

# Temporary Construction Facility 30 & 31

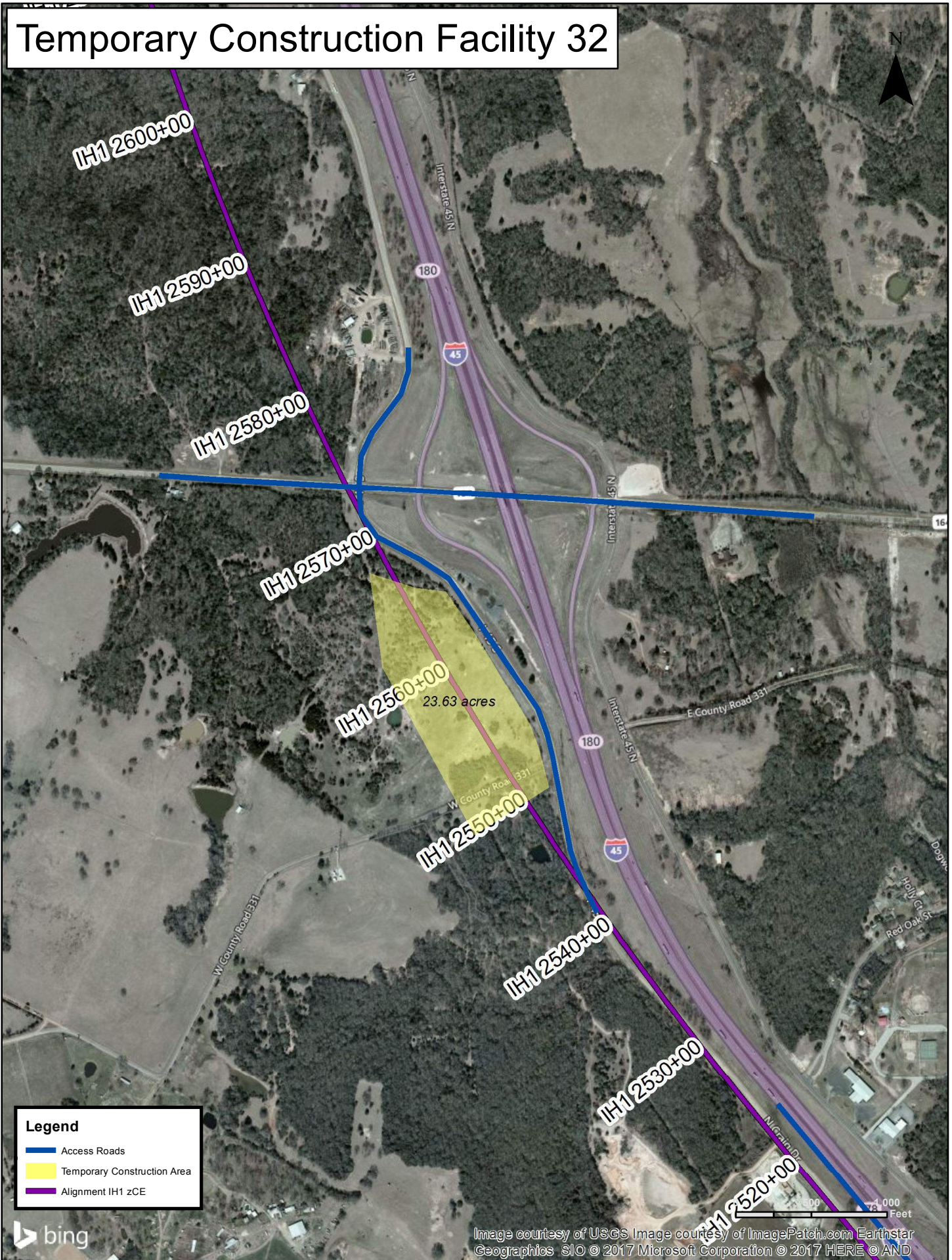


**Legend**

- Access Roads
- Temporary Construction Area
- Alignment IH1 zCE

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# Temporary Construction Facility 32



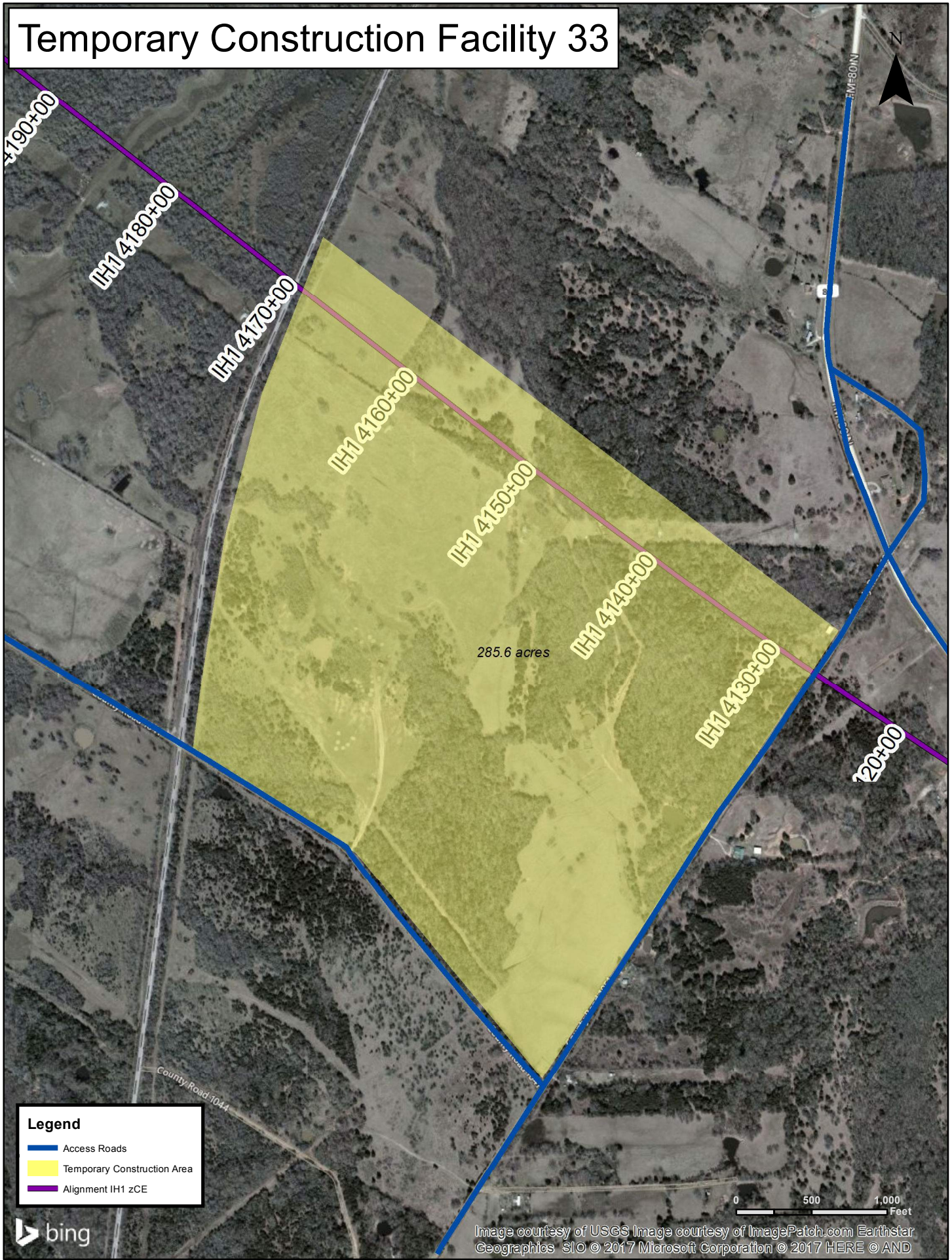
**Legend**

- Access Roads
- Temporary Construction Area
- Alignment IH-1 zCE



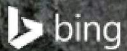
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# Temporary Construction Facility 33

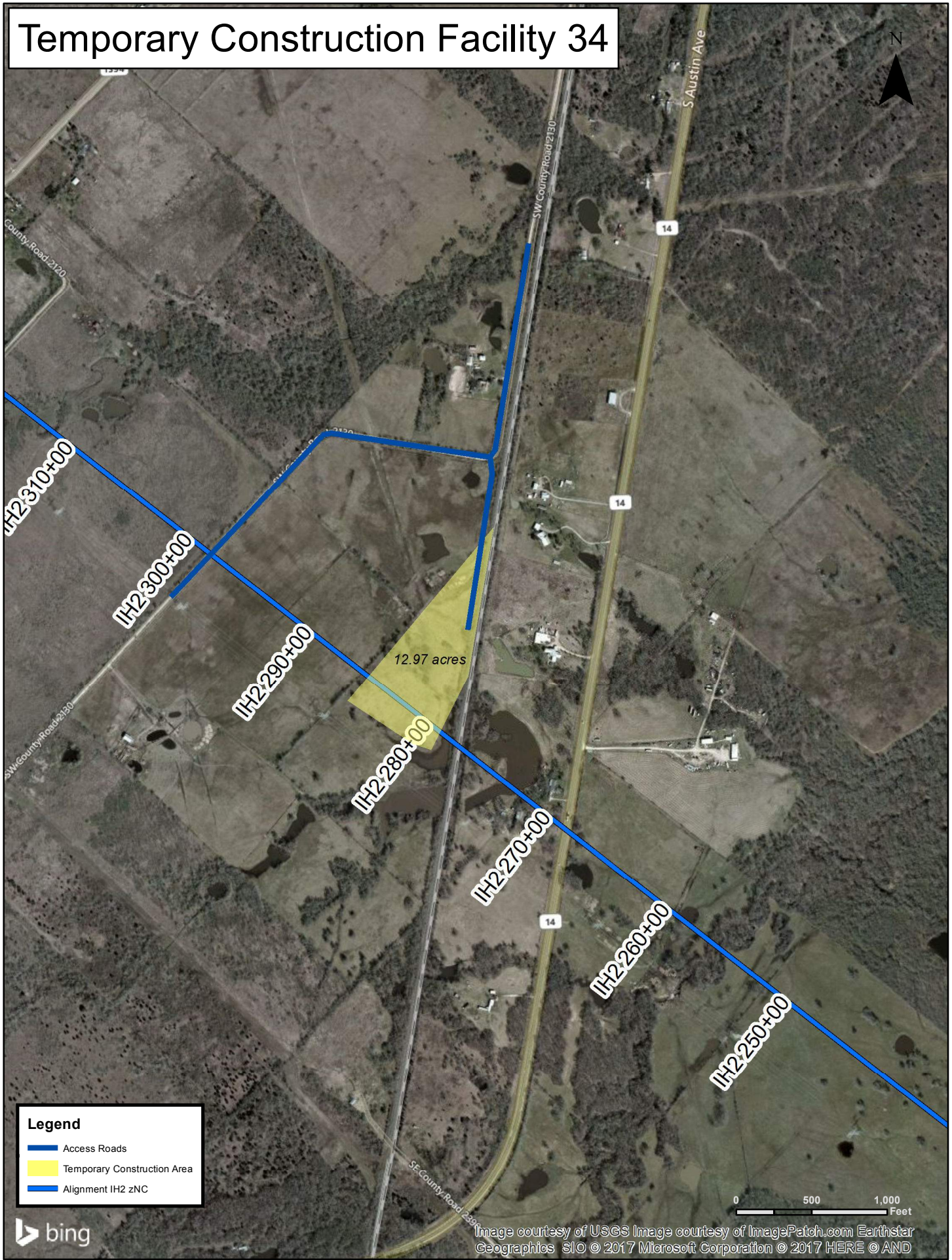


### Legend

- Access Roads
- Temporary Construction Area
- Alignment IH1 zCE

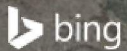


# Temporary Construction Facility 34

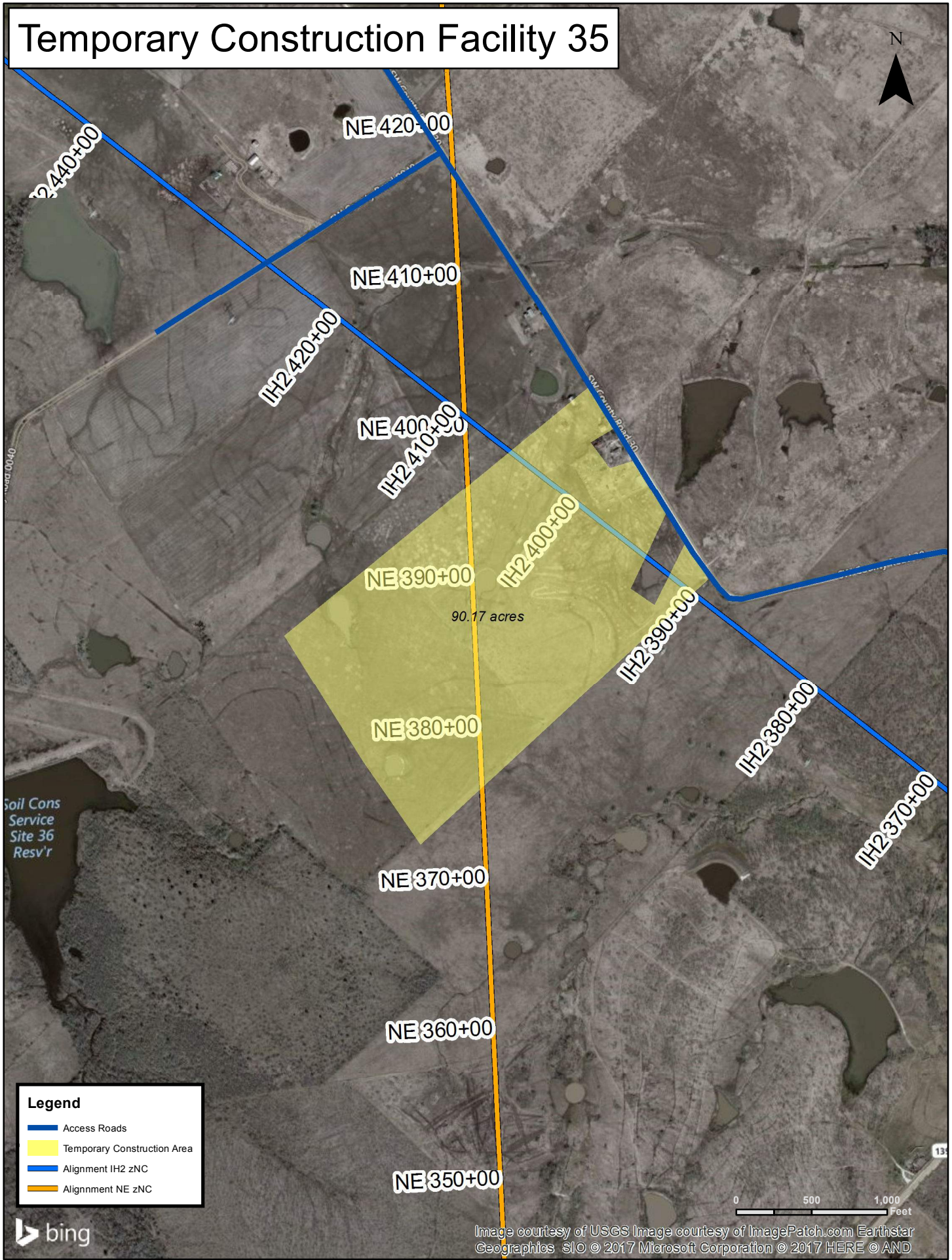


## Legend





- Access Roads
- Temporary Construction Area
- Alignment IH2 zNC

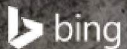


# Temporary Construction Facility 35

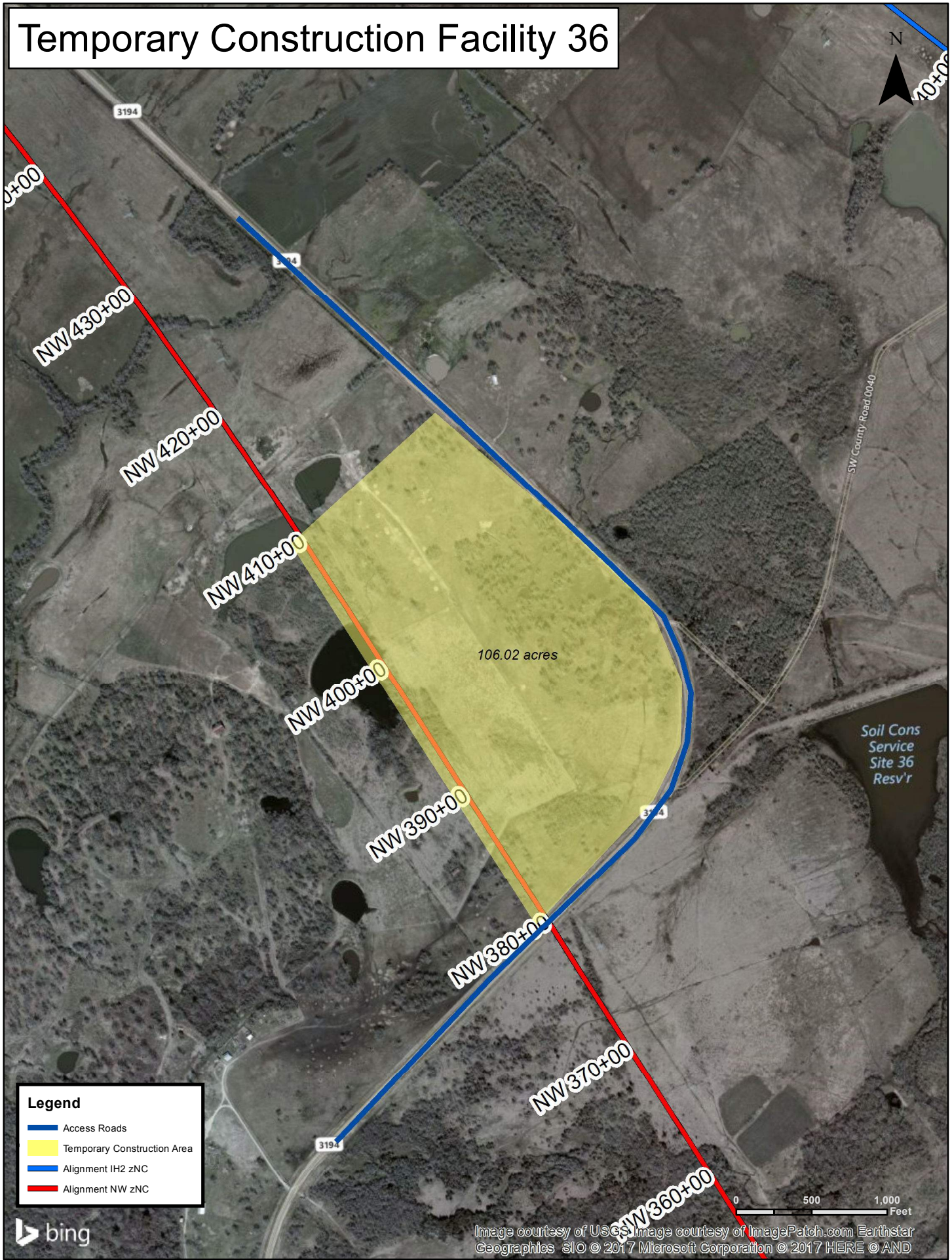


## Legend

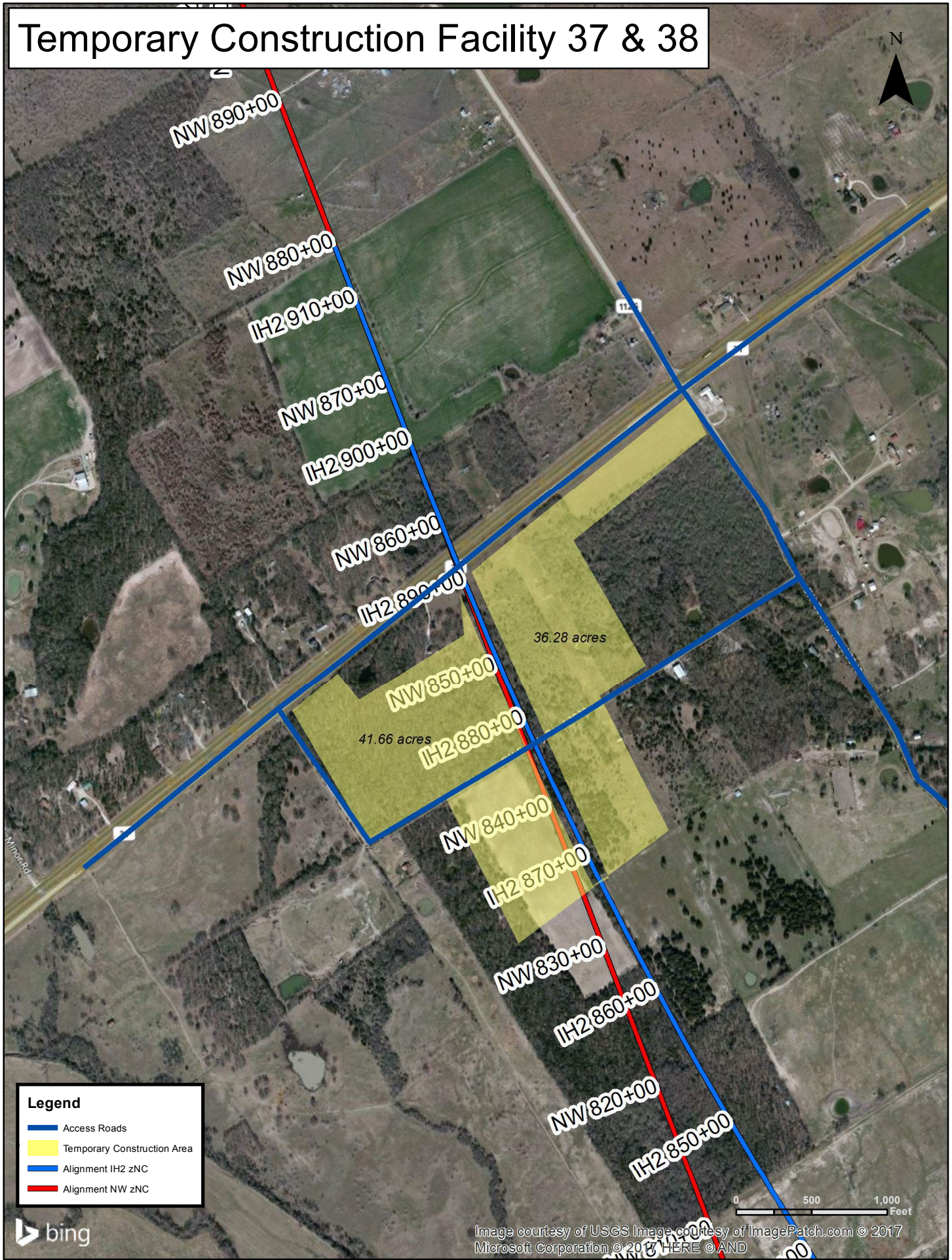
-  Access Roads
-  Temporary Construction Area
-  Alignment IH2 zNC
-  Alignment NE zNC



# Temporary Construction Facility 36



# Temporary Construction Facility 37 & 38



**Legend**

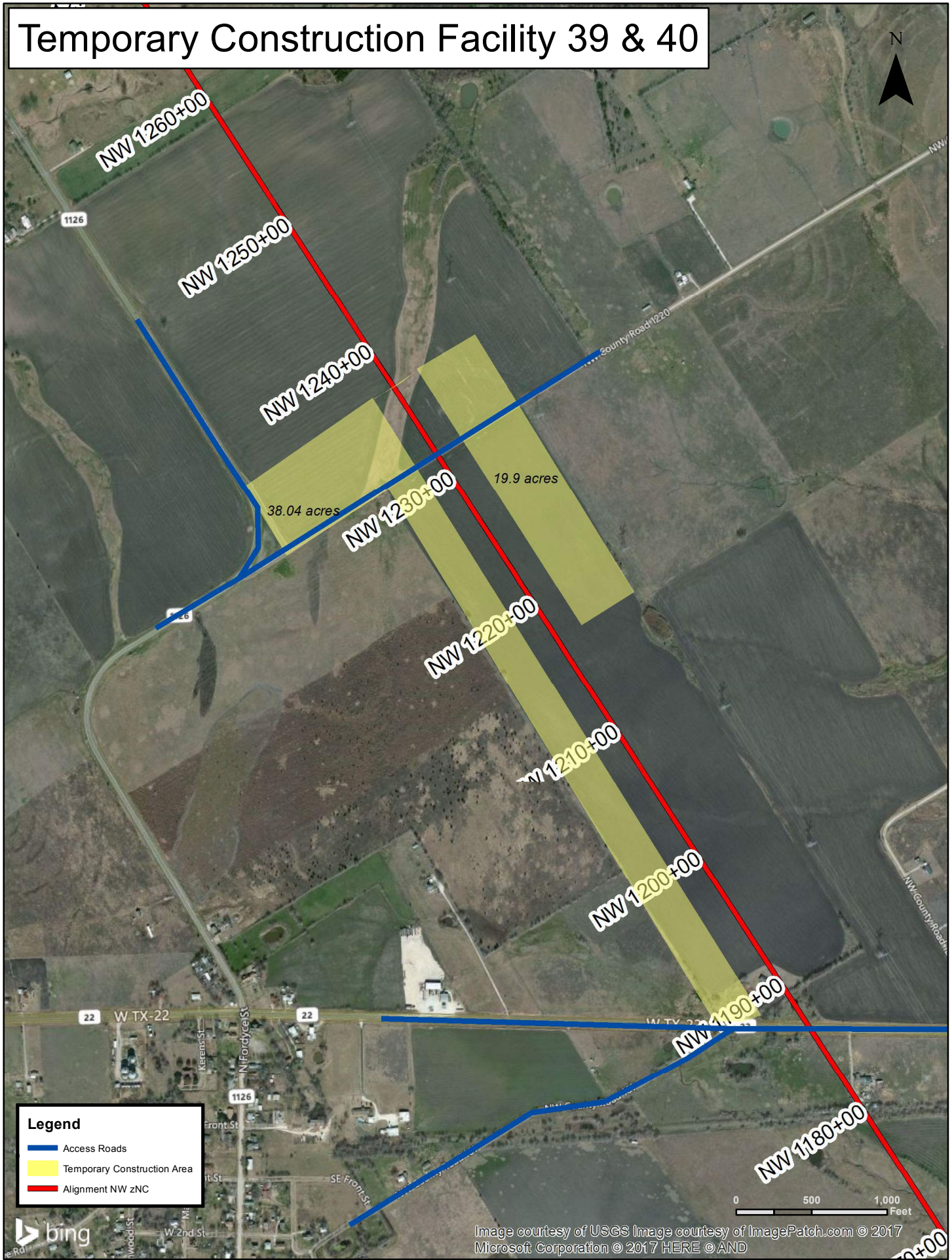
- Access Roads
- Temporary Construction Area
- Alignment IH2 zNC
- Alignment NW zNC

0 500 1,000 Feet

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# Temporary Construction Facility 39 & 40



**Legend**

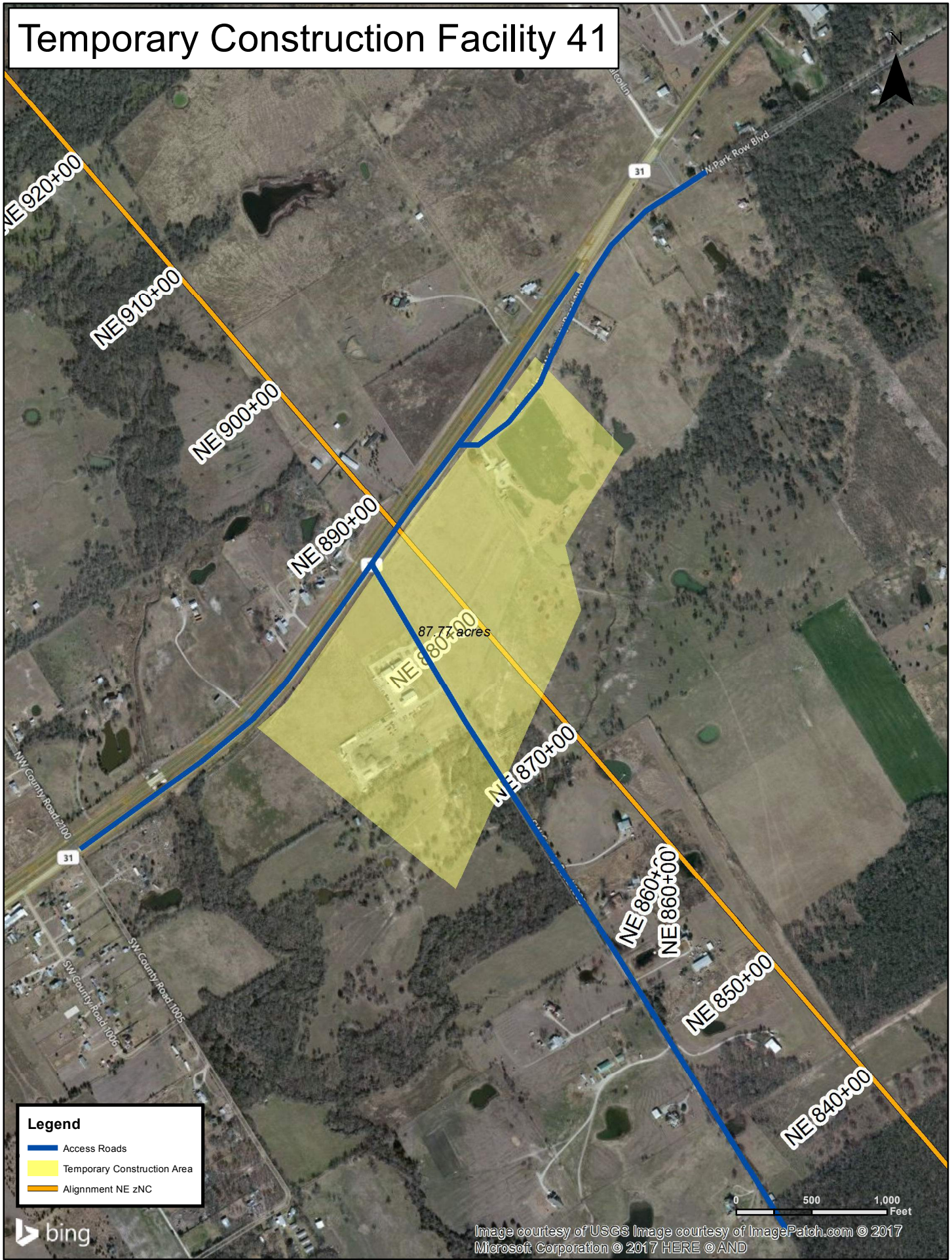
- Access Roads
- Temporary Construction Area
- Alignment NW zNC

0 500 1,000 Feet

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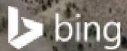


# Temporary Construction Facility 41



### Legend

- Access Roads
- Temporary Construction Area
- Alignment NE zNC



# Temporary Construction Facility 42 & 43



NW County Road 1160

1210+00

NE 1200+00

NE 1190+00

38.62 acres

NE 1180+00

22.88 acres

NE 1170+00

NE 1160+00

22

W TX 22

NE 1150+00

NW County Road 2060

NE 1140+00

NE 1130+00

**Legend**

- Access Roads
- Temporary Construction Area
- Alignment NE zNC

0 500 1,000 Feet

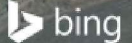
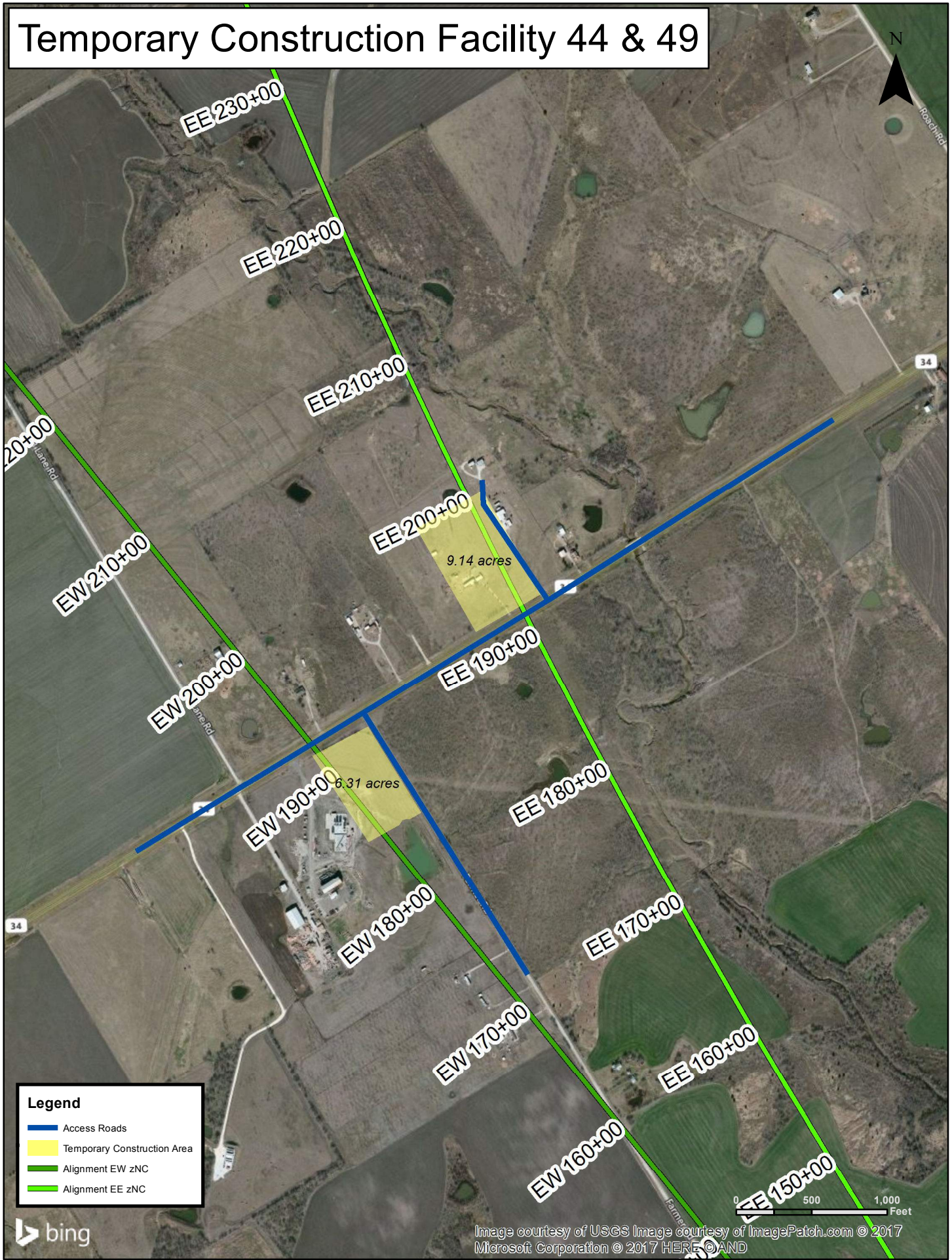


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# Temporary Construction Facility 44 & 49



### Legend

- Access Roads
- Temporary Construction Area
- Alignment EW zNC
- Alignment EE zNC

0 500 1,000 Feet

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# Temporary Construction Facility 45



**Legend**

- Access Roads
- Temporary Construction Area
- Alignment EW zNC
- Alignment EE zNC

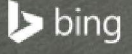
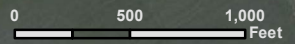


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# Temporary Construction Facility 46 & 47



**Legend**

- Access Roads
- Temporary Construction Area
- Alignment EW zNC
- Alignment EE zNC

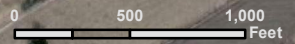


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# Temporary Construction Facility 48



**Legend**

- Access Roads
- Temporary Construction Area
- Alignment EW zNC
- Alignment EE zNC
- Alignment DS zNC

# Temporary Construction Facility 50 & 51



DS 160+00

DS 150+00

DS 140+00

DS 130+00

DS 120+00

DS 110+00

DS 100+00

DS 90+00

DS 80+00

22.83 acres

23.64 acres

Heath Lake

**Legend**

- Access Roads
- Temporary Construction Area
- Alignment DS zNC

0 500 1,000 Feet

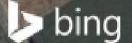


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# Temporary Construction Facility 52 & 53



165.86 acres

DS 310+00

DS 300+00

DS 290+00

DS 280+00

DS 270+00




108.18 acres

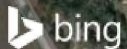
DS 260+00

DS 250+00

DS 240+00

### Legend

-  Access Roads
-  Temporary Construction Area
-  Alignment DS zNC





# Temporary Construction Facility 54 & 55



**Legend**

- Access Roads
- Temporary Construction Area
- Alignment DS zNC

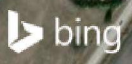
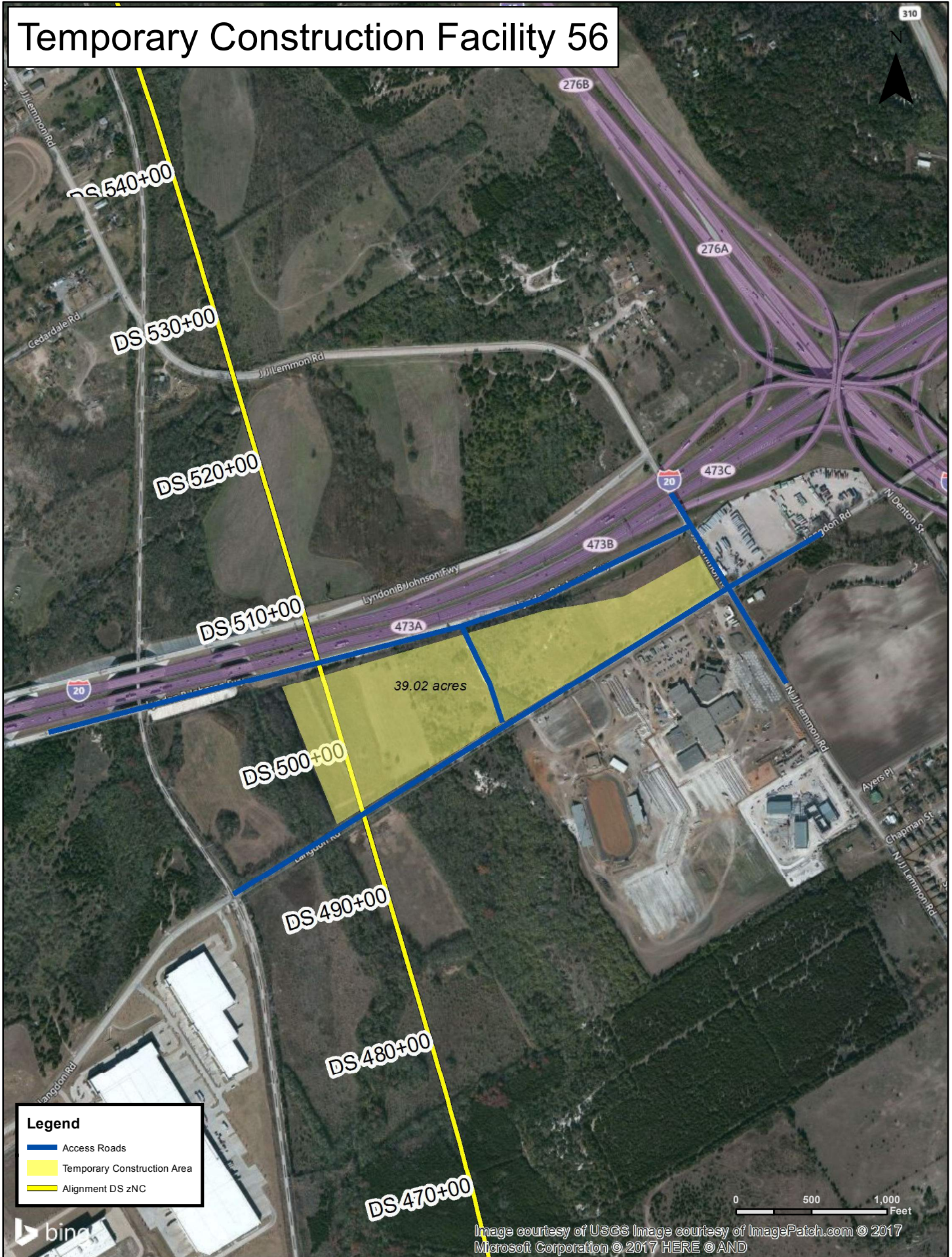
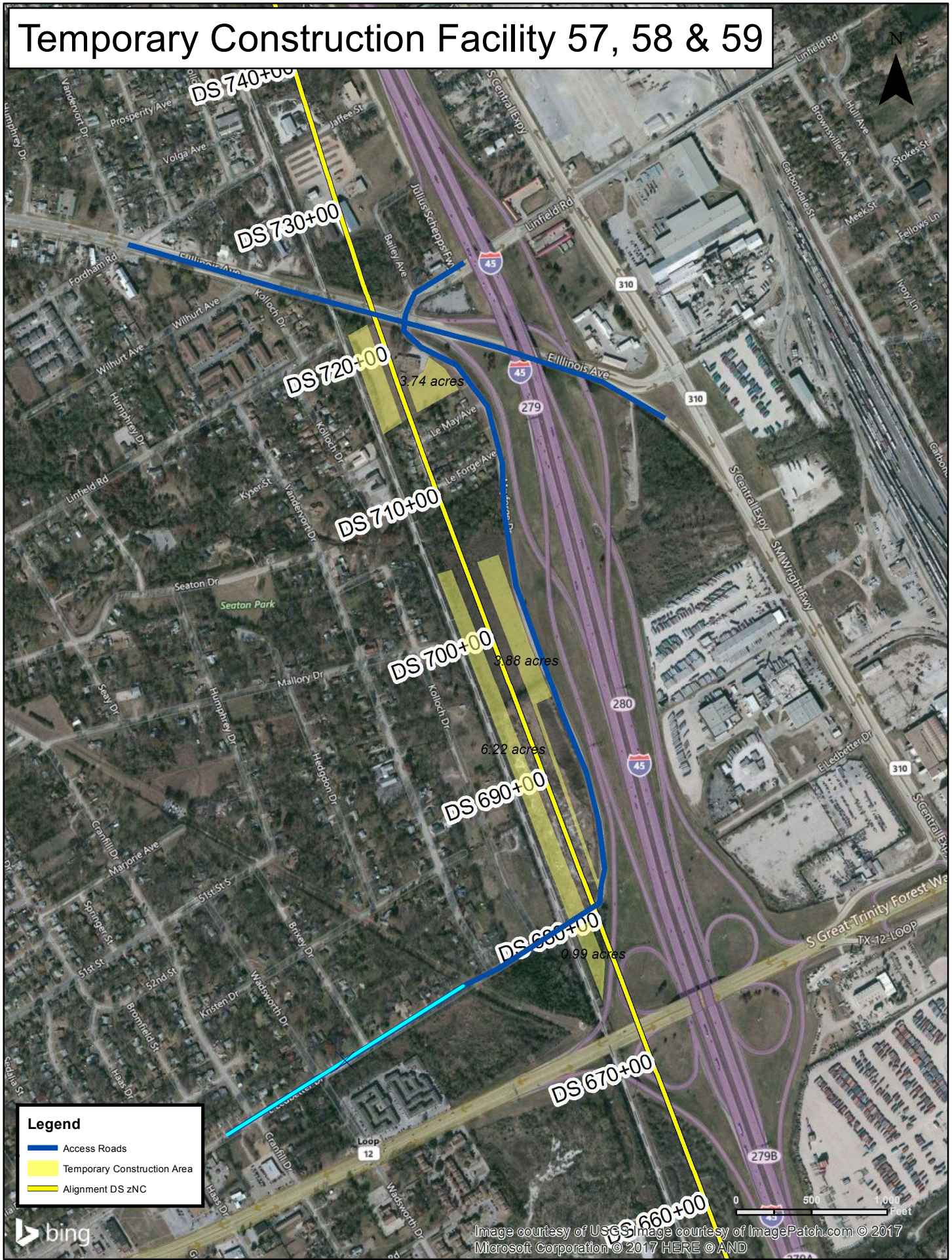


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# Temporary Construction Facility 56



# Temporary Construction Facility 57, 58 & 59

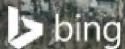


# Temporary Construction Facility 60



## Legend

- Access Roads
- Temporary Construction Area
- Alignment DS zNC
- Alignment DT zNC



# Temporary Construction Facility 61



# Temporary Construction Facility 62, 63 & 64



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## **A8 Construction Cost Estimate and Schedule**

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# TRANSMITTAL

To Megan Inman, AECOM

Date  
May 22, 2017

Copies AECOM: J. Smiley, K. Lueken, T. Horst  
TCRR: A. Greer, M. Bobinecz, D. Jones, M. Johnson. B. Redwine  
OE: S. Clark, C. Taylor  
File: DBE/OE/2017 FDCE Submittal

From Scott Ashley, TCRR

Subject FINAL DRAFT CONCEPTUAL ENGINEERING DESIGN DOCUMENTATION  
FDCE V5 Transmittal for Capital Cost Estimate and Construction Schedule

### We Are Sending You:

Document Format	Date of Document	Number of Copies	Title of Document or Drawing Title
PDF	05/22/2017	1	20170522_TCRR Summary Schedule
PDF	05/22/2017	1	20170522_HSR Construction Cost Estimate

These are transmitted as checked below:

- Deliverable                       For Information                       As requested                       For your use  
 For approval                       For Review and Comment                       Return                       Other, specify

### REMARKS:

Please find attached TCRR’s expected project capital cost and construction schedule. TCRR has been closely coordinating with the construction community within Texas and with HSR owners, operators, and systems suppliers worldwide over the course of project development to gather insight into project infrastructure and facilities design and delivery approaches. TCRR has also undertaken early contractor engagement by bringing a design-build partner on board the project development team to ensure that likely construction means and methods are adequately considered in the development of our financial modeling.

As this is a privately developed project, we are not seeking public funding. As such, our capital cost and construction schedules are considered proprietary and we prefer not to share additional details at this time. Nonetheless, based upon your data requests, we believe that the level of detail provided is sufficient to meet your economic analysis needs for the EIS.

Should you need additional information we would be pleased to discuss how best to support your efforts.

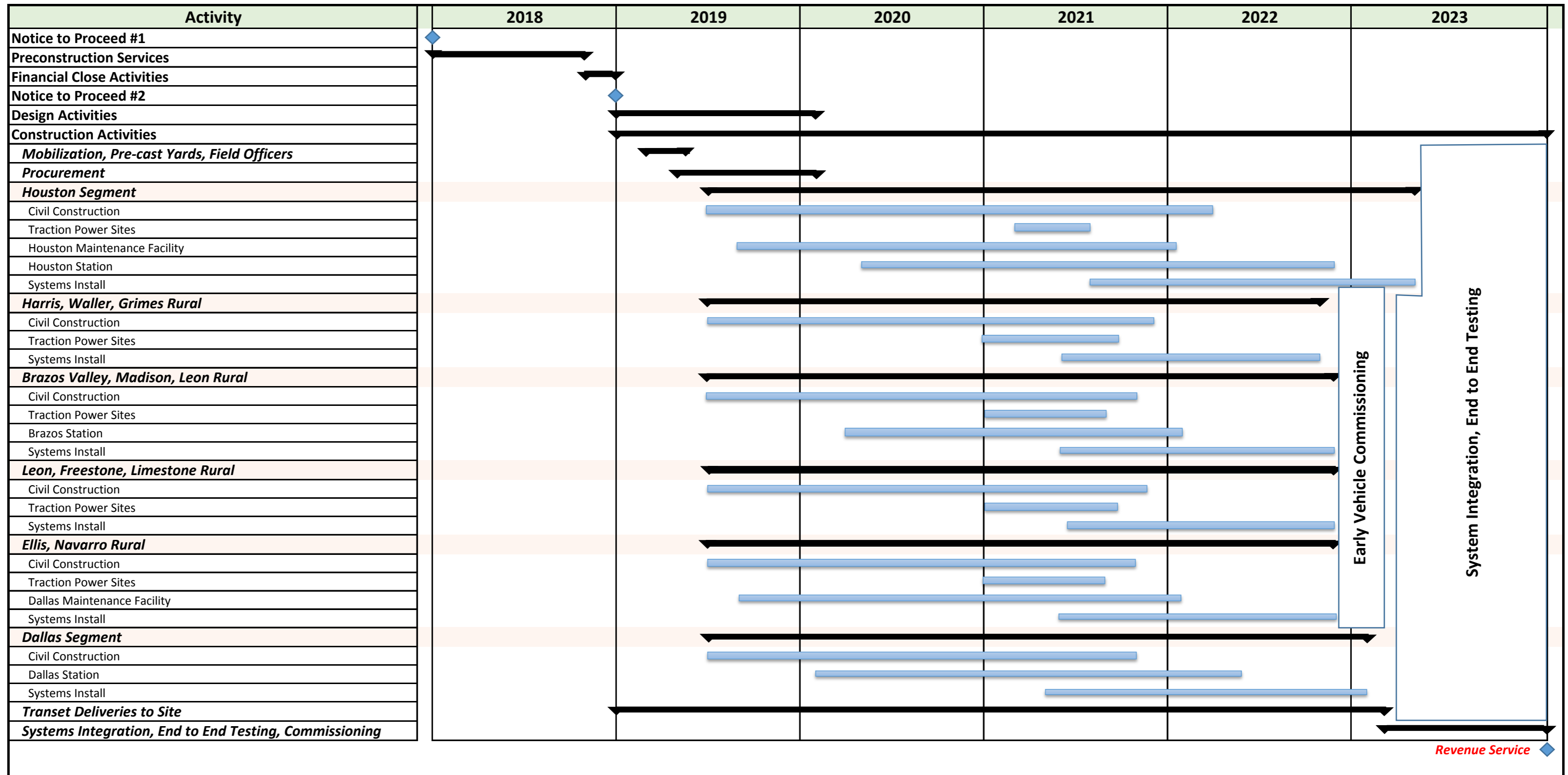
Delivered VIA     Outlook Email     Hand Delivery     Courier     ShareFile     USPS

PREPARED BY: Scott Ashley  Date: May 22, 2017

**IF ENCLOSURES ARE NOT AS NOTED, KINDLY NOTIFY US AT ONCE.**



# TCRR Summary Schedule





## HSR Construction Cost Estimate, May 2017

Direct Labor Costs (28%)	\$2.4B
Direct Materials & Equipment Costs (72%)	\$6.1B
<hr/>	
Total Direct Costs <sup>1</sup> (61%)	\$8.5B
Total Indirect Costs <sup>2</sup> (39%)	\$5.5B
<hr/>	
<b>Total Civil Infrastructure &amp; Fixed Facilities</b>	<b>\$14B +/- \$1B</b>
<b>Systems &amp; Rolling Stock<sup>3</sup></b>	<b>\$2.5B +/- \$.5B</b>
<hr/>	
<b>Total Construction Cost Estimate</b>	<b>\$16.5B +/- \$1.5B</b>

<sup>1</sup>Includes Labor, Material, Equipment, and Subcontractors to perform the specific civil work items

<sup>2</sup>Includes OH & P, Design Services, Safety, QA/QC, Project Administration, etc.

<sup>3</sup>Includes Signals, Power Distribution, Communications, Train Control, Fare Collection, and Rolling Stock