

BRIDGE DECK OVERLAY
LETTING DATE
BRFN-926-0(9)--39-94
04-15-2008

WEBSTER COUNTY
DESIGN NO. 108 & 208

LEGEND	
INTERSTATE ROUTE	
FREEWAY OR EXPRESSWAY ROUTE	
U.S. NUMBERED ROUTE	
STATE NUMBERED ROUTE	
COUNTY NUMBERED ROUTE	
LOCAL ROAD OR CITY STREET	
RAILROAD	
CORPORATION LINE	
SECTION LINE	
CUL DE SAC	
SECTION, TOWNSHIP & RANGE NUMBERS	9, T-89N, R-30W

Iowa Department of Transportation
Highway Division

PLANS OF PROPOSED IMPROVEMENTS ON THE

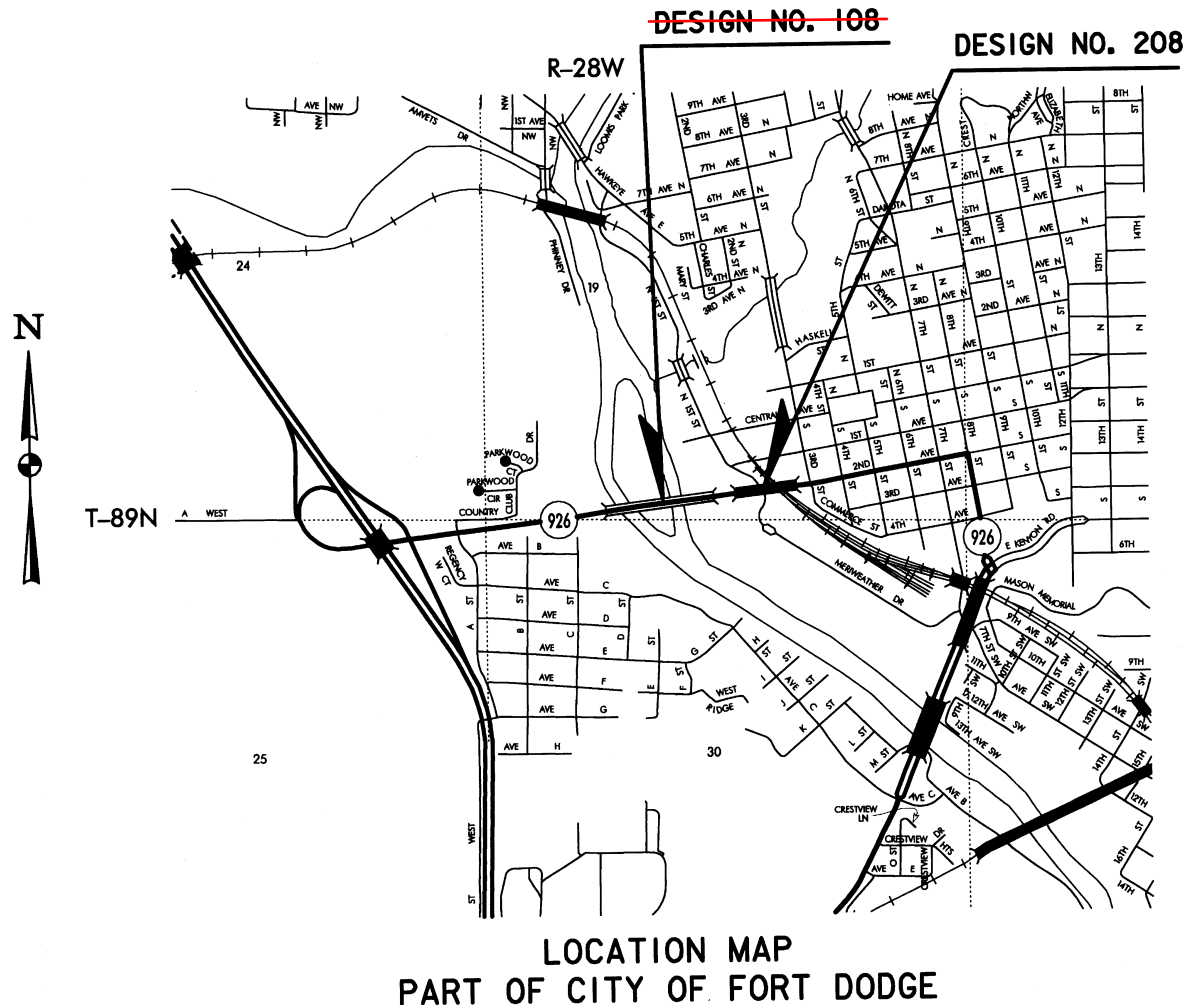
PRIMARY ROAD SYSTEM
WEBSTER COUNTY

BRIDGE DECK OVERLAY

ON IA 926 OVER DES MOINES RIVER & CHICAGO
CENTRAL RAILROAD IN CITY OF FORT DODGE

THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY
AND BRIDGE CONSTRUCTION, SERIES 2001, PLUS APPLICABLE GENERAL SUPPLEMENTAL
SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND
SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

VALUE ENGINEERING SAVES. REFER TO THE GENERAL NOTES IN THESE PLANS.



LOCATION MAP
PART OF CITY OF FORT DODGE

ALL WORKING DRAWINGS INCLUDING SHOP DRAWINGS AND
FALSEWORK DRAWINGS WILL BE CHECKED BY:
WHKS & CO.
1421 S. BELL AVE., SUITE 103
AMES, IOWA 50010-7710

STANDARD ROAD
PLANS

STANDARD ROAD PLANS ARE LISTED
ON SHEETS 22, 44

DESIGN DATA URBAN

2006 AADT 7000 V.P.D.

Form 520003 12-97



I hereby certify that this project was constructed in accordance
with the contract documents, the "as-built" plans were prepared
under my supervision, and that I am a duly licensed Professional
Engineer under the laws of the State of Iowa.

Project Engineer
Date 4/11/12

My license renewal date is December 31, 2013
2008
2010 Christensen Brothers Inc. Alan Lightfoot
Year Contractor Project Inspector

THIS AS BUILT PLAN INCLUDES

YEAR	WORK	CONTRACTOR	PROJ. INSPECTOR
2009	6" RAIL - PED RAIL	WEST CENTRAL CONSTR.	Lightfoot
2009	CONE BARRIER RAIL	UNITED CONTRACTORS, INC.	Lightfoot
2009	PAINTED PAINT MARK	ROADSAFE TRAPPS SYS	Lightfoot
2009	BRIDGE CLEAN+PAINT	P.L. SERVICES	Lightfoot
2009	RMVL OF OVERLAY	DUSTROL, INC.	Lightfoot
2009	LONG. GROOVING	CEDAR FALLS CONSTR. CO.	Lightfoot
2009	RMV+REINSTALL LUM.	KWS. INC.	Lightfoot
2009	CFRP WRAP (PIER)	VECTOR	Lightfoot

INDEX OF SEALS

SHEET NO.	NAME	TYPE
1	SURENDRA K. GUPTA	STRUCTURAL DESIGN
21	BRIAN J. BIRKLAND	ROAD DESIGN

STRUCTURAL DESIGN

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

Signature Surendra K. Gupta Date 02-01-2008

Printed or Typed Name Surendra K. Gupta, P.E.

My license renewal date is December 31, 2009

Pages or sheets covered by this seal: SHEETS 1 THRU 20 OF 50
SHEETS 28 THRU 42 OF 50

DESIGN TEAM WHKS & Co.

ENGLISH

IOWA DOT * OFFICE OF BRIDGES AND STRUCTURES

FILE NO. 30163

WEBSTER COUNTY

PROJECT NUMBER BRFN-926-0(9)--39-94

SHEET NUMBER 1

L:\dept\6\6400.21\Webster 108\drawings\FINAL\Extrusion Submittal\94926009.brg

GENERAL NOTES:

THIS DESIGN IS FOR REPAIRS TO THE EXISTING 556'-0 x 58'-0 CONTINUOUS WELDED PLATE GIRDER BRIDGE PLUS TWO 49'-0 x 58'-0 APPROACH SPANS ON IA 926 OVER THE CHICAGO CENTRAL RAILROAD & 2ND ST. SW IN THE CITY OF FORT DODGE. THIS BRIDGE HAS PREVIOUSLY BEEN OVERLAID. COPIES OF ORIGINAL DESIGN PLANS AND REPAIR AND OVERLAY PLANS WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTACT THE OFFICE OF CONTRACTS - HIGHWAY DIVISION - IOWA D.O.T. - AMES.

REPAIR SHALL CONSIST OF:

- 1 REMOVAL OF EXISTING BRIDGE FLOOR OVERLAY
- 2 BRIDGE FLOOR OVERLAY
- 3 BRIDGE FLOOR REPAIR, CLASS A
- 4 REMOVAL OF EXISTING STEEL HANDRAIL ON BOTH CURBS AND INSTALLING STRUCTURAL STEEL PEDESTRIAN HANDRAILING ON SOUTH CURB
- 5 WIDEN EXISTING S. CURB 1'-0 AT GUTTER LINE
- 6 INSTALLING RETROFIT BARRIER RAIL ON BOTH CURBS
- 7 RECONSTRUCTING THE TOP OF WEST ABUTMENT BACKWALL
- 8 REPAIRING SPALLED CONCRETE ON NORTH & MEDIAN CURBS
- 9 REPAIRING SPALLED AND HOLLOW AREAS ON PIER 1 PILE ENCASEMENTS
- 10 ZONE PAINTING OF STRUCTURAL STEEL AT BOTH ABUTMENTS
- 11 PLACING MACADAM STONE IN ERODED AREAS ON WEST BERM
- 12 REPLACING APPROACH PAVEMENT ON WEST SIDE
- 13 INSTALLING NEW GUARDRAIL ON SOUTHWEST CORNER

PRESENT FLOOR THICKNESS IS ABOUT 8 INCHES INCLUDING EXISTING OVERLAY. THE CONTRACTOR SHALL EXERCISE CARE IN REMOVING CONCRETE IN ORDER TO PREVENT UNNECESSARY UNBONDING OF REINFORCING STEEL.

ALL DIMENSIONS AND DETAILS SHOWN ON THESE PLANS PERTINENT TO NEW CONSTRUCTION SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING CONSTRUCTION.

THE LUMP SUM BID FOR "REMOVALS, AS PER PLAN" SHALL INCLUDE ALL COSTS ASSOCIATED WITH REMOVING THE INSIDE FACE OF EXISTING SOUTH CURB, PORTIONS OF THE EXISTING EXPANSION DEVICE, NORTH CURB FASCIA AND THE TOP OF WEST ABUTMENT BACKWALL. REMOVAL OF SCHEDULED ITEMS SHALL BE IN ACCORDANCE WITH SECTION 2401 OF THE SPECIFICATIONS. ANY DAMAGE TO ANY STEEL OR CONCRETE NOT TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRED AT NO EXTRA COST TO THE STATE.

AREAS OF MEDIAN CURB INDICATED ON THE "SITUATION PLAN" OR DESIGNATED BY THE ENGINEER ARE TO BE REPAIRED USING CONCRETE REPAIR NOTES AND DETAILS INCLUDED IN THESE PLANS.

THE PRICE BID FOR "REMOVAL OF EXISTING HANDRAIL" SHALL INCLUDE ALL COSTS ASSOCIATED WITH DISMANTLING THE EXISTING STEEL HANDRAIL (APPROX. 1312 L.F. AND 156 POSTS). THE RAILS AND POSTS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE BY THE CONTRACTOR. THE BID ITEM SHALL ALSO INCLUDE ALL COSTS ASSOCIATED WITH CUTTING OFF AND PAINTING OF THE EXISTING RAIL POST ANCHOR BOLTS IF REQUIRED.

THE TOP OF THE WEST ABUTMENT BACKWALL AS SHOWN SHALL BE CONSTRUCTED USING STRUCTURAL CONCRETE CLASS D. IF MACHINE FINISHING FOR THE TOP OF THE BACKWALL IS NOT PRACTICAL, A MANUAL TYPE SCREED OR METAL PLATE WITH APPROVED VIBRATORS ATTACHED SHALL BE USED.

IT WILL BE NECESSARY TO SUPPORT THE EARTH AND/OR GRANULAR MATERIAL BEHIND THE ABUTMENT DURING RECONSTRUCTION OF THE TOP OF WEST ABUTMENT BACKWALL BY SOME METHOD APPROVED BY THE ENGINEER. ALL COSTS FOR SUPPORTING THE EARTH AND/OR GRANULAR MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR "CLASS 20 EXCAVATION".

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 2413.09, BOTH ABUTMENT BRIDGE SEATS SHALL HAVE AN APPLICATION OF CONCRETE SEALER IN ACCORDANCE WITH SUB-ARTICLE 2403.21 (D).

NO PRELIMINARY FLOOR SURVEY IS SHOWN. THE PLAN QUANTITY FOR "CLASS A BRIDGE FLOOR REPAIR" IS ESTIMATED AS 25% OF THE TOTAL FLOOR AREA. THE ACTUAL QUANTITY IS DETERMINED BY THE ENGINEER AFTER THE EXISTING OVERLAY HAS BEEN REMOVED. ACTUAL SPALLED AND HOLLOW AREAS AS DETERMINED BY THE ENGINEER SHALL BE REPAIRED.

BEFORE PROCEEDING WITH BRIDGE FLOOR OVERLAY AND BRIDGE FLOOR REPAIR THE CONTRACTOR MAY COMPLETE ALL STAGES OF OTHER CONSTRUCTION. ANY CONSTRUCTION SHALL HAVE STAGE LIMITS, TEMPORARY BARRIER RAIL AND TRAFFIC CONTROL AS DETAILED ON THESE PLANS. TEMPORARY BARRIER RAIL AND TRAFFIC CONTROL MAY BE ADJUSTED TO FIT THE ACTUAL WORK AND STORAGE AREA. WHEN BACKWALLS AND/OR APPROACH SECTIONS ARE TO BE REBUILT TO A RAISED SURFACE, AND WHEN FLOOR OVERLAY IS NOT A PART OF THE SAME STAGE, THE CONTRACTOR SHALL PROVIDE FOR PROFILE TRANSITION WITH H.M.A. SURFACING. PROFILE TRANSITION SHALL BE TAPERED AT A RATE OF 25' FOR 1 1/2 INCHES OF RAISE. THE H.M.A. TRANSITION MATERIAL SHALL BE A COMMERCIAL GRADE HOT SURFACING MIX OR A MIX APPROVED BY THE ENGINEER. H.M.A. MAY BE PLACED BY HAND METHODS AND MAY BE COMPACTED BY ANY APPROVED METHOD. ALL COSTS FOR ADDITIONAL TRAFFIC CONTROL, REPOSITIONING OF BARRIER AND H.M.A. SURFACING SHALL BE BORNE BY THE CONTRACTOR.

THE BID ITEM "STRUCTURAL STEEL" SHALL ALSO INCLUDE ALL COSTS ASSOCIATED WITH CUTTING RAISE PLATES AND WELDING NEW CURB PLATES ON EXPANSION DEVICE AS SHOWN EXCEPT ITEMS INCLUDED IN THE BID ITEM "PAINTING STRUCTURAL STEEL" AND THE BID ITEM "CONTAINMENT".

THE LUMP SUM BID FOR "BRIDGE CLEANING FOR PAINTING" SHALL INCLUDE THE COSTS OF REMOVAL OF ACCUMULATED FOREIGN MATERIAL, LOOSE PAINT AND WATER WASHING AS DESCRIBED IN THE STANDARD SPECIFICATIONS 2508.

THE LUMP SUM BID FOR "BLAST CLEANING OF STRUCTURAL STEEL" SHALL INCLUDE ALL COSTS FOR THE PREPARATION OF STEEL SURFACES THAT REQUIRE PAINTING AS DESCRIBED IN THE STANDARD SPECIFICATIONS 2508.

THE LUMP SUM BID FOR "PAINTING OF STRUCTURAL STEEL" SHALL INCLUDE ALL COSTS FOR PAINTING THE STRUCTURAL STEEL WITHIN THE LIMIT AS SHOWN ON DESIGN SHEET 2 (INCLUDES ALL BEAMS, DIAPHRAGMS AND BEARINGS - APPROX. 1800 SQ. FT.) AS DESCRIBED IN THE STANDARD SPECIFICATIONS 2508. AN EPOXY PAINT SYSTEM SHALL BE USED. BEFORE CLEANING THE EXISTING STRUCTURAL STEEL, THE BRIDGE CONTRACTOR SHALL REMOVE ANY ATTACHMENTS NOT BEING REUSED. IN ADDITION, ANY EXISTING STEEL INACCESSIBLE AFTER REASSEMBLY WILL BE GIVEN THE FULL PAINT SYSTEM BEFORE FINAL ASSEMBLY OF THE STRUCTURE.

THE LUMP SUM BID FOR "PAINTING STRUCTURAL STEEL" SHALL ALSO INCLUDE THE COST OF PREPARING ALL THE EXPOSED SURFACES OF THE EXPANSION DEVICES AND RAISE PLATES THAT ARE TO BE REUSED AND FIELD PAINTING EXISTING STRUCTURAL STEEL AS NOTED IN THESE PLANS. CLEANING AND PAINTING SHALL CONFORM TO STANDARD SPECIFICATION 2508.

CONTAINMENT AND DISPOSAL OF WASTE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS 2508. ALL COSTS ASSOCIATED WITH HAULING AND DEPOSITING OF WASTE AT THE DESIGNATED SITE/FACILITY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND INCLUDED IN THE CONTRACT PRICE BID FOR THE "CONTAINMENT" ITEM.

A SCRAPE SAMPLE WAS TAKEN FROM AN AREA OF THIS BRIDGE TO GET AN INDICATION OF THE EXISTENCE OF AND LEVEL OF TOTAL CHROMIUM AND TOTAL LEAD. ANALYSIS OF TOTAL LEAD ON THIS SAMPLE WAS 187,000 PARTS PER MILLION (PPM). ANALYSIS OF TOTAL CHROMIUM ON THIS SAMPLE WAS 38,300 PPM. THESE ANALYSES SHOW THE EXISTENCE OF THESE TWO TOXIC CONSTITUENTS. LEVELS INDICATED BY THESE TESTS COULD CREATE CONDITIONS ABOVE REGULATORY LIMITS FOR HEALTH AND SAFETY REQUIREMENTS. NO OTHER CONSTITUENTS WERE ANALYZED. THE BIDDER SHOULD NOT RELY ON THE DEPARTMENT'S TESTING AND ANALYSIS FOR ANY PURPOSE OTHER THAN AS AN INDICATION OF THE EXISTENCE OF THESE TWO TOXIC CONSTITUENTS.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE EXISTING CONDUIT IN THE BRIDGE CURBS. IN ORDER TO ENSURE THE EXISTING CONDUITS ARE NOT DAMAGED DURING PLACEMENT OF THE CAST-IN-PLACE BARRIER RAIL, THE CONTRACTOR SHALL BE REQUIRED TO DO THE FOLLOWING:

1. PHYSICALLY LOCATE THE CONDUIT AT APPROXIMATELY 50 FOOT INTERVALS PRIOR TO DRILLING ANY HOLES FOR 3/4" DIAMETER DOWEL BARS.
2. AFTER COMPLETION OF DRILLING FOR THE 3/4" DOWEL BARS AND PRIOR TO PLACEMENT OF THE DOWELS, PROVE TO THE INSPECTOR BY A REASONABLE METHOD THE USABILITY OF THE CONDUIT HAS NOT BEEN COMPROMISED.

COST OF THESE OPERATIONS WILL BE CONSIDERED INCIDENTAL TO THE COST OF THE CAST-IN-PLACE BARRIER RAIL. ANY DAMAGE TO THE CONDUIT OR WIRING BY THE CONTRACTOR WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRED AT NO EXTRA COST TO THE STATE.

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

CONSTRUCTION SHALL BE DONE IN STAGES WITH AT LEAST ONE LANE TRAFFIC MAINTAINED AT ALL TIMES IN ACCORDANCE WITH "TRAFFIC CONTROL PLAN" NOTE.

ALL CONCRETE REMOVAL LINES SHALL BE INITIATED WITH A 3/4" INCH SAWCUT.

THE BRIDGE FLOOR IS COVERED WITH A 1 1/2 INCH THICK PORTLAND CEMENT CONCRETE OVERLAY. THE CONTRACTOR SHALL NOTE THE REDEFINING OF THE CLASSIFICATION LINE (BOUNDARY BETWEEN REPAIR AND OVERLAY) FOR THIS PROJECT DUE TO THE EXISTING 1 1/2 INCH OVERLAY. THE CLASSIFICATION LINE WILL BE DEFINED AS 1 1/2 INCHES BELOW THE TOP OF EXISTING OVERLAY. THIS WILL NECESSITATE THE REMOVAL OF THE EXISTING BRIDGE FLOOR OVERLAY BEFORE PLACING THE PROPOSED NEW BRIDGE FLOOR OVERLAY.

ALL COSTS ASSOCIATED WITH THE REMOVAL OF THE EXISTING OVERLAY SHALL BE INCLUDED IN THE BID ITEM "REMOVAL OF EXISTING P.C.C. OVERLAY". REMOVAL OF EXISTING OVERLAY SHALL BE COMPUTED IN SQUARE YARDS FROM THE MEASUREMENT OF AREAS REMOVED. THE CONTRACTOR WILL BE PAID THE CONTRACT PRICE PER SQUARE YARD FOR FURNISHING ALL EQUIPMENT AND LABOR NECESSARY TO REMOVE THE CONCRETE TO WITHIN 1/2 INCH ABOVE THE CLASSIFICATION LINE. ALL COSTS, INCLUDING FURNISHING EQUIPMENT AND LABOR, ASSOCIATED WITH REMOVAL OF THE NEXT 1/2 INCH OF CONCRETE (TO THE CLASSIFICATION LINE) SHALL BE INCLUDED IN THE BID ITEM "BRIDGE FLOOR OVERLAY".

UPON COMPLETION OF THE REMOVAL OF CONCRETE DOWN TO THE CLASSIFICATION LINE, THE ENGINEER SHALL DETERMINE THE AREAS OF BRIDGE DECK TO BE REPAIRED AS "CLASS A BRIDGE FLOOR REPAIR". ACTUAL HOLLOW AREAS, AS DETERMINED BY THE ENGINEER, SHALL BE REPAIRED.

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

THE CONTRACTOR SHALL NOTIFY ELDON ROSSOW WITH THE CITY OF FORT DODGE (515-576-3601) PRIOR TO REMOVING AND REPLACING THE ELECTRICAL CONDUIT AS SHOWN IN THE PLANS.

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.

NOTE: ROADWAY QUANTITIES SHOWN ELSEWHERE IN THESE PLANS.

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	ITEM CODE	ITEM	UNITS	QUANTITY	AS BUILT QUANTITY
1 37	2401-6745635	REMOVAL OF EXISTING HANDRAIL	LS	1.000	1.000
2 38	2401-6750001	REMOVALS, AS PER PLAN	LS	1.000	1.000
3 39	2402-2720000	EXCAVATION, CLASS 20	CY	23.100	23.100
4 40	2403-0100000	STRUCTURAL CONCRETE (MISCELLANEOUS)	CY	62.500	62.500
5 41	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	6385.000	6385.000
6 42	2408-7800000	STRUCTURAL STEEL	LB	1535.000	1535.000
7 43	2413-0698072	BRIDGE FLOOR REPAIR, CLASS A	SY	965.000	1340.000
8 44	2414-6431100	RETROFIT CONCRETE BARRIER RAILING	LF	1336.100	1336.100
9 45	2414-6445100	STRUCTURAL STEEL PEDESTRIAN HANDRAIL	LF	655.300	655.300
10 46	2426-6772016	CONCRETE REPAIR	SF	297.000	444.910
11 47	2508-0804000	BRIDGE CLEANING FOR PAINTING	LS	1.000	1.000
12 48	2508-0805000	BLAST CLEANING OF STRUCTURAL STEEL	LS	1.000	1.000
13 49	2508-0970000	CONTAINMENT	LS	1.000	1.000
14 50	2508-0991000	PAINTING OF STRUCTURAL STEEL	LS	1.000	1.000
15 51	2510-6745640	REMOVAL OF EXISTING P.C. OVERLAY	SY	3933.000	3933.000
16 52	2523-6765009	REMOVE AND REINSTALL LIGHT POLE AND LUMINAIRE	EA	3.000	3.000
17 53	2533-4980005	MOBILIZATION	LS	1.000	1.000
ALTERNATE A					
18A 54	2413-0698068	BRIDGE FLOOR OVERLAY (CLASS 0 PCC)	SY	3860.000	3860.000
ALTERNATE B					
18B	2413-0698069	BRIDGE FLOOR OVERLAY (CLASS HPC-0 PCC)	SY	3860.000	0

ESTIMATE REFERENCE INFORMATION

DATA LISTED BELOW IS FOR INFORMATIONAL PURPOSES ONLY AND SHALL NOT CONSTITUTE A BASIS FOR ANY EXTRA WORK ORDERS.

ITEM NO.	DESCRIPTION
3	INCLUDES COST OF PLACING GRANULAR BACKFILL AND SPECIAL BACKFILL. INCLUDES ALL MACADAM STONE REQUIRED FOR WEST BERM EROSION. INCLUDES COST OF TEMPORARY SHORING DURING STAGED CONSTRUCTION.
4	INCLUDES ALL PREFORMED EXPANSION JOINT FILLER REQUIRED. INCLUDES 657 L.F. 2" RIGID STEEL CONDUIT AND 5 L.F. 1" RIGID STEEL CONDUIT. INCLUDES ALL MATERIAL AND LABOR ASSOCIATED WITH PROVIDING AND INSTALLING STEEL CONDUIT, JUNCTION BOXES AND FITTINGS. INCLUDES FURNISHING AND PLACING CONCRETE SEALER.
5	INCLUDES 2762 LB IN WEST ABUTMENT BACKWALL, 2821 LB IN SOUTH CURB WIDENING, 337 LB IN N. CURB LIGHT POLE BASES AND 465 LB IN RETROFIT RAIL END SECTION FOOTINGS.
6	INCLUDES 60 LB FOR NEW CURB PLATES, 1475 LB FOR NEW EXPANSION ANGLES, PLATES AND STUDS.
8	INCLUDES 86.7 CY OF CLASS BR OR C STRUCTURAL CONCRETE AND 15,020 LBS OF EPOXY COATED REINFORCING STEEL.
10	INCLUDES 56 S.F. OF REGULAR REPAIR AT HOLES IN MEDIAN AND SPALLS IN PIER 1 PILE ENCASEMENT. INCLUDES 241 S.F. OF SHALLOW REPAIR AT NORTH CURB AND MEDIAN.
16	THE QUANTITY TO BE REMOVED AND REINSTALLED, MEASURED BY COUNT, INCLUDES THE LIGHT POLES ALONG THE NORTH CURB OF THE BRIDGE. THE CONTRACTOR WILL BE PAID THE CONTRACT UNIT PRICE PER UNIT FOR THE PLAN QUANTITY SHOWN.

THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS IN SUCH A MANNER THAT ANY PAINT REMOVED DURING DEMOLITION IS CONTAINED, COLLECTED, AND DISPOSED OF IN ACCORDANCE WITH STANDARD SPECIFICATION 2508. BEFORE DELIVERY OF ANY SCRAP STEEL THE CONTRACTOR SHALL PROVIDE A WRITTEN NOTICE TO THE RECEIVING FACILITY. THIS NOTICE SHALL AT A MINIMUM INCLUDE:

1. A NOTICE THAT THE SCRAP STEEL IS COATED WITH PAINT THAT HAS REGULATED MATERIALS AT LEVELS WHICH COULD BE HAZARDOUS TO EMPLOYEES OR THE ENVIRONMENT.
2. A COPY OF THE SCRAPE SAMPLE PROVIDED IN THE CONTRACT DOCUMENTS.
3. A SIGNATURE BLOCK FOR THE RECEIVING FACILITY TO CONFIRM THEIR RECEIPT OF THIS INFORMATION.

A COPY OF THIS NOTICE, SIGNED BY THE RECEIVING FACILITY, SHALL BE RETURNED TO THE ENGINEER BEFORE ANY SCRAP STEEL IS REMOVED FROM THE PROJECT.

SPECIFICATIONS:

CONSTRUCTION: IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2001, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT, INCLUDING SUPPLEMENTAL SPECIFICATION "CLEANING, SURFACE PREPARATION AND PAINTING OF GALVANIZED SURFACES".

DESIGN STRESSES:

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SERIES OF 2002. CONCRETE IN ACCORDANCE WITH SECTION 8, f'c = 3,500 PSI. REINFORCING STEEL IN ACCORDANCE WITH SECTION 8, GRADE 60. STRUCTURAL STEEL IN ACCORDANCE WITH SECTION 10, ASTM A709, GRADE 36

LOCATION:

ON IA 926 OVER C.C. RAILROAD AND 2ND ST. SW. T-89N R-28W SECTION 19 WAHCONSA TOWNSHIP WEBSTER COUNTY CITY OF FORT DODGE MAINT. NO. 9402.35926 FHWA NO. 052310

DESIGN HISTORY AT THIS SITE

DES. NO.	TYPE OF WORK
2058	ORIGINAL DESIGN
275	OVERLAY AND REPAIR
482	CURB RECONSTRUCTION
201	ABUTMENT REPAIR
208	OVERLAY AND REPAIR

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
556'-0x58'-0 CONTINUOUS WELDED PLATE GIRDER BRIDGE PLUS TWO 49'-0x58'-0 APPROACH SPANS
ESTIMATED QUANTITIES & NOTES
STA. 228+95.68 TO 235+50.18
NOVEMBER, 2007
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 15 FILE NO. 30163 DESIGN NO. 208

WHKS & CO.

DESIGNERS PLANNERS LAND SURVEYORS

MASON CITY, IA DUBUQUE, IA AMES, IA ROCHESTER, MN

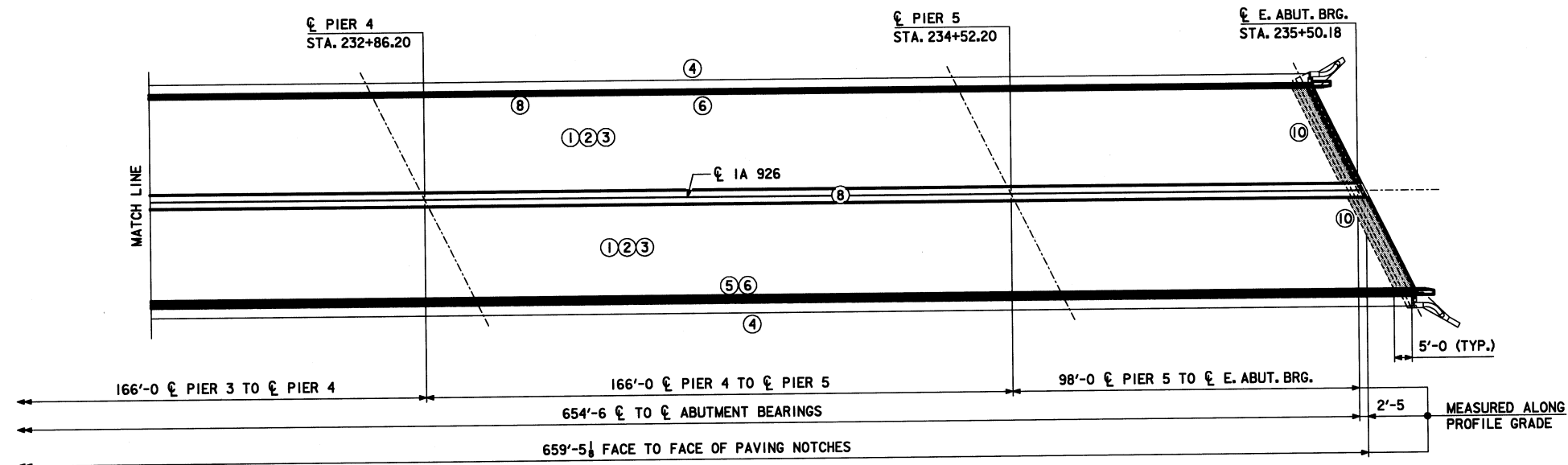
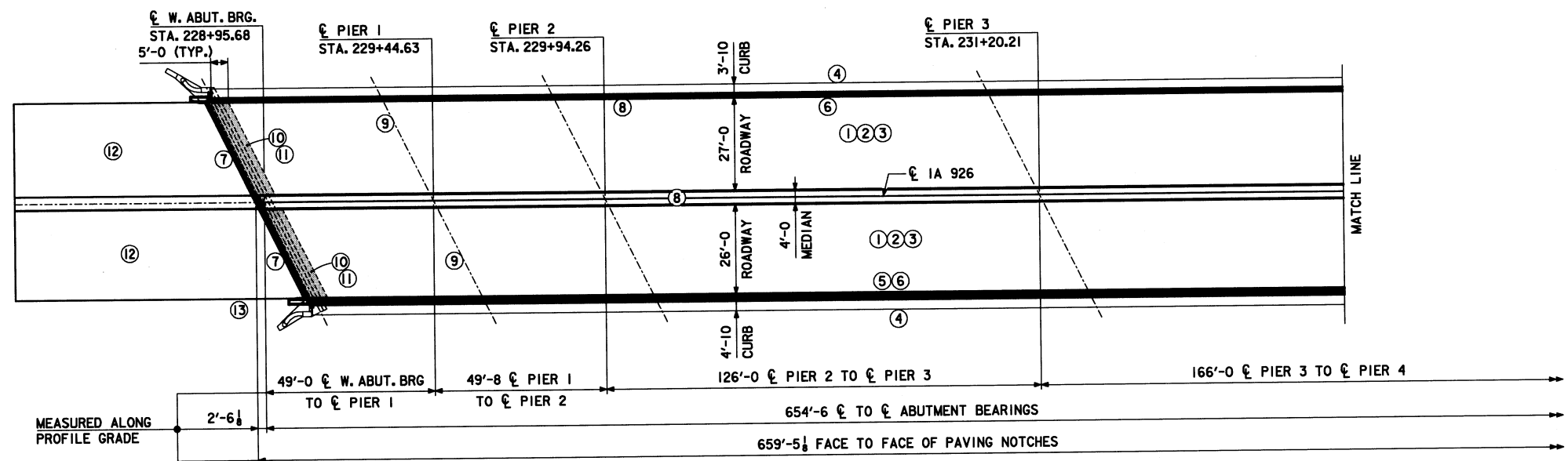
TRAFFIC CONTROL PLAN

NOTE: THE ROADWAY WILL BE OPEN TO THRU TRAFFIC. REFER TO THE TRAFFIC CONTROL PLAN SHOWN ELSEWHERE IN THESE PLANS.

THE CONTRACTOR SHALL NOTIFY ELDON ROSSOW WITH THE CITY OF FORT DODGE (515-576-3601) PRIOR TO REMOVING AND REPLACING THE ELECTRICAL CONDUIT AS SHOWN IN THE PLANS.

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.

NOTE: ROADWAY QUANTITIES SHOWN ELSEWHERE IN THESE PLANS.



SITUATION PLAN

NOTE: CIRCLED NUMBERS ON PLAN REPRESENT LOCATION OF SPECIFIC REPAIR AS DESCRIBED AT BEGINNING OF "GENERAL NOTES" ON DESIGN SHEET 1.



DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
**556'-0x58'-0 CONTINUOUS WELDED
 PLATE GIRDER BRIDGE PLUS
 TWO 49'-0x58'-0 APPROACH SPANS**
SITUATION PLAN
 STA. 228+95.68 TO 235+50.18 NOVEMBER, 2007
WEBSTER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 15 FILE NO. 30163 DESIGN NO. 208

DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

WEBSTER COUNTY

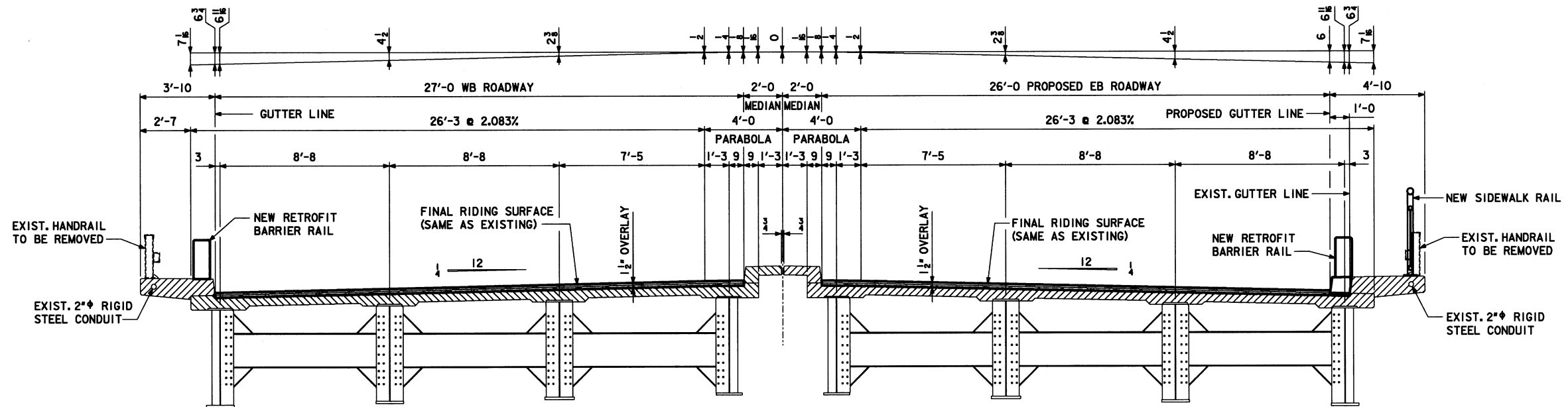
PROJECT NUMBER BRFN-926-0(9)--39-94

SHEET NUMBER 29

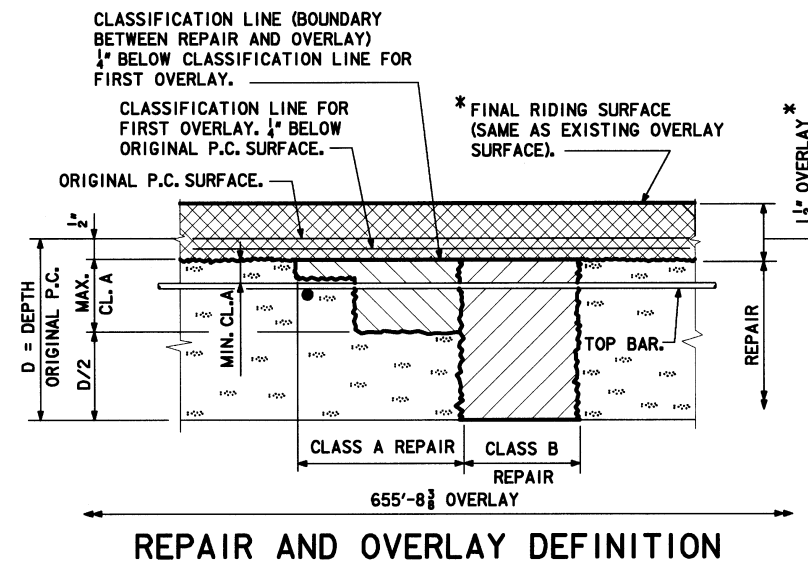
2/1/2008

11:19:09 AM

L:\dept\6\6400.21\Webster 108\drawings\FINAL\Extrusion Submittal\94926009.brg

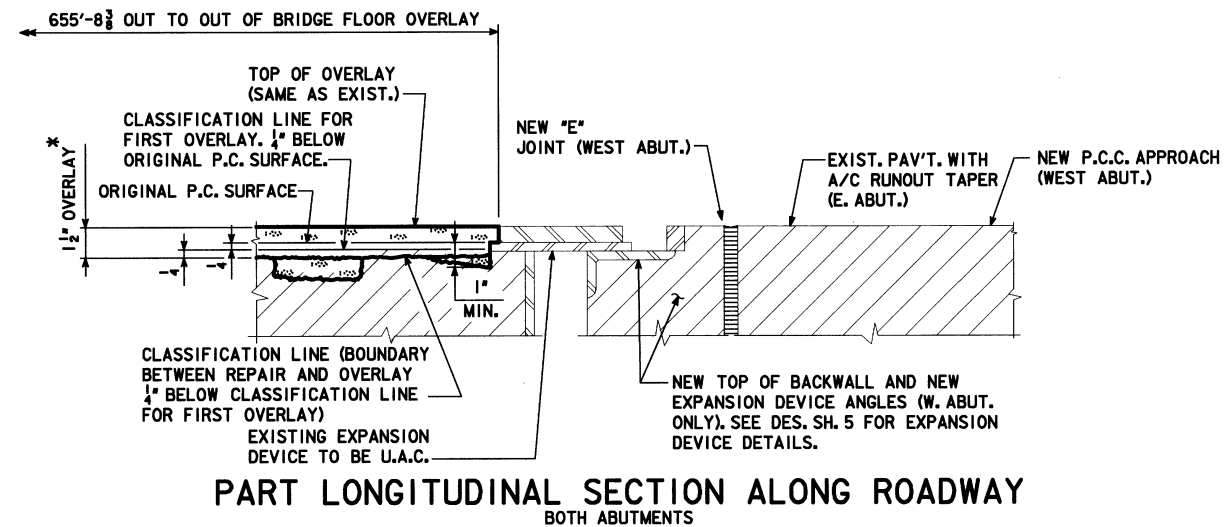


TYPICAL SECTION OF GIRDER SPANS
(LOOKING EAST)



REPAIR AND OVERLAY DEFINITION

* EXISTING P.C. OVERLAY (DESIGN # 275) IS 1 1/2" FINAL RIDING SURFACE TO REMAIN SAME AS THE EXISTING RIDING SURFACE.



PART LONGITUDINAL SECTION ALONG ROADWAY
BOTH ABUTMENTS



DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

2/1/2008

11:19:11 AM

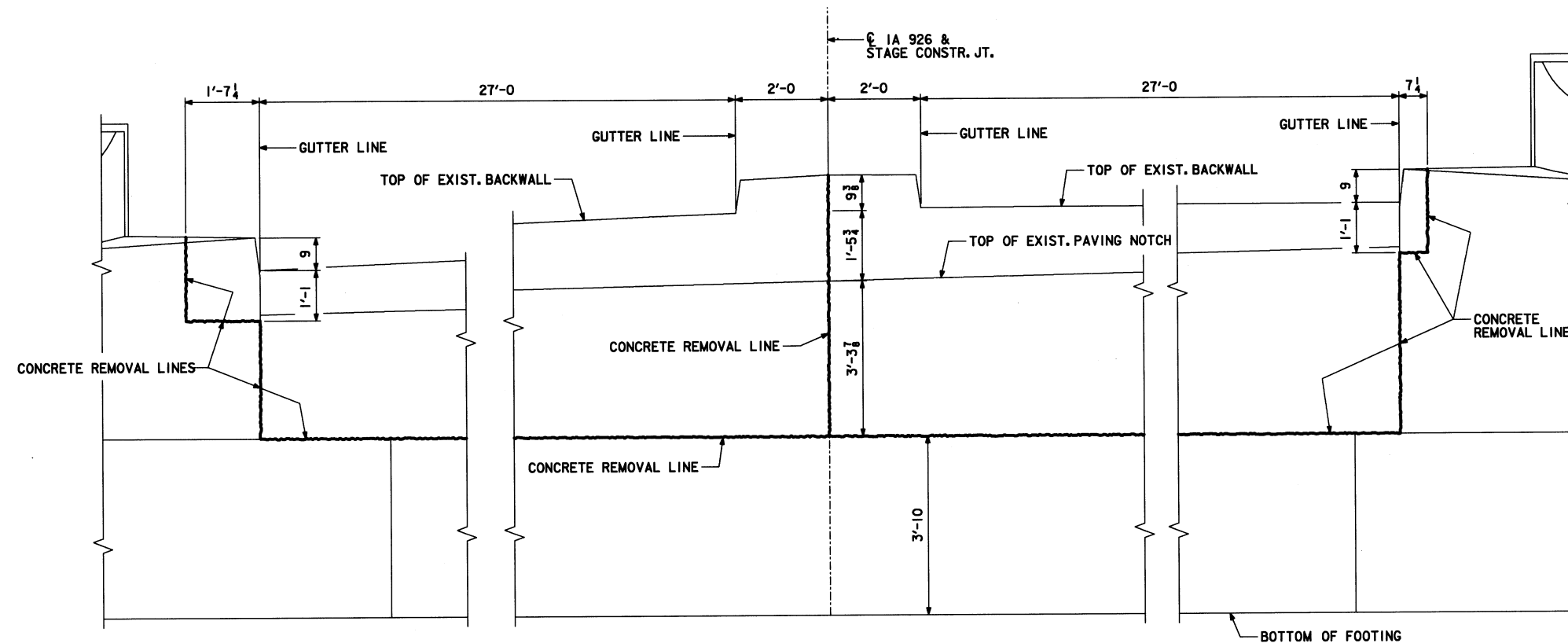
L:\dept\6\6400.21\Webster 108\drawings\FINAL\Extrusion Submittal\94926009.brg

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
556'-0x58'-0 CONTINUOUS WELDED
PLATE GIRDER BRIDGE PLUS
TWO 49'-0x58'-0 APPROACH SPANS
DECK REPAIR DETAILS
STA. 228+95.68 TO 235+50.18 NOVEMBER, 2007
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 3 OF 15 FILE NO. 30163 DESIGN NO. 208

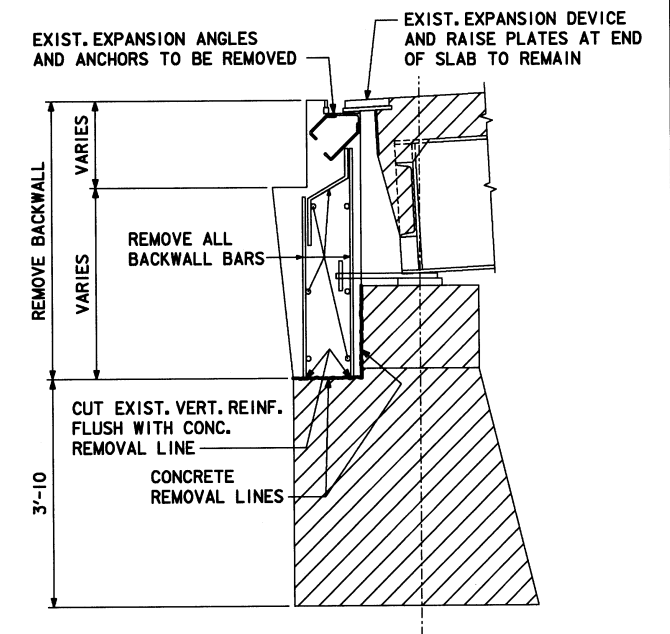
WEBSTER COUNTY

PROJECT NUMBER BRN-926-0(9)--39-94

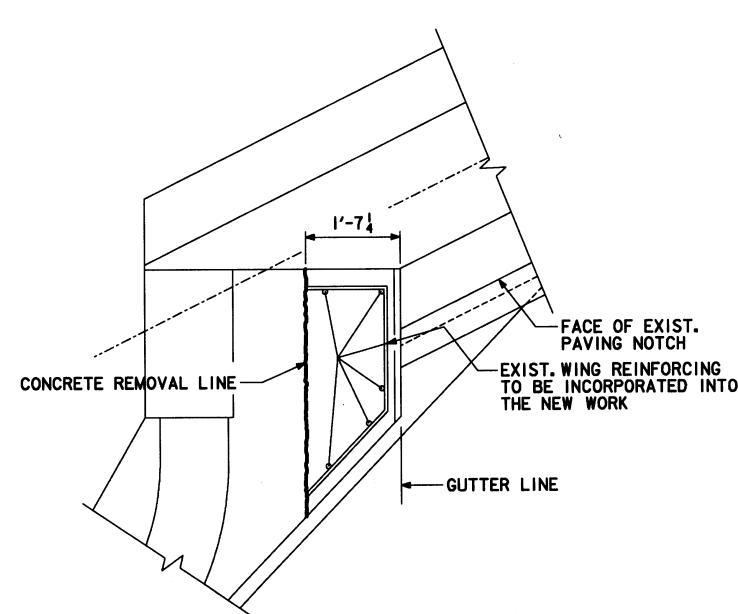
SHEET NUMBER 30



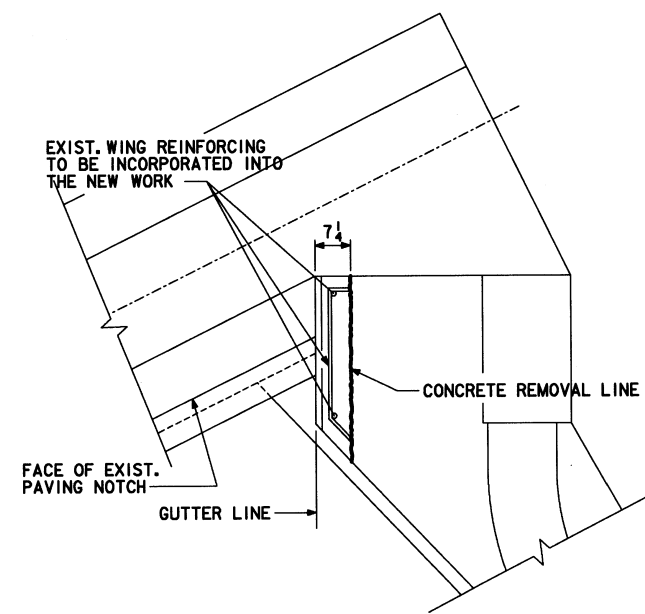
PART REAR ELEVATION OF WEST ABUTMENT
(LOOKING EAST)
NOTE: ALL DIMENSIONS ARE ALONG FACE OF EXIST. PAVING NOTCH.



TYPICAL BACKWALL SECTION



PART PLAN AT NW WING



PART PLAN AT SW WING

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
**556'-0x58'-0 CONTINUOUS WELDED
 PLATE GIRDER BRIDGE PLUS
 TWO 49'-0x58'-0 APPROACH SPANS
 WEST ABUT. REMOVAL DETAILS**
 STA. 228+95.68 TO 235+50.18 NOVEMBER, 2007
WEBSTER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 4 OF 15 FILE NO. 30163 DESIGN NO. 208



DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

WEBSTER COUNTY

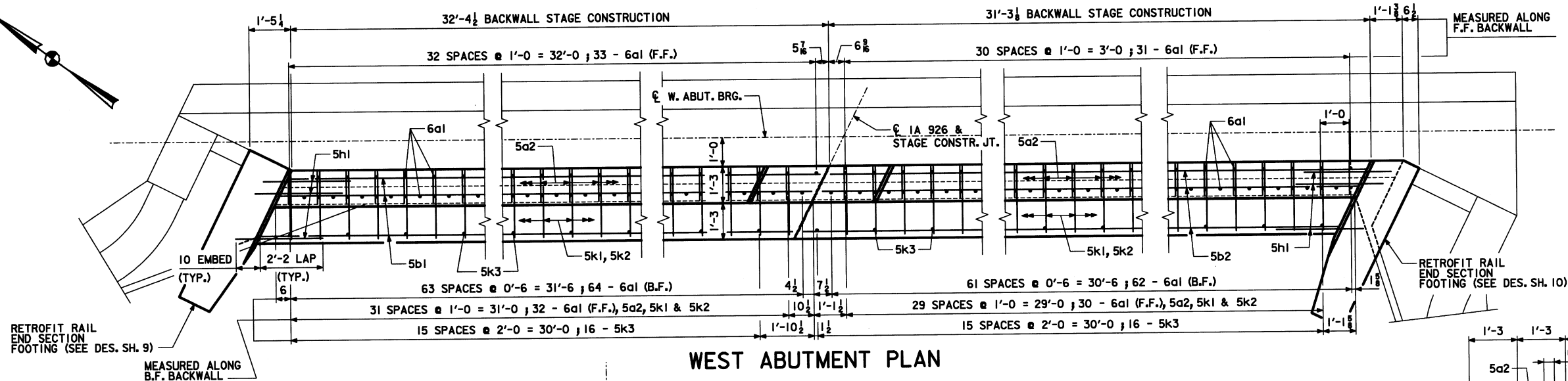
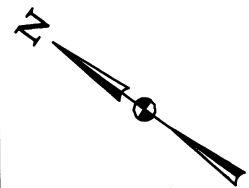
PROJECT NUMBER BRFN-926-0(9)--39-94

SHEET NUMBER 31

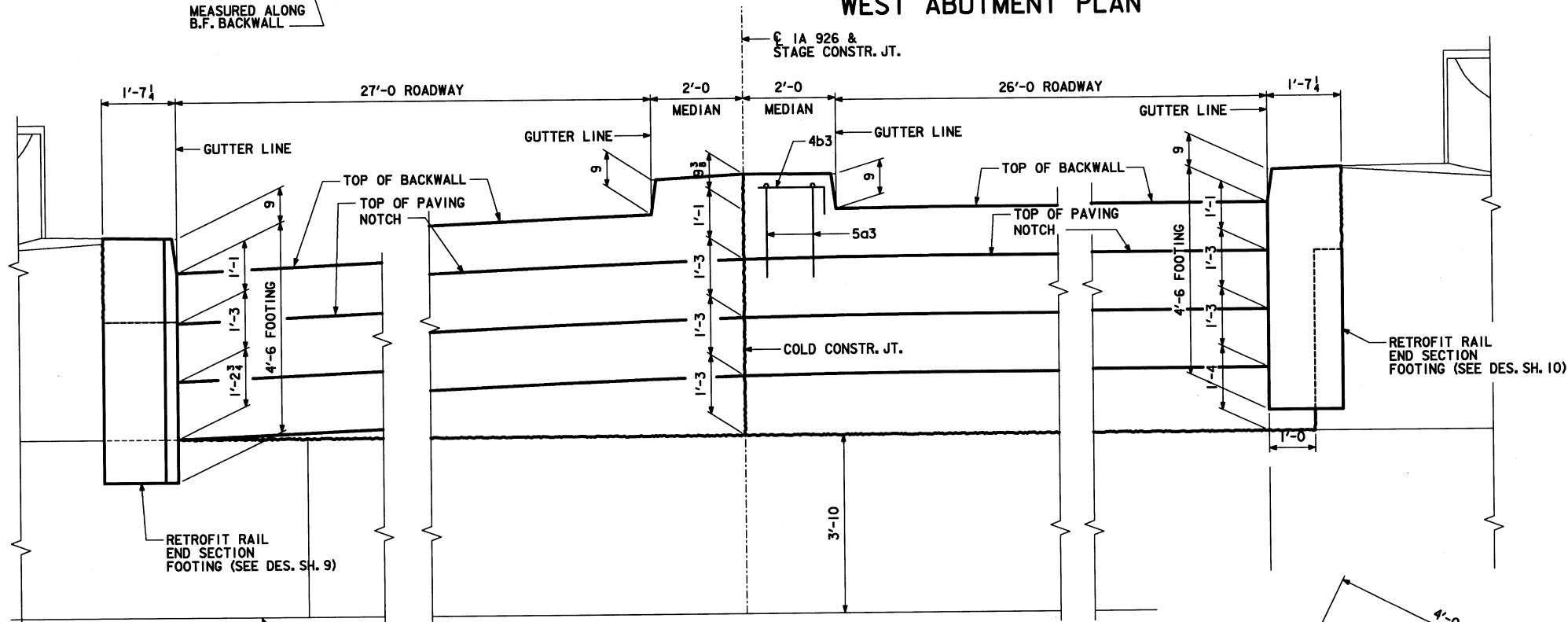
2/1/2008

11:19:14 AM

L:\dept\6\6400.21\Webster 108\drawings\FINAL\Extrusion Submittal\94926009.brg

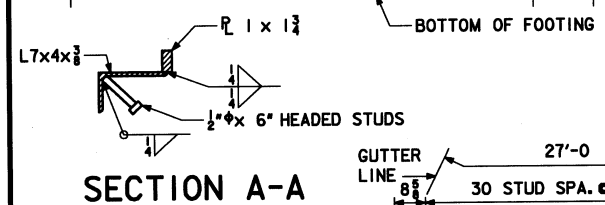


WEST ABUTMENT PLAN

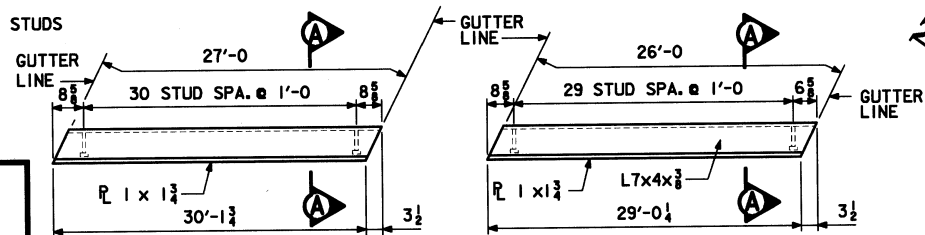


PART REAR ELEVATION OF WEST ABUTMENT
(LOOKING EAST)

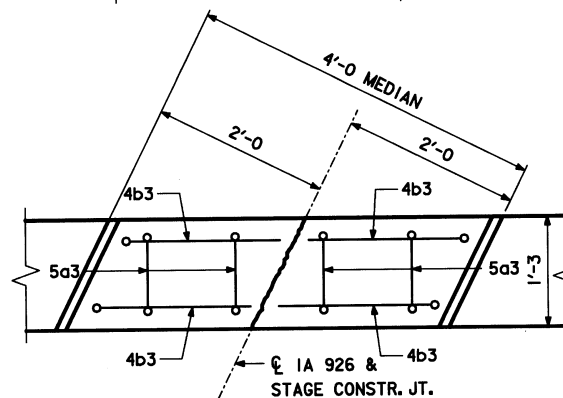
NOTE: ALL DIMENSIONS ARE ALONG FACE OF EXIST. PAVING NOTCH.



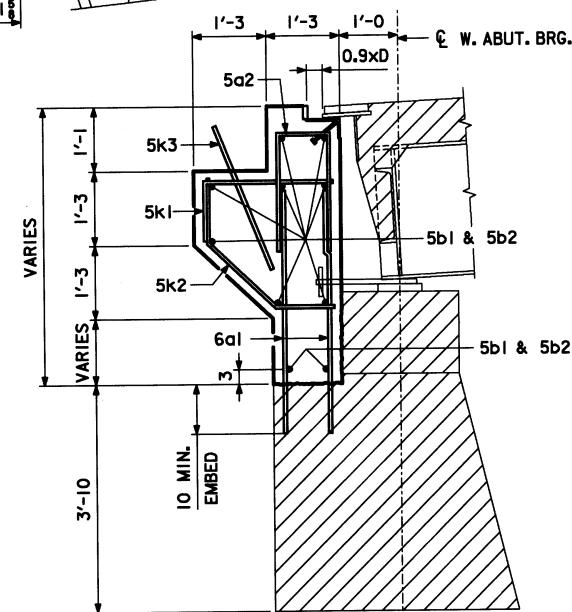
SECTION A-A



PLAN VIEW OF EXPANSION ANGLES



PART MEDIAN PLAN



TYPICAL BACKWALL SECTION
NORMAL TO BACKWALL

NOTE:
DIMENSION 'D'
10°F 4 1/4"
50°F 3"
90°F 1 3/4"
PROPORTIONATE VALUES AT
OTHER TEMPERATURES.

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
**556'-0x58'-0 CONTINUOUS WELDED
PLATE GIRDER BRIDGE PLUS
TWO 49'-0x58'-0 APPROACH SPANS
W. BACKWALL REPAIR DETAILS**
STA. 228+95.68 TO 235+50.18
NOVEMBER, 2007
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 5 OF 15 FILE NO. 30163 DESIGN NO. 208



DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

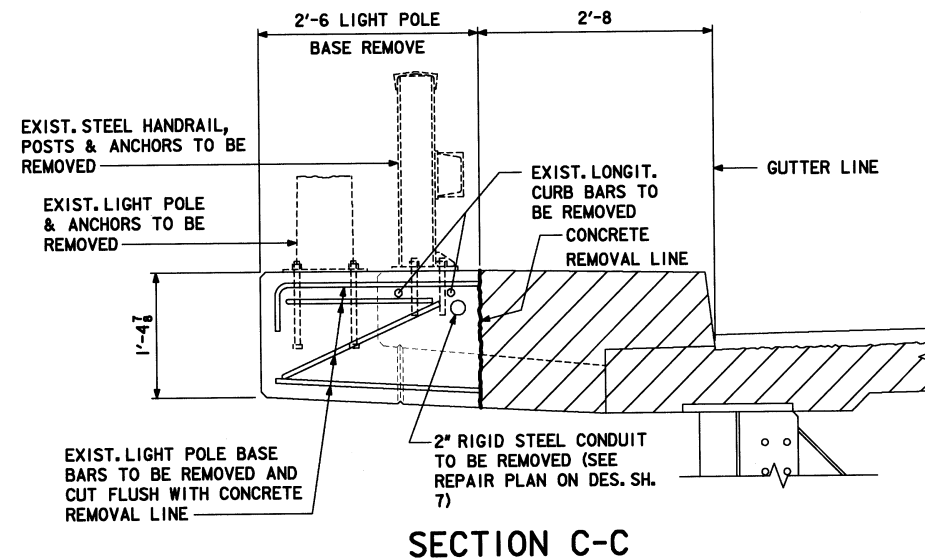
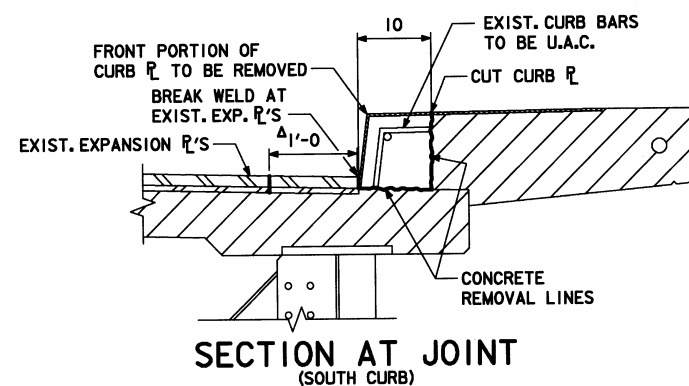
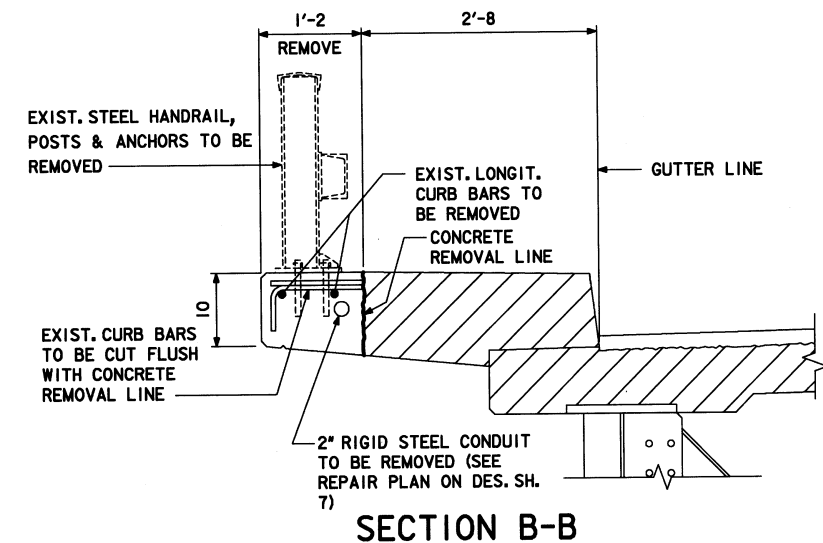
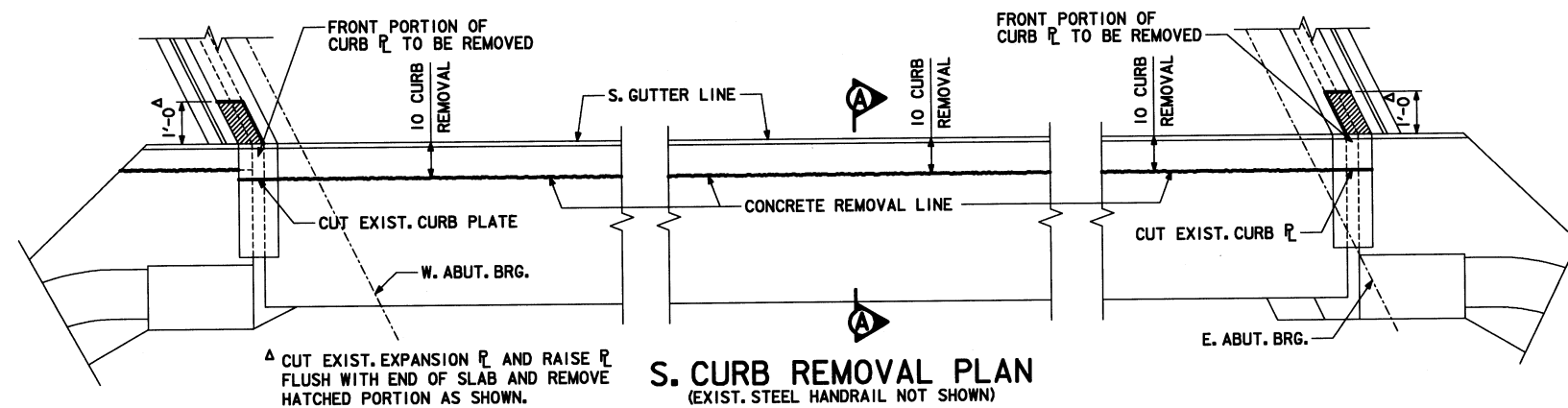
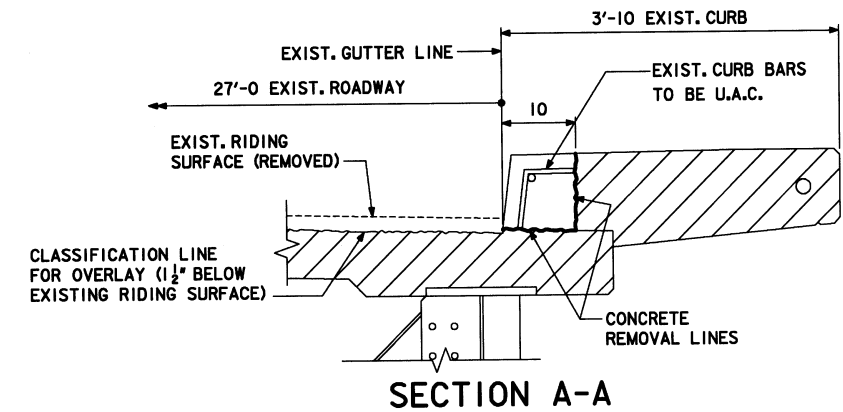
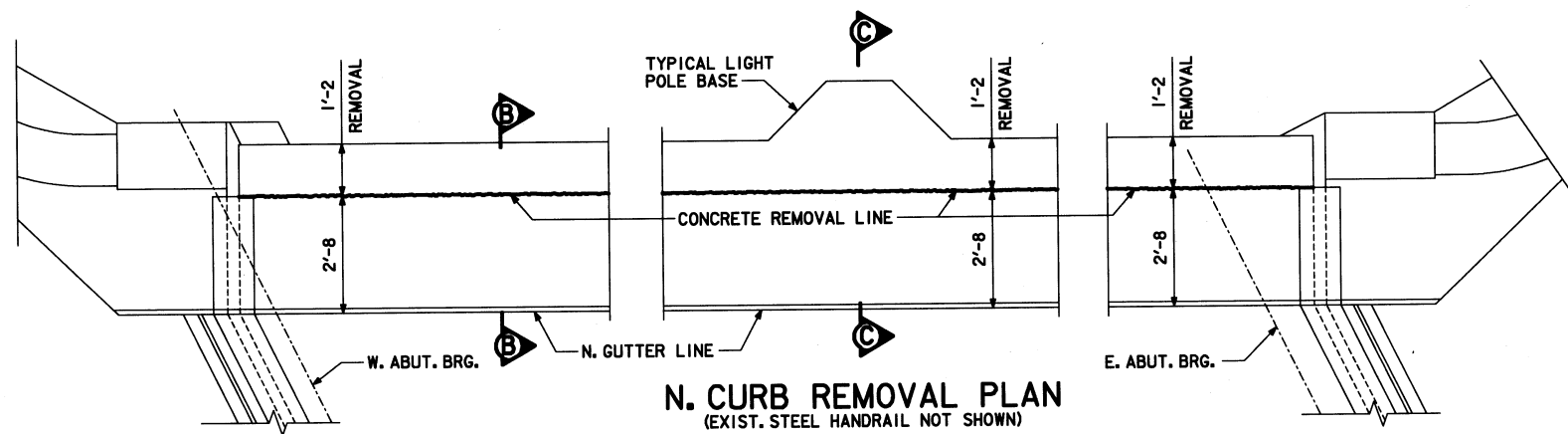
WEBSTER COUNTY PROJECT NUMBER BRFN-926-0(9)-39-94

SHEET NUMBER 32

2/1/2008

11:19:16 AM

L:\dept\6\6400.21\Webster 108\drawings\FINAL\Extrusion Submittal\94926009.brg



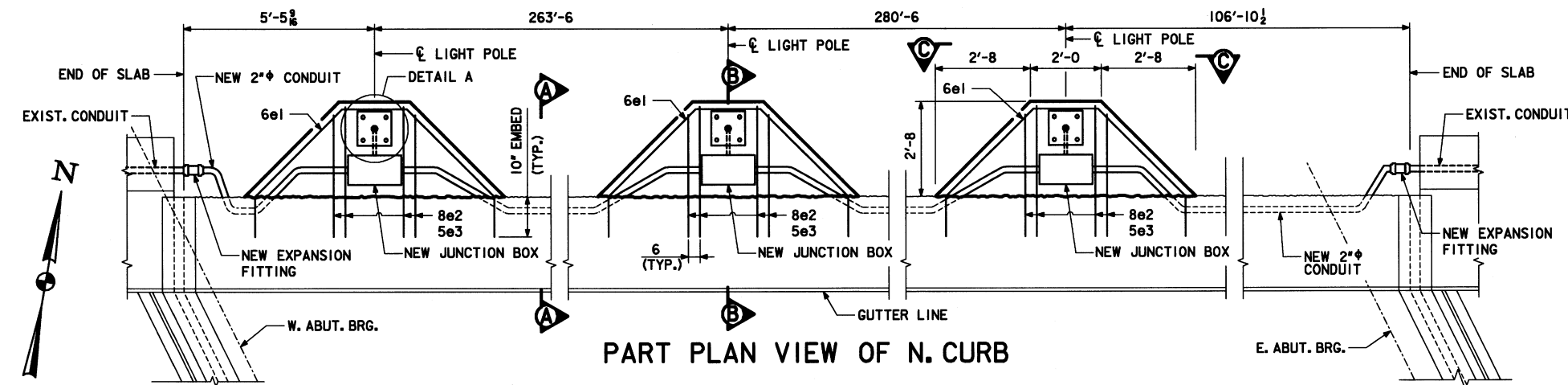
DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
**556'-0x58'-0 CONTINUOUS WELDED
 PLATE GIRDER BRIDGE PLUS
 TWO 49'-0x58'-0 APPROACH SPANS
 CURB REMOVAL DETAILS**
 STA. 228+95.68 TO 235+50.18 NOVEMBER, 2007
WEBSTER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 6 OF 15 FILE NO. 30163 DESIGN NO. 208

WHKS & CO.
 SURVEYING PLANNING LAND SURVEYORS
 MADISON CITY, IA DUBUQUE, IA AMES, IA ROCHESTER, MN

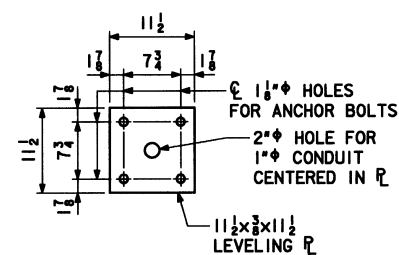
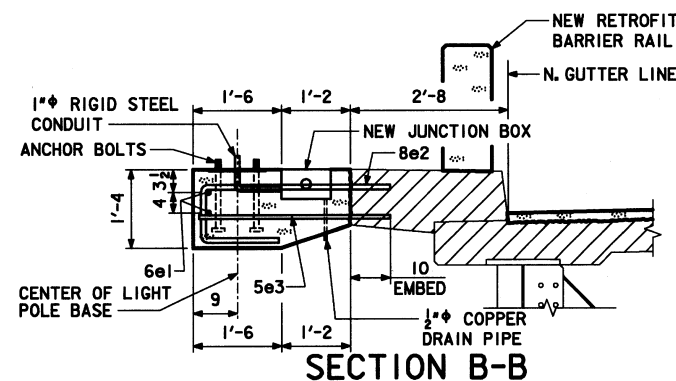
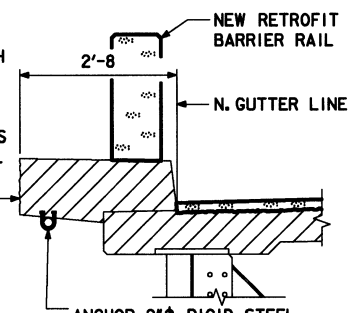
DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

WEBSTER COUNTY PROJECT NUMBER BRFN-926-0(9)-39-94

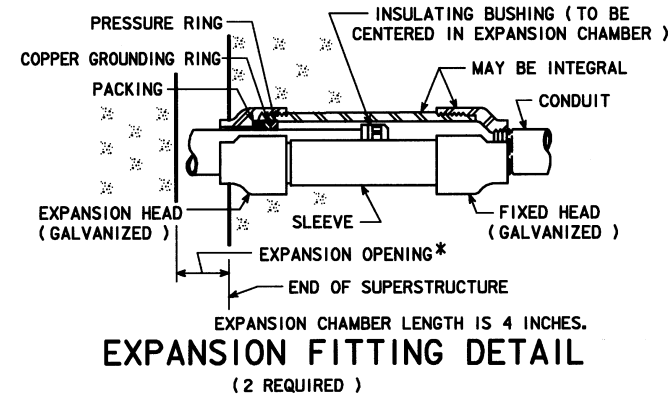
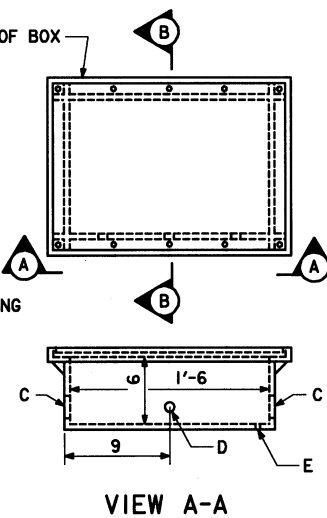
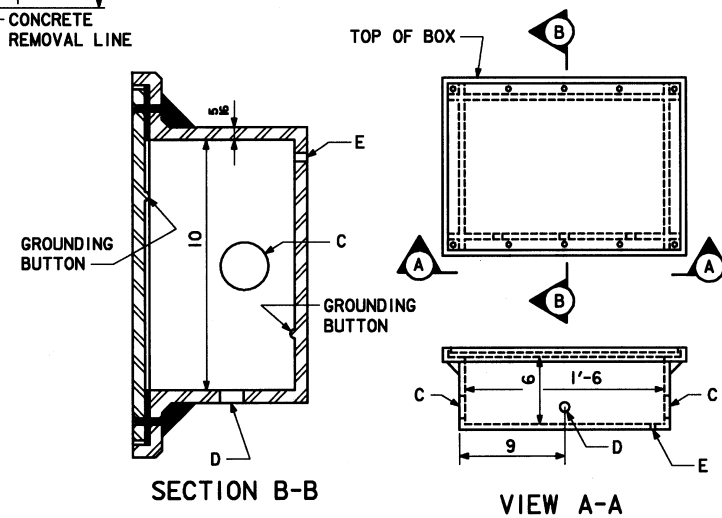
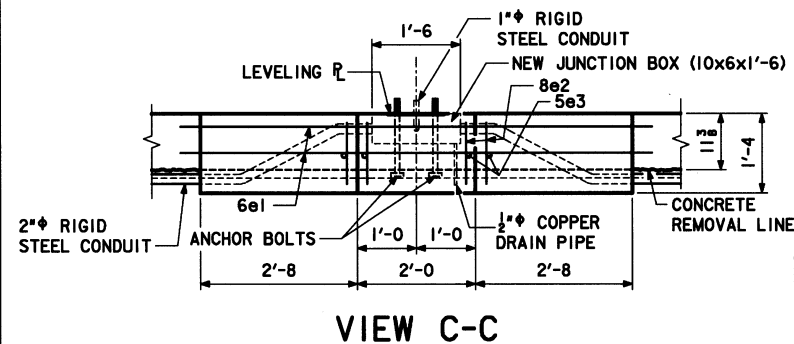
SHEET NUMBER 33



PAINT ENDS OF
REINFORCING BARS WITH
2 COATS OF ZINC RICH
PAINT AND APPLY
CONCRETE SEALER TO
VERTICAL FACE. COST IS
CONSIDERED INCIDENTAL
TO "STRUCTURAL
CONCRETE (MISC.)". _____



NOTE:
CONTRACTOR SHALL PROVIDE NEW
LEVELING PLATES OR REUSE EXISTING
PLATES IF NOT DAMAGED DURING
REMOVAL. REUSE EXISTING ANCHOR
BOLTS OR REPLACE WITH ASTM A325
GALVANIZED BOLTS AS NECESSARY.

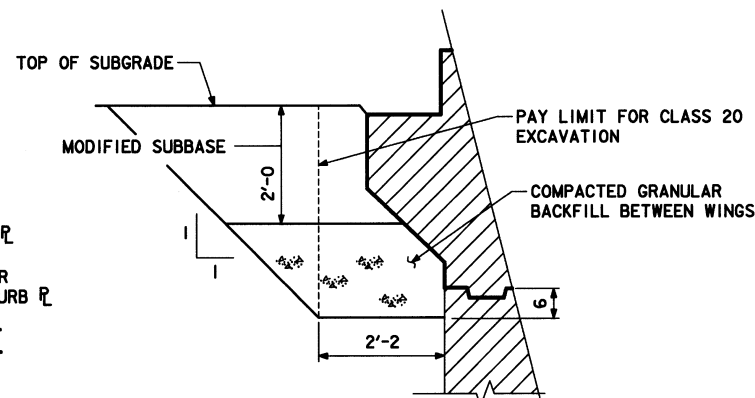
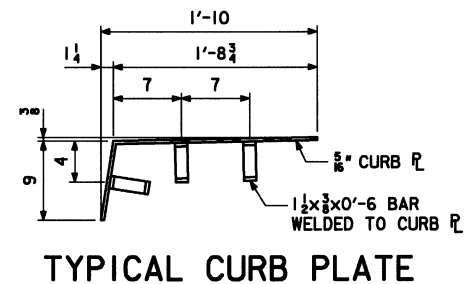
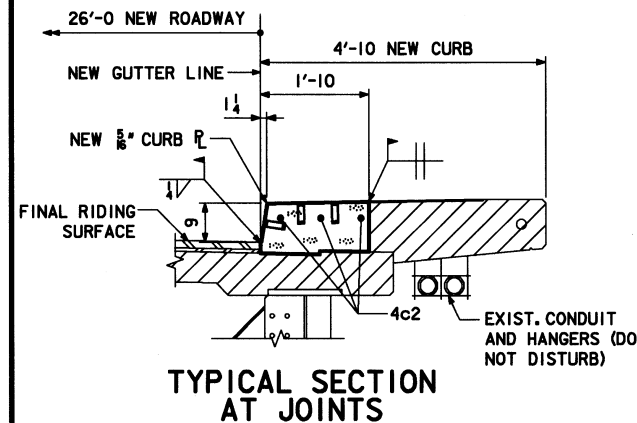
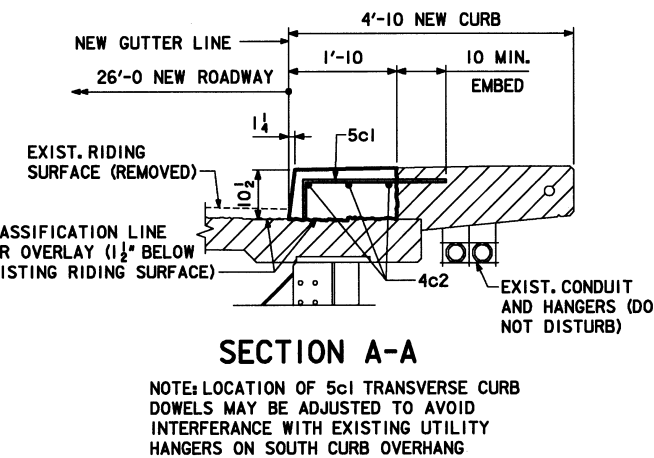
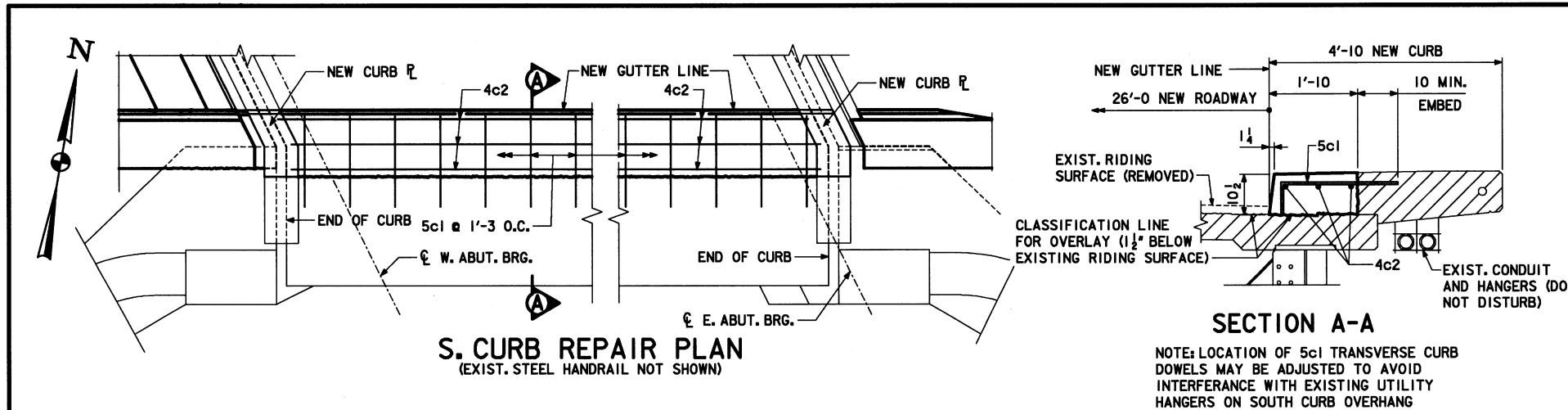


BOSS FOR	HOLE	FOR CONDUIT SIZE
5 THREADS	C	2" ϕ RIGID STEEL
NONE	D	1" ϕ RIGID STEEL
NONE	E	1/2" ϕ COPPER PIPE

NOTE:
THE GROUNDING BUTTONS ARE TO
BE BLIND DRILLED AND TAPPED FOR
 $\frac{3}{8}\phi \times 0'-0\frac{3}{4}$ BOLTS.

* FOR EXPANSION OPENING, SEE DESIGN SHEET 5.

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
**556'-0x58'-0 CONTINUOUS WELDED
 PLATE GIRDER BRIDGE PLUS
 TWO 49'-0x58'-0 APPROACH SPANS
 N. CURB REPAIR DETAILS**
 STA. 228+95.68 TO 235+50.18 NOVEMBER, 2007
WEBSTER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 7 OF 15 FILE NO. 30163 DESIGN NO. 208



DOWEL SETTING NOTE :
THE 6a1, 5c1, AND 5h1 BARS SHALL BE SET AS DOWELS IN DRILLED HOLES. HOLES ARE TO BE 10" DEEP. THE DOWELS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ONE OF THE FOLLOWING SYSTEMS SHALL BE USED AS A BONDING AGENT FOR THE DOWELS :

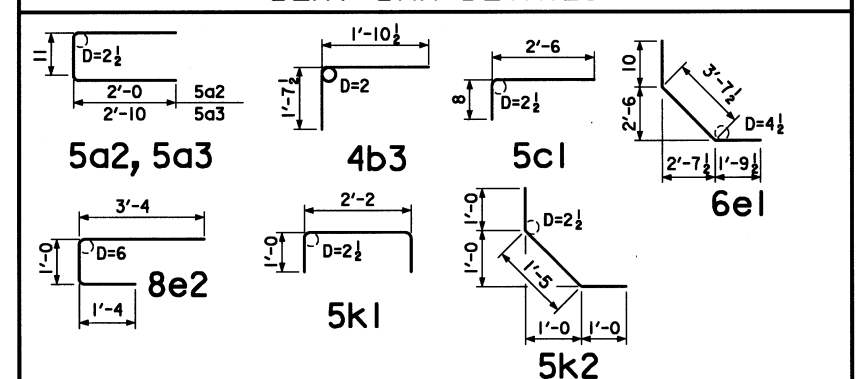
- POLYMER GROUT SYSTEM IN ACCORDANCE WITH STANDARD SPECIFICATIONS ARTICLE 2301.12 AND CURRENT SUPPLEMENTAL SPECIFICATIONS OF THE IOWA D.O.T. HIGHWAY DIVISION.
- HYDRAULIC CEMENT GROUT SYSTEMS. DRILLED HOLES ARE TO BE 2 1/2 TIMES THE DOWEL DIAMETER AND ARE TO BE BLOWN CLEAN WITH COMPRESSED AIR IMMEDIATELY PRIOR TO PLACING GROUT. THE HYDRAULIC CEMENT GROUT SHALL BE ONE OF THOSE APPROVED IN MATERIALS I.M. 491.13 AND SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

EPOXY COATED REINFORCING STEEL

MARK	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
6a1	BACKWALL, VERT., DOWEL		188	VARIES	1082
5a2	BACKWALL, VERT., HAIRPIN		62	4'-11	318
5a3	MEDIAN, VERT., HAIRPIN		4	6'-7	27
5b1	BACKWALL, LONGITUDINAL		10	32'-0	334
5b2	BACKWALL, LONGITUDINAL		10	30'-11	322
4b3	MEDIAN, HORIZONTAL		4	3'-6	9
5k1	PAVING NOTCH		62	4'-2	269
5k2	PAVING NOTCH		62	3'-5	221
* 5k3	PAVING NOTCH		32	3'-6	117
5h1	BACKWALL, DOWELS		20	3'-0	63
5c1	CURB, TRANSV., DOWEL		525	3'-2	1734
4c2	CURB, LONGITUDINAL		42	38'-9	1087
6e1	LIGHT POLE BASE		12	6'-3	113
8e2	LIGHT POLE BASE		12	5'-8	182
5e3	LIGHT POLE BASE		12	3'-4	42
				TOTAL (LBS)	5920

6a1 VARIES FROM 3'-2 TO 4'-6
* 5k3 IS NON-COATED DEFORMED STAINLESS STEEL

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIA.

CONCRETE PLACEMENT QUANTITY

LOCATION	TOTAL (CY)
BACKWALL & PAVING NOTCH	19.0
BARRIER RAIL END SECTION FOOTINGS	3.9
NORTH CURB LIGHT POLE BASES	1.7
SOUTH CURB 656.3 L.F. @ 0.058 CY PER L.F.	37.9
TOTAL (CY)	62.5

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
**556'-0x58'-0 CONTINUOUS WELDED
PLATE GIRDER BRIDGE PLUS
TWO 49'-0x58'-0 APPROACH SPANS
W. ABUT. BACKWALL & CURB REPAIR DETAILS**
STA. 228+95.68 TO 235+50.18
NOVEMBER, 2007
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 8 OF 15 FILE NO. 30163 DESIGN NO. 208

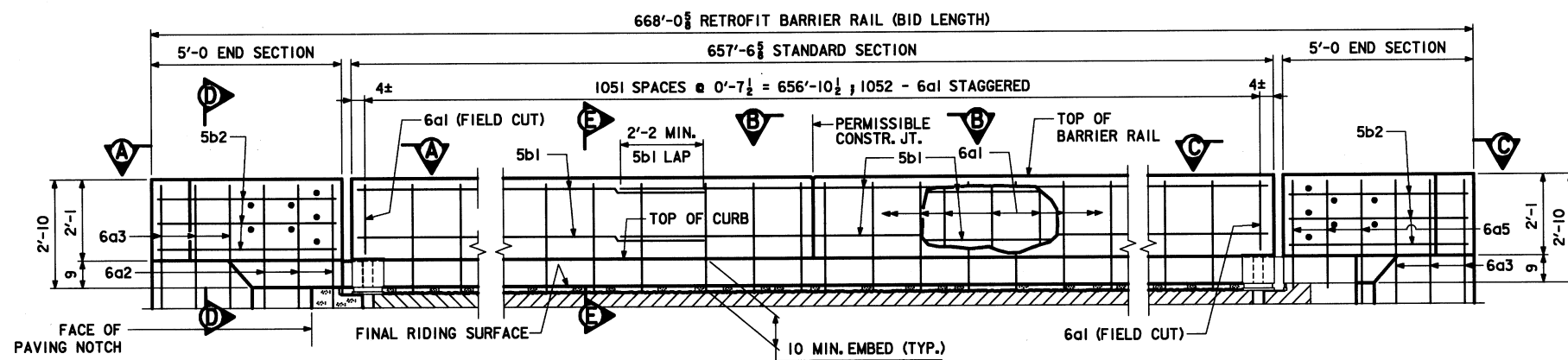


DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

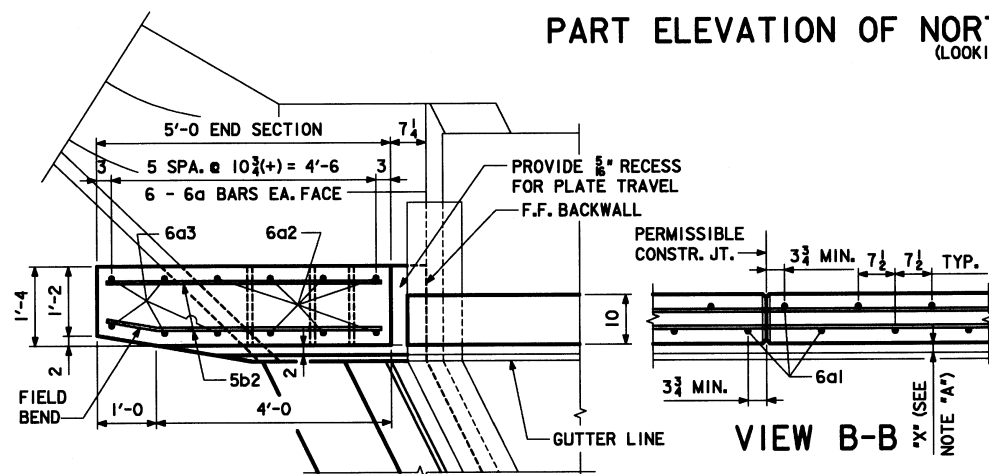
WEBSTER COUNTY

PROJECT NUMBER BRFN-926-0(9)--39-94

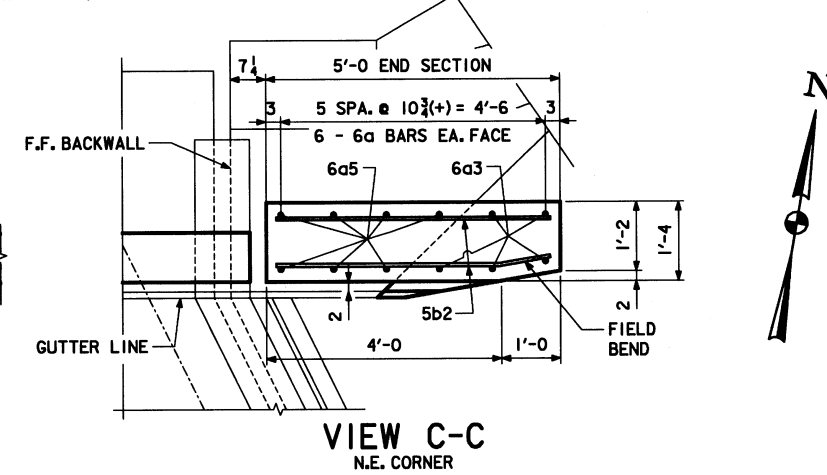
SHEET NUMBER 35



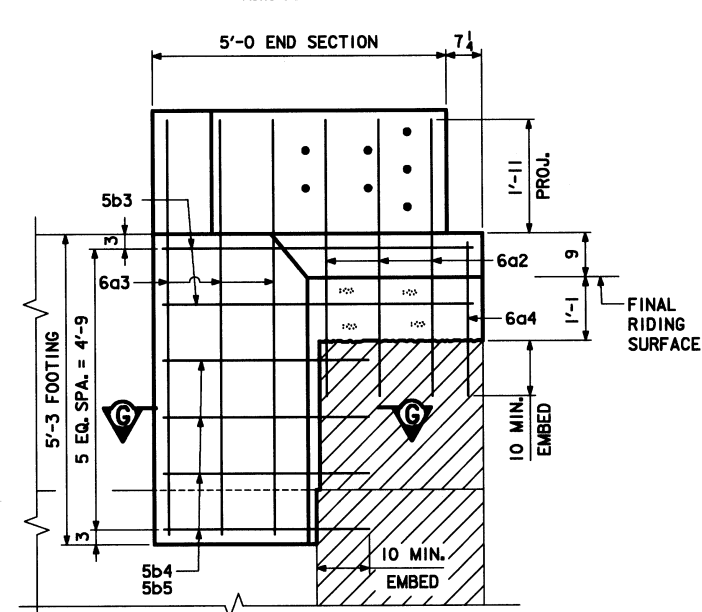
PART ELEVATION OF NORTH RETROFIT BARRIER RAIL
(LOOKING NORTH)



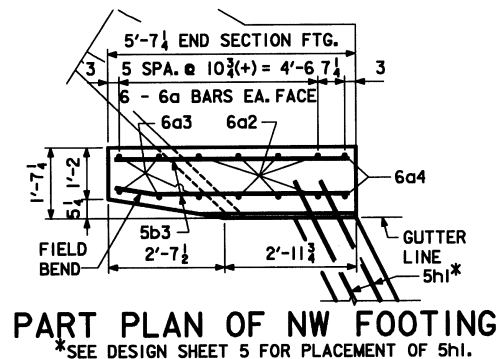
VIEW A-A
N.W. CORNER



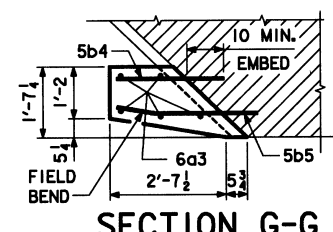
VIEW C-C
N.E. CORNER



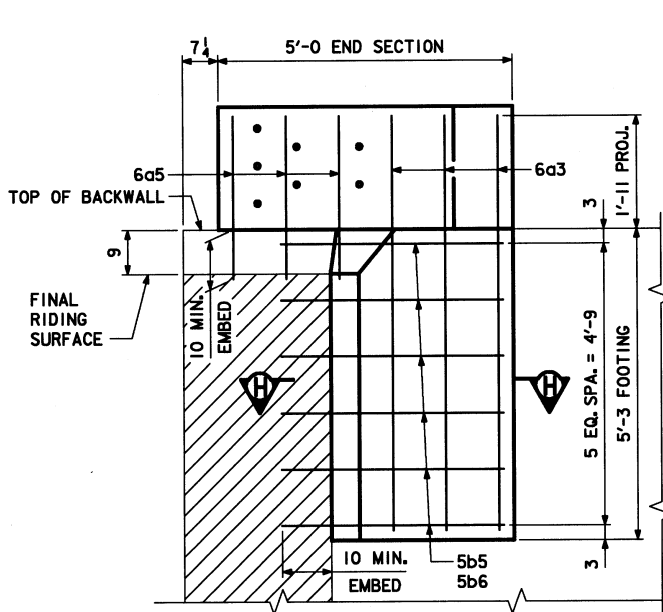
NW FOOTING ELEVATION



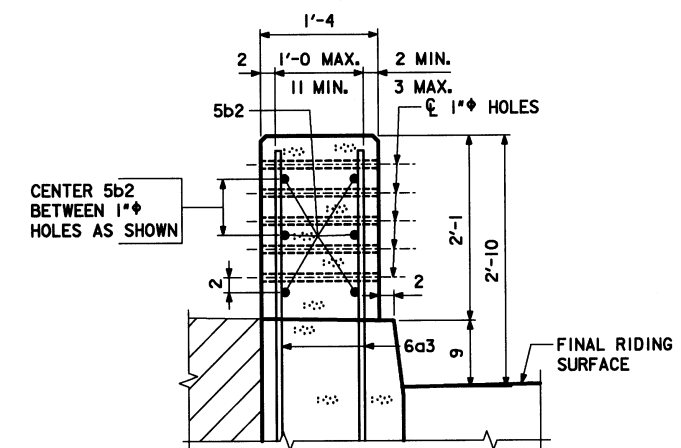
PART PLAN OF NW FOOTING
*SEE DESIGN SHEET 5 FOR PLACEMENT OF 5h1.



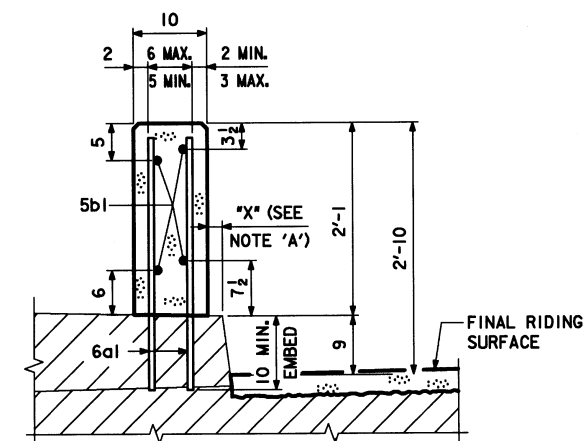
SECTION G-G



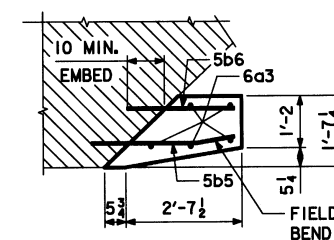
NE FOOTING ELEVATION



SECTION D-D



SECTION E-E



SECTION H-H



NOTE A:
DIMENSION "X" SHALL BE A MINIMUM OF 1" AND A MAXIMUM OF 3", BUT
MUST BE CONSTANT FOR FULL LENGTH OF BRIDGE, HOWEVER
APPROXIMATELY 10 LINEAR FEET AT EITHER END OF STANDARD RAIL
SECTION SHALL BE TRANSITIONED TO 2" AT END SECTION AS SHOWN.

DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

2/1/2008

11:19:25 AM

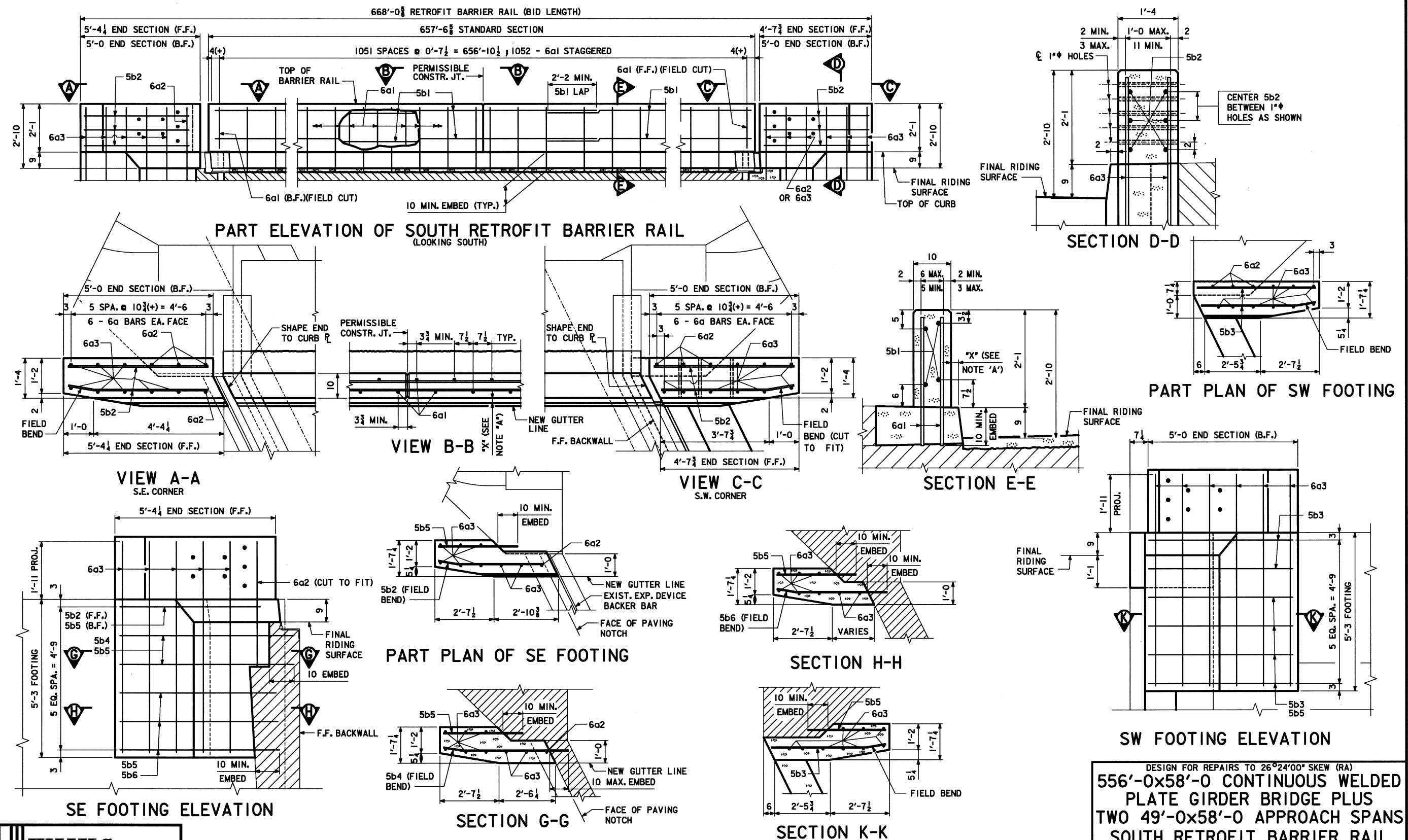
L:\dept\6\6400.21\Webster 108\drawings\FINAL\Extrusion Submittal\94926009.brg

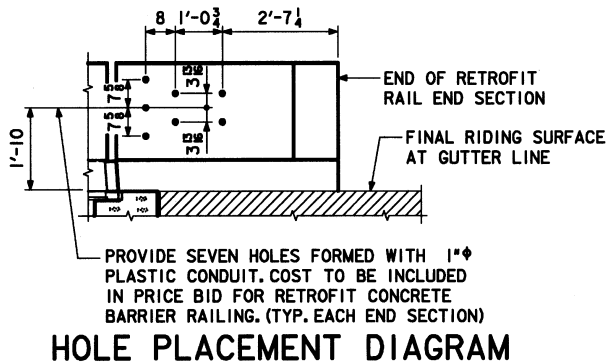
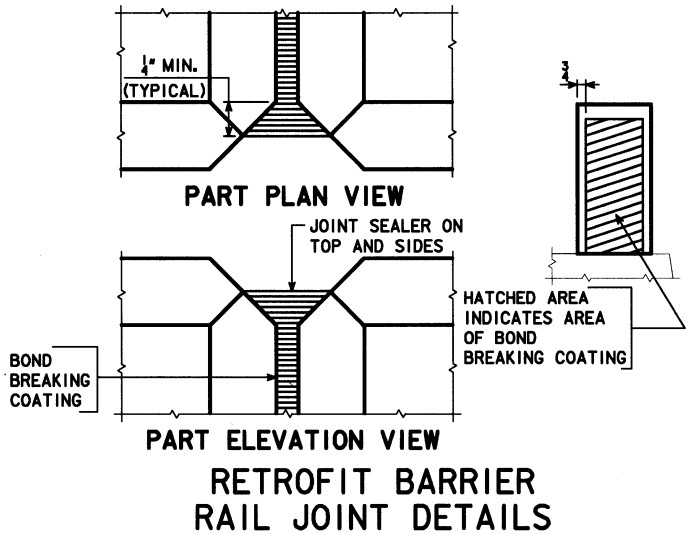
DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
556'-0x58'-0 CONTINUOUS WELDED
PLATE GIRDER BRIDGE PLUS
TWO 49'-0x58'-0 APPROACH SPANS
NORTH RETROFIT BARRIER RAIL
STA. 228+95.68 TO 235+50.18
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 9 OF 15 FILE NO. 30163 DESIGN NO. 208

WEBSTER COUNTY

PROJECT NUMBER BRFN-926-0(9)--39-94

SHEET NUMBER 36





EPOXY COATED REINFORCING STEEL

MARK	LOCATION	SHAPE	NORTH RETROFIT RAIL			SOUTH RETROFIT RAIL		
			NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT
6a1	VERT., DOWELS, BARRIER RAIL	—	1052	2'-10	4477	1052	2'-10	4477
6a2	VERT., DOWELS, END SECTION	—	7	4'-7	48	7	4'-7	48
* 6a3	VERT., DOWELS, END SECTION	—	10	6'-11	104	17	6'-11	177
* 6a4	VERT., DOWELS, END SECTION	—	2	2'-6	8	—	—	—
6a5	VERT., DOWELS, END SECTION	—	7	2'-9	29	—	—	—
5b1	LONGIT., BARRIER RAIL	—	72	38'-9	2910	72	38'-9	2910
5b2	LONGIT., END SECTIONS	—	12	4'-8	58	13	4'-8	63
* 5b3	LONGIT., END SECTION FTG.	—	4	5'-3	22	8	4'-11	41
* 5b4	LONGIT., END SECTION FTG.	—	4	2'-4	10	2	5'-8	12
* 5b5	LONGIT., END SECTION FTG.	—	10	2'-11	30	10	3'-3	34
* 5b6	LONGIT., END SECTION FTG.	—	6	1'-10	11	3	5'-1	16
TOTAL (LBS)			7707			TOTAL (LBS) 7778		

*END SECTION FOOTING REINFORCING INCLUDED IN
TOTAL "REINFORCING STEEL, EPOXY COATED" QUANTITY.

CONCRETE PLACEMENT SUMMARY

SECTION	TOTAL
STANDARD SECTION 1315.1 L.F. AT 0.064 CU. YDS. PER LIN. FT	84.7
END SECTIONS 4 AT 0.51 CU. YDS. PER SECTION	2.0
TOTAL (CU. YDS.)	86.7

CONCRETE BARRIER RAIL QUANTITIES

ITEM	UNIT	NORTH RAIL	SOUTH RAIL
RETROFIT CONCRETE BARRIER RAIL	L.F.	668.1	668.1

RETROFIT BARRIER RAILING NOTES:

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR
REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.
ALL EXPOSED CORNERS 90° OR SHARPER ARE TO BE FILLETED WITH
A 3/4" DRESSED AND BEVELED STRIP.

THE PERMISSIBLE CONSTRUCTION JOINTS ARE TO BE PLACED BETWEEN
VERTICAL BARS AT A MINIMUM SPACING OF 20 FEET. CONSTRUCTION
JOINT CONTACT SURFACES ARE TO BE COATED WITH AN APPROVED
BOND BREAKER.

COST OF JOINT SEALER AND BOND BREAKER SHALL BE CONSIDERED
INCIDENTAL TO OTHER CONSTRUCTION.

THE RETROFIT BARRIER RAIL IS TO BE BID ON A LINEAL FOOT
BASIS MEASURED FROM END TO END OF RAIL. THE NUMBER OF LINEAL
FEET OF RETROFIT BARRIER RAIL INSTALLED WILL BE PAID FOR AT
THE CONTRACT PRICE PER LINEAL FOOT BASED ON PLAN QUANTITIES.
PRICE BID FOR RETROFIT CONCRETE BARRIER RAILING SHALL BE FULL
COMPENSATION FOR FURNISHING ALL MATERIAL (INCLUDING REINF. STEEL
AND 1"Ø PLASTIC CONDUIT) PLUS ALL OF THE EQUIPMENT AND LABOR
REQUIRED TO ERECT THE RAIL IN ACCORDANCE WITH THESE PLANS AND
CURRENT SPECIFICATIONS.

CONCRETE BARRIER RAILS PLACED USING THE SLIPFORM METHOD
WILL REQUIRE THE USE OF A CLASS BR CONCRETE IN ACCORDANCE WITH
ARTICLE 2513.03B OF THE STANDARD SPECIFICATION. CAST-IN-PLACE
BARRIER RAILS SHALL USE CLASS C MIX. CLASS D CONCRETE IS NOT
PERMITTED FOR CONCRETE BARRIER RAILS (CAST-INPLACE OR
SLIPFORMED METHOD).

ALL REINFORCING STEEL IS TO BE GRADE 60 AND EPOXY COATED.

THE JOINT SEALER SHALL BE LIGHT GRAY NONSAG LATEX CAULKING SEALER
MARKETED FOR OUTDOOR USE. NO TESTING OR CERTIFICATION IS REQUIRED.

EXISTING BRIDGE RAIL IS NOT TO BE REMOVED UNTIL AUTHORIZED BY
THE ENGINEER.

EXCAVATION FOR END SECTIONS SHALL BE BACKFILLED WITH SPECIAL
BACKFILL.

THE COST OF FURNISHING AND PLACING SPECIAL BACKFILL IS TO BE
INCLUDED IN THE PRICE BID FOR "EXCAVATION, CLASS 20". NO EXTRA
PAYMENT WILL BE MADE.

DOWEL SETTING NOTE :

THE 6a AND 5b BARS SHALL BE SET AS DOWELS IN DRILLED HOLES.
HOLES ARE TO BE 10" DEEP. THE DOWELS SHALL BE INSTALLED IN
ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ONE OF
THE FOLLOWING SYSTEMS SHALL BE USED AS A BONDING AGENT
FOR THE DOWELS :

- POLYMER GROUT SYSTEM IN ACCORDANCE WITH STANDARD
SPECIFICATIONS ARTICLE 2301.12 AND CURRENT SUPPLEMENTAL
SPECIFICATIONS OF THE IOWA D.O.T. HIGHWAY DIVISION.
- HYDRAULIC CEMENT GROUT SYSTEMS. DRILLED HOLES ARE TO BE
2 1/2 TIMES THE DOWEL DIAMETER AND ARE TO BE BLOWN CLEAN
WITH COMPRESSED AIR IMMEDIATELY PRIOR TO PLACING GROUT.
THE HYDRAULIC CEMENT GROUT SHALL BE ONE OF THOSE
APPROVED IN MATERIALS I.M. 491.13 AND SHALL BE USED IN
ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
**556'-0x58'-0 CONTINUOUS WELDED
PLATE GIRDER BRIDGE PLUS
TWO 49'-0x58'-0 APPROACH SPANS
BARRIER RAIL QUANTITIES**
STA. 228+95.68 TO 235+50.18 NOVEMBER, 2007
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 11 OF 15 FILE NO. 30163 DESIGN NO. 208

WHKS & CO.

ENGINEERS PLANNERS LAND SURVEYORS
MARION CITY, IN DUBUQUE, IA AMES, IA ROCHESTER, MN

DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

STANDARD SHEET 1031T

WEBSTER COUNTY

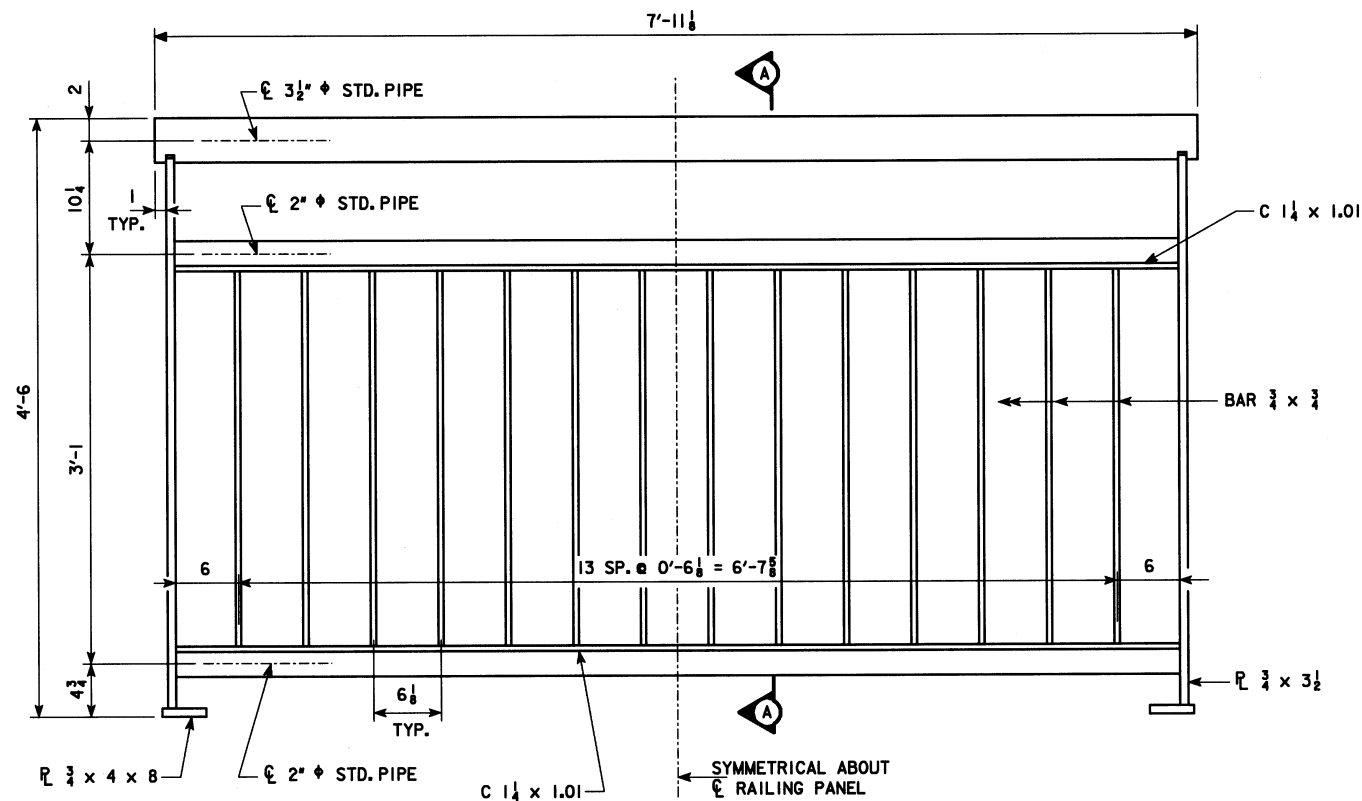
PROJECT NUMBER BRFN-926-0(9)--39-94

SHEET NUMBER 38

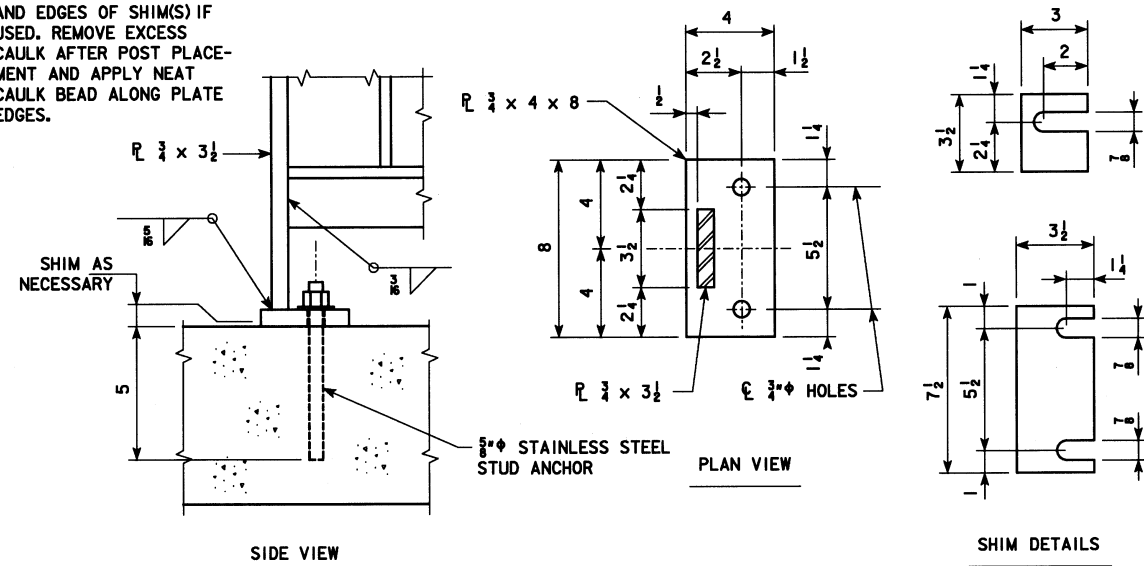
2/1/2008

11:19:30 AM

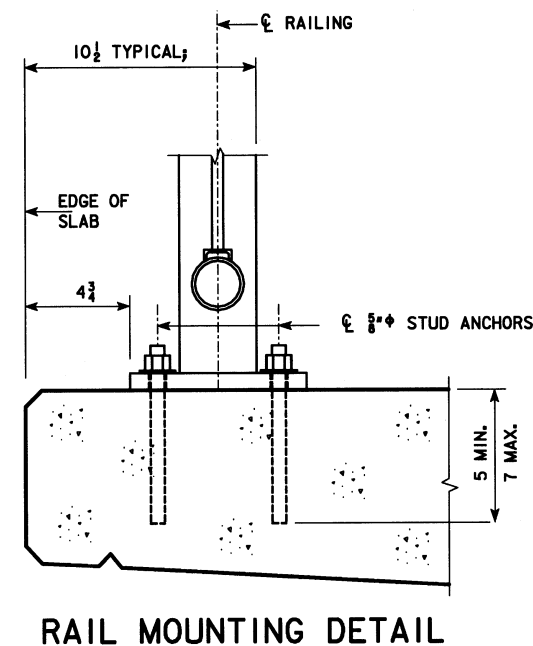
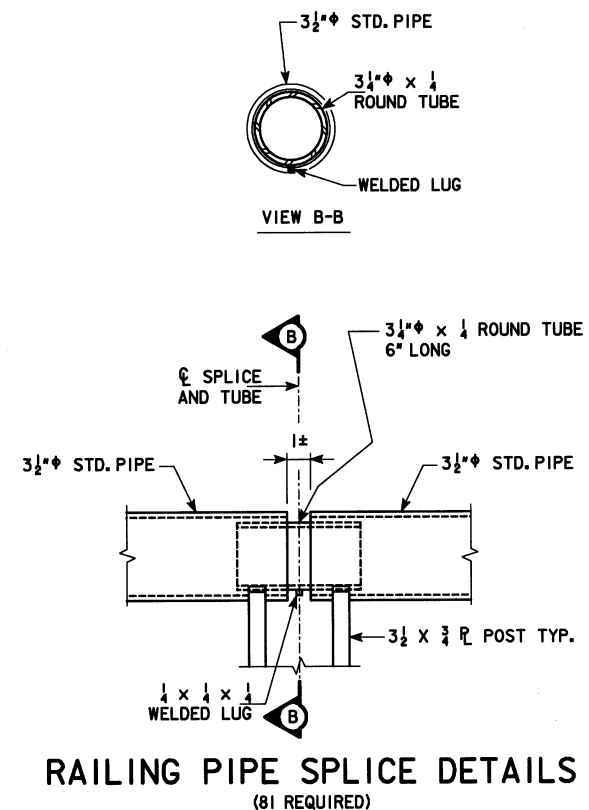
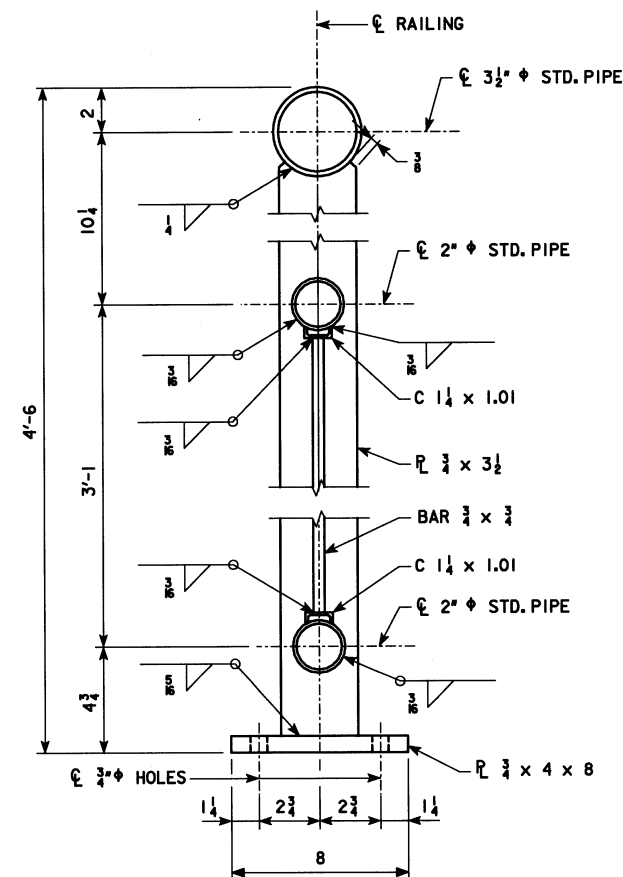
L:\dept\6\6400.21\Webster 108\drawings\FINAL\Extrusion Submittal\94926009.brg



NOTE:
APPLY A THIN LAYER OF
CAULK TO ENTIRE BOTTOM
SURFACE OF BASE PLATE
AND EDGES OF SHIM(S) IF
USED. REMOVE EXCESS
CAULK AFTER POST PLACE-
MENT AND APPLY NEAT
CAULK BEAD ALONG PLATE
EDGES.



NOTE: PROVIDE TWO
GALVANIZED STEEL
1/8" SHIMS OF EACH
TYPE FOR EACH POST
BASE PLATE - USE
AS NECESSARY.



DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
556'-0x58'-0 CONTINUOUS WELDED
PLATE GIRDER BRIDGE PLUS
TWO 49'-0x58'-0 APPROACH SPANS
SIDEWALK RAILING DETAILS
STA. 228+95.68 TO 235+50.18 NOVEMBER, 2007
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 12 OF 15 FILE NO. 30163 DESIGN NO. 208



DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

2/1/2008

11:19:32 AM

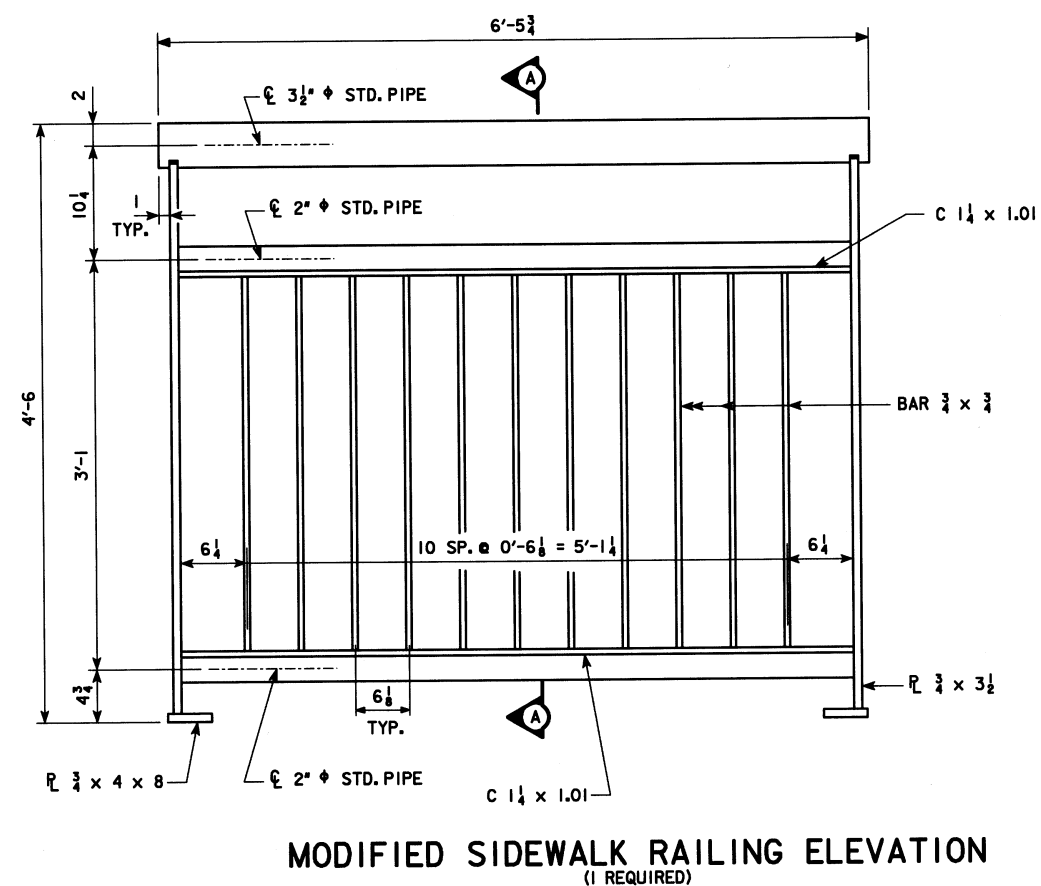
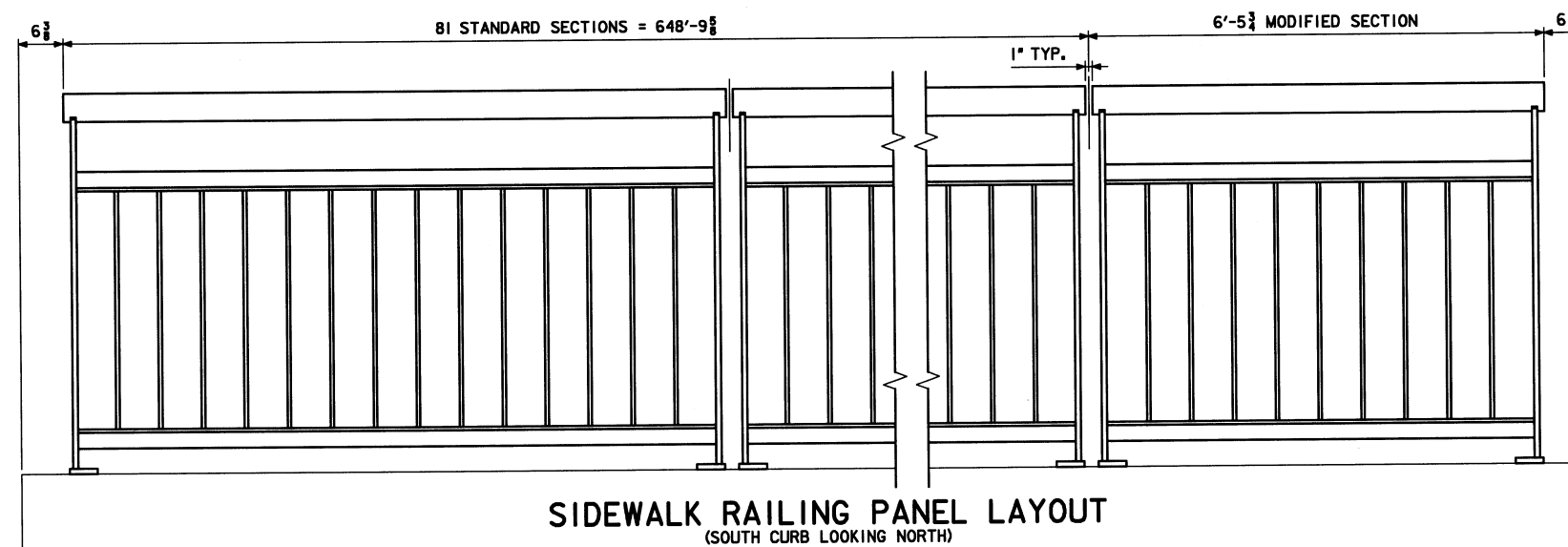
L:\dept\6\6400.21\Webster 108\drawings\FINAL\Extrusion Submittal\94926009.brg

WEBSTER COUNTY

PROJECT NUMBER BRFN-926-0(9)--39-94

SHEET NUMBER

39



WHKS & CO.

ENGINEERS PLANNERS LAND SURVEYORS

MARION CITY, IA DUBUQUE, IA AMES, IA ROCKFESTER, MN

DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

WEBSTER COUNTY

PROJECT NUMBER	BRFN-926-0(9)--39-94
----------------	----------------------

SHEET NUMBER	40
--------------	----

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
556'-0x58'-0 CONTINUOUS WELDED
PLATE GIRDER BRIDGE PLUS
TWO 49'-0x58'-0 APPROACH SPANS
SIDEWALK RAILING DETAILS
STA. 228+95.68 TO 235+50.18 NOVEMBER, 2007
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 13 OF 15 FILE NO. 30163 DESIGN NO. 208

RAILING NOTES

STANDARD PIPE SHALL COMPLY WITH ASTM A53 GRADE B TYPE E. ROUND TUBE TO BE SEAMLESS CARBON STEEL MEETING THE REQUIREMENTS OF ASTM A519. ALL OTHER STRUCTURAL STEEL MATERIALS SHALL COMPLY WITH ASTM A709, GRADE 36 MINIMUM.

GRIND SMOOTH ALL BURRS AND SHARP CORNERS OF STEEL RAILING COMPONENTS PRIOR TO GALVANIZING.

THE RAILING COMPONENTS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A 123. FOLLOW GOOD STANDARD PRACTICES IN ACCORDANCE WITH ASTM A 143 AND ASTM A 384. PREPARE THE FABRICATED RAILING SURFACES BY ABRASIVE BLAST CLEANING TO A MINIMUM OF SSPC-SP 6 "COMMERCIAL BLAST CLEANING" PRIOR TO HOT-DIP GALVANIZING. ALL RAILING MEMBERS SHALL BE FLAT AND STRAIGHT AFTER FABRICATION AND GALVANIZING TO WITHIN 1/8-INCH IN 10 FEET. STRAIGHTEN BY MECHANICAL MEANS WITHOUT DAMAGE TO THE ZINC COATING. ALL RAILING ASSEMBLY HARDWARE SHALL BE GALVANIZED PER THE STANDARD SPECIFICATIONS.

PAINT ALL STRUCTURAL STEEL RAILING COMPONENTS AFTER GALVANIZING AS SHOWN IN THE PLANS IN ACCORDANCE WITH THE SUPPLEMENTAL SPECIFICATION "CLEANING, SURFACE PREPARATION AND PAINTING OF GALVANIZED SURFACES". PAINT COLOR IS TO MATCH FEDERAL STANDARD NO. 595B COLOR NO. 27038 (BLACK). SUBMIT PAINT COLOR SAMPLE TO THE IOWA DEPARTMENT OF TRANSPORTATION, OFFICE OF BRIDGES AND STRUCTURES FOR APPROVAL PRIOR TO GALVANIZING AND PAINTING.

PROTECT ALL PAINTED SURFACES IMMEDIATELY AFTER PAINT HAS CURED. PROTECTION METHOD SHALL BE ADEQUATE TO PREVENT DAMAGE DURING STORAGE, HANDLING, SHIPPING TO THE INSTALLATION SITE, AND DURING THE INSTALLATION OF THE RAILING. DO NOT REMOVE THE PROTECTION UNTIL POTENTIAL DAMAGE TO THE PAINT IS LIMITED TO FINAL ASSEMBLY SURFACES ONLY. PERFORM TOUCH-UP REPAIR OF PAINT IN ACCORDANCE WITH THE SUPPLEMENTAL SPECIFICATION "CLEANING, SURFACE PREPARATION AND PAINTING OF GALVANIZED SURFACES". DO NOT PAINT ANCHORAGES OR FINAL INSTALLATION HARDWARE.

SUBMIT SHOP DRAWINGS OF ALL COMPONENTS OF THE RAILING FOR APPROVAL.

INCLUDE ALL COSTS ASSOCIATED WITH THE RAILING AND ANCHORAGES IN THE PRICE BID FOR "STRUCTURAL STEEL PEDESTRIAN HAND RAILING".

RAILING MOCKUP NOTES

CONSTRUCT A MOCKUP RAILING PANEL FOR REVIEW BY THE ENGINEER. FOR THE PURPOSES OF THE MOCKUP, ONE SIDEWALK RAILING PANEL SHALL BE FABRICATED, GALVANIZED AND PAINTED ACCORDING TO THE REQUIREMENTS IN THESE PLANS. ACTUAL RAILING PRODUCTION MAY NOT PROCEED UNTIL FINAL APPROVAL OF THE MOCKUP. IF THE MOCKUP IS REJECTED, CONSTRUCT ANOTHER MOCKUP AT THE DIRECTION OF THE ENGINEER. USE MATERIALS AND METHODS TO CREATE THE MOCKUP(S) THAT ARE IDENTICAL TO THOSE PROPOSED FOR THE ACTUAL RAILINGS FOR THE PROJECT. THE APPROVED MOCKUP SHALL REMAIN AT THE PROJECT SITE FOR COMPARISON TO ACTUAL RAILINGS AS THEY ARE DELIVERED. PROTECT THE MOCKUP RAILING FROM WEATHER AND DAMAGE DURING STORAGE PERIOD. IF APPROVED FOR USE, INSTALL THE MOCKUP AS PART OF THE FINAL RAILING.

INCLUDE ALL COSTS ASSOCIATED WITH THE MOCKUP IN THE PRICE BID FOR "STRUCTURAL STEEL PEDESTRIAN HAND RAILING".

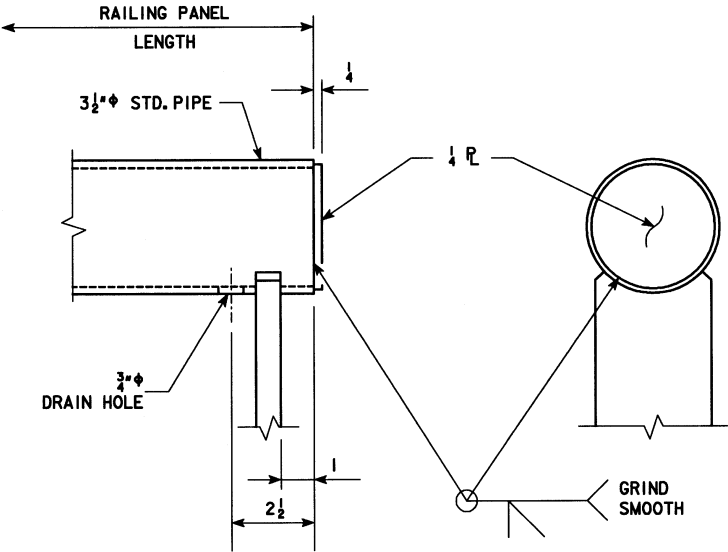
RAILING INSTALLATION NOTES

CONTRACTOR SHALL VERIFY DIMENSIONS OF THE CONCRETE PRIOR TO COMMENCING FINAL LAYOUT AND INSTALLATION OF RAILING. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN CONCRETE DIMENSIONS PRIOR TO RAILING INSTALLATION.

SET ALL RAILING PANELS NORMAL TO THE GRADE ALONG THE BRIDGE. SHIM BASE PLATES AS NECESSARY TO ALIGN PANELS AND TO SET PANELS PLUMB IN THE TRANSVERSE DIRECTION.

THE STUD CONCRETE ANCHORS SHALL BE GALVANIZED AND HAVE A MINIMUM PULLOUT STRENGTH OF 8,000 POUNDS BASED ON 4000 PSI CONCRETE. ANCHORS SHALL BE IN CONFORMANCE WITH MATERIALS I.M. 453.09.

CAULK FOR BASE PLATES SHALL BE LIGHT GREY NONSAG LATEX CAULK MARKETED FOR OUTDOOR USE. NO TESTING OR CERTIFICATION IS REQUIRED. DO NOT CONTAMINATE ADJACENT CONCRETE SURFACES WITH CAULK.



PIPE END CAP DETAILS

RAILING QUANTITY

ITEM	UNIT	QUANTITY
STRUCTURAL STEEL PEDESTRIAN HAND RAILING	LF	655.3

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)

556'-0x58'-0 CONTINUOUS WELDED

PLATE GIRDER BRIDGE PLUS

TWO 49'-0x58'-0 APPROACH SPANS

SIDEWALK RAILING DETAILS

STA. 228+95.68 TO 235+50.18

NOVEMBER, 2007

WEBSTER COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 14 OF 15 FILE NO. 30163 DESIGN NO. 208

WHKS & CO.

ENGINEERS PLANNERS LAND SURVEYORS

MADISON CITY, IA DUBUQUE, IA AMES, IA ROCKHISTON, IA

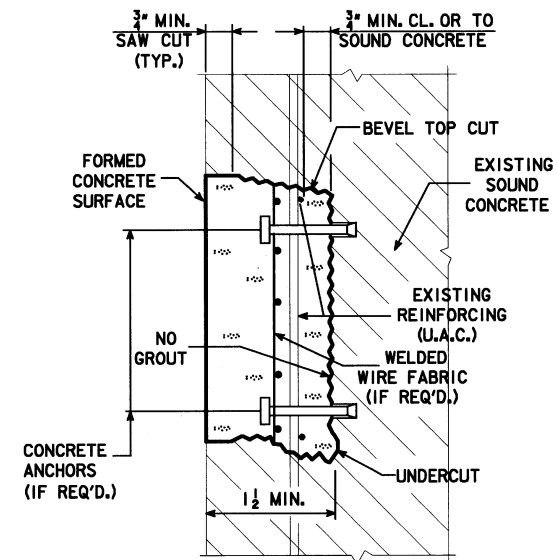
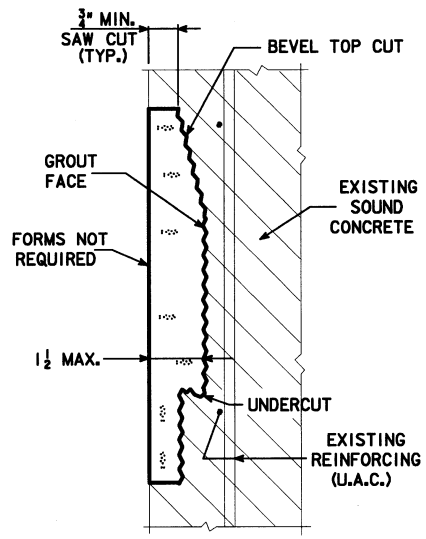
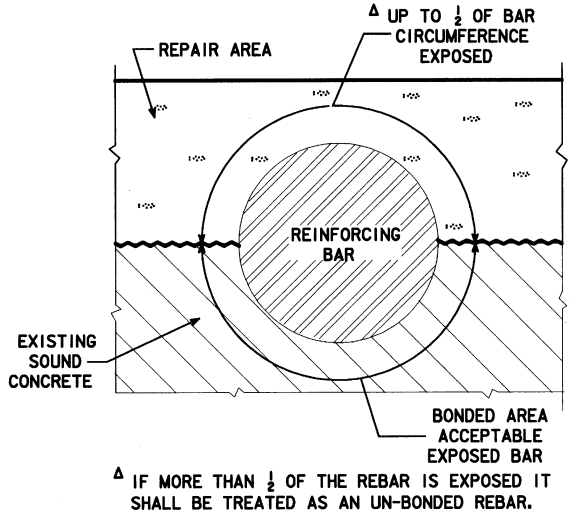
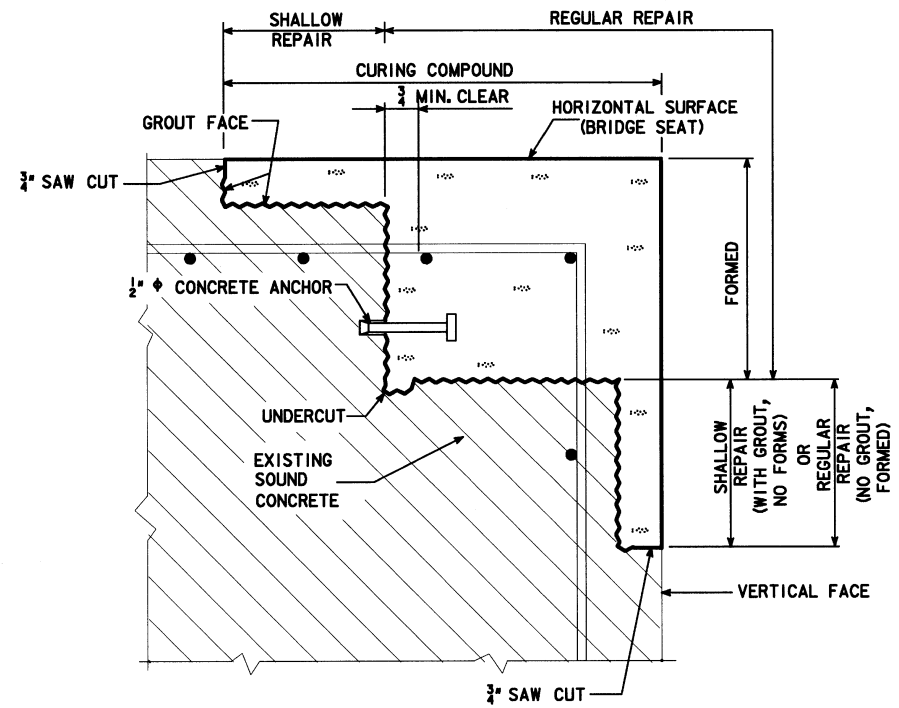
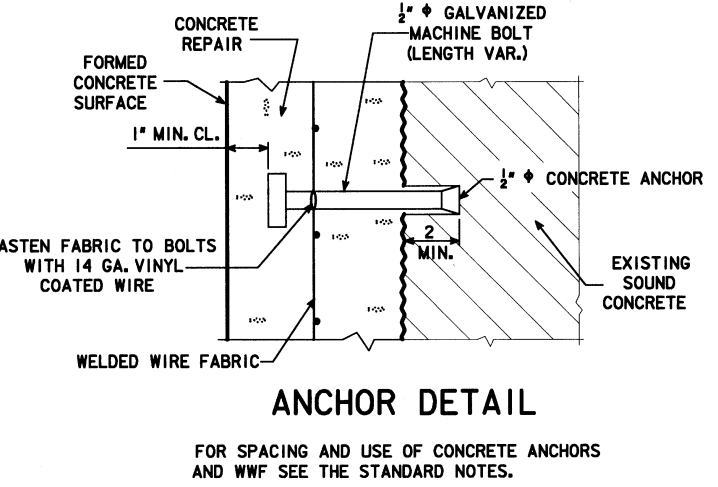
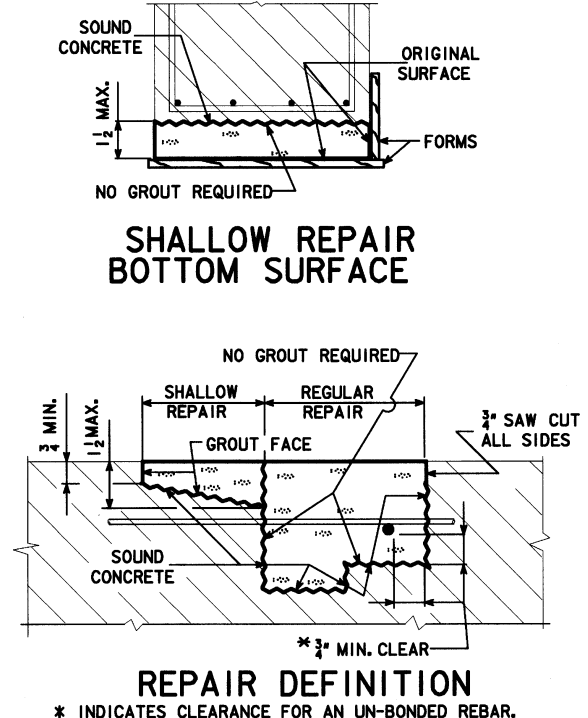
DESIGN TEAM S.K.G. / J.J.O. / J.D.K. / M.A.F.

WEBSTER COUNTY

PROJECT NUMBER BRFN-926-0(9)--39-94

SHEET NUMBER 41

REVISED: MINOR CHANGES MADE IN "STANDARD NOTES", TAPE NO. 19, DATED 11-9-92.
ENGLISH: REPAIR RETROFIT BRIDGES.DGN 1045 - THIS SHEET REDRAWN 9-27-90.



STANDARD NOTES:

THE SPALLED AND HOLLOW AREAS OF THIS BRIDGE AS NOTED AND SHOWN IN THESE PLANS SHALL BE REPAIRED AS FOLLOWS:

ALL THE COSTS OF EQUIPMENT AND MATERIALS REQUIRED TO REPAIR THE SPALLED AND HOLLOW AREAS OF THIS BRIDGE SHALL BE INCLUDED IN THE PRICE BID FOR "CONCRETE REPAIR".

THE PRICE BID FOR "CONCRETE REPAIR" SHALL INCLUDE THE COST OF ALL CONCRETE ANCHORS AND MESH REQUIRED BY THE PLANS.

THE ENGINEER SHALL DETERMINE AND OUTLINE BY VISUAL AND AUDIBLE INSPECTION THE ACTUAL AREAS OF THE CONCRETE REPAIRS. THE CONTRACTOR SHALL BE PAID FOR THE ACTUAL AMOUNT OF REPAIRS MADE ON A SQUARE FOOT BASIS BASED ON THE PRICE BID PER SQUARE FOOT.

ALL EXISTING REINFORCING BARS THAT ARE EXPOSED BY CONCRETE REMOVAL SHALL BE CLEANED AND CAREFULLY INCORPORATED INTO THE NEW WORK, EXCEPT BADLY DETERIORATED EXISTING REINFORCING WHICH SHALL BE REPLACED AS DIRECTED BY THE ENGINEER.

THE CONCRETE ANCHORS REQUIRED SHALL HAVE A MINIMUM PULL OUT OF 5000 LBS. BASED ON 4000 PSI CONCRETE. AN ANCHOR MEETING THE REQUIREMENTS OF IOWA D.O.T. MATERIALS I.M. 453.09 AND THE PULL OUT LOAD ABOVE IS REQUIRED. THE ANCHORS SHALL BE GALVANIZED AND SHALL BE INSTALLED ACCORDING TO RECOMMENDATIONS OF THE MANUFACTURER. THE COST OF FURNISHING AND INSTALLING THE CONCRETE ANCHORS SHALL BE INCLUDED IN THE PRICE BID FOR "CONCRETE REPAIR".

THE WELDED WIRE FABRIC SHALL BE ASTM A185 AND GALVANIZED AS PER ASTM A-641. THE WWF WIRES SHALL BE SPACED 3 X 3 OR 4 X 4 AND THE WIRES SHALL HAVE A NOMINAL AREA OF 0.014 TO 0.029 SQUARE INCHES INCLUSIVE, EXAMPLE "WWF 3 X 3 - W1.4 X W2.9".

WHERE REINFORCEMENT HAS BEEN EXPOSED AND CLEARANCE AROUND THE PERIPHERY OF THE EXISTING BAR IS PROVIDED NO SUPPLEMENTAL REINFORCING IS REQUIRED, EXCEPT WHERE EXISTING REINFORCEMENT DENSITY AND PATTERN ARE SUCH THAT INDIVIDUAL OPEN SPACES BETWEEN BARS ARE OF 1.5 SQUARE FOOT OR LARGER. FOR THIS CONDITION 1/2" CONCRETE ANCHORS AND WELDED WIRE FABRIC SHALL BE INSTALLED AT THE RATE OF ONE CONCRETE ANCHOR WITH WWF PER EACH 1.5 SQUARE FEET OF AREA WITHIN EACH OPEN SPACE.

SEE "STRUCTURAL CONCRETE REPAIR" IN CURRENT STANDARD SPECIFICATIONS FOR MORE INFORMATION CONCERNING THIS WORK.

CONCRETE PLACEMENT QUANTITIES			
MARK	TYPE	UNITS	QUANTITY
①	SHALLOW REPAIR	SQ. FT.	241.0
②	REGULAR REPAIR	SQ. FT.	56.0
TOTAL (SQ. FT.)			444.91 297.0

- ① INCLUDES 53 S.F. OF REPAIR AT VARIOUS LOCATIONS ALONG THE NORTH CURB FACE AND 188 S.F. OF REPAIR AT VARIOUS LOCATION AT THE MEDIAN.
- ② INCLUDES 15 S.F. OF REPAIR TO THE PILE ENCASEMENT AT PILE #5 AND 12 S.F. OF REPAIR AT PILE #13 FROM THE SOUTH END AT PIER 1. REPAIR AREAS ARE APPROXIMATE. ACTUAL REPAIR AREAS ARE TO BE DETERMINED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. INCLUDES 29 S.F. OF REPAIR AT MEDIAN HOLES.

ESTIMATED CONCRETE REPAIR QUANTITIES		
DESCRIPTION	UNITS	AMOUNT
CONCRETE REPAIR	SQ. FT.	444.91 297.0

SEE DESIGN SHEET 2 FOR REPAIR LOCATIONS.

DESIGN FOR REPAIRS TO 26°24'00" SKEW (RA)
**556'-0x58'-0 CONTINUOUS WELDED
PLATE GIRDER BRIDGE PLUS
TWO 49'-0x58'-0 APPROACH SPANS
CONCRETE REPAIR**
STA. 228+95.68 TO 235+50.18 NOVEMBER, 2007
WEBSTER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 15 OF 15 FILE NO. 30163 DESIGN NO. 208

L:\dept\6\6400.21\webster 108\ROADWAY\94926009.dsn 1/30/2008 . . 43

ESTIMATED ROADWAY QUANTITIES					
100-0A 10-28-97					
ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUAN.
1 56	2102-2625000	EMBANKMENT-IN-PLACE	CY	160	160
2 57	2213-6745500	REMOVAL OF CURB	STA	2.17	2.17
3 58	2213-8202080	BASE WIDENING, 8 IN. PORTLAND CEMENT CONCRETE	SY	35	35
4 59	2301-0690200	BRIDGE APPROACH, RK-20	SY	398.1	398.1
5 60	2301-1033080	STANDARD OR SLIP FROM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 8 IN.	SY	4	4
6 61	2412-0000100	LONGITUDINAL GROOVING IN CONCRETE	SY	3572.5	3572.5
7 62	2505-4008200	INSTALLATION OF GUARDRAIL	LF	93.75	93.75
8 63	2505-4021690	GUARDRAIL, END ANCHORAGE, BEAM, RE-69	EACH	1	1
9 64	2505-4021762	GUARDRAIL TERMINAL, BEAM, FLARED, RE-76	EACH	1	1
10 65	2510-6745850	REMOVAL OF PAVEMENT	SY	458.7	458.7
11 66	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	27.15	54.468
12 67	2528-8445110	TRAFFIC CONTROL	LS	1	1
13 68	2602-0000020	SILT FENCE	LF	150	0
EXTRA WORK ORDERS					
685	2503-4470405	INTAKE RA-40 MODIFIED	EACH		7
690	2503-4470415	INTAKE RA-41 MODIFIED	EACH		4
700	2599-9999003	CLASS 13 EXCAVATION	CY		8.75
705	2599-9999005	STAINLESS STEEL ANCHORS	EACH		300
710	2599-9999005	STAINLESS STEEL ANCHORS	EACH		164
715	2599-9999005	PLASTIC ELECTRIC DUST	EACH		1
720	2599-9999005	RMV + REPLACE END POST	EACH		1
725	2599-9999005	RMV + REPLACE END POST	EACH		1
730	2599-9999018	OVERDEPTH OVERLAY GRINDING	SY		3616.5
735	2599-9999025	EMERGENCY ROAD CLOSURE	EACH		7
740	2599-9999003	OVERLAY OVERDEPTH CONCRETE	CY		100.91
745	2599-9999005	FRP CONCRETE REINFORCING WRAP	EACH		1
750	2599-9999005	CORRECTIVE GRINDING	EACH		1
755	2599-9999004	OVERDEPTH CONCRETE REPAIR	SF		1045.1
760	2599-9999004	L.D.'S/END DELAYS REIMBURSEMENT	DAY		20.5
765	2599-9999005	EMERGENCY BRIDGE CLOSURE/DETOUR	EACH		1

ESTIMATE REFERENCE INFORMATION		
100-4A 10-29-02		
Item No.	Item Code	Description
1	2102-2625000	EMBANKMENT-IN-PLACE Approved material shall be obtained by the contractor from outside of the existing right of way. Quantity is for regrading at guardrail locations. See Tab. 107-23, on Sheet 46.
2	2213-6745500	REMOVAL OF CURB See Tab. 110-4, on Sheet 46.
3	2213-8202080	BASE WIDENING, 8IN. PORTLAND CEMENT CONCRETE See Tab. 106-5, on Sheet 47.
4	2301-0690200	BRIDGE APPROACH, RK-20 See Tab. 112-6, on Sheet 46.
5	2412-0000100	LONGITUDINAL GROOVING IN CONCRETE See Tab. 100-28, on Sheet 46.
6	2301-1033080	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 8 IN. See Typ. 6141, on Sheet 47 and Sheet 48 for location.
7	2505-4008200	INSTALLATION OF GUARDRAIL GUARDRAIL, END ANCHORAGE, BEAM, RE-69 GUARDRAIL TERMINAL, BEAM, FLARED, RE-76 See Tab. 108-8A, Sheet No. 46.
8	2505-4021690	
9	2505-4021762	
10	2510-6745850	REMOVAL OF PAVEMENT See Tab. 110-1, Sheet No. 47.
11	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED See Tab. 108-22, on Sheet 47.
12	2528-8445110	TRAFFIC CONTROL See Tab. 108-23 and Tab. 108-26, on Sheet 43. See Sheet 26 for Restricted Width Signing.
13	2602-0000020	SILT FENCE Silt fence shall be used to protect and restore areas disturbed by necessary construction activities, as directed by the Engineer. Item includes 150 linear feet (nominal) at the west approach end of the bridge. The Engineer shall adjust the locations to fit field conditions.

NO.	DESCRIPTION
0685	INTAKE RA-40 MODIFIED - ROADWAY ITEMS w/DES. No. 208 - Needed to rebuild existing RA-40 intakes off end of bridges due to years of deterioration.
0690	INTAKE RA-41 MODIFIED - ROADWAY ITEMS w/DES. No. 208 - Needed to rebuild existing RA-41 intakes off end of bridges due to years of deterioration.
0700	CLASS 13 EXCAVATION - ROADWAY ITEMS w/DES. No. 208 - Removed material in order to construct crossover.
0705	STAINLESS STEEL ANCHORS - DES. No. 108 - Used stainless steel anchors instead of galvanized for ped. rail.
0710	STAINLESS STEEL ANCHORS - DES. No. 208 - Used stainless steel anchors instead of galvanized for ped. rail.
0715	PLASTIC ELECTRIC DUST - DES. No. 108 - Installed in north barrier rail, existing was deteriorated.
0720	RMV + REPLACE END POST - DES. No. 108 - Existing SE concrete end post was deteriorated + needed removed + replaced.
0725	RMV + REPLACE END POST - DES. No. 208 - Existing SE concrete end post was deteriorated + needed removed + replaced.
0730	OVERDEPTH OVERLAY GRINDING - DES. No. 108 - Existing deck overlay was thicker than 2", needed to remove an additional 1" of concrete.
0735	EMERGENCY ROAD CLOSURE - DES. No. 108 - Due to the potential of imminent collapse of the bridge, the District imposed an emergency closure.
0740	OVERLAY OVERDEPTH CONCRETE - DES. No. 108 - To reestablish deck profile grade.
0745	FRP CONCRETE REINFORCING WRAP - DES. No. 108 - Wrap on pier #4 due to extensive deterioration.
0750	CORRECTIVE GRINDING - DES. No. 108 - To achieve the proper smoothness transition to the adjoining pavement.

0755	OVERDEPTH CONCRETE REPAIR - DES. No. 108 - Extensive deterioration of pier #4 to remove + repair.
0765	EMERGENCY BRIDGE CLOSURE/DETOUR - DES. No. 108 - After concerns of the structural integrity compromising the bridge's ability to carry traffic loads when repair on pier #4 went over depth, Dist 1 requested an emergency closure of the bridge.

DES. NO. 208
FILE NO. 30163

L:\dept\6\6400.21\Webster 108\ROADWAY\94926009.dsn 1/30/2008 . 44

04-03-01203-2

During construction of this project, the contractor will be required to coordinate his operations with those of other contractors working within the same area. Other work in progress during the same period of the time will include construction of the following projects:

Project	Type of Work

01-20-84204-2

All holes resulting from operations of the contractor, including removal of guardrail posts, fence posts, utility poles, or foundation studies, shall be filled and consolidated to finished grade as directed by the engineer to prevent future settlement. The voids shall be filled as soon as practical - preferably the day created and not later than the following day. Any portion of the right-of-way or project limits (including borrow areas and operation sites) disturbed by any such operations shall be restored to an acceptable condition. This operation shall be considered incidental to other bid items in project.

10-22-93204-4

All guardrail materials that are removed and not reused on this project shall become the property of the contractor. Any material to be used on this project that is damaged due to the carelessness of the contractor shall be replaced at the contractor's expense without cost to the State of Iowa.

10-16-07213-1

It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. These areas shall not impact cultural resources, wetlands or "Waters of the U.S." U.S. Army Corps of Engineers' (COE) regulations prohibit placement of material on stream banks below the "ordinary high water mark" without an approved COE 404 Permit.

When a disposal site is selected outside of the project limits, it is recommended that the contractor contact the Office of the State Archaeologist (OSA) and State Historic Preservation Office (SHPO) to request an historic site search and a recommendation of suitability for the purpose intended. If OSA or SHPO are contacted, provide a copy of their response to the contracting authority and the Office of Location and Environment.

No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans.

01-20-84232-5

The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service area(s) will be subject to the approval of the resident engineer.

06-07-94232-8

The top six (6) inches of the disturbed areas shall be free of rock and debris and shall be suitable for the establishment of vegetation, subject to the approval of the Engineer.

04-30-02213-7

Unless otherwise directed or authorized, all hot mix asphalt and other bituminous materials which are not specifically addressed or described in the contract documents shall become the property of the contractor.

The contractor, in accordance with current rules and regulations of the Iowa Department of Natural Resources, may:

1. With the approval of the Engineer, blend or otherwise process the material for use with shoulder or special backfill aggregate, for use on the project.

2. With the approval of the Engineer, place with material in areas designated by the Engineer as Soil Aggregate Subbase without extra charge.

3. Remove the material from the project and stockpile for the contractor's future use.

01-20-84221-3

Estimated quantity for new concrete pavement includes all integral curb, all street returns and special areas of repairs to connecting pavements.

01-20-84221-4

In order to avoid any unnecessary surface breaks or premature spalling, the contractor is cautioned to exercise extreme care when performing any of the necessary saw cutting operations for the proposed pavement removal.

04-17-07232-3A

EROSION CONTROL: (Rural Seeding)

Following completion of work on this project, all disturbed areas shall be seeded, fertilized, and mulched.

SEEDING:
3 lbs. of Fescue or Fawn per 1000 sq. ft.

FERTILIZER:
17 lbs. of 13-13-13 (or equivalent) commercial fertilizer per 1000 sq. ft.

MULCH:
70 lbs. of dry cereal straw per 1000 sq. ft. All mulch to be consolidated into the soil with a mulch stabilizer.

The preparation of the seedbed, furnishing and application of seed, fertilizing, and mulching shall be considered incidental to work on this project and no extra compensation will be allowed.

10-28-97232-10

The contractor is expected to have materials, equipment, and labor available on a daily basis to install and maintain erosion control features on the project. This may involve seeding, silt fence, rock ditch checks, silt basins, or silt dikes.

108-2608-30-88

STAGING NOTES

Stage 1 - Westbound Lane Closure
Stage 2 - Eastbound Lane Closure

Contractor shall stage construction to minimize inconvenience to traffic, maximize use and preservation of existing pavement, and improve coordination among projects within the corridor.

Situations may arise which preclude adhering to the original construction sequence or which, in the opinion of the Contractor, would readily lend themselves to more efficient staging operations. Should the Contractor desire to deviate from the original plan, an alternate plan shall be submitted to the Engineer for review and approval.

06-22-84251-2

The contractor is hereby notified that removal of any existing traffic markers, warning devices or guardrail barriers shall be scheduled subject to the approval of the Engineer. The contractor may be required to place temporary warning devices at certain locations where replacement features are not installed the same day during which any such removals take place.

W-1

Where public utility fixtures are shown as existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify the owners of those utilities prior to the beginning of any construction. The contractor shall afford access to these facilities for necessary modification of services. Underground facilities, structures and utilities have been plotted from available surveys and records, and therefore their locations must be considered approximate only. It is possible there may be others, the existence of which is presently not known or shown. It is the contractor's responsibility to determine their existence and exact location and to avoid damage thereto. No claims for additional compensation will be allowed to the contractor for any interference or delay caused by such work.

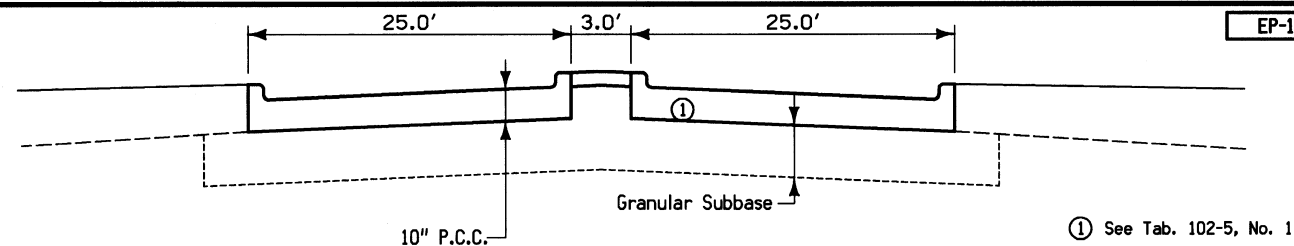
10-18-05262-6

This project is NOT a POINT 25 project and is not subject to the provisions of IAC 761-115.25.

STANDARD ROAD PLANS			
The following Standard Road Plans shall be considered applicable to construction work on this project.			
Number	Date	Sheets	Title
RA-41	04-19-05	1	Curb Intake (Under Pavement)
RC-17	10-19-04	2	Silt Fence
RD-64	10-16-07		Restricted Width Signs (Two-Lane Roadway)
RE-2B	04-03-01	1	Formed Steel Beam Railing Transition and Terminal Sections (Thrie Beam)
RE-7	04-15-03	1	Delineators and Object Markers
RE-12A	10-19-04	1	Formed Steel Beam Guardrail and Posts for Blocked-Out Guardrail (W-Beam)
RE-12B	10-19-04	1	Formed Steel Beam Guardrail and Posts for Blocked-Out Guardrail (Thrie-Beam)
RE-12C	10-19-04	1	Steel Guardrail Post and Wood Blockouts
RE-47	04-17-07	1	Type 3 Object Marker
RE-48A	10-19-04	1	Details of Marker and Delineator Placement (at Bridges)
RE-64B	04-19-05	1	Guardrail Installation (Bridge Ends) (Less Than Full Shoulder Width Bridge)
RE-68	10-19-04	1	Steel Beam Guardrail Standard Transition Section (STS)
RE-69B	10-16-07	1	Guardrail Installation Connection to Retrofit Bridge Endpost
RE-76	10-16-07	1	Guardrail Terminal (FLEAT-350)
RF-19C	10-18-05	1	Subdrains (Longitudinal)
RF-19E	10-16-07	1	Outlets for Longitudinal, Transverse and Backslope Subdrains
RG-1	09-21-99	1	P.C. Concrete Pavement Widening
RH-50	04-17-07	1	Joints (Transverse Contraction)
RH-51	10-17-06	1	Joints (Longitudinal Contraction)
RH-52	04-17-07	1	Joints (Expansion)
RK-20	10-16-07	3	Double Reinforced 12" Approach
RK-23	10-17-06	1	Bridge Approach (Multi-Lane, Curbed Roadway)
RL-14A	10-17-06	2	Guardrail Grading
TC-1	10-17-06	1	Work not Affecting Traffic
TC-81	10-17-06	1	Restricted Width Signing
TC-252	10-17-06	2	Road Closure
TC-418	10-16-07	1	Lane Closure on Divided Highway
TC-423	10-16-07	1	Closure of Two Adjacent Lanes on Undivided Highway

DES. NO. 208

FILE NO. 30163

[illegible]

STEEL BEAM GUARDRAIL AT BRIDGE END POST AND CONCRETE BARRIER

Refer to Standard Road Plans RE-48A, RE-64A, RE-64B, and RE-65B

[illegible]

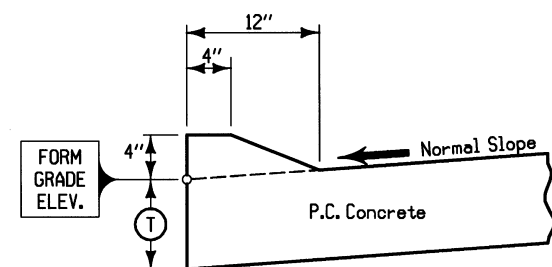
GRADING FOR GUARDRAIL INSTALLATIONS

Refer to Standard Road Plans RL-12, RL-14A(1), RL-14A(2), RL-14B, and Typical 4303

Location		Type	Dimensions (Feet)												Class 10 Excavation Cu. Yds.	③ Embankment In Place Cu. Yds.	Pipe			Remarks		
No.	① Direction of Traffic		Station	Side	BY		Z		X1	Y1 ②	X2	Y2	X3	Y3			X4	Y4	Size Inches		Type	Length Lin. Ft.
					A	T	A	T														
2	EB	228+19.9	A	2	9		54		53.7	4.1					90.5	8.7				'Y' dist. from back of curb (Tapers)		

LONGITUDINAL GROOVING

LOCATION	TOTAL Sq. Yds.	REMARKS
West Approach	179.2	Eastbound
Bridge	3247.7	
West Approach	145.6	Westbound



DETAILS OF INTEGRAL 4" SLOPED CURB

TABULATION OF CURB REMOVAL

STATION TO STATION		SIDE	LENGTH Stations	REMARKS
235+91.44	236+98.44	B	2.17	Crossover