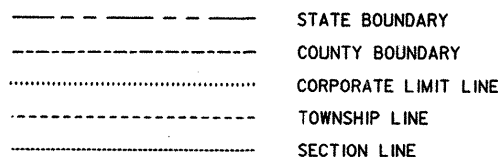
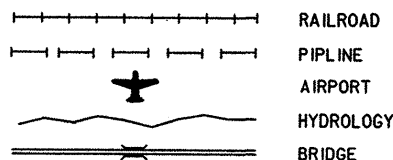
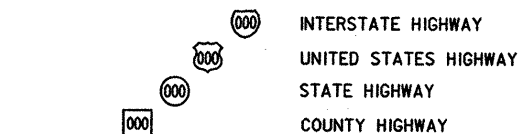
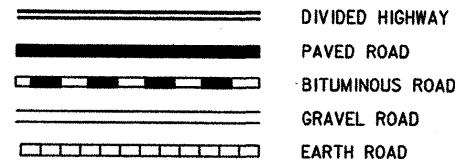


BRFN-926-0(4)--39-94
PIER REPAIR

CADD FILE: H940198.500
08-18-98 GLP 198 WEBSTER

WEBSTER COUNTY
WEBSTER 198

CONVENTIONAL SIGNS



1A-926
WEBSTER CO.
#9
REPLACE EXISTING
PLAN 4608
46100

IOWA
DEPARTMENT OF TRANSPORTATION
Project Development Division
PLANS OF PROPOSED IMPROVEMENTS ON THE
PRIMARY ROAD SYSTEM
WEBSTER COUNTY
PIER REPAIR
IOWA 926 (KARL KING BRIDGE)
OVER DES MOINES RIVER IN FORT DODGE

SCALE: As Noted

The standard specifications, series of 1997 of the Iowa Department of Transportation, shall apply to construction work on this project.
(PLUS CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS)

DESIGN NO. 198



T-89N

1- District 1
1- Jefferson RCE
1- Ames Maint.

CONSTRUCTION PLANS SHOWING PROJECT AS BUILT

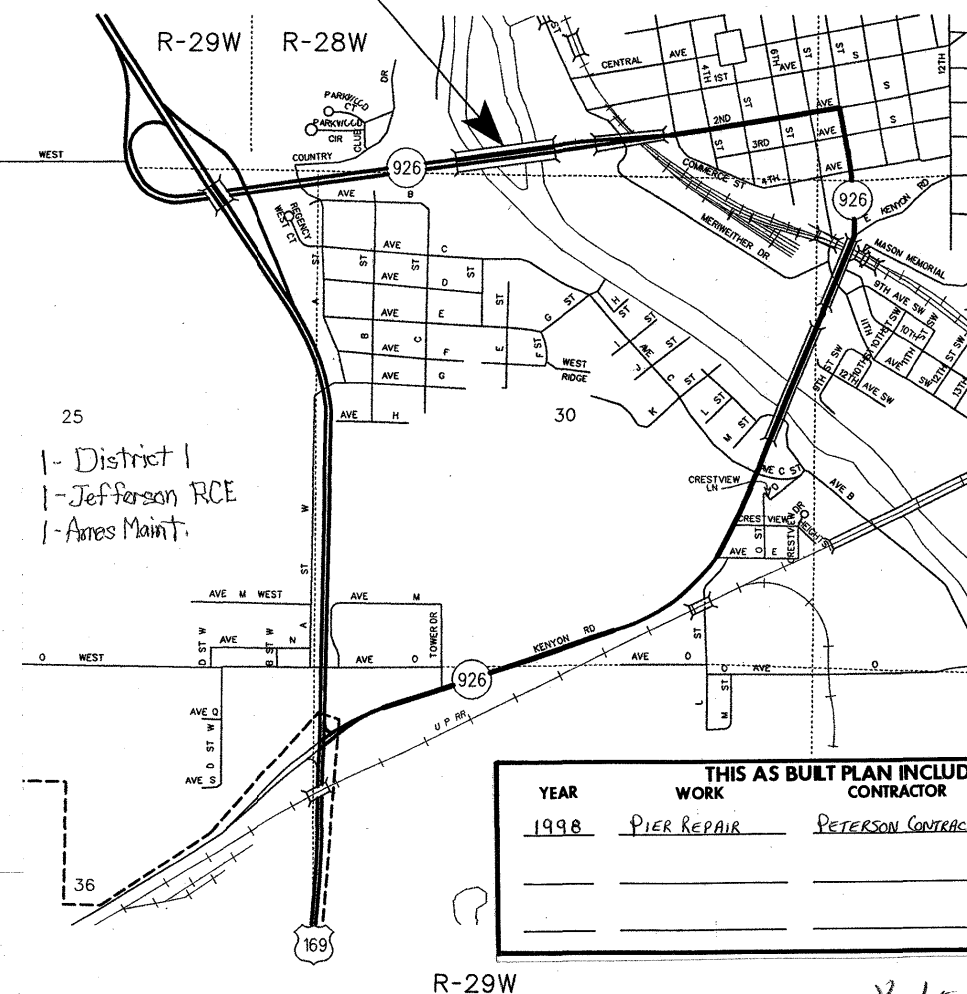
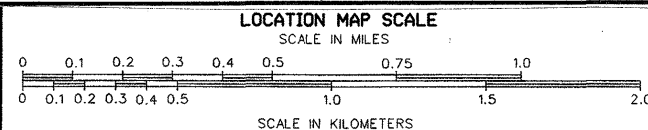
Plan Preparation Supervised By: [Signature]
Resident Construction Engineer
Date: 4-21-2000 Iowa Reg. No. 13298 12-31-2000

REVIEWED AND FORWARDED TO AMES

District Construction Engineer
Three
One 50% Reduced and Two Full-Size Prints To Be Made and Returned To



AFTER MICROFILMING RETURN ORIGINAL
TO DISTRICT NO. 1



YEAR	WORK	CONTRACTOR	PROJ. INSPECTOR
1998	PIER REPAIR	PETERSON CONTRACTORS, INC.	LEONARD BUTRICK

R-29W

100

JEFFERSON
SEP 4 1998
CONSTR. RES.

STATE	FHWA REGION	F.Y.	SHEET	TOTAL
IOWA	7		1	6
PROJECT NUMBER				
BRFN-926-0(4)--39-94				
R.O.W. PROJECT NUMBER				
PIN				
98-94-011-1				

INDEX OF SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	ROAD SIGNATURE SHEET
3	ESTIMATE SHEET
3 - 5	BRIDGE DESIGN NO. 198
6	ROAD SHEETS

VALUE ENGINEERING SAVES
REFER TO THE GENERAL NOTES ON SHEET 3 OF 6

STANDARD ROAD PLANS				STANDARD BRIDGE PLANS		
IDENT	DATE	IDENT	DATE	STANDARD	ISSUED	REVISED
RF-19A	07-15-97					
RS-2	04-30-96					

REVISIONS

I hereby certify that this Engineering document was prepared by me or under my direct personal supervision and that I am a Licensed Professional Engineer under the laws of the State of Iowa.

Gordon L. Port



[Signature]
Signature

5/22/98
Date

Pages or sheets covered by this seal:

SHEETS 1 THRU 5 OF 6

LETTING DATE **8-18-98**

PROJECT DIRECTORY NAME: 94926011A98

FILE NO. 29268

WEBSTER COUNTY

PROJECT NO. BRFN-926-0(4)--39-94

SHEET NO. 1
CADD FILE: H940198.500

Webster IA 926 #9

MICROFILMED

08-18-98 GLP 198 WEBSTER

Robert L.
Stanley
08468
IOWA

I hereby certify that this plan was prepared under my supervision and that engineering decisions with regard to the design were made by me or by other duly licensed Professional Engineers under the laws of the State of Iowa.

Robert Stanley

Signature

5-22-98

Date

ROBERT L. STANLEY

Printed or Typed Name

My license renewal date is December 31, 19 98

Pages or sheets covered by this seal: SHEET 6 OF 6

GEOTECHNICAL DESIGN

GENERAL NOTES:

THIS DESIGN IS INTENDED TO CONSTRUCT A "FROST CUSHION" BEHIND PIER NO. 4, CONSTRUCT A DITCH BEHIND AND ALONGSIDE PIER NO. 4, AND TO EXCAVATE THE UNBALANCED EARTH FROM BEHIND PIER NO. 10.

POLYSTYRENE THERMAL INSULATION MATERIAL SHALL BE TYPE X IN ACCORDANCE WITH ASTM SPECIFICATION C578-95 AND SHALL BE 4 INCHES IN THICKNESS. THE ONE FOOT THICK LAYER AGAINST THE PIER FOOTING SHALL BE MADE UP OF THREE COURSES OF 4 INCH MATERIAL.

UNIT PRICE BID FOR "POLYSTYRENE THERMAL INSULATION" SHALL INCLUDE ALL COSTS ASSOCIATED WITH FURNISHING AND INSTALLING THE INSULATION AS SHOWN AND NOTED IN THESE PLANS. PLAN QUANTITY IS BASED ON THE AREA OF 4 INCH THICK MATERIAL. THE CONTRACTOR WILL BE PAID FOR THE ACTUAL AMOUNT OF INSULATION INSTALLED ON A SQUARE YARD BASIS BASED ON THE PRICE BID PER SQUARE YARD.

THE BID ITEM "CLASS 10 CHANNEL EXCAVATION" INCLUDES ALL COSTS ASSOCIATED WITH REMOVAL OF THE UNBALANCED EARTH BEHIND PIER NO. 10 AS SHOWN AND NOTED IN THESE PLANS.

COPIES OF ORIGINAL DESIGN PLANS WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTACT THE OFFICE OF CONTRACTS - PROJECT DEVELOPMENT DIVISION - IOWA D.O.T. - AMES. DIMENSIONS SHOWN ON THESE PLANS ARE BASED ON DESIGN PLANS (ORIGINAL DESIGN NO. 1457 AND PIER REPAIR DESIGN NO. 679).

ALL DIMENSIONS AND DETAILS SHOWN IN THESE PLANS PERTINENT TO NEW CONSTRUCTION IN RELATION TO EXISTING PORTIONS OF THE STRUCTURE SHALL BE VERIFIED IN THE FIELD BY THE BRIDGE CONTRACTOR BEFORE STARTING CONSTRUCTION.

FAINT LINES ON PLANS INDICATE THE EXISTING STRUCTURE.

UTILITY COMPANIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS SHALL BE NOTIFIED BY THE CONTRACTOR OF THE CONSTRUCTION STARTING DATE.

THE CONTRACTOR IS ENCOURAGED TO TAKE FULL ADVANTAGE OF SPECIFICATION 1105.15 -- VALUE ENGINEERING INCENTIVE PROPOSAL. A PAMPHLET AND CONCEPTUAL PROPOSAL FORM WILL BE AVAILABLE AT THE PRECONSTRUCTION CONFERENCE.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SITES FOR EXCESS EXCAVATED MATERIAL. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES.

ENGINEERING FABRIC SECTIONS SHALL BE JOINED BY OVERLAPPING THE UPSTREAM/ UPHILL STRIP OVER THE DOWNSTREAM/DOWNHILL STRIP BY AT LEAST 2 FEET. THE FABRIC SHALL BE HELD FIRMLY IN PLACE BY PINNING THE OVERLAPPED JOINTS WITH WIRE STAPLES. STAPLES SHALL BE MADE FROM NO. 11 GAGE OR HEAVIER WIRE, WIDTH OF 1 OR 2 INCHES AT THE THROAT AND 6 INCHES FROM TOP TO BOTTOM AFTER BENDING. THE FABRIC SHALL BE PLACED AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. THE FABRIC SHALL BE LOOSELY PLACED AND IT'S UPPER EDGE SHALL BE SECURELY TOED IN AT LEAST 12 INCHES IN DEPTH.

TORN FABRIC MAY BE REPAIRED IN PLACE BY CUTTING AND PLACING A PIECE OF THE SAME FABRIC OVER THE TEAR. THE DIMENSIONS OF THE PATCH SHALL BE AT LEAST TWO FEET LARGER THAN THE TEAR AND IT SHALL BE PINNED SECURED TO PREVENT LAP SEPARATION.

DESIGN HISTORY
AT THIS SITE

DES. NO.	TYPE OF WORK
1457	ORIGINAL DESIGN
163	REPAIR OF WEST ABUTMENT
1471	EXTEND AND REPAIR
177	BRIDGE REPAIR
679	REPAIR PIER 4 COLUMN
682	BRIDGE REPAIR
198	ADD FROST CUSHION TO PIER 4

ESTIMATED PROJECT QUANTITIES

	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUANTITY
1	2102-2710070	EXCAVATION, CLASS 10, RDWY & BORROW	CY	94.000	94 ✓
2	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	235.000	235 ✓
3	2210-0475290	MACADAM STONE BASE	TON	28.000	49.48 ✓
6	2507-3250005	ENGINEERING FABRIC	SY	218.000	285 ✓
7	2507-8029000	EROSION STONE	TON	88.000	145.05 ✓
4	2502-8212304	SUBDRAIN, STANDARD, PERFORATED, 4" AS PER PLAN	LF	94.000	107 ✓
5	2502-8220105	SUBDRAIN OUTLET AS PER PLAN	EA	1.000	1 ✓
8	2528-8445110	TRAFFIC CONTROL	LS	1.000	1 ✓
9	2533-4980005	MOBILIZATION	LS	1.000	1 ✓
10	2599-9999018	POLYSTYRENE THERMAL INSULATION	SY	52.000	52 ✓
105 EWO	2599-9999010	REMOVAL OF EXISTING DRAINAGE PIPE	LS	1.000	1 ✓

ITEM CODE

ITEM REFERENCE INFORMATION

2102-2710070	INCLUDES 50 C.Y. COHESIVE BACKFILL ONLY. INCLUDES 44 C.Y. CONTRACTOR WASTE.
2502-8212304	INCLUDES 3 C.Y. POROUS BACKFILL.
2502-8220105	SEE STANDARD RF-19A.
2599-9999018	SEE GENERAL NOTES FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT.

TRAFFIC CONTROL PLAN

108-23

09-27-94

- Traffic on IA. 926 will be maintained at all times.
- Traffic control on this project shall be in accordance with Standard Road Plan RS-2. For additional complementary information, refer to Part VI of the Manual on Uniform Traffic Control Devices and the current Standard Specifications.
- All traffic control devices shall be furnished, erected, maintained and removed by the contractor.
- Where possible, all post mounted signs shall be placed at least 2 feet beyond the curb or edge of shoulder.
- The location for storage of equipment by the contractor during nonworking hours shall be as approved by the engineer in charge of construction.
- The engineer may require modifications to the pavement marking details shown. Conflicting permanent edge lines, center lines or lane lines shall be removed. As applicable, permanent edge lines, center lines and lane lines shall be placed before the roadway is returned to normal traffic. The current Standard Specifications and supplemental specifications shall apply.
- Proposed sign spacing may be modified as approved by the engineer to meet existing field conditions or to prevent obstruction of the motorist's view of permanent signing.
- Permanent signing that conveys a message contrary to the message of the temporary signing and not applicable to the working conditions shall be covered by the contractor when directed by the engineer.
- Proposed changes in the traffic control plan shall be reviewed with the Office of Construction before changes are made.

CONSTRUCTION: IOWA DEPARTMENT OF TRANSPORTATION SPECIFICATION, SERIES OF 1997, PLUS CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

THIS WORK IS TO BE PERFORMED UNDER THE CONDITIONS OF ARMY CORPS OF ENGINEERS NATION WIDE 404 PERMIT NUMBER 3.

LOCATION:

IOWA 926 (KARL KING BRIDGE) OVER DES MOINES RIVER SECTION 19 T-89N, R-28W WAHKONSA TWP. WEBSTER COUNTY MAINT. NO. 9402.5S926 FHWA NO. 52300

DESIGN FOR ADDING FROST CUSHION TO PIER #4 OF
1109' x 58' CONTI. PLATE GIRDER &
90' x 58' CONTI. CONC. SLAB BRIDGE
QUANTITIES & GENERAL NOTES
STATION 218+78 MAY, 1998
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - PROJECT DEVELOPMENT DIVISION
DESIGN SHEET NO. 1 OF 3 FILE NO. 29268 DESIGN NO. 198

DESIGNED BY G. PORT CHECKED BY
DETAILED BY THAYNE SORENSON CADD FILE H940198.SOI SECTION LEADER: GORDON PORT
16-JUN-1998 07:14 tsorens s:\projects\94926011a98\brfinal\h940198.s01

WEBSTER COUNTY

PROJECT NUMBER

BRFN-926-0(4)--39-94

STATE

FHWA REGION

FISCAL YEAR

SHEET NO.

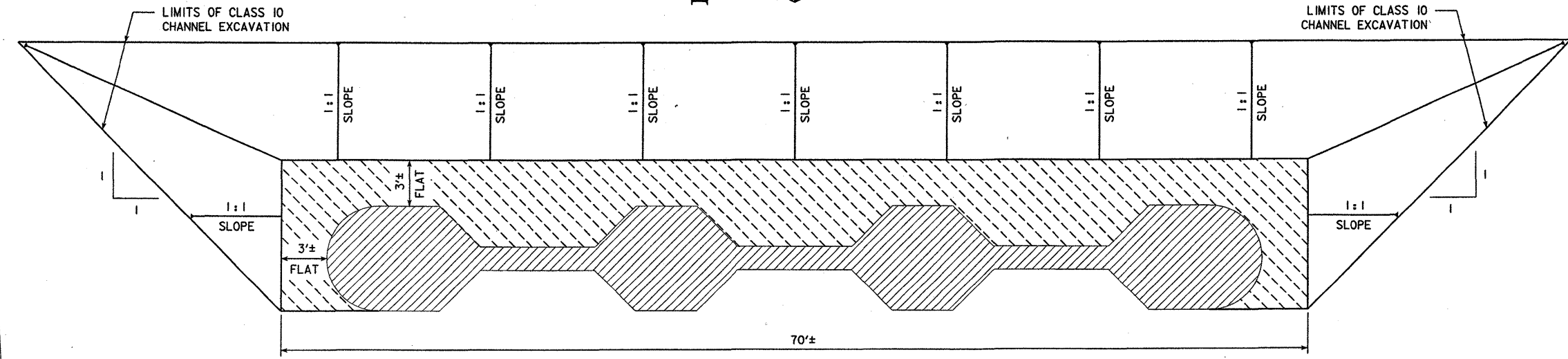
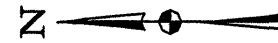
TOTAL SHEETS

IOWA

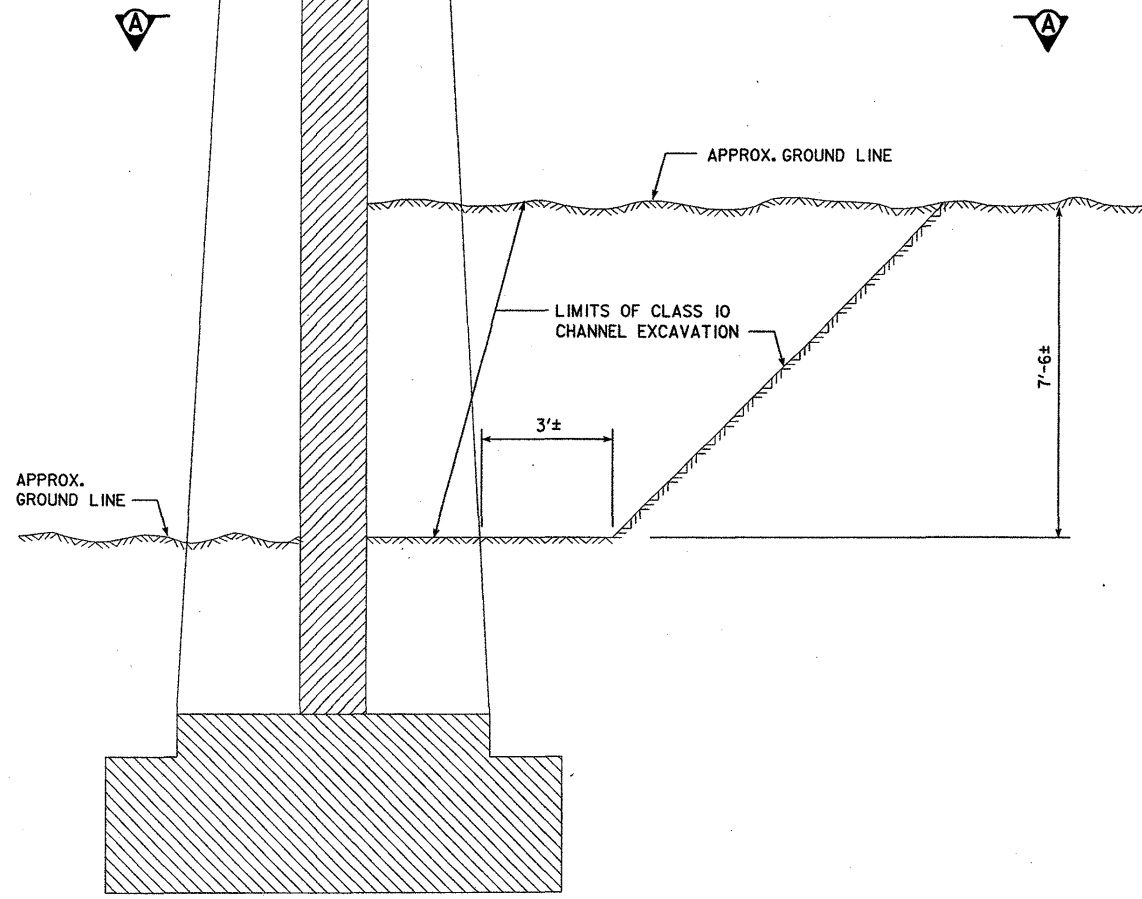
7

3

6



SECTION A - A
(SHOWING LIMITS OF CLASS 10 CHANNEL EXCAVATION)



CROSS SECTION THRU PIER 10
(LOOKING NORTH)

DESIGN FOR ADDING FROST CUSHION TO PIER #4 OF
1109' x 58' CONTI. PLATE GIRDER &
90' x 58' CONTI. CONC. SLAB BRIDGE
PIER 10 DETAILS
STATION 218+78 MAY, 1998
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - PROJECT DEVELOPMENT DIVISION
DESIGN SHEET NO. 2 OF 3 FILE NO. 29268 DESIGN NO. 198

DESIGNED BY G. PORT CHECKED BY
DETAILED BY THAYNE SORENSON CADD FILE H940198.S02

WEBSTER COUNTY

PROJECT NUMBER

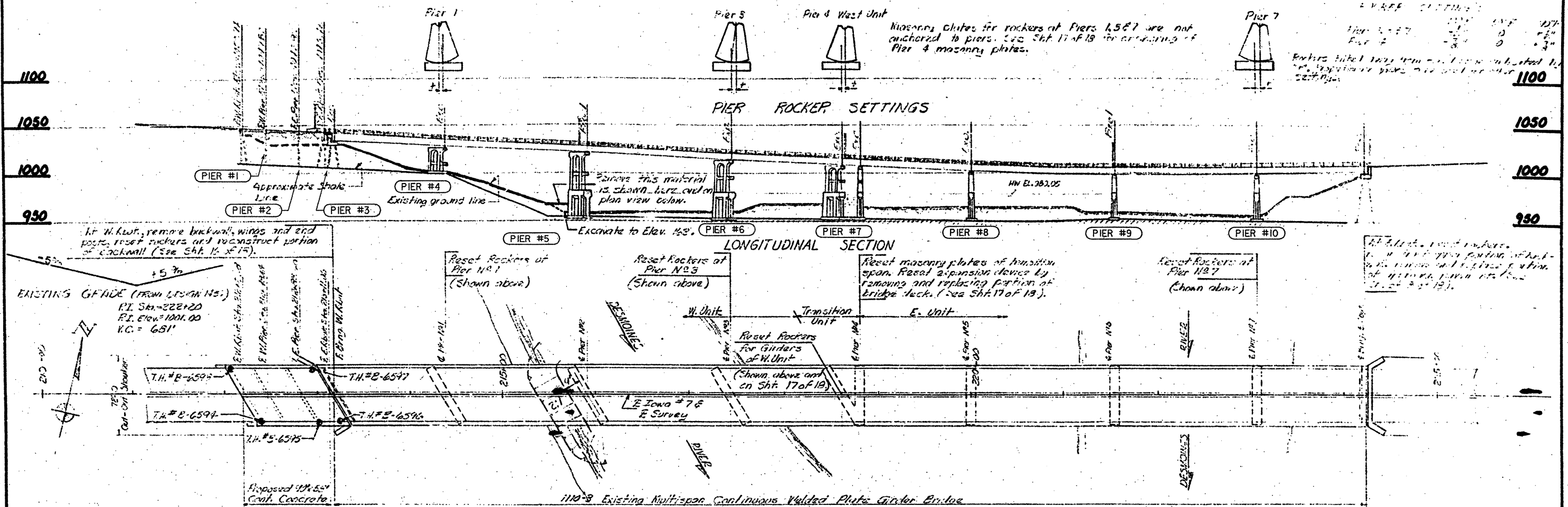
STATE	FHWA REGION	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	7		4	6

22-MAY-1998 07:25

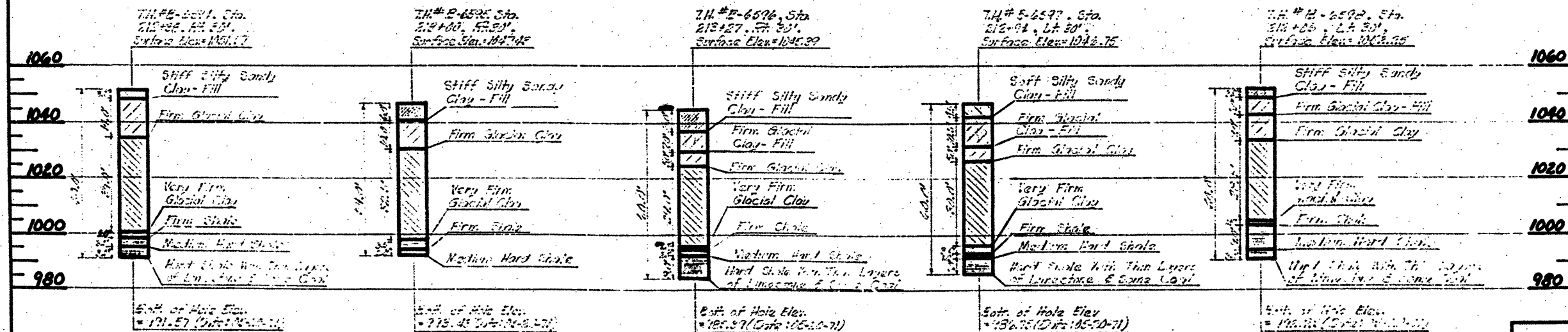
tsorens

s:\projects\94926011a98\brfinal\h940198.s02

Bench Mark: N 411; IHC Bench Mark on N Wing of W. Abut. of Bridge, 36' Lx, Sta. 215+90, Elev. 1047.79.



GENERAL PLAN
Scale: 1" = 50'



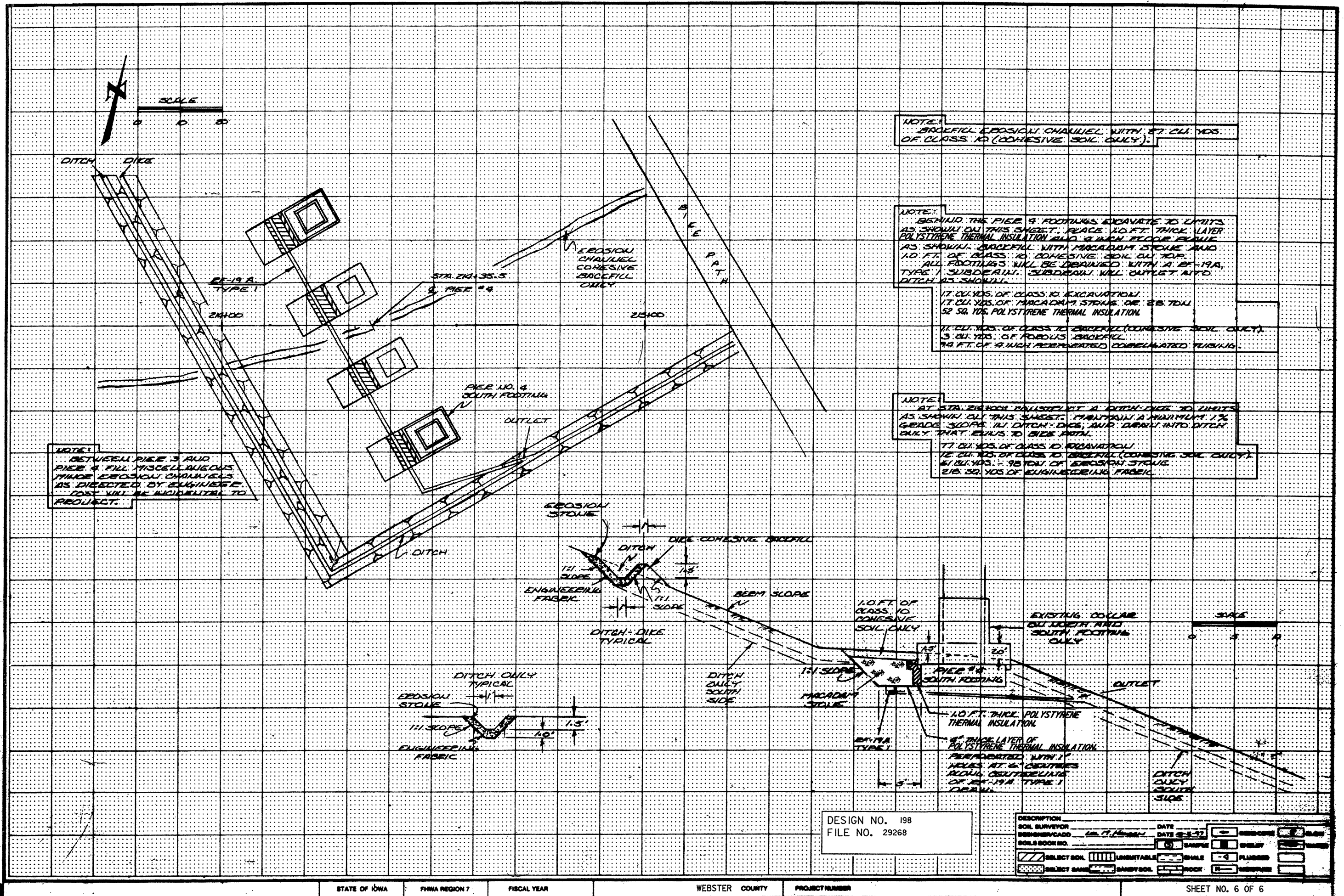
TRAFFIC COUNT: 5800 VPD (1970)

LOCATION:
Section 12
T-211, 422+00
West of 1st
On Lane #7 (from end of bridge)
over 1st Main Canal

THIS SHEET FROM ORIGINAL DESIGN PLANS IS INCLUDED FOR INFORMATION ONLY. ENCIRCLED PIER NUMBERS SHOWN ON LONGIT. SECTION WERE ADDED.

DESIGN NO. 198
FILE NO. 29235
DESIGN SHEET NO. 3 OF 3

Design for 35' span
20' x 55' x 10' CONCRETE GIRDER
BEARER AND RAILROAD BRIDGE
110-8 EXISTING MULTISPAN CONTINUOUS WELDED PLATE GIRDER BRIDGE
CURRENT SEE PROJECT SHEET 110-8 GENERAL PLAN & SOUNDING SKETCH
STATION 215+21 to Station 215+25
WEBSTER COUNTY
IOWA STATE HIGHWAY COMMISSION
Design Sheet No. ___ Of ___ File No. ___ Design No. ___
SHEET NO. 5 OF 6



NOTE:
BRICKFILL EROSION CHANNEL WITH 27 CU. YDS.
OF CLASS 10 (COHESIVE SOIL ONLY).

NOTE:
BEHIND THE PIER 3 FOOTINGS EXCAVATE TO LIMITS
AS SHOWN ON THIS SHEET. PLACE 10 FT. THICK LAYER
POLYSTYRENE THERMAL INSULATION AND 4 INCH FLOOR SLAB.
AS SHOWN. BRICKFILL WITH MACADAM STONE AND
10 FT. OF CLASS 10 COHESIVE SOIL ON TOP.
ALL FOOTINGS WILL BE DRAINED WITH A 24-19A
TYPE 1 SUBDRAIN. SUBDRAIN WILL OUTLET INTO
DITCH AS SHOWN.

17 CU. YDS. OF CLASS 10 EXCAVATION.
17 CU. YDS. OF MACADAM STONE OR 28 TON
52 SQ. YDS. POLYSTYRENE THERMAL INSULATION.
11 CU. YDS. OF CLASS 10 BRICKFILL (COHESIVE SOIL ONLY).
3 CU. YDS. OF FODIOUS BRICKFILL.
14 FT. OF 4 INCH PERFORATED CORRUGATED PIPING.

NOTE:
AT STA. 24+00.00 INSTALL A DITCH DICE TO LIMITS
AS SHOWN ON THIS SHEET. MAINTAIN A MINIMUM 1%
GRADE SLOPE IN DITCH DICE, AND DRAIN INTO DITCH
ONLY THAT LEADS TO DICE PATH.

17 CU. YDS. OF CLASS 10 EXCAVATION.
12 CU. YDS. OF CLASS 10 BRICKFILL (COHESIVE SOIL ONLY).
61 CU. YDS. OF 98 TON OF EROSION STONE.
218 SQ. YDS. OF ENGINEERING FABRIC.

NOTE:
BETWEEN PIER 3 AND
PIER 4 FILL MISCELLANEOUS
THIN EROSION CHANNELS
AS DIRECTED BY ENGINEER.
DO NOT BE INCIDENTAL TO
PROJECT.

DESIGN NO. 198
FILE NO. 29268

DESCRIPTION	DATE	DATE	DATE
SOIL SURVEYOR	DATE	DATE	DATE
DESIGNED BY	DATE	DATE	DATE
SOIL BOOK NO.	DATE	DATE	DATE
SELECT SOIL	UNSATURABLE	SHALE	PLASTER
SELECT SAND	SANDY SOIL	ROCK	MEASURE