

SECTION CORNER RECORD

SE 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

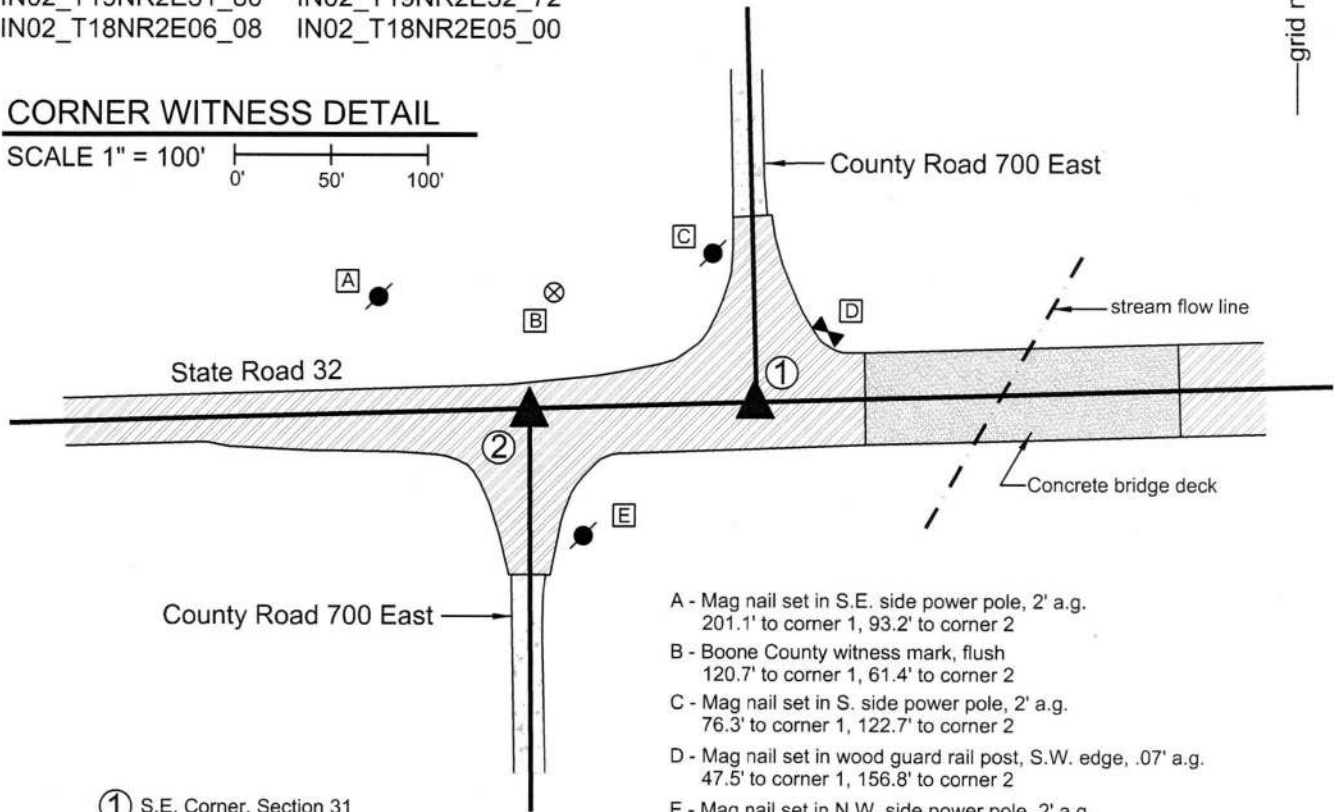
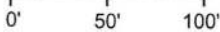
Indiana tie card references:

IN02_T19NR2E31_80 IN02_T19NR2E32_72

IN02_T18NR2E06_08 IN02_T18NR2E05_00

CORNER WITNESS DETAIL

SCALE 1" = 100'



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

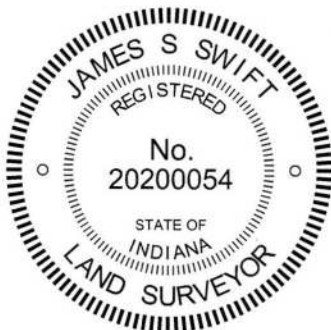
② N.W. Corner, Section 5
N.E. Corner, Section 6
T 18 N, R 2 E

Distance between monuments - 119.1'

- 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

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

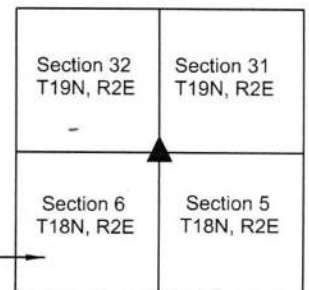
Please refer to page 2 of 2 for further documentation.



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

SE 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.

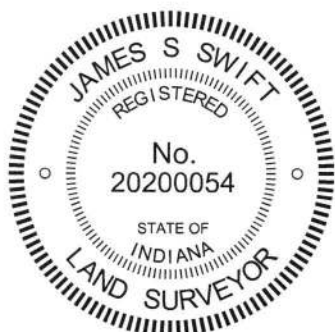
A Location Control Route Survey produced for INDOT by USI Consultants, dated January 29, 2002, shows both corners as "1 inch I. Pin found per County Surveyor Ties." The monuments are referenced by Station and it is clear that this survey calls the iron pins in concrete as the corner. The statement that 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 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.

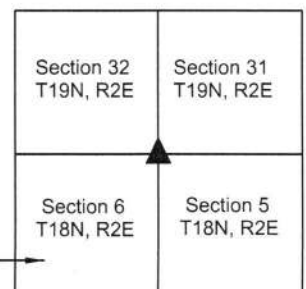



Kenneth E. Hedge, County Surveyor


James S. Swift, IN LS 20200054

March 23, 2017 Page 2 of 2

Union Township
Sections 5, 31 & 32



SECTION CORNER RECORD

SE 050-700

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (NSRS 2007):

North: 1743807.75 East: 3161825.37 (U.S. survey feet)

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

Depth: Six inches below adjacent gravel road surface.

Indiana tie card references:

IN02_T18NR2E05_36

IN02_T18NR2E06_44

CORNER WITNESS DETAIL

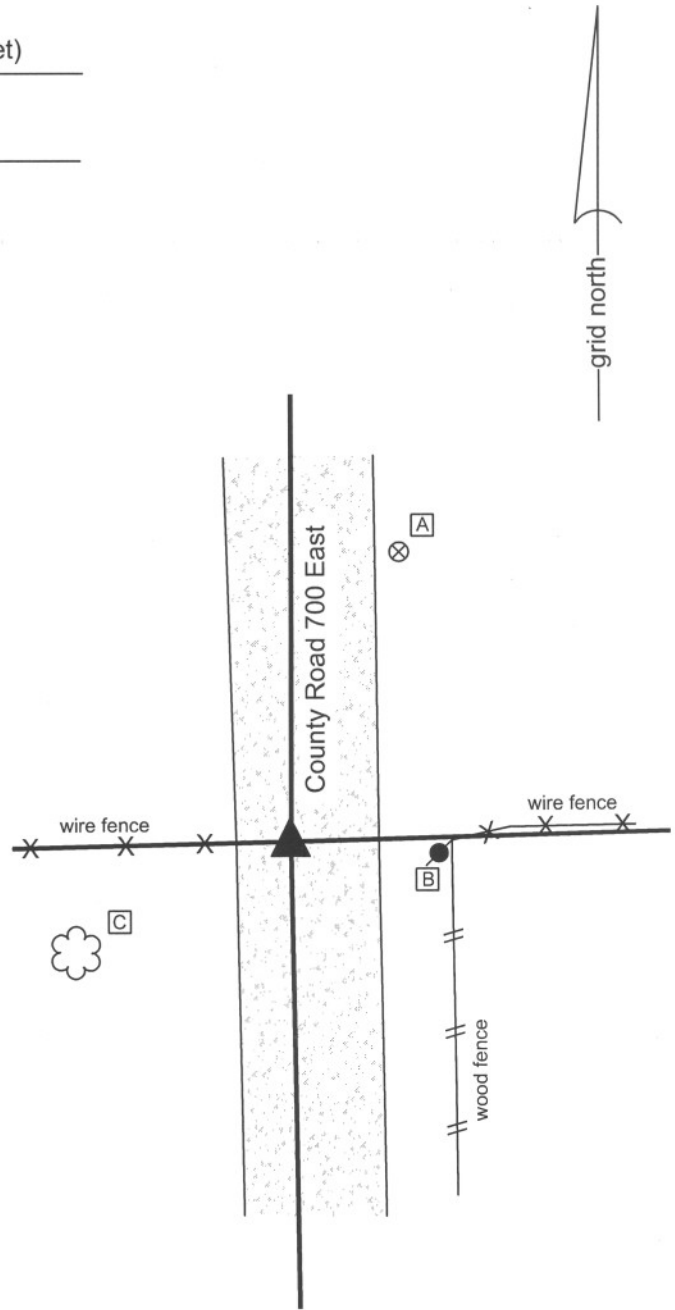
SCALE 1" = 20'



- A - Boone County witness mark, flush, 32.11'
- B - Mag nail set in N. side power pole, 2.0' a.g., 15.4'
- C - Mag nail set in N.E. side 20 inch diameter walnut tree, 3.0' a.g., 22.5'

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 stone found. A BCS record of August 19 and September 5, 1902 states "Located set Rock 6,7,18 + on W. side, sharp point of rock in line." A BCS tie card of June 7, 1991 shows the corner as a railroad rail found. BCS field notes dated August 14, 1975 states "No stone found set rod." No tie card was found associated with these notes. This corner was excavated on June 4, 2009. A railroad rail was found on end at 7 inches deep. A 5/8 inch rebar was found at 7 inches deep, 4.8 feet south of the rail. The record stone was found at 13 inches deep, 0.2 foot west and 0.7 foot south of the rail. The stone was broken in half but the two pieces combined to match the record dimensions. The stone measured 6 inches E-W by 7 inches N-S by 18 inches tall. The "+" was clearly visible on the west side and a distinct high point on the top of the stone was accepted as being the "sharp point" of the rock per the 1902 record. The stone was well embedded in the clay, protruding approximately 3 inches out of the clay in the base layer of the road. The stone was removed and a harrison monument was set in its place at the position of the high point of the stone. 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 14, 2010

Worth Twp	Union Twp
Section 6 T18N, R2E	Section 5 T18N, R2E

PHOTOGRAPHIC DOCUMENTATION

Date of photography: June 4, 2009

View of the stone as first exposed.



The bottom part of the stone found embedded in the road. Not the etched + on the side.



The two parts of the broken stone put together. Note the "sharp point" on the top of the rock.



The two parts of the stone removed from the road bed. The side facing the camera was the west side and the "sharp point" on the top of the rock is on the left in this picture.



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

SECTION CORNER RECORD

SE 050-800

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (NSRS 2007):

North: 1743957.71 East: 3167112.02 (U.S. survey feet)

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

Depth: One inch below adjacent road surface

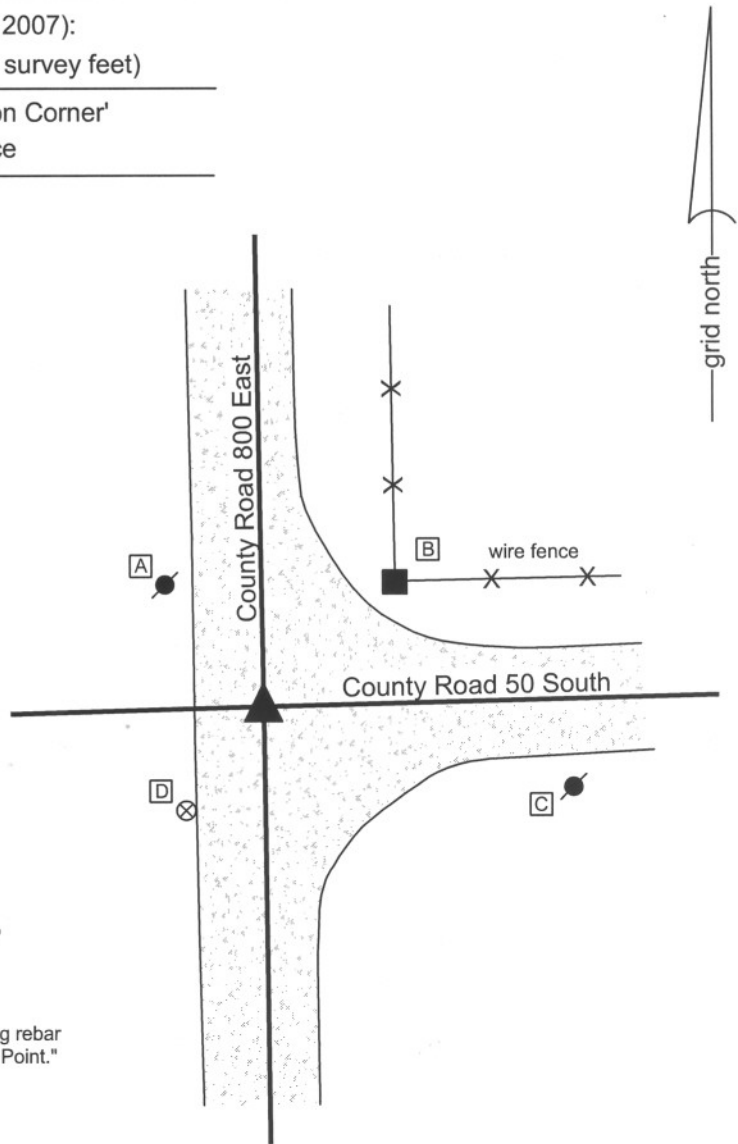
Indiana tie card references:

IN02_T18NR2E04_36

IN02_T18NR2E05_44

CORNER WITNESS DETAIL

SCALE 1" = 30'



- A - Mag nail set in S. side power pole, 2.0' a.g., 23.5'
- B - Mag nail set in S.W. side wood post, 2.0' a.g., 28.3'
- C - Mag nail set in W. side power pole, 3.0' a.g., 48.5'
- D - Boone County witness mark, flush, 20.34'

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 an iron pipe and stone found.

A BCS tied card dated June 7, 1991 calls the corner a 1 inch iron pipe. The corner is not specifically described in the BCS Surveyor's Record but it is depicted as a terminal point for measurements in 1849 and 1912. This corner was excavated on April 28, 2009. The iron pipe was found at 6 inches deep. A stone was found at 1 foot deep. The stone measured 6 inches N-S by 7 inches E-W by 6 inches tall and was embedded in the clay layer below the road. The iron pipe was driven along the edge of the stone, leaning over the top of the stone. No other evidence was found at this corner. The iron pipe and stone were both removed during excavation and the Harrison monument was set in their place, specifically in place of the top of the iron pipe as found prior to excavation.

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

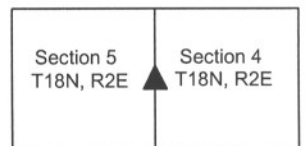


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James S. Swift
 James S. Swift, IN LS 20200054

July 14, 2010

Union Township



PHOTOGRAPHIC DOCUMENTATION

Date of photography: May 28, 2009

The iron pipe, as found.



The stone, as found.



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

SECTION CORNER RECORD

SE 100-700

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (NSRS 2007):

North: 1741162.79 East: 3161869.83 (U.S. survey feet)

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

Depth: Eight inches below adjacent gravel road surface

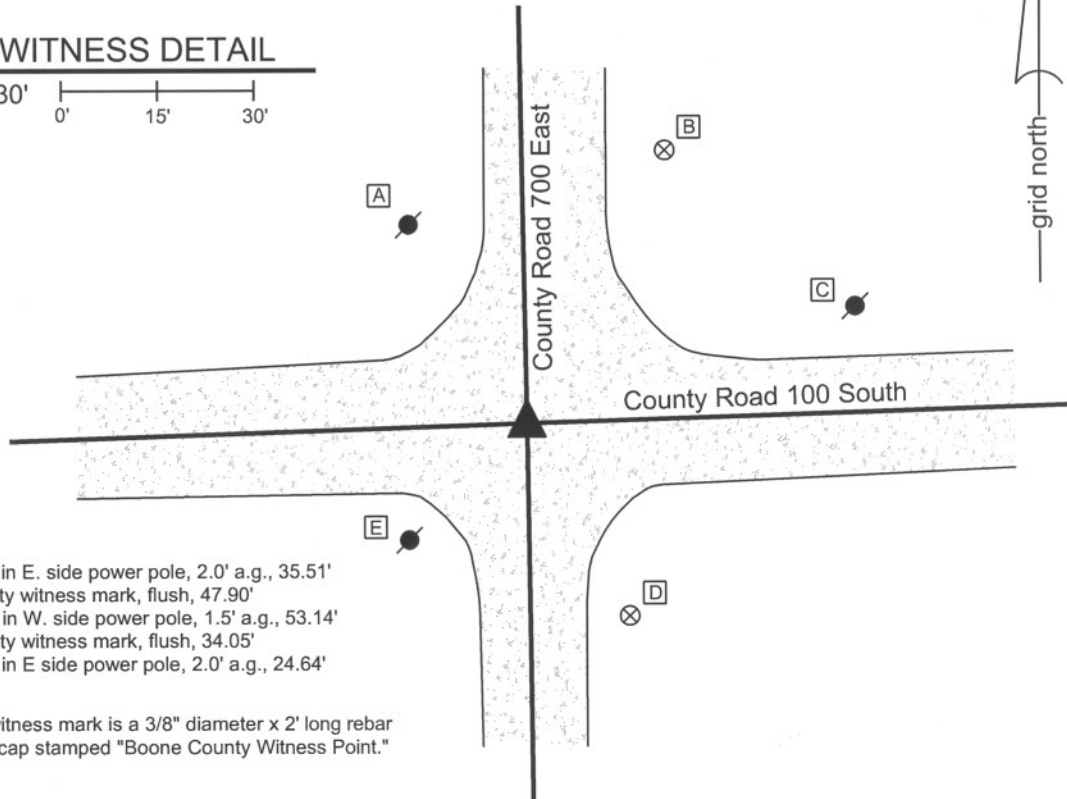
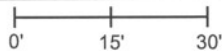
Indiana tie card references:

IN02_T18NR2E05_72 IN02_T18NR2E06_80

IN02_T18NR2E07_08 IN02_T18NR2E08_00

CORNER WITNESS DETAIL

SCALE 1" = 30'



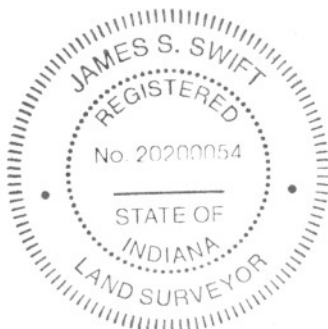
- A - Mag nail set in E. side power pole, 2.0' a.g., 35.51'
- B - Boone County witness mark, flush, 47.90'
- C - Mag nail set in W. side power pole, 1.5' a.g., 53.14'
- D - Boone County witness mark, flush, 34.05'
- E - Mag nail set in E side power pole, 2.0' a.g., 24.64'

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 rebar found.

A BCS record of February 27, 1871 states "Re Established from Oak stump. Set a Rock 14.12.10 marked + (under bridge)." A BCS tie card dated June 7, 1991 shows the corner as a 5/8 inch rebar found. This corner was excavated on May 28, 2009. Prior to excavation a 5/8 inch rebar was found at 3 inches below grade. The rebar was slightly bent at the top but the horizontal position of the main shaft was detectable. The reference in the 1871 to "under bridge" is a confusing reference as it is not clear where or why there might have been a bridge at this intersection. Excavation revealed no more monuments of any kind. An area 7 feet N-S by 11 feet E-W, centered on the found rebar at the approximate center of the intersection, was excavated to at least 30 inches deep and the clay layer below the main road bed. Remnants of an old red clay tile were found at 2 feet, directly under the rebar. The tile appeared to bear in a N-S direction. The presence of the tile may explain the absence of the stone, as the stone may have been removed during the installation of the tile. The harrison monument was set in the horizontal position of the rebar.

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 14, 2010

Worth Twp Union Twp

Worth Township	Section 6 T18N, R2E	Section 5 T18N, R2E
	Section 7 T18N, R2E	Section 8 T18N, R2E

SECTION CORNER RECORD

SE 100-750

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (NSRS 2007):
North: 1741245.75 East: 3164507.86 (U.S. survey feet)

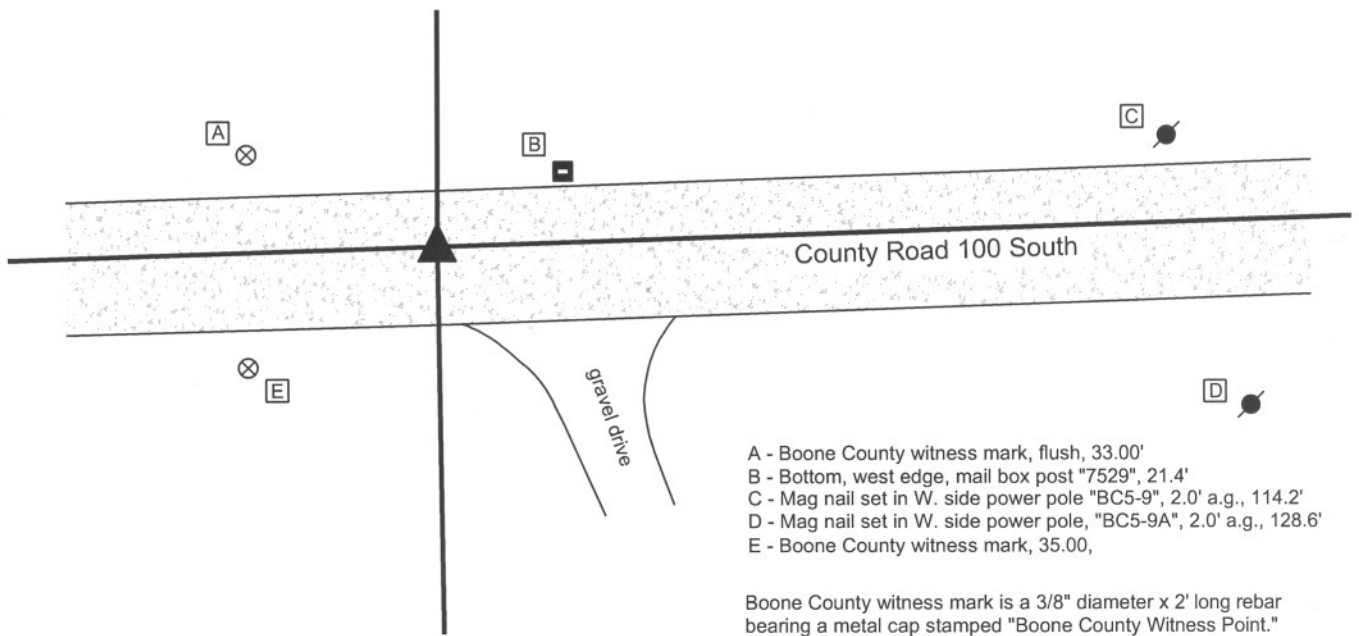
Type of monument: Harrison, 4" disk 'Section Corner'
Depth: Eight inches below gravel road surface

Indiana tie card references:
IN02_T18NR2E05_72
IN02_T18NR2E08_04

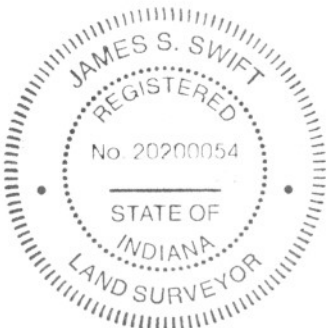


CORNER WITNESS DETAIL

SCALE 1" = 30'



The harrison monument was set in place of a 5/8 inch diameter smooth shafted iron pin found. A BCS record of October 9-10, 1877 states "Reestablished. Set Rock 16,12,10 marked +." A BCS record of August 22, 1907 states "found rock set." This corner was excavated on June 4, 2009. Prior to excavation the aforementioned iron pin was found at 4 inches below grade. Excavation revealed no further evidence of the corner. The area of excavation was 8 feet E-W, centered on the iron pin and 9 feet N-S, extended 3 1/2 feet north and 5 1/2 feet south of the iron pin. It is noted that the road in this area is below the grade of the surrounding fields and that the entire road bed is only 10 inches deep, at which point the clay layer begins. If the stone mentioned in the record were at a depth similar to many other stones found from the same time frame, it would have likely protruded out of the clay and into the bottom of the road bed by 3 or 4 inches. If this were the case, the top of the stone would have been only 6 or 7 inches deep, well within the range of the blade or teeth of a road grader. This corner was originally established as a wood post in July, 1821.



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James S. Swift, IN LS 20200054
July 14, 2010

Union Twp

Section 5
T18N, R2E

Worth Twp

Section 8
T18N, R2E

SECTION CORNER RECORD

SE 100-800

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (NSRS 2007):

North: 1741327.98 East: 3167147.92 (U.S. survey feet)

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

Depth: Eight inches below adjacent gravel road surface

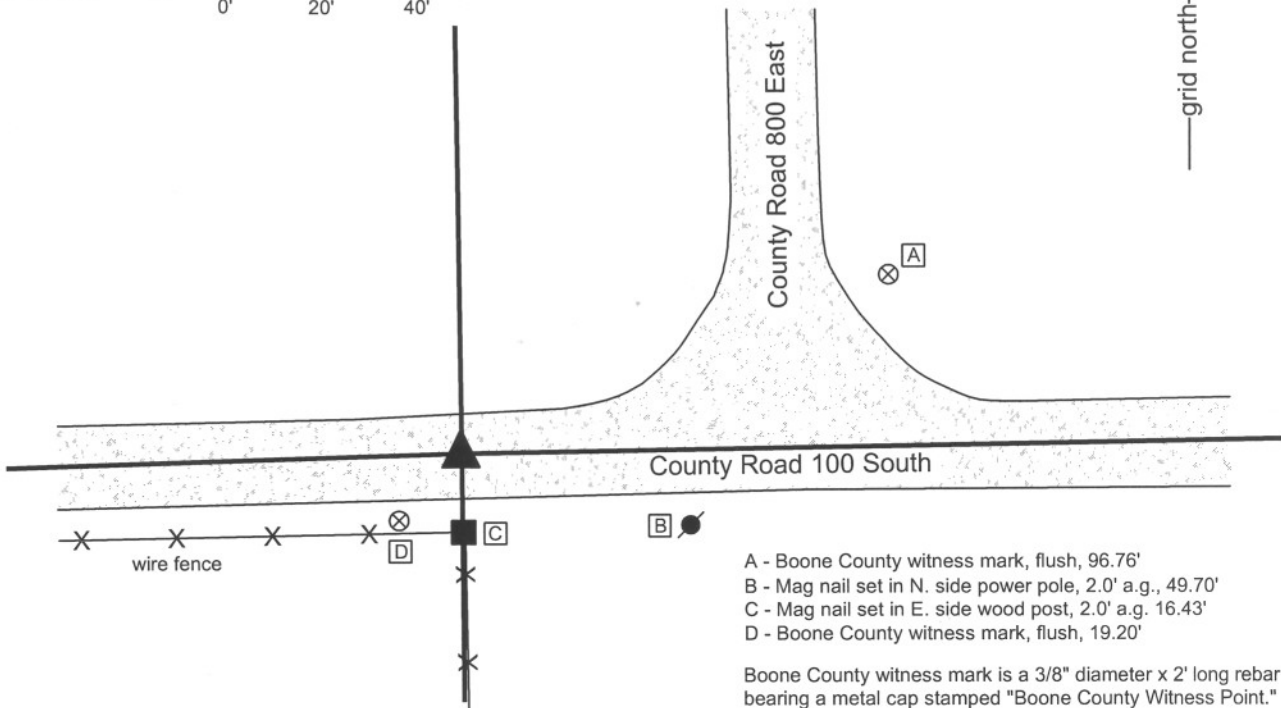
Indiana tie card references:

IN02_T18NR2E04_72 IN02_T18NR2E05_80

IN02_T18NR2E08_08 IN02_T18NR2E09_00

CORNER WITNESS DETAIL

SCALE 1" = 40'



- A - Boone County witness mark, flush, 96.76'
- B - Mag nail set in N. side power pole, 2.0' a.g., 49.70'
- C - Mag nail set in E. side wood post, 2.0' a.g. 16.43'
- D - Boone County witness mark, flush, 19.20'

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 a stone found and in place of an iron pipe found.

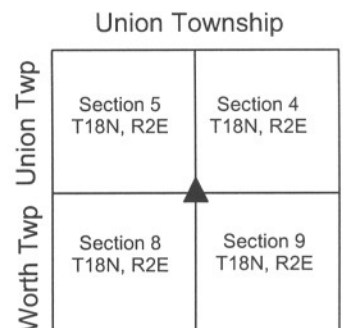
A BCS record of March 22, 1880 states "Reestablished Set Rock 17.24.20+." A BCS tie card of June 7, 1991 shows the corner as a one inch iron pipe found. This corner was excavated on May 14, 2009. Prior to excavation a one inch diameter iron pipe was found at 7 inches deep. This pipe appeared to be the same monument referred to on the 1991 tie card. Excavation revealed a large stone found at 16 inches deep. The stone is 24 inches E-W by 20 inches N-S and measures 17 inches tall on the south side, matching the dimensions described in the 1880 record. No specific markings were found on the stone. The pipe was over the stone, bent slightly and leaning over the top of the stone. The top of the pipe was approximately 2 inches north of the approximate top center of the stone. The position of the pipe was held as the specific position of the corner and the harrison monument was set at this position, over the stone but slightly north of the vague, approximate top center. The pipe was removed during excavation.

This corner was established as a wood post in July, 1821.



Kenneth E. Hedge
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James S. Swift
 James S. Swift, IN LS 20200054
 July 14, 2010



PHOTOGRAPHIC DOCUMENTATION

Date of photography: May 14, 2009

View of the stone as first exposed.



Brandon Miller holding the iron pipe in the approximate position as it was originally found and oriented, prior to removal.



View from the east, looking across the stone and west along County Road 100 South.



View from the north, looking across the stone and south along the fence to the south.



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