

OFFICE OF THE CITY MANAGER
DES MOINES, IOWA

CITY COUNCIL COMMUNICATION 96-206
MAY 20, 1996 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
BIRDLAND MARINA DREDGING PROJECT—CHANGE ORDER NO. 2	◆ RESOLUTION ORDINANCE RECEIVE/FILE	HAROLD E. SMITH CITY ENGINEER

SYNOPSIS —

A change order in the amount of \$53,635 has been negotiated with McAninch Corporation for repairs to the existing steel sheeting wall at the entrance to the Marina. On the morning of May 9, 1996, this wall failed completely, nearly blocking the entrance to the Marina. If the Birdland Marina is to be used this season, the steel sheeting and cable anchors must be repaired immediately.

FISCAL IMPACT —

Funds to cover the cost of this change order are available in the 1995-96 CIP as part of the Neighborhood Basketball/Tennis Court Resurfacing Project, Index 400341, page 175, and will be transferred to the Birdland Marina Project, Index 601047.

RECOMMENDATION —

Approval of Change Order No. 2 with McAninch Corporation.

BACKGROUND —

At the time the improvements to the Birdland Marina were in the design phase, it was apparent that the steel sheeting wall at the entrance to the Marina from the Des Moines River was moving slightly and that maintenance would soon be needed to repair the cable tiebacks to this wall. Therefore, the bids for this Birdland Marina Project included an add alternate for replacement of some steel sheeting and the cable tiebacks for this wall. However, once bids were taken there were insufficient funds in the Birdland Marina Account to include the repair of the wall as part of the awarded contract work. Therefore, the add alternate for steel sheeting repair was not included in the contract awarded to McAninch Corporation. On the morning of May 9, 1996, the steel sheeting failed completely, tipping forward at an angle of over 45°, nearly completely blocking the entrance to the Marina. Personnel from the Engineering Department met with personnel from McAninch Corporation and Shuck-Britson, Inc. on the morning of May 10, 1996 and determined that, before any assessment of repairs could be made, the saturated earth behind the wall must be excavated. Therefore, arrangements were made with McAninch Corporation to excavate and expose the back side of the steel sheetpiling wall so that an assessment could be made on a proper repair procedure. After exposure of the wall, it appeared that it would be possible to pull the wall back gradually into its original position with the use of a backhoe and cinch cables. Shuck-Britson, Inc., a structural engineering firm, has proposed a repair which will reduce the soil pressure on this wall, as per the attached letter.

A change order has been negotiated with McAninch Corporation to provide the necessary equipment, materials and labor to repair this sheetpiling wall, assuming that the existing steel sheeting can be salvaged. McAninch Corporation will be doing the work on a force account basis with a maximum amount of \$53,635.00. Funds for this repair will be transferred from the Neighborhood Basketball/Tennis Court Resurfacing Project in the current Capital Improvements budget.

SHUCK-BRITSON INC.

CONSULTING ENGINEERS

May 15, 1996

Mr. Harold E. Smith, P.E.
City Engineer - City Hall
East First & Locust Streets
Des Moines, Iowa 50309

**RE: Birdland Marina
Sheet Piling Wall Failure
W.O. No. 0211-94-014**

Dear Mr. Smith:

On the morning of Friday, May 10, 1996, Don Beck, of your staff, contacted this office and asked us to review the condition of the existing sheet piling wall located at the river entrance to the Birdland Marina. This wall had failed on Thursday, May 9, 1996.

We met with Ted Wiedenman, of your staff, and McAninch, the contractor working in the Birdland Marina.

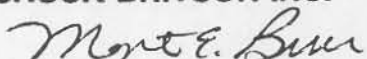
The saturated earth behind the failed wall was removed to determine the cause of the failure and eliminate additional damage to the sheet piling wall.

After removing the earth behind the wall, we determined the sheet piling wall failed after the cables anchoring the sheet piling to the concrete deadman had corroded through. The concrete deadman appears to be in good condition.

We discussed possible repair or replacement concepts with the City personnel and the contractor. We determined the most cost effective repair procedure was to pull the sheet piling back into line and replace the anchor cable and whaler system. The anchor cables should be coated with a bituminous material to reduce corrosion of the steel. A chimney of 3 inch clean rock should be backfilled behind the sheet piling wall to ensure drainage of water from behind the wall and reduce the surcharge against the wall.

We appreciate this opportunity to work with you and your staff and the City of Des Moines.

Sincerely,
SHUCK-BRITSON INC.



Monte E. Burr, P.E.