

7-11-84

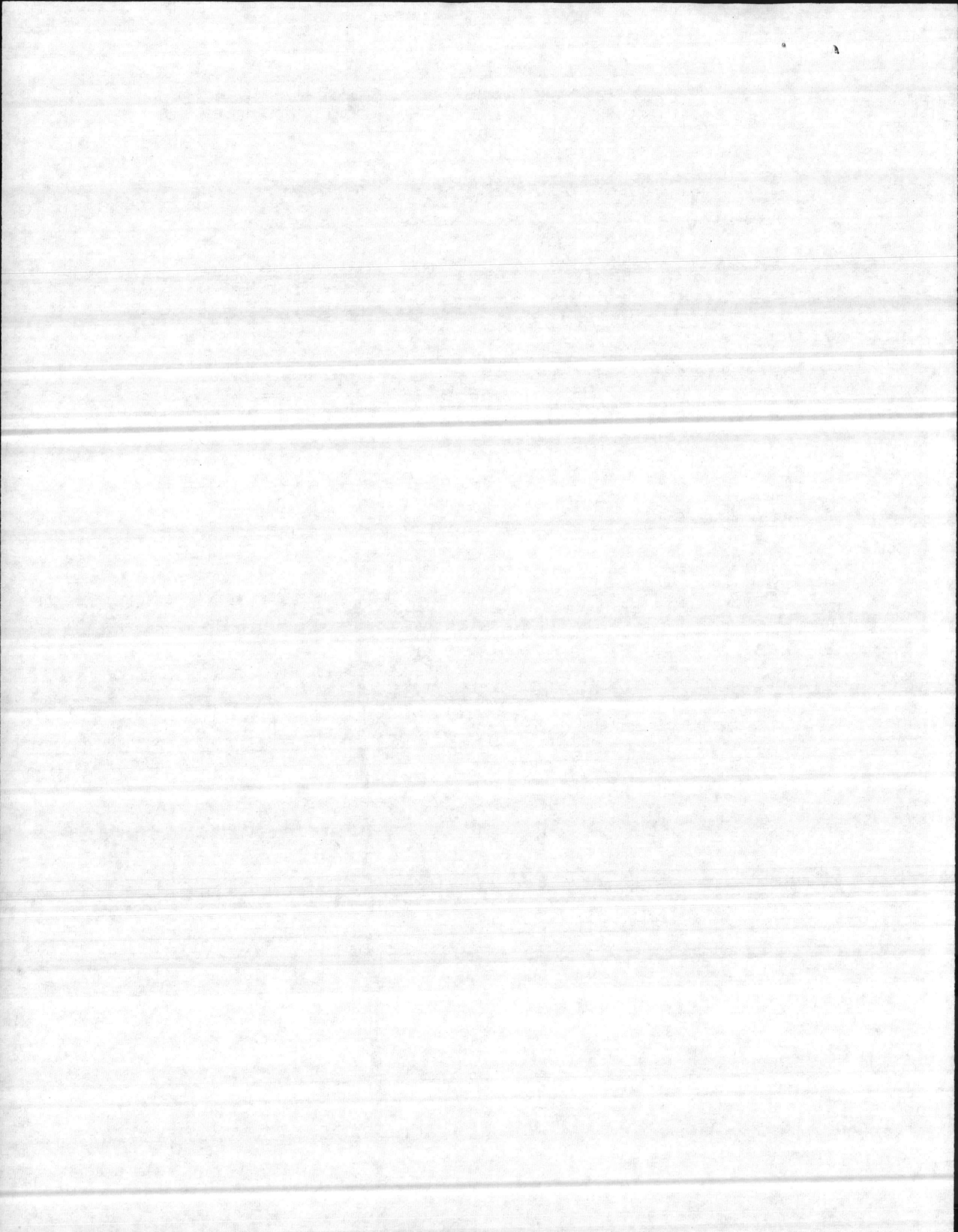
no to file

Spoke to Asst BMO at
MCR. They will commence
temporary repairs as
described in enclosure to
CANT Div Ctr 11010 405 of
27 JUNE, 1984 NLT week
of 16 July 1984

FEH

Pls type
diary sheet

- ① ^{File} Airfield R/W
 - ② Taxiways & aprons
 - ③ Incoming ^{Corresp} ESR's
 - ④ Project file
- Start a P-File
"Repair of storm Culvert"



11010

405

27 June 1984

From: Commander, Atlantic Division, Naval Facilities Engineering Command
To: Commanding General, Marine Corps Base, Camp Lejeune

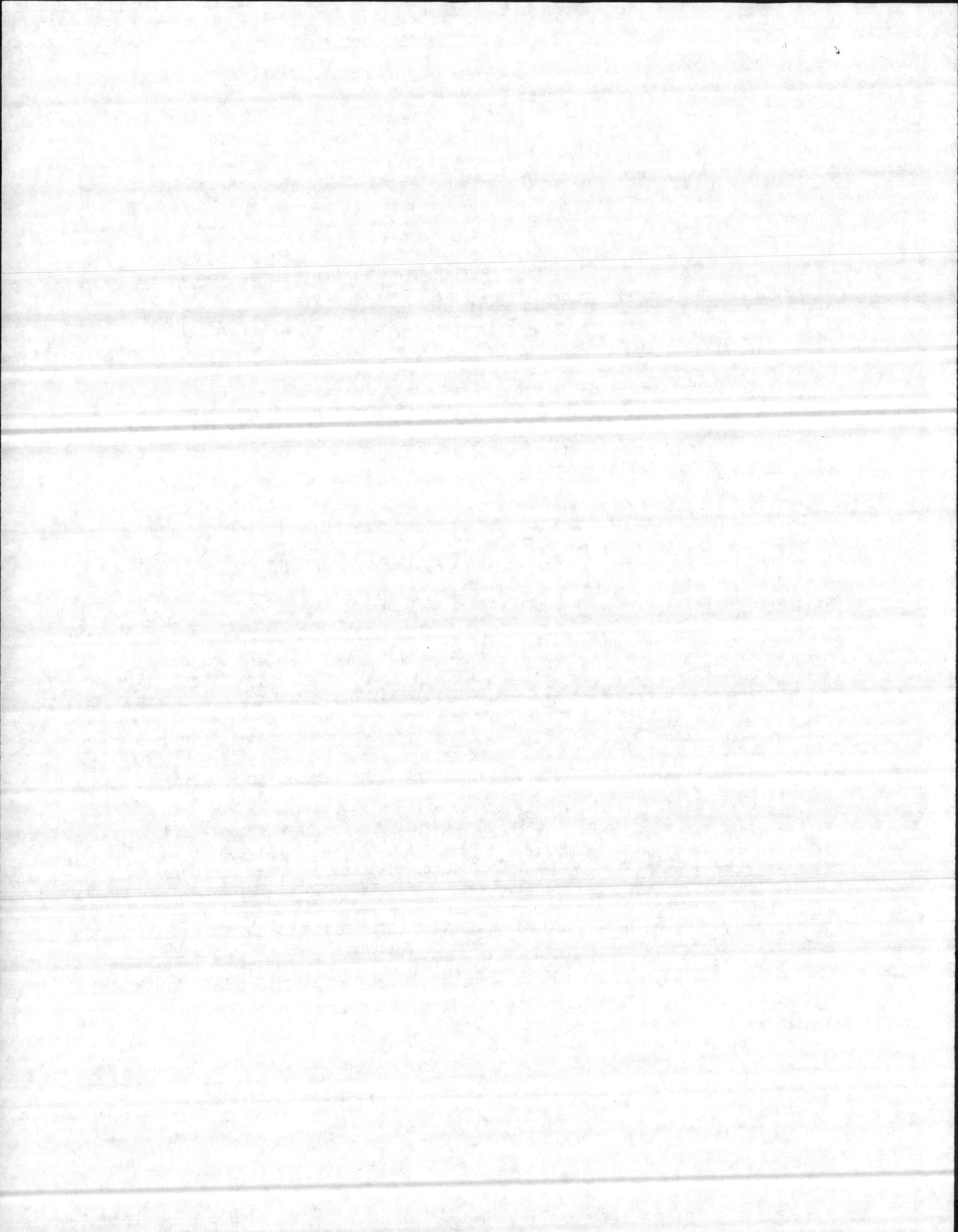
Subj: COLLAPSED STORM CULVERT UNDER A/C PARKING APRON, MARINE CORPS AIR
STATION, NEW RIVER, NC

Ref: (a) PHONCON PW Engineering (Mr. Eris Rouse, Director)/LANTNAVFACENGCOM
(Mr. Ernest L. Fulford, Head, Civil Engineering Branch) of
20 Jun 84 requesting emergency field investigations and assistance
in evaluating the subject culvert failure
(b) CAMLEJ 261813Z Jun 84

Encl: (1) Sketch SK-C-170-84

1. An emergency field investigation of the subject culvert was made by Mr. Fulford and Mr. Robert Taylor (LANTNAVFACENGCOM Civil Engineering Branch) on 21 June 1984. Mr. F. Acosta (MCAS New River) and Mr. Carl Baker (Head, Civil Branch, Camp Lejeune PW Engineering) were met at the site.

2. The 12'-8" x 8'-1" Armco multi-plate pipe arch culvert has collapsed from the bottom up, in the middle, forming a horseshoe shape. See section on enclosed Sketch SK-C-170-84. It was the consensus of opinion that the failure was caused by the build-up of hydrostatic pressure collapsing the multi-plate pipe arch at its weakest point; the bottom center seam. Approximately 700 LF of culvert is damaged and will have to be replaced, beginning at the inlet end of the culvert. Approximately 610 LF of the damaged culvert lies under the 6" unreinforced concrete A/C parking apron. As of 22 June no visible fractures or subsidence of the pavement was detectable. A profile, elevations at 50' intervals, was taken and plotted on the original construction grading plan with no significant differences. The earth shoulder at the northerly side of the apron has subsided approximately 4 feet. A void area exists under the pavement approximately 3 feet deep by 30 feet wide centered over the culvert. The void exists as far under the pavement as visible. Approximately 390 LF of the culvert at the outlet end was undamaged. Top and bottom flowline elevations were taken in the undamaged culvert and plotted on the original profile. Differences were minor and considered to be within construction tolerances. Replacement of damaged culvert will require demolition and new construction of 6" unreinforced concrete of approximately 45 feet wide by 635 feet long, with exact requirements determined by design and construction requirements. Existing joint pattern is a consideration as culvert is diagonal across parking apron.



SUBJECT: CULVERT UNDER A/C PARKING APRON, MARINE CORPS AIR
STATION, NEW RIVER, NC

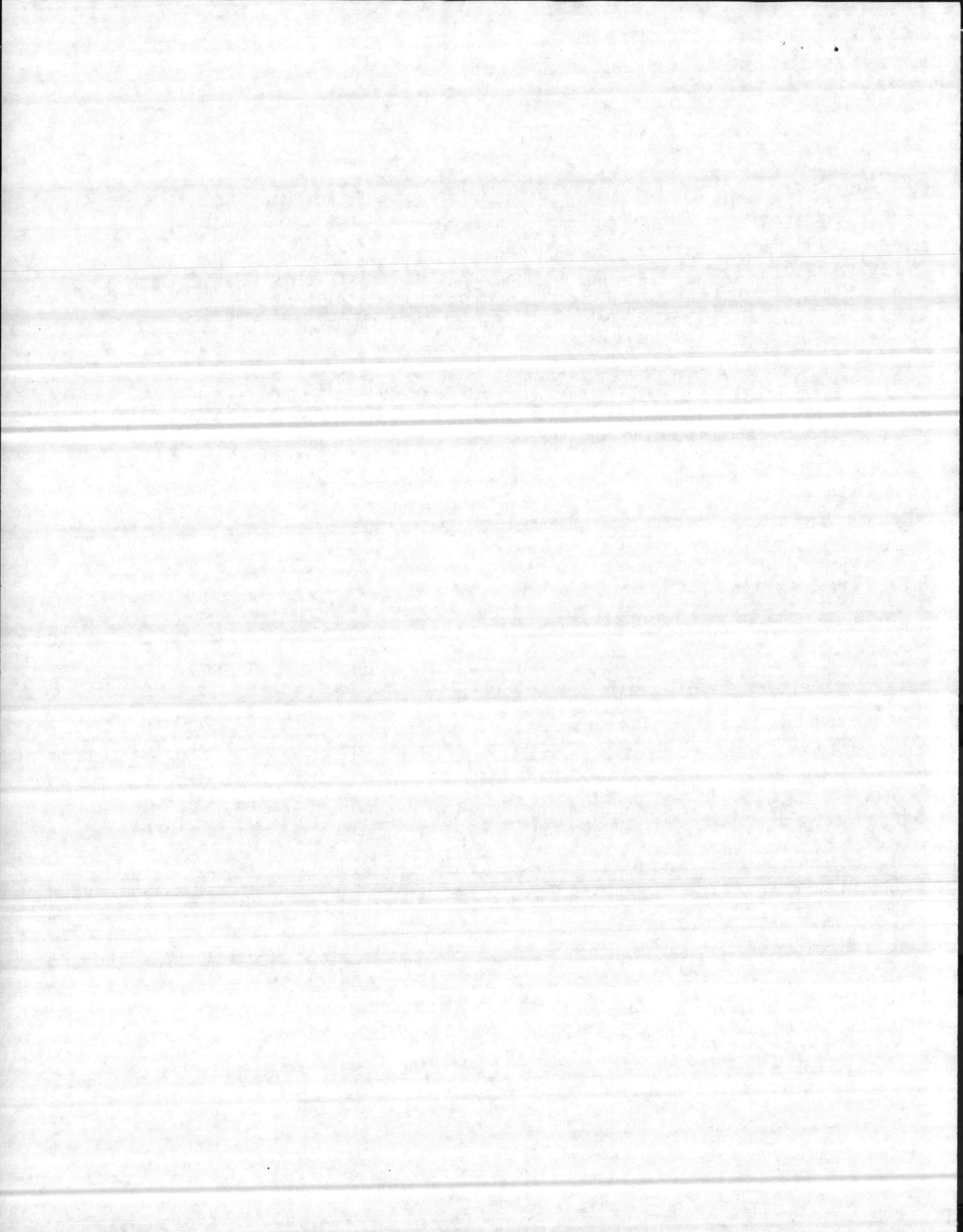
3. Sketch SK-C-170-84 depicts recommendations that should be immediately implemented to prevent vehicular or aircraft accidents and damage to the undamaged portion of the culvert. These recommendations were verbally given to Mr. Rouse and Mr. Baker on 22 June.

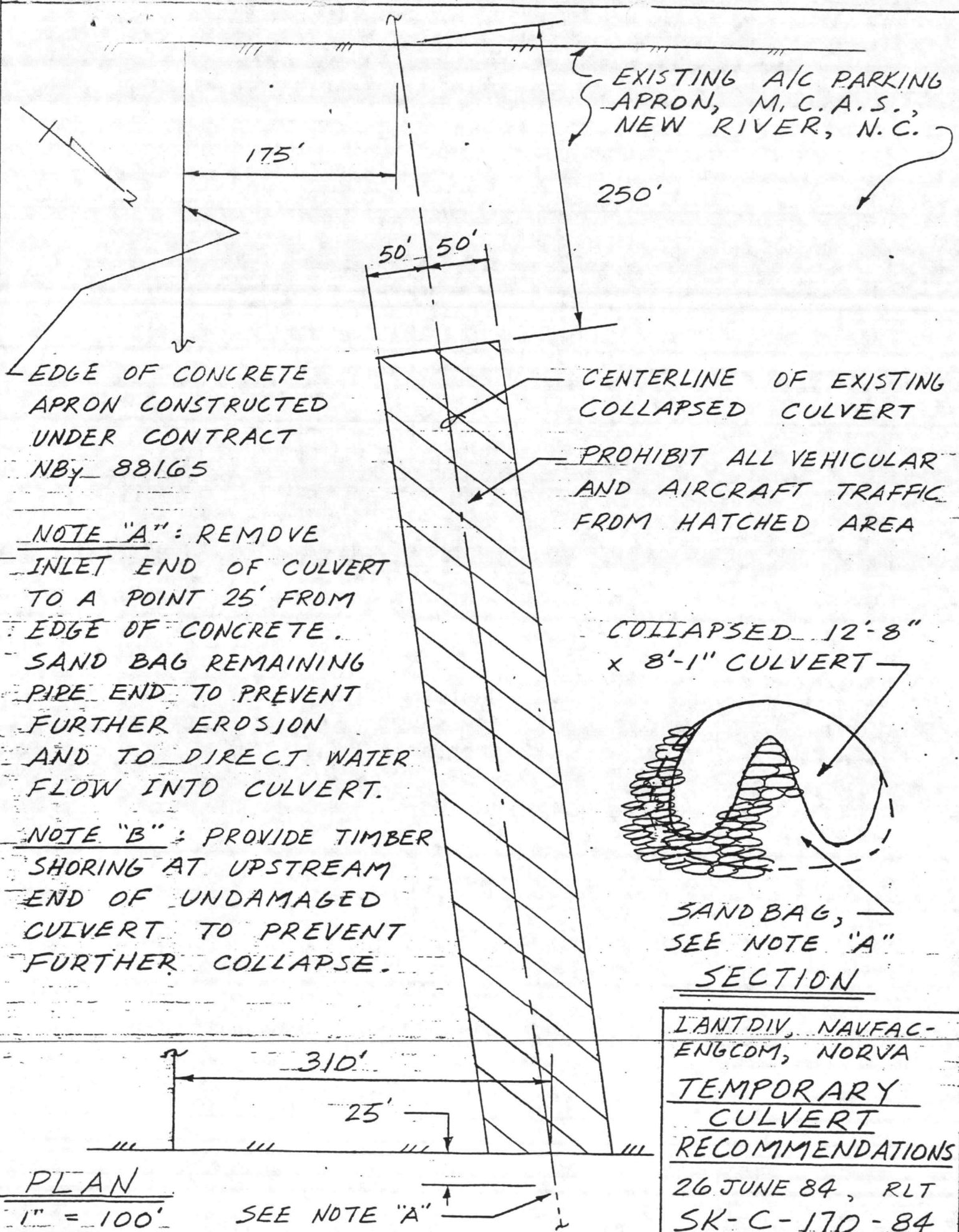
4. Contact was made with Mr. Bob Anderson, Eastern North Carolina Amco representative, and Commie Riggsbee, Amco District Engineer on 22 June. They visited the site on 25 June and by telephone conversation that same day, concurred in our analysis and recommendations.

5. It is understood from reference (b) that an ESR for design is forthcoming. For further information and assistance contact Mr. D. P. Coghlan, autovon 564-9703, Project Manager, or Mr. E. L. Fulford, autovon 564-9905, Engineering and Design Division.

E. L. FULFORD, P.E.
By direction

Copy to:
20 MCAS(H) NEW RIVER





EXISTING A/C PARKING APRON, M. C. A. S., NEW RIVER, N. C.

175'

250'

50' 50'

EDGE OF CONCRETE APRON CONSTRUCTED UNDER CONTRACT NBY 88165

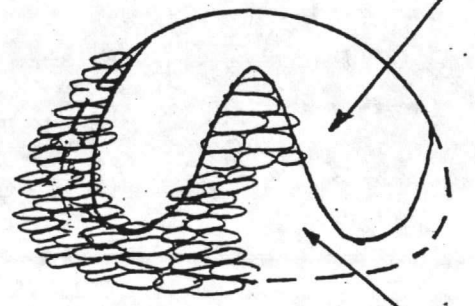
CENTERLINE OF EXISTING COLLAPSED CULVERT

PROHIBIT ALL VEHICULAR AND AIRCRAFT TRAFFIC FROM HATCHED AREA

NOTE "A": REMOVE INLET END OF CULVERT TO A POINT 25' FROM EDGE OF CONCRETE. SAND BAG REMAINING PIPE END TO PREVENT FURTHER ERDSION AND TO DIRECT WATER FLOW INTO CULVERT.

NOTE "B": PROVIDE TIMBER SHORING AT UPSTREAM END OF UNDAMAGED CULVERT TO PREVENT FURTHER COLLAPSE.

COLLAPSED 12'-8" x 8'-1" CULVERT



SANDBAG, SEE NOTE "A"

SECTION

PLAN

1" = 100'

SEE NOTE "A"

LANTDIV, NAVFAC-ENGCOM, NORVA
TEMPORARY CULVERT RECOMMENDATIONS

26 JUNE 84, RLT
 SK-C-170-84

