

# INSTRUCTIONS FOR COMPLETING THE VERTICAL & HORIZONTAL CLEARANCE FORM

## PURPOSE OF THE FORM:

The Vertical & Horizontal Clearance Form should be used to record all new restrictions or any revisions you need to make to existing clearances. Clearances reported on this form are created by structures, truss bridges, pedestrian bridges, skywalks or railroad bridges. Revisions could be due to reconstruction, resurfacing, pavement upheaval, beam repairs or structure deterioration.

Any new construction where restrictions are placed OVER any OPEN road **MUST** be reported at the time these restrictions occur. This includes beams during the construction phase.

## FIELD DESCRIPTIONS:

**Date:** State the date the measurements were taken

**Route On Structure:** State the road or the restriction type the structure is carrying

**Route Under Structure:** State the road traveling under the structure

**Maintenance Number/FHWA Number:** Depending on location, different staff use one or the other or both. Please list at least one of these identifying numbers for the structure.

**Lane Direction Under Structure:** Please mark if you are supplying the clearances for an undivided highway, the NB/EB, or SB/WB divided highway. This designation is determined considering only the general direction of the route, and disregarding entirely the compass direction of any particular route segment.

One form must be filled out for each vertical clearance determination: a non-divided underpass requires one form; a divided underpass requires two forms.

Each ramp under a structure requires its own form and will also need to be checked for the direction of the route as well as if it is an On Ramp or Off Ramp.

**Direction of Travel Under Structure Compass:** Please mark the direction you are traveling under the structure (from entrance to exit) to obtain the measurements.

All compass directions and lane identification on the form pertain to both horizontal and vertical measurements.

## **MEASUREMENT METHOD:**

Measurements are to be recorded in ENGLISH UNITS (feet and inches) rounded down to the nearest inch. Please discard any metric forms you may have and use only the attached English form.

## **VERTICAL CLEARANCE MEASURING**

The vertical clearance is measured from the road surface to the lowest point of the structure crossing overhead (or the superstructure if a high truss bridge). Clearance information must be measured at the Left Edge of Pavement, each Lane Line Marking from left to right, and Right Edge of Pavement at the entrance to, middle of, and exit from the underpass or high truss bridge. The least clearance from these measurements is thus used to determine the vertical clearance of the structure.

Lane 1-8 designations on the form are determined by the lane markings and start at the left side of the road (Lane 1 will usually be the fog line) and continue to the right (the last lane field you complete will usually be the yellow line followed by the Right Edge of Pavement).

Generally, not all 8 lane fields will need to be completed as very few of these exist across the state. Please submit the clearances by starting at the Left Edge of Pavement, moving to the right across the form for each painted lane marking, and then skip to the Right Edge of Pavement to complete the underpass.

In some cases, the Left Edge of Pavement is where the lane marking is located, please complete the field for Left Edge of Pavement and move inward. This also applies if the Right Edge of Pavement is the most right lane marking on the road. If there are no lane markings, only the Left Edge of Pavement and Right Edge of Pavement will be completed.

## **RAMPS**

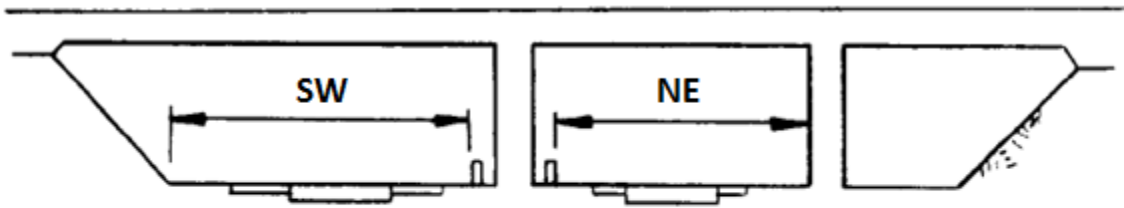
For an underpass that contains a ramp, two forms will need to be completed. The mainline form should be completed as usual but will not contain a Right Edge of Pavement measurement. The Ramp form will begin with Lane 1, not the Left Edge of Pavement as this will be on the mainline form. The Ramp form will contain the Right Edge of Pavement measurement. It should read as though if you put the two forms side by side that you would have the entire underpass clearances from left to right.

## **PLEASE REFER TO THE EXAMPLES AT THE END OF THE INSTRUCTIONS FOR HOW TO COMPLETE THE FORM GIVEN DIFFERENT SCENARIOS**

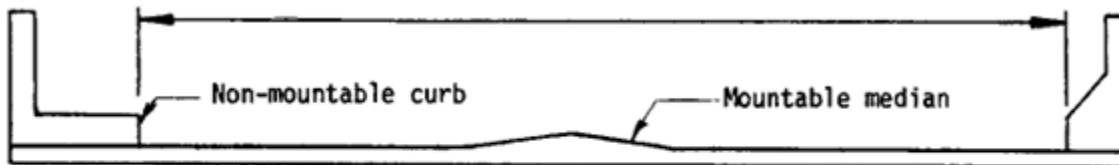
## **HORIZONTAL CLEARANCE MEASURING**

The horizontal measurement should be recorded in the box in the lower section of the form. The purpose of the horizontal clearance measurement is to give the largest available clearance for the movement of wide loads. The “underpass” horizontal clearance should be measured between the most restrictive features: curbs, guard rails, walls, piers or other structural features limiting the roadway.

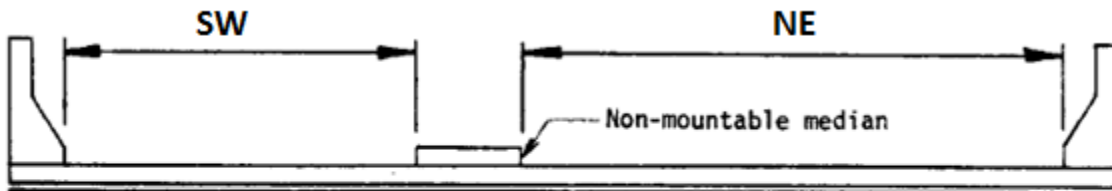
Flush and mountable medians are not considered to be restrictions. Please see the following diagrams and images:



**Horizontal Clearances on divided highway  
with piers & guardrails**



**Horizontal Clearance with no median,  
flush or mountable median**



**Horizontal Clearances with raised median  
or non-mountable median**

**POSTED MEASUREMENTS:**

This box is used to record any "POSTED" vertical clearance attached to a more restrictive overhead clearance. The Manual on Uniform Traffic Control Devices (MUTCD) states a low clearance sign should be posted when the vertical clearance is 14'09" or less. The clearance shown on the sign is 3" less than the actual clearance which provides an allowance for frost heave. The "Posted" clearance should be recorded for all structures affected, including Interstate routes.

# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES

## NON-DIVIDED HIGHWAY UNDER STRUCTURE

FWHA 46210, 7901.8R080

POWESHIEK COUNTY

I 80 EB OVER IA 21



# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES



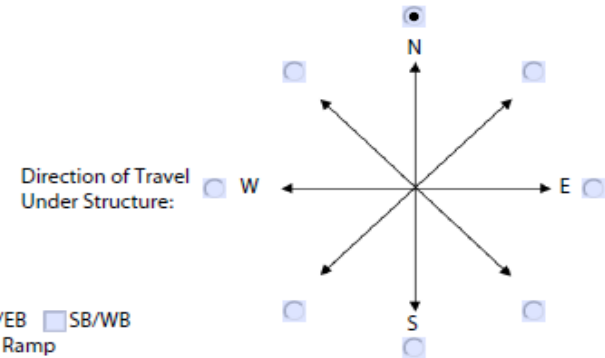
Date: Month  Day  Year

Measured By:

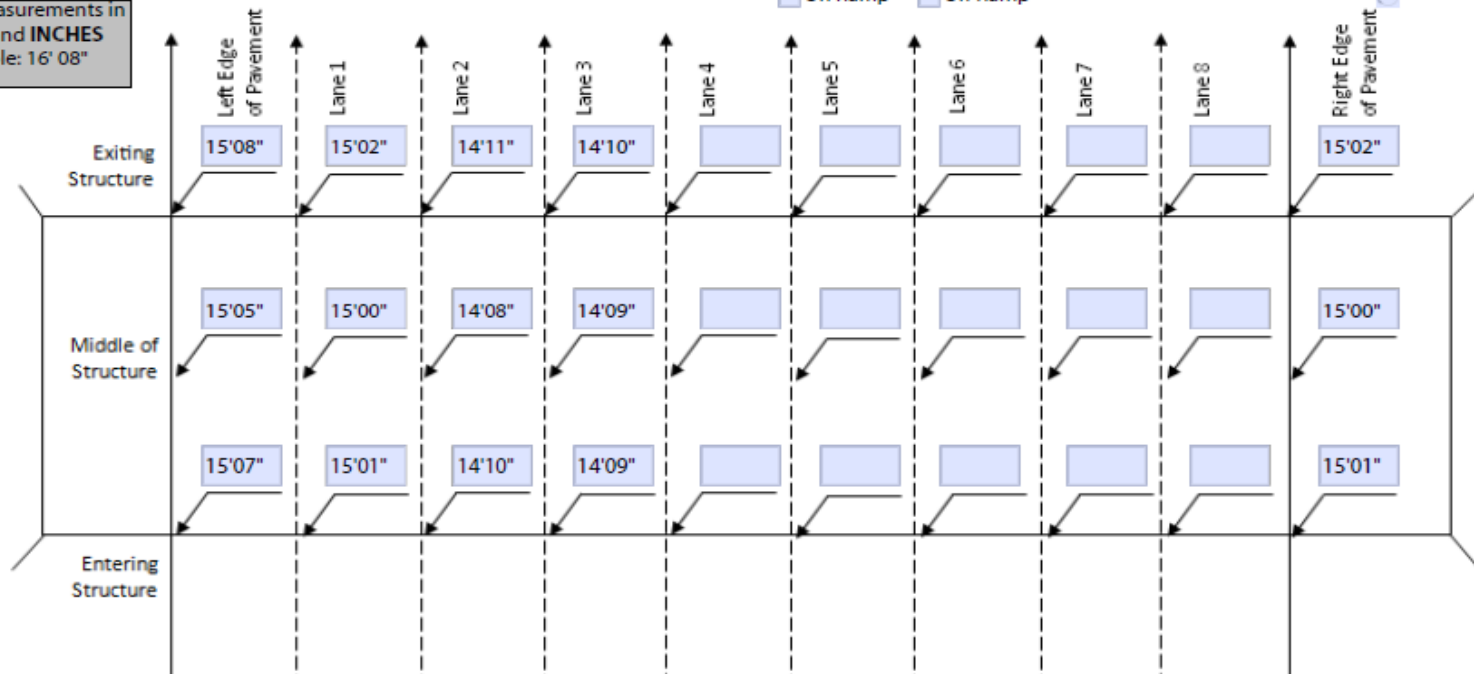
County:  Maintenance Number:

Route On Structure:  FHWA Number:

Route Under Structure:  Lane Direction Under Structure:  Undivided Highway  NB/EB  SB/WB  
 On Ramp  Off Ramp



All Measurements in FEET and INCHES  
Example: 16' 08"



Record **HORIZONTAL CLEARANCE** (measured perpendicular to roadway centerline) between most restrictive features of underpass (piers, guardrail, etc.) in this box:

Record any **POSTED** vertical clearance in feet and inches for clearances 14' 09" or less.

Return completed form to [Jodi.Clement@dot.iowa.gov](mailto:Jodi.Clement@dot.iowa.gov)

See Page 2 for Additional instructions on Completing the Form

# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES

## DIVIDED HIGHWAY UNDER STRUCTURE

FWHA 18040, 1557.60080

CASS COUNTY

COUNTY ROAD N16 OVER I 80 WB



# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES



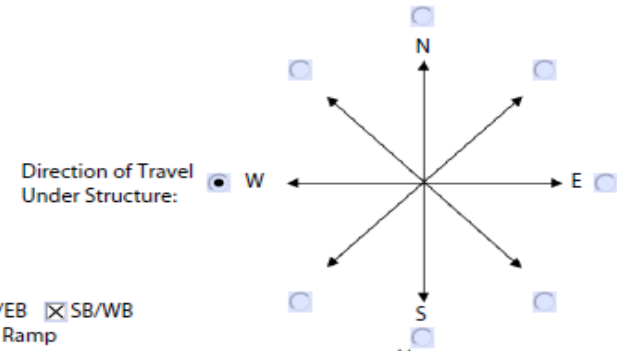
Date: Month  Day  Year

Measured By:

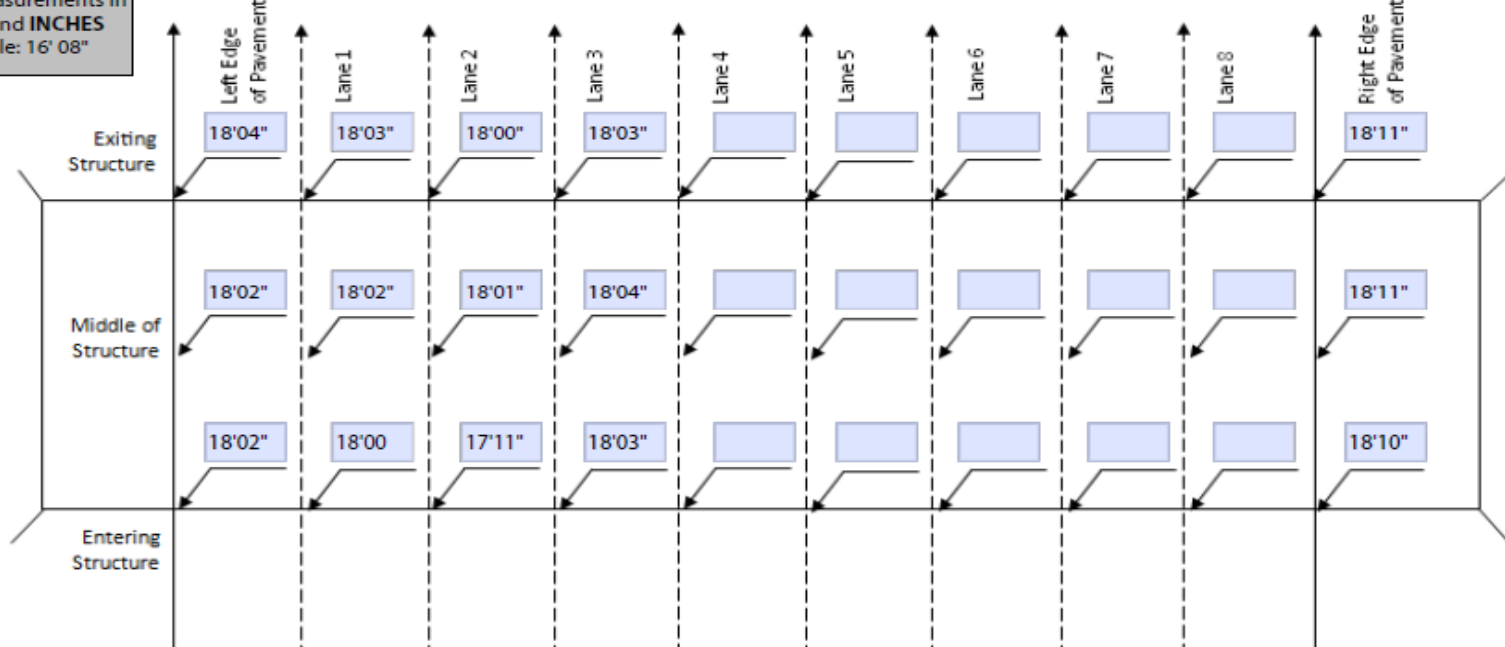
County:  Maintenance Number:

Route On Structure:  FHWA Number:

Route Under Structure:  Lane Direction Under Structure:  Undivided Highway  NB/EB  SB/WB  
 On Ramp  Off Ramp



All Measurements in FEET and INCHES  
Example: 16' 08"



Record **HORIZONTAL CLEARANCE** (measured perpendicular to roadway centerline) between most restrictive features of underpass (piers, guardrail, etc.) in this box:

Record any **POSTED** vertical clearance in feet and inches for clearances 14' 09" or less.

Return completed form to [Jodi.Clement@dot.iowa.gov](mailto:Jodi.Clement@dot.iowa.gov)

See Page 2 for Additional instructions on Completing the Form

# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES

LEFT & RIGHT EDGE OF PAVEMENT ARE LANE LINES

FWHA 700055, 5125.9P001

JEFFERSON COUNTY

PEDESTRIAN WALKWAY OVER IA 1





# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES



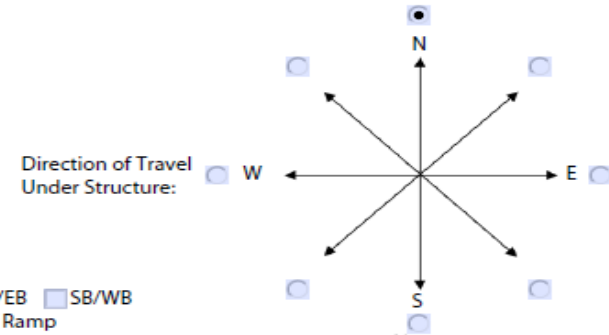
Date: Month  Day  Year

Measured By:

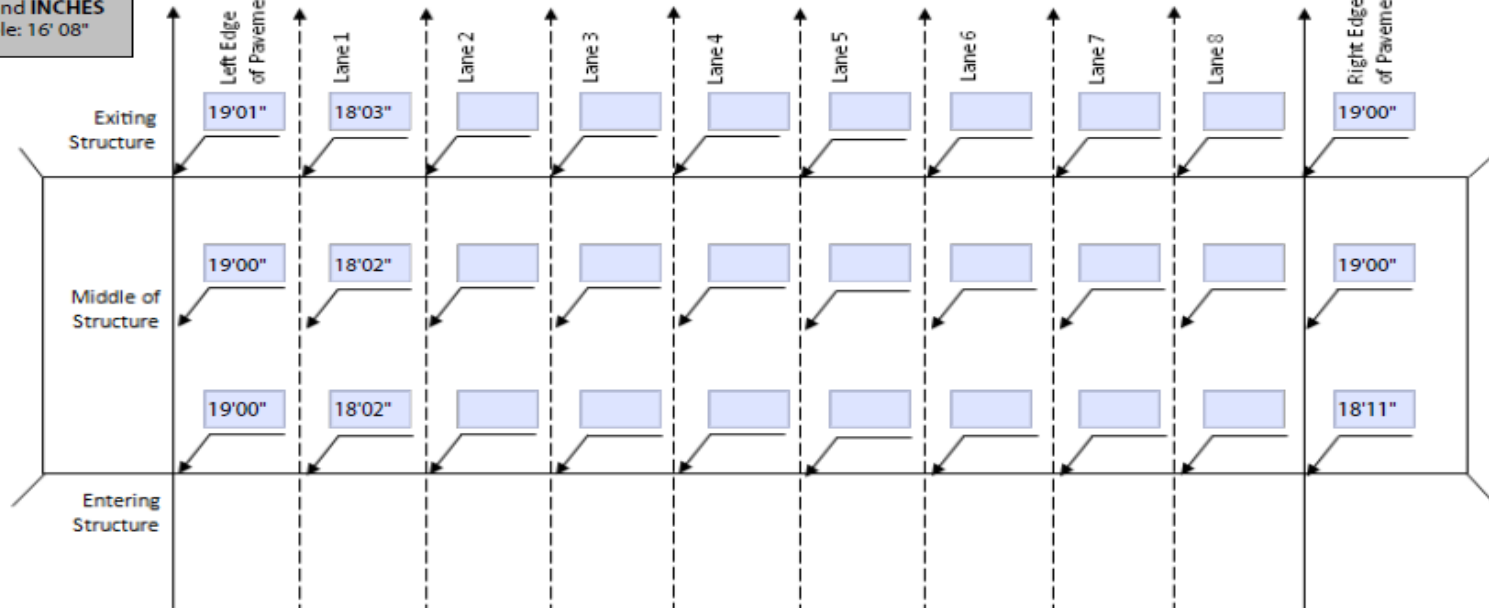
County:  Maintenance Number:

Route On Structure:  FHWA Number:

Route Under Structure:  Lane Direction Under Structure:  Undivided Highway  NB/EB  SB/WB  
 On Ramp  Off Ramp



All Measurements in FEET and INCHES  
Example: 16' 08"



Record **HORIZONTAL CLEARANCE** (measured perpendicular to roadway centerline) between most restrictive features of underpass (piers, guardrail, etc.) in this box:

Record any **POSTED** vertical clearance in feet and inches for clearances 14' 09" or less.

Return completed form to [Jodi.Clement@dot.iowa.gov](mailto:Jodi.Clement@dot.iowa.gov)

See Page 2 for Additional instructions on Completing the Form

# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES

## DIVIDED HIGHWAY WITH OFF RAMP (MAINLINE)

FWHA 605290, 0771.6A380

BLACK HAWK COUNTY

I 380 SB RAMP OVER US 20 EB MAINLINE



# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES



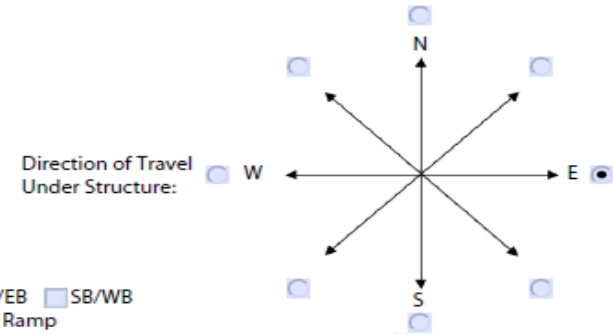
Date: Month  Day  Year

Measured By:

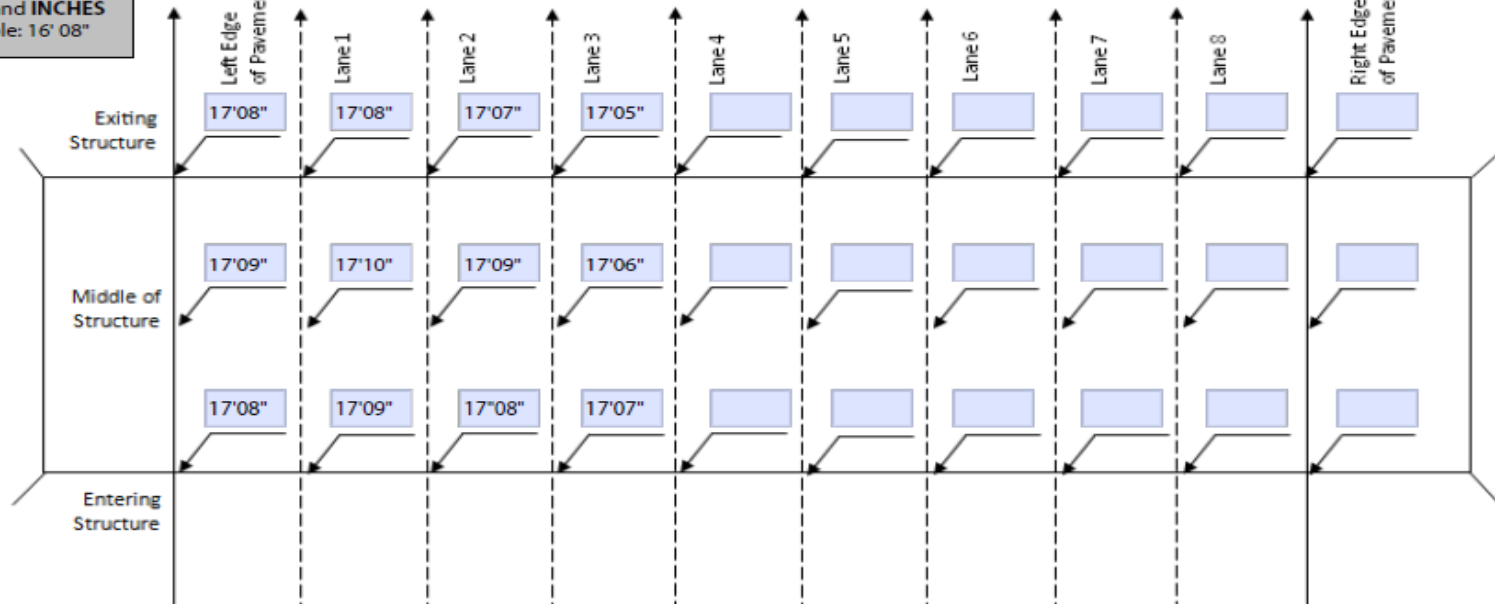
County:  Maintenance Number:

Route On Structure:  FHWA Number:

Route Under Structure:  Lane Direction Under Structure:  Undivided Highway  NB/EB  SB/WB  
 On Ramp  Off Ramp



All Measurements in FEET and INCHES  
Example: 16' 08"



Record **HORIZONTAL CLEARANCE** (measured perpendicular to roadway centerline) between most restrictive features of underpass (piers, guardrail, etc.) in this box:

Record any **POSTED** vertical clearance in feet and inches for clearances 14' 09" or less.

Return completed form to [Jodi.Clement@dot.iowa.gov](mailto:Jodi.Clement@dot.iowa.gov)

See Page 2 for Additional instructions on Completing the Form

# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES

## DIVIDED HIGHWAY WITH OFF RAMP (OFF RAMP)

FWHA 605290, 0771.6A380

BLACK HAWK COUNTY

I 380 SB RAMP OVER US 20 EB OFF RAMP TO US 218 NB



# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES



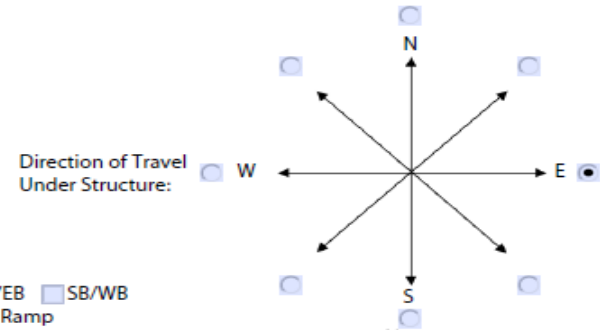
Date: Month  Day  Year

Measured By:

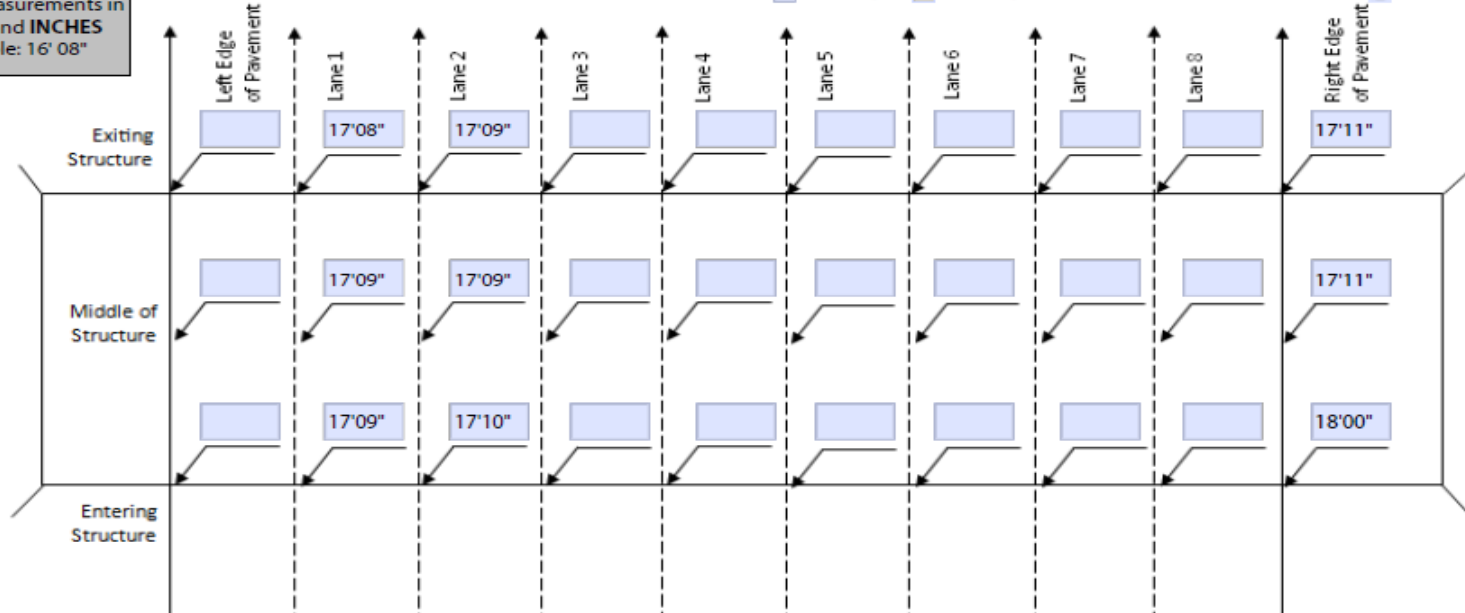
County:  Maintenance Number:

Route On Structure:  FHWA Number:

Route Under Structure:  Lane Direction Under Structure:  Undivided Highway  NB/EB  SB/WB  
 On Ramp  Off Ramp



All Measurements in FEET and INCHES  
 Example: 16' 08"



Record **HORIZONTAL CLEARANCE** (measured perpendicular to roadway centerline) between most restrictive features of underpass (piers, guardrail, etc.) in this box:

Record any **POSTED** vertical clearance in feet and inches for clearances 14' 09" or less.

Return completed form to [Jodi.Clement@dot.iowa.gov](mailto:Jodi.Clement@dot.iowa.gov)

See Page 2 for Additional instructions on Completing the Form

# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES

## DIVIDED HIGHWAY WITH SEPARATE LANE FOR OFF RAMP (MAINLINE)

FWHA 52830, 9704.6S012

WOODBURY COUNTY

IA 12 OVER IA 376 SB



# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES



Date: Month  Day  Year

Measured By:

County:

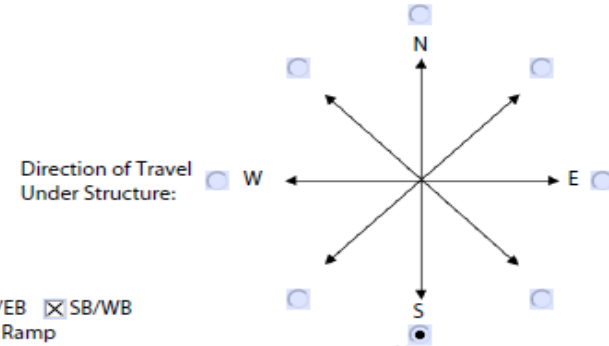
Maintenance Number:

Route On Structure:

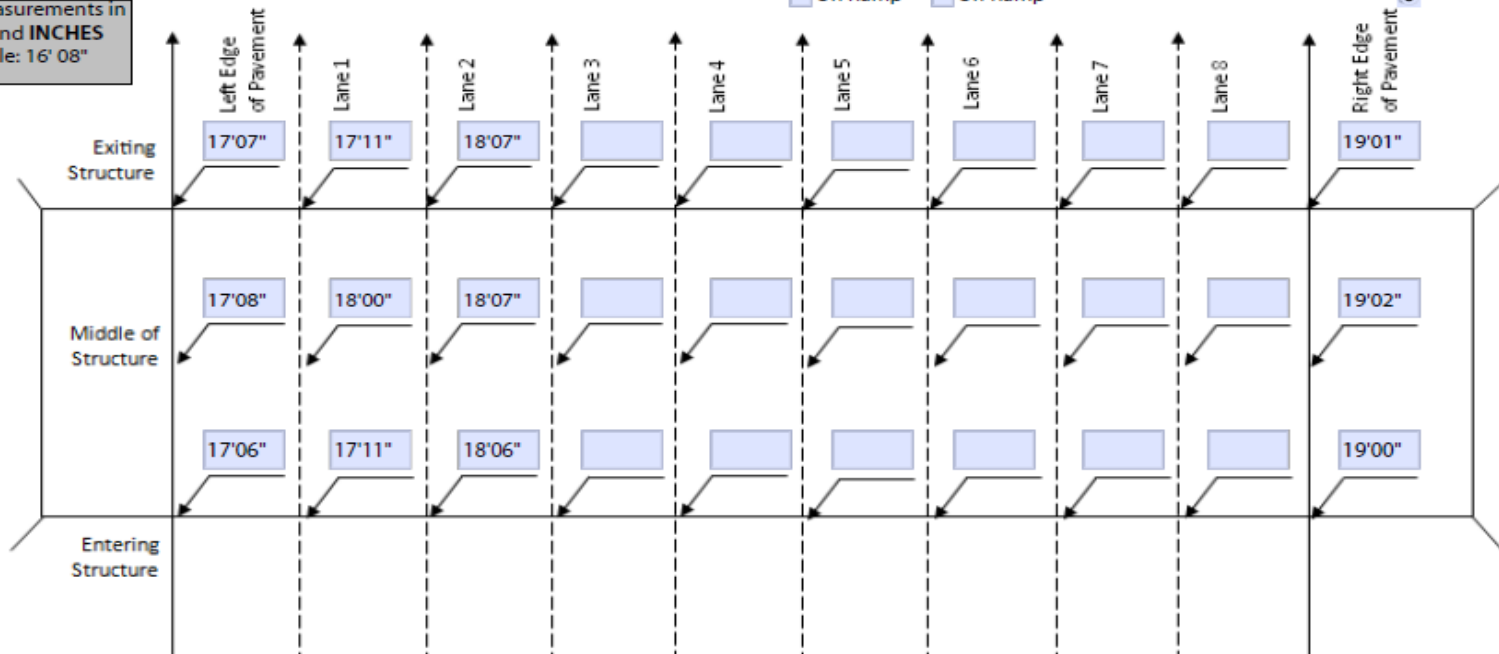
FHWA Number:

Route Under Structure:

Lane Direction Under Structure:  Undivided Highway  NB/EB  SB/WB  
 On Ramp  Off Ramp



All Measurements in FEET and INCHES  
 Example: 16' 08"



Record **HORIZONTAL CLEARANCE** (measured perpendicular to roadway centerline) between most restrictive features of underpass (piers, guardrail, etc.) in this box:

Record any **POSTED** vertical clearance in feet and inches for clearances 14' 09" or less.

Return completed form to [Jodi.Clement@dot.iowa.gov](mailto:Jodi.Clement@dot.iowa.gov)

See Page 2 for Additional instructions on Completing the Form

# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES

## DIVIDED HIGHWAY WITH SEPARATE LANE FOR OFF RAMP (OFF RAMP)

FWHA 52830, 9704.6S012

WOODBURY COUNTY

IA 12 OVER IA 376 SB OFF RAMP





# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES



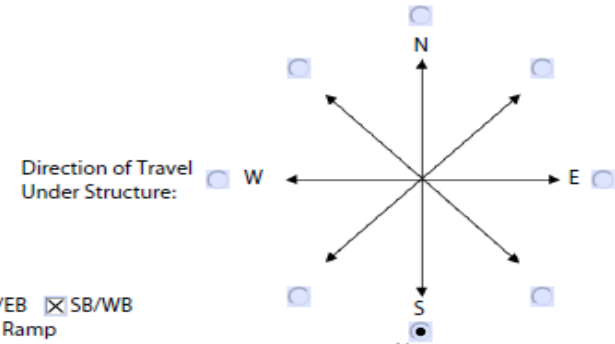
Date: Month  Day  Year

Measured By:

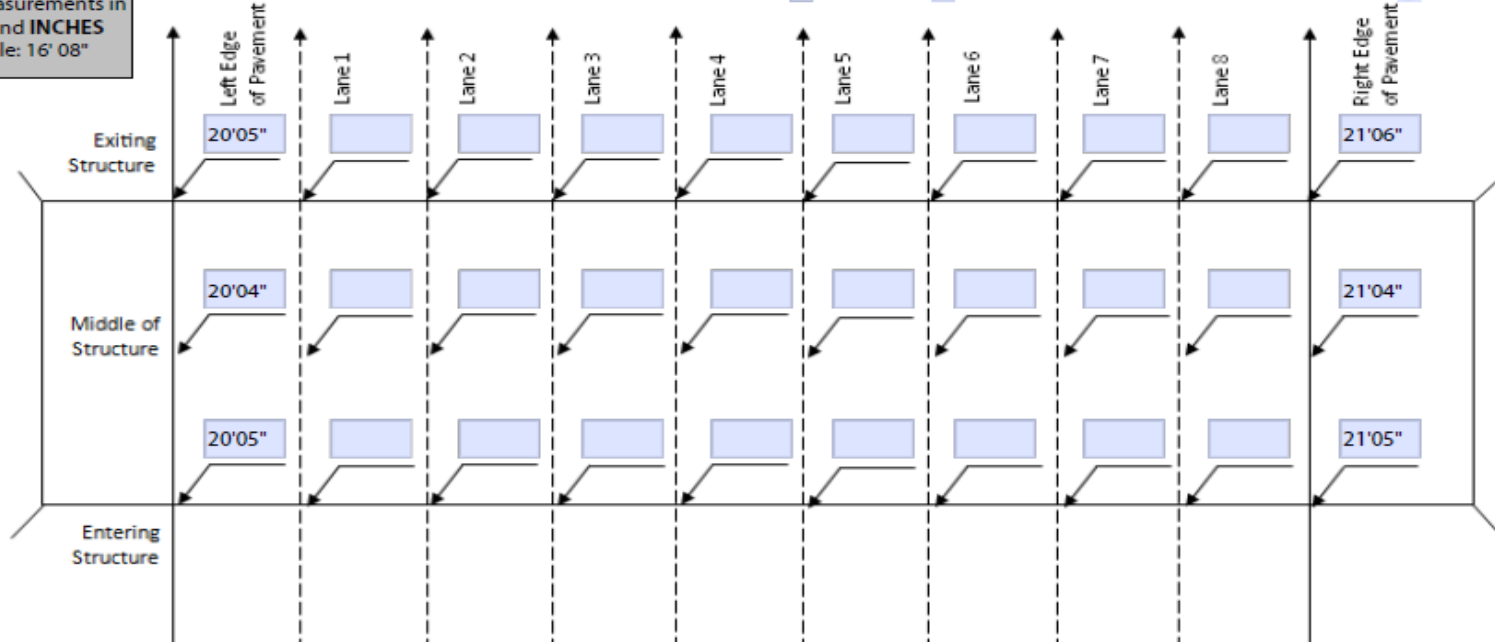
County:  Maintenance Number:

Route On Structure:  FHWA Number:

Route Under Structure:  Lane Direction Under Structure:  Undivided Highway  NB/EB  SB/WB  
 On Ramp  Off Ramp



All Measurements in FEET and INCHES  
Example: 16' 08"



Record **HORIZONTAL CLEARANCE** (measured perpendicular to roadway centerline) between most restrictive features of underpass (piers, guardrail, etc.) in this box:

Record any **POSTED vertical clearance** in feet and inches for clearances 14' 09" or less.

Return completed form to [Jodi.Clement@dot.iowa.gov](mailto:Jodi.Clement@dot.iowa.gov)

See Page 2 for Additional instructions on Completing the Form



# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES

## DIVIDED HIGHWAY WITH ON RAMP (MAINLINE)

FWHA 12491, 7724.10080

POLK COUNTY

UNIVERSITY AVENUE OVER I 35 SB/I 80 WB



# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES



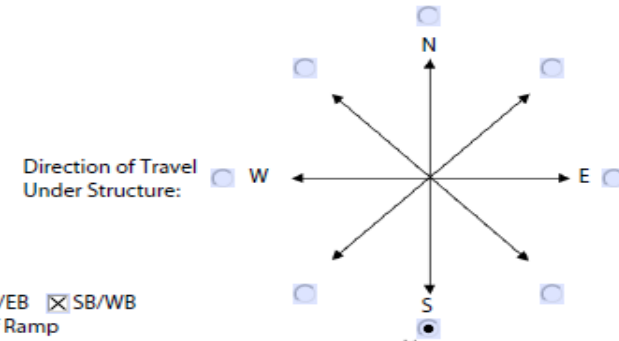
Date: Month  Day  Year

Measured By:

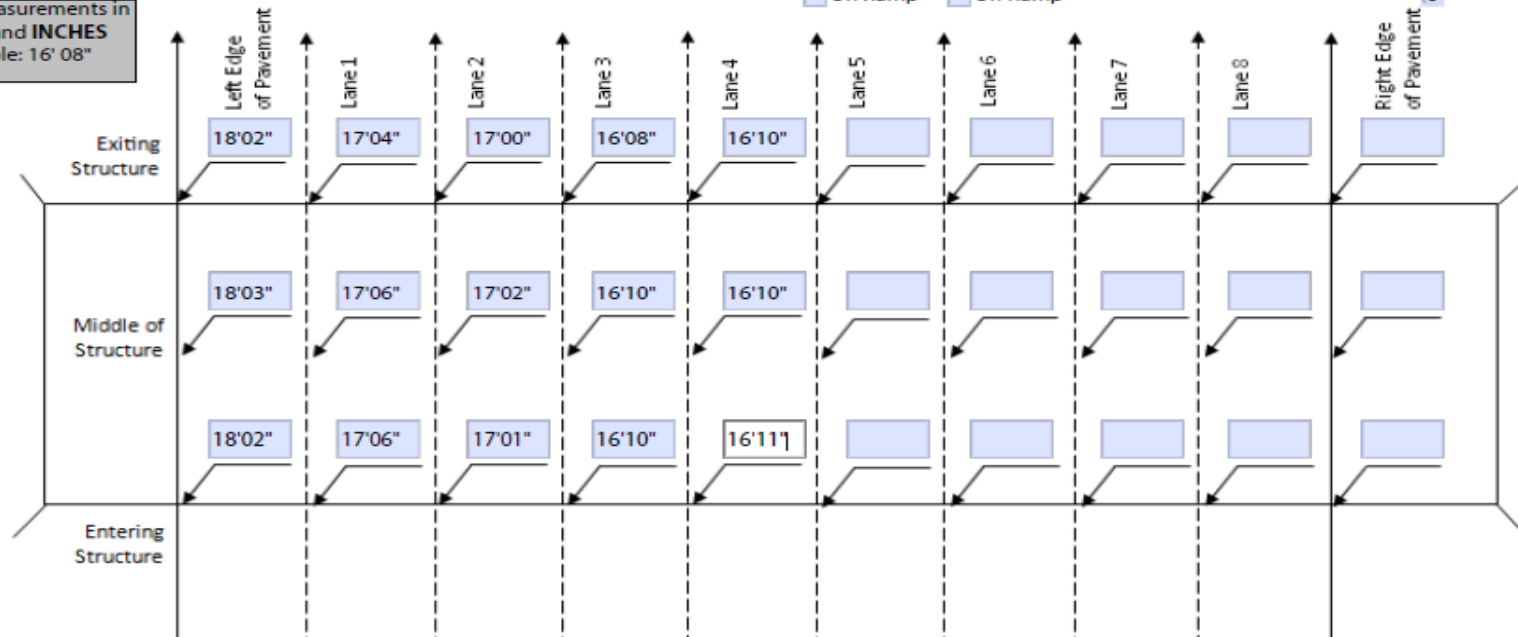
County:  Maintenance Number:

Route On Structure:  FHWA Number:

Route Under Structure:  Lane Direction Under Structure:  Undivided Highway  NB/EB  SB/WB  
 On Ramp  Off Ramp



All Measurements in FEET and INCHES  
Example: 16' 08"



Record **HORIZONTAL CLEARANCE** (measured perpendicular to roadway centerline) between most restrictive features of underpass (piers, guardrail, etc.) in this box:

Record any **POSTED** vertical clearance in feet and inches for clearances 14' 09" or less.

Return completed form to [Jodi.Clement@dot.iowa.gov](mailto:Jodi.Clement@dot.iowa.gov)

See Page 2 for Additional instructions on Completing the Form

# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES

## DIVIDED HIGHWAY WITH ON RAMP (ON RAMP)

FWHA 12491, 7724.10080

POLK COUNTY

UNIVERSITY AVENUE OVER I 35 SB/I 80 WB ON RAMP



# VERTICAL & HORIZONTAL CLEARANCE FORM EXAMPLES



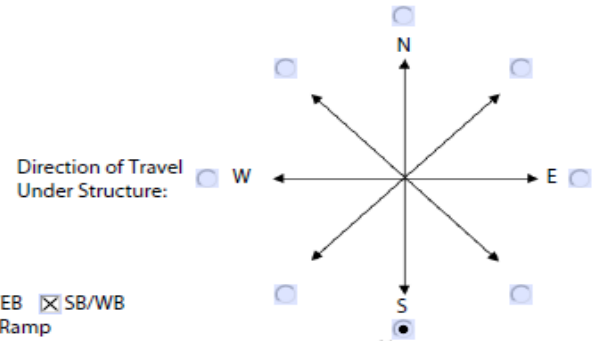
Date: Month  Day  Year

Measured By:

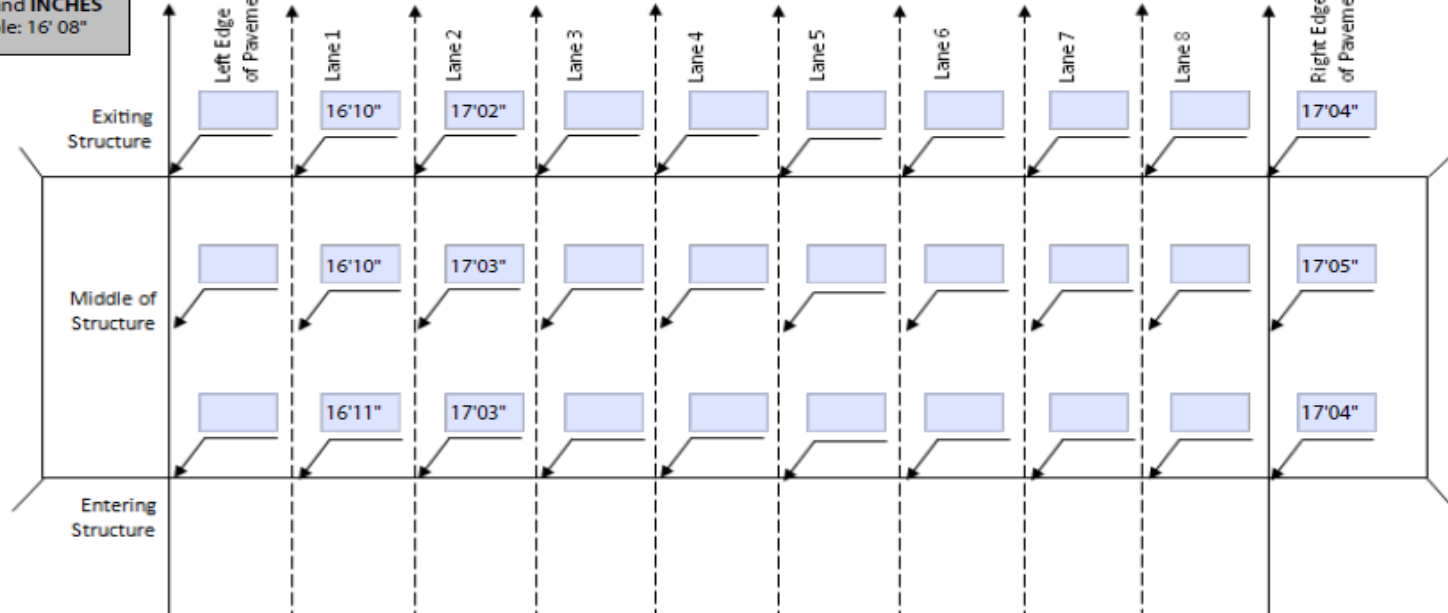
County:  Maintenance Number:

Route On Structure:  FHWA Number:

Route Under Structure:  Lane Direction Under Structure:  Undivided Highway  NB/EB  SB/WB  On Ramp  Off Ramp



All Measurements in FEET and INCHES  
Example: 16' 08"



Record **HORIZONTAL CLEARANCE** (measured perpendicular to roadway centerline) between most restrictive features of underpass (piers, guardrail, etc.) in this box:

Record any **POSTED** vertical clearance in feet and inches for clearances 14' 09" or less.

Return completed form to [Jodi.Clement@dot.iowa.gov](mailto:Jodi.Clement@dot.iowa.gov)

See Page 2 for Additional instructions on Completing the Form

