Form 000021wd

4-96

# IOWA DEPARTMENT OF TRANSPORTATION

## To Office District <#> Date <Month DD, YYYY>

## Attention <Assistant District Engineer> Ref No. <County> County

 <Project Number>

## From <Bridge Design Engineer> (for BSB prepared concepts) PIN <PIN>

##  <Consultant Engineer, Consulting Firm Name> Design No(s). <#(s)>

## Bureau Bridges and Structures File No. <#>

##  FHWA No(s). <#(s)>

Subject <Final / Draft> Concept for Bridge Repair of <Bridge size and type>

 Bridge Maintenance No. <0000.0X000>

The bridge on <Route> over <Route, River, RR, etc.> was struck on the <morning, afternoon, evening, or time if known> of <Date struck> by a <Vehicle or more descriptive if known> traveling <southbound on I-29>. The repair cost estimate is < Project Total from Cost Estimate >. The project will be funded with <Emergency and Contingency Funds>. The proposed letting is <letting date>. The bridge field exam on <Date> was attended by <Personnel> of <Bureau, District or Consultant>.

<Note: The location description should match the SIIMS description. Both the cost estimate amount and programmed cost (if available) should be included.>

The bridge location map and asset information can be viewed in SIIMS using the following link:

<Link to structure map page in SIIMS>

# EXISTING CONDITIONS

The bridge was constructed in <year>, design number <Design #>. The bridge <is/is not> on the NHS system.

It is located <distance> miles from <nearest named crossing roadway, preferably a US or IA route>. The bridge is a <# spans> span <pretensioned prestressed concrete beam, steel girder, steel I-beam, etc.> structure. The cross section consists of <# beams> spaced at <beam spacing> supporting a <deck thickness including any PCC overlay present> thick concrete deck. The pier diaphragms are <concrete, steel>. The intermediate diaphragm(s) <is, are> <concrete, steel> located at <midspan; third points of span; X, X, X, and X feet from west pier of span>. The bridge rail is a <concrete retrofit, painted steel, galvanized steel, aluminum, concrete jersey, concrete F-shape> rail. <There is <empty, name utility> conduit in the south rail>.

<Description of Bridge damage including length and location. Be sure and identify any cracks in concrete beams that will require epoxy injection. Use same numbering scheme of beams and spans as shown in Bridge Maintenance file and describe location of first beam mentioned (ie: beam 1 (north exterior) and span (ie: span 2 from west abutment)>

# RECOMMENDATIONS

It is recommended that the following repairs be made:

1. Remove and replace exterior beam(s) <X and X> along with a portion of the rail, curb, deck, pier diaphragms and intermediate diaphragm(s) in span <X>. <Carefully expose conduit and incorporate into new work.>
2. Remove and replace interior beam(s) <X, X, and X> along with a portion of the deck, pier diaphragms and intermediate diaphragm(s) in span <X>.
3. Repair beam(s) <X, X, and X>. Remove all unsound concrete, clean, and fill repair areas with class “O” concrete. <Install steel sleeve, Apply fiber reinforced polymer (FRP) sheets> to contain repair concrete. Cracks in beam(s) <X, X. and X> will be epoxy injected by DOT personnel prior to contract repair.

This project <is/is not> considered a Traffic Critical Project. Traffic control will involve <TBR, Shoulder strengthening, traffic signals, floodlighting, road closure, etc.> on <bridge route>. <route under bridge> will require a temporary lane closure and road closure for short periods to facilitate beam removal and replacement.

All recipients of this letter should review this concept of work to be accomplished and advise the Bridges and Structures Bureau of any comments you have by <Date(approx. 3 weeks from date sent)>.

Estimated cost of repairs is as follows:

<Complete [Cost Estimate for Concepts](https://iowadot.gov/bridge/concepts/Cost%20Estimates%20for%20Concepts.xlsx) and paste area within yellow outline from “Estimate for Copying” tab, linking if desired.>

<Bridge Design Engineer's or Consulting Engineer’s Initials(CAPITALS)>

Distributed to:

<Copy the appropriate list from [Master List for Distribution of Concepts](https://iowadot.gov/bridge/concepts/Master%20List%20for%20Distribution%20of%20Concepts.xlsx) and paste here. Remove any non-applicable recipients, empty rows, vacant positions, and double asterisks in front of recipients.>

Appendix

<Include photos with labels of key areas>

<Save a copy to the ProjectWise directory under the Concept\B0Submittal folder>

*Updated 7/7/2022*