start of construction, California Broadband Cooperative will create a recycling program to be implemented that will require that the Project meet specified diversion goals.	Prior to and during construction activities.	Engineering Inspector	Prior to and during construction activities.
HUMAN HEALTH/SAFETY			
APM-HHS-1: An environmental health and safety professional who is 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) trained shall be present during the trenching and cable installation in the vicinity of the three active Leaking Underground Storage Tank (LUST) sites listed in Section 3.12 to monitor the construction to minimize these risks.	During construction activities	Health and Safety Monitor to submit monitoring logs	Health and Safety Monitor to verify in field
APM-HHS-2: The Project Applicant and contractor shall be subject to the Occupational Safety Health Administration (OSHA) which sets forth mandatory health and safety standards for construction sites. These standards include mandatory incident reporting, daily tailgate meetings, and monthly safety meetings with the contractor to discuss potential health and safety issues. In addition, the construction superintendent shall be responsible for verifying that all construction personnel working on the Project site is a legal citizen or possesses an employment visa.	During construction activities	Project Applicant/ Contractor	Health and Safety Monitor to verify in field

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Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
NOISE			
MM-N-1: If Project construction activities with ground borne vibration activities occur within 100 feet of sensitive receptors, the occupants and property owners shall be notified of the construction activities 15 days prior to construction.	Prior to construction activities	Construction Monitor to identify areas of sensitive receptors. Engineering Inspector to verify occupants and property owners are notified.	Immediately prior to construction activities in areas with sensitive receptors.
WATER RESOURCES			
MM-W-1: If a fracture of the substrate occurs during horizontal directional drilling (frac-out), drilling fluids have the potential to be released into the stream or dry streambed. In the event of a frac-out, the California Broadband Cooperative will implement response measures in the Horizontal Directional Drilling Contingency and Resource Protection Plan.	Included in Project plans specifications; implemented during construction activities	The Engineering Inspector would verify that the Horizontal Directional Drilling Contingency and Resource Protection Plan was implemented.	Following the event of a frac-out.
MM-W-2: If a leak or spill from fuels and lubricants enters or threatens to enter a stream crossed or immediately adjacent to the Proposed Project Right of Way, the California Broadband Cooperative will implement response procedures specified in the Spill Prevention and Pollution Plan.	Included in Project plans and specifications; during construction activities	The Engineering Inspector would verify that the Spill Prevention and Pollution Plan measures were implemented.	Following a fuel or lubricant leak into a stream.
BIOLOGICAL RESOURCES			
MM-Bio-1: If the contractor suspects that invasive and/or noxious weeds have been brought to the site, the contractor would notify the Biological Monitor to resolve the issue using similar practices identified in APM-Bio-12 and best professional judgment.	During construction activities.	A Biological Monitor would determine the necessary course of action to remedy the potential introduction of invasive and/or noxious weeds and provide recommendations for further prevention of such cases.	The Biological Monitor would document the actions taken to remove the invasive and/or noxious weeds upon completion of the action.
MM-Bio-2: If special-status plant species, such as Joshua trees, cacti, and succulents are within an impact area and cannot be avoided, the restoration specialist shall remove and temporarily relocate the species ahead of construction, to a "nursery area" until safe to return to the immediate area where the special-status vegetation was originally found. The "nursery area" will be located outside of desert	During and after construction	The Biological Monitor	The Biological Monitor shall verify that vegetation is not cleared outside existing roads. The Biological Monitor would verify that the special-status plant species within the construction impact area is temporarily relocated and then restored.

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Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
tortoise critical habitat. If the "nursery area" is located within desert tortoise suitable habitat, the "nursery area" will be located within a previously disturbed area or an area devoid of vegetation (i.e., laydown or staging areas). If unforeseen circumstances require disturbance of vegetation beyond the final Proposed Project route, California Broadband Cooperative shall notify the appropriate Agencies immediately. Surface stabilization and reclamation within and along the boundaries of the Proposed Project Right-of-way shall be accomplished by removing construction debris from the Project area and returning the soil to its original grade.			
▪ On BLM lands, cactus, yucca, and other succulents will be salvaged and transplanted out of harm's way, but still within the right-of-way when avoidance is not possible.			
MM-Bio-3: If an active native bird nest were found within 100 feet (500 feet for raptors) of the Project corridor, an appropriate buffer will be assigned by the Monitoring Biologist. The biologist shall have the discretion to adjust the buffer area (upward or downward) as appropriate according to proposed construction activity, the bird species involved, and the status of the nest and nesting activity.	During the bird breeding season of March 15 through September 15, 48-hours prior to and during construction activities.	Biological Monitor to submit daily monitoring logs.	The nesting species and the assigned buffer will be documented upon discovery of nest.
▪ If an active goshawk nest were found within a protected activity center along the Project corridor, the Project will follow the appropriate limited operating period (i.e., February 15 – September 15).	During the goshawk breeding season of February 15 through September 15, 48-hours prior to and during construction activities. The surveys will follow the Pacific Southwest Region Northern Goshawk Survey Protocol (2000).	Biological Monitor to submit daily monitoring logs to the Forest Wildlife Biologist and include the GPS location of any nests or individuals seen, the date surveys occurred, and names of surveyors.	The nesting goshawk and the assigned buffer will be documented upon discovery of nest.
MM-Bio-4: The Proposed Project does not directly cross any known greater sage-grouse lekking or	Prior to and during construction activities.	The Project Biologist or Biological Monitor and the appropriate Agency	Measures required to maintain construction activity would be

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
breeding areas. If a greater sage-grouse is observed within 100 feet of an active construction site, construction activities will be limited or temporarily halted until the animal has left the area. If the sage-grouse does not leave the area on its own, the Project Biologist would contact the appropriate Agency to determine the best course of action. If any construction activities were to occur within a newly identified lekking or breeding area, the activities shall be conducted outside the breeding season.		would determine the course of action in an effort to allow construction activities to resume.	documented immediately upon completion of biologist and Agency discussions. The Biological Monitor to record greater sage-grouse observations and interactions.
MM-Bio-5: A survey shall be conducted within 30 days prior to the initiation of construction by a qualified biologist to determine the presence or absence of the burrowing owl in the construction zone plus 250 feet beyond.	30 days prior to start of construction and during construction activities.	The Biological Monitor will be responsible for the oversight of burrowing owl surveys and burrows that are encountered and provide recommendations for protection.	The Biological Monitor to record burrowing owl observations and interactions.
MM-Bio-6: If the burrowing owl is present, no disturbance shall occur within 50 meters (approximately 160 ft) of occupied burrows from September 1 through January 31 or within 75 meters (approximately 250 ft) of occupied burrows from February 1 through August 31.	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field.
MM-Bio-7: Pipes or similar construction materials that are stored on site for one or more nights shall be inspected for burrowing owls by a Biological Monitor before the material is moved, buried, or capped.	During construction activities.	The Contractor is responsible for closing and capping pipes and similar construction materials. The Biological Monitor is responsible for inspections and submitting monitoring logs of inspections performed.	Biological Monitor to verify in the field.
MM-Bio-8: Passive relocation of burrowing owls shall be implemented prior to construction only at the direction of the California Department of Fish and Game and only if the above-described occupied burrow disturbance absolutely cannot be avoided (e.g., due to physical or safety constraints). Relocation of owls shall be implemented only during the non-breeding season.	Prior to the start of construction activities and only during September 1 to January 31.	The Biological Monitor will be responsible for the oversight of burrowing owl surveys and burrows, and will coordinate accordingly with the California Department of Fish and Game.	The Biological Monitor to record burrowing owl relocation activities.

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
MM-Bio-9: When conducting construction activities during the bird breeding season of February 15 through September 15 within 500 feet of habitat in which least Bell's vireos and/or southwestern willow flycatchers are known to occur or have potential to occur, a Project Biologist shall survey for least Bell's vireos and southwestern willow flycatchers within 48 hours prior to initiating activities in an area. If least Bell's vireos or southwestern willow flycatchers are present, then construction would be temporarily halted; and the Biological Monitor and appropriate Agency would be contacted to determine the best course of action.	48 hours prior to construction (and during construction) in least Bell's vireo and southwestern willow flycatcher habitat between March 15 and September 15	The Project Biologist will conduct the survey and coordinate with the appropriate Agency, if necessary.	The Project Biologist shall submit a report documenting survey methodology and all least bell's vireo and southwestern willow flycatcher observations.
MM-Bio-10: If a special-status mammalian species were detected or directly observed within 100 feet of a construction area that may result in direct disturbance to that animal, then construction would be temporarily halted until the mammal left; if it does not leave on its own, the Biological Monitor would contact the appropriate Agency to determine the best course of action.	During construction activities.	A Biological Monitor and the Agency would determine the course of action in an effort to allow construction activities to resume. A Biological Monitor would be present to monitor for potential disturbance to special-status mammalian species.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions. Biological Monitor would submit daily monitoring logs.
MM-Bio-11: If a Sierra Nevada bighorn sheep is observed within 100 feet of an active construction site, then construction would be temporarily halted until the animal leaves the area. If the animals does not leave the area within a short time; or if it appears to be injured or ill; or if a lamb, with or without a ewe, is present in the area, then the Project Biologist, if necessary, shall contact the appropriate Agency to determine the best course of action. All verified bighorn sheep observations will be recorded in daily field notes and reported in the Project compliance reports.	During construction activities.	The Project Biologist and the Agency would determine the course of action in an effort to allow construction activities to resume.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions.
MM-Bio-12: If a mule deer is observed within 100 feet of an active construction site, then construction would be temporarily halted until the	During construction activities.	An on-call Biological Monitor and the Agency would determine the course of action in an effort to allow	Measures required to resume work would be documented immediately upon completion of biologist and

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
animal leaves the area. If the mule deer does not leave the area within a short time; or if it appears to be injured or ill; or if a fawn, with or without a doe, are present in the area, the Project Biologist or Biological Monitor will be contacted and, if necessary, the appropriate Agency would be contacted to determine the best course of action.		construction activities to resume.	Agency discussions.
MM-Bio-13: Mohave ground squirrel are assumed to be present in the Proposed Project area. The Mohave ground squirrel shall be looked for opportunistically as part of other surveys and monitoring required during Project construction. Mitigation measures will be coordinated with the California Department of Fish and Game, and an incidental take permit will be obtained by California Broadband Cooperative prior to construction occurring in Mohave ground squirrel habitat.	During construction activities.	The Biological Monitor will be responsible for the oversight of Mohave ground squirrel and burrows that are encountered and provide recommendations for protection.	The Biological Monitor to record Mohave ground squirrel observations and interactions.
MM-Bio-14: The Project Biologist shall immediately notify the Contractor and the California Department of Fish and Game of any Mohave ground squirrel encountered. Notification to the California Department of Fish and Game shall follow the requirements identified in the incidental take permit.	Prior to and during construction activities.	The Biological Monitor will be responsible for notifying the Contractor and California Department of Fish and Game of a Mohave ground squirrel encounter. The Biological Monitor will be responsible for the preparation of an incident report for a Mohave ground squirrel encounter.	The Biological Monitor will notify the California Department of Fish and Game within the same day or by the following business day as described in this measure. The Biological Monitor will prepare an incident report following a Mohave ground squirrel encounter.
MM-Bio-15: The Project Biologist will survey for bats and/or bird nests prior to installing of conduit at bridges. Construction at any bridges with active bird nests or bat colonies would be avoided during the breeding season. The appropriate Agency would be consulted should a bridge appear to serve as a bat roost.	A bird nest and bat survey would be performed within two weeks of installing conduit on a bridge. The typical bird nesting season is between February 15 and August 31, with most nesting activities occurring between March and July. The typical bat breeding season is May to July.	The Project Biologist will conduct the survey.	Active bird nests and bat colonies will be identified on a map following the nesting bird surveys.

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
MM-Bio-16: If roosting bats may be present, then the Project Biologist shall identify the species and contact the California Department of Fish and Game or the Nevada Department of Wildlife to determine the best course of action. Where bridges may serve as maternity roosts, Project construction will be delayed until conclusion of the breeding season.	Prior to and during construction activities.	The Project Biologist or Biological Monitor and the Agency would determine the course of action in an effort to minimize impacts to special-status bats or roost site and allow construction activities to resume.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions.
MM-Bio-17: The Project Biologist shall conduct pre-construction surveys for American badger dens in the Project Area, including areas within 100 feet of all Project Right of Way staging areas and access roads. If dens are detected, each den will be classified as inactive, potentially active, or definitely active.	Prior to construction activities.	The Biological Monitor will be responsible for the oversight of badger surveys and burrows that are encountered and provide recommendations for protection.	The Biological Monitor to record badger observations and interactions.
MM-Bio-18: Disturbance to all American badger dens will be avoided to the maximum extent possible. Dens determined to be occupied between March 1 and June 30 will be avoided to protect adults and nursing young. If a potentially active den is found in a construction area, the appropriate Agency would be contacted to determine the best course of action.	During construction activities	The Biological Monitor will be responsible for the oversight of badger surveys and burrows that are encountered and coordinate with the appropriate Agency to provide recommendations for protection.	The Biological Monitor to record badger observations and interactions.
MM-Bio-19: To prevent badger burrows from possible collapse from equipment vibration, speed limits shall be reduced to no more than 20 mph when within 200 feet from an active American badger den.	During construction activities	The Contractor will be responsible for oversight of construction crews vehicle operations.	During construction activities.
MM-Bio-20: A pre-construction survey shall be	The pre-construction survey shall be	A biologist qualified to survey for and	The qualified biologist shall

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
conducted for pygmy rabbit in suitable habitat by the Project Biologist. To the greatest extent possible, construction activities shall be restricted to the road; and vehicles and equipment shall avoid driving in pygmy rabbit habitat and avoid all burrows with a 50-meter buffer (15-meter minimum) in order to minimize impacts to pygmy rabbits, their burrows, and habitat. If a pygmy rabbit is found in a construction area and does not leave the site on its own, the appropriate Agency would be contacted to determine the best course of action.	conducted within two weeks prior to construction.	handle pygmy rabbit.	document the methodology and results of the pre-construction survey and the relocation of any rabbit colonies, if necessary. Other methods implemented to avoid or minimize impacts to pygmy rabbits shall be documented.
MM-Bio-21: If construction activities may result in adverse impacts to special-status amphibian and/or reptilian species, then construction would be temporarily halted and the Project Biologist and appropriate Agency would be contacted to determine the best course of action.	During construction activities.	A Biological Monitor and the Agency would determine the course of action in an effort to allow construction activities to resume.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions.
MM-Bio-22: Surveys for special-status amphibian and/or reptile species shall be conducted prior to construction in areas with potential to support special-status reptile or amphibian species. If a special-status amphibian and/or reptilian species is confirmed to be present within 100 feet of the construction activities, then a Biological Monitor would be present to monitor for the species and alert construction crews to the possible presence of these species.	Within two weeks prior to and during construction activities.	A Biological Monitor would be present to survey and monitor for potential disturbance to special-status amphibian or reptile species.	Biological Monitor would submit survey results and daily monitoring logs.
MM-Bio-23: If a desert tortoise is observed within 100 feet of an active construction site, then construction would be temporarily halted; and the Biological Monitor would contact the appropriate Agency to determine the best course of action.	During construction activities.	A Biological Monitor and the Agency would determine the course of action in an effort to allow construction activities to resume.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions. All observations of desert tortoises within the Project vicinity will be recorded and compiled in compliance reports.
MM-Bio-24: If a desert tortoise must be moved	During construction	The Project Biologist.	The Project Biologist shall document

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
from harm's way during Project activities, the Project Biologist will follow the "Guidelines for Handling Desert Tortoises During Construction Projects" (Desert Tortoise Council 1999), or most current Agency guidelines, and will comply with the requirements identified in the Biological Opinion.			all incidents in which a desert tortoise must be moved.
MM-Bio-25: If construction activities are required within 100 feet of waterbodies suitable for special-status aquatic wildlife, a Biological Monitor would be present on the site during construction.	Prior to and during construction activities.	Prior to the start of each day's construction activities, a Biological Monitor will determine if activities will occur within 100 feet of a waterbody suitable for special-status aquatic wildlife. Daily visual inspections also would include assessment of the integrity of Best Management Practices. The biological monitor would report deficient sediment control devices to the Engineering Inspector for prompt repair.	Biological Monitor would submit daily monitoring logs.
MM-Bio-26: If habitat for special-status insects is within the construction area, and a special-status insect species are detected within or adjacent to the proposed area of direct disturbance during construction and does not leave the site on its own, the appropriate regulatory Agencies would be consulted to determine the best course of action.	During construction.	The Project Biologist will conduct the survey and coordinate with the appropriate Agency.	The Project Biologist shall prepare a report documenting the consultation with the resource agencies and recommended actions.
CULTURAL RESOURCES			
MM-CR-1: In the event that any previously unidentified or buried cultural resource materials are encountered within any part of the Project area, all ground-disturbing construction activities must be suspended in the vicinity of the find until the deposit is recorded and evaluated by a qualified archaeologist and the appropriate avoidance and minimization measure is identified.	In the event of discovery	Cultural Resources Monitor to submit compliance reports	In the event of discovery.

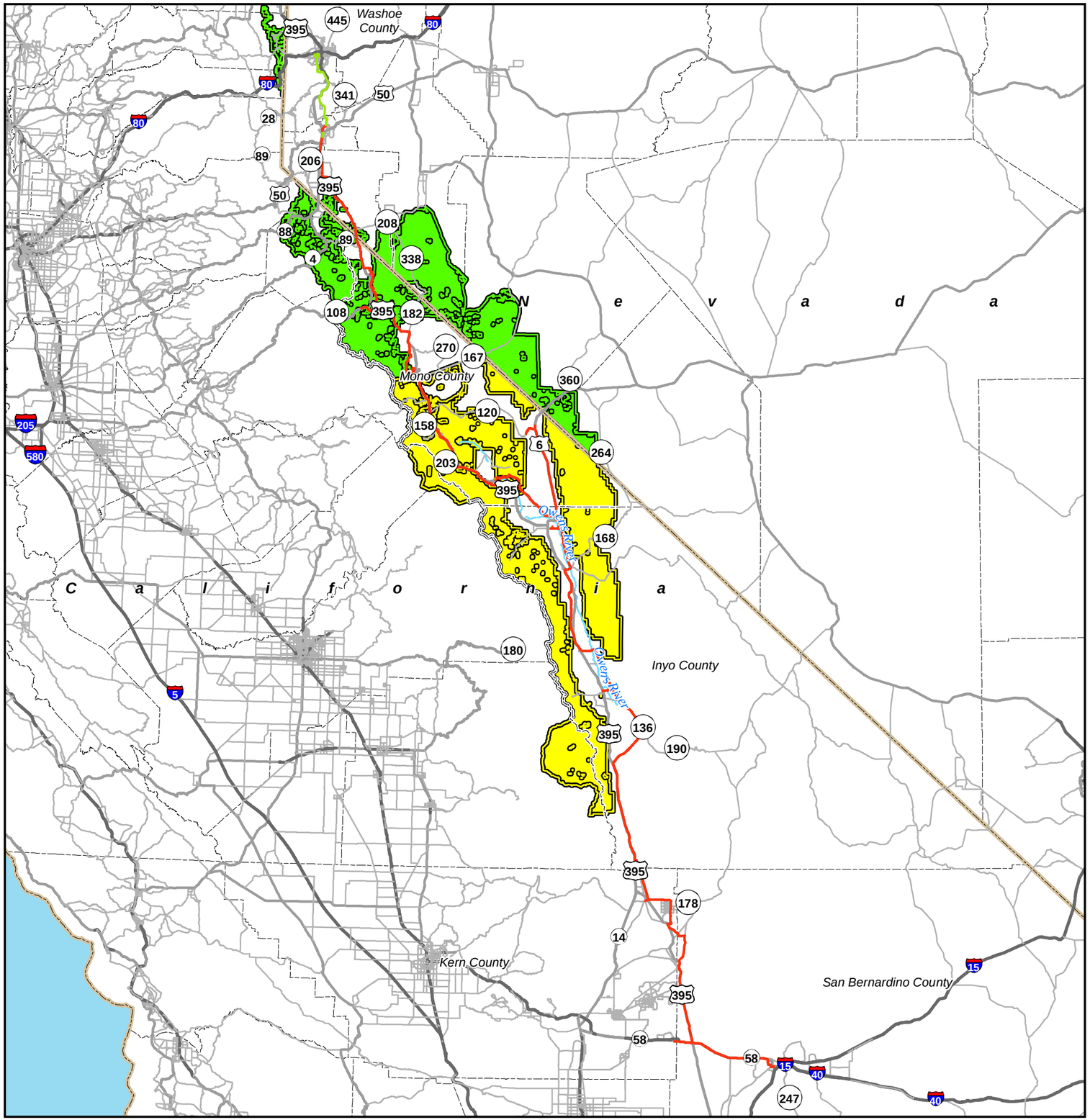
MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
On Bureau of Land Management lands, Agency archaeologists should be contacted prior to work continuing. The field manager makes the decision when work can continue, based on the Agency archaeologists' opinion.			
MM-CR-2: Sites that cannot be avoided, such as those that have already been determined eligible for National Register of Historic Places or State listing, will require testing and data recovery measures upon approval of a data recovery plan. A recovery plan will be in place prior to construction activities. Testing of the site and data recovery can be conducted with Agency approval.	Prior to construction activities	Cultural Resources Monitor to submit daily monitoring logs	Cultural Resources Monitor to verify in the field
MM-CR-3. If potential human skeletal remains are discovered, all activity in the area of discovery would cease immediately. The protocol for the inadvertent discovery of human remains is found in State Health and Safety Code Division, Part 1, Chapter 2, Section 7050.5 and Public Resource Code 5097.98. Other applicable State and Federal laws are the Archaeological Resources Protection Act (ARPA), the American Indian Religious Freedom Act (AIRFA), and the Native American Graves Protection & Repatriation Act (NAGPRA). The County Coroner would be notified immediately (within 24 hours) to make a determination as to human or nonhuman skeletal remains and the circumstances, manner, and cause of death. If the Coroner determines that the remains are Native American, he or she would contact the Native American Heritage Commission to identify a Most Likely Descendent, or, if in Nevada, the Office of Historic Preservation of the Department of Cultural Affairs. In California, the Native American Heritage Commission would notify the most likely descendant who would consult with the Project proponent and the lead Agency in determining the final disposition of the remains. In	In the event of discovery	Cultural Resources Monitor to submit compliance reports	In the event of discovery.

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
Nevada, the Office of Historic Preservation would consult with the Project proponent and the lead Agency in determining the final disposition of the remains. Upon discovery of human remains, Native American Graves Protection & Repatriation Act procedures will be followed. In brief, the contractor will immediately notify the responsible Federal or Tribal official by telephone and provide written confirmation to the responsible Federal or Tribal official. If the inadvertent discovery occurs in connection with an on-going activity, the contractor must cease the activity in the area of the inadvertent discovery and make a reasonable effort (halt all activity within a 100-foot radius) to protect the human remains and other cultural items. The Federal or Tribal Agency official must certify receipt of the notification within three days. The Federal or Tribal official may take further action to secure and protect the human remains and other cultural items. The Federal or Tribal Agency official must prepare, approve, and sign a written plan of action to treat the inadvertent discovery. The activity that resulted in the discovery may resume 30 days after the Federal or Tribal Agency official certifies receipt of the notification. Custody must be determined in accordance with 25 USC 3002 (a), "Priority of Ownership," and 43 CFR 10.6, "Priority of Custody."			
MM-CR-4: If fossils are encountered during construction, construction activities shall be temporarily diverted from the discovery, and the Paleontological Monitor shall notify the appropriate parties/Agencies and collect matrix for testing and processing as directed by the Project Paleontologist. In order to expedite removal of fossil-bearing matrix, the Paleontological Monitor	During construction	Project Paleontologist to conduct appropriate recovery and testing.	In the event of discovery.

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
may request heavy machinery to assist in moving large quantities of matrix out of the path of construction to designated stockpile areas. Construction shall resume at the discovery location once the all necessary matrix is stockpiled, as determined by the Paleontological Monitor. Testing of stockpiles shall consist of screen washing small samples to determine if important fossils are present. If such fossils are present, the additional matrix from the stockpiles shall be water screened to ensure recovery of a scientifically significant sample. Samples collected would be limited to a maximum of 6,000 pounds per locality. At each fossil locality, field data forms shall record the locality, stratigraphic columns would be measured, and appropriate scientific samples submitted for analysis. The Project Paleontologist shall direct identification, laboratory processing, cataloguing, analysis, and documentation of the fossil collections. When appropriate, and in consultation with California Broadband Cooperative and the appropriate parties/Agencies, splits of rock or sediment samples shall be submitted to commercial laboratories for microfossil, pollen, or radiometric dating analysis. After analysis, the collections shall be prepared for curation. A final technical report shall be prepared to summarize construction monitoring and present the results of the fossil recovery program. The report shall be prepared in accordance with California Public Utilities Commission, Society of Vertebrate Paleontology guidelines, and lead Agency requirements. The final report shall be submitted to the Applicant, lead Agencies, and the curation repository.			
AESTHETIC AND VISUAL RESOURCES			

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
MM-AVR-1: If construction staging areas are visible from residences; public gathering areas; and/or recreational areas, facilities, or trails, then construction staging areas shall be visually screened using temporary screening fencing of appropriate design and color.	Included in Project plans and specifications, and implemented prior to construction activities	The Engineering Inspector is to verify that appropriate screening techniques were implemented.	Upon completion of the installation of visual barriers.

APPENDIX C – MAPS OF VEGETATION COMMUNITIES OF INYO NATIONAL FOREST



Legend

- 01 Mojave Creosote Bush Scrub
- 03 Developed
- 04 Desert Saltbush Scrub
- 05 Desert Sink Scrub
- 06 Transmontane Alkali Marsh
- 07 Rabbitbrush Scrub
- 08 Tamarisk Scrub
- 10 Open Water
- 11 Rabbitbrush Scrub
- 12 Big Sagebrush Scrub
- 13 Joshua Tree Woodland
- 14 Ornamental Landscaping
- 15 Mojave Riparian Forest
- 17 Great Basin Cottonwood - Willow Riparian Forest
- 18 Great Basin Mixed Scrub
- 19 Wet Subalpine Meadow
- 20 Subalpine Sagebrush Scrub
- 21 Aspen Forest
- 22 Tobacco Brush Chaparral
- 23 Great Basin Grassland
- 24 Lodgepole Pine Forest
- 25 Sierran Mixed Conifer Forest
- 26 Great Basin Pinyon-Juniper Woodland
- 27 Great Basin Pinyon Woodland
- 28 Great Basin Juniper Woodland and Scrub
- 31 Agriculture
- 32 Montane Riparian Forest
- 32 Montane Riparian Forrest
- 33 Eastside Ponderosa Pine Forest
- 34 Great Basin Pinyon-Juniper Woodland
- 35 Montane Black Cottonwood Riparian Forest
- 36 Ruderal/Disturbed
- 37 Turf grass
- 38 Montane Freshwater Marsh
- 39 Transitional Great Basin Mixed Scrub
- 40 Blackbush Scrub
- 41 Indigo Bush Scrub
- 42 Desert Greasewood Scrub
- 43 Mojave Mixed Woody Scrub
- 44 Burro Bush Scrub
- 45 Stabilized and Partially Stabilized Desert Sand Field
- 46 Rose Thicket
- 47 Great Basin Saltbush Scrub
- D01 Disturbed Mojave Cresote Bush Scrub
- D04 Disturbed Desert Saltbush Scrub
- D07 Disturbed Rabbitbrush Scrub
- D12 Big Sagebrush Scrub
- D17 Disturbed Great Basin Cottonwood - Willow Ripa
- D18 Disturbed Great Basin Mixed Scrub
- D19 Disturbed Wet Subalpine Meadow
- D20 Disturbed Subalpine Sagebrush Scrub
- D23 Disturbed Great Basin Grassland
- D26 Disturbed Great Basin Pinyon-Juniper Woodland
- D36 Disturbed Ruderal/Disturbed
- D40 Disturbed Blackbush Scrub
- D41 Disturbed Indigo Bush Scrub
- D42 Disturbed Desert Greasewood Scrub
- G19 Grazed Wet Subalpine Meadow
- G23 Grazed Great Basin Grassland

- Backbone
- Leased Conduit - Existing/Proposed

Major Roads

- Primary Limited Access
- Primary US & State Highways
- Secondary State & County

- Waterway
- State Boundary
- County Boundary

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Miles

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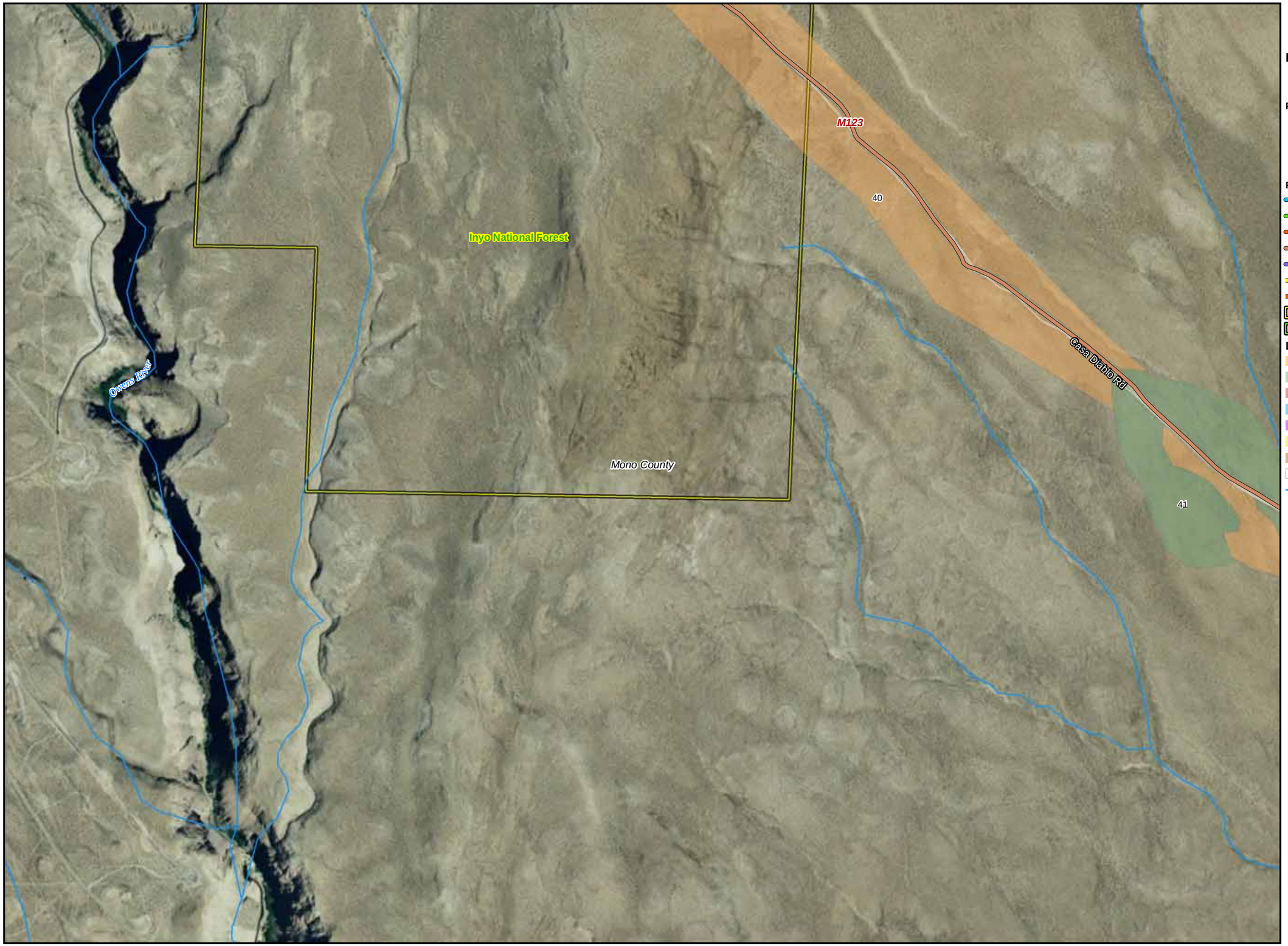


CBC Digital 395

R08-Bishop to Mammoth Lakes-143

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

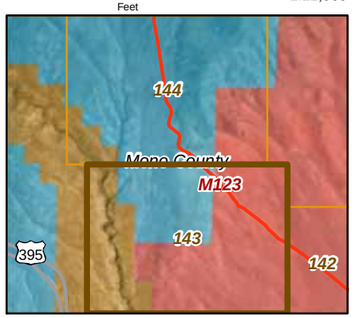
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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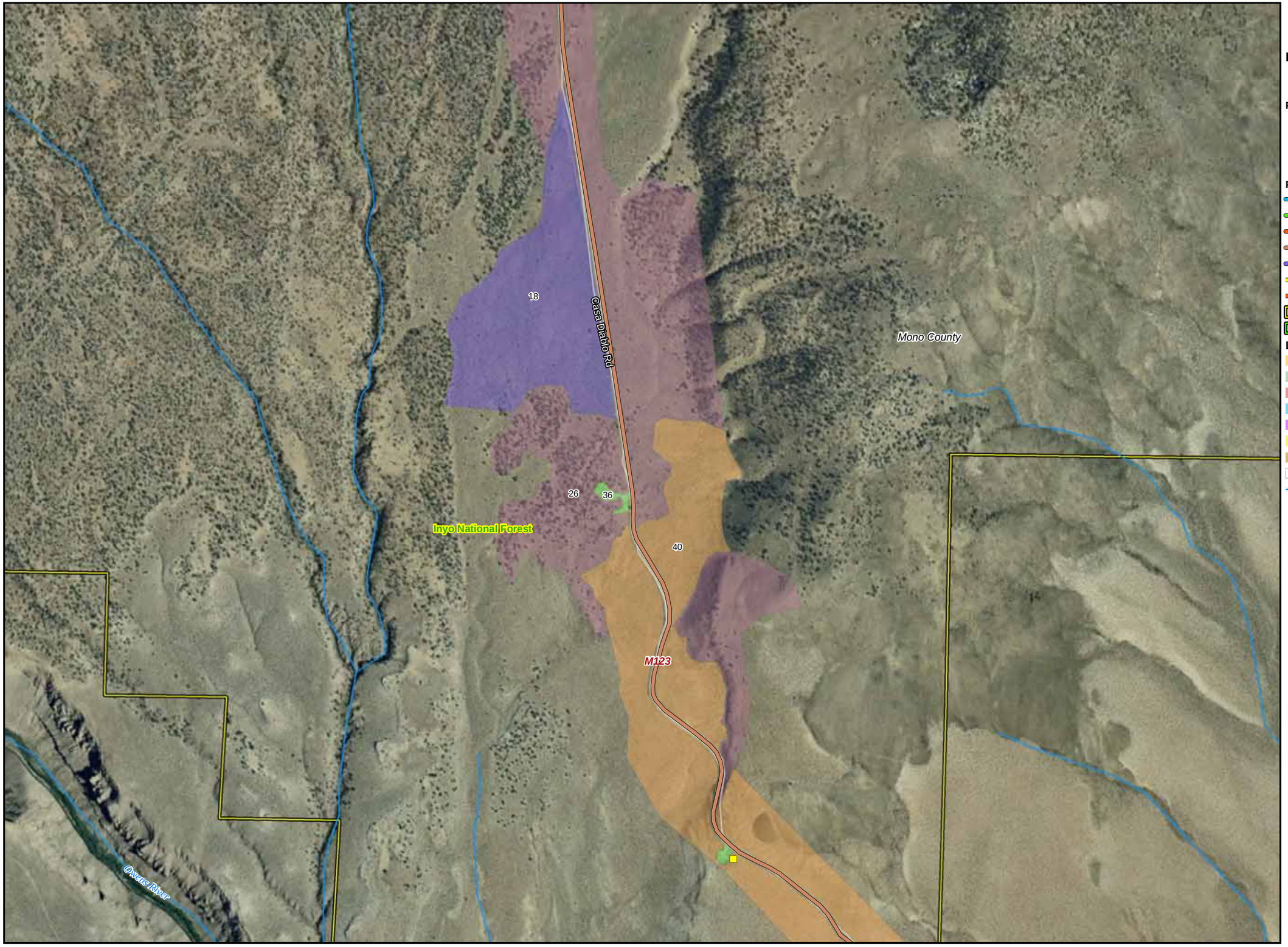

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R08-Bishop to Mammoth Lakes-144

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

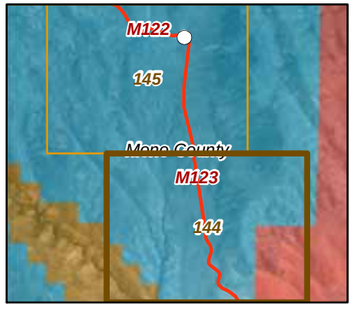
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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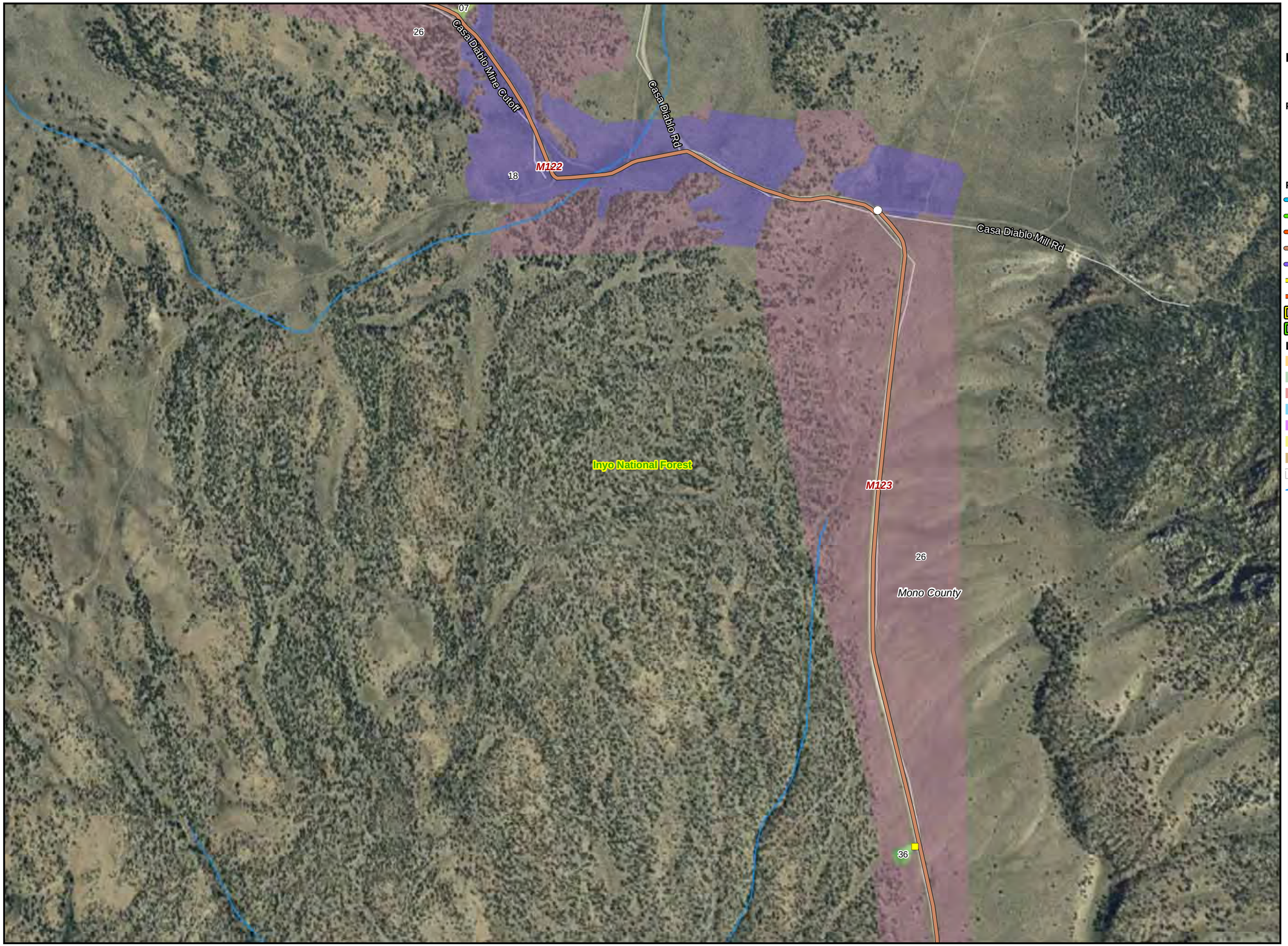

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R08-Bishop to Mammoth Lakes-145

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

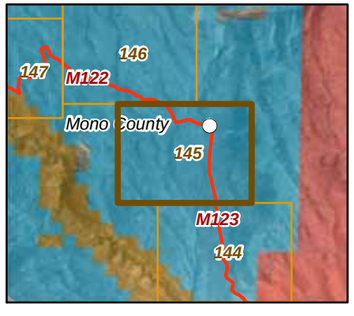
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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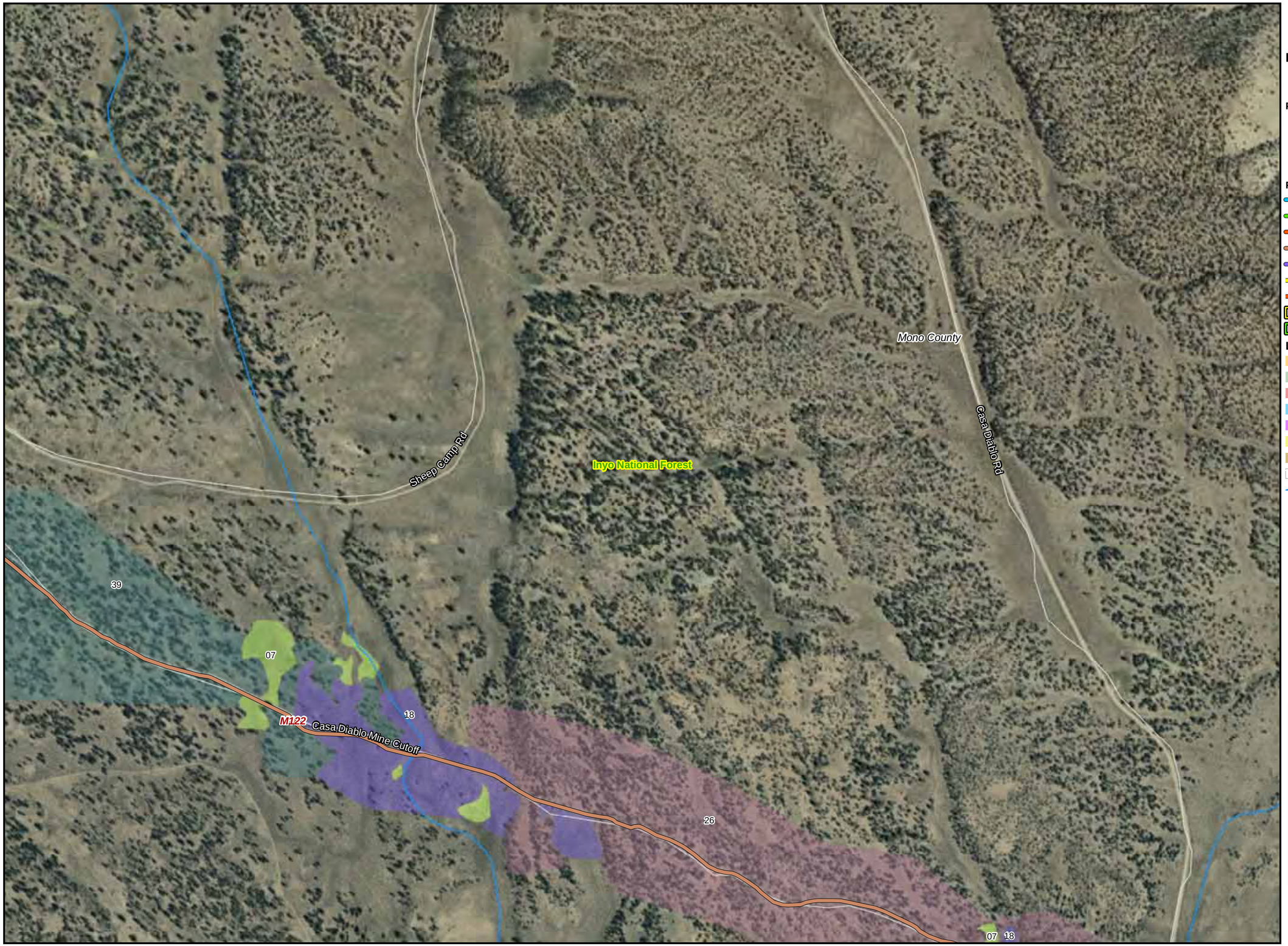

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R08-Bishop to Mammoth Lakes-146

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000

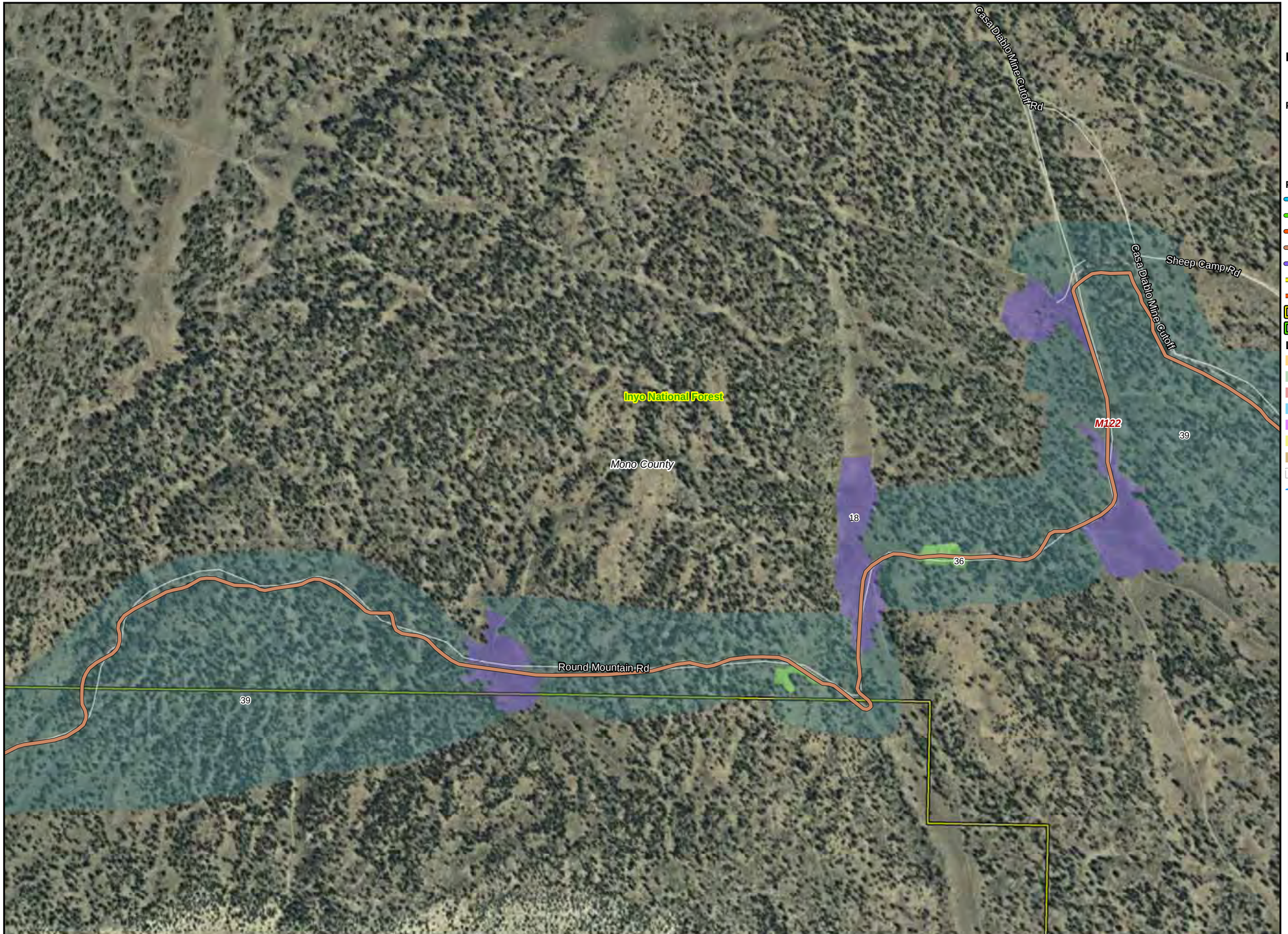
20260

04-06-12

Chambers Group Inc.

CBC Digital 395

R08-Bishop to Mammoth Lakes-147



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

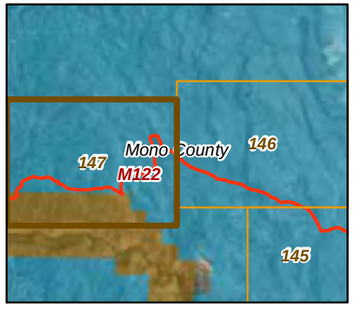
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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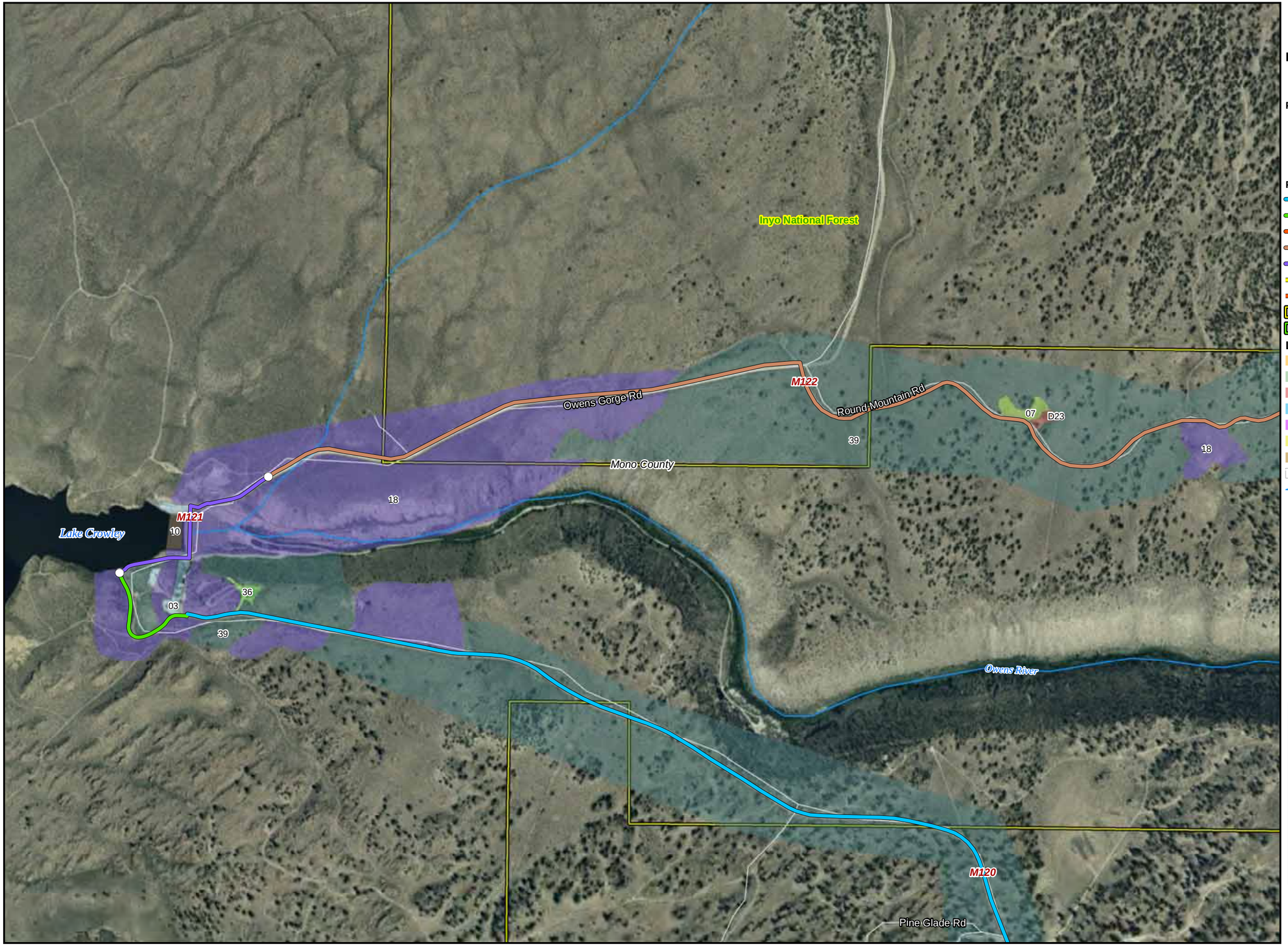
CBC Digital 395

R08-Bishop to Mammoth Lakes-148



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

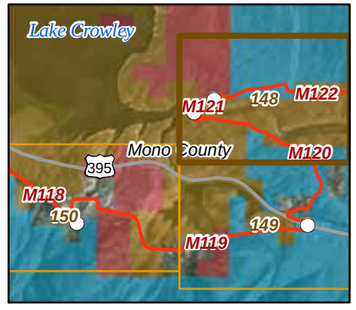
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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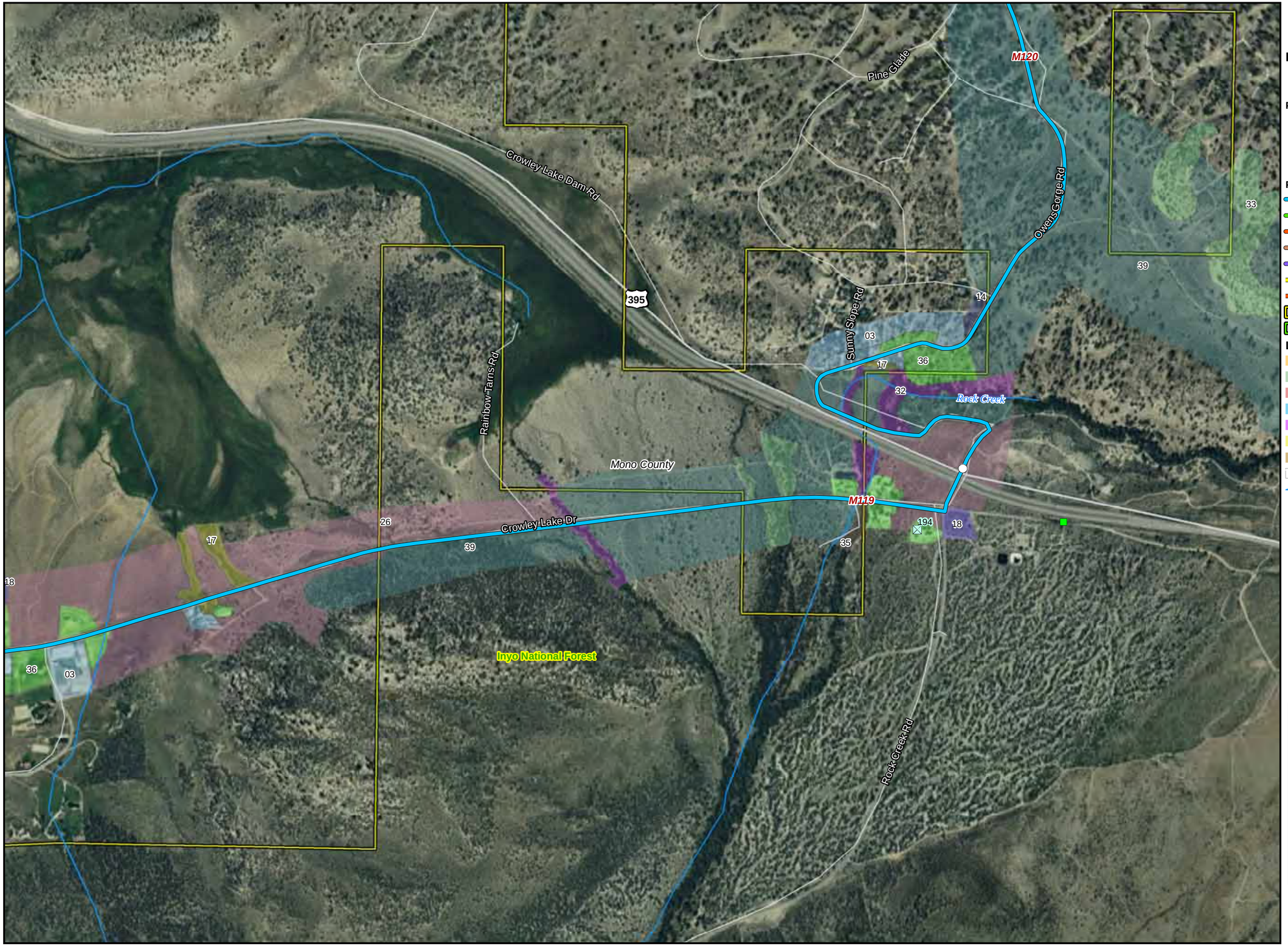
CBC Digital 395

R08-Bishop to Mammoth Lakes-149



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

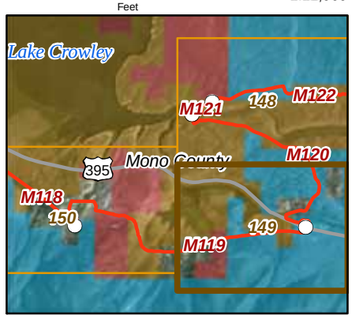
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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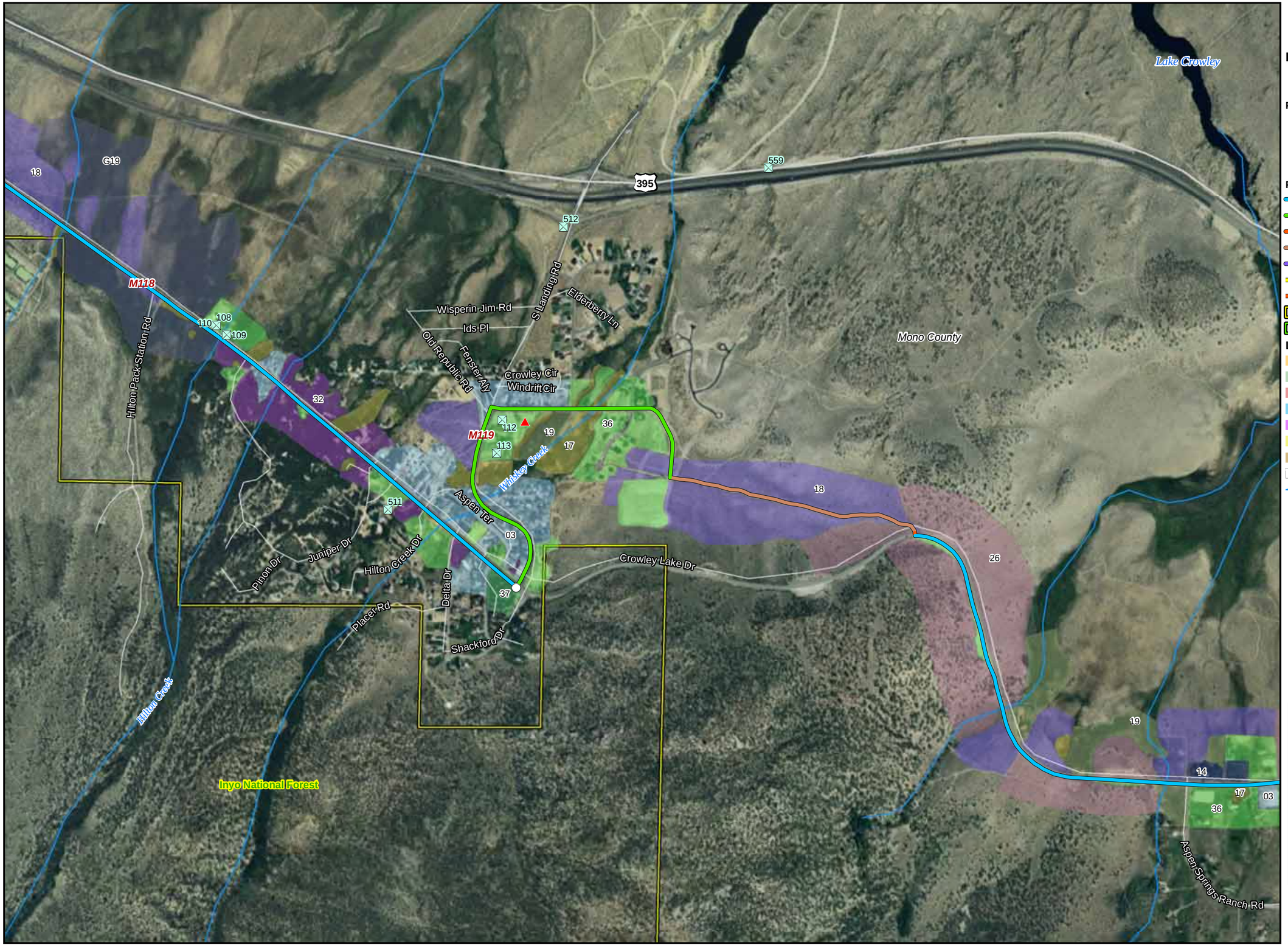
CBC Digital 395

R08-Bishop to Mammoth Lakes-150



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

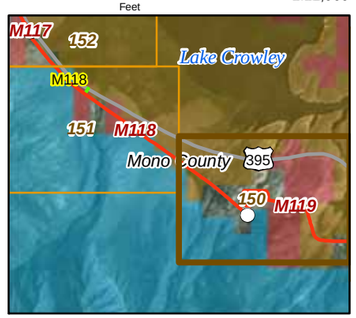
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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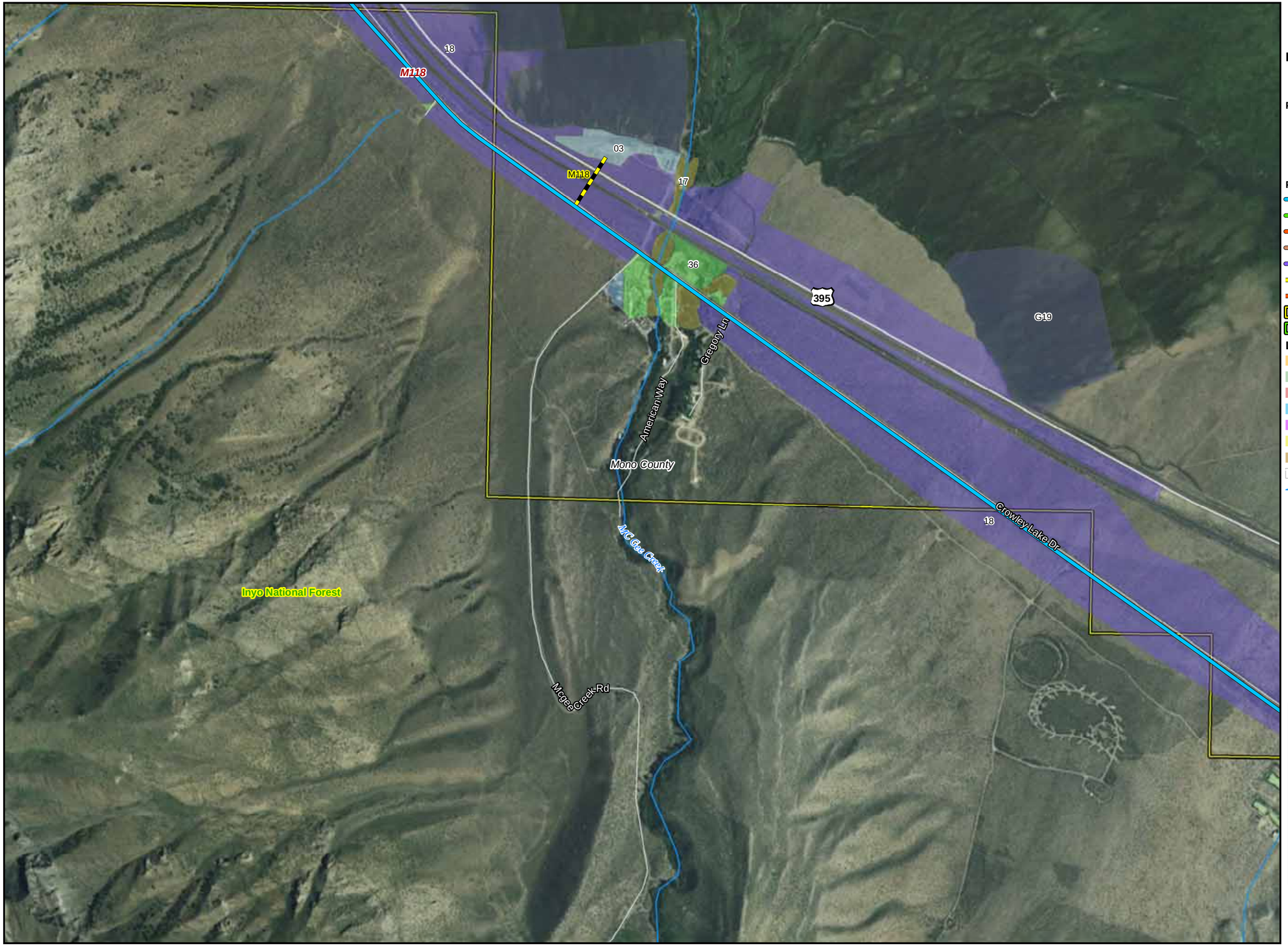
CBC Digital 395

R08-Bishop to Mammoth Lakes-151



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

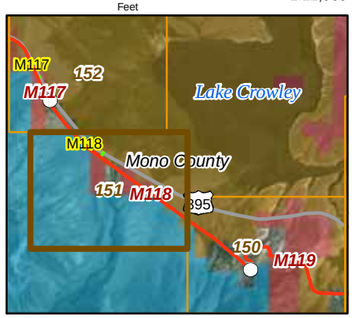
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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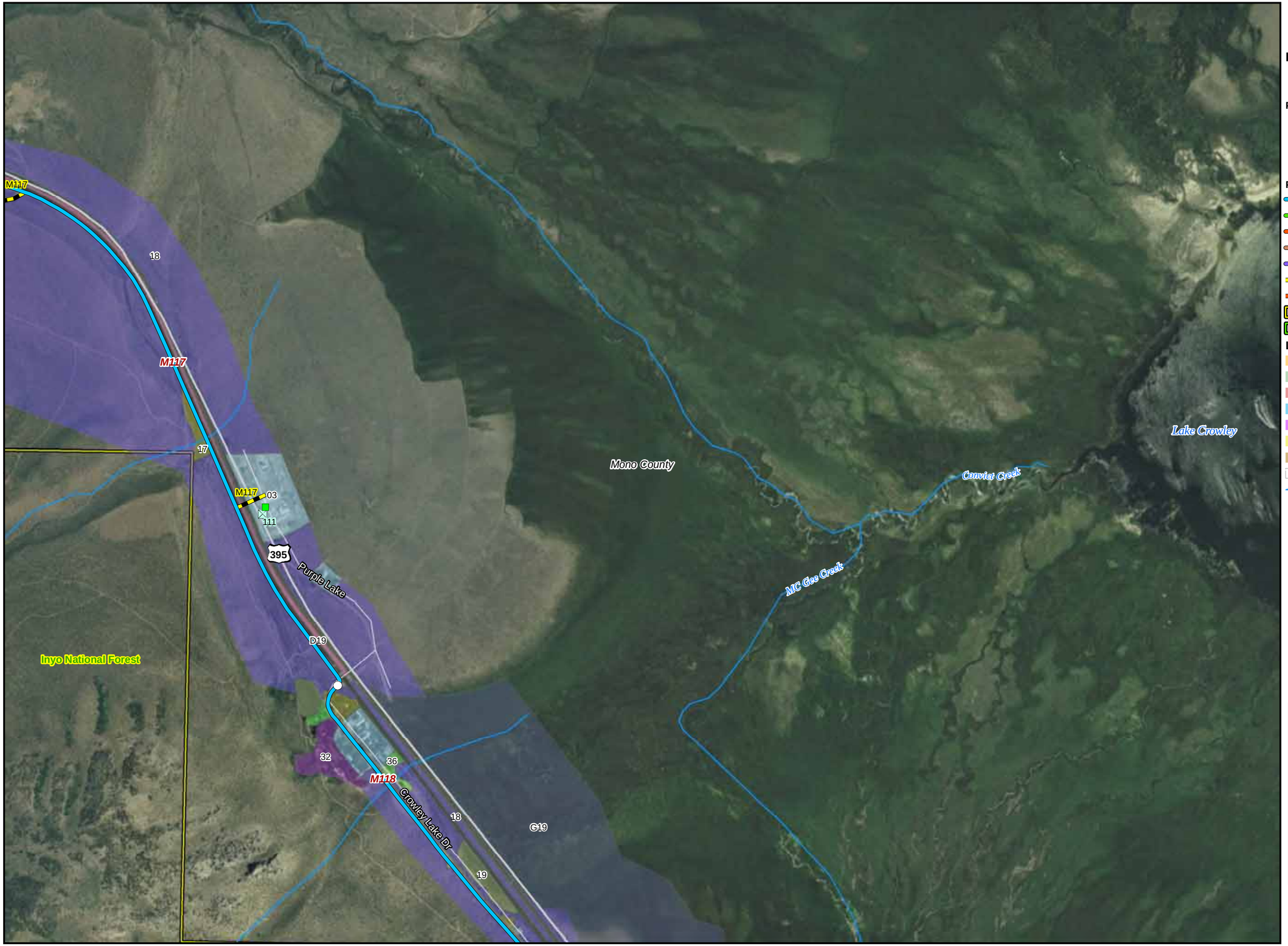
CBC Digital 395

R08-Bishop to Mammoth Lakes-152



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

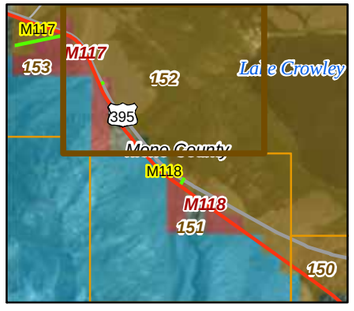
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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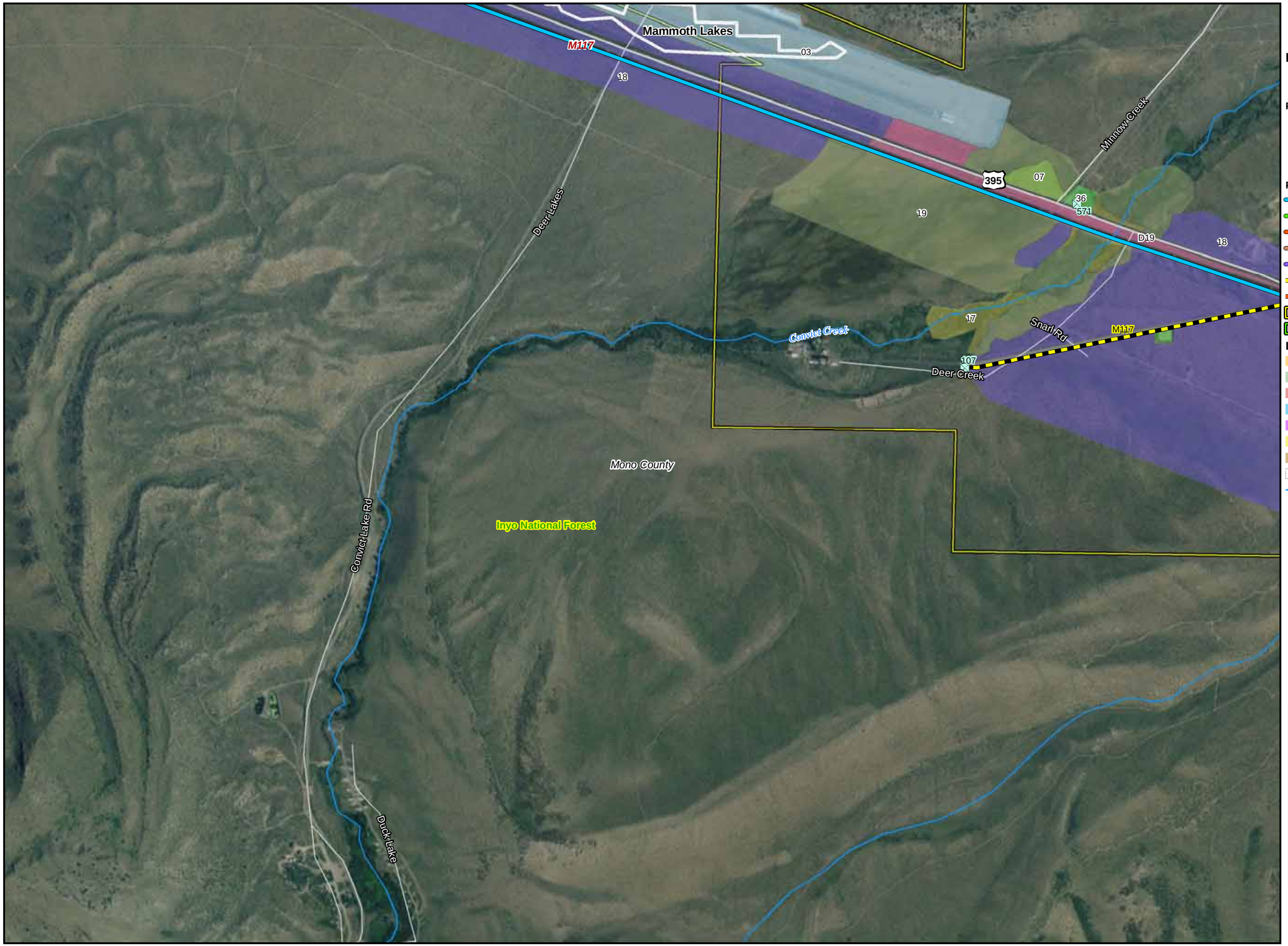


CBC Digital 395

R08-Bishop to Mammoth Lakes-153

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

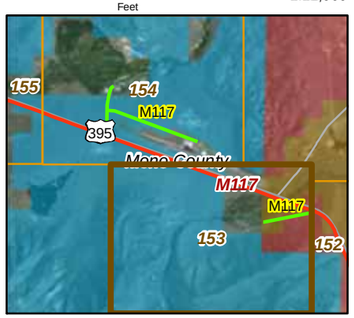
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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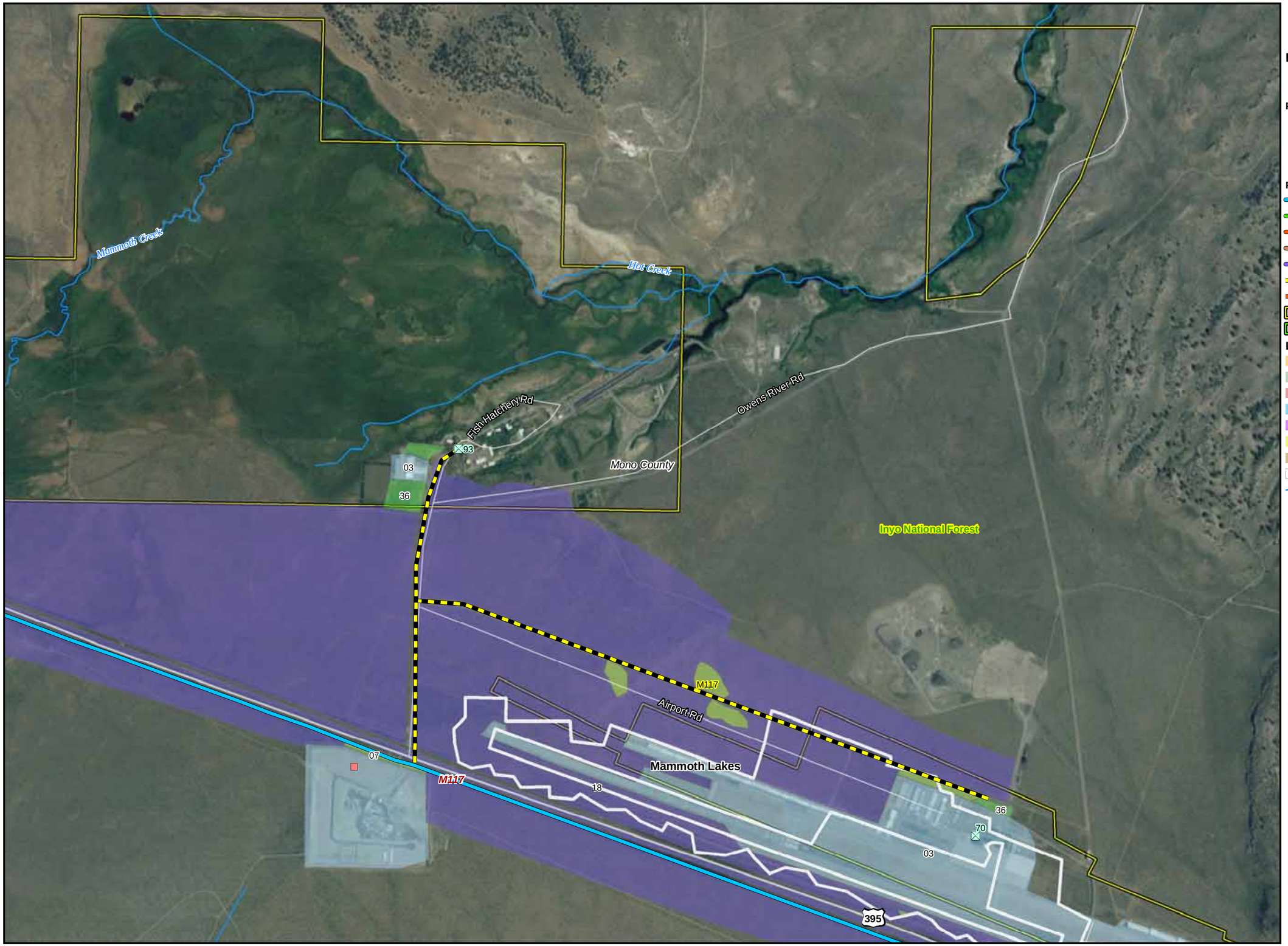
CBC Digital 395

R08-Bishop to Mammoth Lakes-154



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

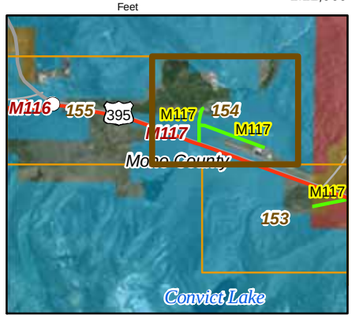
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500 Feet

1:12,000



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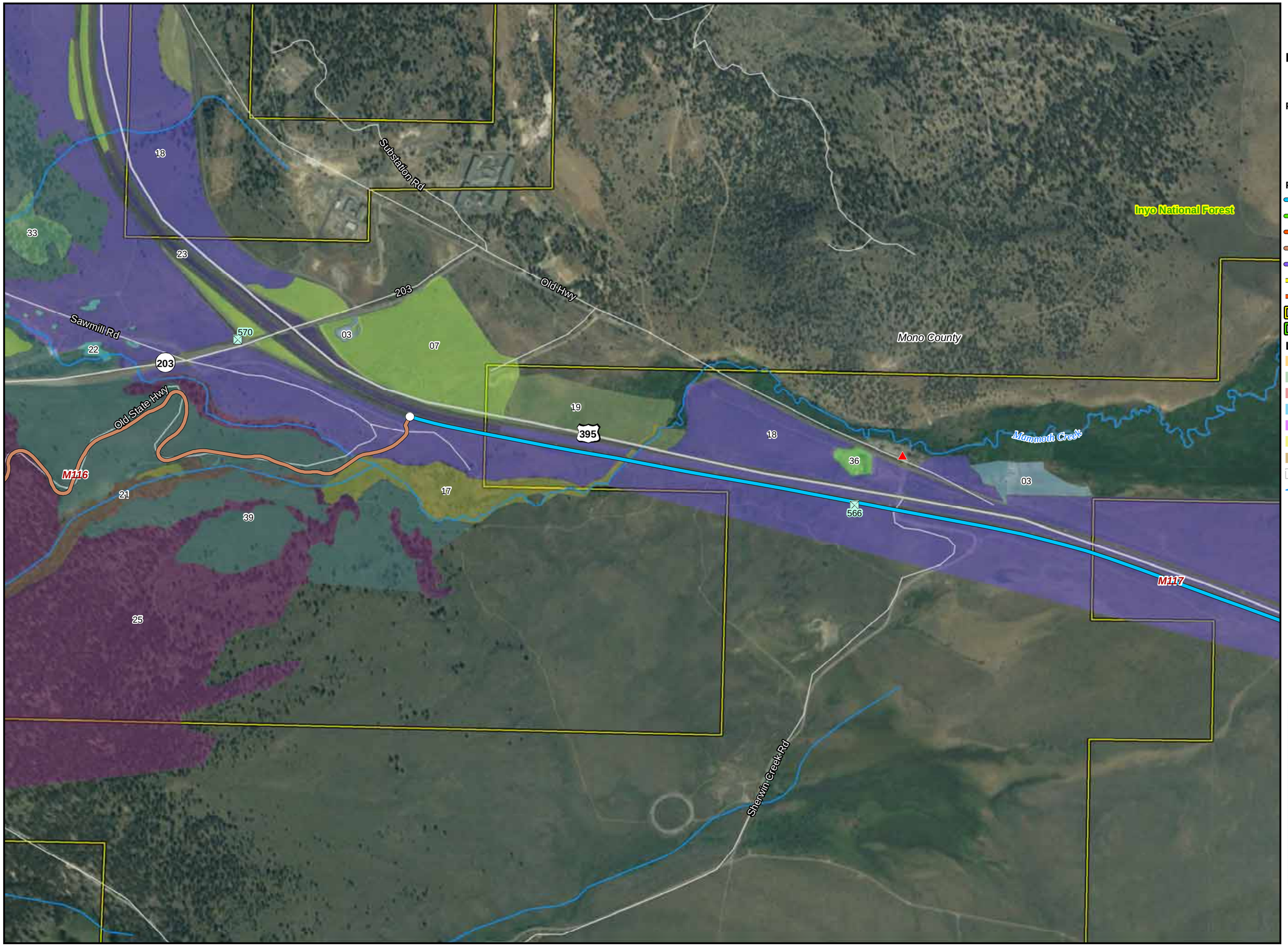
CBC Digital 395

R08-Bishop to Mammoth Lakes-155



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

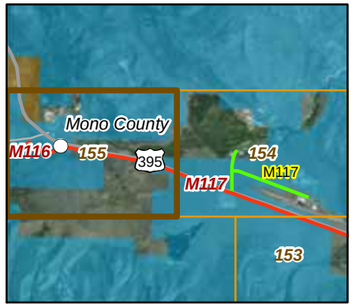
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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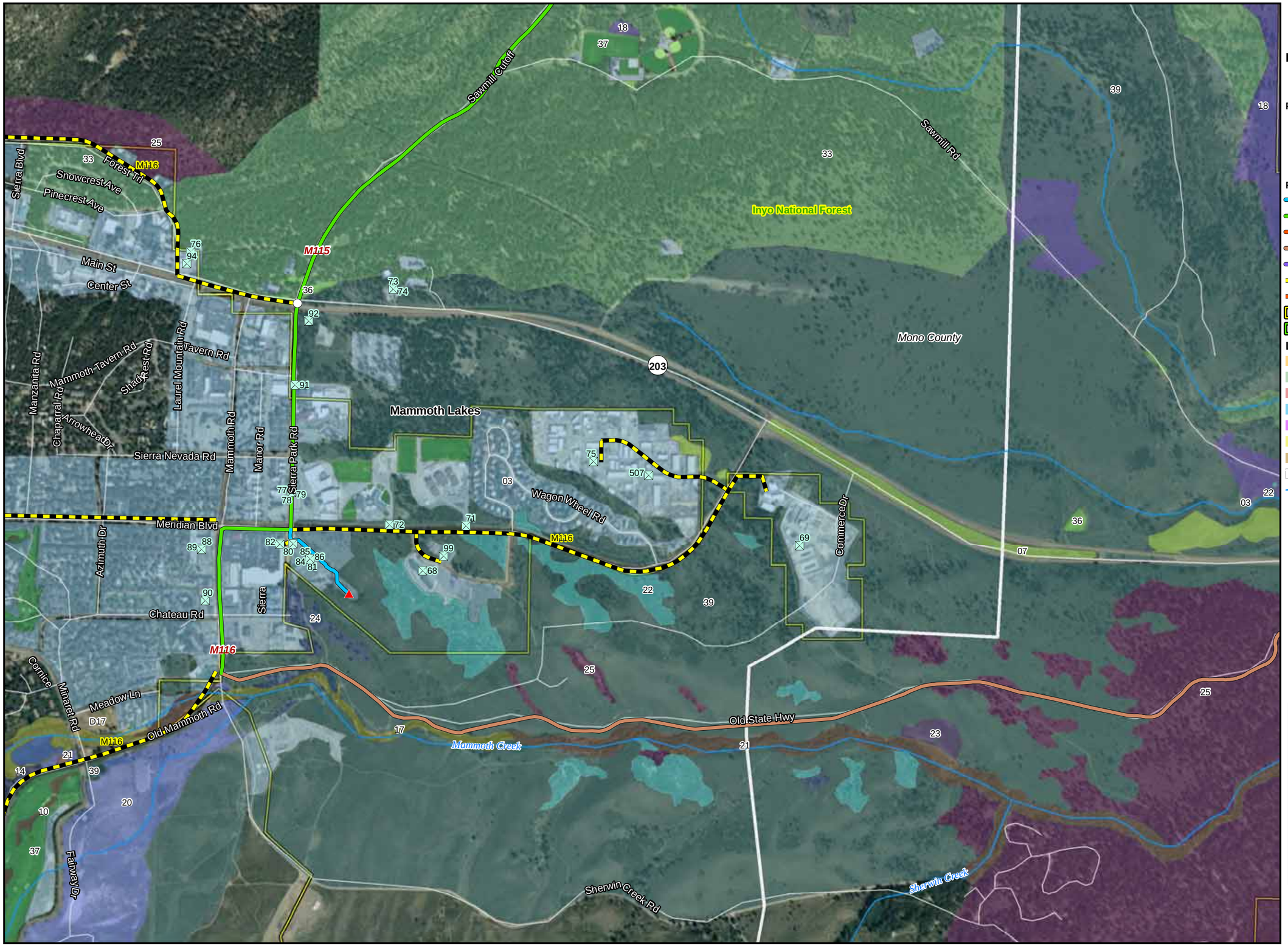
CBC Digital 395

R08-Bishop to Mammoth Lakes-156



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

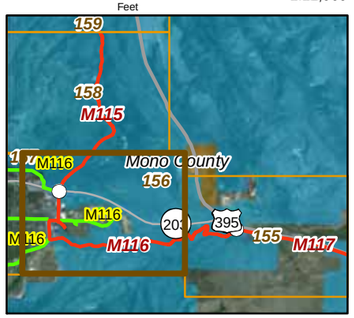
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500 Feet

1:12,000



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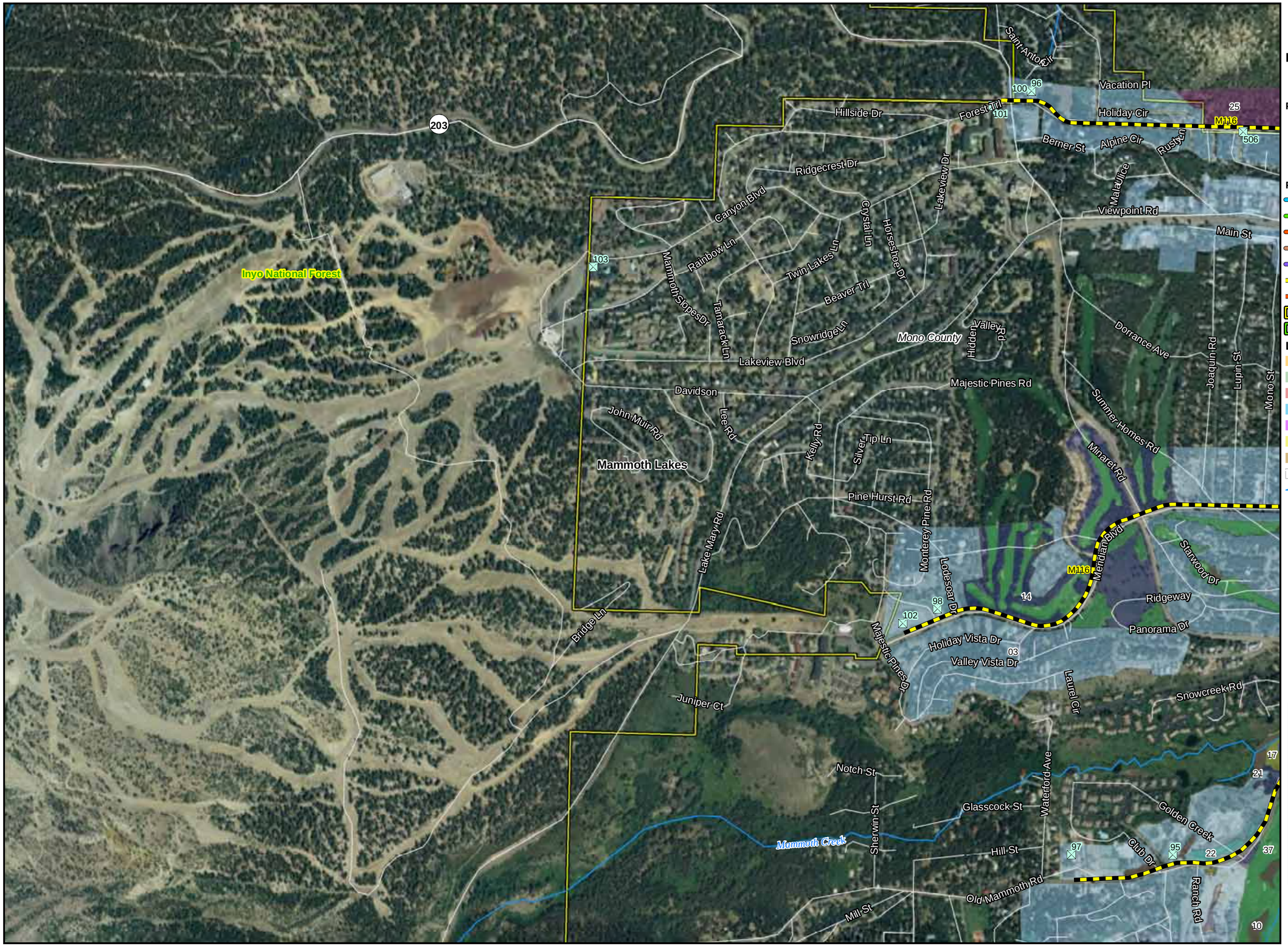
CBC Digital 395

R08-Bishop to Mammoth Lakes-157



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

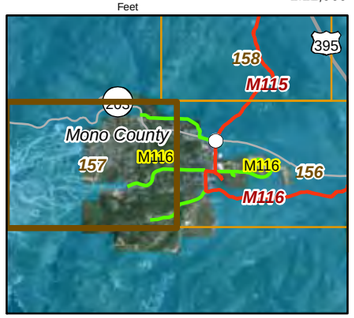
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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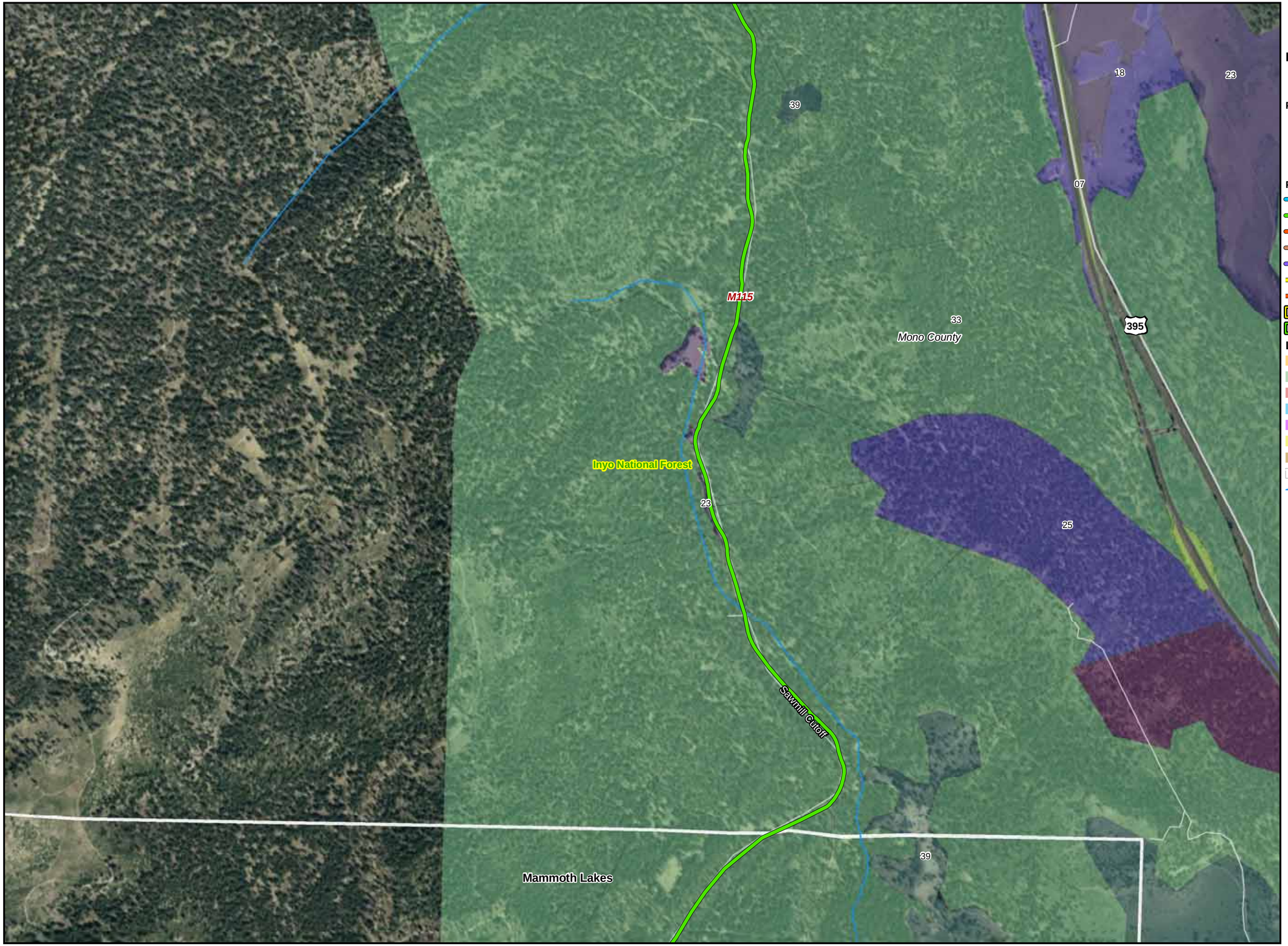
CBC Digital 395

R09-Mammoth Lakes to Bridgeport-158



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

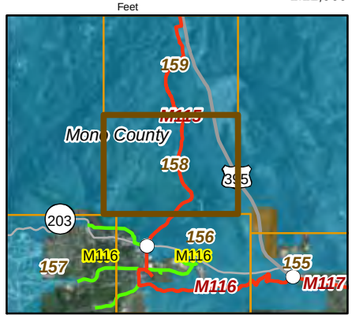
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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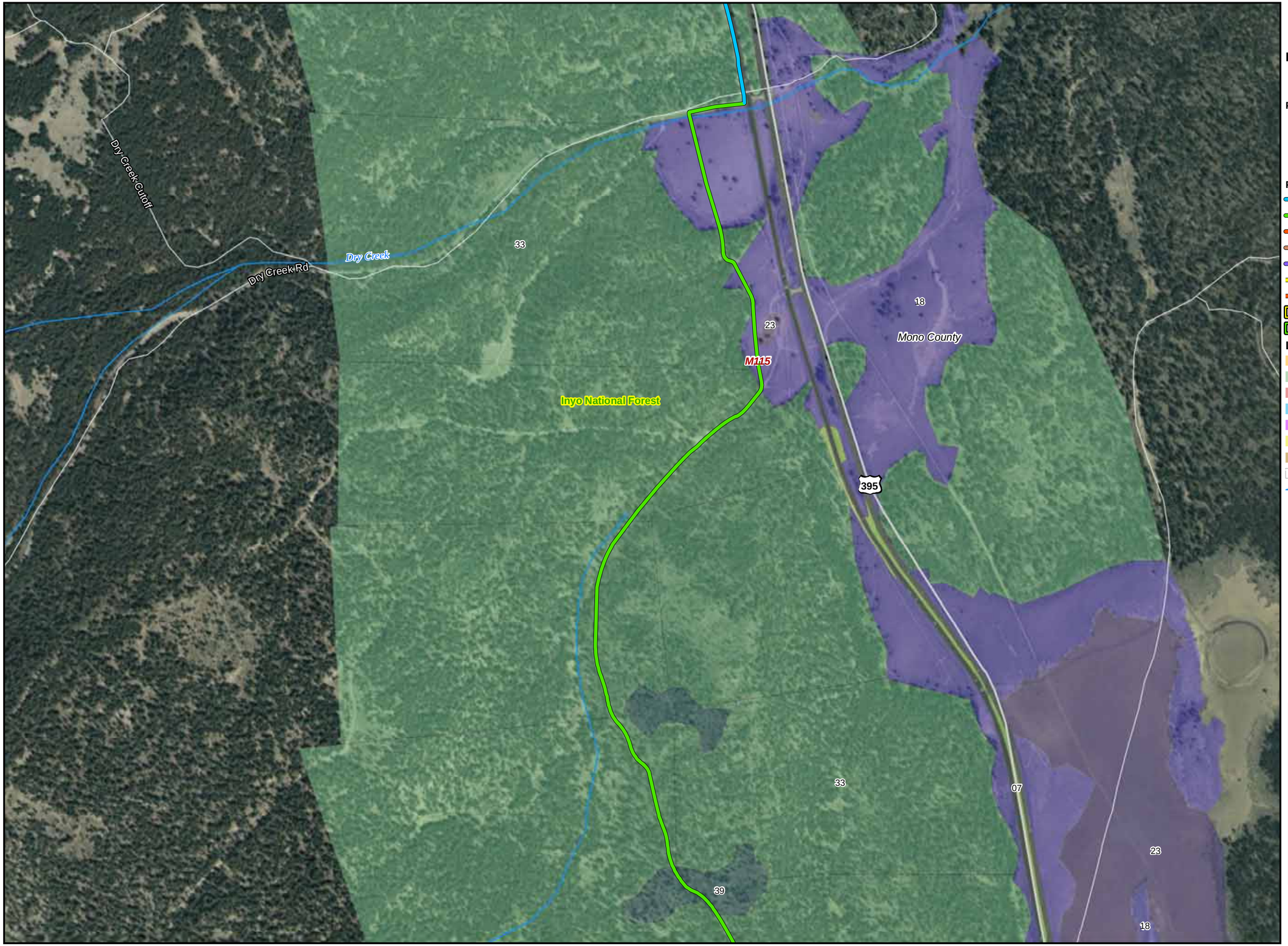

CBC Digital 395

R09-Mammoth Lakes to Bridgeport-159

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000

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04-06-12

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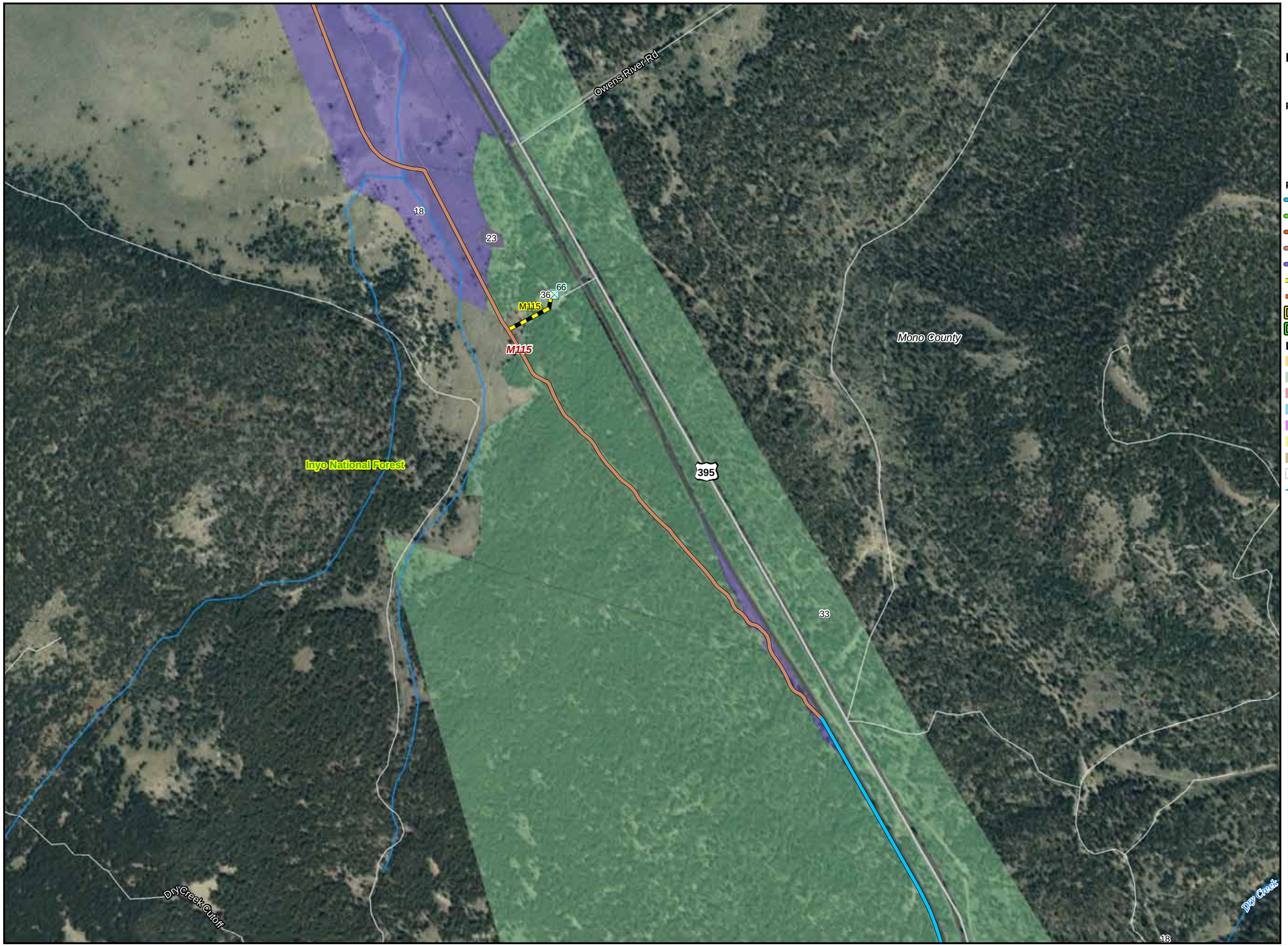


CBC Digital 395

R09-Mammoth Lakes to Bridgeport-160

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

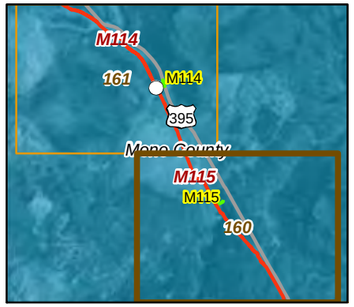
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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CBC Digital 395

R09-Mammoth Lakes to Bridgeport-161

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

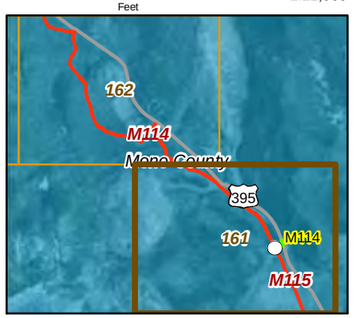
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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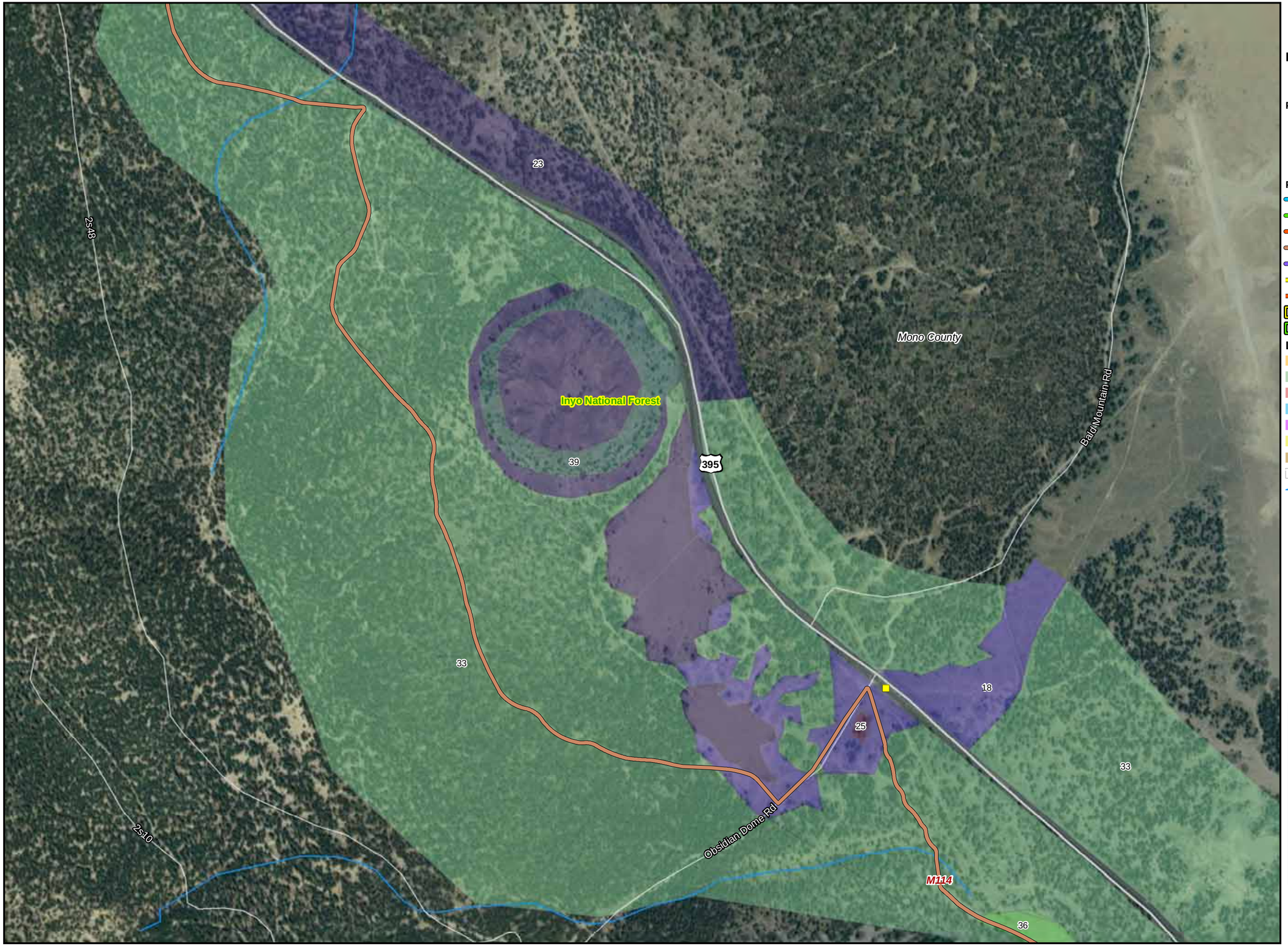
04-06-12

Chambers Group Inc.

CBC Digital 395

R09-Mammoth Lakes to Bridgeport-162



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

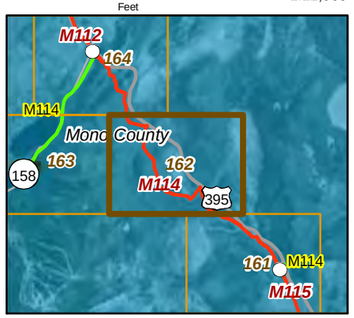
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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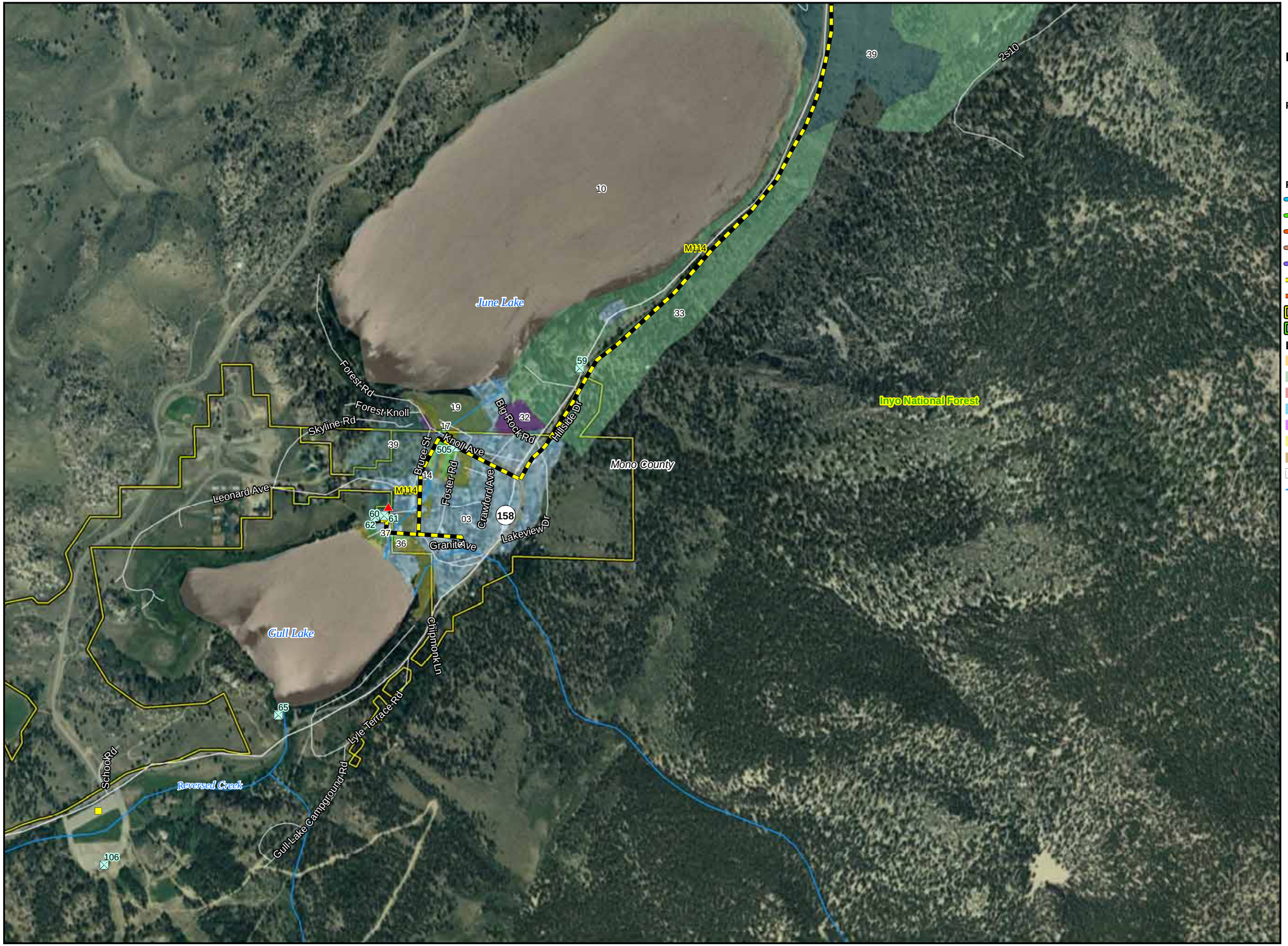
04-06-12

Chambers Group Inc.

CBC Digital 395

R09-Mammoth Lakes to Bridgeport-163



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

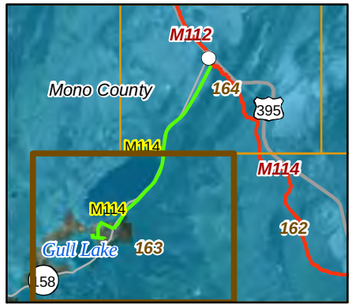
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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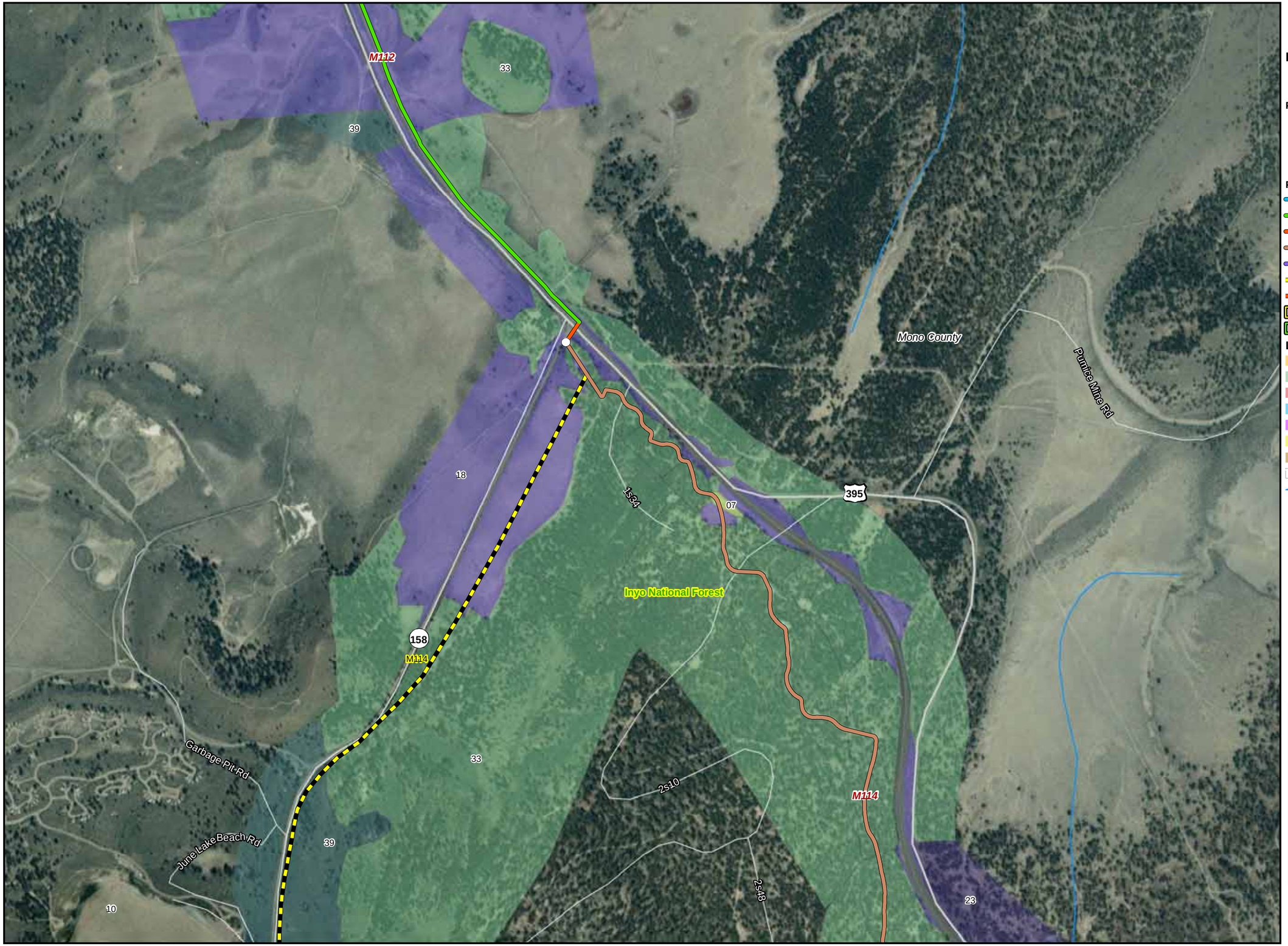
CBC Digital 395

R09-Mammoth Lakes to Bridgeport-164



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

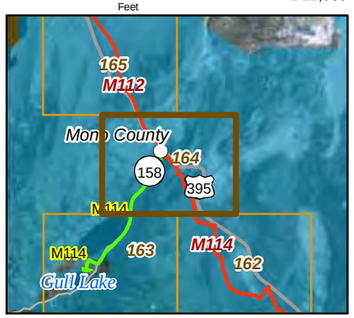
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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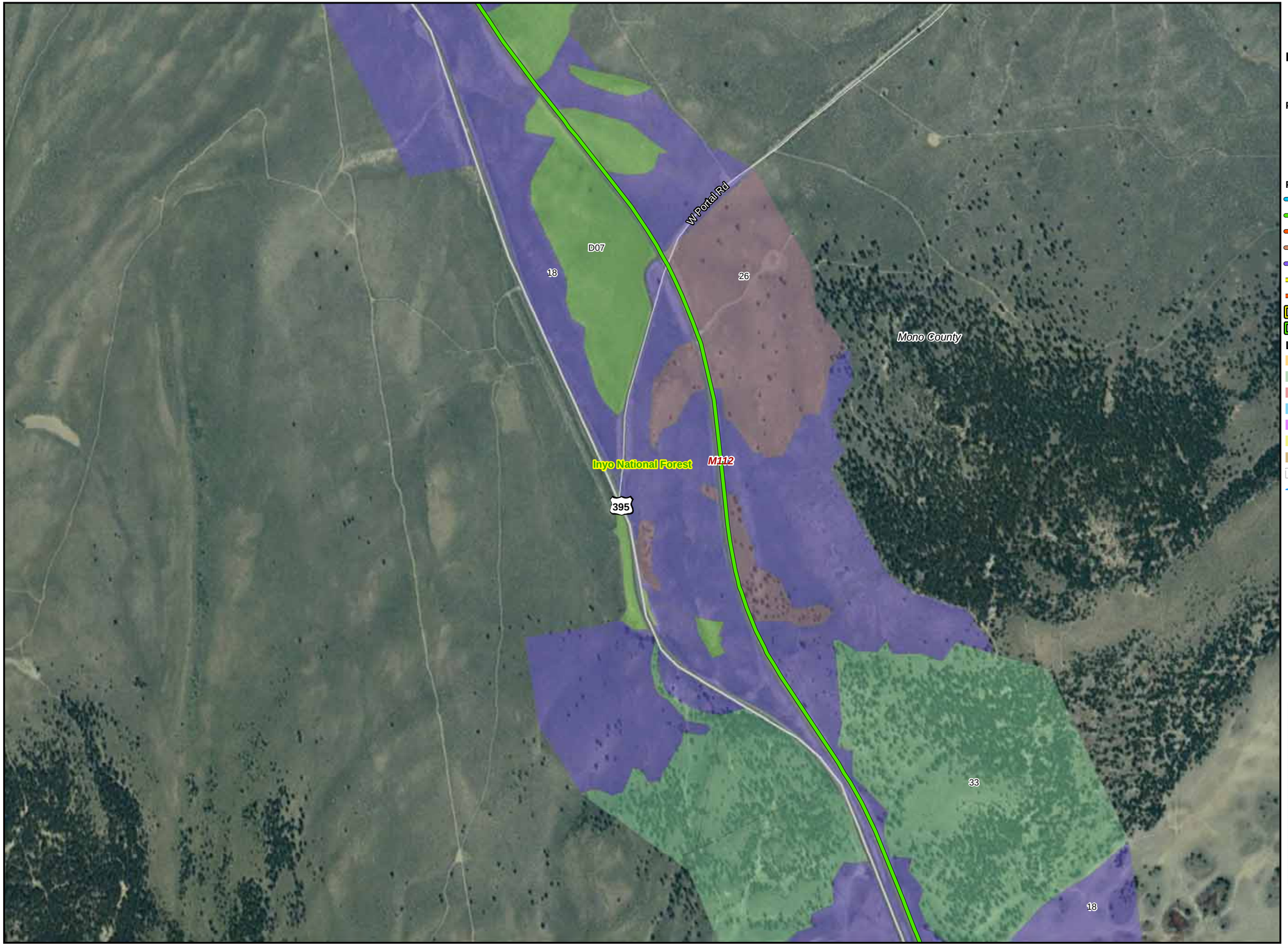
Chambers Group Inc.



CBC Digital 395

R09-Mammoth Lakes to Bridgeport-165

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000

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04-06-12

Chambers Group Inc.

CBC Digital 395

R09-Mammoth Lakes to Bridgeport-166

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000

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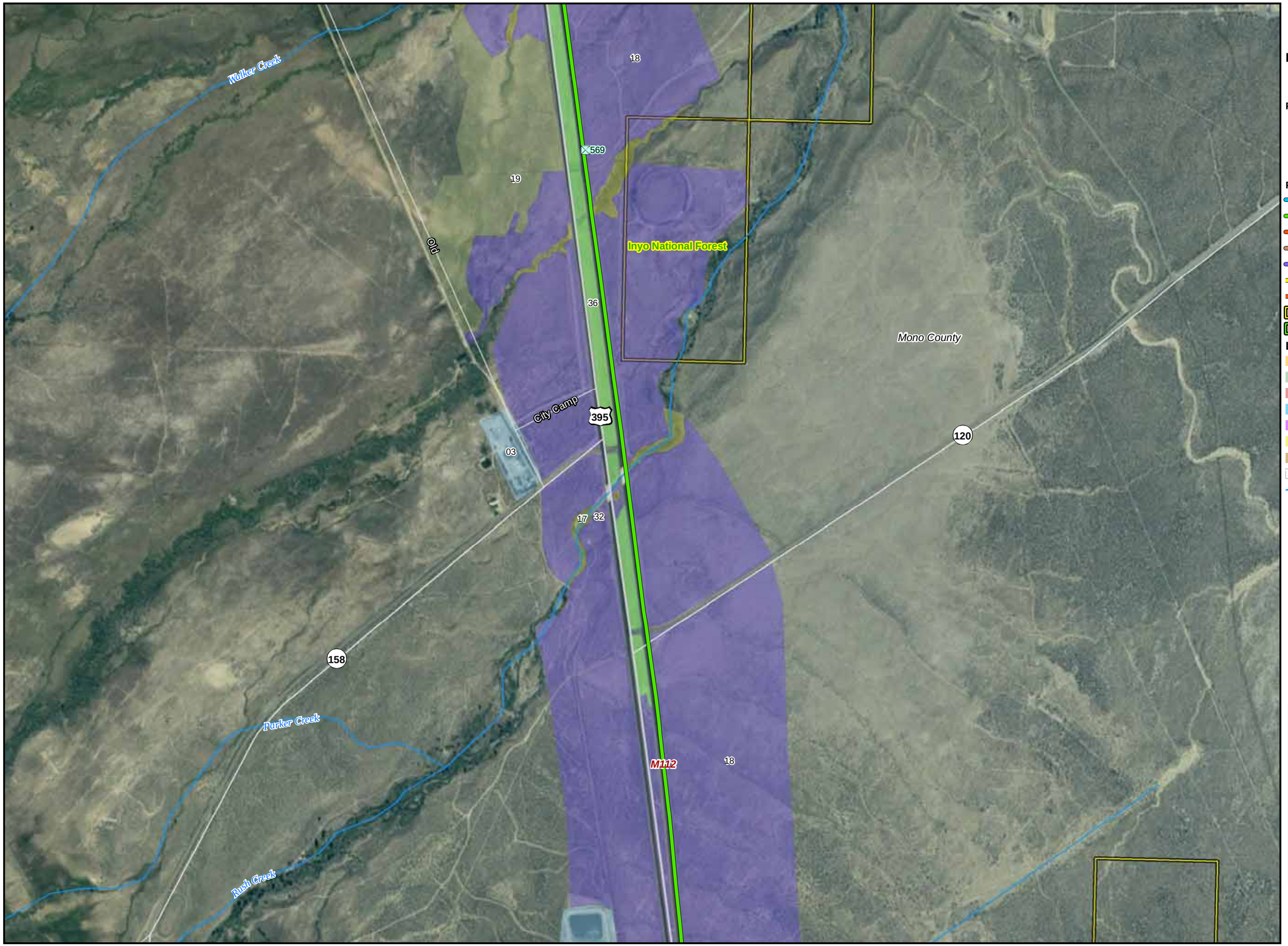
Chambers Group Inc.

CBC Digital 395

R09-Mammoth Lakes to Bridgeport-167



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
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- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

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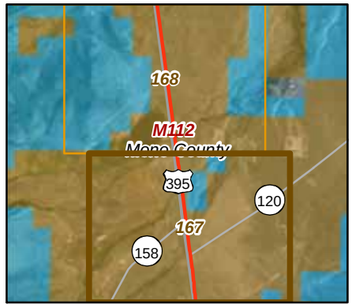

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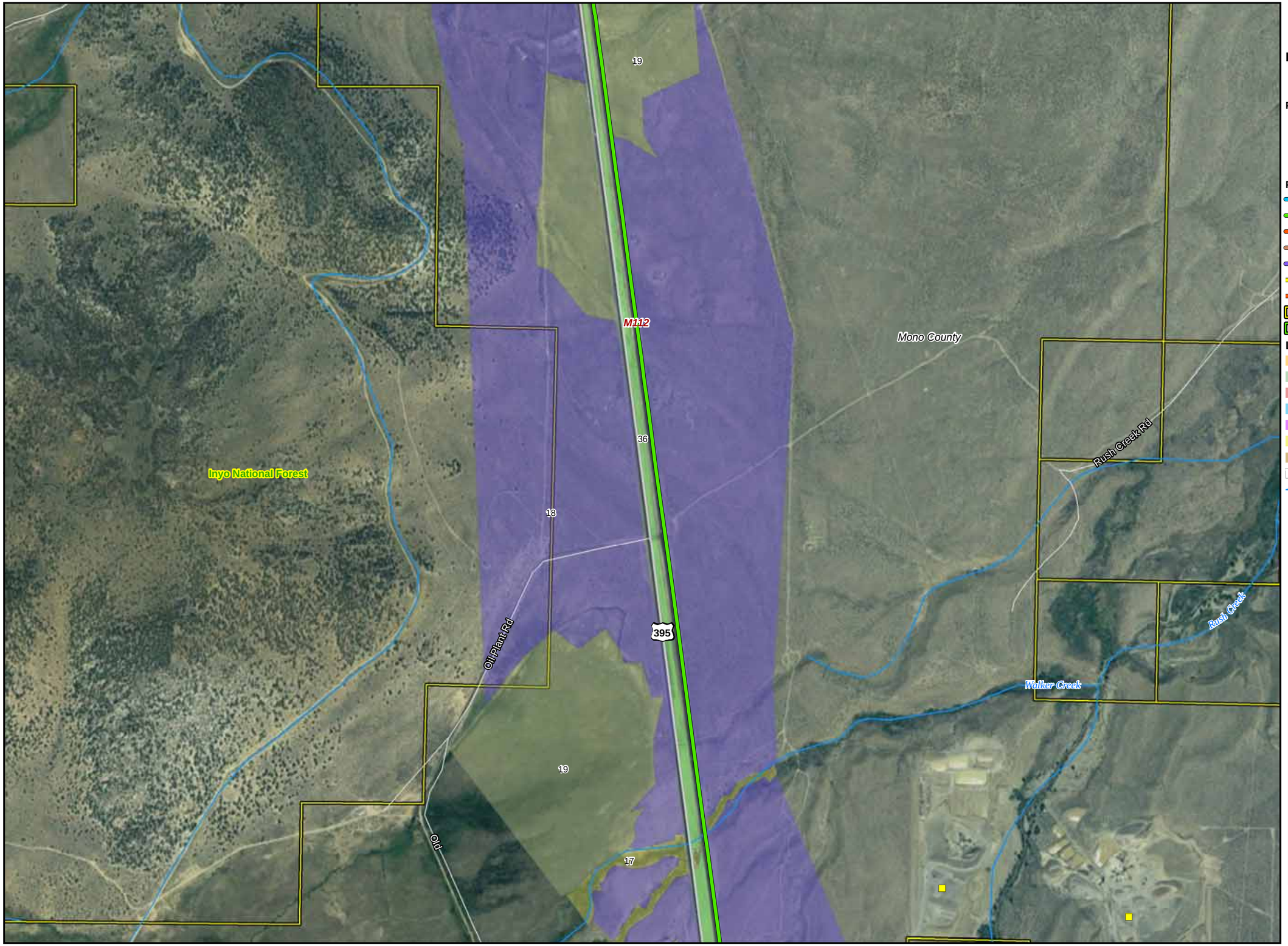

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
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- US Forest Service, Toiyabe National Forest

LandOwnership

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- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

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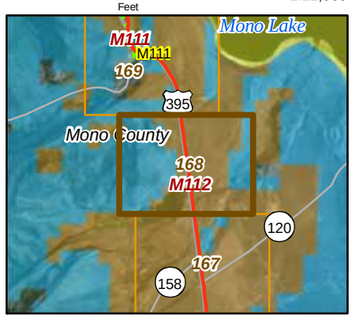

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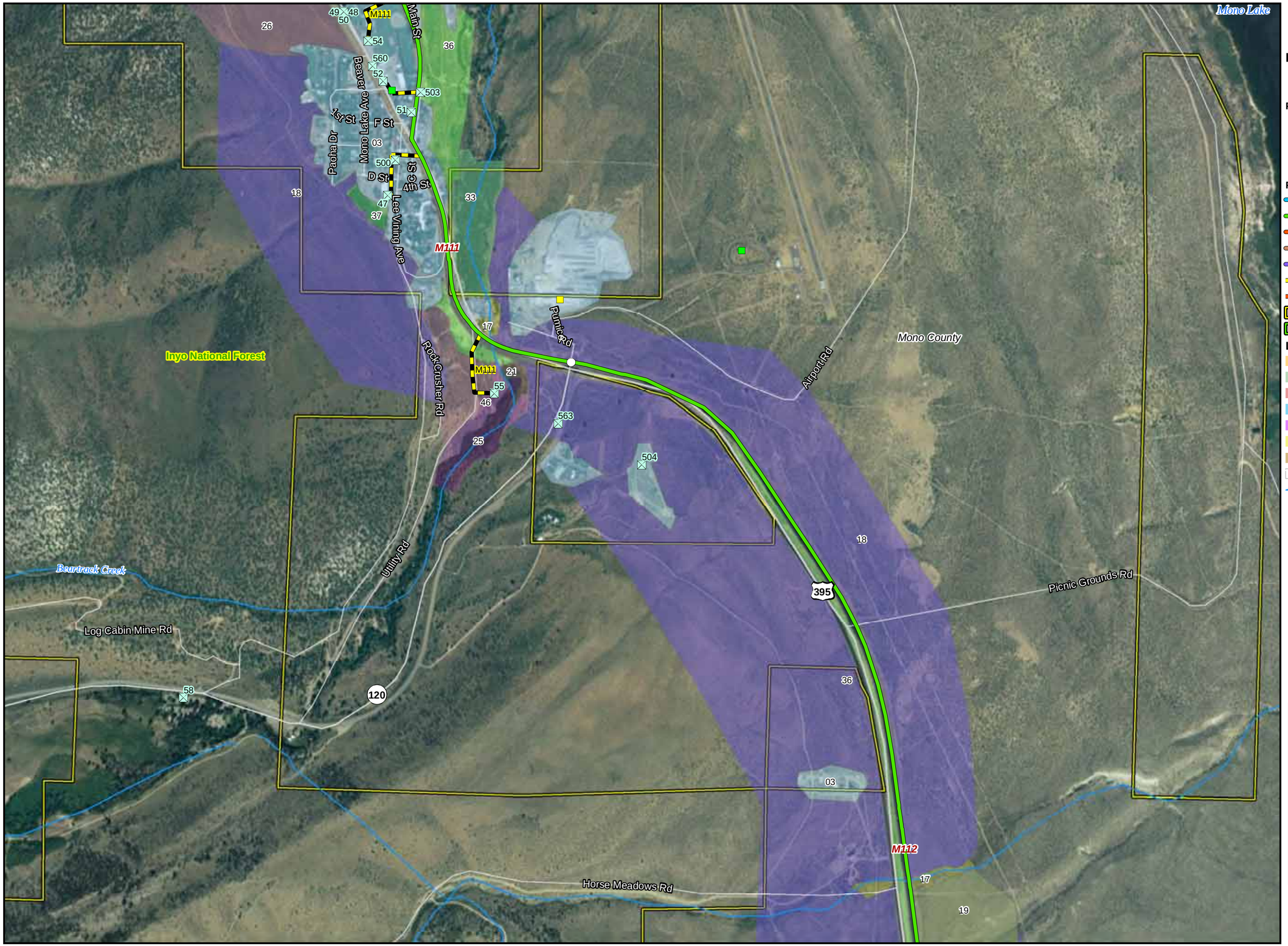
Chambers Group Inc.

CBC Digital 395

R09-Mammoth Lakes to Bridgeport-169



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

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- Road Crossing
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- Lease
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- US Forest Service, Inyo National Forest
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- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

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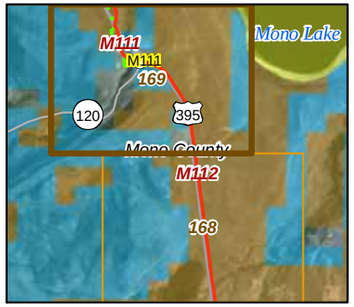

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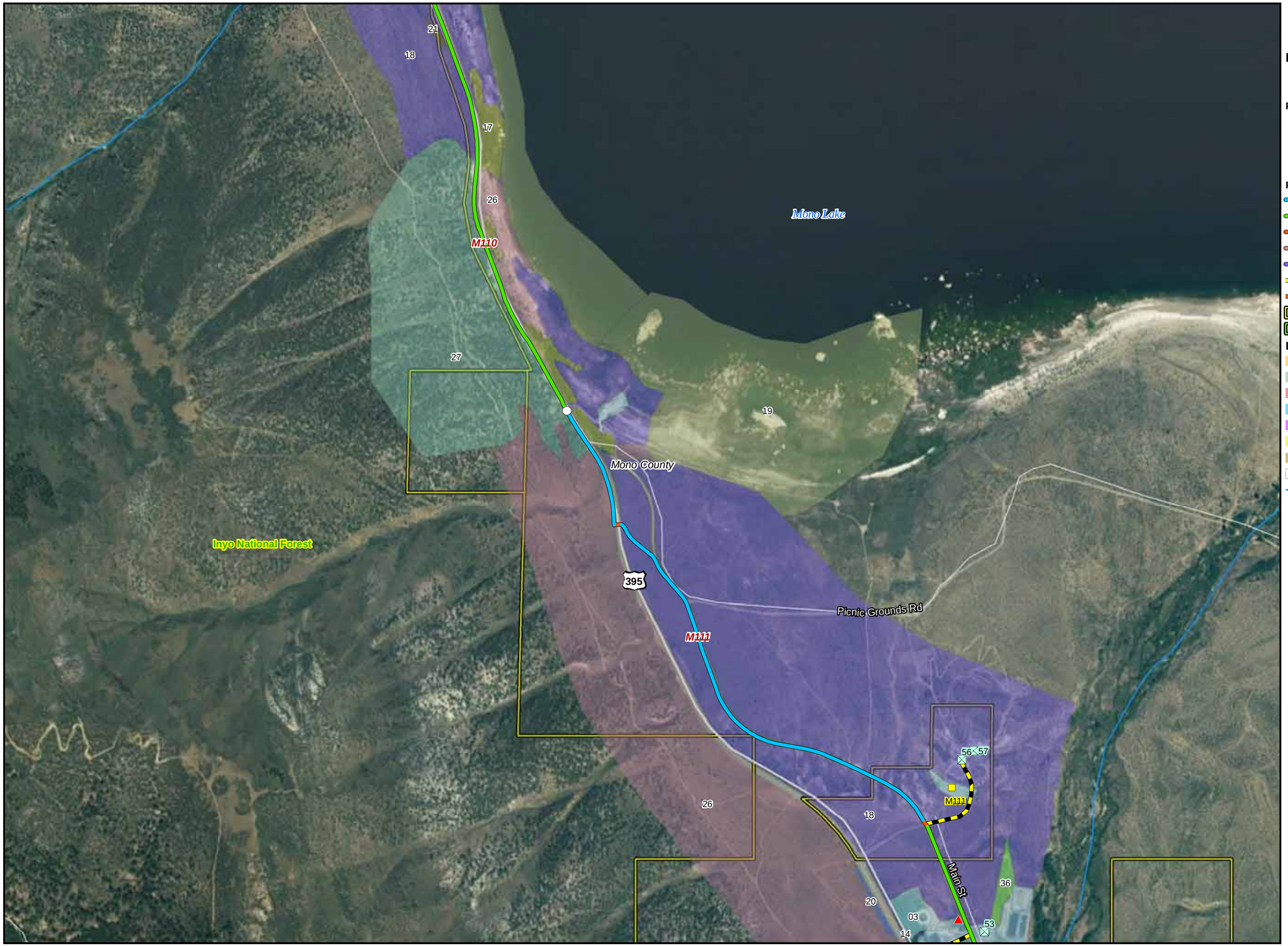

CBC Digital 395

R09-Mammoth Lakes to Bridgeport-170

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
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- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

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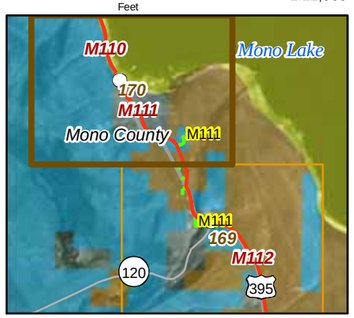
Feet

1:12,000



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Chambers Group Inc.

CBC Digital 395

R09-Mammoth Lakes to Bridgeport-171

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

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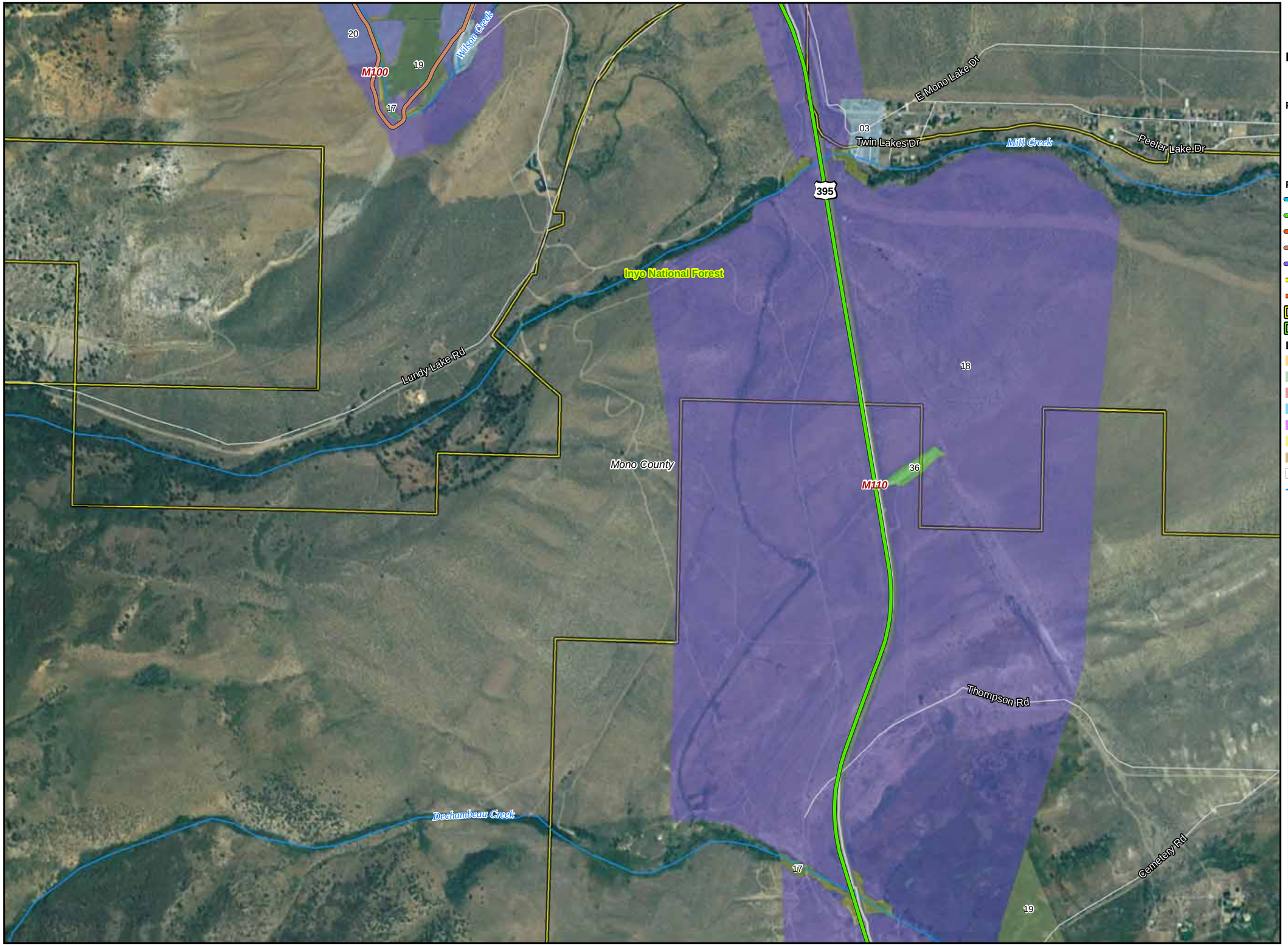
Chambers Group Inc.

CBC Digital 395

R09-Mammoth Lakes to Bridgeport-172



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

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- Bureau of Indian Affairs
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- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

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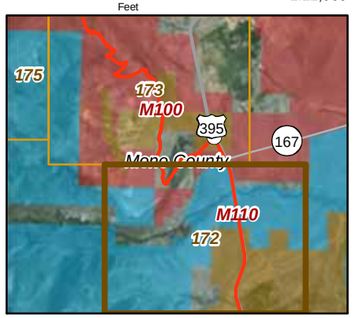

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APPENDIX D – CURRENT AND PLANNED FUTURE PROJECTS

Appendix D: Current and Planned Future Projects

Project Name	Location	Description
Mono County		
High Point Curve Realignment	US 395, Mile Post 117.9 to 119.4	Realign curves
South Sherwin Summit Rehab	US 395, Mile Post R128.8/R129.5 ten miles north of Bishop to Mile Post R10.3 at Tom's Place	Rehabilitate roadway and widen shoulders
Casa Diablo IV Geothermal Development Project	Near the intersection of US 395 and SR 203, approximately 3 miles east of Mammoth Lakes	Construction of a 33-megawatt geothermal power plant and associated well field, internal access roads, pipelines, and a transmission line.
June Lake Hazardous Fuels Reduction	US 395 and June Lake Loop	Hazardous fuels reduction work on 4,578 acres within threat zones in June Lake Loop.
Crestview Safety Roadside Rest Area Rehab	US 395, Mile Post 32.4, six miles north of the junction of US 395 and SR 203	Upgrade and repair existing safety roadside rest area making it ADA compliant
Sonora Wildlife Crossing	US 395, Mile Post 91.7 to 96.8, near the junction of US 395 and SR 108	Construct deer fencing with undercrossings
Pickle Meadows CAPM	Route 108, Mile Post 9.8 to 15.1, west of US 395	Pavement rehabilitation
Mammoth Creek Bridge Deck and Rail Upgrade	US 395, Mile Post 23.6 to 27.1	Bridge deck rehabilitation and rail upgrade
Inyo National Forest Motorized Travel Management	Various locations within the Inyo National Forest	Designation and enhancement of motorized-vehicle use roads and trails within the Inyo National Forest.

D R A F T

BIOLOGICAL EVALUATION/ASSESSMENT

DIGITAL 395 MIDDLE MILE PROJECT

HUMBOLDT-TOIYABE NATIONAL FOREST

BRIDGEPORT RANGER DISTRICT

Prepared by:_____ Date: __May 1, 2012_____

Reviewed by:_____ Date: _____
Rachel Mazur, Forest Wildlife Biologist, Bridgeport District
Humboldt-Toiyabe National Forest

Reviewed by:_____ Date: _____
Jim Harvey, Forest Aquatic Ecologist, Bridgeport District
Humboldt-Toiyabe National Forest

Reviewed by:_____ Date: _____
Kim O'Connor, Forest Botanist, Bridgeport District
Humboldt-Toiyabe National Forest

EXECUTIVE SUMMARY

The purpose of this biological evaluation/biological assessment (BE/BA) is to analyze the effects of the California Broadband Cooperative Digital 395 Middle Mile Project (Proposed Project) implementation on any species listed as threatened, endangered, or proposed by the U.S. Fish and Wildlife Service (USFWS) or U.S. Department of Agriculture Forest Service (USFS) Region 4 sensitive species. The Proposed Project is to install approximately 593 miles of middle-mile fiber-optic cable and associated infrastructure to provide broadband service in unserved and underserved areas of the Eastern Sierra using a variety of construction methods. Approximately 26.4 miles of the Proposed Project route are within the Humboldt-Toiyabe National Forest (HTNF), starting in northern Mono County, California, along US 395, 0.38 miles south of Pole Line Road, generally following US 395 northward, and exiting the HTNF north of Highway 208 in Douglas County, Nevada, resulting in 37.2 acres of HTNF vegetation with a potential to be directly impacted by Proposed Project activities within the Proposed Project ROW.

Of the 24 USFWS listed or USFS sensitive plant species that have the potential to occur within the Bridgeport District of the HTNF, 5 of the species (Bodie Hills rockcress, Lavin's egg milkvetch, Wassuk beardtongue, Mono County phacelia, and Masonic Mountain jewelflower) have the potential to be impacted by Proposed Project activities. However, impacts will be reduced by modifications of construction plans if sensitive plant populations are discovered within the Proposed Project ROW; and in all cases, less than 0.01 percent of the habitat available to these plant species within the Bridgeport District of the HTNF has the potential to be impacted by the Proposed Project. Of the 25 USFWS listed or USFS sensitive wildlife species that have the potential to occur within the Bridgeport District of the HTNF, 2 of the species (greater sage-grouse and pygmy rabbit) have the potential to be impacted by Proposed Project activities; however, impacts will be reduced by modifications of construction plans if sensitive animals are observed near the Proposed Project ROW; and in all cases, less than 0.02 percent of the habitat available to these species within the Bridgeport District of the HTNF has the potential to be impacted by the Proposed Project. In all cases, it was determined that although the Proposed Project may impact individuals of a sensitive species, it will not lead toward federal listing or a loss of population viability.

I. INTRODUCTION

The purpose of this biological evaluation/biological assessment (BE/BA) is to analyze the effects of the California Broadband Cooperative (CBC) Digital 395 Middle Mile Project (Proposed Project) implementation on any species listed as threatened, endangered, or proposed by the U.S. Fish and Wildlife Service (USFWS) or U.S. Department of Agriculture Forest Service (USFS) Region 4 sensitive species. This BE/BA is prepared in compliance with the requirements of Forest Service Manual (FSM) direction 2670.

The Forest Service is directed by FSM 2672.4 to complete a biological evaluation for all Forest Service planned, funded, executed, or permitted programs and activities. The BE/BA process is completed to determine the effects of projects on federally listed species in compliance with requirements of the Endangered Species Act (ESA). It also provides a process and standard through which proposed, endangered, threatened, and sensitive species receive full consideration in the decision-making process to maintain species viability and meet recovery goals. For sensitive species, this document will evaluate whether the proposed action will result in a trend towards federal listing or a loss of viability. Threatened, endangered, and proposed species are identified by the USFWS. Sensitive species are listed by the USFS Bridgeport District of the Humboldt-Toiyabe National Forest.

II. CURRENT MANAGEMENT DIRECTION

Project Area

The Proposed Project passes through the Carson Front, Alpine, Walker, and Existing Wilderness Management Areas, as designated in the Toiyabe National Forest Land and Resource Management Plan (LRMP) (USFS 1986) but does not pass through Management Areas designated in the Humboldt National Forest LRMP (USFS 1986).

Threatened, Endangered, and Proposed Species

Current direction is to manage National Forest System habitats and activities for threatened and endangered species to achieve recovery objectives so that special protection measures provided under the ESA are no longer necessary (FSM 2670.21). Section 7 of the ESA directs Federal departments and agencies to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats.

Sensitive Species

United States Department of Agriculture Regulation 9500-4 directs the Forest Service to avoid actions that may cause a sensitive species to become threatened or endangered (FSM 2670.12). Populations of all sensitive species of wildlife, fish, and plants must be maintained at viable levels in habitats distributed throughout their geographic range on National Forest System lands (FSM 2670.22). Other applicable management direction and policy for threatened, endangered, and sensitive species are incorporated by reference from the following:

- Forest Service Manual and Handbooks (FSM/H 2670)
- National Forest Management Act, 1976 (NFMA)
- Endangered Species Act, 1973, as amended (ESA)
- National Environmental Policy Act, 1969 (NEPA)
- Recovery Plans for individual species
- Bridgeport District, Humboldt-Toiyabe National Forest Sensitive Species List
- Wilderness Act, 1964
- Forest and Rangeland Renewable Resources Planning Act, 1974 (RPA)
- California Wilderness Act, 1984

III. DESCRIPTION OF PROPOSED PROJECT

The Proposed Project is to install approximately 593 miles of middle-mile fiber-optic cable and associated infrastructure to provide broadband service in unserved and underserved areas of the Eastern Sierra. In addition to internet services, high-capacity "dark" fiber also will be made available to the region's last-mile providers, government agencies, and cellular and long-distance carriers. The purpose is to improve local internet services, provide diverse routing between northern and southern California and Nevada, and enhance public safety. The proposed action includes the installation of underground fiber optical cables (FOC) within the Humboldt-Toiyabe National Forest (HTNF). For purposes of this document, the term "Proposed Project ROW" includes the footprint or area of direct placement/disturbance of the Proposed Project features (e.g., conduit, nodes), as well as the construction footprint related to those features (e.g., boring, plowing, drilling, staging areas, pathway of construction-related equipment).

The Proposed Project will be located between Barstow, California, and Reno, Nevada, providing broadband services to the area commonly referred to as the Eastern Sierra. The Proposed Project route crosses through San Bernardino, Kern, Inyo, and Mono counties in California and Douglas, Carson City, and Washoe counties in Nevada. The Proposed Project route consists of a main backbone and various spurs that lead away from the main backbone. The various spurs along the Proposed Project route branch from the main backbone to connect to nodes within communities along the route. The main backbone of the Proposed Project route enters the HTNF in northern Mono County along US 395, approximately 0.38 mile south of Pole Line Road, and generally follows US 395 northward, exiting the HTNF north of Highway 208 in Douglas County, Nevada (Figure 1). Approximately 26.4 miles of route are within the HTNF.

Figure 1. Location of the Digital 395 Project within the Humboldt-Toiyabe National Forest

Construction Methods

Project construction methods are detailed in the following subsections for the Proposed Project route. Applicant Proposed Measures (APMs) to avoid and minimize construction impacts to sensitive resources will be conducted to the extent practicable and are based on existing data, as well as through coordination with the Bridgeport Ranger District of the HTNF.

Conduit Construction Strategy

Two types of conduit are included in this Proposed Project, FOC backbone and distribution lines. The FOC backbone will consist of one 1.50-inch duct, where one cable will initially be installed, and two 1.25-inch ducts for future use. The distribution line will consist of one 1.25-inch duct, where between 2 and 7 microducts will be installed. The FOC backbone is the only portion of the Proposed Project to be installed in the HTNF.

Three methods of conduit construction will be used to account for variations in geology, route accessibility, terrain, or environmental issues. The three construction methods are cable plowing, horizontal directional drilling (HDD), and trenching with either a trencher or track-hoe. Approximately 75 percent of the Proposed Project route within the HTNF will be constructed by cable plowing. Approximately 18 percent will require trenching, and the remaining approximately 7 percent will be performed by HDD. CBC will implement a HDD Contingency and Resource Protection Plan.

Cable Plowing

Plows have been used for many decades as a trenchless method for installing underground pipeline and utility facilities. The process of cable/duct plowing involves a vibrating blade to split the ground and cut a narrow slit to insert a bundle of conduit. A typical plowing blade, which is up to 4 inches in width, acts like a knife during plowing and creates minimal, temporary disruption to the soil. Soil disturbance from the plow blade is anticipated to occur within a 4- to 6-inch width but may be up to 12 inches in width. As the ground is cut, the conduit is installed at the desired depth by feeding it down a chute located on the back of the blade. As the tractor passes the insertion point, the ground is then packed, restoring it to its nearly original condition. Plowing will occur only on existing dirt roads, the disturbed portions of county roads, previously disturbed access roads, and adjacent to paved California Department of Transportation (Caltrans) roads. After the conduits are installed, the furrow will be compacted back in place by the back end of the plow or a following compaction vehicle. Since most of the work in the Proposed Project is planned to occur on existing road or utility ROWs/easements, conditions are mostly amenable to plow installation. The disturbed soil surface will be returned to the pre-construction conditions.

Approximately 26.4 miles of the Proposed Project occur within the HTNF, and the Proposed Project ROW is 20 feet wide. Therefore, it is anticipated that approximately 64 acres of disturbance may occur within the Proposed Project ROW within HTNF. No buildings or nodes are proposed to be built within the HTNF. If pretreatment is required, disturbance to soils from the pretreatment activity may increase to 6 feet, not including the wheels/tracks of the equipment. Pretreatment may include the following two actions: pre-ripping and/or

clearing/grubbing. Pretreatment is applicable only to plowing. For many sections of the US 395 route, two tractors will be used. A Caterpillar D8, which is approximately 8.5 feet wide, will be used for "pre-ripping" hard soil and removing obstacles in advance of the plow. Clearing would involve removing boulders or vegetation that cannot be avoided (e.g., there is no path around vegetation). Clearing and grubbing of vegetation is not anticipated for the Proposed Project; however, USFS and any other appropriate agency will be contacted prior to vegetation clearing/grubbing, if clearing/grubbing is necessary. Where soil conditions allow (i.e., pre-ripping is not needed), the Proposed Project will use the much smaller DitchWitch vibratory plows to deploy the conduit (soil disturbance is limited to a width of 36 inches, the typical width of a large DitchWitch). The plows will be configured to install a total of three 1.25-inch conduits to a depth of up to 42 inches, allowing for at least 36 inches of cover.

Trenching

Locations inaccessible to plowing or characterized by excessive rockiness or fracture rock will be constructed using trenching machines, excavators, or backhoes. The trenches are opened and then backfilled after the conduit is installed in the trench. Soil disturbance from trenching is anticipated to occur within a 6-foot width, based on the terrain type and accounting for side-cast. Typically, as soon as the conduits are installed, the trench will be refilled and compacted. Erosion and dust control measures will also be implemented. Occasions may arise when short sections of a trench will remain open until the next workday; these are likely to be splice box locations or short sections still open at the end of a work-day. Appropriate safety measures, such as barricades and/or trench covers, will be implemented when these situations occur. Trenches will not be left open overnight unless covered or barricaded for safety. In areas identified as sensitive habitat areas, trenches to be covered will be inspected prior to filling or covering to identify and protect desert tortoise, as well as other wildlife, from harm's way.

Horizontal Directional Drilling

Horizontal directional drilling (HDD) is a steerable, trenchless method of installing underground conduits and cables along a prescribed bore path by using a surface drilling rig, making minimal impact only at the entrance and exit pits of the bore. A HDD bore may extend from about 50 feet to over 2,500 feet, depending on the need and the substrate. HDD will be used to avoid open trenches and where plowing is not practical. HDD minimizes environmental disruption and will be used for consolidated substrate and/or solid rock conditions and for locations where roadways or rivers must be crossed and/or where environmentally sensitive areas must be avoided.

Guiding the HDD is a very important part of the drilling operation, as the drilling head is under the ground and is not visible from the ground surface. In most cases, a transmitter (called a sonde) that registers angle, rotation, direction, and temperature data will be located on the bore head. This information is encoded into an electro-magnetic signal and transmitted through the ground to the surface, where it is picked up by a hand-held receiver. When boring solid rock, a wireline system may be used. In this instance, information is transmitted through a cable fitted within the drill string. The bore head direction can be guided using this system.

Once the initial bore is complete, the small bore head is refitted with a reamer to enlarge the bore hole, and the process is reversed. While the reamer head is being retracted, conduits will be

pulled back to the point of origin. At both ends, the boring pits allow for the construction of the bore; boring pits are open pit areas that will be approximately 3 feet wide by 10 feet long to allow for the entrance and exit of the bore. The bore itself will extend beyond the length of the element being avoided (e.g., stream, railroad).

Directional drilling uses a bentonite/water mixture that is pumped down the drill stem to cool the drill head, lubricate the drill pipe, maintain the bore hole opening, and remove bore cuttings. Bentonite is a fine clay that, when mixed with water, provides the necessary lubricant and operating fluid for the drilling process. The bentonite will be removed from each bore site and properly disposed. Directional bores may be employed to circumvent obstacles in the ground and other points that will occur intermittently in conjunction with construction of various phases. The minimum depth of the bore will be in compliance with the requirements of the regulatory agencies. CBC will implement a HDD Contingency and Resource Protection Plan.

The Proposed Project will not have fluid pits onsite, but drying sites may be located onsite where the bentonite is temporarily dried and mixed. CBC will coordinate with the Counties for these locations, which most likely will be county disposal sites. Bentonite will be properly disposed offsite.

Construction Equipment

Because of the variety of equipment that may be employed to accomplish installation of the FOC, and because each contractor has a slightly different equipment inventory, equipment may include: D8 Caterpillar, backhoe, 10-wheeler truck, semi-trailer truck, ¾-ton pickup truck, excavator, trencher, dozer/plow, loader, cable reel trailer, mechanical pusher/puller, and water truck. Equipment will stay within the confines of the Proposed Project ROW or access road to the ROW identified for the Proposed Project. Based on the Proposed Project schedule required to complete the Proposed Project, multiple crews will be working concurrently along the route.

Access Vaults

Additional underground components include buried access or splice vaults. Within the new construction portions of the route only, vaults will be placed approximately every 4,500 feet to enable access to the underground conduits. Approximately 30 vaults are proposed for installation within the HTNF. The buried access vaults measure 48 inches in diameter and are 48 inches deep. With the exception of the flush metal manhole lids, the remaining body of the round, prefabricated structure will not be visible from the surface. The vaults will be installed with backhoes and vacuum excavation methods. They will be located within the existing road ROWs at a minimum of 20 to 30 feet from the edge of pavement (depending on type of highway), or nearest appropriate/accessible location, as stipulated by the recently (December 30, 2010) issued guidelines from Caltrans; vaults will be placed outside the State Highway ROW, as practicable.

Subsurface Warning Tape and Cable Locating Technology

Where methods permit, a continuous ribbon of Buried Cable Warning Tape will be placed above, and parallel to, the new conduit within the ground. The warning tape will be imprinted with a warning message as a final warning to excavators that fiber-optic cable is buried below. The tape will be impervious to soil acid, alkali, and/or other natural soil agents. Installation of the tape will occur simultaneously with the installation of the conduit. The subsurface tape may be magnetic, which will allow engineers to scan the road for the fiber cable location without having to resort to ground-disturbing activities, such as potholing, to locate the cable line. In all areas, a "tracer" wire will be installed as part of the plastic ducts. This tracer wire allows a tone to be induced on the wire so that the exact location of the conduit can be located with electronic equipment. This method is used by standard underground cable-locating procedures prior to any future digging in the area (Underground Service Alert).

Marker Posts

Above-ground warning marker posts will be placed along the entire cable route at intervals of approximately 700 feet. An estimated 192 new marker posts will be installed within the HTNF. The posts will be contained within the Proposed Project ROW directly above or offset, as required of the conduit/cable. Mechanical equipment consisting of a tractor with a power auger extension arm may be required for post installation. Ground disturbance during the installation of marker posts is typically limited to a relatively small area (maximum area of 12 by 12 inches). This area of disturbance typically lies within the area disturbed for installation of FOC and conduit. These metal, poly-vinyl, or fiberglass posts are installed to provide visible evidence of the presence of buried cable, the identy of the owner of the cable, and a telephone number for emergency notifications. The location of the marker posts may be adjusted to accommodate sensitive environments (e.g., sensitive vegetation communities) or physical limitations (e.g., rocks). Marker posts will be installed, as much as possible, in areas that lack vegetation.

Staging and Laydown Areas

Staging areas will be established outside the Proposed Project footprint, mainly in commercial property areas, to provide the locations to store material and large equipment for intermittent periods of time and to conduct fueling and maintenance work. Laydown areas are areas identified for vehicle parking and/or short-term placement of equipment, conduit, and cable. The general size of staging/laydown areas is approximately 100 feet wide by 100 feet long; the exact size will depend upon the individual locations. Temporary parking of vehicles (overnight) will occur within areas of the ROW or in laydown areas. The laydown areas generally are composed of previously disturbed/developed areas (e.g., dirt parking lots) that may contain sparsely scattered and disturbed vegetation, if any. In sensitive areas, the construction contractor will clearly mark the boundaries of laydown areas in the field using visible materials (e.g., staking, flagging, construction fencing), the areas will be cleared (surveyed) by the Project biologists prior to parking equipment, and areas with sensitive resources will be avoided.. It is expected that more laydown areas are identified than will actually be needed. Additional locations were identified to allow for options, should any of the laydown areas prove to be inadequate. Two

potential laydown areas have been identified for the Proposed Project within the HTNF (Appendix A).

Construction Schedule

The total duration of construction activity of the approximately 593-mile network is estimated at up to 16 months. Proposed Project construction is estimated to begin in early 2012. Construction crews will generally work 8- to 10-hour days, five days a week, during daylight hours. Saturday work may be required in some areas, as needed; and the appropriate approval from the proper agency would be obtained prior to construction on weekends. No work is anticipated to occur on major holidays. The Proposed Project will avoid traffic control on State highways when peak volumes are anticipated (e.g., Fridays after 3:00 p.m.) and days preceding and following holiday weekends. The Proposed Project will avoid lane closures during times of inclement weather, including but not limited to rain, snow, and ice.

Based on the Proposed Project schedule required to complete the Proposed Project, multiple crews will likely be working concurrently along the route. During this period, various aspects of construction will be occurring simultaneously, including the following: conduit plowing, trenching, cable pulling, splicing, marker post installation, and final restoration of the roads and access roads. As it takes longer to install the conduit, the cable installation crews will not start work until the conduit installation has made sufficient progress. This will facilitate keeping the cable installation crews from catching up too soon to the conduit installation crews. This will create greater lag time between the cable and conduit crews at the beginning of construction. This lag time will likely shorten over the course of the construction period. Due to the use of multiple crews, it is possible that some of the laydown areas will be used for more than one period of time.

Applicant-Proposed and Mitigation Measures

Applicant-proposed measures (APMs) are methods, measures, or practices that avoid, reduce, or minimize a project's adverse effects on various environmental resources. They can be applied before, during, or after construction of the project to reduce or eliminate potential environmental effects. APMs would be employed by the Proposed Project applicant and/or the construction superintendent. Mitigation measures (MMs) are methods, measures, or practices to mitigate a project's adverse effects on various environmental resources. Any revegetation work on the HTNF would be coordinated in advance with the Forest Botanist and would comply with Forest Service requirements. APMs and MMs are listed in Appendix B of this report.

Operation and Maintenance

Operation and maintenance (O&M) activities will be implemented along the Proposed Project ROW over the life of the Proposed Project. The utility owner will apply for and obtain an encroachment permit every other year to conduct O&M activities within the State Highway ROW. Existing access roads would be utilized for operation and maintenance activities. Surveyors would drive along the existing roads to inspect the line after rainstorm events and may

stop and open the hatches to ground vaults and manholes. Ground-disturbing activities associated with ongoing operation and maintenance procedures are typically minor, if any. These activities would result mainly from repair of erosion control devices or cable conduits in the event of storm damage, landslides, or other emergencies. In most emergency situations, review of damaged areas will be accessed via public roads, private transmission access roads, or route access roads. No new habitat will be affected by O&M activities. The appropriate agencies will be contacted if maintenance activities outside previously authorized areas are required.

IV. AFFECTED ENVIRONMENT

A literature review and field reconnaissance surveys were conducted to identify biological resources along the Proposed Project route. The results of those assessments are described in detail below and in the Draft Biological Technical Report for the California Broadband Cooperative Digital 395 Middle Mile Project (Chambers Group 2011a).

Literature Review

Prior to performing the biological field surveys, existing documentation relevant to the proposed backbone of the Proposed Project was reviewed. The most recent records of the California Natural Diversity Database (CNDDB 2010) managed by the California Department of Fish and Game (CDFG) and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPSEI) were reviewed for the California U.S. Geological Survey (USGS) 7.5-minute quadrangles containing and surrounding the Proposed Project route within the HTNF. The most recent records of Nevada Department of Wildlife (NDOW) and the Nevada Native Heritage Program (NNHP) were searched for sensitive species for known occurrences within Douglas County, Nevada. These databases contain records of reported occurrences of Federal- and/or State-listed as endangered or threatened species, proposed endangered or threatened species, former Federal Species of Concern (FSC), California Species of Special Concern (CSC), or otherwise sensitive species or habitat that may occur within or in the immediate vicinity of the Proposed Project route within the HTNF. The USGS 7.5-minute quadrangles reviewed for this Proposed Project included: *Casa Diablo Mountain, Convict Lake, Crestview, June Lake, Lee Vining, Lundy, Old Mammoth, Toms Lake,* and *Whitmore Hot Springs.* In addition, the United States Forest Service (USFS) sensitive species list was reviewed for the HTNF, as provided by Bridgeport District Wildlife Biologist Sherri Lisius to Lisa Louie, Senior Project Manager at Chambers Group, Inc. (Chambers Group) in an email dated September 8, 2011. Species identified during the literature review as occurring or having the potential to occur within the vicinity of the Proposed Project route were included in the consideration of species in Section V of this report.

Biological Reconnaissance Surveys

Biological, reconnaissance-level surveys were conducted along the approximately 593-mile Proposed Project route, which includes 26.4 miles on HTNF lands; the Survey Area included a 50-foot buffer that encompassed the 20-foot wide Proposed Project ROW. The surveys identified vegetation communities and habitats that potentially may support special-status species within the Proposed Project ROW. The surveys were conducted from October 15, 2010, through December 2, 2010. Additional surveys along the optimized route were conducted from June 8 through June 10, 2011. Weather conditions during the surveys included temperatures ranging from approximately 19 to 89 degrees Fahrenheit with 0 to 100 percent cloud cover. Surveys were not conducted during storm events. Chambers Group biologists Rebecca Alvidrez, Leslie Buena, Nichole Cervin, Heather Clayton, Sarah Harris, Jessie Miller, Paul Morrissey, Tyler Sears, and Tracy Treybig conducted the reconnaissance-level surveys.

Vegetation

During general reconnaissance surveys, plant species that were identifiable were recorded, but focused surveys for sensitive plant species were not conducted as part of this Project. Plant communities in the Proposed Project route were identified, qualitatively described, and mapped onto an aerial photograph. Plant communities were determined in accordance with the categories set forth in Holland (1986) or Sawyer et al. (2009). Plant nomenclature follows that of *The Jepson Manual: Higher Plants of California* (Hickman 1993). A map showing the location of vegetation communities for the Proposed Project within the HTNF is located in Appendix C. A list of the plant species observed during the surveys within Mono County, California, and Douglas County, Nevada, is included as Appendix D.

Wildlife

Wildlife and wildlife signs observed along the Proposed Project route, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (e.g., undisturbed native habitat, wildlife trails) or in habitats with the potential to support State- and/or Federal-listed or proposed listed species. Notes were made on the general habitat types, species observed, and the general conditions of the site. A list of the wildlife species observed or detected within Mono County, California, and Douglas County, Nevada, during the surveys is included as Appendix E.

The California Wildlife Habitat Relationship

The California Wildlife Habitat Relationship (CWHR) is a wildlife information system and predictive model for California's regularly occurring birds, mammals, reptiles, and amphibians and is a classification scheme used to describe wildlife habitats based on vegetation type, size, and density (CWHR 2005). The acreages of each vegetation community present along the Proposed Project route within the HTNF area were calculated and were grouped based by CWHR type (Table 1).

Table 1. CWHR types present within the Humboldt-Toiyabe National Forest Portion of the Digital 395 Project Area.

CWHR Type	Observed Vegetation Communities	Acres
Sagebrush	Rabbitbrush Scrub	0.94
	Transitional Great Basin Mixed Scrub	0.31
	Disturbed Rabbitbrush Scrub	0.01
	Disturbed Great Basin Mixed Scrub	0.01
	Subalpine Sagebrush Scrub	0.14
	Great Basin Mixed Scrub	13.73
Pinyon-Juniper	Great Basin Pinyon-Juniper Woodland	11.61
	Great Basin Pinyon Woodland	4.28
	Great Basin Juniper Woodland and Scrub	0.27
Lodgepole Pine	Lodgepole Pine Forest	1.61
Aspen	Aspen Forest	0.4701
Sierran Mixed-Conifer	Sierran Mixed Conifer Forest	0.0834
Eastside Pine	Eastside Ponderosa Pine Forest	0.8859
Montane Riparian	Great Basin Cottonwood - Willow Riparian Forest	1.7268
	Montane Riparian Forest	0.7760
Wet Meadow	Wet Subalpine Meadow	0.7830
Annual Grasses	Ruderal/Disturbed	0.1002
Urban	Developed	0.0179
Perennial Grasses	Great Basin Grassland	0.1989
	Grazed Great Basin Grassland	0.0004
N/A	Open Water	0.0437
Total Acres		**37.1883**

Vegetation Communities Observed

The following vegetation communities were observed within the Proposed Project ROW during the Chambers Group field reconnaissance surveys within the HTNF area. The vegetation communities observed are described below and associated with the appropriate CWHR type.

Sagebrush

Rabbitbrush Scrub and Disturbed Rabbitbrush Scrub

Rabbitbrush Scrub is dominated by rabbitbrush species (*Chrysothamnus* spp.), typically characterized by evenly spaced shrubs growing up to three feet in height. Shrubs flower in late summer or fall. Rabbitbrush Scrub is a disturbance-maintained community, in which fire, grazing, or tilling maintains the community's composition (Holland 1986). Plant species typical of this vegetation community observed during these surveys included rabbitbrush shrubs, such as rubber rabbitbrush (*C. nauseosus*), yellow rabbitbrush (*C. viscidiflorus*), and black-stem rabbitbrush (*C. paniculatus*).

Areas characterized as Disturbed Rabbitbrush Scrub have a minimum cover of 25 percent non-native, weedy vegetation present within the community and represent a lower habitat value for wildlife species than intact Rabbitbrush Scrub.

Transitional Great Basin Mixed Scrub

This community represents an ecotone that is transitional between Great Basin Mixed Scrub and an Eastside Ponderosa Pine Forest. Transitional Great Basin Mixed Scrub is characterized by a moderately tall, fairly open shrubland with several species contributing to the canopy (Holland 1986). Dominant species typically include big sagebrush (*Artemisia tridentata*) and antelope bush (*Purshia tridentata*) with several perennial grasses comprising the herbaceous vegetation. Mature ponderosa pine (*Pinus ponderosa*) trees are found scattered among the shrubs; this community tends to occur at higher elevations than the Great Basin Mixed Scrub community.

Transitional Great Basin Mixed Scrub was observed within the Proposed Project route in Mono County, California. Plant species typical of this community observed during these surveys included big sagebrush and other species characteristic of the Great Basin Mixed Scrub community. A few ponderosa pine trees were also observed.

Great Basin Mixed Scrub and Disturbed Great Basin Mixed Scrub

Great Basin Mixed Scrub is characterized by a moderately tall, fairly open shrubland with several species contributing to the canopy. Dominant species typically include big sagebrush and antelope bush, with several perennial grasses comprising the herbaceous vegetation. This community is typically found on deep, gravelly, well-drained sites, usually on alluvium derived primarily from granitic sources. This community also integrates on cooler or more shallow-soiled sites with Subalpine Sagebrush Scrub; on residual upland sites with Great Basin Pinyon-Juniper Woodlands; and with Big Sagebrush Scrub on slightly lower elevation, less fertile, or overgrazed sites (Holland 1986). Plant species typical of this community observed during these surveys included big sagebrush, antelope bush, yellow rabbitbrush, fourwing saltbush (*Atriplex canescens*), and blue wildrye (*Elymus glaucus*).

Areas characterized as Disturbed Great Basin Mixed Scrub have a minimum cover of 25 percent non-native, weedy vegetation present within the community, and represent a lower habitat value for wildlife species than intact Great Basin Mixed Scrub.

Subalpine Sagebrush Scrub
Subalpine Sagebrush Scrub is dominated by big sagebrush. The community is characterized by mostly soft-woody shrubs, growing from two to six feet in height, usually with bare ground underneath and between the shrubs. It is found at higher elevations and colder temperatures. Often the plants are dwarfed, with crowns touching or more open. Growth in this community occurs primarily from early to mid-summer. Most of the species in this community flower during mid to late summer and become dormant in the fall, winter, and early spring due to cold temperatures (Holland 1986). Plant species characteristic of this community observed during these surveys included yellow rabbitbrush, cherry (*Prunus* sp.), and blue wildrye.

Pinyon-Juniper

Great Basin Pinyon-Juniper Woodland
Great Basin Pinyon-Juniper Woodland is characterized by open woodland dominated by big sagebrush, with single-leaf pinyon pine (*Pinus monophylla*) and Utah juniper (*Juniperus osteosperma*) contributing to the canopy. The understory is typical of Big Sagebrush Scrub or Subalpine Sagebrush Scrub. This community is found on deep or well-drained soils or shallow, rocky, poorly drained soils receiving more moisture than a Northern Juniper Woodland. Plant species typical of this community found during these surveys included big sagebrush, Utah juniper, single-leaf pinyon pine, and blue wildrye.

Great Basin Pinyon Woodland
Great Basin Pinyon Woodland is a scrubby steppe dominated by single-leaf pinyon pine trees over an understory of big sagebrush and antelope bush up to three feet in height (shorter on cold, exposed, windy ridges). This community typically is found on rocky soils, usually with low nutrient content and layers associated with soil profile development. Plant species typical of this community observed during these surveys included single-leaf pinyon pine trees, big sagebrush, antelope bush, and blue wildrye.

Great Basin Juniper Woodland and Scrub
Great Basin Juniper Woodland is open woodland dominated by Utah juniper, with scrub and herb components from adjacent non-forested stands of Great Basin Scrub. This community is found on dry, shallow, and often stony soils. Great Basin Juniper Woodland and Scrub is a community that is present in areas that are slightly colder and drier than areas with Great Basin Pinyon Woodland present. Plant species typical of this community observed during these surveys included Utah juniper, single-leaf pinyon pine, big sagebrush, antelope bush, and rabbitbrush.

Lodgepole Pine

Lodgepole Pine Forest
Lodgepole Pine Forest is characterized by dense forests of slender trees up to 130 feet in height, often in nearly pure stands of lodgepole pine (*Pinus contorta* var. *murrayana*). The understory is sparse in dense stands, but low shrubs and perennial herbs may occur abundantly in forest openings. Flowering of most understory plants is concentrated in the early summer, with growth of herbaceous species limited by drought in late summer. Most plants are dormant from fall through spring. Lodgepole Pine Forest typically occurs at higher elevations with long, snowy

winters and cool, dry summers. This community tolerates large variations in soil and moisture conditions but most commonly occurs on rocky, well-drained soils. Plant species typical of this community observed during these surveys included lodgepole pine and scattered quaking aspen (*Populus tremuloides*). The understory was dominated by annual grasses and unvegetated bare ground.

Aspen

Aspen Forest

Aspen Forest is characterized by dense groves of aspen growing up to 65 feet in height. Scrubby thickets may occur at the edges of the groves in areas of relatively dry soil or at high altitudes. The understory is sparse in dense groves but includes a variety of small shrubs and herbaceous perennials in more open stands. The growing season of this community is from late spring or early summer through early fall. The trees are leafless from late October until late May, or longer at high elevations. Flowering occurs in spring before the leaves emerge. This community may occur away from stream banks near springs or in areas with high soil moisture. Plants typical of this community observed during these surveys included aspen, wild rose (*Rosa* sp.), western choke-cherry (*Prunus virginiana*), and creeping snowberry (*Symphoricarpos mollis*).

Sierran Mixed-Conifer

Sierran Mixed Conifer Forest

Sierran Mixed Conifer Forest is characterized by an open, dense, forest of coniferous evergreens up to 250 feet in height with several dominant species. Fir (*Abies* sp.), Douglas-fir (*Pseudotsuga menziesii*), and dogwood (*Cornus* sp.) dominate moist sites; pine (*Pinus* sp.) and buckthorn (*Ceanothus* sp.) dominate dry sites. The understory is typically sparse, consisting of scattered broadleaved mesophytic shrubs and small trees. Most growth occurs in early summer, and the majority of plants are dormant in winter. This community grows in areas with warm, dry summers and cool, moist winters with considerable snow accumulation at the higher elevations. Sierran Mixed Conifer Forest typically is found on north-facing slopes near its lower elevational margin. Soil typically is moist and covered by a thick leaf litter layer, dead branches, and downed wood. Plant species typical of this community observed during these surveys included lodgepole pine, sugar pine (*Pinus lambertiana*), single-leaf pinyon pine, and Utah juniper.

Eastside Pine

Eastside Ponderosa Pine Forest

Eastside Ponderosa Pine Forest is characterized by open forest of coniferous evergreens dominated by ponderosa pine (*Pinus ponderosa*) trees. The understory within this community is very minimal, with the ground mostly covered by a dense needle layer. Ponderosa pines on the east side of the Sierra-Cascade crest are characterized by shorter, thicker needles; smaller, denser cones; and greater cold tolerance than trees on the west side of the crest. Eastside Ponderosa Pine Forest is often found in areas with coarse, well-drained, basaltic soils with warm, dry summers and cool, moist winters with considerable high-elevation snow accumulation.

Montane Riparian

Great Basin Cottonwood - Willow Riparian Forest

Great Basin Cottonwood-Willow Riparian Forest is an open-canopied, broad-leaved, winter-deciduous riparian forest dominated by Fremont cottonwood (*Populus fremontii*) and willow trees (*Salix* sp.), without much shrubby understory. This community typically is found along the larger streams at lower montane elevations, usually where streams empty into valleys (Holland 1986). Areas dominated by native willow trees growing adjacent to roadsides or near agricultural ditches have also been classified as Great Basin Cottonwood-Willow Riparian Forest habitat. Plant species typical of this community observed during these surveys included Fremont cottonwood, red willow (*Salix laevigata*), narrow-leaved willow (*S. exigua*), other willow species, rabbitbrush shrubs, wild rose, and creeping wildrye (*Elymus triticoides*), as well as other graminoids.

Montane Riparian Forest

Montane Riparian Forest typically is characterized by open to dense, broad-leaved, winter-deciduous, shrubby riparian thickets, which are usually dominated by any of several willow species, alder (*Alnus* sp.), or dogwood. This community is often found on relatively fine-textured alluvium landscapes along low-gradient reaches of snowmelt-fed streams. Plant species typical of this community observed during these surveys included quaking aspen, white alder (*Alnus rhombifolia*), and multiple willow species including red willow, narrow-leaved willow, and black willow (*Salix gooddingii*).

Wet meadow

Wet Subalpine Meadow

Wet Subalpine Meadow is an open area within the Subalpine Forest where a diverse flora of grasses, sedges, rushes, and forbs form low (typically less than two feet in height), dense, often matted vegetation. Moisture in this community type remains high throughout the growing season, and the growing season is often limited by snow. Some meadows appear to be late successional communities, while others are maintained by streams that flow through the meadow (Holland 1986). Large depressions dominated by sedges and rushes within scrub communities in the Proposed Project route also have been classified as Wet Subalpine Meadow areas. Furthermore, much of the meadow habitat within the Proposed Project route correlates with “Freshwater Emergent Wetland” as identified by the National Wetlands Inventory (NWI). Plant species typical of this community found during these surveys included rushes (*Juncus* spp.), sedges (*Carex* spp.), Kentucky bluegrass (*Poa pratensis*), and other grass species.

Annual Grasses

Ruderal/Disturbed

Areas classified as Ruderal are dominated by pioneering herbaceous species that readily colonize disturbed ground and are typically found in temporary, often frequently disturbed habitats (Barbour et al. 1999). The soils in Ruderal areas are characterized as heavily compacted or frequently disturbed. The vegetation in these areas is adapted to living in compact soils where water does not readily penetrate the soil.

Disturbed areas are those areas that are either devoid of vegetation (cleared or graded), such as dirt roads, or those areas that are dominated by non-native, weedy species. Plant species typical of this community observed during these surveys included tocalote (*Centaurea melitensis*), cryptantha (*Cryptantha* sp.), shortpod mustard (*Hirschfeldia incana*), dove weed (*Eremocarpus setigerus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), cheat grass (*Bromus tectorum*), annual bluegrass (*Poa annua*), and Mediterranean schismus (*Schismus barbatus*).

Urban

Developed

Developed areas are unvegetated areas that have been altered by humans and display man-made structures, such as houses, paved roads, buildings, parks, or other maintained areas.

Perennial Grasses

Great Basin Grassland and Grazed Great Basin Grassland

Great Basin Grassland typically is characterized by open, steppe-like vegetation of perennial bunch grasses with flowering culms one to three feet in height. Most growth and flowering occurs during late spring and early summer. The plants are dormant in winter due to cold temperatures and mostly dormant in late summer and fall due to drought conditions. Great Basin Grassland is often found on fine-textured soils that can be damp or frozen at the surface in winter, moist in spring, and dry in summer and fall. Plant species typical of this community observed during these surveys included blue wildrye, fescue (*Festuca* sp.), needlegrass (*Nassella* sp.), and other brome (*Bromus* sp.) and bluegrass (*Poa* sp.) species.

Areas characterized as Grazed Great Basin Grassland have been subjected to grazing by cattle or other livestock. The habitat is either currently being used for grazing or has been grazed within the last three to five years. Although native vegetation remains an important component of this community, the plants appear stunted and affected by herbivory, atypical of an undisturbed community. Grazed areas possess a lower habitat value for native wildlife species than intact Great Basin Grassland.

Open Water

Open Water

Although not directly associated with a CWHR type, Open Water was observed within the Proposed Project ROW within the HTNF area. Open Water often contains a number of phytoplankton species and filamentous blue-green and green algae. In shallow water, vascular species, including horned pondweed (*Zannichellia palustris*), duckweed fern (*Azolla filiculoides*), and duckweed (*Lemna* sp.), may be found floating on the water surface (Gray and Bramlet 1992).

V. SPECIES EVALUATED

PLANTS

Species considered in this analysis include all species on the Intermountain Region (R4) Threatened, Endangered, Proposed, and Sensitive Species list (USDA 2011a) that have been documented from or have the potential to occur on the Bridgeport Ranger District of the HTNF. Species considered below were identified from the Bridgeport Ranger District list of Threatened, Endangered, and Sensitive species, as provided by Sherri Lisius, Bridgeport District Wildlife Biologist, to Lisa Louie, Senior Project Manager at Chambers Group, in an email dated September 8, 2011, and revised by Kimberly O'Connor, Forest Botanist, on December 9, 2011.

Candidate Species

- whitebark pine (*Pinus albicaulis*)
- Webber ivesia (*Ivesia webberi*)

Other Forest Sensitive Plant Species

- Bodie Hills rockcress (*Arabis bodiensis*)
- Tiehm rockcress (*Arabis tiehmii*)
- Long Valley milkvetch (*Astragalus johannis-howellii*)
- Lavin's egg milkvetch (*Astragalus oophorus* var. *lavinii*)
- upswept moonwort (*Botrychium ascendens*)
- dainty moonwort (*Botrychium crenulatum*)
- slender moonwort (*Botrychium lineare*)
- moosewort (*Botrychium tunux*)
- Tioga Pass sedge (*Carex tiogana*)
- Bodie Hills draba (*Cusickiella quadricostata*)
- star draba (*Draba asterophora* var. *asterophora*)
- three-ranked hump-moss (*Meesia triquetra*)
- Shevock rockmoss (*Orthotrichum shevockii*)
- Spjut's bristle-moss (*Orthotrichum spjutii*)
- Wassuk beardtongue (*Penstemon rubicundus*)
- Mono County phacelia (*Phacelia monoensis*)
- altered andesite popcorn flower (*Plagiobothrys glomeratus*)
- Marsh's bluegrass (*Poa abbreviata* ssp. *marshii*)
- White Mountain skypilot (*Polemonium chartaceum*)
- Williams combleaf (*Polyctenium williamsiae*)
- Mono ragwort (*Senecio pattersonensis*)
- Masonic Mountain jewelflower (*Streptanthus oliganthus*)

Based on the assessment described in Section IV, Table 2 lists the species which **do not** have the potential to occur within the analysis area or will not be impacted by the Proposed Project. For each species, the table also explains the basis for the determination that the species does not

occur within the Proposed Project area, or, for species that have the potential to occur within the Proposed Project area, why the project will not impact the species.

Therefore, it is determined there will be <u>no impact</u> and/or <u>no effect</u> to the species indentified in Table 2 from the Proposed Project, and no further analysis will be conducted.

Table 2. List of Special-Status Plant Species within the Proposed Project ROW on the HTNF without Potential Habitat

Species	Status	Habitat	Habitat located within the project area
Tiehm rockcress (*Arabis tiehmii*)	Sensitive	Tiehm's rock cress occurs in granitic soils within Alpine Boulder and Rock Field habitats at elevations between 9,745 and 12,960 feet above mean sea level (amsl).	Proposed Project ROW within the HTNF is outside the elevation range for this species.
Long Valley milkvetch (*Astragalus johannis-howellii*)	Sensitive	This species occurs on sandy loam or swales in vicinity of former/present hot spring activity within mountain sagebrush and Great Basin Scrub associations above 6,690 feet amsl.	Proposed Project ROW within the HTNF does not cross through appropriate habitat for this species.
moosewort (*Botrychium tunux*)	Sensitive	This species occurs on beach sand deposits in sparsely to densely vegetated areas (with bryophytes and herbaceous plants). Its mountain habitats are sparsely vegetated alpine scree slopes (Farrar 2006).	This species has been recorded in the Spring Mountain area of the HTNF in Clark and Nye counties (USDA 2011b). This area is not with the Proposed Project ROW.
Tioga Pass sedge (*Carex tiogana*)	Sensitive	This species occurs on Meadows and Seeps (mesic, lake margins), lake-margins, and edges of these communities from between 10,170 and 10,826 feet amsl.	Proposed Project ROW within the HTNF is outside the elevation range for this species.
star draba (*Draba asterophora* var. *asterophora*)	Sensitive	This species occurs on Alpine Boulder or Rock Field, or on steep, rocky slopes within subalpine coniferous forest associations at elevations between 8,200 and 11,500 feet amsl.	Specific habitat is extremely rare within the Proposed Project ROW within the HTNF. In addition, the Proposed Project ROW nearest to the Lost Cannon Peak occurrence(s) does not exceed 7,000 feet amsl (along the SR-108).

Table 2. List of Special-Status Plant Species within the Proposed Project ROW on the HTNF without Potential Habitat

Species	Status	Habitat	Habitat located within the project area
Webber ivesia (*Ivesia webberi*)	Candidate	This species occurs on clay and gravelly soils of bedrock substrate in sod on mid-elevation Benches and Flats habitat at elevations between 4,000 and 5,950 feet amsl. The known range along the Proposed Project ROW within the HTNF is within Douglas, Nevada.	Proposed Project ROW in Douglas County lacks the necessary vegetation communities, and occurrence data indicate that this species has not been documented within 5 miles of this area.
three-ranked hump-moss (*Meesia triquetra*)	Sensitive	This species occurs in mesic soil (typically fens or other wetland-type features) of Upper Montane Coniferous Forest, Subalpine Coniferous Forest, Meadow and Seep, and Bog and Fen habitats at elevations between 4,265 and 9,688 feet amsl.	The known range includes Ophir Creek drainage and USFS Unit Tahoe Basin Management in the Lake Tahoe area; it occurs in the vicinity of the Luther Pass area. These documented occurrences are not within 5 miles of the Proposed Project ROW within the HTNF; additionally, this species will be avoided because all natural wetland/perennial features will be bored under (using HDD).
Spjut's bristle-moss (*Orthotrichum spjutii*)	Sensitive	This species occurs on granitic, rocky (boulders/rock outcrops) substrates within Pinyon-Juniper Woodland, Subalpine Coniferous Forest, and Lower and Upper Montane Coniferous Forest habitats at elevations between 6,890 and 7,875 feet amsl.	No documented occurrences of this species are known within 5 miles of the Proposed Project ROW within the HTNF. In addition, this species will be avoided, as it occurs on boulders or large rocks, which would be trenched around or bored under (using HDD methods) during construction if this species were positively identified by a biological monitor.
altered andesite popcorn flower (*Plagiobothrys glomeratus*)	Sensitive	Occurs in dry, shallow, mostly acidic, gravelly clay soils on ridges, knolls, and steep slopes within Pinyon-Juniper Woodland, Sagebrush Scrub, and Montane Coniferous Forest habitats at elevations between 4,850 and 6,650 feet amsl.	This species is endemic to Nevada and found in Storey and Washoe counties. The Proposed Project ROW within the HTNF is not located in Storey or Washoe counties.

Table 2. List of Special-Status Plant Species within the Proposed Project ROW on the HTNF without Potential Habitat

Species	Status	Habitat	Habitat located within the project area
Marsh's bluegrass (*Poa abbreviata* ssp. *marshii*)	Sensitive	This species is known to occur only on Alpine Boulder and Rock Field at elevation above 10,000 feet amsl.	Proposed Project ROW within the HTNF is outside the elevation range for this species.
White Mountain skypilot (*Polemonium chartaceum*)	Sensitive	This species occurs in Alpine Boulder or Rock Field, or other rocky substrates within Subalpine Coniferous Forest associations at elevations between 5,000 and 14,000 feet amsl.	Specific habitat is extremely rare within the Proposed Project ROW within the HTNF; no documented occurrences within 5 miles of the Proposed Project ROW.
Mono ragwort (*Senecio pattersonensis*)	Sensitive	This species occurs within Alpine Boulder and Rock Fields at elevations between 9,500 and 10,600 feet amsl.	Proposed Project ROW within the HTNF is outside the elevation range for this species.

The Project area contains potential habitat for the following plant species:

Bodie Hills rockcress, Lavin's egg milkvetch, upswept moonwort, dainty moonwort, slender moonwort, Bodie Hills draba, Shevock rockmoss, Wassuk beardtongue, Mono County phacelia, whitebark pine, Williams combleaf, and Masonic Mountain jewelflower. Brief descriptions of each of these plant species with potential habitat present are provided below. The information presented below was gathered from Nevada Rare Plant Atlas (NNHP 2001), Natural Diversity Database (CDFG 2010), and California Native Plant Society (CNPS 2010).

Sensitive Plant Species

Bodie Hills rockcress (*Arabis bodiensis*)
Bodie Hills rockcress is a perennial herb that flowers between June and July. This species occurs in Great Basin Scrub, Subalpine Coniferous Forest, Alpine Boulder and Rock Field, and Pinyon-Juniper Woodland habitats at elevations between 6,840 and 11,580 feet amsl. It has been documented from 27 occurences across the known range for this species. The known range of this species includes Fresno, Inyo, Mono, and Tulare counties in California and Nevada, although no occurences have been documented in Douglas County.

Of the available 469,128 acres of habitat within the Bridgeport region of the HTNF, 33 acres (less than 0.01 percent) of this habitat are within the Proposed Project ROW. No occurences of Bodie Hills rockcress have been recorded within 5 miles of the Proposed Project ROW within the HTNF in California or Nevada. The number of individuals within the nearest documented occurrence was not available.

Lavin's egg milkvetch (*Astragalus oophorus* var. *lavinii*)
Lavin's egg milkvetch is a perennial herb that flowers in June. This species occurs within openings within Great Basin Scrub and Pinyon-Juniper Woodland habitats at elevations between 5,700 and 10,005 feet amsl. The known range of this species includes Mono County in California and Douglas and Mineral counties in Nevada. Within this range, it has been documented by 10 occurences, all presumbed extant. Documented in California only within Bodie Hills, Lavin's egg milkvetch is threatened by limited distribution.

This species has a low potential to occur along the Proposed Project ROW because so little of its habitat is within the ROW. Of the available 439,621 acres of habitat within the Bridgeport region of the HTNF, 30 acres (less than 0.01 percent) of this habitat are within the Proposed Project ROW. No occurences of Lavin's egg milkvetch are recorded within 5 miles of the Proposed Project ROW within HTNF in California or Nevada. No population estimates were available for California; however, over 5,325 individuals were estimated from the Nevada state occurences.

upswept moonwort (*Botrychium ascendens*)
Upswept moonwort is a perennial herb with sporangia appearing between July and August. This species occurs in mesic soils of Lower Montane Coniferous Forest and Meadow and Seep habitats at elevations between 4,920 and 7,495 feet amsl. Its known range includes Butte, El Dorado, Lassen, Mono, Modoc, Plumas, Shasta, Tehama, and Tulare counties in California and Idaho, Nevada, Oregon, Washington, and Wyoming. Possible threats to upswept moonwort include logging and foot traffic.

There are no reported occurences within 5 miles of the ROW within HTNF in CA or NV.

dainty (scalloped) moonwort (*Botrychium crenulatum*)
Dainty moonwort is is a perennial herb with sporangia appearing between June and September. This species occurs within Lower Montane Coniferous Forest, Upper Montane Coniferous Forest, Meadow and Seep, Bogs and Fens, and Fresh Water Marsh and Swamp habitats at elevations between 4,160 and 10,760 feet amsl. Its known range includes Butte, Colusa, Lake, Lassen, Los Angeles, Mono, Modoc, Placer, Plumas, San Bernardino, Shasta, Tehama, and Tulare counties in California and Arizona, Idaho, Nevada, Oregon, Utah, Washington, and Wyoming. Dainty moonwort is threatened by foot traffic, grazing, trampling, road deconstruction, and recreational activities.

There are no reported occurences within 5 miles of the ROW within HTNF in CA or NV.

slender moonwort (*Botrychium lineare*)
Slender moonwort is a perennial herb with sporangia appearing in late June or July. This species occurs in upper montane coniferous forest, often in disturbed areas. Slender moonwort occurs in Alaska, Colorado, Idaho, Montana, Minnesota, Oregon, South Dakota, Washington, and Wyoming. This species is known in California from one occurrence near Piute Pass in Inyo County and has been documented from the Spring Mountains in Nevada. Threats to slender moonwort include fire suppression, grazing, mining, non-native plants, urbanization, logging, and habitat disturbance.

Bodie Hills draba (*Cusickiella quadricostata*)
Bodie Hills Draba is a perennial herb that flowers between June and September. This species occurs in rocky or clay soils of Great Basin Scrub and Pinyon-Juniper Woodland habitats at elevations between 6,200 and 8,500 feet amsl. Its known range includes Douglas, Lyon, and Mineral counties in Nevada and Mono County, California; 38 occurences have been mapped across the current range of this species, all presumbed extant.

Within the HTNF, suitable habiat is present within the Proposed Project ROW; however, this species has a low potential to occur along the Proposed Project ROW because so little of its habitat is within the ROW. Of the available 439,621 acres of suitable habitat within the Bridgeport region of the HTNF, 30 acres (less than 0.01 percent) of this suitable habitat are within the Proposed Project ROW. One occurrence of Bodie Hills draba was identified within 4.6 miles of the Proposed Project ROW within the HTNF in California; over 5,000 plants were observed at this occurrence in 1991. No data were avaliable from the Nevada occurences.

Shevock rockmoss (*Orthotrichum shevockii)*
Shevock rockmoss has no flowering period. This species occurs on granitic, rocky substrates of Joshua Tree Woodland and Pinyon-Juniper Woodland habitats at elevations between 2,460 and 6,890 feet amsl. The known range includes Kern and Mono counties in California.

This species has not been reported from Douglas County. There are two reported occurrences of this species within 5 miles of the ROW in the HTNF CA, both were recorded in 1996. One occurrence is approximately 2.8 miles from the ROW and the second is approximately 3.25 from the ROW within the HTNF.

Wassuk beardtongue (*Penstemon rubicundus*)
Wassuk beardtongue is a perennial herb that flowers between May and September. Wassuk beardtongue occurs in open, rocky to gravelly soils on granitic slopes, areas of disturbance, roadsides, and drainage bottoms within Pinyon-Juniper Woodland, Sagebrush Scrub, Upper-Mixed Scrub, and Shadscale zone habitats at elevations between 4,200 and 6,850 feet amsl. The known range includes Douglas, Esmeralda, and Mineral counties in Nevada; it is known from 12 mapped occurences throughout this range, all presumed extant.

Within the HTNF, potential suitable habiat within the Proposed Project ROW is avaliable; however, the species is unlikely to occur along the Proposed Project ROW because so little of its habitat is present within the ROW. Of the available 473,266 acres of suitable habitat within the Bridgeport region of the HTNF, 30 acres (less than 0.01 percent) of this suitable habitat are within the Proposed Project ROW. No known occurrences of this species are recorded within 5 miles of the Proposed Project ROW within the HTNF in California; however, one Nevada occurrence is immediately west of Topaz Lake in Douglas County, adjecent to the Proposed Project ROW in the HTNF. Of the Nevada occurences, this is the only occurrence near the Proposed Project ROW, with the majority of the occurences discovered in Mineral County (total estimated population of over 228 individuals).

Mono County phacelia (*Phacelia monoensis*)
Mono County phacelia is an annual herb that flowers between May and June. This species occurs in clay soils, often along roadsides, within Great Basin Scrub and Pinyon-Juniper Woodland habitats at elevations between 6,230 and 9,515 feet amsl. The known range includes Inyo and Mono counties in California and Esmeralda, Lyon, and Mineral counties in Nevada; it is known from 27 occurrences across this range, 25 of which are presumed extant. Threats to Mono phacelia include vehicles, trampling, and grazing.

Although this species has been found along roadsides, and suitable habitat is avaliable along the Proposed Project ROW, this species is not likely to be present within the Proposed Project ROW because so little of its habitat occurs within the Proposed Project ROW within the HTNF. Of the available 439,621 acres of habitat within the Bridgeport region of the HTNF, 30 acres (less than 0.01 percent) of this suitable habitat are within the Proposed Project ROW. No occurences of Mono County phaceila have been documented within 5 miles of the Proposed Project ROW within HTNF in California or Nevada. Over 1,200 individuals were present in the nearest population within the HTNF, located 8 miles northeast of US 195 in Bridgeport in 1993.

whitebark pine *(Pinus albicaulis)*
Whitebark pine is a Candidate for Federal Listing and a USFS Sensitive species. This subalpine tree species occurs in Subalpine Forest habitat at elevations between 7,000 to 12,000 feet amsl. Threats to the whitebark pine include habitat loss and mortality from white pine blister rust, mountain pine beetle, catastrophic fire and fire suppression.

Williams combleaf *(Polyctenium williamsiae)*
Williams combleaf is a perennial herb that flowers between March and July. This species occurs in open/barren, sandy to sandy-clay substrates of mud margins and bottoms of seasonal lakes, on granitic slopes, areas of disturbance, roadsides, and drainage bottoms within Pinyon-Juniper Woodland, Sagebrush Scrub, and Mountain Sagebrush habitats at elevations between 5,670 and 8,930 feet amsl. The known range includes Douglas, Lyon, Mineral, Nye, and Washoe counties in Nevada and California and Oregon. Trampling by livestock, off-highway vehicles, and water diversion and developments are threats to Williams combleaf.

There are no reported occurrences of this species within 5 miles of the ROW within the HTNF in CA. This species is known to occur in Douglas County.

Masonic Mountain jewel-flower (*Streptanthus oliganthus*)
Masonic Mountain jewel-flower is a perennial herb that flowers between June and July. This species occurs in volcanic or granitic, rocky soils within Pinyon-Juniper Woodland habitat at elevations between 6,495 and 10,005 feet amsl. The known range of this species includes Inyo, Mono, and Tuolumne counties in California and Esmeralda, Lyon, and Mineral counties in Nevada; it is known from 27 occurences across this range. Masonic Mountain jewel-flower is threatened by mining, grazing, and off-highway vehicles.

Within the HTNF, suitable potential habitat occurs along the Proposed Project ROW; and this species has a moderate to high potential to occur within the Proposed Project ROW. Of the

available 360,653 acres of suitable habitat within the Bridgeport region of the HTNF, 16 acres (less than 0.005 percent) of this suitable habitat are within the Proposed Project ROW. Several occurrences of this species are recorded within 5 miles of the Proposed Project ROW within the HTNF in California. The nearest occurrence is approximately 1.75 miles from US 395 about 4.5 miles north of the Sonora Junction in the HTNF. This population was estimated at over 600 individuals in 1991.

WILDLIFE

Species considered in this analysis were identified from the Bridgeport Ranger District list of Threatened, Endangered, and Sensitive species, as provided by Sherri Lisius, Bridgeport District Wildlife Biologist, to Lisa Louie, Senior Project Manager at Chambers Group, in an email dated September 8, 2011. The following species were identified on this list:

Federally-Listed Species

Endangered Species

- Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*)

Threatened Species

- Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*)

Candidate Species

- Pacific fisher (*Martes pennanti*)
- greater sage-grouse (*Centrocercus urophasianus*)
- mountain yellow-legged frog, Sierra Nevada Distinct Population Segment (*Rana muscosa*)
- Yosemite toad (*Anaxyrus canorus*)
- North American wolverine (*Gulo gulo luscus*)

Forest Sensitive Species

Humboldt-Toiyabe Forest Sensitive Wildlife Species

- spotted bat (*Euderma maculatum*)
- Pacific fisher
- North American wolverine
- Townsend's western big-eared bat (*Corynorhinus townsendii townsendii*)
- pygmy rabbit (*Brachylagus idahoensis*)
- desert bighorn sheep (*Ovis canadensis nelsoni*)
- Sierra Nevada red fox (*Vulpes vulpes necator*)
- bald eagle (*Haliaeetus leucocephalus*)
- mountain quail (*Oerortyx pictus*)
- flammulated owl (*Otus flammeoulus*)

- California spotted owl (*Strix occidentalis occidentalis*)
- great gray owl (*Strix nebulosa*)
- northern goshawk (*Accipter gentilis*)
- white-headed woodpecker (*Picoides alborlarvatus*)
- peregrine falcon (*Falco peregrinus*)
- greater sage-grouse
- mountain yellow-legged frog, Sierra Nevada Distinct Population Segment
- Yosemite toad

Based on the assessment described in Section IV, Table 3 lists all the wildlife species which **do not** have the potential to be impacted by the Proposed Project.

It is determined there will be <u>no impact</u> and/or <u>no effect</u> to the species identified in Table 3 from the Proposed Project, and no further analysis will be conducted.

Table 3. List of Special-Status Wildlife Species within the Proposed Project ROW on the HTNF without Potential Habitat or Project Impacts

Species	Status	Habitat	Habitat located within the project area
Sierra Nevada bighorn sheep (SNBS)	Endangered	This species occurs on the eastern slopes of the Sierra Nevada mountain range from alpine habitat to Great Basin Scrub habitat. Sierra Nevada bighorn sheep require open, rocky, and precipitous slopes at elevations of 14,000 feet amsl in summer to detect and evade predators and varying lower elevations dependent upon winter storm severity. This species occurs in five distinct geographic areas in California: Lee Vining Canyon, Mono County (reintroduced); Wheeler Ridge, Inyo County (reintroduced); Mount Baxter, Inyo County (native); Mount Williamson, Inyo County (native); and Mount Langely, Inyo County (reintroduced).	The Proposed Project route within the HTNF is not located within the SNBS Critical Habitat, Mt. Warren Unit 1. In addition, known populations of SNBS have not been identified within 1 mile of the Proposed Project route (Knox, 2011). The elevation of this portion of the Proposed Project route is approximately 9,400 feet amsl and would be expected to be wintering habitat and not used for lambing. Additionally, the Proposed Project ROW is located along existing roads (Dunderberg Meadow and Virginia Lakes Rd) and does not contain steep, rocky terrain favored by SNBS.
Lahontan cutthroat trout	Threatened	Historically, this species occurred in alkaline lakes, mountain streams and tributaries, and rivers of the Lahontan Basin in northern Nevada, eastern California, and southern Oregon. Currently, Lahontan cutthroat trout are found in rivers in the Truckee, Carson, and Walker basins of northern Nevada (USFWS 2009). They require clear, cold water and are tolerant of high alkalinity and high total dissolved solid	Although this species historically occupied areas near the Proposed Project ROW, this species will not be impacted by this Project. All perennial waterways will be avoided by the use of bridge attachments or HDD; in addition, the implementation of best management practices (BMPs), applicant-proposed measures (APMs), and mitigation measures

Table 3. List of Special-Status Wildlife Species within the Proposed Project ROW on the HTNF without Potential Habitat or Project Impacts

Species	Status	Habitat	Habitat located within the project area
		levels found in some lake environments. Lahontan cutthroat trout are obligate stream spawners and spawn in early spring, sometimes migrating to find suitable spawning sites. Competition with non-native species, habitat fragmentation and isolation, localized recreational harvest, degraded habitat, drought, and fire are threats to the Lahontan cutthroat trout (USFWS 2009).	will virtually eliminate other potential impacts to waterways (sedimentation, chemicals, or other construction-related impacts).
Pacific fisher	Candidate Sensitive	Occupies moderate canopy cover and conditions associated with late-successional forests, with large home ranges.	Although potentially suitable habitat may be present within the Proposed Project ROW, the CNDDB record of occurrence dates to 1973. Additionally, this species is known to occur on the western slopes of the Sierra Nevada Mountains.
North American wolverine	Candidate	Habitat for this species includes mixed conifer, red fir, and lodgepole habitats; and it may also use subalpine conifer, alpine dwarf-shrub, wet meadow, and montane riparian habitats. California wolverines prefer areas with low human disturbance; and although largely nocturnal, they may be active at any point in the day.	Although potentially suitable habitat may be present within the Proposed Project ROW, the CNDDB record of occurrence dates to 1950. Additionally, photo-verified presence of a wolverine in California was reported for the first time in 86 years during February 2008. The process of determining the origin of this wolverine using genetic, stable carbon and stable nitrogen isotope information was documented and revealed the animal was male and not a remnant of a historical California population. Furthermore, recent surveys using detection devices that can produce verifiable evidence completed in 1993 and 2007, suggest that the former wolverine population has been extirpated from California (Moriarty et. al. 2009).

Table 3. List of Special-Status Wildlife Species within the Proposed Project ROW on the HTNF without Potential Habitat or Project Impacts

Species	Status	Habitat	Habitat located within the project area
Yosemite toad	Candidate	The Yosemite toad is a Candidate for Federal listing. The Yosemite toad has an activity period from April to July that can extend to early October. During the winter, this species utilizes rodent burrows, willow thickets, forest edges adjoining meadows, and clumps of vegetation near water. Yosemite toads are endemic to California and occupy high ranges (elevations 4,800 to 12,000 feet amsl) of the Sierra Nevada Mountains. Suitable habitats include wet mountain meadows, willow thickets, and forest edges, usually near permanent water.	This species is known to occur within the vicinity of the Proposed Project ROW (2 miles NW of Lundy Lake; 5 miles west of the Sonora Junction). In these areas, a biological monitor will search areas adjacent to water to ensure no toads are present. In addition, all wetland/perennial waterways will be avoided by the use of bridge attachments or HDD; the implementation of BMPs, APMs, and mitigation measures will avoid or minimize impacts to wetlands/waterways.
mountain yellow-legged frog	Candidate Sensitive	The mountain yellow-legged frog is typically found on gently sloping banks with rocks and/or vegetation up to the edge of the water (Stebbins 1985) and is almost always found within several meters of water, including streams, ponds, lakes, reservoirs, and riparian woodlands at moderate to high elevations (Mullally & Cunningham 1956b). Microhabitats include gently sloping shorelines of riverbanks, meadow pools, stream edges, isolated pools, and lake borders in the Sierra Nevada range and rocky stream courses of southern California. In Nevada, this species is most abundant in high-elevation lakes and slow-moving portions of streams. Although seldom found away from water, it may cross upland areas between summer and winter habitats (Matthews and Pope 1999).	This species is known to occur within the vicinity of the Proposed Project ROW (near Mono Lake; 8 miles west of the Sonora Junction); however, no occurrences are within 5 miles. In these areas, a biological monitor will search areas adjacent to water to ensure no frogs are present. In addition, all wetland/perennial waterways will be avoided by the use of bridge attachments or HDD; the implementation of BMPs, APMs, and mitigation measures will avoid or minimize impacts to wetlands/waterways.
desert bighorn sheep	Sensitive	Inhabits rocky, steep, broken-up canyons and washes.	Occurs in White Mountain region of HTNF, which is not located near Proposed Project ROW.
peregrine falcon	Sensitive	The North American range is from western Alaska south into Mexico, including tropical, desert, aquatic, and tundra habitats from sea level to 12,000 feet amsl. This species nests on open cliff ledges or shallow caves.	The Proposed Project ROW does not cross open cliff ledges or shallow caves. No tree removal is proposed.

Table 3. List of Special-Status Wildlife Species within the Proposed Project ROW on the HTNF without Potential Habitat or Project Impacts

Species	Status	Habitat	Habitat located within the project area
northern goshawk	Sensitive	Within the Sierra Nevada, goshawks breed from 2,460 feet amsl in ponderosa pine/mixed-conifer vegetation habitats to 10,000 feet in red fir and lodgepole pine vegetation habitats. On the eastern slope of the Sierra Nevada, goshawks are found in the eastside pine and aspen vegetation types (USDA 2001). Foraging has been documented to occur in heavy-canopied forests with open understories.	Although suitable habitat is present adjacent to the Proposed Project ROW, no direct or indirect effects are expected to the northern goshawk, as no tree removal would occur. Additionally, construction will be temporary in duration.
white headed woodpecker	Sensitive	Found in montane coniferous forests that are dominated by pines, such as ponderosa pines, at elevations from 2,000 to 5,000 feet.	The elevation of the Proposed Project ROW within the HTNF is above 5,000 feet amsl; additionally, no tree removal is proposed.
mountain quail	Sensitive	Found in dense cover with scattered open areas on slopes in foothills and mountains. It uses the dense thickets resulting from fires or clear cuts and is seldom found far from this cover.	The Proposed Project ROW does not cross dense cover habitat utilized by mountain quail within the HTNF.
California spotted owl	Sensitive	Requires forest stands that have at least 40% canopy cover and higher than average downed woody material and snags from 7,700 to 10,000 feet amsl.	Suitable habitat is not located within the Proposed Project ROW within the HTNF.
bald eagle	Sensitive	Nests in large, old-growth, or dominant live tree with open branch-work, most frequently in stands with less than 40% canopy. Requires large bodies of water or free-flowing rivers adjacent to snags or other perches for foraging from sea level to 9,000 feet amsl.	Appropriate nesting and foraging habitat is not present within Proposed Project ROW within the HTNF.
flammulated owl	Sensitive	Occupies open coniferous mountain forests, quite often mixed with oak or aspen. Habitats generally characterized by brushy undergrowth at elevations ranging from 1,200 to 3,000 feet amsl.	The Proposed Project ROW within the HTNF is outside the elevation range for this species.

Table 3. List of Special-Status Wildlife Species within the Proposed Project ROW on the HTNF without Potential Habitat or Project Impacts

Species	Status	Habitat	Habitat located within the project area
great gray owl	Sensitive	The species is found from Alaska, across Canada, and into the northern Rocky Mountains and eastern Sierra Nevada. The species habitat in northern Canada and Alaska is generally comprised of taiga interspersed with open spaces. In the southern parts of its range, the great gray owl inhabits deciduous or coniferous forests adjacent to meadows and similar open spaces up to approximately 9,000 feet in elevation.	No potential habitat for great gray owl occurs within the Proposed Project ROW. The conifer forest present is not located adjacent to large montane meadow systems, and no occurrences of great gray owl are known in or near the Proposed Project ROW.
spotted bat	Sensitive	The range of the spotted bat includes the western U.S. from central Idaho south into Mexico, west to the Pacific Ocean, and east to western Wyoming, Colorado, and New Mexico. Habitats for this species include arid deserts, grasslands, and mixed conifer forests. The spotted bat prefers to roost in rock crevices but also will use caves and buildings.	The Proposed Project ROW does not cross roosting habitat for the spotted bat. Although the Proposed Project ROW is adjacent to suitable foraging habitat, construction will not be conducted at night and will be limited in duration; therefore, impacts to this species are not expected.
Townsend's big-eared bat	Sensitive	Within California, the Townsend's big-eared bat is found throughout the state, in a variety of habitats from sea level to 10,000 feet amsl. Juniper/pine and mixed coniferous forests are commonly used; however, it is not found in the subalpine and alpine habitats (Zeiner et al. 1990).	No occurrences of Townsend's big-eared bat are known in the Proposed Project ROW. The Proposed Project does not cross roost sites within the HTNF. Potential foraging habitat does exist; however, construction will not be conducted at night and will be limited in duration so impacts to this species are not expected.
Sierra Nevada red fox	Sensitive	Sierra Nevada red fox prefer areas with low human disturbance. They typically occupy red fir and lodgepole pine forests in the subalpine zone and alpine fell fields of the Sierra Nevada at elevations ranging from 4,000 to 12,000 feet; however, they are seldom sighted below 5,000 feet and most often above 7,000 feet (USDA 2001). This species uses forested areas in proximity to meadows, riparian areas, and brush fields. A population of Sierra Nevada red fox was discovered in the Sonora Pass area of the Bridgeport RD, HTNF in December 2010. The CDFG also observed a Sierra Nevada red fox	The Proposed Project ROW is approximately 7 miles from the Sonora Pass within the HTNF. Additionally, proximity of the Proposed Project route to the highway and other human disturbances decreases the potential of the Sierra Nevada red fox to occur within the Proposed Project ROW.

Table 3. List of Special-Status Wildlife Species within the Proposed Project ROW on the HTNF without Potential Habitat or Project Impacts

Species	Status	Habitat	Habitat located within the project area
		in the Pine Creek area northwest of Bishop, CA, in January 2011. CDFG is currently conducting a wide-scale, systematic survey of the Eastern Sierra region, with efforts concentrating in the Sonora Pass and Pine Creek areas (S.Weis, USFS, personal communication dated 10-19-2011).	

The Project area contains potential habitat for the several wildlife species; however, no permanent impacts are expected to occur to these listed or sensitive wildlife species (see Table 3). The Project area contains potential habitat for greater sage-grouse and pygmy rabbit that may be affected by the Proposed Project. Brief descriptions of these wildlife species with potential habitat present are provided below. The information presented below was gathered from the California Natural Diversity Database (CDFG 2010) and US Fish and Wildlife Service website (USFWS 2010), unless noted otherwise.

Sensitive Wildlife Species

Greater sage-grouse

The greater sage-grouse inhabits areas with dense sagebrush cover. Leks, or breeding display sites, typically occur in open areas surrounded by sagebrush; these sites include, but are not limited to, landing strips, old lakebeds, low sagebrush flats and ridge tops, roads, cropland, and burned areas (Connelly et al. 2000). Known lekking sites are within 3 miles of the Proposed Project ROW within the HTNF (near the Sonora Junction area). A common feature of lek sites is that they have less herbaceous and shrub cover than surrounding habitats (Schroeder et al. 1999). Brood-rearing areas include sagebrush, riparian meadows, greasewood bottoms, alfalfa, grain, irrigated pastures, and trails. The common feature of brood areas is that they are rich in forbs and insects. Winter ranges are dominated by 6 to 43 percent cover of sagebrush, primarily big sagebrush, low sagebrush, and/or silver sagebrush (Schroeder et al. 1999). Sagebrush is essential in surviving the winter and dominates the diet during late autumn, winter, and early spring. Insects, beetles, and ants are important for juveniles; and intake of forbs increases as the juveniles age. Breeding occurs from March to early April, and young hatch in early April to late July (Schroeder et al. 1999). The nest site tends to be in sagebrush stands with the mean height of 29 to 80 cm, and nests tend to be under the tallest sagebrush in the stand (Connelly et al. 2000). Of the available 72,637 acres of suitable habitat within the Bridgeport region of the HTNF, 15 acres (approximately 0.02 percent) of this suitable habitat are within the Proposed Project ROW.

Pygmy rabbit

The pygmy rabbit is found throughout most of the Great Basin area and in some areas of the western United States, including eastern California and northern Nevada. Habitat for this species consists primarily of sagebrush, with secondary habitat in communities dominated by rabbitbrush. Pygmy rabbits dig their burrows in deep, loose soil. Their main food source is sagebrush, but their diet also can include grass or other foliage. Threats to this species include habitat loss and fragmentation caused by conversion of sagebrush rangeland to agriculture, development, and wildfire frequency in some areas (USFWS 2010b). This species is known to occur in Bodie Hills and near Mono Lake in California, as well as throughout the Great Basin area in Nevada. Of the available 72,637 acres of suitable habitat within the Bridgeport region of the HTNF, 15 acres (approximately 0.02 percent) of this suitable habitat are within the Proposed Project ROW.

VI. EFFECTS OF THE PROPOSED ACTION AND DETERMINATIONS

Direct effects, including loss or alteration of habitat; degradation or destruction of vegetation; and/or harassment, injury, or mortality of wildlife species, may result from Project construction and O&M activities. Indirect effects may include invasion by non-native and invasive weed species, alteration of vegetation community distribution, or long-term consideration of noise and dust created during construction and O&M activities. Minimal disturbance to vegetation will occur from the utilization of the plow. Crushed vegetation may occur along portions of shoulder vegetation from the tractor pulling the plow; however, the root systems will remain relatively undisturbed, and vegetation is expected to recover after construction. Ground-disturbance impacts (permanent and temporary) to the Proposed Project ROW are discussed in more detail below. Permanent ground impacts were considered for the permanent placement of nodes. Temporary ground impacts were considered for construction activities within the Proposed Project ROW for conduit/cable placement, including laydown and staging areas and access roads. Effects would be anticipated to be greatest during Project construction, when equipment and personnel would be most active within the USFS lands, and would diminish as the presence of equipment and personnel were reduced and the long-term O&M activities were initiated.

For both plant and wildlife species, the cumulative effects analysis considers the Proposed Project's direct and indirect effects when added with the direct and indirect effects resulting from past, present, and reasonably foreseeable projects likely to occur over the next 10 years. The present and reasonably foreseeable projects were selected from the following sources that are currently available:

1. List of cumulative projects identified in the 2011 Public Review Draft EA/IS;
2. USFS (Humboldt-Toiyabe) Schedule of Proposed Action (SOPA) projects for July 2011 to September 2011; and
3. BLM (Barstow, Bishop, Ridgecrest, Carson City/Sierra Front Office) list of projects.

Only cumulative projects that provided enough information to determine potential environmental effects were considered (Appendix F). As a result, any projects that appeared idle for one year or more were removed from the analysis, as they are no longer considered reasonably foreseeable. Any projects that are partially or wholly complete (i.e., ground-disturbing activities completed) were included in the baseline conditions for the cumulative analysis. The remaining list includes projects that are presently being planned or constructed, as well as those where the initial scoping process has not yet been completed.

Available environmental documents for current and proposed projects were reviewed for impacts and proposed mitigation information. The analysis considered only the results of the direct and indirect effects of the project and not areas of the Proposed Project ROW where no impacts occurred. The resulting analysis focuses on whether the Proposed Project will have a substantial incremental cumulative effect on any of the species evaluated or cause a decline in viability of that species. The cumulative projects considered for both plant and wildlife species are identified in the individual discussions. If cumulative projects provided limited project information beyond project location, general project location information was used in the cumulative analysis.

Listed or Sensitive Wildlife Species

Greater sage-grouse

Direct Effects

The greater sage-grouse depend on sagebrush habitat for breeding and foraging; the Proposed Project ROW contains known breeding (lekking or nesting) sites within 3 miles of the HTNF (USFWS 2010a). These known lekking sites are within sagebrush habitats near the Sonora Pass area (USFWS 2010a). The Proposed Project may directly affect greater sage-grouse by temporarily disturbing potential foraging habitat and/or known lekking sites (i.e., sagebrush and associated areas). The Proposed Project ROW crosses through approximately 15 acres of sagebrush habitat within the HTNF (Appendix C), and the Proposed Project has the potential to affect vegetation within this habitat. Vegetation may be subject to crushing, disturbance of root systems, removal, and introduction of invasive plant species. In addition, greater sage-grouse foraging in this area may be directly impacted by temporary human presence, noise, and vibration from construction activities and equipment, which temporarily may cause an individual to avoid areas during construction that may otherwise serve as foraging or breeding habitat. However, the majority of work will be located within and immediately adjacent to previously disturbed lands (roads and access roads). Direct effects to sage-grouse would be minimized by the following measures: limiting or temporarily halting construction activity if the species is observed within 100 feet of a construction area until the species is greater than 100 feet from the construction site, implementing daily work procedures to minimize impacts to the species, conducting pre-construction surveys, and implementing speed limits. Additionally, measures to avoid and/or minimize the spread of non-native plant species to sage-grouse habitat include cleaning and inspecting construction equipment and vehicles and avoiding or minimizing off-road travel.

Indirect Effects

The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed to perform maintenance activities. The Proposed Project would result in short-term, temporary increases in human activity during times of maintenance; but this would occur in specific locations and for brief periods of time and is not expected to result in an effect that would disrupt the foraging behaviors of the greater sage-grouse over the long-term. Potential long-term effects may include habitat alteration or fragmentation if invasive plant species replace native plants and habitat; however, AMPs and mitigation measures will be incorporated that would help reduce the potential of invasive plants encroaching in this area. These measures include cleaning and inspecting construction equipment and vehicles and avoiding or minimizing off-road travel. Incorporation of these measures will reduce the likelihood of introducing non-native vegetation to sage-grouse habitat, therefore minimizing the potential for long-term habitat alteration or fragmentation due to the spread of invasive plant species. A complete description of avoidance and minimization measures can be found in Appendix B.

Cumulative Effects
Potential project effects to the greater sage-grouse may include a disturbance of foraging behavior as a result of construction activities and temporary habitat disturbance due to Proposed Project construction. Indirect effects to habitat may occur, but the area of effect would be limited based on the Proposed Project design and minimization measures. Cumulative projects identified that may affect the species include a fuel-reduction project in the Twin Lakes area and Sonora wildlife crossing areas; however, these cumulative projects would be expected to avoid impacts to the greater sage-grouse. Therefore, the Proposed Project may contribute some cumulative effect on the greater sage-grouse, given that the Proposed Project may have some direct or indirect effects; however, the Proposed Project's contribution to cumulative impacts will be minimized by limiting or temporarily halting construction activity if the species is observed within 100 feet of a construction area until the species is greater than 100 feet away, implementing daily work procedures to minimize impacts to the species, conducting pre-construction surveys, and implementing speed limits. Based on the above assessment, the Proposed Project is not expected to have a substantial incremental cumulative effect; and the overall effects are not expected to cause a decline in the population of this species.

Determination
The proposed action **may temporarily impact individuals, but will not lead toward federal listing or a loss of population viability** to the greater sage-grouse. The Proposed Project has the potential to affect up to 15 acres of potential foraging habitat; and the vegetation within greater sage grouse habitat may be subject to crushing, disturbance of root systems, removal, and introduction of invasive plant species. However, Project-proposed minimization and mitigation measures will reduce the potential of invasive weeds spreading in suitable habitat. Additionally, impacts from the Proposed Project will be short-term and temporary because the majority of work will be located within and immediately adjacent to previously disturbed lands (roads and access roads); a biological monitor will be present in suitable habitat to observe for the species and notify crews to stop work if the species is observed; and the Proposed Project will implement avoidance and minimization measures as outlined in Appendix B.

Pygmy rabbit

Direct Effects
The pygmy rabbit has potential to occur within the northern portions of the HTNF within California and in Nevada; it depends on sagebrush habitat for burrowing and foraging, and the Proposed Project ROW is within areas that are dominated by sagebrush communities within the HTNF. The Proposed Project may directly affect pygmy rabbit by temporarily disturbing potential foraging habitat (i.e., sagebrush and associated areas). The Proposed Project ROW crosses through approximately 15 acres of sagebrush habitat within the HTNF (Appendix C), and the Proposed Project has the potential to affect vegetation within this habitat. Vegetation may be subject to crushing, disturbance of root systems, removal, and introduction of invasive plant species. In addition, pygmy rabbits foraging or residing in this area may be directly impacted by temporary human presence, noise, and vibration from construction activities and equipment, which temporarily may cause an individual to avoid areas during construction that may otherwise serve as foraging or burrowing habitat. However, the majority of work will be located within and immediately adjacent to previously disturbed lands (roads and access roads). Direct

effects to pygmy rabbit would be minimized by the following measures: limiting or temporarily halting construction activity if the species is observed within 100 feet of a construction area until the species is greater than 100 feet away, implementing daily work procedures to minimize impacts to the species, conducting pre-construction surveys, and implementing speed limits. Additionally, measures to avoid and/or minimize the spread of non-native plant species to pygmy rabbit habitat include cleaning and inspecting construction equipment and vehicles and avoiding or minimizing off-road travel.

Indirect Effects

The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed to perform maintenance activities. The Proposed Project would result in short-term, temporary increases in human activity during times of maintenance; but this would occur in specific locations and for brief periods of time and is not expected to result in an effect that would disrupt the foraging behaviors of the pygmy rabbit over the long-term. Potential long-term effects may include habitat alteration or fragmentation if invasive plant species replace native plants and habitat; however, AMPs and mitigation measures will be incorporated that would help reduce the potential of invasive plants encroaching in this area. These measures include cleaning and inspecting construction equipment and vehicles and avoiding or minimizing off-road travel. Incorporation of these measures will reduce the likelihood of introducing non-native vegetation to pymgy rabbit habitat, minimizing the potential for long-term habitat alteration or fragmentation due to the spread of invasive plant species. A complete description of avoidance and minimization measures can be found in Appendix B.

Cumulative Effects

Potential project effects to the pygmy rabbit may include a disturbance of foraging, breeding, and/or burrowing behavior as a result of construction activities and temporary habitat disturbance due to Proposed Project construction. Indirect effects to habitat may occur, but the area of effect would be limited based on the Proposed Project design and minimization measures. Cumulative projects identified that may affect the species include a fuel-reduction project in the Twin Lakes area and Sonora wildlife crossing areas; however, these cumulative projects would be expected to avoid impacts to the pygmy rabbit. Therefore, the Proposed Project may contribute some cumulative effect on the pygmy rabbit, given that the Proposed Project may have some direct or indirect effects; however, the Proposed Project's contribution to cumulative impacts will be minimized by limiting or temporarily halting construction activity if the species is observed within 100 feet of a construction area until the species is greater than 100 feet away, implementing daily work procedures to minimize impacts to the species, conducting pre-construction surveys, and implementing speed limits. Based on the above assessment, the Proposed Project is not expected to have a substantial incremental cumulative effect; and the overall effects are not expected to cause a decline in the population of this species.

Determination

The proposed action **may temporarily impact individuals, but will not lead toward federal listing or a loss of population viability** to the pygmy rabbit. The Proposed Project has the potential to affect up to 15 acres of potential habitat; and the vegetation within pygmy rabbit

habitat may be subject to crushing, disturbance of root systems, removal, and introduction of invasive plant species. However, Project-proposed minimization and mitigation measures will reduce the potential of invasive weeds spreading in suitable habitat. Additionally, impacts from the Proposed Project will be short-term and temporary because the majority of work will be located within and immediately adjacent to previously disturbed lands (roads and access roads); a biological monitor will be present in suitable habitat to observe for the species and notify crews to stop work if the species is observed or detected (i.e., burrows identified); and the Proposed Project will implement avoidance and minimization measures as outlined in Appendix B.

Special-Status Plant Species

State- or Federal-listed threatened or endangered plants, and plants listed by USFS as sensitive plant species, have a potential to occur onsite. A pre-construction survey for special-status plant species shall be conducted and the locations of identified plants documented. Where practicable, construction activities will either avoid special-status plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance. Where avoidance is not possible, minimization practices would be employed. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of these APMs and MMs are provided in Appendix B, APM-Bio-7, APM-Bio-13, and MM-Bio-2.

Bodie Hills rockcress (*Arabis bodiensis*)

Direct Effects

Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. No reported occurrences of Bodie Hills rockcress occur within the USGS quadrangles that the Proposed Project construction will occur in within the HTNF; however, it is believed that this species is present within the Burcham Flats Road vicinity. Bodie Hills rockcress occurs in neighboring quadrangles to the east (Bridgeport/Bodie Hills area), and approximately 25 acres of potentially suitable habitat (sagebrush and pinyon-juniper associations) exist within the Proposed Project ROW within the HTNF. However, this species grows on exposed, dry, or open slopes, or exposed summits within these habitats, which reduces the probability of encountering this species within the Proposed Project ROW. Direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately, and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects

Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Considering

this species generally grows on exposed slopes or summits, the only indirect effect would be the introduction/increased spread of non-native plant species. Little is known about the effects of non-native competition with this species; however, APMs and mitigation measures will be incorporated to avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species. The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. This effect would be limited in the total area of effect and will be minimized or avoided through the implementation of APMs and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination

The proposed action **may impact individuals, but will not result in a loss of population viability** to Bodie Hills rockcress. The possibility of introducing or increasing the spread of non-native plant species is possible; however, Project-proposed minimization and mitigation measures will reduce the potential of invasive weeds spreading in these habitats. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

Lavin's egg milkvetch (*Astragalus oophorus* var. *lavinii*)

Direct Effects

Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. No reported occurrences of Lavin's egg milkvetch are known within 5 miles of the Proposed Project ROW within the HTNF; however, this species has the potential to be present within the vicinity because approximately 25 acres of potentially suitable habitat (sagebrush and pinyon-juniper associations) occur within the Proposed Project ROW within the HTNF. This

species tends to grow on barren slopes, badlands, or other types of openings within these vegetation communities. Because less than 0.01 percent of Lavin's egg milkvetch habitat within HTNF is within the Proposed Project ROW, the potential for impacts to this species is low. Direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects

Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area; these changes may increase competitive interactions for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species. In addition, this plant is unlikely to occur along the majority of the Proposed Project ROW, as it generally grows about 8,035 feet amsl in California; the ROW rarely exceeds 7,500 feets amsl throughout the HTNF.

Determination

The proposed **action may impact individuals, but will not result in a loss of population viability** to Lavin's egg milkvetch. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors is possible; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to Lavin's egg milkvetch. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities

will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

upswept moonwort (*Botrychium ascendens*)

Direct Effects

Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. There are no documented occurrences for upswept moonwort within 5 miles of the Proposed Project ROW within the HTNF in California or Nevada. Direct effects to this species will be avoided because all natural wetland/perennial features, where upswept moonwort may occur, will be bored under using HDD. In addition, potential direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects

Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small

incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination
The proposed action **may impact individuals but will not result in a loss of population viability** to upswept moonwort. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to upswept moonwort. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

dainty moonwort (*Botrychium crenulatum*)

Direct Effects
Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. There are no documented occurrences for dainty moonwort within 5 miles of the Proposed Project ROW within the HTNF in California or Nevada. Direct effects to this species will be avoided because all natural wetland/perennial features, where dainty moonwort may occur, will be bored under using HDD. In addition, potential direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects
Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects
Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species. The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination
The proposed action **may impact individuals but will not result in a loss of population viability** to dainty moonwort.. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to dainty moonwort. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

slender moonwort (*Botrychium lineare*)

Direct Effects
Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. This species has been documented from one occurrence near Piute Pass in Inyo County, California, and from the Spring Mountains in Nevada. Direct effects to this species will be avoided because all natural wetland/perennial features, where slender moonwort may occur, will be bored under using HDD. In addition, potential direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects
Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby

hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination

The proposed action **may impact individuals but will not result in a loss of population viability** to slender moonwort. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to slender moonwort. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

Bodie Hills draba (*Cusickiella quadricostata*)

Direct Effects

Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. No occurrences of Bodie Hills draba are reported within 3 miles of the Proposed Project ROW within the HTNF; however, it is believed that this species has the potential to be present

within the vicinity because approximately 25 acres of potentially suitable habitat (sagebrush and pinyon-juniper associations) occur within the Proposed Project ROW within the HTNF. This species tends to grow on rocky or clay soils within these vegetation communities. Direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects

Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination

The proposed action **may impact individuals but will not result in a loss of population viability** to Bodie Hills draba. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to Bodie Hills draba. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD

methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

Shevock rockmoss (*Orthotrichum shevockii)*

Direct Effects

Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. Two occurrences of this species have been recorded within 3 miles of the Proposed Project ROW within the HTNF. Shevock rockmoss likely would be avoided during construction because it occurs on boulders or large rocks which would be trenched around or bored under using HDD methods. In addition, potential direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects

Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small

incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination
The proposed action **may impact individuals but will not result in a loss of population viability** to Shevock rockmoss. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to Shevock rockmoss. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

Wassuk beardtongue (*Penstemon rubicundus*)

Direct Effects
Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. An occurrence of Wassuk beardtongue is reported near the Proposed Project ROW within the HTNF (directly west of Topaz Lake). Additionally, it is believed that this species has the potential to be present within other parts of the Proposed Project ROW because approximately 25 acres of potentially suitable habitat (sagebrush and pinyon-juniper associations) occur within the Proposed Project ROW within the HTNF. This species tends to associate with disturbed areas, including roadsides and drainage bottoms. Direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be completely avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects
Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults. Maintenance will be required throughout

the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species .The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination

The proposed action **may impact individuals but will not result in a loss of population viability** to Wassuk beardtongue. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to Wassuk beardtongue. A pre-construction survey for sensitive plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

Mono County phacelia (*Phacelia monoensis*)

Direct Effects

Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. Some sensitive species, however, inhabit disturbed areas; occurrences of Mono County phacelia are reported near or within disturbed areas (including roadsides). None of these occurrences are within 5 miles of the Proposed Project ROW within the HTNF; however, this species has the potential to be present within other parts of the Proposed Project ROW because approximately 24 acres of potentially suitable habitat (scrub and pinyon-juniper associations) occur along disturbed roads present within the Proposed Project ROW in the HTNF . Direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be completely

avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects

Indirect effects to a sensitive plant or population as a result of construction related disturbance could include increased spread of non-native species, soil disturbance that alters near-by hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species.The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination

The proposed action **may impact individuals but will not result in a loss of population viability** to Mono County phacelia. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to Mono County phacelia. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

Whitebark pine (*Pinus albicaulis)*

Direct Effects

Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. The Proposed project ROW crosses through suitable habitat for the whitebark pine in HTNF. No mature whitebark pine trees will be impacted by the Proposed Project because no trees will be removed. However, there is a potential for seedlings and/or saplings to occur in the ROW. Potential direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects

Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects

Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination
The proposed action **may impact individuals but will not result in a loss of population viability** to whitebark pine. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to whitebark pine. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

Williams combleaf (*Polyctenium williamsiae)*

Direct Effects
Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. This species has not been documented within 5 miles of the ROW in California or Nevada. Direct effects to this species will be avoided because all natural wetland/perennial/riparian features, where Williams combleaf may occur, will be bored under using HDD. In addition, potential direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects
Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults above ground. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects
Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project

areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat through the introduction/increased spread of invasive plant species. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination

The proposed action **may impact individuals but will not result in a loss of population viability** to Williams combleaf. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to Williams combleaf. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

Masonic Mountain jewel-flower (*Streptanthus oliganthus*)

Direct Effects

Direct effects to vegetation include such actions as trampling, crushing, or removing plants. The majority of the Proposed Project will be constructed along disturbed roadsides and/or unvegetated areas within the HTNF, which reduces the likelihood of direct impacts to sensitive species. Occurrences of Masonic Mountain jewel-flower are reported near the Proposed Project ROW within the HTNF (nearest occurrence is approximately 1.75 miles from US 395, about 4.5 miles north of the Sonora Junction). Additionally, it is believed that this species has the potential to be present within other parts of the Proposed Project ROW because approximately 15 acres of potentially suitable habitat (pinyon-juniper associations) occur within the Proposed Project ROW within the HTNF. Direct effects will be avoided by performing pre-construction surveys; if this species were encountered, the USFS Project Botanist would be notified immediately; and construction would avoid the individual or population, or the Project Biologist would consult with the USFS Project Botanist on how to proceed if the species cannot be avoided. Likely, this species would be avoided by either minor re-routing of the FOC alignment or by using HDD methods to prevent surface disturbance in the area containing the sensitive species, resulting in no direct effects.

Indirect Effects
Indirect effects to a sensitive plant or population as a result of construction-related disturbance could include increased spread of non-native species, soil disturbance that alters nearby hydrology, and/or alterations to nearby vegetation that affect other abiotic factors. Possible indirect effects would be nearby soil disruptions that change abiotic factors within the area and the increased spread of non-native species; these changes may alter competitive interactions and/or local hydrology for this species. BMPs, APMs, and mitigation measures will be incorporated to reduce the likelihood of the alterations and avoid the introduction or spread of invasive plant species. The completed backbone of the Proposed Project will include underground FOC with indiscrete markers and vaults. Maintenance will be required throughout the operation of the FOC; however, the FOC is underground, and vegetation is not expected to be altered or removed when maintenance activities are performed.

Cumulative Effects
Sensitive plant species may be subject to crushing, disturbance of root systems, removal, and introduction of invasive vegetation species within temporary and permanent Proposed Project areas within the Proposed Project ROW. Cumulative projects that may affect sensitive plant species include a fuels-reduction project in the Twin Lakes area and Sonora wildlife crossing. These projects could add to the effects of the Proposed Project on this species if they resulted in the removal of individuals or the introduction of invasive plant species . The Proposed Project may result in indirect effects to limited areas of potentially suitable habitat. These effects would be limited in the total area of effect and will be minimized or avoided through the implementation of BMPs, APMs, and/or mitigation measures. Although the Proposed Project may potentially have a small incremental cumulative effect, the overall effects are not expected to cause a decline in the population of this plant species.

Determination
The proposed action **may impact individuals but will not result in a loss of population viability** to Masonic Mountain jewel-flower. The possibility of introducing or increasing the spread of non-native plant species or altering nearby habitat factors exists; however, Project-proposed minimization and mitigation measures will reduce the potential of these indirect effects to Masonic Mountain jewel-flower. The majority of the Proposed Project would be constructed along disturbed roadsides or other unvegetated areas. A pre-construction survey for plant species will be conducted, and the locations of identified plants will be documented. Construction activities will either avoid sensitive plant species occurrences by minor re-routing of the cable alignment or by using HDD methods to prevent surface disturbance near known individuals/populations. CBC staff, contractors, and appropriate Caltrans personnel will complete environmental awareness training. A detailed description of avoidance and minimization measures is provided in Appendix B.

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APPENDIX A – STAGING/LAYDOWN AREAS (HTNF)

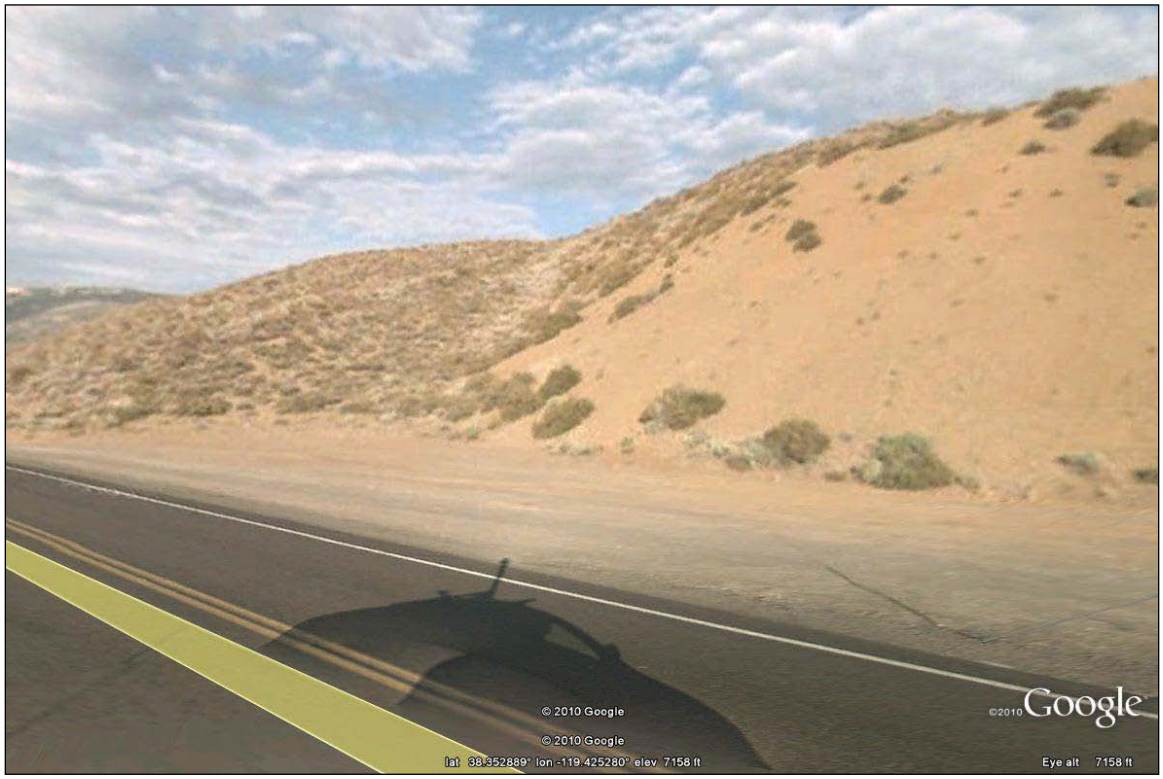
Staging/Laydown Areas

Site #	Use Type	County	Land Status/ Ownership	Latitude	Longitude	Dimensions	Surface	Current Use	Proposed Use
M-03-01	Laydown	Mono	Toiyabe National Forest	38.353326	-119.424767	40 x 150	Asphalt/Dirt	Clearing / Turnout	Equipment and Material Storage
M103-02	Laydown	Mono	Toiyabe National Forest	38.452000	-119.444117	50 x 150	Dirt	Clearing / Turnout	Equipment and Material Storage

MONO

M-103-01

38.353326 -119.424767
Image USDA Farm Service Agency
© 2010 Google
©2010 Google
Imagery Date: 5/24/2009
lat 38.353138° lon -119.424780° elev 7153 ft
Eye alt 8694 ft


© 2010 Google
© 2010 Google
©2010 Google
lat 38.352889° lon -119.425280° elev 7158 ft
Eye alt 7158 ft

M-103-02

38.452000 -119.444117
Image USDA Farm Service Agency
© 2010 Google
Google
Imagery Date: 5/24/2009
lat 38.452242° lon -119.444416° elev 6301 ft
Eye alt 7455 ft

APPENDIX B – MITIGATION MONITORING AND REPORTING PLAN (MMRP)

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DRAFT MITIGATION MONITORING AND REPORTING PLAN (MMRP)

This Draft Mitigation Monitoring and Reporting Program (MMRP) has been developed in accordance with requirements of the California Environmental Quality Act (CEQA) for the Digital 395 Middle Mile Project. When adopting a Mitigated Negative Declaration containing mitigation measures, an agency must adopt a program for reporting or monitoring mitigations measures identified in the document as a condition of approval (CEQA guidelines Section 15091(d) and 15097).

The Mitigation Monitoring and Reporting Program includes:

- Identification of the person or Agency responsible for implementing the mitigation;
- Brief description of the monitoring methods;
- Timing of monitoring activities; and
- Explanation of how compliance with the mitigation will be verified and documented (such as the type of report that documents what type of monitoring occurred and the results of that monitoring).

In an effort to avoid and minimize the potential for Project-related impacts, Applicant Proposed Measures (APMs) also are provided as a part of the Proposed Project and are included as part of the MMRP. The APMs and Mitigation Measures (MMs) are listed according to resource area. Specific avoidance, minimization, and mitigation measures with respect to special-status species will be modified in cooperation with the appropriate agencies. The Proposed Project will incorporate these environmental protection measures as part of the Project and shall be carried forward and implemented in accordance with Project activities.

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Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
AIR QUALITY RESOURCES			
APM-AQ-1: For land preparation and excavation, the following dust control measures should be implemented: ▪ All soil excavated or graded should be sufficiently watered to prevent excessive dust. Watering should occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations. ▪ All clearing, grading, earth moving and excavation activities should cease a) During periods of winds greater than 20 mph (averaged over one hour), if disturbed material is easily windblown, or b) When dust plumes of 40% or greater opacity impact public roads, occupied structures, or neighboring property. ▪ All fine material transported offsite should be either sufficiently watered or securely covered to prevent excessive dust. ▪ If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed. ▪ Areas disturbed by clearing, earth moving, or excavation activities should be minimized at all times. ▪ Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown, fugitive dust. ▪ Where acceptable to the fire department, weed control should be accomplished by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.	Throughout active construction	Engineering Inspector to verify during construction.	Throughout active construction
APM-AQ-2: For building construction, the following dust	Throughout active construction	Engineering Inspector to verify during	Throughout active construction

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control measures should be implemented: ▪ Once initial leveling has ceased all inactive soil areas within the construction site should either be seeded and watered until plant growth is evident, treated with a dust palliative, or watered twice daily until soil has sufficiently crusted to prevent fugitive dust emission. ▪ All active disturbed soil areas should be sufficiently watered to prevent excessive dust, but no less than twice per day.		construction.	
NOISE			
APM-N-1: A Type 1 sound level meter and acoustic calibrator shall be used to acquire noise data. The sound level meter shall be calibrated and certified by the manufacturer or other independent acoustical laboratory. Annual recalibration by the manufacturer or other independent acoustical laboratory is required. The sound level meter shall be capable of taking measurements using the A-weighting network and the slow response settings. The measurement microphone shall be fitted with a windscreen.	During construction.	Construction Monitor to verify noise levels are not excessive at sensitive receptors.	During construction activities.
WATER RESOURCES			
APM-W-1: To avoid impacts to streams, the conduit will be installed using horizontal directional drilling at stream crossings. Horizontal directional drilling uses a bentonite/water mixture that is pumped down the drill stem to run the drill head, lubricate the drill pipe, maintain the borehole, and remove bore cuttings. Bentonite is a fine clay that, mixed with water, provides the lubricant and operating fluid for the horizontal directional drilling process. Directional drilling eliminates disturbance to streams; however, if a fracture of the rock (substrate) occurs during horizontal directional drilling (frac-out), drilling fluids have the potential to be released into the stream. To protect stream resources in the event of a frac-out, the California Broadband Cooperative has prepared, and will implement, a Horizontal Directional Drilling Contingency and Resource Protection Plan. Resource protection measures in the plan	Included in Project specifications; prior to and during construction activities.	Construction Monitor to identify stream crossings. Engineering Inspector to verify horizontal directional drilling method is implemented and that Best Management Practices in the Horizontal Directional Drilling Contingency and Resource Protection Plan are implemented.	Horizontal directional drilling method documentation following horizontal directional drilling implementation.

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include: ▪ During drilling operations, visual inspection along the bore path of the alignment shall take place at all times. In addition, at stream crossings with flowing water the stream shall be monitored upstream and downstream of the crossing; ▪ Specification of onsite equipment required to clean up and contain a drilling fluid release; ▪ Designation of responsibilities and reporting procedures in the event of a drilling fluid release; and/or ▪ Specific response procedures in the event of a drilling fluid release.			
APM-W-2: To minimize the potential that waterbodies crossed by or adjacent to the Project route would be degraded by leaks and spills from fuels and lubricants used in Project equipment, the California Broadband Cooperative will prepare a Spill Prevention and Pollution Plan and will implement the Best Management Practices specified in the plan in order to avoid introducing pollutants to waterbodies. The Spill Prevention and Pollution Plan will include: ▪ Measures to ensure that petroleum products are not discharged into drainages or bodies of water; ▪ A description of potentially hazardous and non-hazardous materials that could accidentally be spilled during construction (fuels, equipment lubricant, human waste and chemical toilets, and bentonite), potential spill sources, potential spill causes, proper storage and transport methods, spill containment, spill recovery, Agency notification, and responsible parties; ▪ Hazardous substances shall be stored in staging areas that are located at least 100 feet from ephemeral and intermittent streams and 300 feet from perennial streams, lakes and wetlands. Refueling and vehicle maintenance shall be performed at least 100 feet from ephemeral and	Included in Project plans and specifications; prior to and during construction activities.	The Engineering Inspector will be responsible for the daily inspection of Spill Prevention and Pollution Plan implementation and Best Management Practices effectiveness, and if necessary provide input and recommendations for increased effectiveness.	Best Management Practices of an approved Spill Prevention and Pollution Plan will be installed prior to the start of construction for that day.

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intermittent streams and 300 feet from perennial streams, lakes and wetlands (i.e., hazardous substances, refueling, and vehicle maintenance will occur outside of Riparian Conservation Areas); and ▪ Sedimentation fences, certified weed-free hay bales, sand bags, water bars, and baffles will be used as additional sources of protection for waters and ditches.			
APM-W-3: To minimize the potential that waterbodies crossed by or adjacent to the Proposed Project route would be degraded by pollutants and sediment erosion associated with Project construction the California Broadband Cooperative will prepare and implement a Storm Water Pollution Prevention Plan. The Storm Water Pollution Prevention Plan addresses, at a minimum: ▪ Identification of potential sources of pollutants and toxic materials; ▪ Identification of Best Management Practices for storm water contact minimization, construction material distribution and access, equipment storage, vehicle maintenance and cleaning areas; ▪ Erosion and sediment control measures for wet- and dry-season activities; ▪ Temporary and permanent erosion control techniques, sediment control on public roads, wind erosion, and non-stormwater management techniques; and ▪ Waste management/disposal methods.	Included in Project plans and specifications; prior to and during construction activities.	The Engineering Inspector will be responsible for the daily inspection of Storm Water Pollution Prevention Plan implementation and Best Management Practices effectiveness, and if necessary provide input and recommendations for increased effectiveness.	Best Management Practices of an approved Storm Water Pollution Prevention Plan will be installed prior to the start of construction for that day.
BIOLOGICAL RESOURCES			
APM-Bio-1: The Applicant shall designate one or more Project Biologists. For the purposes of this document, Project Biologist refers to the qualified, authorized, or approved person assigned to monitor measures identified in the Mitigation Monitoring and Reporting Plan and to document compliance with these measures. The biologist must be qualified in the respective field of biology and must be acceptable to the appropriate jurisdictional Agency. The	Throughout active construction and until final compliance report completed and accepted	To be designated by the Applicant.	Throughout active construction and at reporting intervals.

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Project Biologist also will oversee other biologists, including biological monitors. Within the range of the desert tortoise, at least one designated Project Biologist shall meet the current United States Fish and Wildlife Service Authorized Biologist qualifications criteria, demonstrate familiarity with protocols and guidelines for the desert tortoise, be approved by the United States Fish and Wildlife Service, obtain training such as that offered through the Desert Tortoise Conservation Center in Las Vegas; and possess a California Endangered Species Act Memorandum of Understanding pursuant to Section 2081(a) for desert tortoise. The lead authorized biologist will be responsible for compliance with the Biological Opinion.			
▪ Project Biologist(s) or Biological Monitor(s) shall inspect work sites daily, and shall be on site as needed according to Applicant Proposed Measures and Mitigation Measures in this Mitigation Monitoring and Reporting Plan. Project Biologists and Biological Monitors shall be familiar with sensitive species and the minimization measures for this Proposed Project. The Project Biologist(s) shall be responsible for overseeing and training Biological Monitors; advise the Applicant and Contractor on compliance with biological mitigation measures; notify the Applicant of non-compliance with biological resources conditions; respond directly to inquiries of the lead agencies or resource agencies regarding biological resource issues; maintain written records of tasks related to compliance and reporting for biological resource measures; prepare monthly, annual, and final compliance reports; establish and enforce speed limits at Project work areas; and maintain the ability for regular, direct communication with representatives of California Department of Fish and Game, United States Fish and Wildlife Service,			

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Bureau of Land Management, and United States Forest Service, including notifying these agencies of dead or injured special-status species and reporting special-status species observations.			
▪ **Daily logs.** The Project Biologist(s) and Biological Monitor(s) shall maintain written records of daily activities, observations, and communications with the Applicant or construction personnel in a bound log book. These log books shall be made available for review to the lead agencies, California Department of Fish and Game, United States Fish and Wildlife Service, Bureau of Land Management, and United States Forest Service at any time during or following Project implementation.	Throughout active construction and until final compliance report completed and accepted	To be designated by the Applicant.	Throughout active construction and at reporting intervals
▪ **Stop Work Authority.** The Project Biologist(s) and Biological Monitor(s) shall have written authority to require a halt to activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued.	Throughout active construction and until final compliance report completed and accepted	To be designated by the Applicant.	Throughout active construction and at reporting intervals
APM-Bio-2: Project Biologist(s) or Biological Monitor(s) shall clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with mitigation measures; inspect active construction areas for trench closure and any needed installation of structures that prevent wildlife entrapment or allow escape at the end of each work day and during periods of construction inactivity; inspect areas where animals may have become trapped prior to construction commencing each day; monitor vehicle speeds in and around work areas for conformance with posted speed limits; direct construction personnel on appropriate buffer areas around work sites to minimize wildlife disturbance; periodically inspect areas with high vehicle activity (e.g., equipment and materials staging areas, construction personnel parking lots) for animals in harm's way.	Throughout active construction and until final compliance report completed and accepted	To be designated by the Applicant.	Throughout active construction and at reporting intervals
APM-Bio-3: The Contractor shall undertake the following			

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measures to manage construction sites and related facilities to avoid or minimize impacts to biological resources:			
▪ **Limit Disturbance Areas.** The boundaries of areas to be disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be clearly delineated with stakes and flagging prior to construction activities in consultation with the Project Biologist. Spoils and topsoil shall be stockpiled in areas already disturbed or to be disturbed by construction, so that stockpile sites do not add to total disturbance footprint. Disturbances, Project vehicles, and equipment shall be confined to the designated work areas. Parking areas, staging and disposal site locations shall similarly be located in areas without native vegetation or special-status species habitat.	Prior to and during construction	The Contractor shall identify and clearly mark in the field areas of disturbance.	This shall be ongoing as the Proposed Project progresses along the alignment,
▪ **Minimize Access Impacts.** Where new access routes may be needed, or existing routes may need improvements, the improvements shall not extend beyond the flagged impact area as described above. Vehicles passing or turning around shall do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged and/or staked) prior to the onset of construction.	Prior to and during construction	The Contractor shall identify and clearly mark in the field areas of disturbance.	This shall be ongoing as the Proposed Project progresses along the alignment,
▪ **Minimize Traffic Impacts.** Vehicular traffic during Project construction and operation shall be confined to existing designated routes of travel to and from work sites, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit within any part of the Project area shall be designated and enforced by the Project Biologist.	Prior to and during construction	Project personnel are responsible for implementing this measure. The Contractor shall post the appropriate speed limit as determined by the Project Biologist.	This shall be ongoing as the Proposed Project progresses along the alignment,
▪ **Minimize Impacts of Alignments, Roads, Staging Areas.** Staging areas for construction equipment, supplies, personnel parking, and other ancillary	Included in Project plans and specifications. Surveys for biological resources shall be performed prior to	The Engineering Inspector to determine and verify the appropriate disturbance. The Project Biologist	Documentation of the Alignments, Roads, Staging Areas. Staging areas for construction equipment,

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functions shall be designed and maintained with the goal of minimizing impacts to native plant communities and sensitive biological resources. Sites within the range of the desert tortoise shall be either fenced to exclude desert tortoises from entering the area, or shall be inspected periodically to determine whether a tortoise is within the area. Equipment and supplies (e.g., conduit) shall be inspected for desert tortoise prior to moving. The Project Biologist or Biological Monitor shall evaluate potential for special-status plants or wildlife at every potential disturbance site; specifically, site selection of an area to be permanently or temporarily disturbed shall avoid streambeds, washes, or sensitive habitat types wherever feasible. Where these sites cannot feasibly be avoided, the Project Biologist shall outline site-specific requirements to minimize impacts to habitat and wildlife. These requirements shall include, but would not be limited to, pre-construction clearance surveys, onsite monitoring, and post-construction remediation.	and during construction.	and Biological Monitors shall perform surveys for biological resources.	supplies, personnel parking, and other ancillary functions shall be made by the Engineering Inspector. The Project Biologist shall report the findings of surveys.
▪ **Avoid Use of Toxic Substances.** Any soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants.	Included in Project plans and specifications.	The Engineering Inspector to determine and verify the appropriate substance use.	Documentation of the implemented substances.
▪ **Minimize Standing Water.** Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract desert tortoises and common ravens to construction sites. A Biological Monitor shall patrol these areas to ensure water does not puddle and shall take appropriate action to reduce water application where necessary.	During times of active construction.	The Contractor will be responsible for implementing watering measures and using the proper amount. The Project Biologist will be responsible for providing direction as-needed for watering amounts.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations.
▪ **Monitor Ground-Disturbing Activities Prior to Pre-Construction Site Mobilization.** If pre-construction	Included in Project plans and specifications. Prior to the start of	The Engineering Inspector to determine necessary pre-construction	The Engineering Inspector to document pre-construction

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site mobilization requires ground-disturbing activities such as for geotechnical borings or hazardous waste evaluations, a Designated Biologist or Biological Monitor shall be present to monitor any actions that could disturb soil, vegetation, or wildlife.	construction.	methods. The Project Biologist and Biological Monitors shall be present during such activities.	activities that occur. The Project Biologist shall report observations as they relate to biological resources.
▪ **Cover all open trenches.** All open trenches will be covered at the end of the work day.	During construction activities.	The Contractor is responsible for implementing the covering of trenches while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document the trench coverings upon completion of the end of the day inspection.
APM-Bio-4: The Project Biologist shall be responsible for preparing and submitting monthly compliance memos, annual compliance reports, and completion compliance report to the lead agencies, Applicant, California Department of Fish and Game, United States Fish and Wildlife Service, Bureau of Land Management, and United States Forest Service, as appropriate. Each report shall summarize work progress during the report period; discuss implementation of all biological avoidance and minimization measures, summarize observations of special-status plants or animals, Applicant and contractor communications addressing biological resources, Agency communications, and describe measures taken to avoid or minimize impacts to biological resources.	Throughout active construction and until final compliance report completed and accepted.	Project Biologist	Monthly compliance memos shall be submitted no later than two weeks following the end of each calendar month. Annual compliance reports shall be submitted no later than the 30th of January following the end of each calendar year. The Project completion report shall be submitted no later than 30 days following the completion of Project construction.
APM-Bio-5: Trash and food items wrappers, cans, bottles, and ALL food scraps will be contained in closed containers in a manner that wildlife cannot access it and removed daily to reduce attractiveness to opportunistic predators such as common ravens (*Corvus corax*), coyotes (*Canis latrans*), and feral dogs. Feeding of wildlife is strictly prohibited.	During construction activities.	Project personnel are responsible for implementing this measure.	The Biological Monitor will document upon completion of the daily inspection.
APM-Bio-6: Pets and firearms shall be prohibited from the construction site. If guard dogs are to be used, the Contractor shall ensure that such animals do not affect any special-status species.	During construction.	The Contractor will be responsible for assuring that domestic animals that could harm special-status species are not on site during construction.	The Biological Monitor will verify that no dogs or other domestic animals that could harm special-status species are on site.
APM-Bio-7: California Broadband Cooperative staff and contractors as well as appropriate Caltrans personnel will	Prior to and as-needed for new personnel during construction	A Biologist familiar with special-status species and the minimization	The training would be conducted prior to all personnel working on

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complete an environmental awareness training on the protected species in and around the Project route and on required environmental protection measures. Training shall explain the need for and implementation of minimization measures. The format of the training seminar shall be discussed with the California Broadband Cooperative beforehand. The Project Biologist or Biological Monitor shall provide the necessary training, including a course outline and supplementary materials, for the California Broadband Cooperative staff and contractors, and a class roster to the California Broadband Cooperative to certify which persons completed the training. The training shall include: supporting written material and electronic media, including photographs of protected species; the locations and types of sensitive biological resources within the Project alignment and adjacent areas, and explain the reasons for protecting these resources; inform participants that no snakes, other reptiles, bats, or any other wildlife shall be harmed or harassed, with special emphasis on special-status species; including information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures; a discussion of fire prevention measures to be implemented by workers during Project activities; specific requirements regarding smoking and disposal of cigarettes; identify the Project Biologist(s) and Biological Monitor(s) for contact or further comments and questions about the material discussed in the program; direct trainees to report all observations of listed species and their sign to the Project Biologist for inclusion in the compliance reports; a discussion of the Project Biologist's and Biological Monitor's stop work authority; and a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines**.**	activities.	measures for this Project would perform the training.	Project site.
APM-Bio-8: Horizontal directional drilling or bridge	Included in Project plans and	The Engineering Inspector is to	Documentation of the

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attachments will be used to install the conduit at locations where the route crosses perennial waterbodies. Wetlands, including transmontane alkali marsh, will be avoided. If avoidance is not feasible, conduit will be installed using horizontal directional drilling, as described in the Project description of the Joint Environmental Assessment/Mitigated Negative Declaration.	specifications.	determine and verify the appropriate method, either horizontal directional drilling or bridge attachment.	implemented construction method for a perennial waterbody.
APM-Bio-9: No in-stream construction is proposed. No trenching or plowing activities are proposed to occur within seasonal or perennial aquatic habitat containing protected fish species. The selected construction techniques would be limited to horizontal directional drilling operations under water ways and ephemeral streams with the potential to support these species.	Included in Project plans and specifications.	The onsite Biological Monitor will identify the appropriate Best Management Practices for individual locations. The Engineering Inspector is to verify appropriate techniques.	Documentation of the implemented construction method upon completion.
APM-Bio-10: Where work is required in the vicinity of seasonal or perennial aquatic habitats, the Spill Prevention and Pollution Plan will include Best Management Practices to avoid introducing contaminants into waterbodies.	Included in Project specifications and during construction.	The Contractor will prepare the Spill Prevention and Pollution Plan and provide appropriate Best Management Practices for stream protection.	Engineering Inspector to verify in the field upon completion of installation of Best Management Practices.
APM-Bio-11: Within 100 feet of the upper limit of the bank of an aquatic habitat containing protected fish, mollusk and crustacean species, a Biological Monitor shall be present on the site during construction. Daily inspections of construction Best Management Practices shall occur, and the Biological Monitor shall report deficient sediment control devices to the Contractor for prompt repair. Horizontal directional drilling or bridge attachments would be used to install conduit where the route crosses waterbodies. A Spill Prevention and Pollution Plan has been prepared that includes Best Management Practices to avoid introducing contaminants into waterbodies.	Prior to and during construction activities.	Biological Monitor to submit daily inspection logs, and provide recommendations to the Contractor. The Contractor will prepare the Spill Prevention and Pollution Plan and provide appropriate Best Management Practices for aquatic habitat protection. The Engineering Inspector is to verify appropriate techniques for responses.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring within 100 feet of aquatic habitat containing protected fish species. The Biological Monitor would notify the appropriate resource agencies immediately if a special-status fish species were observed in the immediate vicinity of the day's construction area.
APM-Bio-12: The contractor will implement the following control measures for invasive and noxious weeds (non-native vegetation):	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field
▪ Contractor vehicles and equipment will be cleaned	Prior to and during construction	The Biological Monitor will be	The Biological Monitor will record

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inside and out prior to arrival at the work site in an effort to limit the introduction of non-native vegetation onto the Project corridor. Exterior cleaning will consist of pressure washing vehicles and equipment, with attention paid to the tracks, feet, and/or tires and on the undercarriage, with special emphasis on axles, frame, cross members, motor mounts, and on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out, and refuse will be disposed of in waste receptacles to be disposed of at an approved offsite location. The Contractor, with oversight from the Monitoring Biologist, will inspect vehicles and equipment in an effort to increase the potential that they are free of soil and debris capable of transporting non-native vegetation seeds, roots, or rhizomes. Seeds and plant parts that result from the cleaning will be collected and bagged for disposal at an approved offsite location. If noxious or invasive weeds are within the Project area, vehicles will be cleaned before moving on to areas that are weed free.	activities.	responsible to oversee and provide recommendations for the purposes of decreasing the likelihood that non-native vegetation enters the Project.	cleaning methods and if non-native vegetation debris was collected from vehicles, equipment, or construction personnel, and where disposal of the materials will occur, following cleaning.
▪ Project personnel will inspect, remove, and dispose of non-native vegetation seeds and plant parts found on their clothing and personal equipment. Plant materials gathered from Project personnel will be bagged to be disposed of at an approved offsite location.	Prior to and during construction activities.	The Biological Monitor will be responsible to oversee and provide recommendations for the purposes of decreasing the likelihood that non-native vegetation enters the Project.	The Biological Monitor will record if non-native vegetation debris was collected from vehicles, equipment, or construction personnel and where disposal of the material will occur, following cleaning.
▪ Contractors will avoid or minimize all types of off-road travel that may result in the collection and dispersion of non-native vegetation by construction vehicles and equipment.	During construction activities.	The Biological Monitor will be responsible to oversee and provide recommendations for the purposes of decreasing the likelihood that non-native vegetation enters the Project.	The Biological Monitor will record instances of off-road vehicle use.
▪ The Contractor will select unvegetated areas or paved areas or other incidental disturbance for equipment staging. In order to minimize spread of	During construction activities.	The Biological Monitor will be responsible for identifying areas containing non-native vegetation and	The Biological Monitor will document recommendations made to the Contractor and when the

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weed seed or propagules from weedy areas into native vegetation, the contractor will begin daily Project operations in unvegetated areas or areas vegetated by native plants, as identified by the Biological Monitor, whenever feasible prior to operating in areas dominated by non-native vegetation. If this is not feasible, vehicles will be cleaned of any non-native vegetation seeds and plant parts, as described in sections of APM-Bio-10 above before moving to areas vegetated by native plants.		provide recommendations for delayed work in that area.	Contractor implements the recommendations.
▪ The Contractor will limit the size of vegetation and/or ground disturbance to the amount necessary to perform the activity safely and as designed so as to minimize exposed soil to non-native vegetation establishment.	During construction activities.	The Contractor will be responsible for oversight of Project activities being conducted in a safe manner and as designed.	The Biological Monitor will record daily logs of ground-disturbing activities.
▪ The Contractor, in conjunction with the Biological Monitor, will evaluate where native vegetation needs to be established and/or protected.	During construction activities.	The Biological Monitor will be responsible for identifying and recommending areas of native vegetation to be protected.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations.
▪ Resource agencies will be consulted regarding measures to prevent the spread of non-native vegetation. This coordination will include identification of species on the involved Agency non-native lists (e.g., Inyo National Forest).	During construction activities.	The Biological Monitor will be responsible for coordination with resource agencies.	The Biological Monitor will document coordination with resource agencies.
▪ The Contractor will utilize straw and/or hay bales for Best Management Practices, such as sediment control or mulch distribution, from State-cleared sources that are free of primary noxious weeds.	During construction activities.	The Contractor will be responsible for purchasing the appropriate straw and/or hay bales.	Records of sale from State-cleared sources will be submitted to California Broadband Cooperative by the Contractor.
APM-Bio-13: The Project Biologist shall conduct a clearance survey for special-status plant species immediately prior to construction in appropriate habitat**.** If planned construction activities may result in an impact to special-status plant species, the following measures will be taken: (1) a minor re-route of the cable would be made to avoid the plant(s) and a suitable buffer area to prevent root damage or other	Prior to construction activities in areas with documented special-status plant species.	The Biological Monitor would verify that special-status plant species are present and recommend realignment or the use of horizontal directional drilling in that area.	Following the documentation of special-status plant occurrence on or adjacent to the alignment and subsequent decision that potential impacts to rare plant species cannot be avoided.

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incidental damage; or (2) in areas that cannot be avoided by a minor re-route, the cable shall be installed using horizontal directional drilling methods to eliminate surface disturbance. A biological monitor shall be present during construction activities occurring within the vicinity of these special-status plant populations and shall be responsible for designating an appropriate buffer area or bore depth to minimize potential adverse impacts to the plants and their roots. If re-alignment shall occur on BLM managed lands, a BLM botanist must be contacted.			
▪ Starting in spring, a qualified botanist must flag the sections of the alignment that cross known occupied habitat on BLM lands for *Calochortus excavates* (Segment I108), *Sidalcea covillei* (Segment I108), *Streptanthus oliganthus* (Segment M100), and *Orthotrichum shevockii* (Segment M129).	Prior to construction activities in areas with documented special-status plant species.	The Biological Monitor would verify that special-status plant species are present and recommend realignment or the use of horizontal directional drilling in that area.	Following the documentation of special-status plant occurrence on or adjacent to the alignment and subsequent decision that potential impacts to rare plant species cannot be avoided.
APM-Bio-14: Nesting bird surveys will be conducted during the nesting season within 100 feet (500 feet for raptors) of the proposed construction corridor, access routes, and staging areas, and an appropriate buffer determined by the onsite Project Biologist or Biological Monitor to these areas prior to the commencement of equipment operation. To the extent possible, work will be scheduled to avoid the habitat supporting the densest populations of breeding birds during nesting, especially those classified as "wet meadow" and "montane riparian" habitats.	Nesting bird surveys would be performed within 48 hours prior to the onset of construction. The typical nesting season is between March 15 and September 15 with most nesting activities occurring between March and July.	A biologist familiar with the avian species that may nest within the Project corridor.	Active bird nests that are located will be identified on a map following the nesting bird surveys.
▪ Nesting bird surveys will be conducted during the nesting season for northern goshawk within protected activity center areas prior to construction activities in these areas. If no nesting northern goshawk are found in these areas, construction may proceed.	Nesting bird surveys would be performed within 48 hours prior to the onset of construction between February 15 and September 15. Surveys will follow the Pacific Southwest Region Northern Goshawk Survey Protocol (2000) in order to determine goshawk occupancy and status of nesting within the Protected Activity Center.	Biological Monitor to submit daily monitoring logs.	Active bird nests that are located will be identified on a map following the nesting bird surveys. If nesting northern goshawk are found, the appropriate mitigation measure would be implemented. The location of all newly discovered nest sites will be reported to the Inyo National Forest wildlife biologist. This

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			information includes the GPS location of the nest, information of the number of birds seen, the dates surveys took place, and the names of surveyors..
APM-Bio-15: The following measures will be taken to minimize and avoid impacts to the greater sage-grouse:	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field
▪ Prior to the initiation of any construction within the range of the greater sage-grouse, the California Department of Fish and Game, Nevada Department of Wildlife and United States Forest Service biologists will be contacted to identify any known or potential greater sage-grouse lekking or breeding habitat within the Project alignment; the Project Biologist shall identify those areas for the Contractors and implement the appropriate specific seasonal and daily work procedures to avoid or minimize any potential impacts to greater sage-grouse.	Prior to and during construction activities.	The Project Biologist will be responsible for coordinating with the California Department of Fish and Game, Nevada Department of Wildlife, and United States Forest Service and working with the Contractor to implement appropriate avoidance and minimization measures.	The Project Biologist will document the results of the agency coordination and document the implemented avoidance and minimization measures.
▪ To protect nesting greater sage-grouse **no work or staging** shall occur from February 15 through July 30 in areas of known sage-grouse lekking, to include: ▪ along the backbone from Conway Summit to the intersection of US 395 and Green Creek Road. ▪ along Burcham Flat Road, within 3 miles of an active lek.	During construction activities.	The Contractor will be responsible for avoiding construction from February 15 to July 30 along the backbone from Conway Summit to the intersection of US 395 and Green Creek Road and within 3 miles of an active lek along Burcham Flat Road.	Location of construction between February 15 and July 30 will be documented by the Contractor.
▪ To protect nesting greater sage-grouse **no work or staging** shall occur from April 15th to June 15th in areas of known nesting to include: ▪ Distribution line located north of Highway 395 to the Mammoth Airport in the Long Valley area.	During construction activities.	The Contractor will be responsible for avoiding construction from April 15th to June 15th in areas of known nesting.	Location of construction between April 15 and June 15 will be documented by the Contractor.
▪ Prior to construction activities at work sites, the Project Biologist will conduct pre-construction wildlife surveys at the site and surrounding buffer area.	Prior to the start of construction.	The Project Biologist and/or Biological Monitor shall perform pre-construction surveys.	The Project Biologist will be responsible for the documentation of the findings of those surveys.
▪ Speed limits within greater sage-grouse habitat and	During construction activities.	The Project Biologist will provide	The Biological Monitor will

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known breeding areas (i.e., Burcham Flat Road, a known lek and nesting area for the species) will be limited to a pace that does not interfere with breeding displays or breeding and nesting activities. Speed limits will be clearly identified in these areas. Construction personnel will obey posted speed limit signs for the Project at all times when on the Project.		recommendations for speed limits based on the biology and mobility of this species. The Contractor will be responsible for posting those speed limits and making Project personnel aware of the posted speed limits. The Biological Monitor will be responsible for bringing awareness to these areas daily as applicable.	document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in greater sage-grouse habitat.
▪ All open trenches will be covered at the end of the workday.	During construction activities.	The Contractor is responsible for implementing the covering of trenches, while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document the trench coverings upon completion of the end of the day inspection.
▪ No vegetation removal activities within 3 miles of an active lek will take place during greater sage-grouse lekking/nesting season between February 15 and July 30.	During construction activities.	The Biological Monitor is to provide identification of greater sage-grouse habitat. The Contractor is responsible for avoiding vegetation removal within 3 miles of an active lek between February 15 and July 30.	Location of vegetation removal between February 15 and July 30 will be documented by the Contractor.
▪ Any greater sage-grouse nest encountered during Project activities will be protected under the guidelines of local, State, and Federal laws.	During construction activities.	The Project Biologist will be responsible for the oversight of greater sage-grouse nests that are encountered and provide recommendations for protection.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in the vicinity of greater sage-grouse nests.
APM-Bio-16: Prior to ground-disturbing activities at work sites, the Project Biologist or Biological Monitor will conduct pre-construction wildlife surveys at the site and surrounding buffer area. Pre-construction surveys address potential occurrence of mammalian species, with particular attention afforded to burrowing species. Wherever possible, any mammal species, whether a sensitive species or not, will be allowed to leave the work site prior to construction.	Prior to ground-disturbing construction activities.	The Project Biologist and/or Biological Monitor shall perform pre-construction surveys.	The Biological Monitor to record observations and interactions with mammalian species.

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▪ If a Sierra Nevada red fox den is found in the project area, work within a ¼ mile buffer would be immediately halted until after June 30th with clearance from the Bridgeport District wildlife biologist.	Prior to ground-disturbing construction activities.	The Project Biologist and/or Biological Monitor shall perform pre-construction surveys.	The Biological Monitor to record observations and interactions with mammalian species.
APM-Bio-17: Populations of Sierra Nevada bighorn sheep are known to occur along the Proposed Project route adjacent to the proposed line in the Humboldt-Toiyabe National Forest in Mono and Douglas Counties. The following measures will be taken to minimize and avoid impacts to Sierra Nevada bighorn sheep:	During construction activities.	Biological Monitor to submit daily monitoring logs.	Biological Monitor to verify in the field.
▪ Speed limits within known Sierra Nevada bighorn sheep breeding areas will be limited to a pace that does not interfere with breeding displays or breeding and will be clearly identified within these areas. Construction personnel will obey posted speed limit signs for the Project at all times when on the Project.	During construction activities.	The Biological Monitor will provide recommendations for speed limits based on the biology and mobility of this species. The Contractor will be responsible for posting those speed limits and making Project personnel aware of the posted speed limits. The Biological Monitor will be responsible for bringing awareness to these areas daily as applicable.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in Sierra Nevada bighorn sheep breeding areas.
▪ Construction within or in the vicinity of Sierra Nevada bighorn sheep herds during the lambing season and/or near lambing herds will be postponed until after the lambing season.	During construction activities.	The Project Biologist or Biological Monitor will be responsible for providing avoidance recommendations to the Contractor.	The Project Biologist will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Project Biologist or Biological Monitor shall record all Sierra Nevada bighorn sheep observations throughout the Project alignment and daily Project activities occurring in Sierra Nevada bighorn sheep lambing areas for inclusion of Project compliance reports.
APM-Bio-18: The following measures will be taken to minimize and avoid impacts to mule deer:	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field
▪ Speed limits within known mule deer breeding	During construction activities.	The Project Biologist will provide	The Biological Monitor will

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areas and migration routes will be limited to a pace that does not interfere with breeding or migration and will be clearly identified within these areas. Construction personnel will obey posted speed limit signs for the Project at all times when on the Project.		recommendations for speed limits based on the biology and mobility of this species. The Contractor will be responsible for posting those speed limits and making Project personnel aware of the posted speed limits. The Biological Monitor will be responsible for bringing awareness to these areas daily as applicable.	document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in mule deer breeding areas.
▪ Where feasible, construction activities within migration corridors for mule deer will be avoided during the winter season (i.e., November 1-March 31).	During construction activities.	The Project Biologist and Contractor will be responsible for identifying and avoiding mule deer migration corridors during the winter season.	The Biological Monitor to document avoidance, where feasible..
APM-Bio-19: Prior to initiating conduit installation on any bridge, the Project Biologist will conduct pre-construction bat roost surveys at the bridge site.	Prior to construction activities.	The Project Biologist or Biological Monitor and the Agency would determine the course of action in an effort to minimize impacts to special-status bats or roost site.	Biological Monitor to verify in the field.
APM-Bio-20: The following measures will be taken to minimize and avoid impacts to the desert tortoise, following the most up-to-date guidance available, currently "Desert Tortoise – Authorized Biologist and Monitor Responsibilities and Qualifications":	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field
▪ Speed limits within desert tortoise habitat will be limited to a pace that does not endanger the desert tortoise and in no circumstances will exceed 20 mph on any unpaved road. Under no circumstances, except an emergency, will any Project personnel drive off-road outside of the Proposed Project ROW in desert tortoise habitat. Construction personnel will obey posted speed limit signs for the Project at all times when on the Project.	During construction activities.	The Project Biologist will provide recommendations for speed limits. The Contractor will be responsible for posting those speed limits and making Project personnel aware of the posted speed limits. The Project Biologist and Biological Monitor will be responsible for bringing awareness to these areas daily as applicable.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor to record daily activities occurring in desert tortoise habitat.
▪ Pre-construction surveys for desert tortoise shall be conducted within the Proposed Project Right of Way and the required buffer areas. The Project	Between February 15 and November 15, the survey shall occur within 48 hours prior to ground disturbance.	The Project Biologist will conduct the survey.	The Project Biologist will document the methodology and results of the survey and will identify the location

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Biologist and desert tortoise monitors shall walk parallel 30-foot wide linear transects covering 100 percent of the site and within a 50-foot buffer.	Between November 16 and February 14, the survey may be performed several days or several weeks prior to disturbance.		of any tortoises or borrows observed.
▪ Special habitat features, such as burrows/pallets, identified during pre-construction surveys shall be marked, recorded, and avoided to the extent possible. Burrows that are found shall be checked for desert tortoises and eggs by the Project Biologist. When desert tortoises are found, the burrows shall be flagged so that equipment operators and drivers shall clearly see the flagging and avoid the burrows. Unoccupied burrows shall be flagged in a manner that contrasts with occupied burrows.	Prior to construction	The Project Biologist shall conduct the survey.	The Project Biologist shall document the flagging of borrows and any other actions taken to ensure borrows are avoided by construction activities.
▪ Encounters with desert tortoises shall be immediately reported to the Project Biologist. The Project Biologist shall maintain a record of desert tortoises encountered during Project activities. Information recorded for each desert tortoise shall include: the location (narrative, vegetation type, and maps); date of observation; general condition of health, including apparent injuries and state of healing; whether the desert tortoise voided its bladder; if moved, location moved from and location moved to; digital photographs of each handled tortoise; and diagnostic markings (i.e., identification numbers or marked lateral scutes).	During construction	The Project Biologist shall keep record.	The Project Biologist shall record all encounters with desert tortoises and the actions resulting from those encounters.
▪ All open holes shall be covered, fenced, or inspected by the Biological Monitor at the beginning, middle, and end of each day. Ramps shall be constructed at the ends of trenches, and, where feasible, at about 100-foot intervals along the trench to allow entrapped tortoises to escape. The Biological Monitor will inspect trench/hole closures each night after they have been filled or covered to verify no refuge for desert tortoise	During construction activities.	The Contractor is responsible for implementing the covering of trenches while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document the trench coverings upon completion of the end of the day inspection.

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remains.			
▪ If trenches/holes cannot be closed (covered) and are located in habitat appropriate for desert tortoise, silt fencing will be installed around the area to prevent desert tortoise from entering the construction area. The Biological Monitor will perform an inspection of a completed silt fence. Following construction and removal of the silt fence, the ground will be returned to its pre-disturbance condition.	During construction activities.	The Project Biologist will provide the recommendation for silt fence installation. The Contractor is responsible for implementing the installation of silt fencing while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document recommendations made to the Contractor and when the Contractor implements the recommendations. The Biological Monitor will document the silt fence installations upon completion of the inspection.
▪ Any conduit or similar structure with a diameter greater than 3 inches, stored less than 8 inches aboveground for one or more nights, shall be inspected for tortoises before the material is moved, buried, or capped. As an alternative, all such structures may be capped before being stored or placed on pipe racks.	During construction.	The Biological Monitor is responsible for inspecting structures for the presence of tortoises; the Contractor is responsible for capping and/ or storing materials above 8 inches above ground.	The Biological Monitor will document at the end of each day.
▪ The Biological Monitor will perform daily inspections for the presence of desert tortoise in each trench/hole wherever silt fence is installed for desert tortoise protection. Priority of inspections will occur for areas scheduled for construction activities that day, then followed by areas not scheduled for construction. Encounters with desert tortoises shall immediately be reported to the Project Biologist.	During construction activities.	The Contractor is responsible for implementing the installation of silt fencing, while it will be the Biological Monitor who is responsible for an end of the day inspection of the trench coverings.	The Biological Monitor will document the silt fence installations upon completion of the daily inspection.
▪ In an effort to mitigate impacts to the desert tortoise, California Broadband Cooperative will install new desert tortoise exclusionary fencing in locations along the Proposed Project route identified by the United States Fish and Wildlife Service as preferred locations for fence installation. The exact length, location, and responsibility of maintenance of this new exclusionary fencing will be determined in a collaborative effort with the California Broadband Cooperative, National Telecommunication and Information	Prior to construction activities.	The Contractor is responsible for implementing the installation of exclusionary fencing, while it will be the Biological Monitor who is responsible for a daily inspection of the exclusion coverings.	The Biological Monitor will document the exclusionary fence installations upon completion of the daily inspection.

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Administration, United States Fish and Wildlife Service, California Department of Fish and Game, and Caltrans based on experience, expertise, and available funding. New exclusionary fencing will be attached to existing Caltrans right-of-way fencing.			
▪ Desert tortoise fencing is present along portions of the Proposed Project. Desert tortoise fence located along the Proposed Project will be inspected on a daily basis.	During construction.	The Project Biologist to conduct fence inspections. In areas where desert tortoise fence has been inspected and determined to be intact, a Biological Monitor will not be required. However, if there is a breach in the desert tortoise fence, a Biological Monitor will be required.	The Project Biologist shall document the inspection of desert tortoise fencing.
▪ Project-related damage to existing desert tortoise fencing shall be repaired immediately following construction in that area so that tortoises do not travel through damaged sections and into the highway.	During construction.	The Project Biologist to conduct fence inspections. The Contractor is responsible for repairing damages to existing tortoise fencing.	The Project Biologist shall document the inspection of desert tortoise fencing including observations of trapped animals, repairs, tortoises, tortoise burrows, and carcasses observed.
▪ A written status report shall be submitted to the California Department of Fish and Game and United States Fish and Wildlife Service every 30 days until construction in desert tortoise habitat is completed	Every 30 days during construction in desert tortoise habitat.	The Project Biologist is responsible for the report.	The report will document all actions taken to protect desert tortoise and all observations and interactions with desert tortoise during the prior 30-day period.
▪ A summary report describing the effectiveness and practicality of mitigation measures; the number of desert tortoises observed, moved from site, and accidentally killed or injured; and the specific information on each tortoise encountered shall be prepared after the completion of construction in desert tortoise habitat.	90 days after the completion of construction in desert tortoise habitat.	The Biological Monitor is responsible for the report.	The report shall describe the effectiveness and practicality of mitigation measures; the number of desert tortoises observed, moved from site, and accidentally killed or injured; and the specific information on each tortoise
▪ Desert tortoises commonly seek shade during the hot portions of the day. Employees working within the geographic range of this species will be required to check under their equipment or vehicle before it is moved. If desert tortoises are encountered, the vehicle is not to be started/	During construction activities.	All Project personnel are responsible for implementing this measure.	The Biological Monitor will document upon completion of the daily inspection.

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moved until such animals have voluntarily moved to a safe distance away from the parked vehicle. If a desert tortoise is present and has not moved voluntarily after time, construction will be immediately halted and the Biological Monitor will be contacted.			
CULTURAL RESOURCES			
APM-CR-1: Construction will occur only in portions of the Project Area that have been surveyed or a record search has been completed in compliance with Section 106 of the National Historic Preservation Act. Prior to construction, a Construction Phase Monitoring Plan will be developed that will indicate areas not needing monitoring, inventory all sites and areas needing monitoring, the level of monitoring that must take place within or near a site or area to be monitored, and plans for daily communication and for the discovery of unexpected finds.	Included in Project specifications and during construction activities	Cultural Resources Monitor in coordination with the Monitoring Phase Lead Archaeologist	Cultural Resources Monitor to identify prior to construction activities, based on the Construction Phase Monitoring Plan.
APM-CR-2: Impacts to identified cultural resources within the Project Area shall be minimized through avoidance and minimization measures which include: re-routing of the fiber-optic line and associated components or directional boring beneath the site with an archaeological monitor present at the bore rig site and bore pits, as feasible.	Included in Project specifications and during construction activities	Cultural Resources Monitor to submit daily monitoring logs	Cultural Resources Monitor to verify in the field
APM-CR-3: Site boundaries and a buffer zone, as defined and agreed upon by the lead or jurisdictional Agency, will be provided for insuring avoidance of impacts to archaeological sites by designating these boundaries and buffer zones using flagging tape and/or fencing. Flagging and/or fencing will not occur too far in advance of construction activities; timing will be coordinated with the appropriate land managing Agency. Monitoring will be conducted prior to construction to insure flagging has not been removed and will be conducted by a qualified archaeologist.	Prior to construction activities	Cultural Resources Monitor to submit daily monitoring logs	Cultural Resources Monitor to verify in the field
APM-CR-4: A qualified archaeological monitor will be present during ground-disturbing activities within the Project area in areas determined likely to contain cultural resources. The monitor will be empowered to temporarily halt or redirect	During construction activities; and in the event of discovery	Cultural Resources Monitor to submit daily monitoring logs	Cultural Resources Monitor to verify in the field

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construction activities until the deposit is recorded and evaluated by a qualified archaeologist and the appropriate avoidance and minimization measures have been agreed upon in conjunction with the lead Agency and local Agency jurisdiction.			
APM-CR-5: Phased mitigation procedures to meet Section 106 review and compliance are outlined in the finished Programmatic Agreement.	Prior to and during construction	The Applicant and appropriate Agencies will follow procedures outlined in the final Programmatic Agreement.	The Project Archaeologist will document compliance with the final Programmatic Agreement.
APM-CR-6: Prior to construction, the Applicant shall designate a certified Project Paleontologist to supervise monitoring of construction excavations and to produce a Paleontological Resource Management Plan for the Proposed Project. This Paleontological Resource Management Plan shall be prepared and implemented under the direction of the Project Paleontologist and would address and incorporate measures identified in this Mitigation Monitoring and Reporting Plan. Paleontological monitoring shall include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present. The monitor shall have authority to temporarily divert grading away from exposed fossils in order to recover the fossil specimens. The Paleontological Resource Management Plan may require field surveys for specific areas along the Project route based on the sensitivity of the area. The Paleontological Resource Management Plan may require the Applicant to have a formal agreement with a recognized museum repository and the Project Paleontologist to curate any fossil collections, maintain appropriate field and laboratory documentation, and prepare the final Paleontological Resource Recovery Report in a timely manner following construction. More specific guidelines for paleontological resource monitoring will be identified in the Project Paleontological Resource Management Plan. The Project Paleontologist shall document interim results of the construction monitoring program with monthly progress reports.	Prior to construction	To be designated by Applicant. Project Paleontologist to prepare and implement measures from the Paleontological Resource Management Plan.	Throughout active construction and at reporting intervals.

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APM-CR-7: Workers Environmental Awareness Program training shall be provided to construction supervisors and crew for awareness of requirements regarding the protection of archaeological and paleontological resources and procedures to be implemented in the event that artifacts, human remains, or fossil remains are encountered by ground-disturbing activities.	Prior to and as-needed for new personnel during construction activities.	The Project Archaeologist and Paleontologist familiar with the minimization measures for this Project would perform the training.	The training would be conducted prior to all personnel working on Project site in areas of concern.
APM-CR-8: Ground-disturbing activities shall be monitored on a full-time basis by a paleontological construction monitor only in those parts of the Project area where these activities may disturb previously undisturbed strata in rock units of high sensitivity. The areas that will require full-time monitoring include: ▪ Segment Hinkley to Kramer Junction: older alluvium; ▪ Segment Kramer Junction to Atolia-Quaternary: older alluvium north of Kramer Junction Quaternary non-marine terrace deposits; ▪ Segment Searles to Ridgecrest: Quaternary lake deposits and alluvium one mile on either side; ▪ Segment Ridgecrest to Inyokern: Quaternary lake deposits and alluvium one mile on either side of Quaternary lake deposits; ▪ Segment Inyokern to Little Lake: Quaternary nonmarine deposits; ▪ Segment Little Lake to Olancha: Quaternary alluvium adjacent to Owens Lake; ▪ Segment Olancha to Keeler: Quaternary alluvium adjacent to Owens Lake; ▪ Segment Keeler to Owenyo: Quaternary lake deposits; ▪ Quaternary alluvium adjacent to Owen Lake; ▪ Segment Lone Pine Quaternary lake deposits; ▪ Segment Owenyo to Independence: Quaternary alluvium where route crosses Owens River; and ▪ Segments in the Mono Basin-Quaternary lake deposits.	During construction	The Project Paleontologist to decide the level of monitoring required for the area.	Level of monitoring to be identified prior to construction activities. Project Paleontologist to keep notes regarding monitoring.

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The Project Paleontologist, upon conferring with the Paleontological Monitor(s), can reduce the amount of monitoring if it is determined that a large portion of a segment is in top soil or fill. The areas that will require part-time or spot checking monitoring: ▪ All areas with Quaternary alluvium The areas that will require no monitoring: ▪ Areas where volcanic, granitic, or metamorphic rocks are present.			
AESTHETIC AND VISUAL RESOURCES			
APM-AVR-1: Staging and material and equipment storage areas, including storage sites for excavated materials will be appropriately located away from areas of high public visibility to the extent possible.	Included in Project specifications, prior to construction activities	Engineering Inspector	Prior to construction activities
LAND USE			
APM-LU-1: Prepare Construction Notification Plan. Prior to construction, California Broadband Cooperative shall prepare and submit a Construction Notification Plan to the National Telecommunications and Information Administration and the California Public Utilities Commission for approval. The Plan shall identify the procedures that address at a minimum the following components:	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities
▪ **Public notice mailer.** Prior to construction, a public notice mailer shall be prepared for construction activities that would restrict, block, or require a detour to access existing residential properties, retail and commercial businesses, wilderness and recreation facilities, and public facilities (e.g., schools and reserves). This notice shall state the type of construction activities that will cause the restriction, block, or detour and the location and duration of construction in these areas. California	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities

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Broadband Cooperative shall mail the notice to all residents or property owners within 300 feet of the right-of-way who could be impacted by this restriction, block or detour and also to specific public agencies with facilities that could be impacted by this restriction, block, or detour. If construction delays of more than seven days occur in these areas, an additional notice shall be prepared and distributed.			
▪ **Newspaper advertisements.** Prior to construction within a route segment, one round of newspaper advertisements shall be placed in local newspapers and bulletins. The advertisement shall state when and where construction will occur and provide information on the public liaison person and hotline identified below. If construction is delayed as noted above, an additional round of newspaper ads shall be placed to discuss the status and schedule of construction.	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities
▪ **Public venue notices.** Prior to construction, notice of construction shall be posted at public venues, such as trail crossings, rest stops, resource management offices, and other public venues to inform residents and visitors of the purpose and schedule of construction activities that will cause the restriction, block, or detour at the public venue. For public road closures, California Broadband Cooperative shall post information about the road detour at applicable resource management offices and post the notice within two miles north and south of the detour. For recreation facilities and reserves, the notice shall be posted along the access routes to known recreational destinations that would be restricted, blocked, or detoured and shall provide information on alternative recreation areas that may be used during the closure of these facilities.	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities

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▪ Public liaison person and toll-free information hotline. California Broadband Cooperative shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. California Broadband Cooperative shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.	Prior to construction activities	California Broadband Cooperative to prepare. Engineering Inspector to verify prior to construction.	Prior to construction activities
INFRASTRUCTURE			
APM-I-1: Roadway Capacity Maintenance. California Broadband Cooperative and its construction contractors shall maintain the maximum possible amount of travel lane capacity on roads during non-construction periods and shall provide traffic control during construction along public roads and highways.	During construction activities	Engineering Inspector	During construction activities
APM-I-2: Prepare Transportation Management Plans. Prior to the start of construction, California Broadband Cooperative shall submit Traffic Management Plans to all agencies with jurisdiction over public roads that would be affected by construction activities. Traffic Management Plans shall define the locations of all roads that would need to be temporarily closed due to construction activities. The Traffic Management Plans shall define the use of flag persons, warning signs, lights, barricades, cones, etc. according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the *Work Area Traffic Control Handbook* (WATCH). Shoulder or lane closures shall be accomplished in accordance with the 2010 Caltrans Standard Plans.	Prior to and during construction activities	Engineering Inspector	Prior to and during construction activities

MITIGATION MONITORING AND REPORTING PROGRAM APPLICANT PROPOSED MEASURES (as of April 24, 2012) California Broadband Cooperative - Digital 395 Middle Mile Project			
Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
A lane closure shall be required when personnel are working or equipment is operated within six feet of the traveled way. A shoulder closure shall be used when personnel or equipment for the work are located outside of six feet from the traveled way. Any traffic control that deviates from 2010 Caltrans Standard Plans shall require a traffic control plan being submitted for approval 14 days prior to the start of work.			
APM I-3: Prepare Recycling Program. Prior to the start of construction, California Broadband Cooperative will create a recycling program to be implemented that will require that the Project meet specified diversion goals.	Prior to and during construction activities.	Engineering Inspector	Prior to and during construction activities.
HUMAN HEALTH/SAFETY			
APM-HHS-1: An environmental health and safety professional who is 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) trained shall be present during the trenching and cable installation in the vicinity of the three active Leaking Underground Storage Tank (LUST) sites listed in Section 3.12 to monitor the construction to minimize these risks.	During construction activities	Health and Safety Monitor to submit monitoring logs	Health and Safety Monitor to verify in field
APM-HHS-2: The Project Applicant and contractor shall be subject to the Occupational Safety Health Administration (OSHA) which sets forth mandatory health and safety standards for construction sites. These standards include mandatory incident reporting, daily tailgate meetings, and monthly safety meetings with the contractor to discuss potential health and safety issues. In addition, the construction superintendent shall be responsible for verifying that all construction personnel working on the Project site is a legal citizen or possesses an employment visa.	During construction activities	Project Applicant/ Contractor	Health and Safety Monitor to verify in field

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
NOISE			
MM-N-1: If Project construction activities with ground borne vibration activities occur within 100 feet of sensitive receptors, the occupants and property owners shall be notified of the construction activities 15 days prior to construction.	Prior to construction activities	Construction Monitor to identify areas of sensitive receptors. Engineering Inspector to verify occupants and property owners are notified.	Immediately prior to construction activities in areas with sensitive receptors.
WATER RESOURCES			
MM-W-1: If a fracture of the substrate occurs during horizontal directional drilling (frac-out), drilling fluids have the potential to be released into the stream or dry streambed. In the event of a frac-out, the California Broadband Cooperative will implement response measures in the Horizontal Directional Drilling Contingency and Resource Protection Plan.	Included in Project plans specifications; implemented during construction activities	The Engineering Inspector would verify that the Horizontal Directional Drilling Contingency and Resource Protection Plan was implemented.	Following the event of a frac-out.
MM-W-2: If a leak or spill from fuels and lubricants enters or threatens to enter a stream crossed or immediately adjacent to the Proposed Project Right of Way, the California Broadband Cooperative will implement response procedures specified in the Spill Prevention and Pollution Plan.	Included in Project plans and specifications; during construction activities	The Engineering Inspector would verify that the Spill Prevention and Pollution Plan measures were implemented.	Following a fuel or lubricant leak into a stream.
BIOLOGICAL RESOURCES			
MM-Bio-1: If the contractor suspects that invasive and/or noxious weeds have been brought to the site, the contractor would notify the Biological Monitor to resolve the issue using similar practices identified in APM-Bio-12 and best professional judgment.	During construction activities.	A Biological Monitor would determine the necessary course of action to remedy the potential introduction of invasive and/or noxious weeds and provide recommendations for further prevention of such cases.	The Biological Monitor would document the actions taken to remove the invasive and/or noxious weeds upon completion of the action.
MM-Bio-2: If special-status plant species, such as Joshua trees, cacti, and succulents are within an impact area and cannot be avoided, the restoration specialist shall remove and temporarily relocate the species ahead of construction, to a "nursery area" until safe to return to the immediate area where the special-status vegetation was originally found. The "nursery area" will be located outside of desert	During and after construction	The Biological Monitor	The Biological Monitor shall verify that vegetation is not cleared outside existing roads. The Biological Monitor would verify that the special-status plant species within the construction impact area is temporarily relocated and then restored.

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
tortoise critical habitat. If the "nursery area" is located within desert tortoise suitable habitat, the "nursery area" will be located within a previously disturbed area or an area devoid of vegetation (i.e., laydown or staging areas). If unforeseen circumstances require disturbance of vegetation beyond the final Proposed Project route, California Broadband Cooperative shall notify the appropriate Agencies immediately. Surface stabilization and reclamation within and along the boundaries of the Proposed Project Right-of-way shall be accomplished by removing construction debris from the Project area and returning the soil to its original grade.			
▪ On BLM lands, cactus, yucca, and other succulents will be salvaged and transplanted out of harm's way, but still within the right-of-way when avoidance is not possible.			
MM-Bio-3: If an active native bird nest were found within 100 feet (500 feet for raptors) of the Project corridor, an appropriate buffer will be assigned by the Monitoring Biologist. The biologist shall have the discretion to adjust the buffer area (upward or downward) as appropriate according to proposed construction activity, the bird species involved, and the status of the nest and nesting activity.	During the bird breeding season of March 15 through September 15, 48-hours prior to and during construction activities.	Biological Monitor to submit daily monitoring logs.	The nesting species and the assigned buffer will be documented upon discovery of nest.
▪ If an active goshawk nest were found within a protected activity center along the Project corridor, the Project will follow the appropriate limited operating period (i.e., February 15 – September 15).	During the goshawk breeding season of February 15 through September 15, 48-hours prior to and during construction activities. The surveys will follow the Pacific Southwest Region Northern Goshawk Survey Protocol (2000).	Biological Monitor to submit daily monitoring logs to the Forest Wildlife Biologist and include the GPS location of any nests or individuals seen, the date surveys occurred, and names of surveyors.	The nesting goshawk and the assigned buffer will be documented upon discovery of nest.
MM-Bio-4: The Proposed Project does not directly cross any known greater sage-grouse lekking or	Prior to and during construction activities.	The Project Biologist or Biological Monitor and the appropriate Agency	Measures required to maintain construction activity would be

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
breeding areas. If a greater sage-grouse is observed within 100 feet of an active construction site, construction activities will be limited or temporarily halted until the animal has left the area. If the sage-grouse does not leave the area on its own, the Project Biologist would contact the appropriate Agency to determine the best course of action. If any construction activities were to occur within a newly identified lekking or breeding area, the activities shall be conducted outside the breeding season.		would determine the course of action in an effort to allow construction activities to resume.	documented immediately upon completion of biologist and Agency discussions. The Biological Monitor to record greater sage-grouse observations and interactions.
MM-Bio-5: A survey shall be conducted within 30 days prior to the initiation of construction by a qualified biologist to determine the presence or absence of the burrowing owl in the construction zone plus 250 feet beyond.	30 days prior to start of construction and during construction activities.	The Biological Monitor will be responsible for the oversight of burrowing owl surveys and burrows that are encountered and provide recommendations for protection.	The Biological Monitor to record burrowing owl observations and interactions.
MM-Bio-6: If the burrowing owl is present, no disturbance shall occur within 50 meters (approximately 160 ft) of occupied burrows from September 1 through January 31 or within 75 meters (approximately 250 ft) of occupied burrows from February 1 through August 31.	During construction activities.	Biological Monitor to submit daily monitoring logs	Biological Monitor to verify in the field.
MM-Bio-7: Pipes or similar construction materials that are stored on site for one or more nights shall be inspected for burrowing owls by a Biological Monitor before the material is moved, buried, or capped.	During construction activities.	The Contractor is responsible for closing and capping pipes and similar construction materials. The Biological Monitor is responsible for inspections and submitting monitoring logs of inspections performed.	Biological Monitor to verify in the field.
MM-Bio-8: Passive relocation of burrowing owls shall be implemented prior to construction only at the direction of the California Department of Fish and Game and only if the above-described occupied burrow disturbance absolutely cannot be avoided (e.g., due to physical or safety constraints). Relocation of owls shall be implemented only during the non-breeding season.	Prior to the start of construction activities and only during September 1 to January 31.	The Biological Monitor will be responsible for the oversight of burrowing owl surveys and burrows, and will coordinate accordingly with the California Department of Fish and Game.	The Biological Monitor to record burrowing owl relocation activities.

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
MM-Bio-9: When conducting construction activities during the bird breeding season of February 15 through September 15 within 500 feet of habitat in which least Bell's vireos and/or southwestern willow flycatchers are known to occur or have potential to occur, a Project Biologist shall survey for least Bell's vireos and southwestern willow flycatchers within 48 hours prior to initiating activities in an area. If least Bell's vireos or southwestern willow flycatchers are present, then construction would be temporarily halted; and the Biological Monitor and appropriate Agency would be contacted to determine the best course of action.	48 hours prior to construction (and during construction) in least Bell's vireo and southwestern willow flycatcher habitat between March 15 and September 15	The Project Biologist will conduct the survey and coordinate with the appropriate Agency, if necessary.	The Project Biologist shall submit a report documenting survey methodology and all least bell's vireo and southwestern willow flycatcher observations.
MM-Bio-10: If a special-status mammalian species were detected or directly observed within 100 feet of a construction area that may result in direct disturbance to that animal, then construction would be temporarily halted until the mammal left; if it does not leave on its own, the Biological Monitor would contact the appropriate Agency to determine the best course of action.	During construction activities.	A Biological Monitor and the Agency would determine the course of action in an effort to allow construction activities to resume. A Biological Monitor would be present to monitor for potential disturbance to special-status mammalian species.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions. Biological Monitor would submit daily monitoring logs.
MM-Bio-11: If a Sierra Nevada bighorn sheep is observed within 100 feet of an active construction site, then construction would be temporarily halted until the animal leaves the area. If the animals does not leave the area within a short time; or if it appears to be injured or ill; or if a lamb, with or without a ewe, is present in the area, then the Project Biologist, if necessary, shall contact the appropriate Agency to determine the best course of action. All verified bighorn sheep observations will be recorded in daily field notes and reported in the Project compliance reports.	During construction activities.	The Project Biologist and the Agency would determine the course of action in an effort to allow construction activities to resume.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions.
MM-Bio-12: If a mule deer is observed within 100 feet of an active construction site, then construction would be temporarily halted until the	During construction activities.	An on-call Biological Monitor and the Agency would determine the course of action in an effort to allow	Measures required to resume work would be documented immediately upon completion of biologist and

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
animal leaves the area. If the mule deer does not leave the area within a short time; or if it appears to be injured or ill; or if a fawn, with or without a doe, are present in the area, the Project Biologist or Biological Monitor will be contacted and, if necessary, the appropriate Agency would be contacted to determine the best course of action.		construction activities to resume.	Agency discussions.
MM-Bio-13: Mohave ground squirrel are assumed to be present in the Proposed Project area. The Mohave ground squirrel shall be looked for opportunistically as part of other surveys and monitoring required during Project construction. Mitigation measures will be coordinated with the California Department of Fish and Game, and an incidental take permit will be obtained by California Broadband Cooperative prior to construction occurring in Mohave ground squirrel habitat.	During construction activities.	The Biological Monitor will be responsible for the oversight of Mohave ground squirrel and burrows that are encountered and provide recommendations for protection.	The Biological Monitor to record Mohave ground squirrel observations and interactions.
MM-Bio-14: The Project Biologist shall immediately notify the Contractor and the California Department of Fish and Game of any Mohave ground squirrel encountered. Notification to the California Department of Fish and Game shall follow the requirements identified in the incidental take permit.	Prior to and during construction activities.	The Biological Monitor will be responsible for notifying the Contractor and California Department of Fish and Game of a Mohave ground squirrel encounter. The Biological Monitor will be responsible for the preparation of an incident report for a Mohave ground squirrel encounter.	The Biological Monitor will notify the California Department of Fish and Game within the same day or by the following business day as described in this measure. The Biological Monitor will prepare an incident report following a Mohave ground squirrel encounter.
MM-Bio-15: The Project Biologist will survey for bats and/or bird nests prior to installing of conduit at bridges. Construction at any bridges with active bird nests or bat colonies would be avoided during the breeding season. The appropriate Agency would be consulted should a bridge appear to serve as a bat roost.	A bird nest and bat survey would be performed within two weeks of installing conduit on a bridge. The typical bird nesting season is between February 15 and August 31, with most nesting activities occurring between March and July. The typical bat breeding season is May to July.	The Project Biologist will conduct the survey.	Active bird nests and bat colonies will be identified on a map following the nesting bird surveys.

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
MM-Bio-16: If roosting bats may be present, then the Project Biologist shall identify the species and contact the California Department of Fish and Game or the Nevada Department of Wildlife to determine the best course of action. Where bridges may serve as maternity roosts, Project construction will be delayed until conclusion of the breeding season.	Prior to and during construction activities.	The Project Biologist or Biological Monitor and the Agency would determine the course of action in an effort to minimize impacts to special-status bats or roost site and allow construction activities to resume.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions.
MM-Bio-17: The Project Biologist shall conduct pre-construction surveys for American badger dens in the Project Area, including areas within 100 feet of all Project Right of Way staging areas and access roads. If dens are detected, each den will be classified as inactive, potentially active, or definitely active.	Prior to construction activities.	The Biological Monitor will be responsible for the oversight of badger surveys and burrows that are encountered and provide recommendations for protection.	The Biological Monitor to record badger observations and interactions.
MM-Bio-18: Disturbance to all American badger dens will be avoided to the maximum extent possible. Dens determined to be occupied between March 1 and June 30 will be avoided to protect adults and nursing young. If a potentially active den is found in a construction area, the appropriate Agency would be contacted to determine the best course of action.	During construction activities	The Biological Monitor will be responsible for the oversight of badger surveys and burrows that are encountered and coordinate with the appropriate Agency to provide recommendations for protection.	The Biological Monitor to record badger observations and interactions.
MM-Bio-19: To prevent badger burrows from possible collapse from equipment vibration, speed limits shall be reduced to no more than 20 mph when within 200 feet from an active American badger den.	During construction activities	The Contractor will be responsible for oversight of construction crews vehicle operations.	During construction activities.
MM-Bio-20: A pre-construction survey shall be	The pre-construction survey shall be	A biologist qualified to survey for and	The qualified biologist shall

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
conducted for pygmy rabbit in suitable habitat by the Project Biologist. To the greatest extent possible, construction activities shall be restricted to the road; and vehicles and equipment shall avoid driving in pygmy rabbit habitat and avoid all burrows with a 50-meter buffer (15-meter minimum) in order to minimize impacts to pygmy rabbits, their burrows, and habitat. If a pygmy rabbit is found in a construction area and does not leave the site on its own, the appropriate Agency would be contacted to determine the best course of action.	conducted within two weeks prior to construction.	handle pygmy rabbit.	document the methodology and results of the pre-construction survey and the relocation of any rabbit colonies, if necessary. Other methods implemented to avoid or minimize impacts to pygmy rabbits shall be documented.
MM-Bio-21: If construction activities may result in adverse impacts to special-status amphibian and/or reptilian species, then construction would be temporarily halted and the Project Biologist and appropriate Agency would be contacted to determine the best course of action.	During construction activities.	A Biological Monitor and the Agency would determine the course of action in an effort to allow construction activities to resume.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions.
MM-Bio-22: Surveys for special-status amphibian and/or reptile species shall be conducted prior to construction in areas with potential to support special-status reptile or amphibian species. If a special-status amphibian and/or reptilian species is confirmed to be present within 100 feet of the construction activities, then a Biological Monitor would be present to monitor for the species and alert construction crews to the possible presence of these species.	Within two weeks prior to and during construction activities.	A Biological Monitor would be present to survey and monitor for potential disturbance to special-status amphibian or reptile species.	Biological Monitor would submit survey results and daily monitoring logs.
MM-Bio-23: If a desert tortoise is observed within 100 feet of an active construction site, then construction would be temporarily halted; and the Biological Monitor would contact the appropriate Agency to determine the best course of action.	During construction activities.	A Biological Monitor and the Agency would determine the course of action in an effort to allow construction activities to resume.	Measures required to resume work would be documented immediately upon completion of biologist and Agency discussions. All observations of desert tortoises within the Project vicinity will be recorded and compiled in compliance reports.
MM-Bio-24: If a desert tortoise must be moved	During construction	The Project Biologist.	The Project Biologist shall document

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
from harm's way during Project activities, the Project Biologist will follow the "Guidelines for Handling Desert Tortoises During Construction Projects" (Desert Tortoise Council 1999), or most current Agency guidelines, and will comply with the requirements identified in the Biological Opinion.			all incidents in which a desert tortoise must be moved.
MM-Bio-25: If construction activities are required within 100 feet of waterbodies suitable for special-status aquatic wildlife, a Biological Monitor would be present on the site during construction.	Prior to and during construction activities.	Prior to the start of each day's construction activities, a Biological Monitor will determine if activities will occur within 100 feet of a waterbody suitable for special-status aquatic wildlife. Daily visual inspections also would include assessment of the integrity of Best Management Practices. The biological monitor would report deficient sediment control devices to the Engineering Inspector for prompt repair.	Biological Monitor would submit daily monitoring logs.
MM-Bio-26: If habitat for special-status insects is within the construction area, and a special-status insect species are detected within or adjacent to the proposed area of direct disturbance during construction and does not leave the site on its own, the appropriate regulatory Agencies would be consulted to determine the best course of action.	During construction.	The Project Biologist will conduct the survey and coordinate with the appropriate Agency.	The Project Biologist shall prepare a report documenting the consultation with the resource agencies and recommended actions.
CULTURAL RESOURCES			
MM-CR-1: In the event that any previously unidentified or buried cultural resource materials are encountered within any part of the Project area, all ground-disturbing construction activities must be suspended in the vicinity of the find until the deposit is recorded and evaluated by a qualified archaeologist and the appropriate avoidance and minimization measure is identified.	In the event of discovery	Cultural Resources Monitor to submit compliance reports	In the event of discovery.

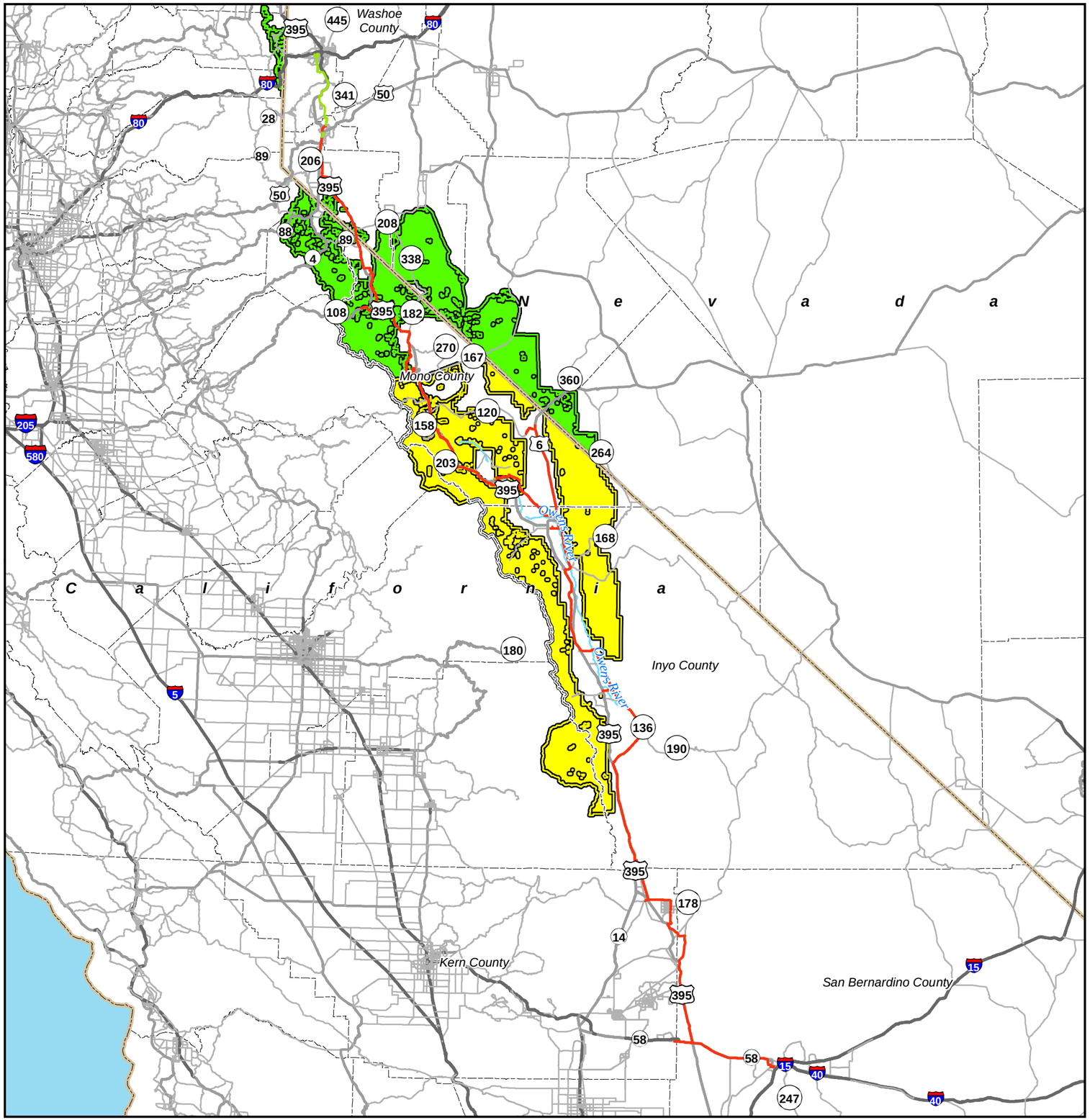
MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
On Bureau of Land Management lands, Agency archaeologists should be contacted prior to work continuing. The field manager makes the decision when work can continue, based on the Agency archaeologists' opinion.			
MM-CR-2: Sites that cannot be avoided, such as those that have already been determined eligible for National Register of Historic Places or State listing, will require testing and data recovery measures upon approval of a data recovery plan. A recovery plan will be in place prior to construction activities. Testing of the site and data recovery can be conducted with Agency approval.	Prior to construction activities	Cultural Resources Monitor to submit daily monitoring logs	Cultural Resources Monitor to verify in the field
MM-CR-3. If potential human skeletal remains are discovered, all activity in the area of discovery would cease immediately. The protocol for the inadvertent discovery of human remains is found in State Health and Safety Code Division, Part 1, Chapter 2, Section 7050.5 and Public Resource Code 5097.98. Other applicable State and Federal laws are the Archaeological Resources Protection Act (ARPA), the American Indian Religious Freedom Act (AIRFA), and the Native American Graves Protection & Repatriation Act (NAGPRA). The County Coroner would be notified immediately (within 24 hours) to make a determination as to human or nonhuman skeletal remains and the circumstances, manner, and cause of death. If the Coroner determines that the remains are Native American, he or she would contact the Native American Heritage Commission to identify a Most Likely Descendent, or, if in Nevada, the Office of Historic Preservation of the Department of Cultural Affairs. In California, the Native American Heritage Commission would notify the most likely descendant who would consult with the Project proponent and the lead Agency in determining the final disposition of the remains. In	In the event of discovery	Cultural Resources Monitor to submit compliance reports	In the event of discovery.

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
Nevada, the Office of Historic Preservation would consult with the Project proponent and the lead Agency in determining the final disposition of the remains. Upon discovery of human remains, Native American Graves Protection & Repatriation Act procedures will be followed. In brief, the contractor will immediately notify the responsible Federal or Tribal official by telephone and provide written confirmation to the responsible Federal or Tribal official. If the inadvertent discovery occurs in connection with an on-going activity, the contractor must cease the activity in the area of the inadvertent discovery and make a reasonable effort (halt all activity within a 100-foot radius) to protect the human remains and other cultural items. The Federal or Tribal Agency official must certify receipt of the notification within three days. The Federal or Tribal official may take further action to secure and protect the human remains and other cultural items. The Federal or Tribal Agency official must prepare, approve, and sign a written plan of action to treat the inadvertent discovery. The activity that resulted in the discovery may resume 30 days after the Federal or Tribal Agency official certifies receipt of the notification. Custody must be determined in accordance with 25 USC 3002 (a), "Priority of Ownership," and 43 CFR 10.6, "Priority of Custody."			
MM-CR-4: If fossils are encountered during construction, construction activities shall be temporarily diverted from the discovery, and the Paleontological Monitor shall notify the appropriate parties/Agencies and collect matrix for testing and processing as directed by the Project Paleontologist. In order to expedite removal of fossil-bearing matrix, the Paleontological Monitor	During construction	Project Paleontologist to conduct appropriate recovery and testing.	In the event of discovery.

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
may request heavy machinery to assist in moving large quantities of matrix out of the path of construction to designated stockpile areas. Construction shall resume at the discovery location once the all necessary matrix is stockpiled, as determined by the Paleontological Monitor. Testing of stockpiles shall consist of screen washing small samples to determine if important fossils are present. If such fossils are present, the additional matrix from the stockpiles shall be water screened to ensure recovery of a scientifically significant sample. Samples collected would be limited to a maximum of 6,000 pounds per locality. At each fossil locality, field data forms shall record the locality, stratigraphic columns would be measured, and appropriate scientific samples submitted for analysis. The Project Paleontologist shall direct identification, laboratory processing, cataloguing, analysis, and documentation of the fossil collections. When appropriate, and in consultation with California Broadband Cooperative and the appropriate parties/Agencies, splits of rock or sediment samples shall be submitted to commercial laboratories for microfossil, pollen, or radiometric dating analysis. After analysis, the collections shall be prepared for curation. A final technical report shall be prepared to summarize construction monitoring and present the results of the fossil recovery program. The report shall be prepared in accordance with California Public Utilities Commission, Society of Vertebrate Paleontology guidelines, and lead Agency requirements. The final report shall be submitted to the Applicant, lead Agencies, and the curation repository.			
AESTHETIC AND VISUAL RESOURCES			

MITIGATION MONITORING AND REPORTING PROGRAM MITIGATION MEASURES California Broadband Cooperative - Digital 395 Middle Mile Project			
Mitigation Measure to be Implemented	**Implementation Timing**	**Responsible Party**	**Timing of verification**
MM-AVR-1: If construction staging areas are visible from residences; public gathering areas; and/or recreational areas, facilities, or trails, then construction staging areas shall be visually screened using temporary screening fencing of appropriate design and color.	Included in Project plans and specifications, and implemented prior to construction activities	The Engineering Inspector is to verify that appropriate screening techniques were implemented.	Upon completion of the installation of visual barriers.

APPENDIX C – MAPS OF VEGETATION COMMUNITIES OF HUMBOLDT-TOIYABE NATIONAL FOREST



Legend

- 01 Mojave Creosote Bush Scrub
- 03 Developed
- 04 Desert Saltbush Scrub
- 05 Desert Sink Scrub
- 06 Transmontane Alkali Marsh
- 07 Rabbitbrush Scrub
- 08 Tamarisk Scrub
- 10 Open Water
- 11 Rabbitbrush Scrub
- 12 Big Sagebrush Scrub
- 13 Joshua Tree Woodland
- 14 Ornamental Landscaping
- 15 Mojave Riparian Forest
- 17 Great Basin Cottonwood - Willow Riparian Forest
- 18 Great Basin Mixed Scrub
- 19 Wet Subalpine Meadow
- 20 Subalpine Sagebrush Scrub
- 21 Aspen Forest
- 22 Tobacco Brush Chaparral
- 23 Great Basin Grassland
- 24 Lodgepole Pine Forest
- 25 Sierran Mixed Conifer Forest
- 26 Great Basin Pinyon-Juniper Woodland
- 27 Great Basin Pinyon Woodland
- 28 Great Basin Juniper Woodland and Scrub
- 31 Agriculture
- 32 Montane Riparian Forest
- 32 Montane Riparian Forrest
- 33 Eastside Ponderosa Pine Forest
- 34 Great Basin Pinyon-Juniper Woodland
- 35 Montane Black Cottonwood Riparian Forest
- 36 Ruderal/Disturbed
- 37 Turf grass
- 38 Montane Freshwater Marsh
- 39 Transitional Great Basin Mixed Scrub
- 40 Blackbush Scrub
- 41 Indigo Bush Scrub
- 42 Desert Greasewood Scrub
- 43 Mojave Mixed Woody Scrub
- 44 Burro Bush Scrub
- 45 Stabilized and Partially Stabilized Desert Sand Field
- 46 Rose Thicket
- 47 Great Basin Saltbush Scrub
- D01 Disturbed Mojave Cresote Bush Scrub
- D04 Disturbed Desert Saltbush Scrub
- D07 Disturbed Rabbitbrush Scrub
- D12 Big Sagebrush Scrub
- D17 Disturbed Great Basin Cottonwood - Willow Ripa
- D18 Disturbed Great Basin Mixed Scrub
- D19 Disturbed Wet Subalpine Meadow
- D20 Disturbed Subalpine Sagebrush Scrub
- D23 Disturbed Great Basin Grassland
- D26 Disturbed Great Basin Pinyon-Juniper Woodland
- D36 Disturbed Ruderal/Disturbed
- D40 Disturbed Blackbush Scrub
- D41 Disturbed Indigo Bush Scrub
- D42 Disturbed Desert Greasewood Scrub
- G19 Grazed Wet Subalpine Meadow
- G23 Grazed Great Basin Grassland

- Backbone
- Leased Conduit - Existing/Proposed

Major Roads

- Primary Limited Access
- Primary US & State Highways
- Secondary State & County

- Waterway
- State Boundary
- County Boundary

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Chambers Group Inc.

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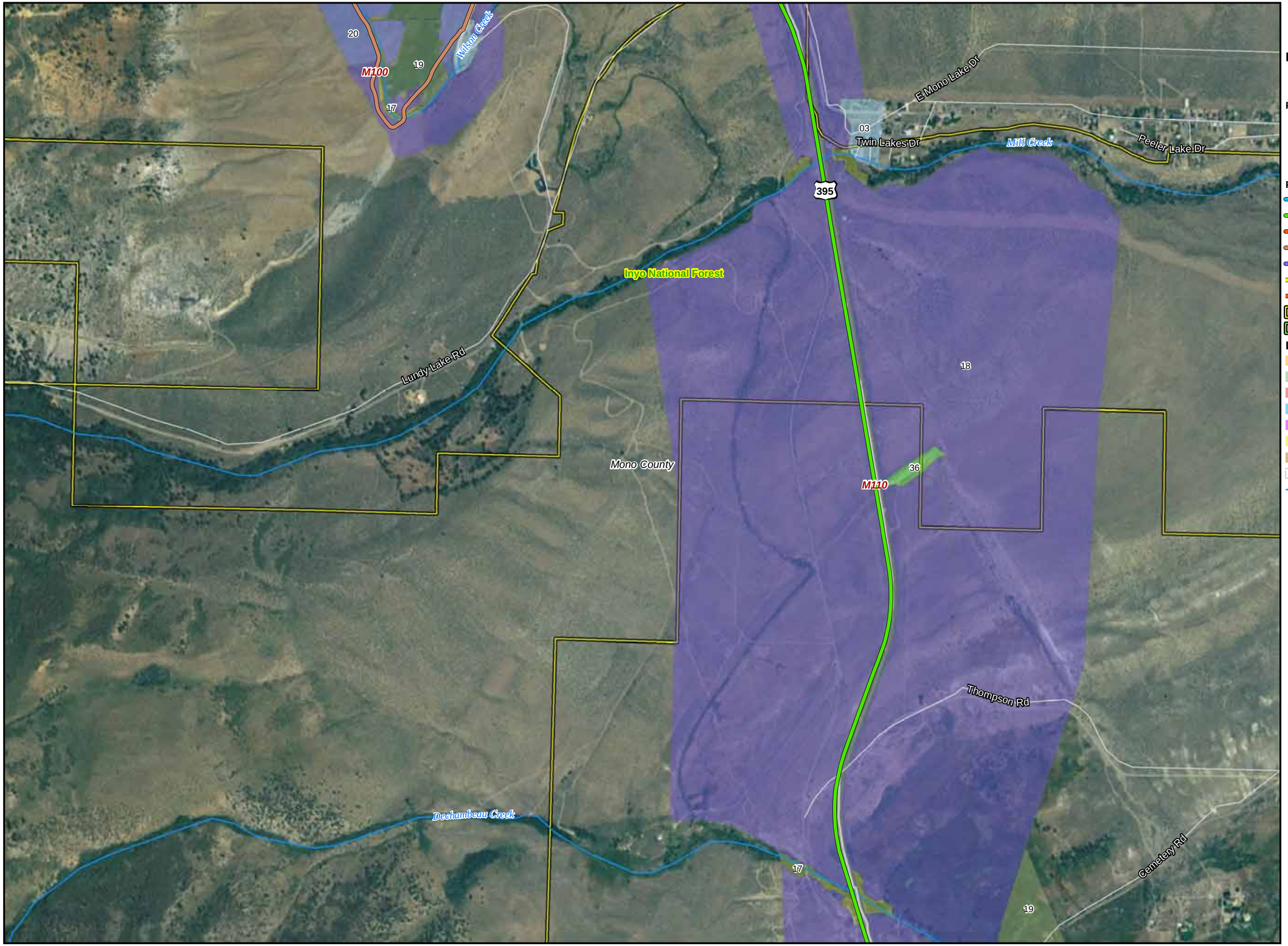
R09-Mammoth Lakes to Bridgeport-172



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

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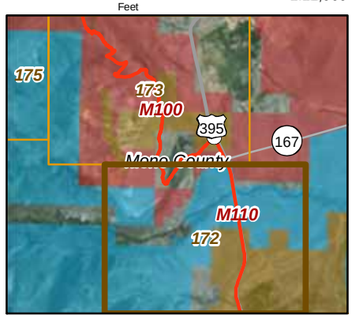

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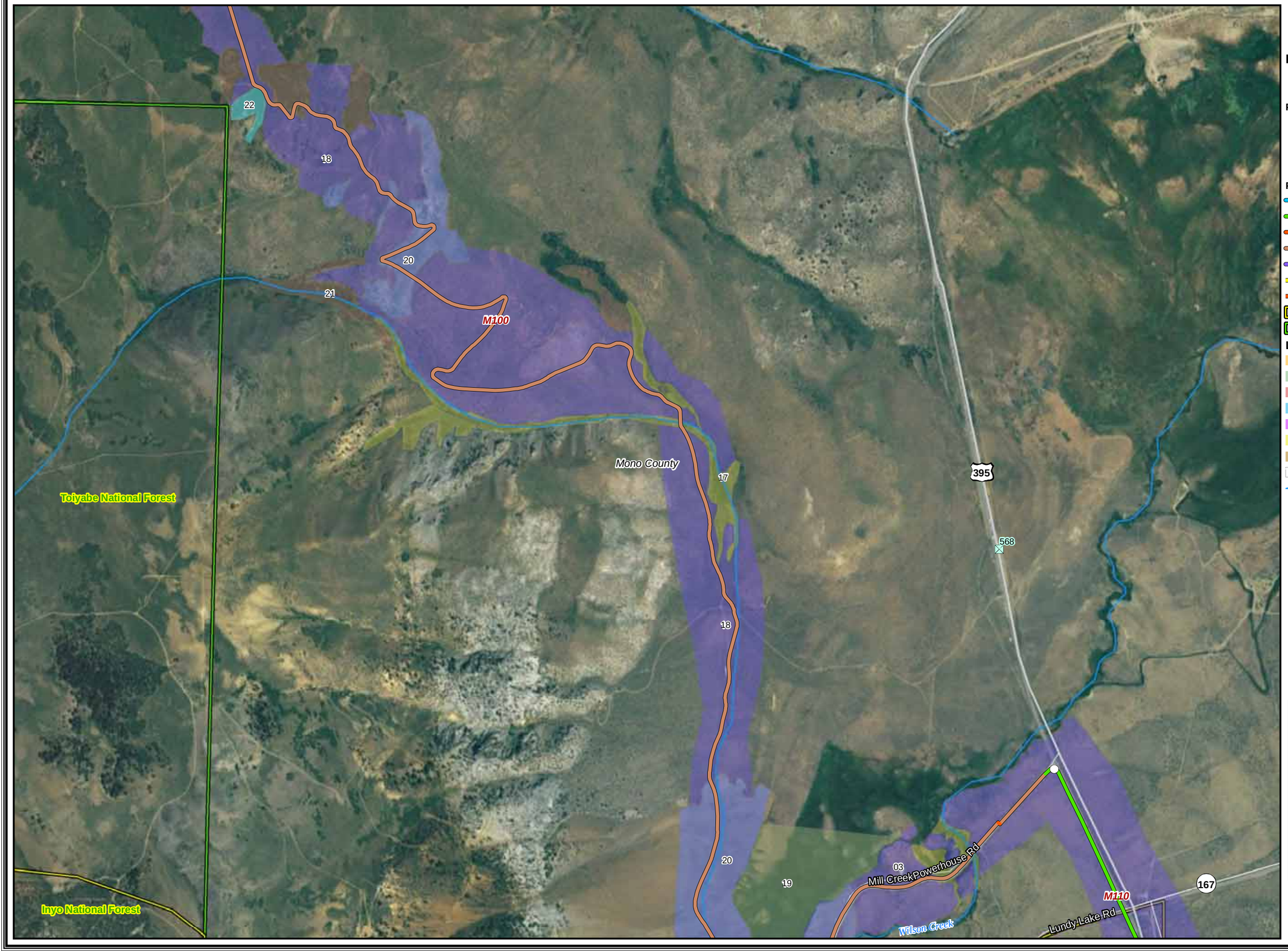


CBC Digital 395

R09-Mammoth Lakes to Bridgeport-173

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

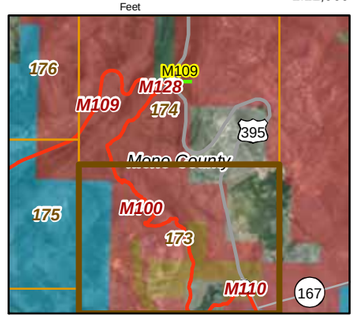
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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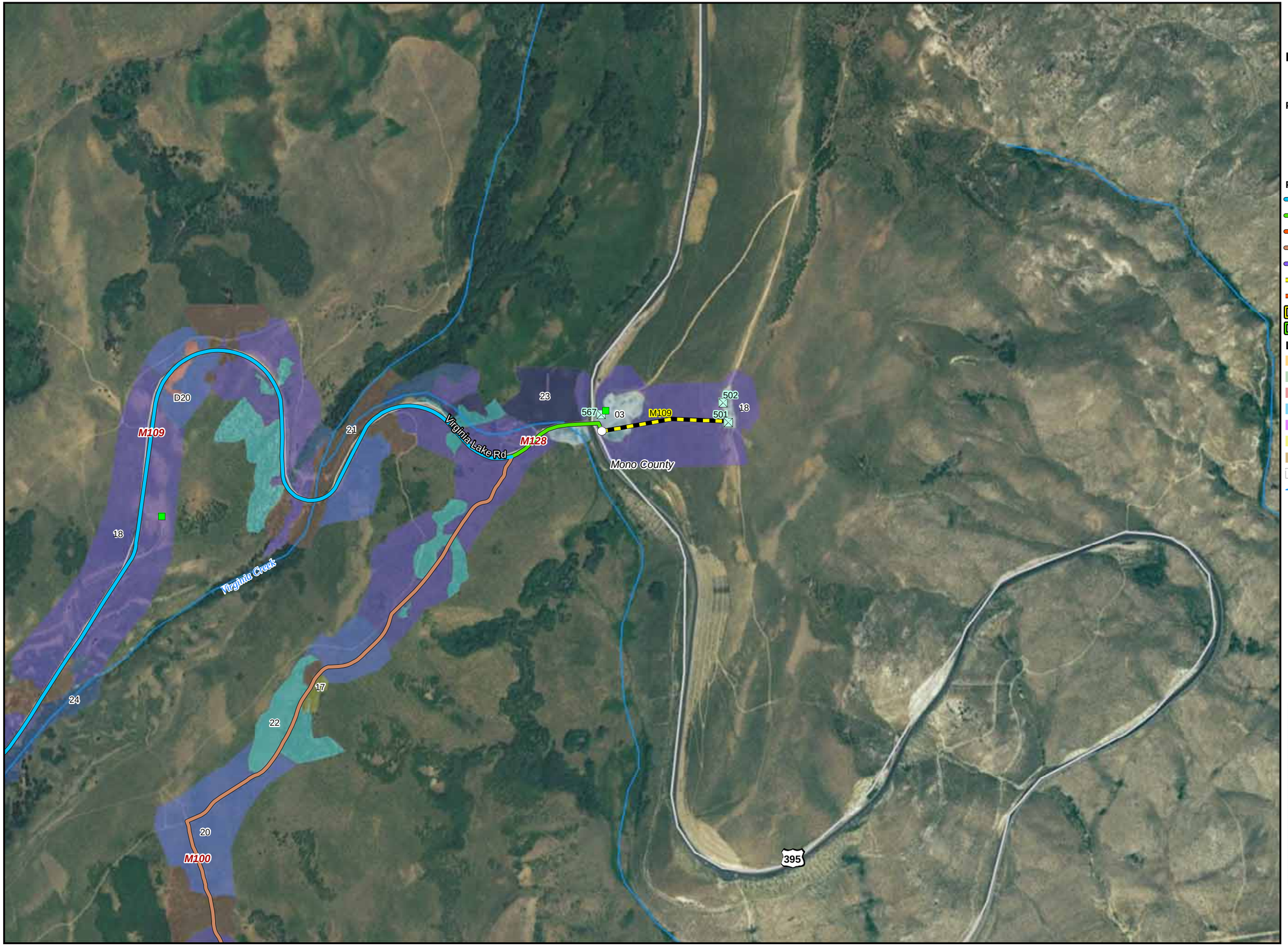


CBC Digital 395

R09-Mammoth Lakes to Bridgeport-174

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

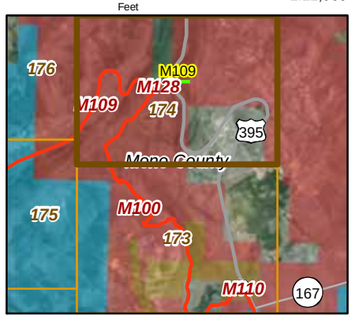
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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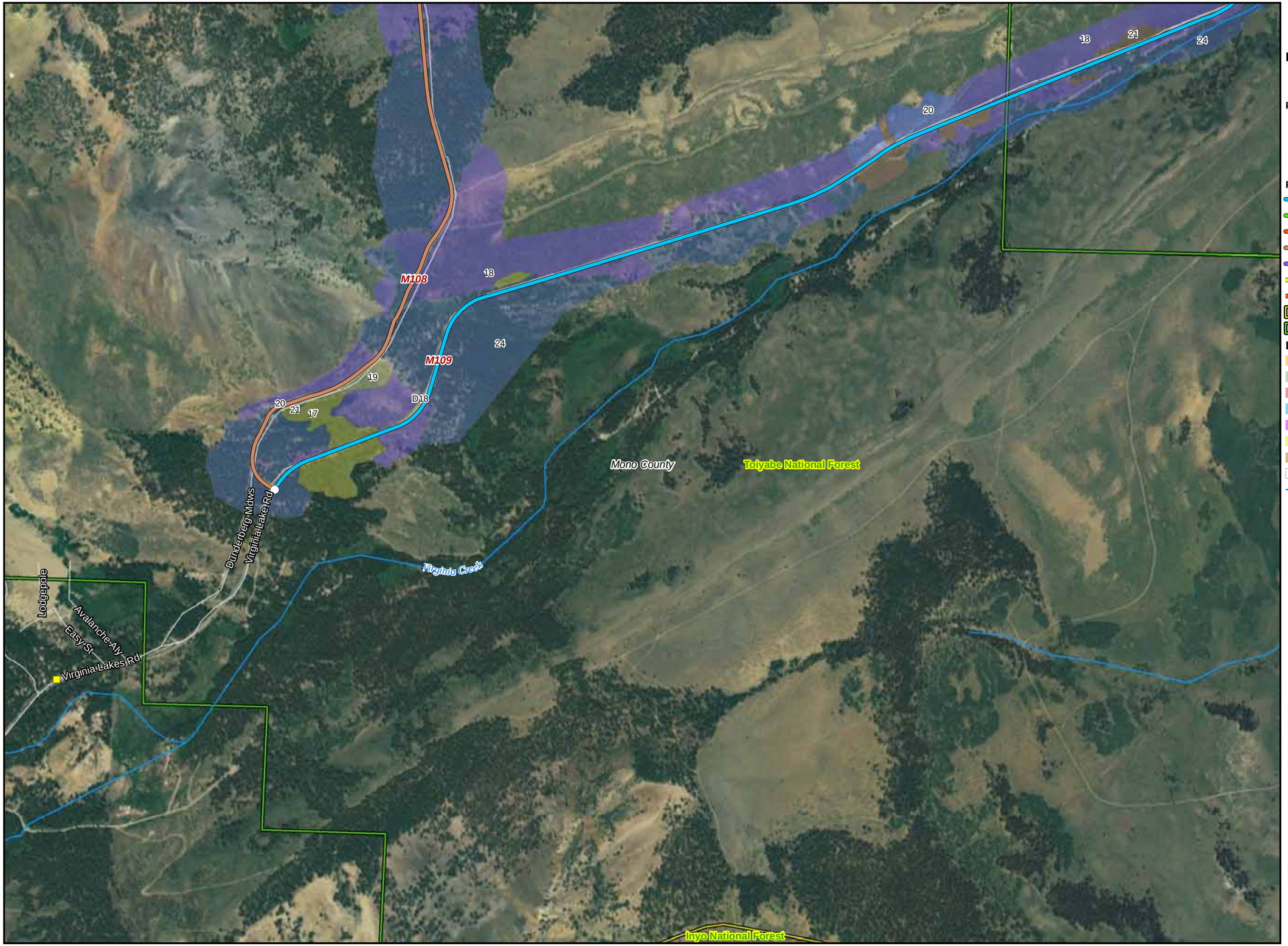
CBC Digital 395

R09-Mammoth Lakes to Bridgeport-175



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

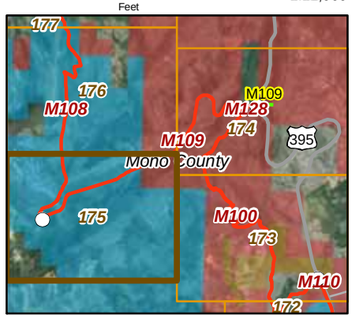
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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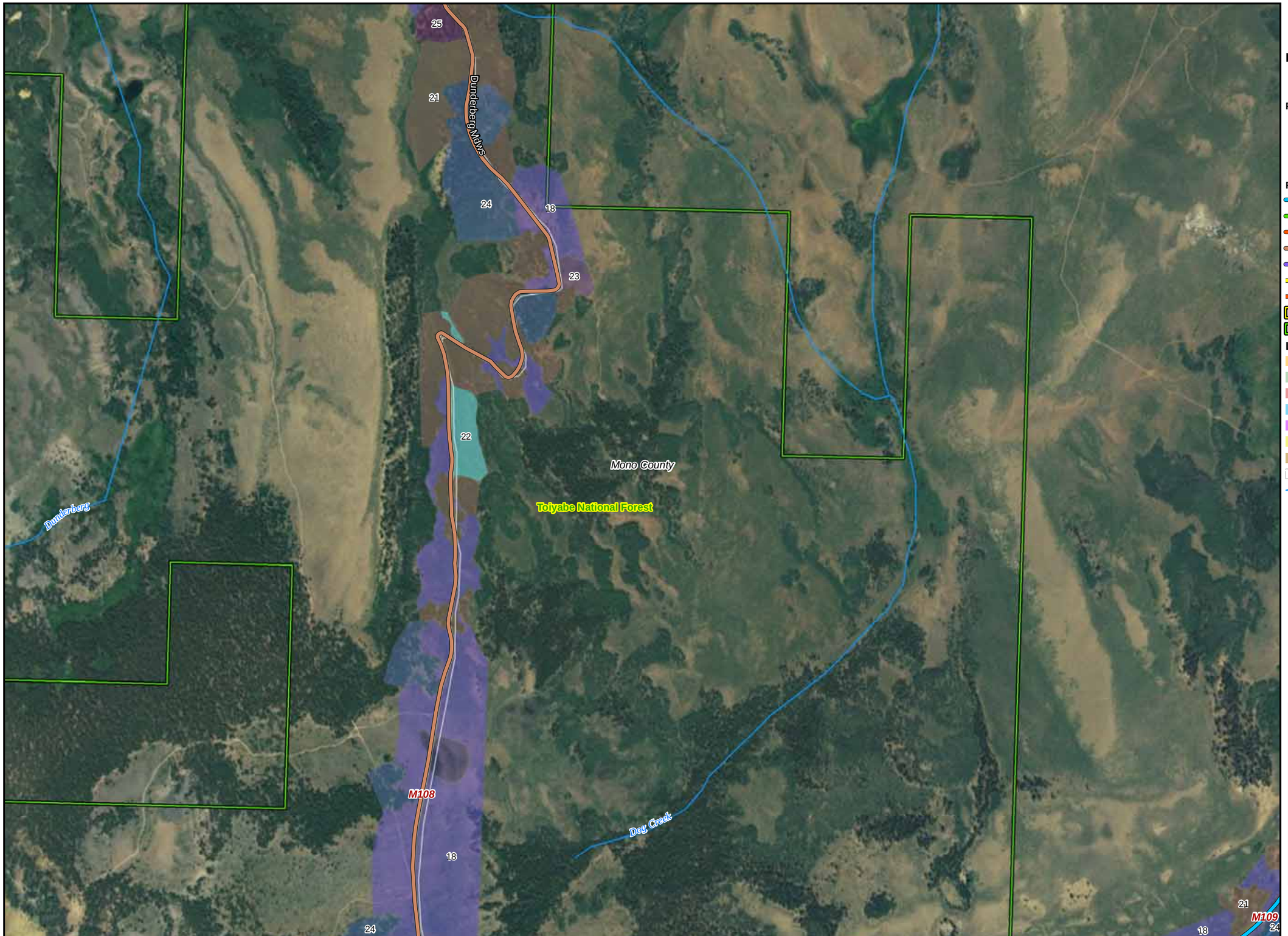


CBC Digital 395

R09-Mammoth Lakes to Bridgeport-176

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

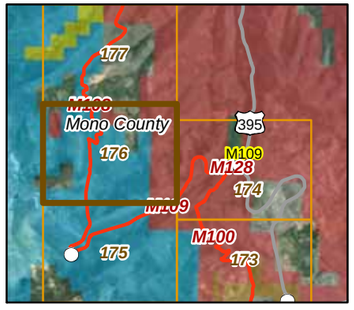
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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CBC Digital 395

R10-Bridgeport to Topaz Lake-183

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

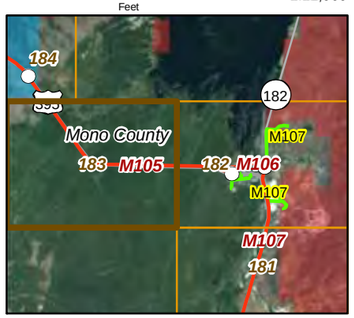
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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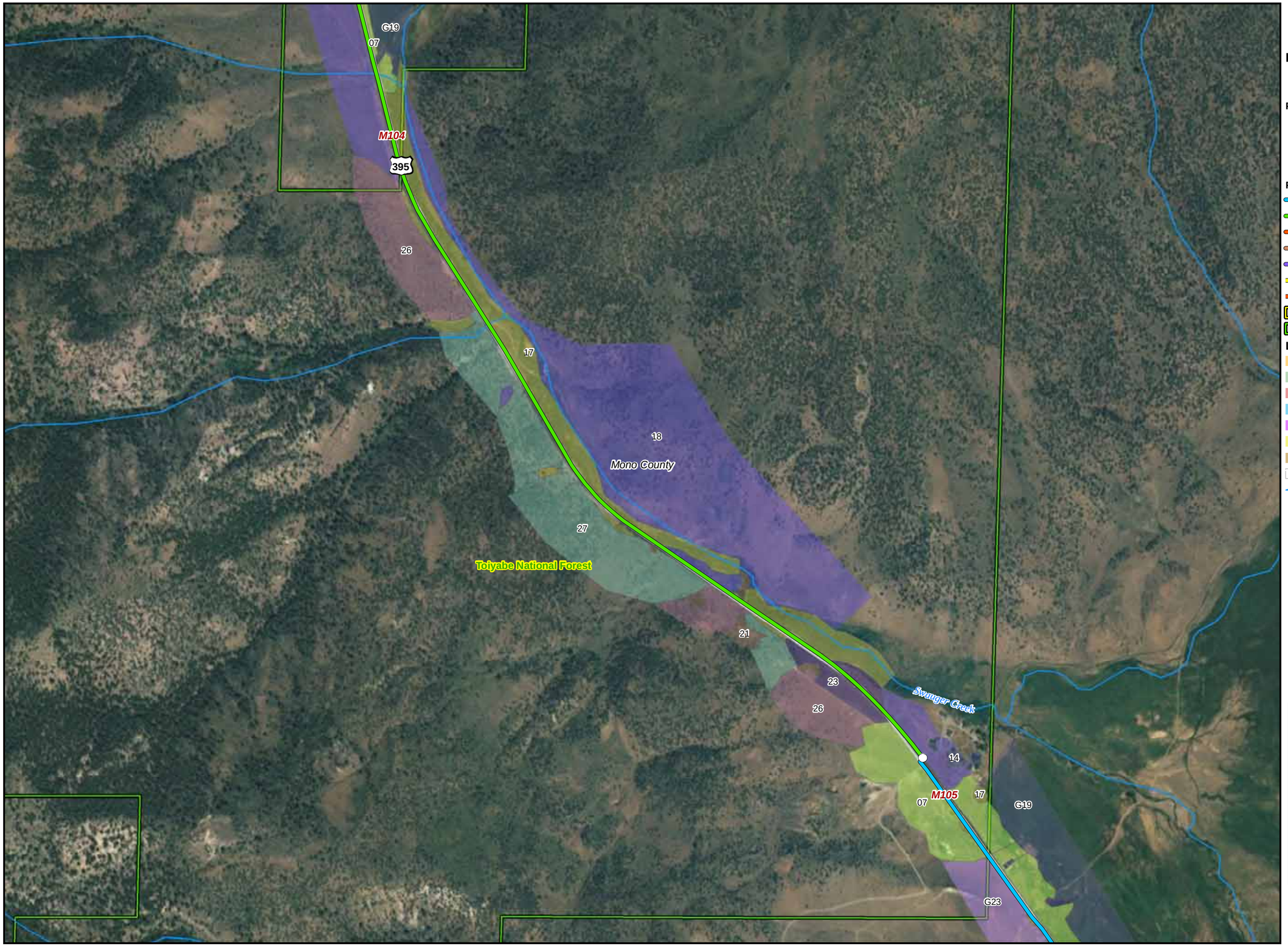
Chambers Group Inc.



CBC Digital 395

R10-Bridgeport to Topaz Lake-184

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000

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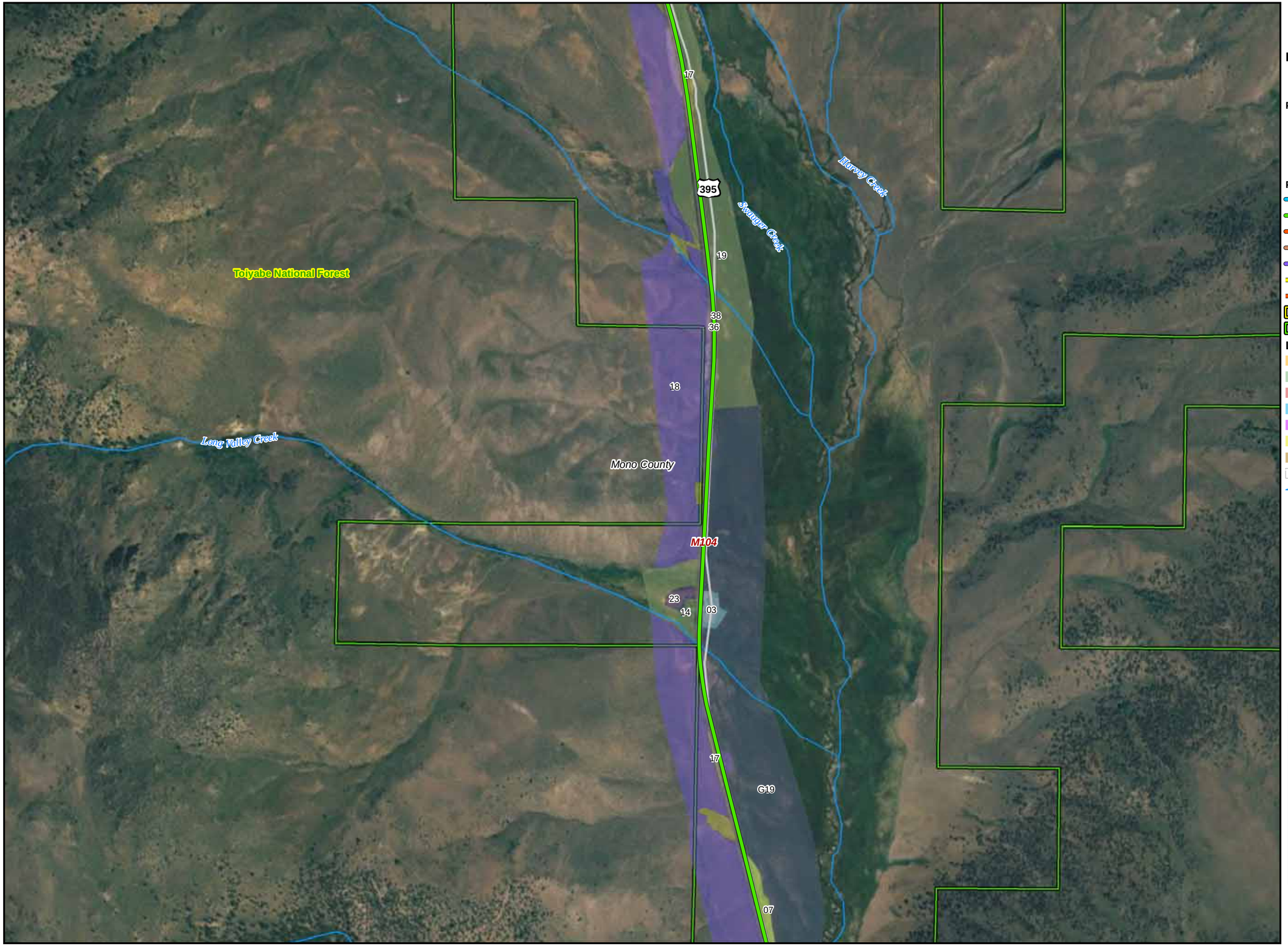
CBC Digital 395

R10-Bridgeport to Topaz Lake-185



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000

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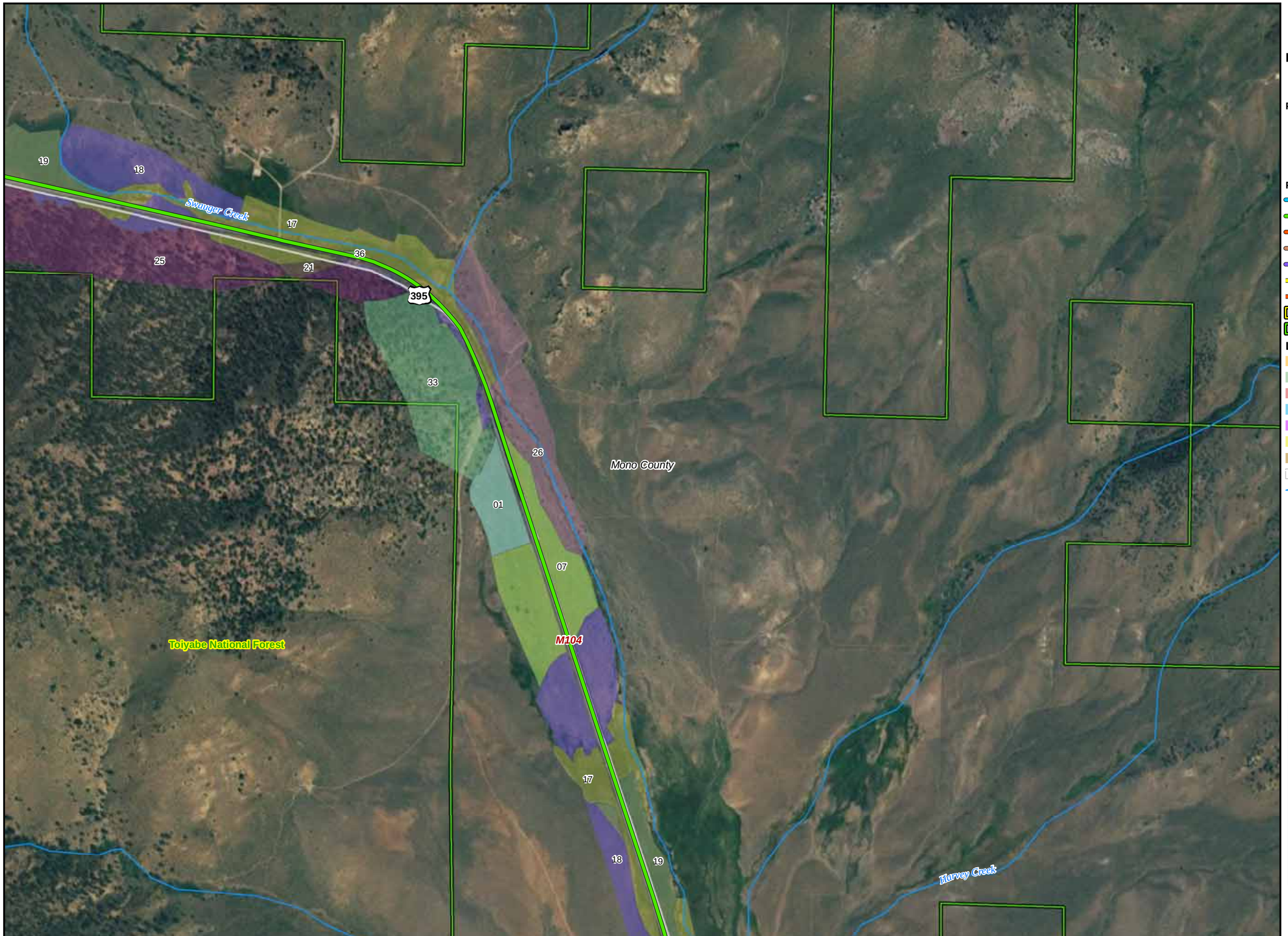
CBC Digital 395

R10-Bridgeport to Topaz Lake-186



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

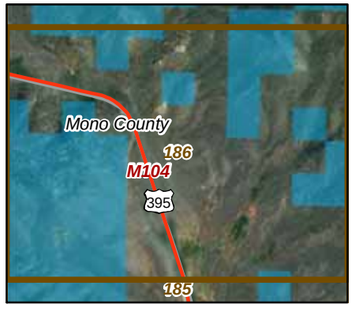
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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CBC Digital 395

R10-Bridgeport to Topaz Lake-187

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000

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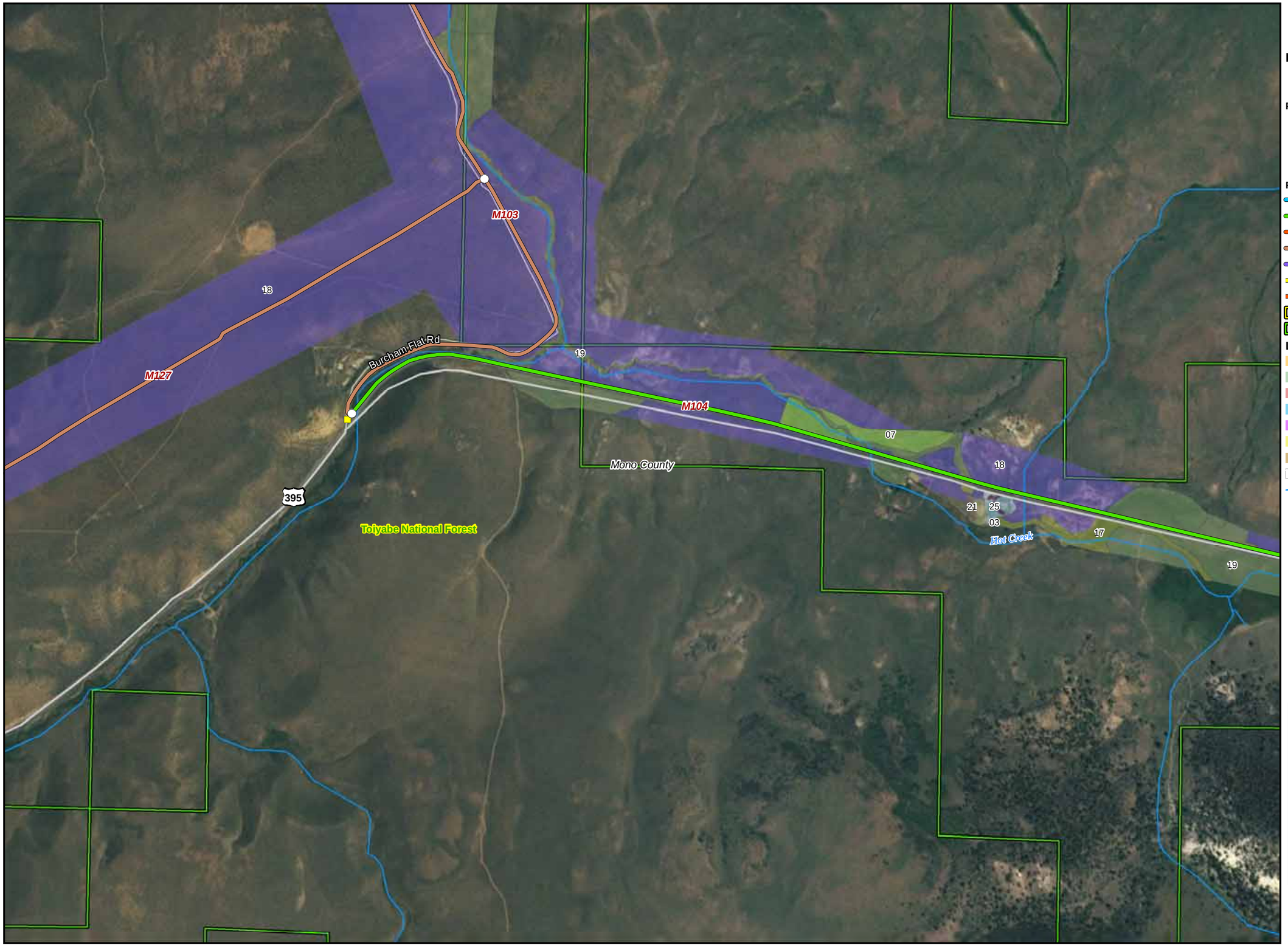
CBC Digital 395

R10-Bridgeport to Topaz Lake-188



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

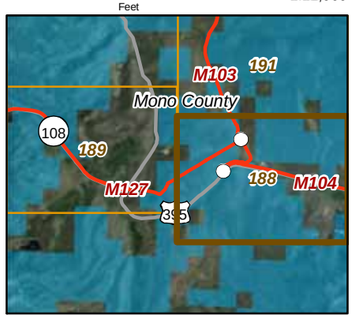
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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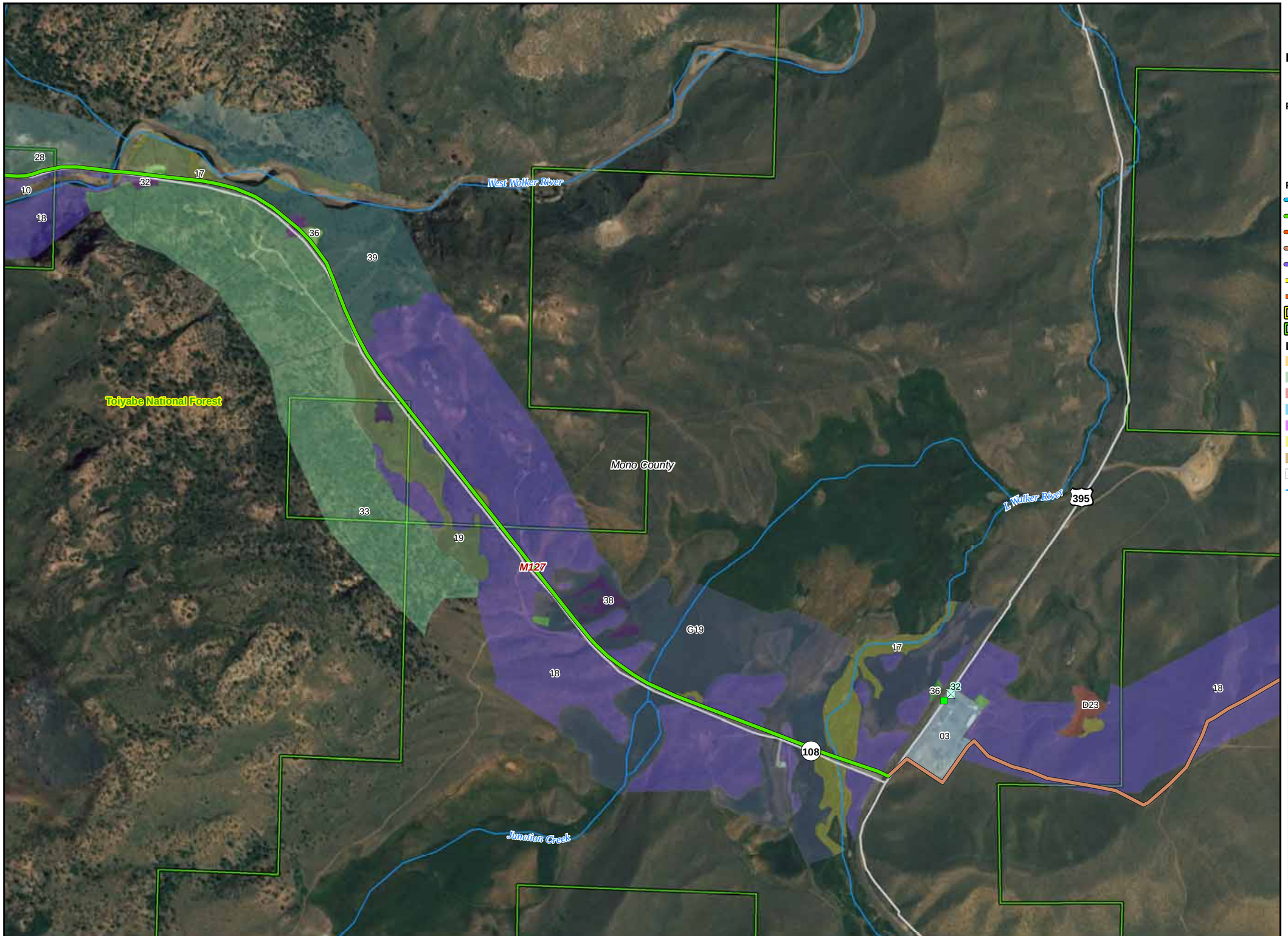
R10-Bridgeport to Topaz Lake-189



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

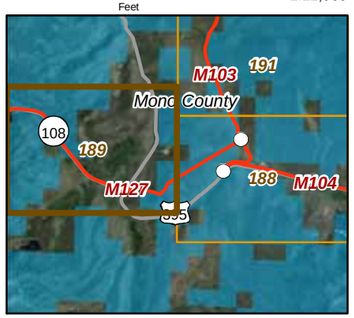
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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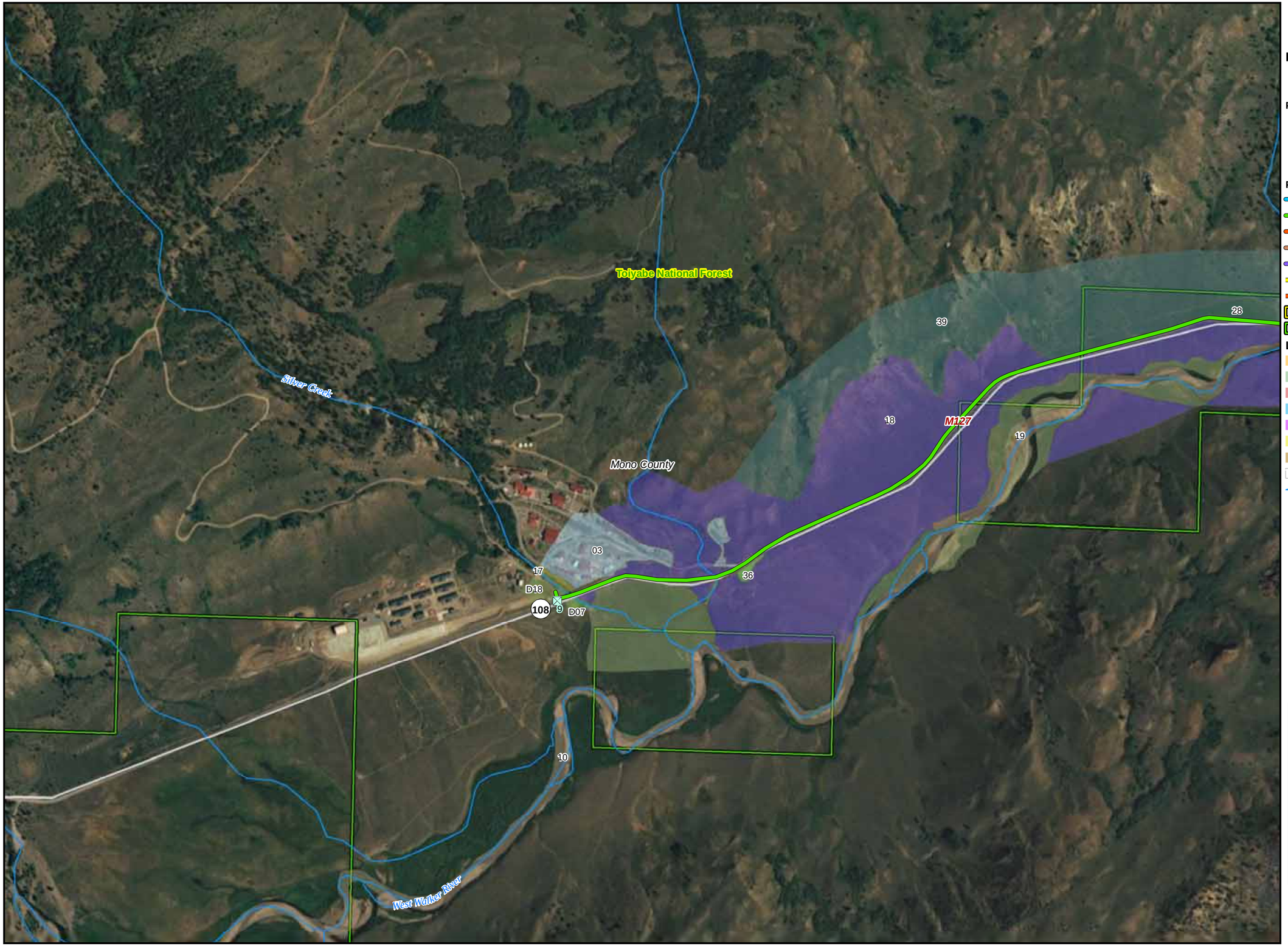
R10-Bridgeport to Topaz Lake-190



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

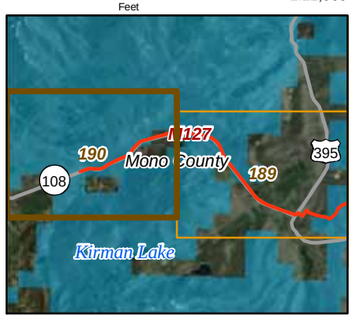
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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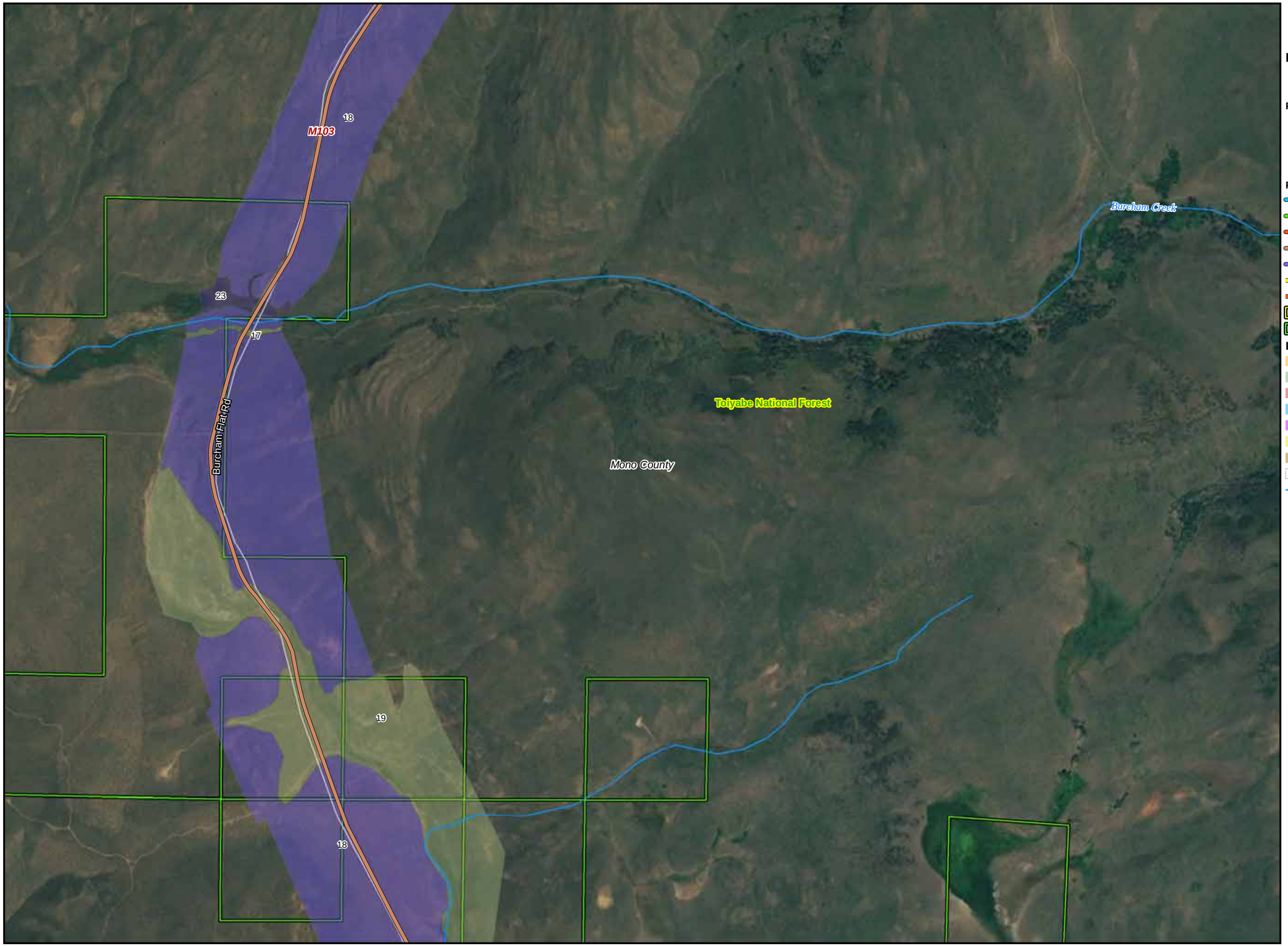
CBC Digital 395

R10-Bridgeport to Topaz Lake-191



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

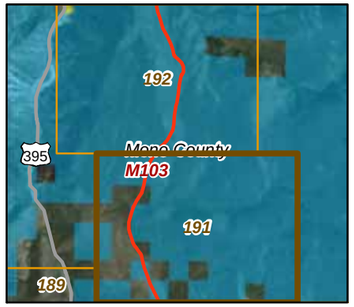
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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CBC Digital 395

R10-Bridgeport to Topaz Lake-192

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

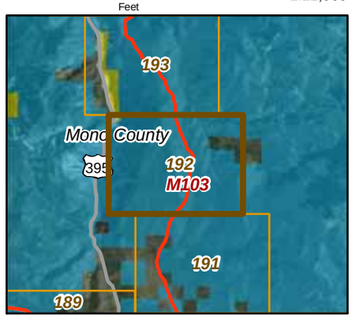
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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CBC Digital 395

R10-Bridgeport to Topaz Lake-193

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000

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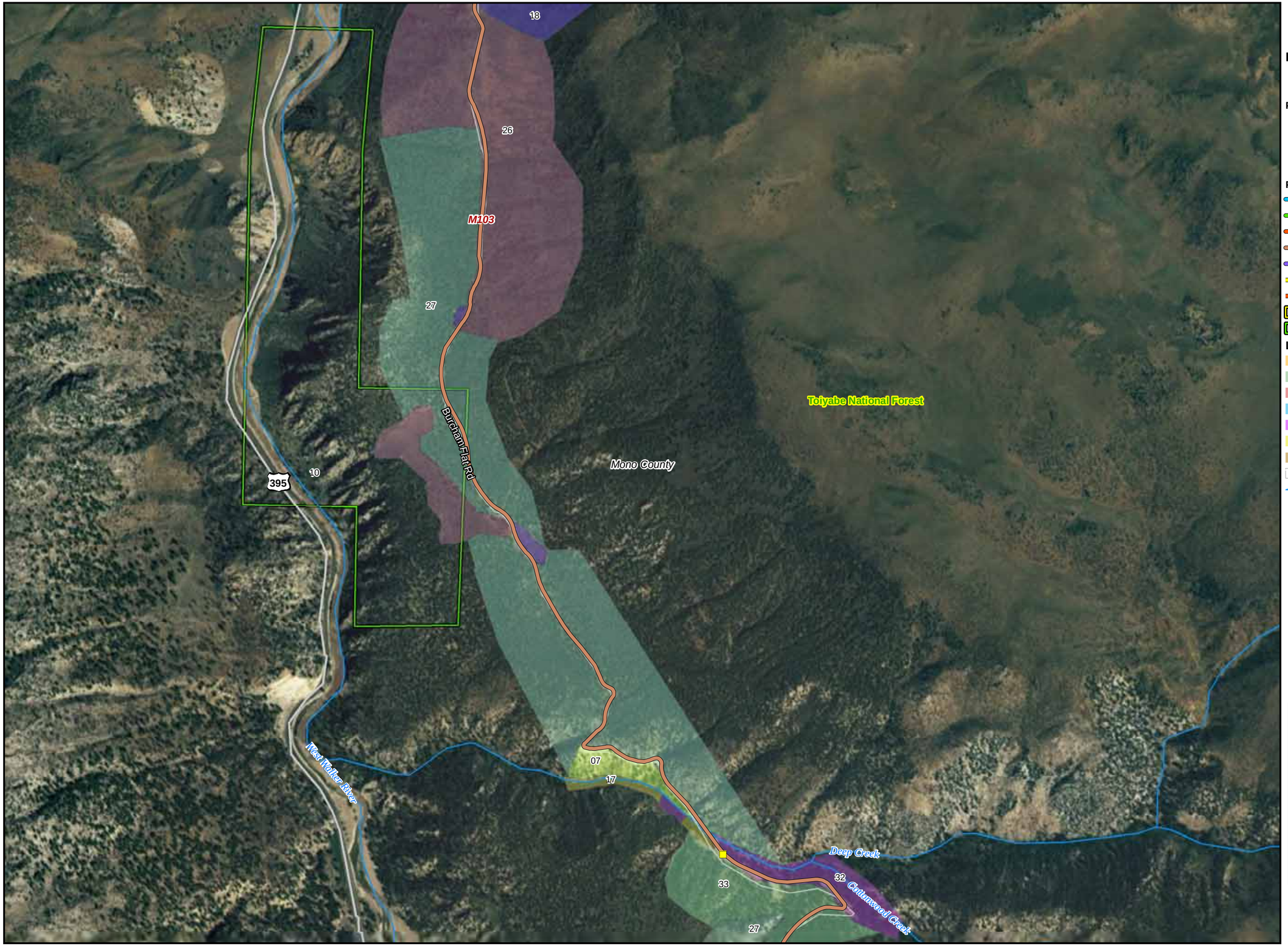
04-06-12

Chambers Group Inc.



CBC Digital 395

R10-Bridgeport to Topaz Lake-194

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000

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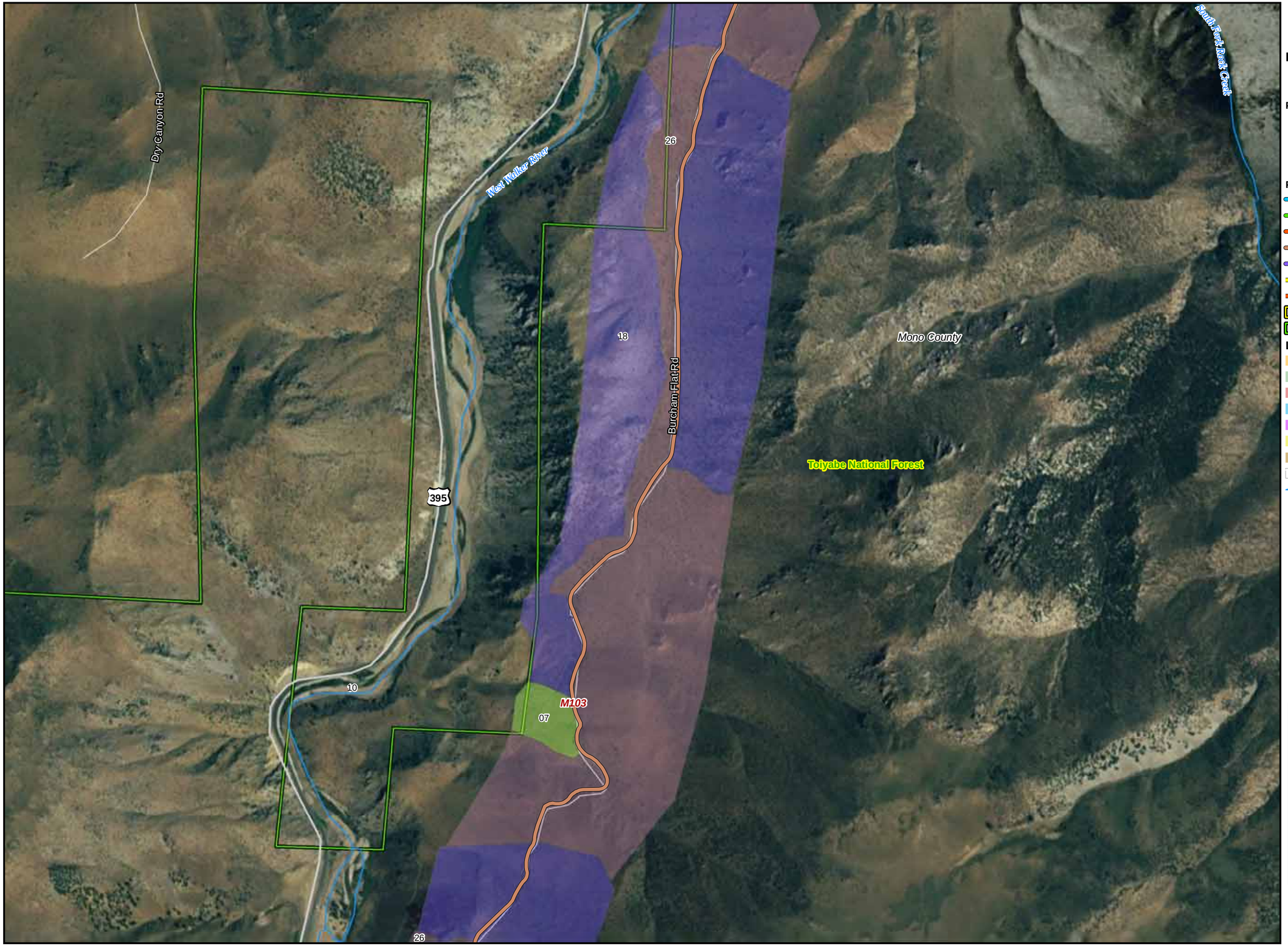
04-06-12

Chambers Group Inc.



CBC Digital 395

R10-Bridgeport to Topaz Lake-195

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

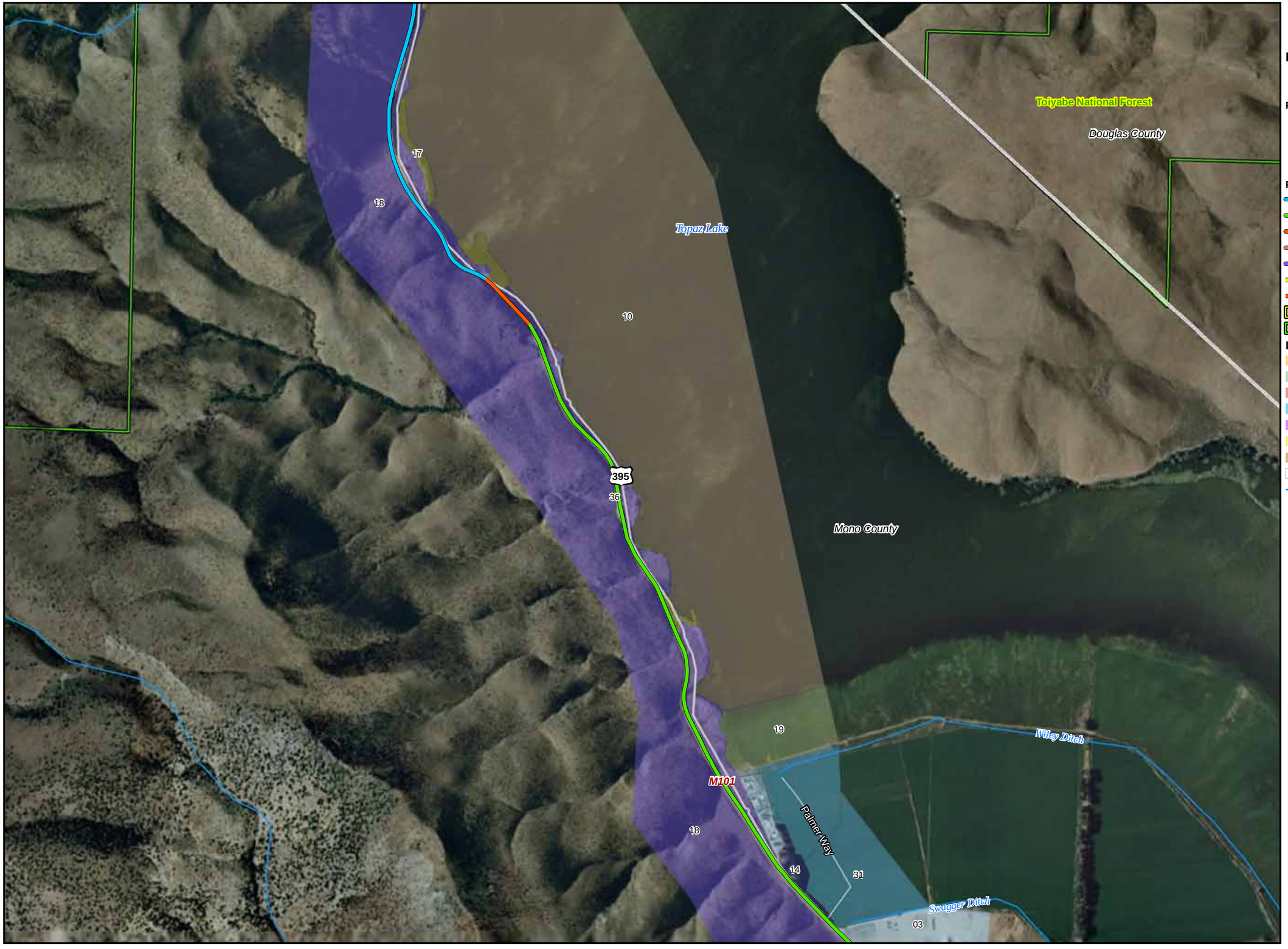
0 250 500 1,000 1,500
Feet

1:12,000

20260

04-06-12

Chambers Group Inc.



CBC Digital 395

R10-Bridgeport to Topaz Lake-202

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

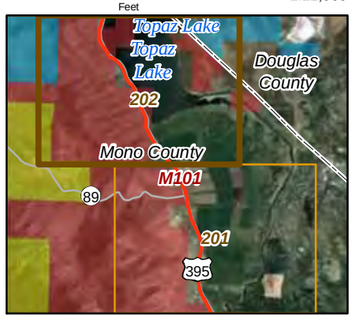
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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04-06-12

Chambers Group Inc.

CBC Digital 395

R10-Bridgeport to Topaz Lake-203

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

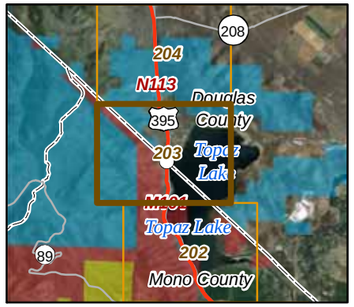
- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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04-06-12

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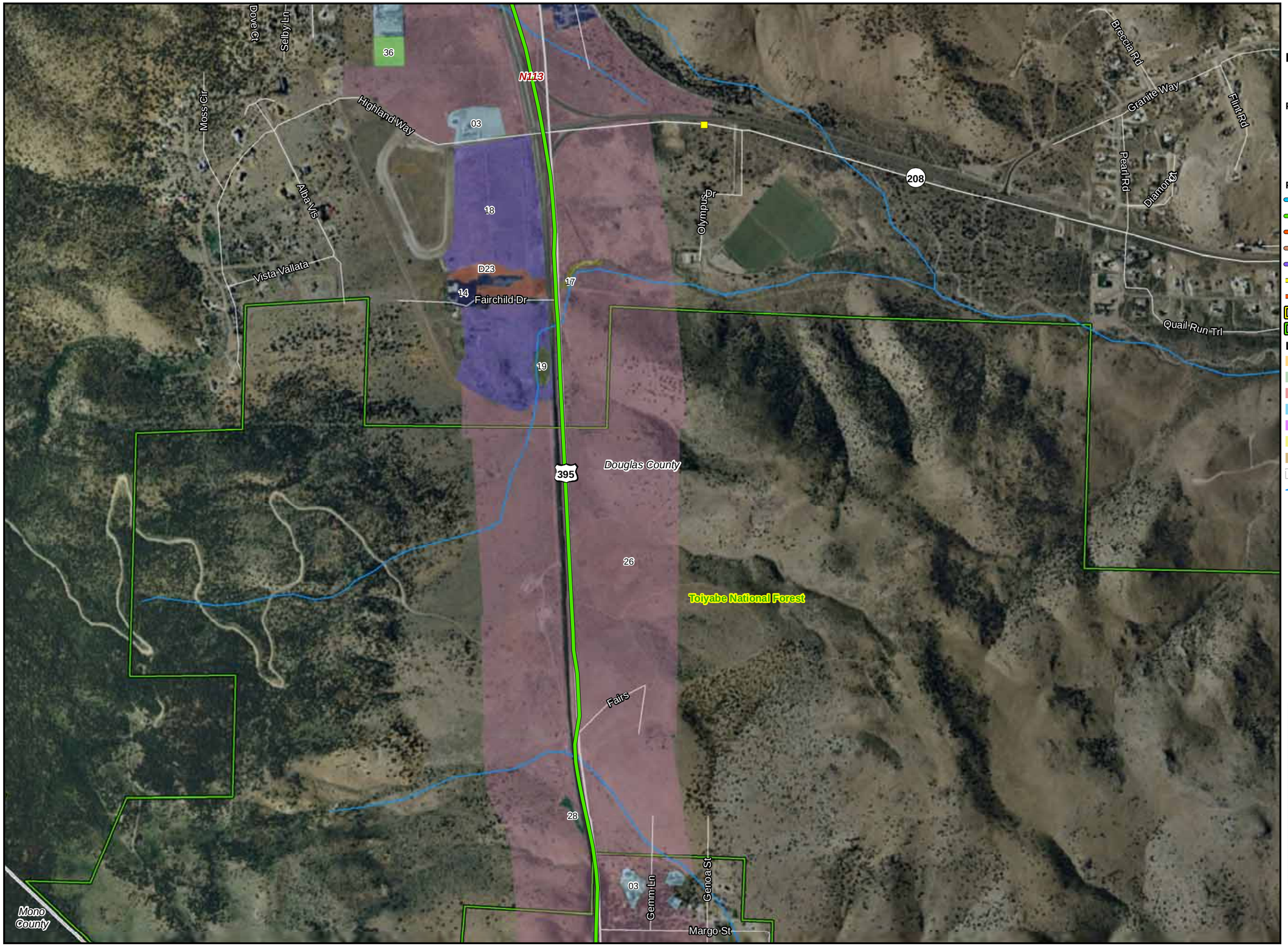
CBC Digital 395

R10-Bridgeport to Topaz Lake-204



Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

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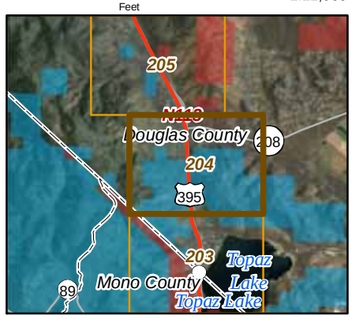

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04-06-12

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CBC Digital 395

R12-Topaz Lake to Carson City-206

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
- Road Crossing
- Dirt Road
- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

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Feet

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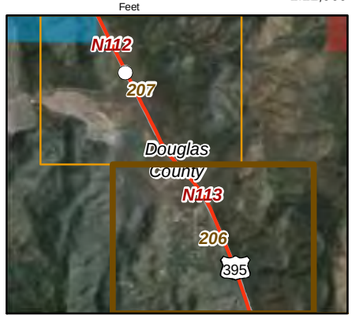

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04-06-12

Chambers Group Inc.

CBC Digital 395

R12-Topaz Lake to Carson City-207

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
- Right Side
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- Lease
- Distribution Line
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- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

LandOwnership

- DOD Land
- National Park Service
- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

0 250 500 1,000 1,500
Feet

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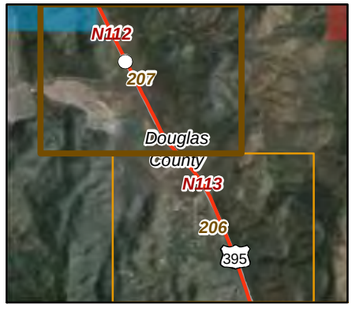

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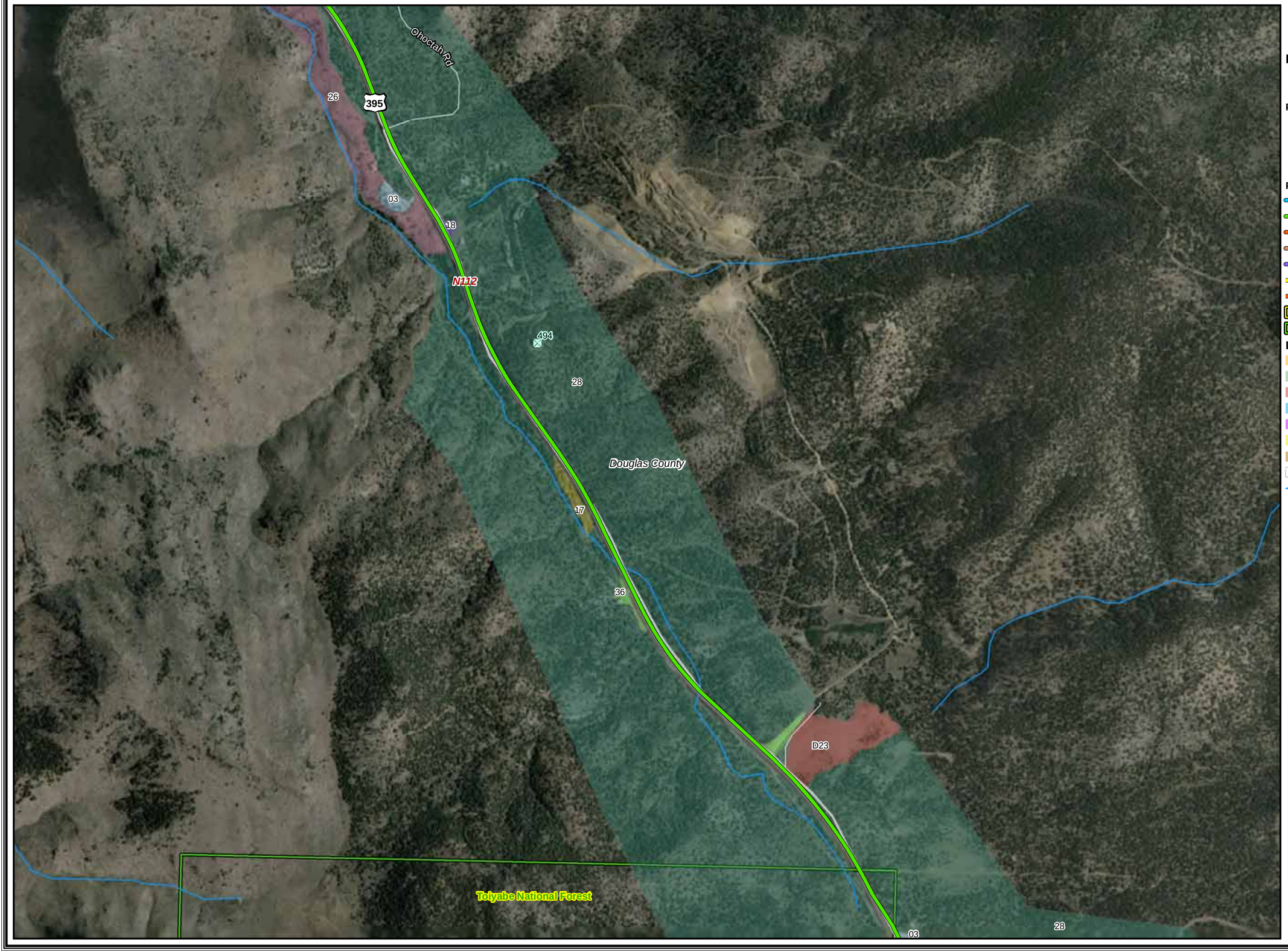

CBC Digital 395

R12-Topaz Lake to Carson City-208

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

- Left Side
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- Lease
- Distribution Line
- Distribution Line - Aerial
- US Forest Service, Inyo National Forest
- US Forest Service, Toiyabe National Forest

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- BLM Land
- USFS Land
- Bureau of Indian Affairs
- State Land
- Local Government
- City Limit
- Waterways

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Feet

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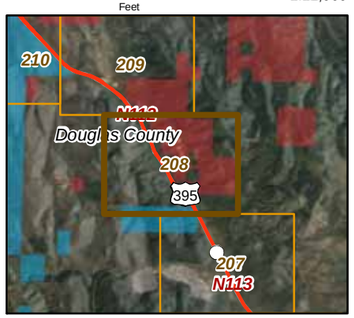

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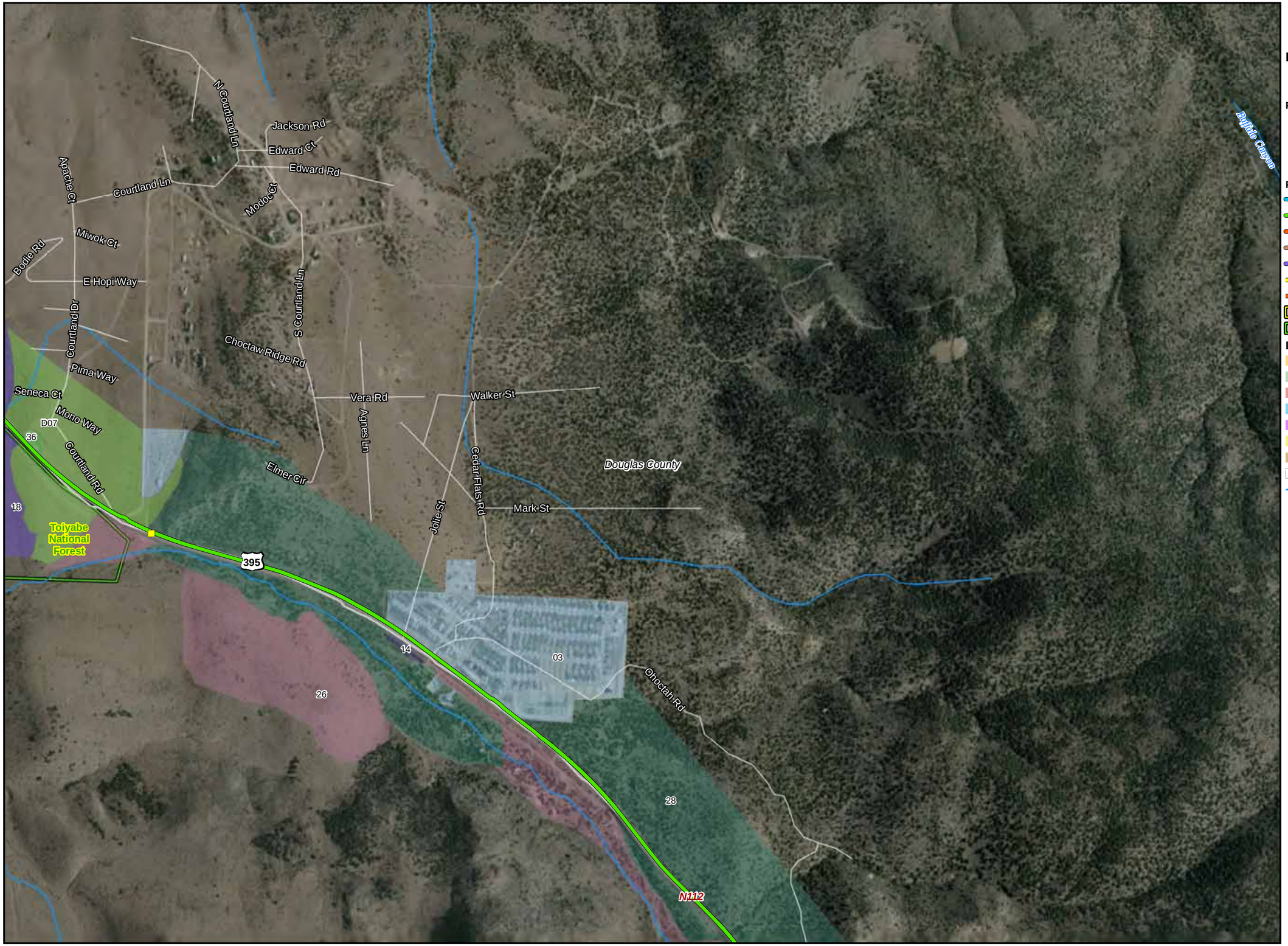
Chambers Group Inc.



CBC Digital 395

R12-Topaz Lake to Carson City-209

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
- Existing - Anchor / POI

FOC Backbone from Barstow to Reno

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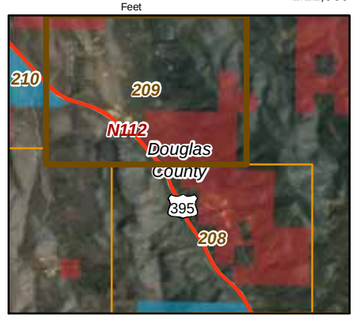
- Waterways

0 250 500 1,000 1,500
Feet

1:12,000



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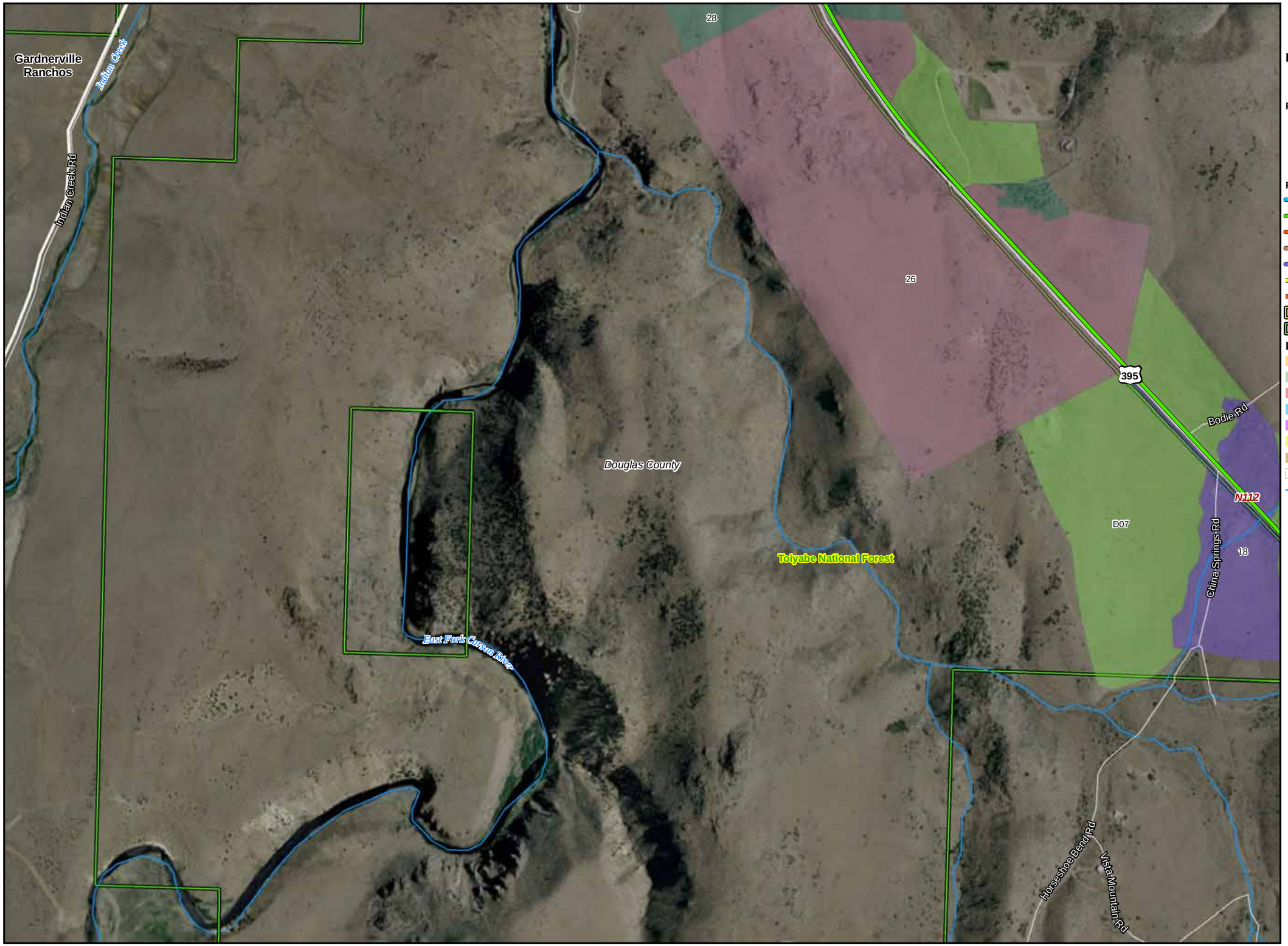
Chambers Group Inc.



CBC Digital 395

R12-Topaz Lake to Carson City-210

Legend

- Segment Start and End Marker
- Proposed Node / Facility

Project Staging Site

- Staging Area
- Laydown
- Depot
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- Waterways

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Feet

1:12,000

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04-06-12

Chambers Group Inc.

APPENDIX D – PLANT SPECIES OBSERVED WITHIN MONO AND DOUGLAS COUNTIES

Appendix D
Plant Species Observed Within Project Area in Mono County

Scientific Name	Common Name
GYMNOSPERMS	
CORNACEAE	**DOGWOOD FAMILY**
Cornus sp.	dogwood
CUPRESSACEAE	**CYPRESS FAMILY**
Juniperus oteosperma	Utah juniper
EPHEDRACEAE	**EPHEDRA FAMILY**
Ephedra nevadensis	Nevada ephedra
PINACEAE	**PINE FAMILY**
Abies sp.	fir
Pinus sp.	pine
Pinus contorta ssp. *murrayana*	lodgepole pine
Pinus jeffreyi	Jeffery pine
Pinus lambertiana	sugar pine
Pinus monophylla	single-leaf pinyon pine
Pinus ponderosa	ponderosa pine
Pseudotsuga menziesii	Douglas-fir
ANGIOSPERMS (DICOTYLEDONS)	
ASTERACEAE	**SUNFLOWER FAMILY**
Achillea millefolium	California yarrow
Artemisia spinescens	budsage
Artemisia tridentata	big sagebrush
Baccharis salicifolia	mule fat
Chrysothamnus nauseosus	rubber rabbitbrush
Chrysothamnus paniculatus	blackstem rabbitbrush
Chrysothamnus viscidiflorus	yellow rabbitbrush
Chrysothamnus sp.	rabbitbrush
Ericameria sp.	goldenbush
BETULACEAE	**BIRCH FAMILY**
Alnus rhombifolia	white alder
BORAGINACEAE	**BORAGE FAMILY**
Cryptantha sp.	cryptantha
CACTACEAE	**CACTUS FAMILY**
Opuntia acanthocarpa	buckhorn cholla
CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**
Symphoricarpos mollis	creeping snowberry
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
Atriplex sp.	saltbush
Atriplex canescens ssp. *linearis*	four-wing saltbush
Atriplex confertifolia	spiny saltbrush
Atriplex polycarpa	allscale
Kochia californica	rusty molly
Krascheninnikovia lanata	winter fat
Sarcobatus vermiculatus	greasewood

Appendix D
Plant Species Observed Within Project Area in Mono County

Scientific Name	Common Name
FABACEAE	**LEGUME FAMILY**
Psorothamnus arborescens ssp. *Minutiflorus*	Johnson's indigo bush
Trifolium sp.	clover
OLEACEAE	**OLIVE FAMILY**
Fraxinus sp.	ash
POLEMONIACEAE	**PHLOX FAMILY**
Leptodactylon pungens	granite prickly phlox
POLYGONACEAE	**BUCKWHEAT FAMILY**
Eriogonum gracillimum	annual buckwheat
RHAMNACEAE	**BUCKTHORN FAMILY**
Ceanothus sp.	ceanothus
Ceanothus velutinus	tobacco brush, snowbrush
ROSACEAE	**ROSE FAMILY**
Coleogyne ramosissima	blackbush
*Prunus cerasifera**	cherry plum
Prunus sp.	cherry
Prunus virginiana	western choke-cherry
Purshia sp.	cliffrose
Purshia tridentata	antelope bush
Rosa californica	California wild rose
Rosa woodsii	Woods' rose
SALICACEAE	**WILLOW FAMILY**
Populus balsamifera ssp. *trichocarpa*	black cottonwood
Populus fremontii	Fremont cottonwood
Populus tremuloides	aspen
Salix exigua	narrow-leaved willow
Salix gooddingii	black willow
Salix laevigata	red willow
Salix sp.	willow
SAURURACEAE	**LIZARD'S-TAIL FAMILY**
Anemopsis californica	yerba mansa
TAMARICACEAE	**TAMARISK FAMILY**
*Tamarix aphylla**	athel
*Tamarix ramosissima**	Mediterranean tamarisk
ULMACEAE	**ELM FAMILY**
*Ulmus parvifolia**	Chinese elm
ZYGOPHYLLACEAE	**CALTROP FAMILY**
Larrea tridentata	creosote bush
ANGIOSPERMS (MONOCOTYLEDONS)	
CYPERACEAE	**SEDGE FAMILY**
Carex sp.	sedge
Scirpus robustus	Pacific coast bulrush

Appendix D
Plant Species Observed Within Project Area in Mono County

Scientific Name	Common Name
JUNCACEAE	**RUSH FAMILY**
Juncus sp.	rush
POACEAE	**GRASS FAMILY**
Avena sp.*	wild oat
Bromus sp.	brome
*Cynodon dactylon**	Bermuda grass
Elymus glaucus	blue wildrye
Elymus triticoides	creeping wildrye
Festuca rubra	red fescue
*Hordeum vulgare**	barley
Nassella sp.	needlegrass
Poa pratensis	Kentucky bluegrass
Poa sp.	bluegrass
Sporobolus airoides	alkali sacaton
*Stenotaphrum secundatum**	St. Augustine grass
TYPHACEAE	**CATTAIL FAMILY**
Typha sp.	cattail
ZANNICHELLIACEAE	**HORNED-PONDWEED FAMILY**
Zannichellia palustris	horned pondweed

*Non-Native Species

Appendix D
Plant Species Observed Within Project Area in Douglas County

Scientific Name	Common Name
GYMNOSPERMS	
CUPRESSACEAE	**CYPRESS FAMILY**
Juniperus oteosperma	Utah juniper
PINACEAE	**PINE FAMILY**
Pinus monophylla	single-leaf pinyon pine
ANGIOSPERMS (DICOTYLEDONS)	
ASTERACEAE	**SUNFLOWER FAMILY**
Artemisia tridentata	big sagebrush
*Centaurea melitensis**	tocalote
Chrysothamnus nauseosus	rubber rabbitbrush
Chrysothamnus paniculatus	blackstem rabbitbrush
Chrysothamnus viscidiflorus	yellow rabbitbrush
BORAGINACEAE	**BORAGE FAMILY**
Cryptantha sp.	cryptantha
BRASSICACEAE	**MUSTARD FAMILY**
*Hirschfeldia incana**	shortpod mustard
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
Atriplex canescens ssp. *linearis*	four-wing saltbush
EUPHORBIACEAE	**SPURGE FAMILY**
Eremocarpus setigerus	dove weed
FABACEAE	**LEGUME FAMILY**
Trifolium sp.	clover
OLEACEAE	**OLIVE FAMILY**
Fraxinus sp.	ash
ROSACEAE	**ROSE FAMILY**
Purshia tridentata	antelope bush
Rosa californica	California wild rose
SALICACEAE	**WILLOW FAMILY**
Populus fremontii	Fremont cottonwood
Salix exigua	narrow-leaved willow
Salix laevigata	red willow
Salix sp.	willow
ULMACEAE	**ELM FAMILY**
*Ulmus parvifolia**	Chinese elm
ANGIOSPERMS (MONOCOTYLEDONS)	
CYPERACEAE	**SEDGE FAMILY**
Carex sp.	sedge
JUNCACEAE	**RUSH FAMILY**
Juncus sp.	rush
POACEAE	**GRASS FAMILY**
Avena sp.*	wild oat
*Bromus madritensis**	foxtail chess
Bromus sp.	brome

Appendix D
Plant Species Observed Within Project Area in Douglas County

Scientific Name	Common Name
*Bromus tectorum**	cheat grass
*Cynodon dactylon**	Bermuda grass
Elymus glaucus	blue wildrye
Elymus triticoides	creeping wildrye
Festuca rubra	red fescue
*Hordeum vulgare**	barley
Nassella sp.	needlegrass
*Poa annua**	annual bluegrass
Poa pratensis	Kentucky bluegrass
Poa sp.	bluegrass
*Schismus barbatus**	Mediterranean schismus
*Stenotaphrum secundatum**	St. Augustine grass
ZANNICHELLIACEAE	**HORNED-PONDWEED FAMILY**
Zannichellia palustris	horned pondweed

*Non-Native Species

APPENDIX E – WILDLIFE OBSERVED WITHIN MONO AND DOUGLAS COUNTIES

Appendix E
Wildlife Species Observed Within Project Area in Mono County

Scientific Name	Common Name
CLASS AVES	**BIRDS**
ACCIPITRIDAE	**HAWKS, KITES, EAGLES**
Accipiter striatus	Cooper's hawk
Aquila chrysaetos	golden eagle
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
ALAUDIDAE	**LARKS**
Eremophila alpestris	horned lark
ALCEDINIDAE	**KINGFISHERS**
Ceryle alcyon	belted kingfisher
ANATIDAE	**DABBLING DUCKS**
Anas platyrhynchos	mallard
Aythya affinis	lesser scaup
Bucephala albeola	bufflehead
ARDEIDAE	**HERONS & EGRETS**
Ardea Herodias	great blue heron
CATHARIDAE	**NEW WORLD VULTURES**
Cathartes aura	turkey vulture
COLUMBIDAE	**PIGEONS & DOVES**
Columba livia	rock pigeon
Patagioenas fasciata	band-tailed pigeon
CORVIDAE	**JAYS, MAGPIES, & CROWS**
Aphelocoma californica	western scrub jay
Corvus corax	common raven
Cyanocitta stelleri	Steller's jay
Pica pica	black-billed magpie
EMBERIZIDAE	**EMBERIZIDS**
Melospiza melodia	song sparrow
Pipilo crissalis	California towhee
Pipilo maculatus	spotted towhee
Zonotrichia leucophrys	white-crowned sparrow
FALCONIDAE	**FALCONS & CARACARAS**
Falco mexicanus	prairie falcon
Falco sparverius	American kestrel
FRINGILLIDAE	**FINCHES**
Carpodacus mexicanus	house finch
ICTERIDAE	**BLACKBIRDS & ORIOLES**
Sturnella neglecta	western meadowlark
LANIIDAE	**SHRIKES**
Lanis ludovicianus	loggerhead shrike
LARIDAE	**SKAUS, GULLS, TERNS & SKIMMERS**
Larus californicus	California gull

Appendix E
Wildlife Species Observed Within Project Area in Mono County

Scientific Name	Common Name
ODONTOPHORIDAE	**NEW WORLD QUAILS**
Callipepla californica	California quail
PASSERIDAE	**SPARROWS**
Passer domesticus	house sparrow
STURNIDAE	**STARLINGS & ALLIES**
Sturnus vulgaris	European starling
TURDIDAE	**THRUSHES**
Turdus migratorius	American robin
CLASS MALACOSTRACA	**CRUSTACEANS**
CAMBARIDAE	**CAMBARID CRAYFISH & CRAYFISHES**
Procambarus clarkii	red swamp crayfish
CLASS MAMMALIA	**MAMMALS**
CANIDAE	**FOXES, WOLVES, & RELATIVES**
Canis latrans	coyote
CERVIDAE	**DEER, ELK, & RELATIVES**
Odocoileus hemionus	mule deer
FELIDAE	**CATS**
Lynx rufus	bobcat
LEPORIDAE	**HARES & RABBITS**
Lepus californicus	black-tailed jack rabbit
Sylvilagus sp.	cottontail
MEPHITIDAE	**SKUNKS**
Mephitis mephitis	striped skunk
PROCYONIDAE	**COATIS, RACCONS, & RELATIVES**
Procyon lotor	raccoon

Appendix E
Wildlife Species Observed Within Project Area in Douglas County

Scientific Name	Common Name
CLASS AVES	**BIRDS**
ACCIPITRIDAE	**HAWKS, KITES, EAGLES**
Accipiter striatus	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
COLUMBIDAE	**PIGEONS & DOVES**
Columba livia	rock pigeon
CORVIDAE	**JAYS, MAGPIES, & CROWS**
Magpie Pica hudsonia	black-billed magpie
FALCONIDAE	**FALCONS & CARACARAS**
Falco sparverius	American kestrel
FRINGILLIDAE	**FINCHES**
Carpodacus mexicanus	house finch
ODONTOPHORIDAE	**NEW WORLD QUAILS**
Callipepla californica	California quail
PASSERIDAE	**SPARROWS**
Passer domesticus	house sparrow
STURNIDAE	**STARLINGS & ALLIES**
Sturnus vulgaris	European starling
TURDIDAE	**THRUSHES**
Turdus migratorius	American robin
CLASS MAMMALIA	**MAMMALS**
CANIDAE	**FOXES, WOLVES, & RELATIVES**
Canis latrans	coyote
CERVIDAE	**DEER, ELK, & RELATIVES**
Odocoileus hemionus	mule deer
FELIDAE	**CATS**
Felis catus	feral cat
Lynx rufus	bobcat

APPENDIX F – CURRENT AND PLANNED FUTURE PROJECTS

Appendix F: Current and Planned Future Projects

Project Name	Location	Description	Type of Potential Impacts[1]
Mono County			
High Point Curve Realignment	US 395, Mile Post 117.9 to 119.4	Realign curves	Habitat loss, noise
South Sherwin Summit Rehab	US 395, Mile Post R128.8/R129.5 ten miles north of Bishop to Mile Post R10.3 at Tom's Place	Rehabilitate roadway and widen shoulders	Habitat loss, noise
Casa Diablo IV Geothermal Development Project	Near the intersection of US 395 and SR 203, approximately 3 miles east of Mammoth Lakes	Construction of a 33-megawatt geothermal power plant and associated well field, internal access roads, pipelines, and a transmission line.	Habitat loss/ fragmentation, noise, avian strikes, water quality
June Lake Hazardous Fuels Reduction	US 395 and June Lake Loop	Hazardous fuels reduction work on 4,578 acres within threat zones in June Lake Loop.	Habitat modification
Crestview Safety Roadside Rest Area Rehab	US 395, Mile Post 32.4, six miles north of the junction of US 395 and SR 203	Upgrade and repair existing safety roadside rest area making it ADA compliant	Noise
Sonora Wildlife Crossing	US 395, Mile Post 91.7 to 96.8, near the junction of US 395 and SR 108	Construct deer fencing with undercrossings	Temporary habitat modification, noise
Pickel Meadows CAPM	Route 108, Mile Post 9.8 to 15.1, west of US 395	Pavement rehabilitation	Noise
Twin Lakes Fuels Reduction Project	Approximately 13 miles southwest of Bridgeport	Fuels reduction treatment on approximately 1,500 acres around the Twin Lakes area.	Habitat modification
Mammoth Creek Bridge Deck and Rail Upgrade	US 395, Mile Post 23.6 to 27.1	Bridge deck rehabilitation and rail upgrade	Noise

[1] Actual impacts to be determined during individual project analysis