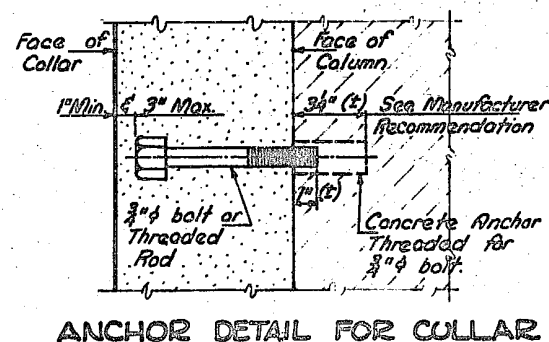
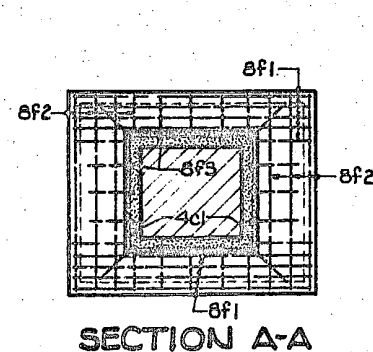
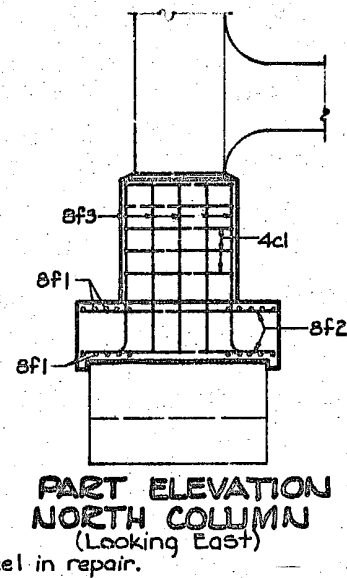
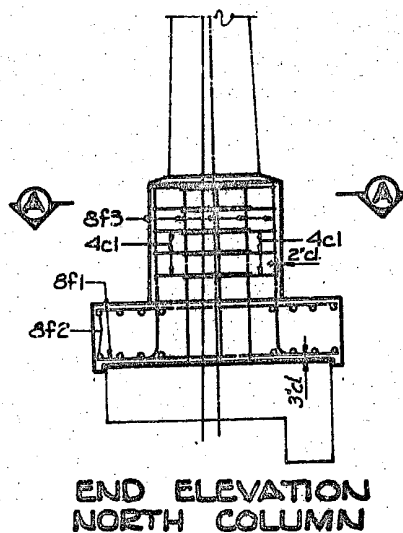
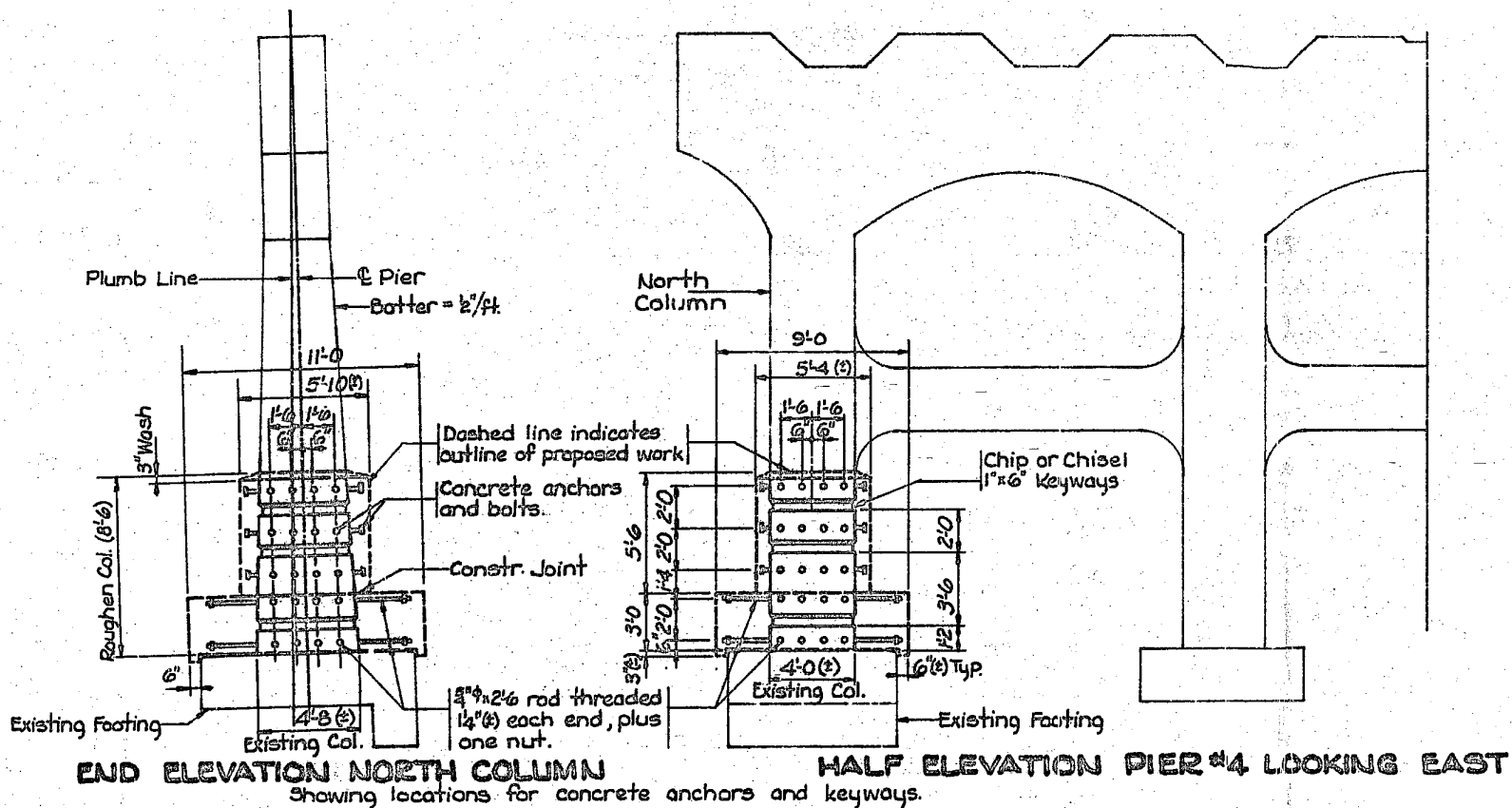
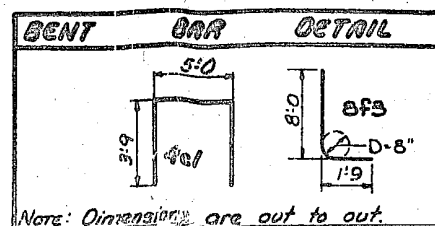


MATERIAL LIST:
48 - 3/4" x 0-7 bolts.
32 - 3/4" x 2-6 threaded rod with nut.
80 - 3/4" concrete anchors.

CONCRETE PLACEMENT QUANTITIES	
Location	Quantity
Footing Cap	92
Column Collar	28
Total - Cu. Yds.	12.0

REINFORCING BAR LIST					
BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
8f1	Footing	20	20	10'-8"	570
8f2	Footing	16	16	8'-8"	370
8f3	Footing to Collar	16	16	9'-9"	417
4cl	Collar Hairpins	10	10	12'-6"	84
Total (lbs.)					1441



NOTES:
The footing supporting the north column of the most westerly two-story frame-type pier is severely cracked. The purpose of this repair is to prevent a sudden failure of this pier should additional settlement occur.
The repair consists of adding a reinforced concrete cap on top of the damaged footing and a reinforced concrete collar around the lower portion of the column. The concrete anchor bolts, the keyways cut into the column and the roughening of the column are to insure the structural integrity of this repair. Roughening of column should be accomplished using a chipping tool or other suitable means. The top of the existing footing should be thoroughly cleaned prior to placing concrete but it need not be saturated with water. It is intended that the collar concrete bond to the column so the Standard Spec. 2403.15 will apply for that.
The concrete anchors shall be one of those brands approved by Materials I. M. 453.09, such as: Hilli, Rawl or Star.

NOTE: This repair not in letting & has not been sheet since it is being constructed by the District Bridge Crew last week in May 1979. Other Figs were uncovered & found to be uncracked.

Design for Repair
KARL KING BRIDGE
PIER #4 - NORTH COLUMN
On Iowa #7. May, 1979
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
Design Sheet No. 1 Of 1 File No. 26214 Design No. 679

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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