

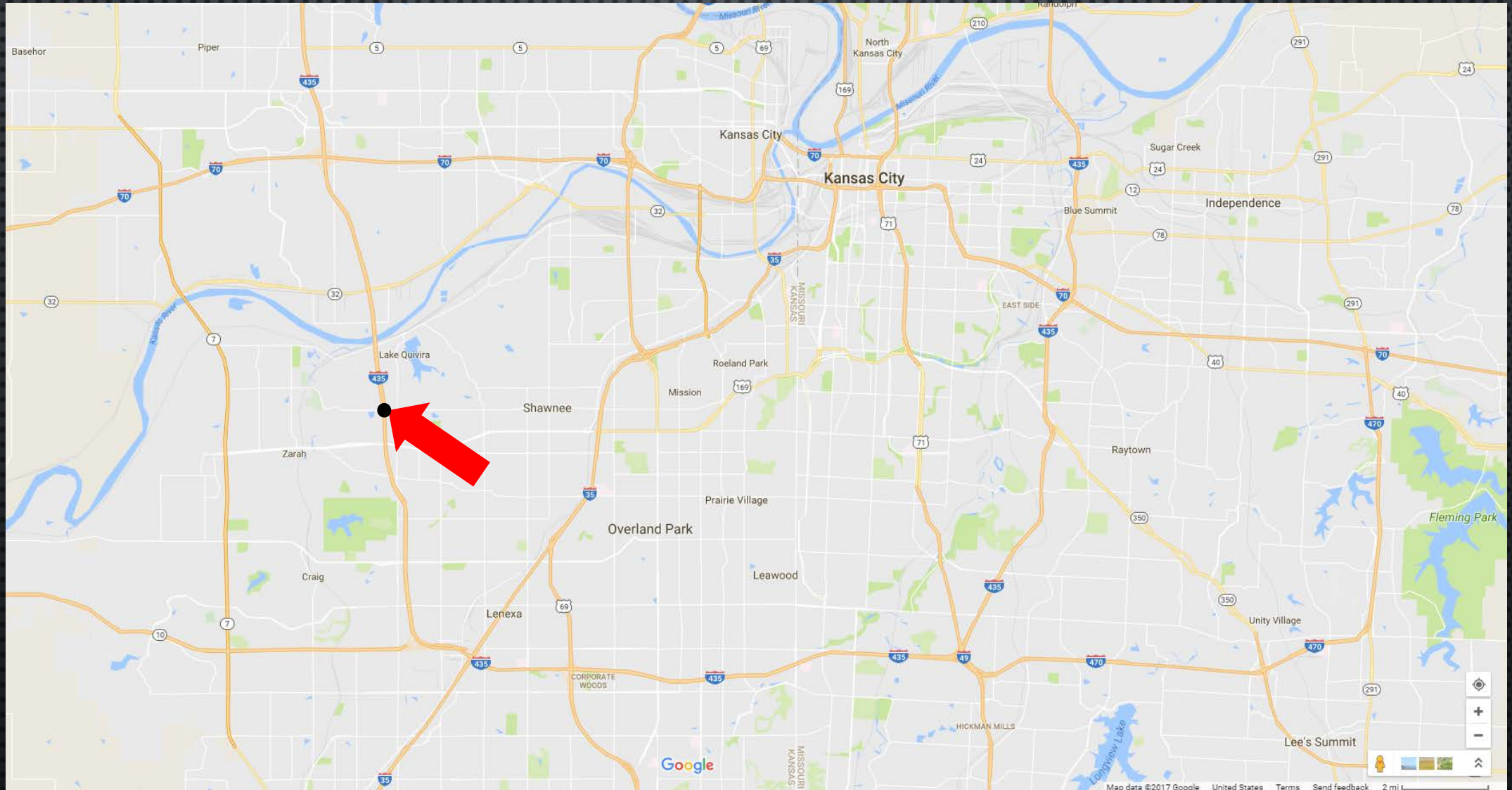
JOHNSON DRIVE EMERGENCY BRIDGE REPAIRS



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HNTB Corporation



BRIDGE LOCATION



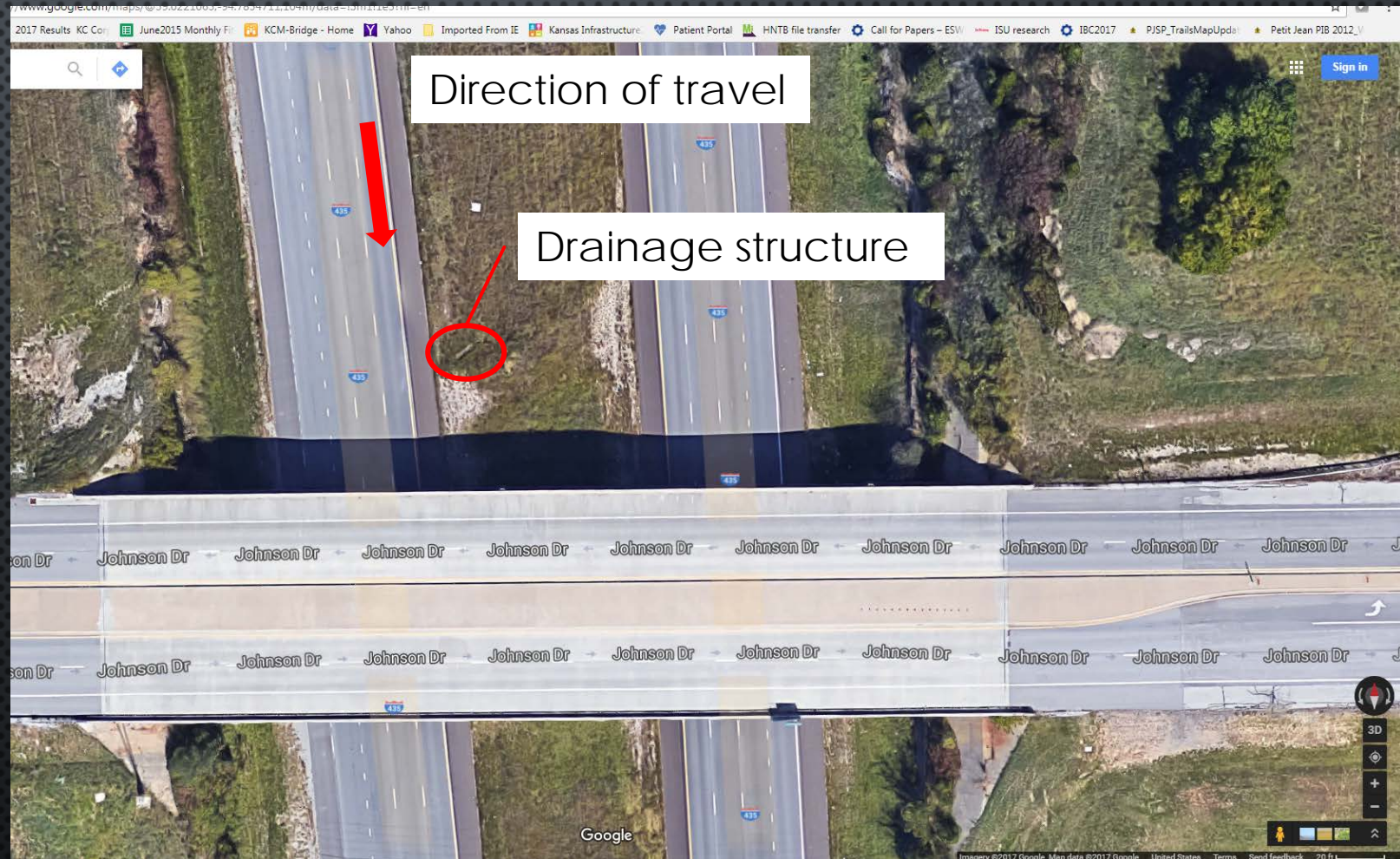
JOHNSON DRIVE BRIDGE OVER I-435



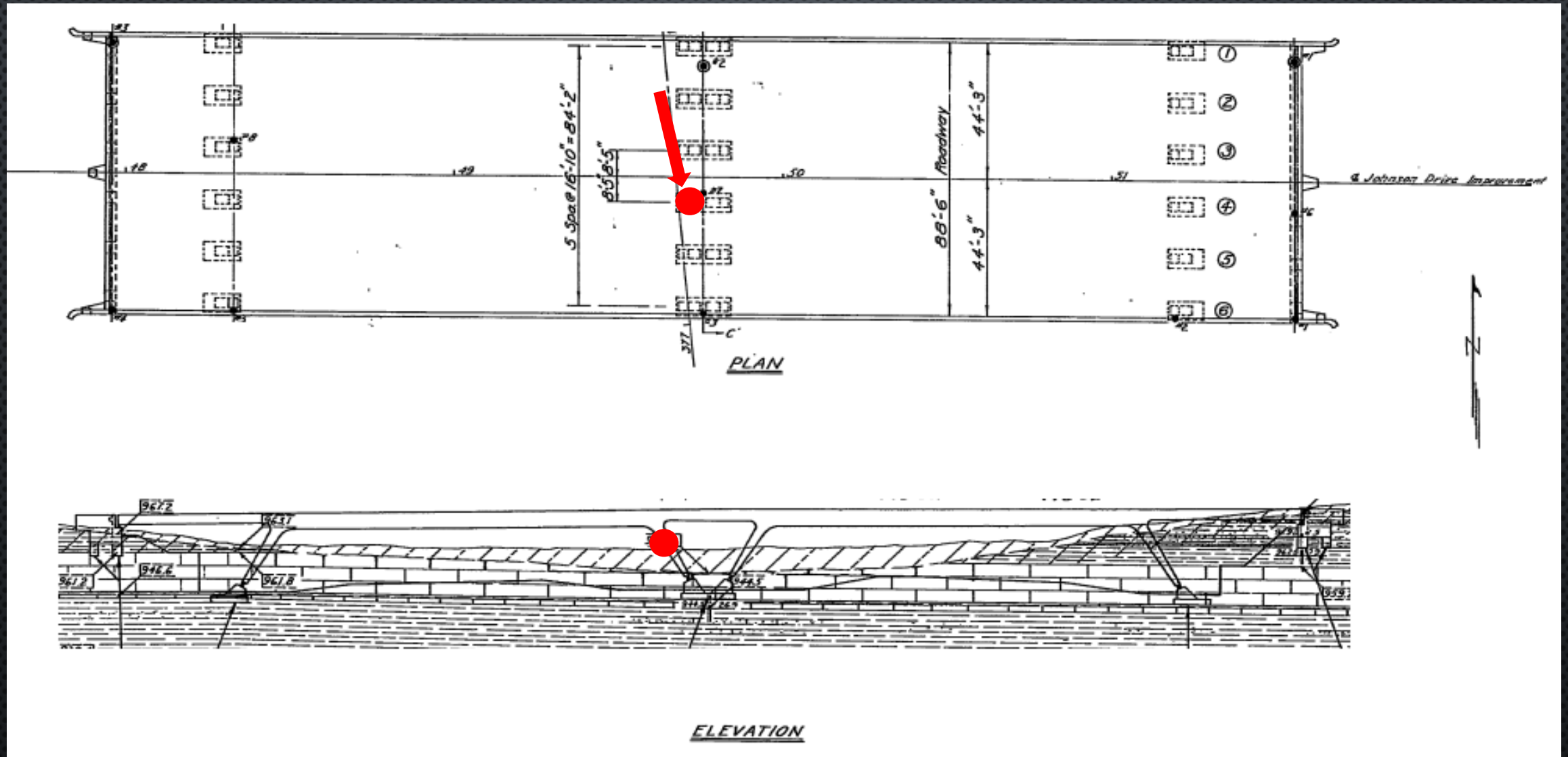
Google

THE COLLISION

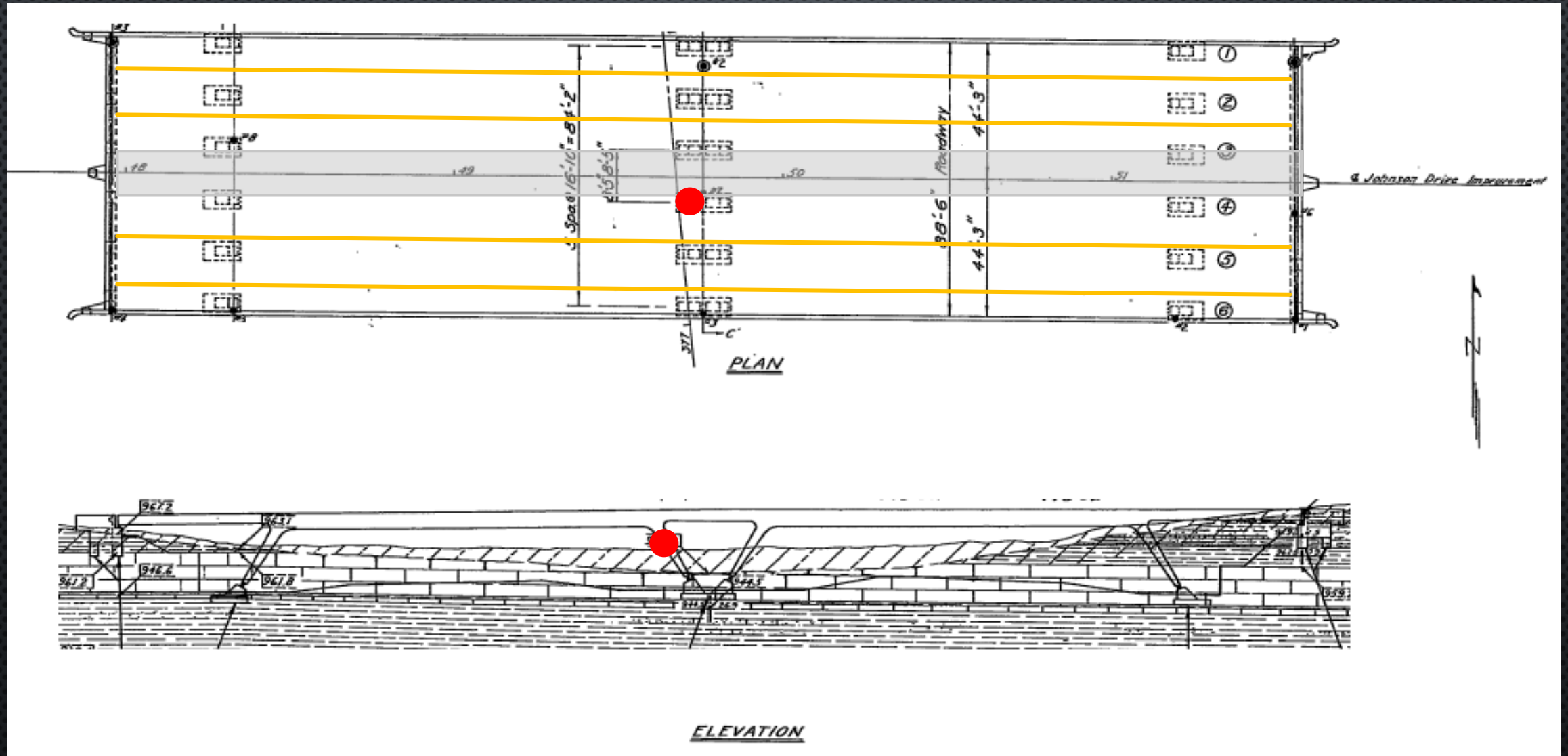
- ACCIDENT ON APRIL 10TH, 2016
- SUV HEADING SOUTH ON I-435 LOST CONTROL AND HIT THE BRIDGE
- POLICE WITNESS ESTIMATED THE VEHICLE WAS GOING OVER 100 MPH
- VEHICLE WAS AIRBORNE AND HIT THE BRIDGE \pm 10 FEET ABOVE GROUND



LOCATION OF IMPACT



LOCATION OF IMPACT



BRIDGE DAMAGE



Frame 1



Frame 2



Frame 3

BRIDGE DAMAGE

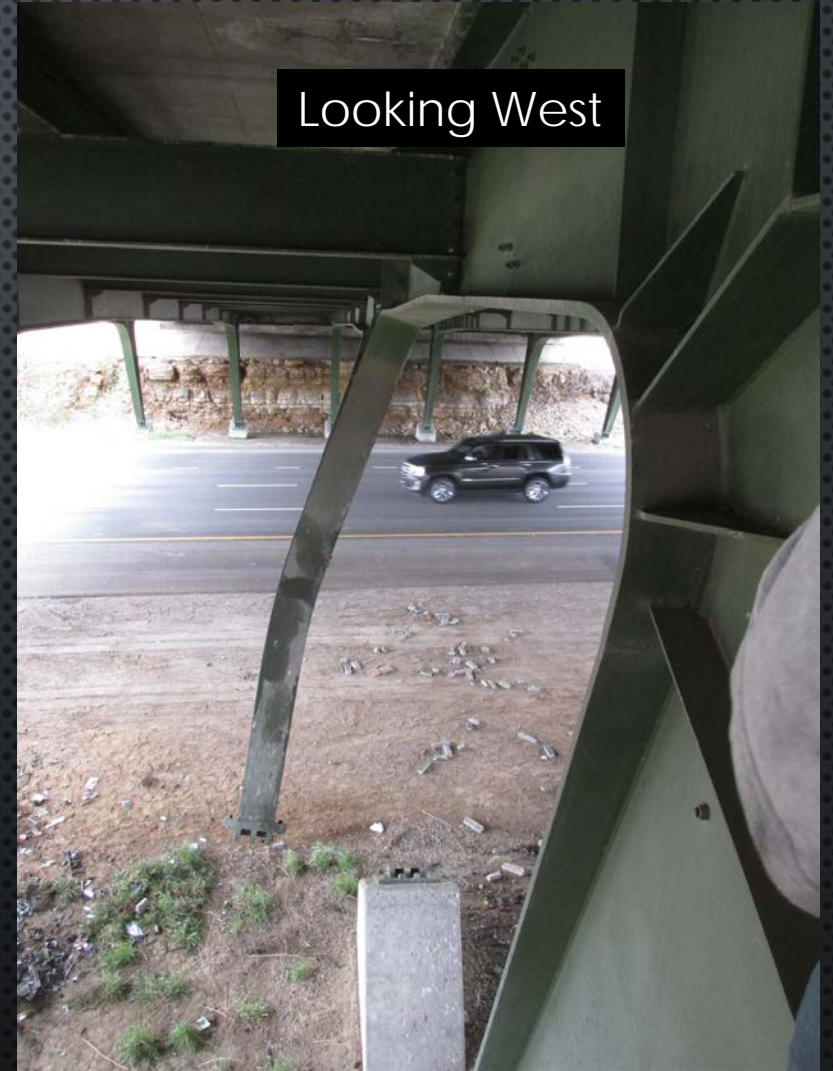
Looking East



Frame 4

Frame 5

Looking West



Frame 4

BRIDGE DAMAGE



BRIDGE DAMAGE



BRIDGE DAMAGE

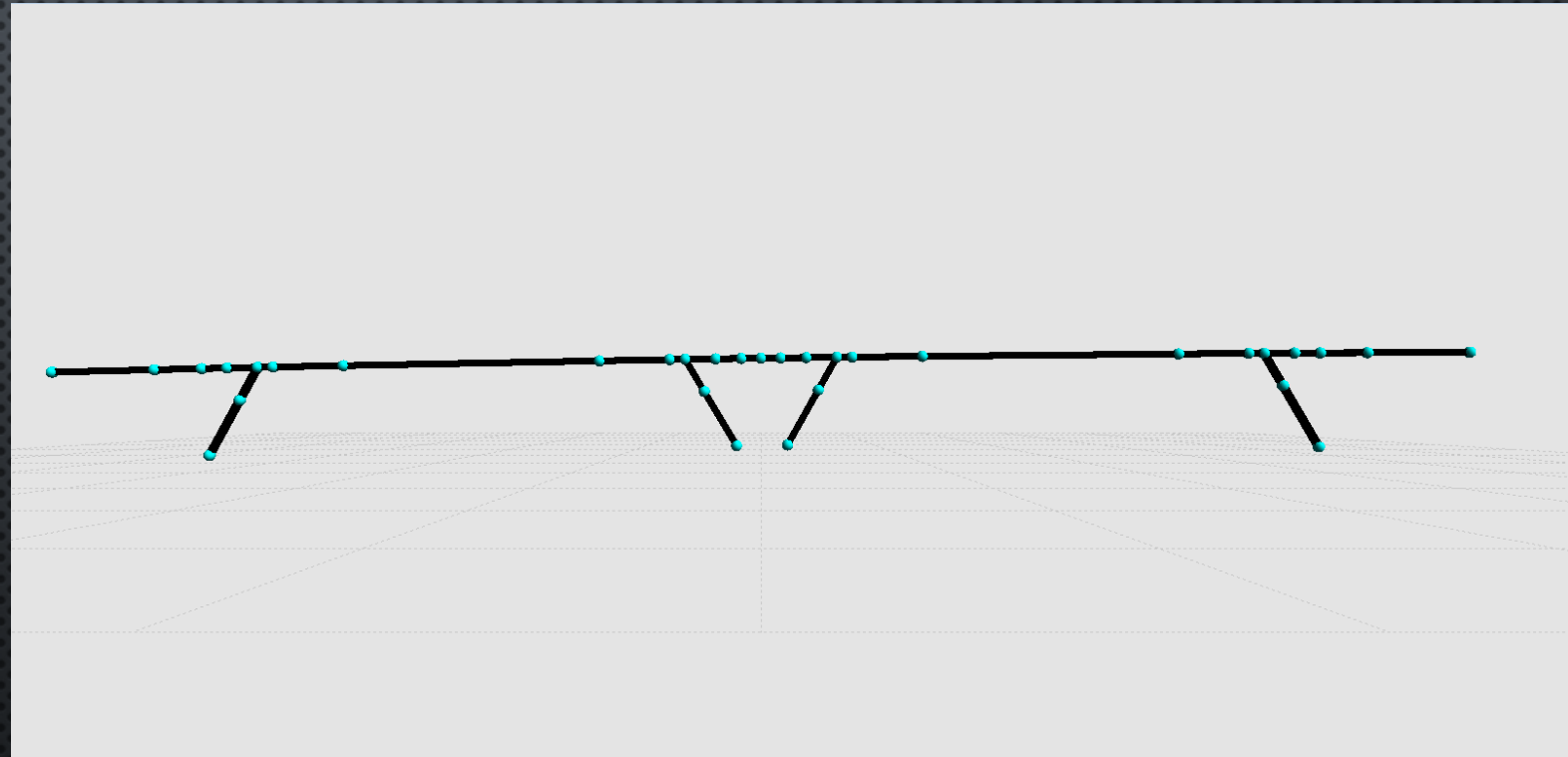


BRIDGE DAMAGE



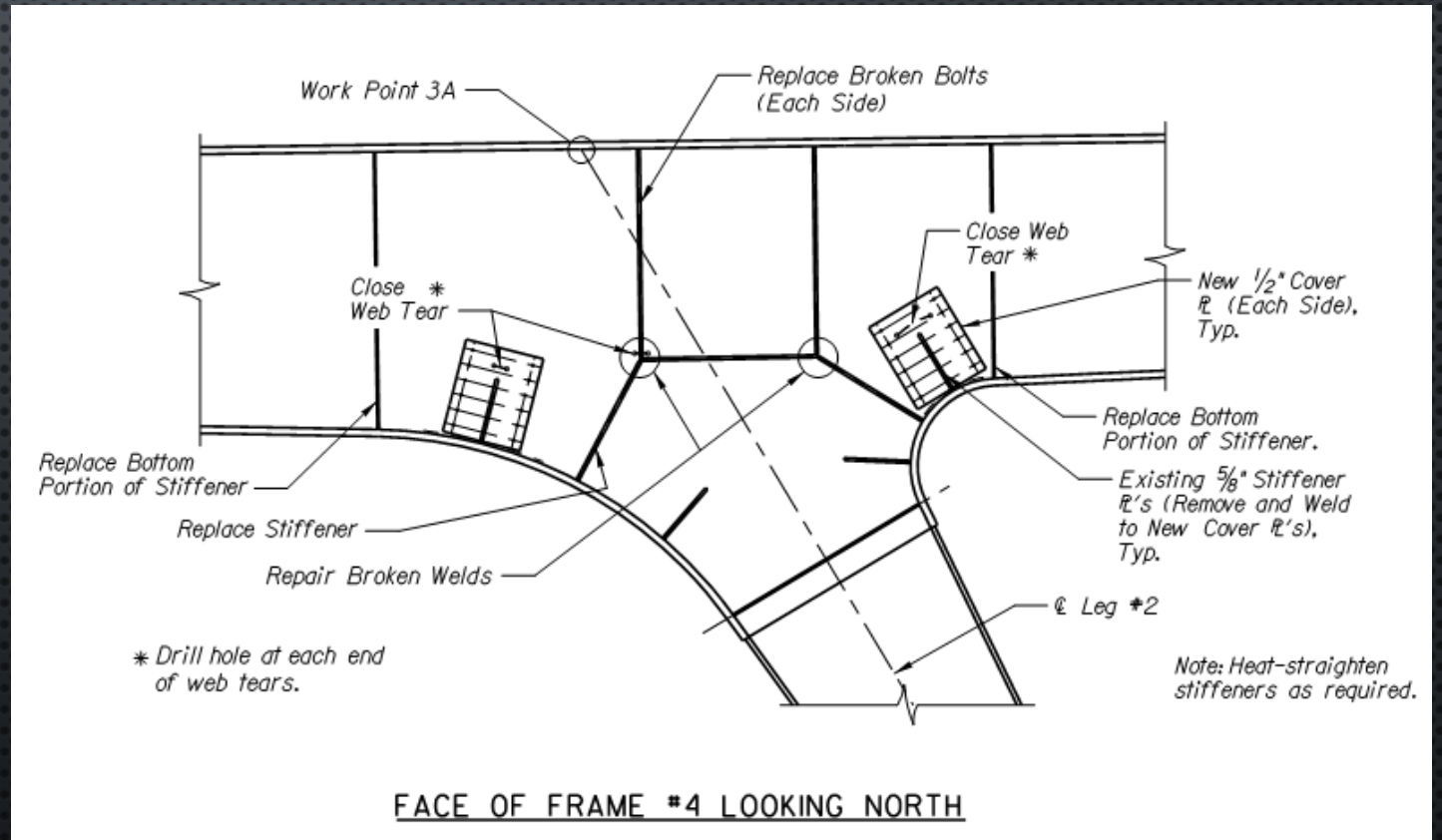
BRIDGE ANALYSIS

- 2-D FRAME MODEL
- STEEL MEMBERS ONLY
- ANALYSIS USED TO DETERMINE JACKING LOAD REQUIRED TO RE-LOAD THE DAMAGED LEG



ADDITIONAL ENGINEERING

- DOCUMENTED ALL DAMAGED LOCATIONS
- DETERMINED MEMBERS TO BE REPAIRED OR REPLACED
- PROVIDED REHABILITATION PLANS
- SITE VISITS DURING REPAIRS
- DOCUMENTED REPAIRS AND SUBMITTED AS-BUILT PLANS TO KDOT



HEAT STRAIGHTENING



HEAT STRAIGHTENING



BEFORE AND AFTER



JOHNSON DRIVE EMERGENCY REPAIRS

- KDOT INSPECTED THE BRIDGE THE SAME DAY AS THE COLLISION (APRIL 10TH, 2016)
- HNTB WAS ONSITE APRIL 12TH, 2016
- FLAME-ON WAS ONSITE AND BEGAN REPAIRS APRIL 26TH, 2016
- WORK WAS COMPLETED AND ALL LANES OF TRAFFIC RE-OPENED MAY 7TH, 2016

QUESTIONS?