

SECTION CORNER RECORD

NE 000-700

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (2011):

Corner 1: North: 1746198.20 East: 3161925.82 (U.S. survey feet)

Corner 2: North: 1746194.68 East: 3161806.76 (U.S. survey feet)

Type of monument: INDOT Type B monument

Depth: Flush with adjacent road surface

Indiana tie card references:

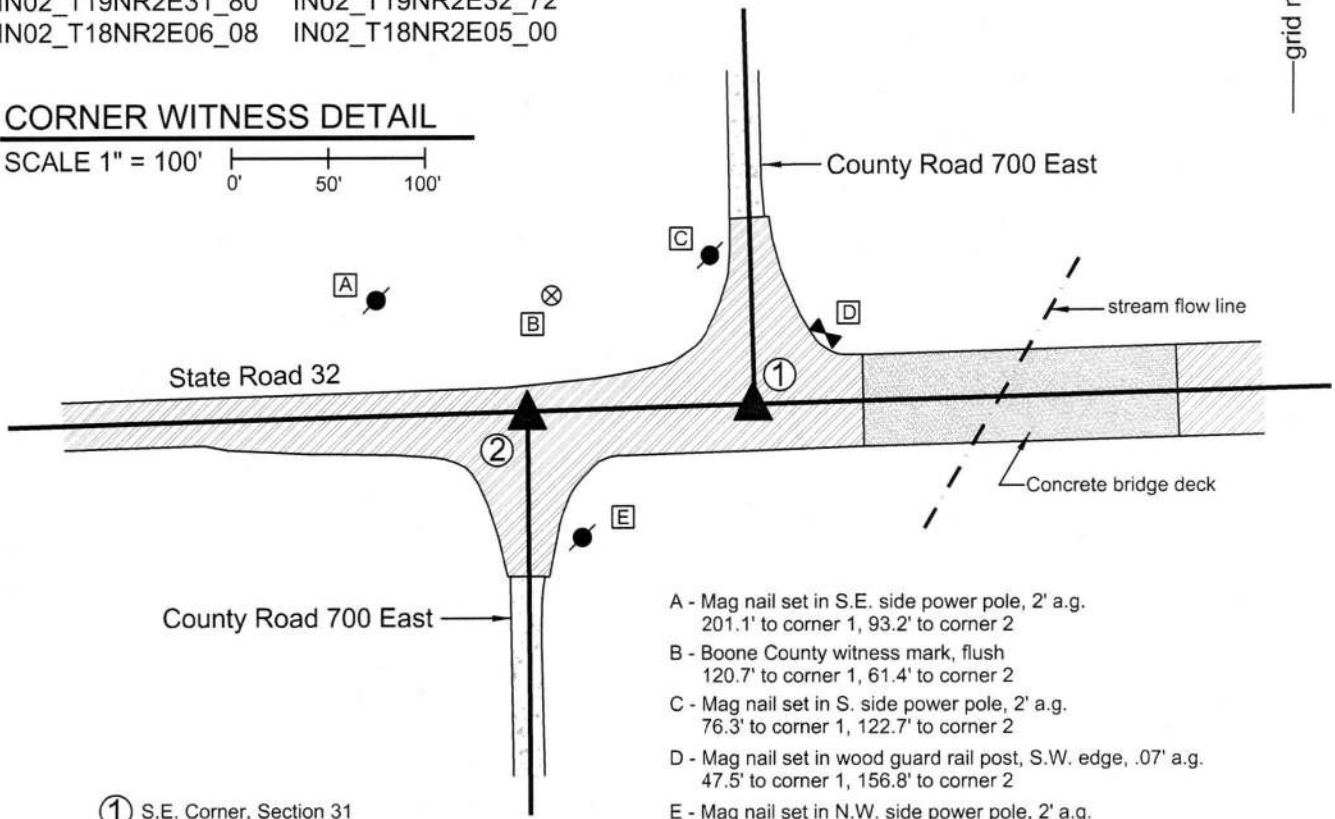
IN02_T19NR2E31_80 IN02_T19NR2E32_72

IN02_T18NR2E06_08 IN02_T18NR2E05_00



CORNER WITNESS DETAIL

SCALE 1" = 100'



- A - Mag nail set in S.E. side power pole, 2' a.g.
201.1' to corner 1, 93.2' to corner 2
- B - Boone County witness mark, flush
120.7' to corner 1, 61.4' to corner 2
- C - Mag nail set in S. side power pole, 2' a.g.
76.3' to corner 1, 122.7' to corner 2
- D - Mag nail set in wood guard rail post, S.W. edge, .07' a.g.
47.5' to corner 1, 156.8' to corner 2
- E - Mag nail set in N.W. side power pole, 2' a.g.
115.6' to corner 1, 68.0' to corner 2

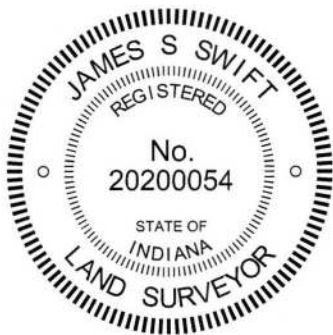
① S.E. Corner, Section 31
S.W. Corner, Section 32
T 19 N, R 2 E

② N.W. Corner, Section 5
N.E. Corner, Section 6
T 18 N, R 2 E

Distance between monuments - 119.1'

Boone County witness mark is a 3/8" diameter x 2' long rebar bearing a metal cap stamped "Boone County Witness Point."

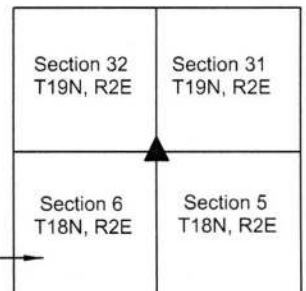
Please refer to page 2 of 2 for further documentation.



Kenneth E. Hedge
Kenneth E. Hedge, County Surveyor

James S. Swift
James S. Swift, IN LS 20200054
March 23, 2017 Page 1 of 2

Union Township
Sections 5, 31 & 32



SECTION CORNER RECORD

NE 000-700

BOONE COUNTY SURVEYOR'S OFFICE

Written Documentation Sheet

Please refer to page 1 of 2 for other information.

The INDOT Type B monuments were set during a bridge reconstruction project.

No specific descriptions of these corners were found in the BCS Surveyor's Record beyond the original establishment of the corners as wood posts in 1819 and 1821, respectively. A BCS tie card dated January 18, 1994 shows both corners and provides reference ties to the corners but does not state what monuments were found marking the corners. The graphic representation on the tie card clearly indicates that the corners are situated at the respective intersections of the centerlines of State Road 32 and County Road 700 East.

Significant uncertainty has been associated with the positions of these corners for several years. Investigation of these corners in 2012 yielded the discovery of two sets of monuments at each corner. Mag nails were found at the positions where the approximate center of State Road 32 is intersected by the approximate centers of the respective roadways of County Road 700 East. Also, one inch diameter iron pins set in concrete were found in the vicinity of these intersections. The origin of these monuments is not specifically known. It is noted that the iron pins are uniformly east of the Mag nails and the positions where the respective north-south roadways intersect State Road 32.

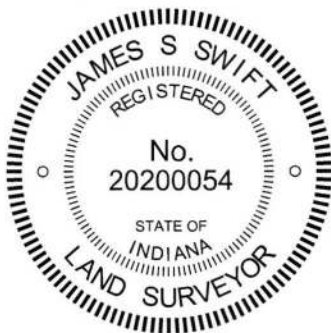
A Location Control Route Survey produced for INDOT by USI Consultants, dated January 29, 2002, shows both corners as "1 inch I. Pin fnd per County Surveyor Ties." The monuments are referenced by Station and it is clear that this survey calls the iron pins in concrete as the corner. The statement that the positions were found per County Surveyor Ties is not confirmed. The distance reference ties were not present in 2012. As noted above, the 1994 BCS tie card shows the corners at the physical intersections of the roadways, while the iron pins are east of the intersections. The same 2002 Route survey also shows P.O.T. stations which are intended to represent the termini of the intersecting lines of the centers of C.R. 700 East. The Mag nails found in 2002 correlate with the P.O.T. stations. It is believed most likely that these nails were set in association with the 2002 route survey.

Later in 2002, a set of surveys certified by Jerry L. Carter of Anderson & Associates, recorded as documents 0217183 and 0217184 in the Office of the Boone County Recorder, show Corner 1 (standard corner) as a nail found and notes the that an iron pin in concrete is 27.6 feet east, which correlates to the respective stations shown on the aforementioned Route Survey. A 2007 survey by Sea Group, LLC recorded as Instrument 200700008100 (Boone County Recorder) shows the respective corners as Mag Nails, the positions of which correlate to the aforementioned Mag nails found in 2012.

It is apparent that the Carter and Sea Group surveys hold nails which were intended by the 2002 route survey to mark P.O.T. stations, not the section corners. However, it is not apparent why the iron pins held on the route survey were ever considered as marking the corners, other than their presence in the roadway. The reference ties from 1994 were not confirmed but, as noted above, the positions of the iron pins being well east of the centers of C.R. 700 East, do not match the clear and specific graphic representation on the tie card. Nor do the positions of these pins fit with the actual available evidence of the corners, in the form of the existing north-south roadways. Personal discussion of the matter with the late Mr. Carter indicated that he firmly believed the iron pins in concrete to have been set in error. In performing the 2002 surveys noted above, he held the nails as marking the corners, as they fit with all available evidence of the corners, whereas the iron pins fit with none of the available evidence. Also of note is the fact that the route survey created additional P.O.T. stations in order to account for the fact that the iron pins were substantially distant from the actual roadway intersections.

Assessing the available evidence in the field, the evidence of the existing roadways was accepted as dominant over the evidence of the found iron pins. The found nails, likely set as P.O.T.s in 2002, were held as marking the corners. This intersection was reconstructed in 2014-2015 as part of the project replacing the bridge just east of the intersection. INDOT was notified of the uncertainties associated with the corners and the intention of this office to hold the positions of the nails. This intention was confirmed by INDOT and the final monumentation set for the corners conforms with the original positions of the nails. Type B monuments were set at these positions by INDOT contractors, in cooperation with this office. The previous positions of the iron pins in concrete were 27.6 feet east at Corner 1 and 19.6 feet east and 0.9 foot south at Corner 2, respectively.

It is also noted that the descriptions of the parcels adjoining the intersection purchased by INDOT prior to the bridge reconstruction project are tied to respective corners, but hold the disputed positions of the iron pins, now removed. It is recommended that future surveyors take this into account if and when the limits of these small parcels are defined.

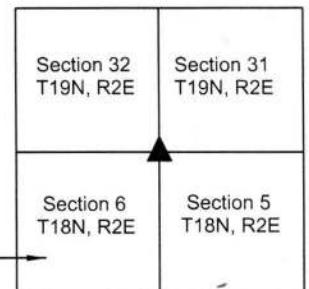


Kenneth E. Hedge
Kenneth E. Hedge, County Surveyor

James S. Swift
James S. Swift, IN LS 20200054

March 23, 2017 Page 2 of 2

Union Township
Sections 5, 31 & 32



SECTION CORNER RECORD

NE 050-600

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (2011):

Corner 1: North: 1748701.63 East: 3156410.42 (U.S. survey feet)

Corner 2: North: 1748691.17 East: 3156410.47 (U.S. survey feet)

Type of monument: Harrison, 4" disk 'Section Corner'

Depth: One inch below adjacent road surface

Indiana tie card references:

IN02_T19NR1E36_44 IN02_T19NR2E31_36

CORNER WITNESS DETAIL

SCALE 1" = 40'

- A - Boone County witness mark, flush, 29.5' to Corner 1, 39.6' to Corner 2
- B - Boone County witness mark, flush, 26.9' to Corner 1, 18.4' to Corner 2
- C - Boone County witness mark, flush, 28.4' to Corner 1, 18.9' to Corner 2

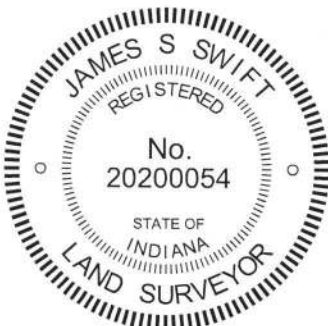
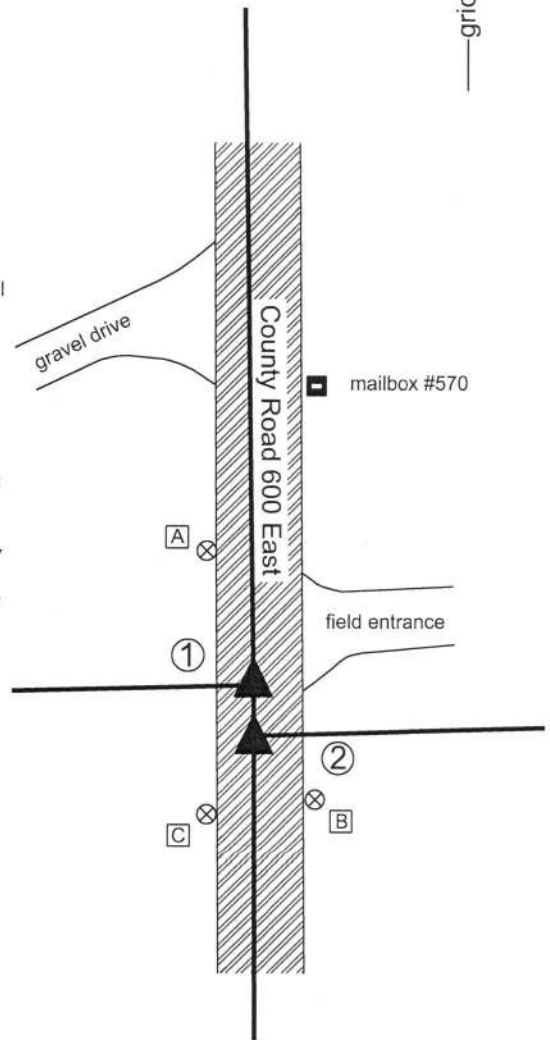
The Harrison monument at Corner 2 was set over a stone and in place of a found Mag nail and Harrison monument. The monument Corner 1 was set in place of a found Mag nail and Harrison monument.

No specific descriptions of Corner 1 were found in the BCS Surveyor's Record beyond the original establishment of the corner as a wood post in 1819. A BCS record of May 22, 1855 states, with respect to Corner 2, "A Stone marked 1/4 S 31." BCS tie cards dated July 28, 2005 show both corners as Harrison monuments with no documentation of source.

Both corners were excavated on May 17, 2018. Prior to excavation, Mag nails were found at the surface of the road. The monuments referenced in the 2005 tie card were known to be below the Mag nails. Excavation at Corner 2 revealed the Harrison monument at 7 inches deep, directly below the Mag Nail. Further excavation revealed a stone found at 17 inches deep, below the Harrison. The stone was embedded in the clay layer below the road bed, with the top of the stone at the bottom of the road bed. With the top 4 inches of the stone exposed, it measured 11 inches N-S by 11 inches E-W. Various markings were visible on the top of the stone, mostly deep scratches which appeared to have been made by a road grader. The scratches were substantial enough that it was not possible to identify whether the mark "1/4 S 31" was present. The Harrison monument had been situated near the northwest edge of the top of the stone. Mag spikes were found driven into the clay at the NE, NW, SE and SW edges of the stone. The stone was held as marking the corner and a new Harrison monument was set in place of the previous monument, slightly northwest of the top, center of the stone.

Excavation at Corner 1 revealed the known Harrison monument at 7 inches below the found Mag nail, but no further evidence of the corner. It is noted that an average closing distance computed with respect to the original federal survey notes and the corners 1/2 mile to the north and south would place these corners approximately 13.9 feet apart. The found Harrison monuments are closer to 10.5 feet apart. The area around Corner 1 was excavated to 1.5 feet south, 4 feet north and 2.5 feet east and west of the existing monuments to include an area which may contain evidence at the computed closing distance. No further evidence of Corner 1 was found and the position of the found Mag nail and Harrison monument were held as marking the corner. These monuments were replaced with a new Harrison monument.

- ① East Quarter Corner Section 36 T 19 N, R 1 E
- ② West Quarter Corner Section 31 T 19 N, R 2 E



Kenneth E. Hedge
Kenneth E. Hedge, County Surveyor

James S. Swift
James S. Swift, IN LS 20200054
June 12, 2018

Center Township	Union Township
Section 36 T19N, R1E	Section 31 T19N, R2E

SECTION CORNER RECORD

BOONE COUNTY SURVEYOR'S OFFICE

NE 050-700

State Plane grid coordinates NAD83 (2011):

North: 1748854.43 East: 3161849.86 (U.S. survey feet)

Type of monument: 5/8 inch rebar with metal cap 'Boone County Surveyor'

Depth: Six inches below adjacent gravel road surface.

Indiana tie card references:

IN02_T19NR2E31_44 IN02_T19NR2E32_36

CORNER WITNESS DETAIL

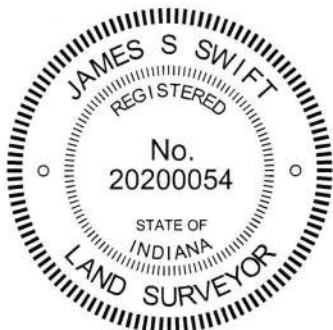
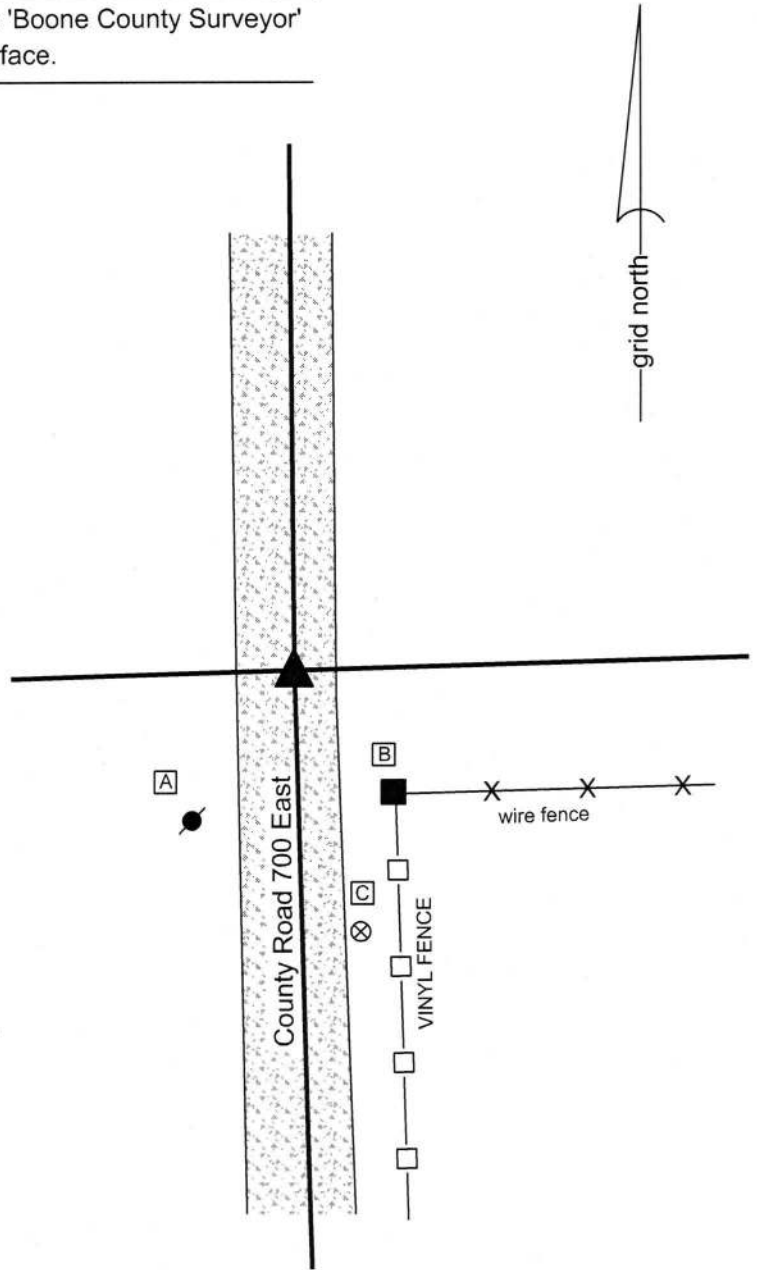
SCALE 1" = 30'

- A - Mag nail set in N.E. side power pole, 2' a.g., 27.4'
- B - Mag nail set in W. side wood post, 2' a.g., 24.9'
- C - Boone County witness mark, flush, 41.9'

The rebar was set in place of another rebar found. BCS records of April 14-16, 1862 state, with respect to this corner, "Found point but fixed no corner." No recent BCS tie cards were found referencing this corner. Significant excavation was not performed at this corner as it is known that the corner falls within the bed of a former railroad. The corner is addressed on two surveys by Anderson and Associates, certified by Jerry L. Carter, LS No. S0350, dated August, 2002 and recorded as Documents 0217183 and 0217184 in the Office of the Boone County Recorder. These surveys show the corner to be a "rebar/cap set." The rebar was found in a position which agrees with the relative positions of other monuments shown on the surveys. No other recorded surveys were found which confirm or contest this position for the corner. Plans for the railroad which formerly crossed this corner in the E-W direction have not been found. The position of the rebar fits relatively well with proximate corners and the evidence of the original section lines in the form of the physical roadways. This position was held for establishing several parcels in section 32.

The position of the rebar was held as marking the corner. During minor excavation, it was discovered that the rebar was driven through a section of railroad tie which was fully embedded in the road bed. The rebar was removed and residue on the rebar indicated that the railroad tie is approximately 8 inches thick. The rebar was 5/8 inch diameter, 24 inches long with a yellow plastic cap smashed around the shaft, and was quite stable as driven through the section of railroad tie. A new 30 inch length of rebar was driven through the same hole in the railroad tie. A metal cap stamped Boone County Surveyor was set over this rebar and a divot was punched in the cap at the same position as the top of the original rebar, as found prior to removal.

This corner was originally established as a wood post in 1821.

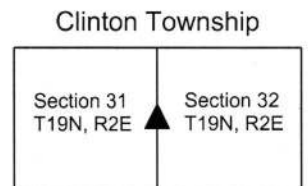


Kenneth E. Hedge

 Kenneth E. Hedge, County Surveyor

James S. Swift

 James S. Swift, IN LS 20200054
 April 28, 2017



SECTION CORNER RECORD

NE 100-600

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (2011):

Corner 1: North: 1751369.50 East: 3156369.35 (U.S. survey feet)

Corner 2: North: 1751341.82 East: 3156369.75 (U.S. survey feet)

Type of monument: Harrison, 4" disk 'Section Corner'

Depth: Flush with adjacent road surface

Indiana tie card references:

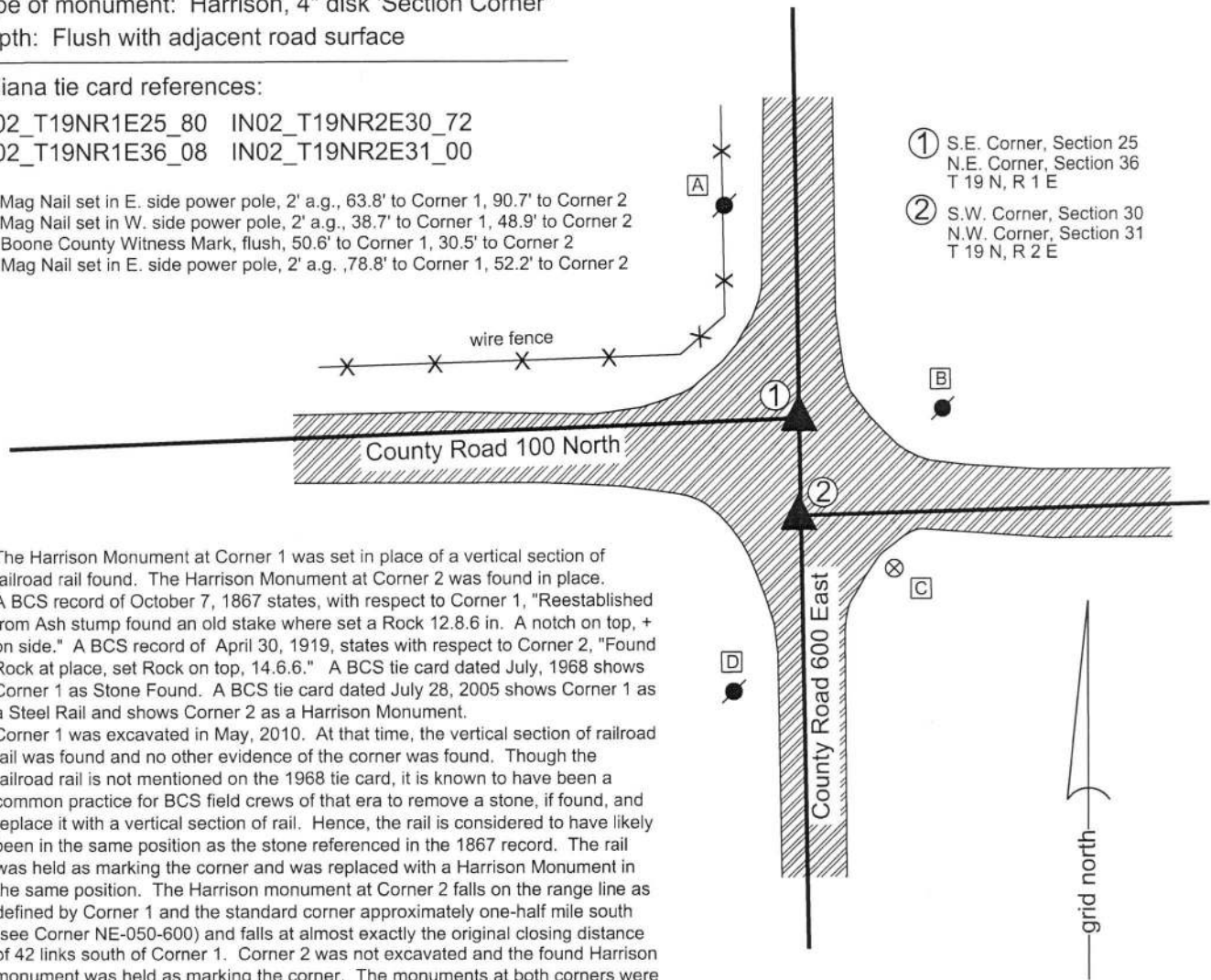
IN02_T19NR1E25_80 IN02_T19NR2E30_72

IN02_T19NR1E36_08 IN02_T19NR2E31_00

- A - Mag Nail set in E. side power pole, 2' a.g., 63.8' to Corner 1, 90.7' to Corner 2
- B - Mag Nail set in W. side power pole, 2' a.g., 38.7' to Corner 1, 48.9' to Corner 2
- C - Boone County Witness Mark, flush, 50.6' to Corner 1, 30.5' to Corner 2
- D - Mag Nail set in E. side power pole, 2' a.g., 78.8' to Corner 1, 52.2' to Corner 2

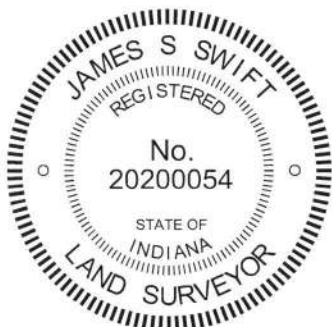
CORNER WITNESS DETAIL

SCALE 1" = 50'



- ① S.E. Corner, Section 25
N.E. Corner, Section 36
T 19 N, R 1 E
- ② S.W. Corner, Section 30
N.W. Corner, Section 31
T 19 N, R 2 E

The Harrison Monument at Corner 1 was set in place of a vertical section of railroad rail found. The Harrison Monument at Corner 2 was found in place. A BCS record of October 7, 1867 states, with respect to Corner 1, "Reestablished from Ash stump found an old stake where set a Rock 12.8.6 in. A notch on top, + on side." A BCS record of April 30, 1919, states with respect to Corner 2, "Found Rock at place, set Rock on top, 14.6.6." A BCS tie card dated July, 1968 shows Corner 1 as Stone Found. A BCS tie card dated July 28, 2005 shows Corner 1 as a Steel Rail and shows Corner 2 as a Harrison Monument. Corner 1 was excavated in May, 2010. At that time, the vertical section of railroad rail was found and no other evidence of the corner was found. Though the railroad rail is not mentioned on the 1968 tie card, it is known to have been a common practice for BCS field crews of that era to remove a stone, if found, and replace it with a vertical section of rail. Hence, the rail is considered to have likely been in the same position as the stone referenced in the 1867 record. The rail was held as marking the corner and was replaced with a Harrison Monument in the same position. The Harrison monument at Corner 2 falls on the range line as defined by Corner 1 and the standard corner approximately one-half mile south (see Corner NE-050-600) and falls at almost exactly the original closing distance of 42 links south of Corner 1. Corner 2 was not excavated and the found Harrison monument was held as marking the corner. The monuments at both corners were raised to the level of the surface of the newly paved roadways in May, 2018. Corner 1 was originally established as a wood post in 1819 and Corner 2 was originally established as a wood post in 1821.



Kenneth E. Hedge
Kenneth E. Hedge, County Surveyor

James S. Swift
James S. Swift, IN LS 20200054
August 1, 2018

Center Township Union Township

Section 25 T19N, R1E	Section 30 T19N, R2E
Section 36 T19N, R1E	Section 31 T19N, R2E

SECTION CORNER RECORD

NE 100-650

BOONE COUNTY SURVEYOR'S OFFICE

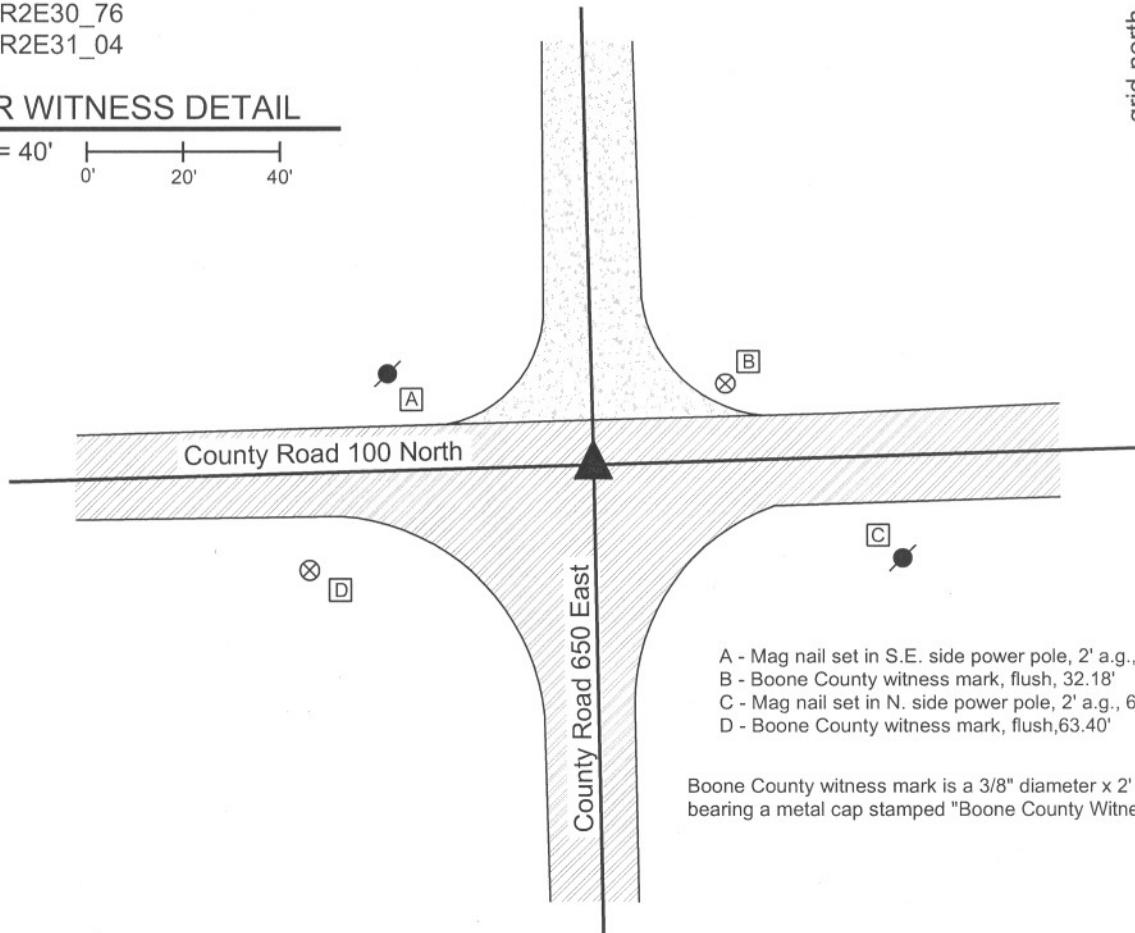
State Plane grid coordinates NAD83 (NSRS 2007):
North: 1751418.61 East: 3159182.58 (U.S. survey feet)

Type of monument: Harrison, 4" disk 'Section Corner'
Depth: One inch below adjacent road surface

Indiana tie card references:
IN02_T19NR2E30_76
IN02_T19NR2E31_04

CORNER WITNESS DETAIL

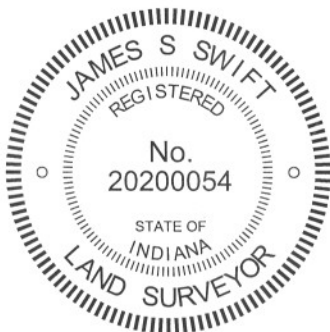
SCALE 1" = 40'
0' 20' 40'



- A - Mag nail set in S.E. side power pole, 2' a.g., 45.65'
- B - Boone County witness mark, flush, 32.18'
- C - Mag nail set in N. side power pole, 2' a.g., 66.62'
- D - Boone County witness mark, flush, 63.40'

Boone County witness mark is a 3/8" diameter x 2' long rebar bearing a metal cap stamped "Boone County Witness Point."

The harrison monument was set in place of a railroad rail found. A BCS tie card dated July 10, 1968 states "no stone." No specific descriptions of this corner were found in the old BCS Surveyor's Record. This corner was excavated on August 26, 2010. Prior to excavation a railroad spike was found at the surface. Excavation revealed a piece railroad rail on end found at 6 inches deep, the top, center of which was 0.2 foot southwest of the railroad spike. The spike and rail were both removed during excavation. Fragments of an oak stake were found in the clay approximately one foot east of the rail at 30 inches deep. No other evidence of the corner was found. The 1968 record does not specifically state that the rail was set at that time, but it is known that it was a common practice for BCS field crews from that era to set railroad rails as monuments. With no source documentation on the fragments of wood found, the rail was held as the best available evidence of the corner and a harrison monument was set in its place. This corner was originally established as a wood stake in July, 1821.



Kenneth E. Hedge
Kenneth E. Hedge, County Surveyor

James S. Swift
James S. Swift, IN LS 20200054

July 25, 2011

Union Township

Section 30
T19N, R2E

Section 31
T19N, R2E

SECTION CORNER RECORD

NE 100-700

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (NSRS 2007):
North: 1751495.52 East: 3161826.38 (U.S. survey feet)

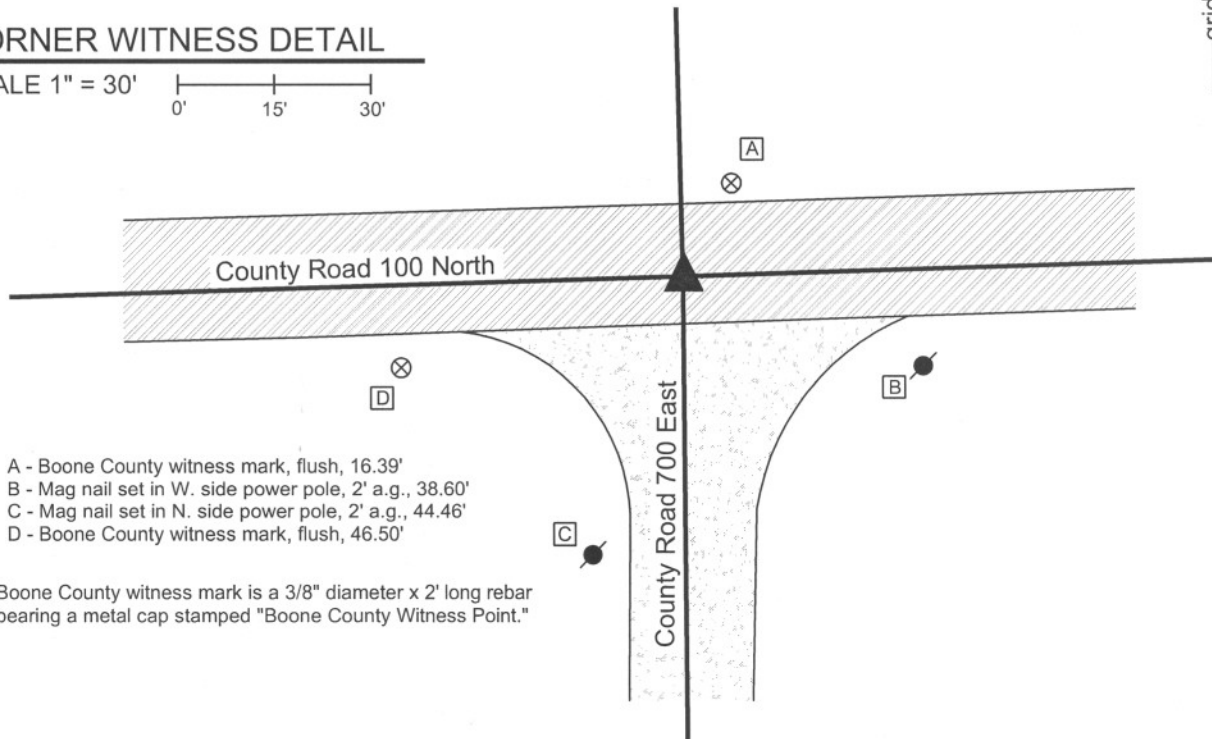
Type of monument: Harrison, 4" disk 'Section Corner'
Depth: One inch below adjacent road surface

Indiana tie card references:
IN02_T19NR2E29_72 IN02_T19NR2E30_80
IN02_T19NR2E31_08 IN02_T19NR2E32_00



CORNER WITNESS DETAIL

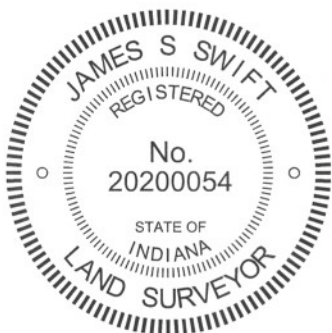
SCALE 1" = 30'
0' 15' 30'



- A - Boone County witness mark, flush, 16.39'
- B - Mag nail set in W. side power pole, 2' a.g., 38.60'
- C - Mag nail set in N. side power pole, 2' a.g., 44.46'
- D - Boone County witness mark, flush, 46.50'

Boone County witness mark is a 3/8" diameter x 2' long rebar bearing a metal cap stamped "Boone County Witness Point."

The harrison monument was set over the top, high point of a stone found. A BCS record dated April 15-16, 1862 states "Found a Rock, yet shown correct by stump of one tree." A BCS tie card dated July 8, 1968 states "no stone." This corner was excavated on December 18, 2009. Prior to excavation a railroad spike was visible at the surface. Excavation revealed a railroad rail on end at 4 inches deep, below the railroad spike. A 5/8 inch rebar was found adjacent to the rail on the south side. Further excavation revealed a stone found 18 inches deep, 2.7 feet south and 1.8 feet east of the rail. The stone imesasures 7 inches N-S, 9 inches E-W and is 11 inches tall with no visible markings. The stone is fully embedded in the clay layer below the road with the top of the stone at the bottom of the sub-base layer of the road. The characteristics of this stone, embedded in the clay, horizontal with no specific markings are consistent with other stones which were set in the early 1800s and were found, but not set, by later County Surveyors. The 1862 reference to the stump of one tree is accepted as evidence that the stone was found to be the proper distance from an original bearing tree. The stone was held as the best evidence of the original location of the corner and the harrison monument was set directly over the top, high point of the stone. The railroad rail, railroad spike and rebar were all removed during excavation. The 1968 reference to "no stone" indicates that a stone was searched for but found. It is most likely that the railroad rail was set at that time, after the erroneous determination that other evidence, in the form of a stone, was not present. This corner was originally established as a wood post in July, 1821.



Kenneth E. Hedge
Kenneth E. Hedge, County Surveyor

James S. Swift
James S. Swift, IN LS 20200054
July 25, 2011

Union Township	
Section 30 T19N, R2E	Section 29 T19N, R2E
Section 31 T19N, R2E	Section 32 T19N, R2E

PHOTOGRAPHIC DOCUMENTATION
Date of photography: December 18, 2009

Railroad rail and rebar, as found.



The stone exposed.



View of the stone and County Road 100 North, from the west, looking east.



View of the stone and County Road 700 East, from the north, looking south.



For details and documentation, refer to related sheet "Section Corner Record."