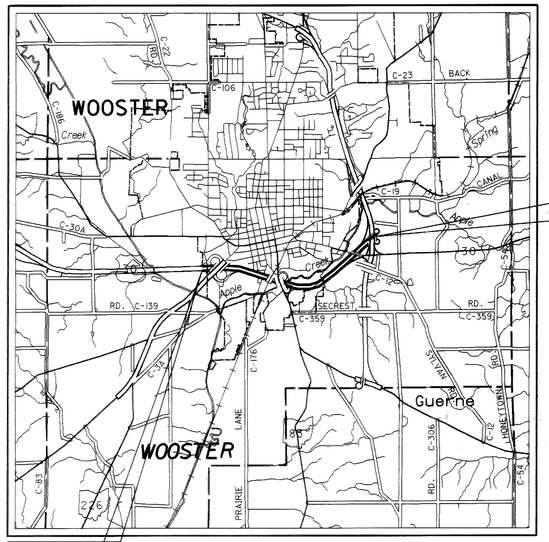
WAY - USR 30/250-9.18/9.98
040082 PID - 18631
DIST 03 2/25/2004

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
WAY-30/250-9.18/9.98
CITY OF WOOSTER
KILLBUCK TOWNSHIP
WOOSTER TOWNSHIP
WAYNE COUNTY



END PROJECT
STA. 626+45.93 E.B.
STA. 626+00.00 W.B.

BEGIN PROJECT
STA. 484+45

LOCATION MAP

LATITUDE: 40°47'00" LONGITUDE: 81°56'00"

SCALE IN MILES
0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2005)	30220
DESIGN YEAR ADT (2025)	43930
DESIGN HOURLY VOLUME (2025)	4393
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	22%
DESIGN SPEED	60mph
LEGAL SPEED	55/60mph

DESIGN FUNCTIONAL CLASSIFICATION - URBAN FREEWAY

NHS PROJECT . YES

DESIGN EXCEPTIONS
GRADED SHOULDER WIDTH - 10-20-03 SHEET 28

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA	65 Ac.
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	4 Ac.
NOTICE OF INTENT EARTH DISTURBED AREA	10 Ac.

INDEX OF SHEETS:

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF RECONSTRUCTION OF 2.6 MILES OF U.S. 30/U.S. 250 INCLUDING REMOVAL AND REPLACEMENT OF FOUR LANES OF PAVEMENT. THE PROJECT ALSO INCLUDES RECONSTRUCTION OF THE TWO BRIDGES OVER CHRISTMAS RUN AND APPLE CREEK, REPLACING THE DECK AND WIDENING THE BRIDGE OVER S.R. 83, AND REPLACING THE DECK ON THE BRIDGE OVER PITTSBURGH AVENUE.

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2002 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE PART TIME CLOSING OF THE HIGHWAY TO TRAFFIC, AS NOTED ON SHEETS 45-47. DURING WHICH TIME DETOURS WILL BE PROVIDED AS SHOWN HEREIN. PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

APPROVED Thomas M. O'Leary ACS
DATE 10-21-03 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor Jr.
DATE 11-19-03 DIRECTOR, DEPARTMENT OF TRANSPORTATION

ENGINEERS SEAL:
FOR ENTIRE PLAN EXCEPT STRUCTURES & LIGHTING
STATE OF OHIO · A. FREDERICK SELING JR. · E-48722 · REGISTERED PROFESSIONAL ENGINEER
SIGNED: A. Frederick Seling Jr.
DATE: 9/10/03

ENGINEERS SEAL:
LIGHTING
STATE OF OHIO · STANLEY J. KMONK · E-51379 · REGISTERED PROFESSIONAL ENGINEER
SIGNED:
DATE: 9/5/03

ENGINEERS SEAL:
FOR WAY30-1147B & WAY-250-1188L STRUCTURES
STATE OF OHIO · JAMES E. PREVOST · E-64055 · REGISTERED PROFESSIONAL ENGINEER
SIGNED: James E. Prevost
DATE: 9/5/03

ENGINEERS SEAL:
FOR WAY-30-0935 & WAY-30-1039 STRUCTURES
STATE OF OHIO · DEAN W. STUTZMAN · E-41283 · REGISTERED PROFESSIONAL ENGINEER
SIGNED:
DATE: 9/10/03

STANDARD CONSTRUCTION DRAWINGS

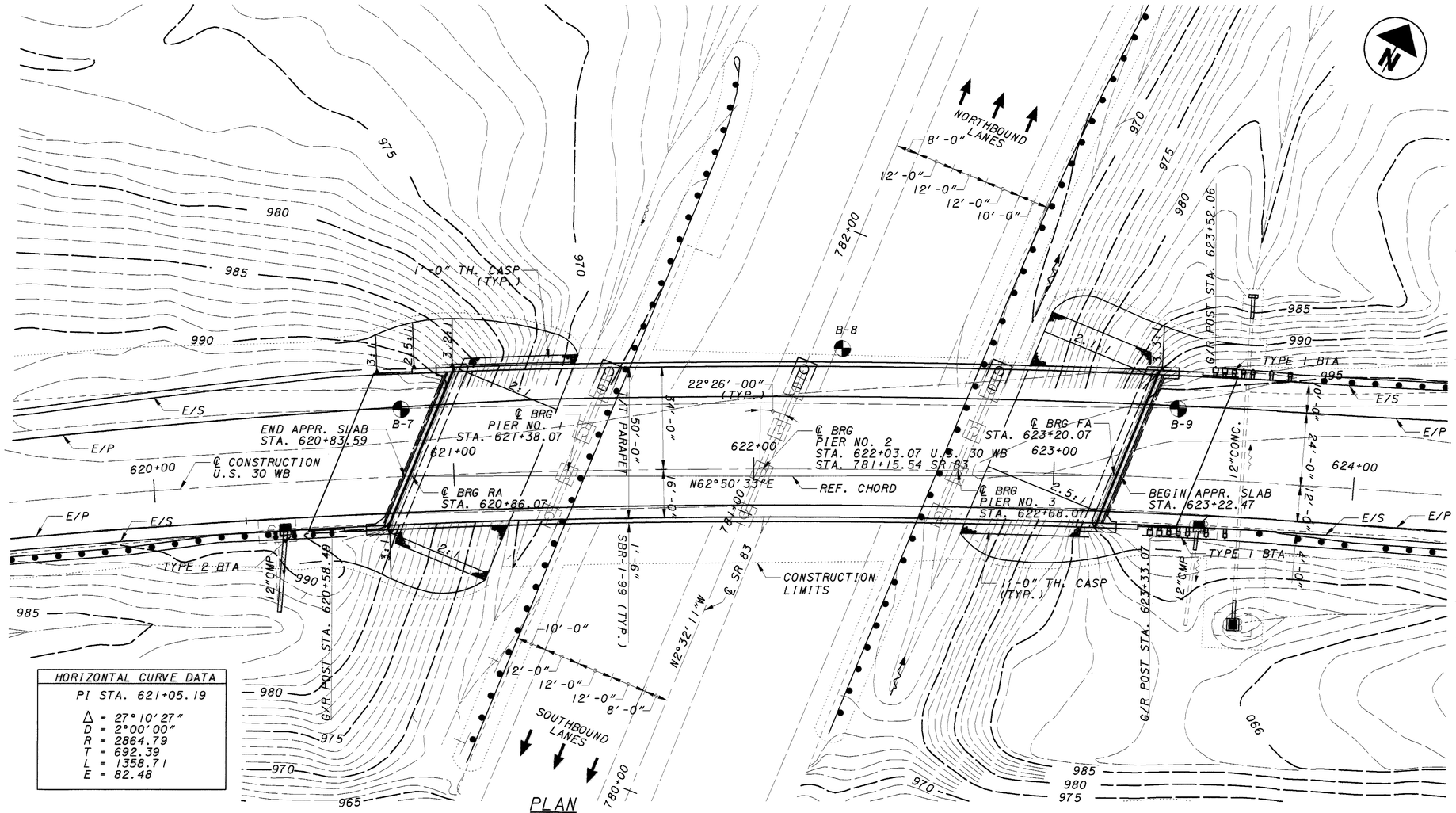
BP-2.1	7-28-00	RM-4.3	4-18-03	TC-21.40	1-18-02	HL-50.22	1-18-02	MT-102.10	10-18-02
BP-2.2	7-28-00	RM-4.4	4-18-03	TC-22.20	1-19-01	HL-60.11	7-20-01	MT-102.20	10-18-02
BP-2.3	7-28-00	RM-4.5	4-18-03	TC-41.10	1-19-01	HL-60.21	7-20-01	MT-105.10	10-18-02
BP-2.5	7-28-00	RM-4.6	4-18-03	TC-41.20	1-19-01	HL-60.31	7-20-01	MT-105.11	10-18-02
BP-3.1	7-28-00	CB-1.1	7-19-02	TC-41.40	1-18-02	MT-35.10	4-20-01	SUPPLEMENTAL SPECIFICATIONS	
BP-5.1	7-28-00	CB-2.1	7-19-02	TC-41.50	7-18-03	MT-95.30	4-19-02		
BP-6.1	7-28-00	CB-2.2	7-19-02	TC-42.10	1-19-01	MT-95.40	7-18-03		
BP-9.1	7-28-00	CB-2.3	7-19-02	TC-42.20	4-20-01	MT-96.10	4-19-02	802	7-19-02
F-2.1	7-28-00	CB-3.1	7-19-02	TC-51.11	4-20-01	MT-96.11	4-19-02	832	2-12-03
F-3.1	7-28-00	CB-3.3	7-19-02	TC-51.12	4-20-01	MT-100.00	4-19-02	833	2-12-03
F-3.3	7-28-00	CB-3.4	7-19-02	TC-52.10	4-20-01	MT-96.21	4-19-02	846	4-19-02
F-3.4	7-28-00	HW-2.1	7-19-02	TC-52.20	4-20-01	MT-96.25	4-20-01	850	4-19-02
GR-1.1	4-18-03	HW-2.2	7-19-02	TC-61.10	1-19-01	MT-98.12	4-19-02		
GR-2.1	4-18-03	I-1.1	7-19-02	TC-65.10	10-19-01	MT-98.13	4-19-02	864	7-11-00
GR-3.1	4-18-03	MH-1.2	7-19-02	TC-65.11	10-19-01	MT-98.14	4-19-02	880	10-18-02
GR-3.2	4-18-03	DM-1.1	7-18-03	TC-65.12	10-19-01	MT-98.15	4-19-02	894	10-18-02
GR-4.2	4-18-03	DM-1.2	7-19-02	TC-71.10	4-19-02	MT-98.16	4-19-02	908	4-18-03
GR-4.5	4-18-03	DM-1.4	7-19-02	TC-72.20	1-19-01	MT-98.17	10-18-02	954	9-9-97
GR-5.1	4-18-03	DM-4.1	7-19-02	TC-73.10	1-19-01	MT-98.18	10-18-02	SPECIAL PROVISIONS	
GR-5.2	4-18-03	DM-4.3	7-19-02	HL-20.11	4-19-02	MT-98.19	10-18-02		
GR-5.3	4-18-03	DM-4.4	7-19-02	HL-30.11	4-19-02	MT-99.20M	1-30-95		
GR-6.1	4-18-03	TC-07.65	7-18-03	HL-30.21	4-19-02	MT-99.50	10-18-02		
GR-6.2	4-18-03	TC-12.30	1-19-01	HL-30.22	4-19-02	MT-99.51	10-18-02		
RM-1.1	4-18-03	TC-21.10	1-19-01	HL-30.32	4-19-02	MT-101.20	10-18-02		
RM-4.2	4-18-03	TC-21.20	1-19-01	HL-50.11	7-20-01	MT-101.70	10-18-02		

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:
ENGINEERING ASSOCIATES, INC.
1935 EAGLE PASS - WOOSTER, OHIO 44691
TELEPHONE : (330) 345-6556

FEDERAL PROJECT NO. NON - FEDERAL
PID NO. 18631
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT
R.J. CORMAN RAILROAD CO.
NORFOLK SOUTHERN CORP.

WAY-30/250-9.18/9.98

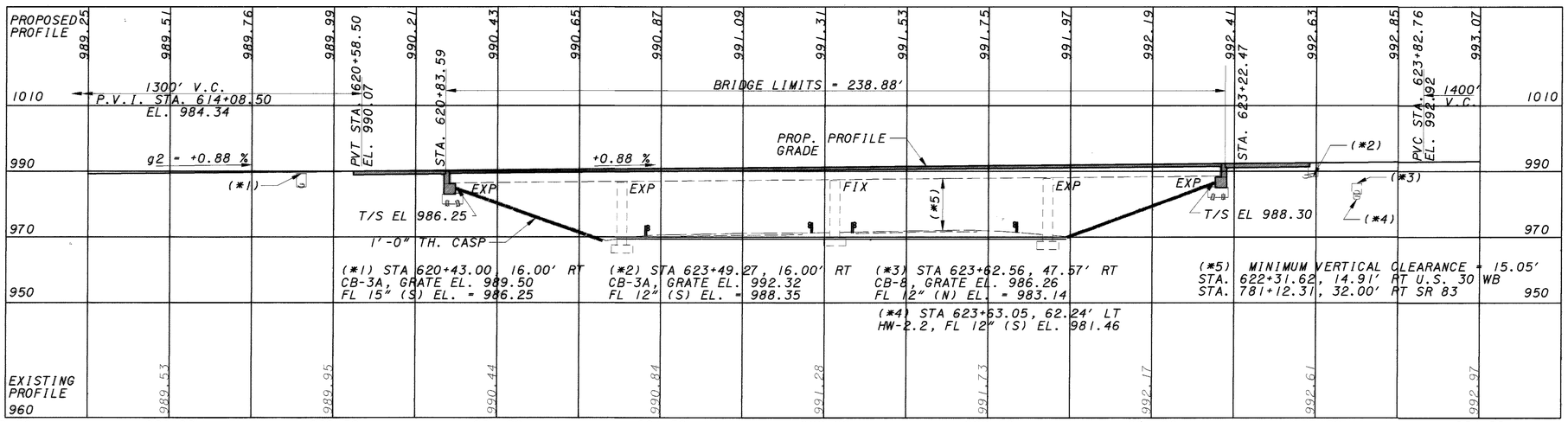


PLAN

HORIZONTAL CURVE DATA

PI STA. 621+05.19

Δ = 27°10'27"
D = 2°00'00"
R = 2864.79
T = 692.39
L = 1358.71
E = 82.48



(*1) STA 620+43.00, 16.00' RT
CB-3A, GRATE EL. 989.50
FL 15" (S) EL. = 986.25

(*2) STA 623+49.27, 16.00' RT
CB-3A, GRATE EL. 992.32
FL 12" (S) EL. = 988.35

(*3) STA 623+62.56, 47.57' RT
CB-8, GRATE EL. 986.26
FL 12" (N) EL. = 983.14

(*4) STA 623+53.05, 62.24' LT
HW-2.2, FL 12" (S) EL. 981.46

(*5) MINIMUM VERTICAL CLEARANCE = 15.05'
STA. 622+31.62, 14.91' RT U.S. 30 WB
STA. 781+12.31, 32.00' RT SR 83

PROFILE ALONG ℄ CONSTRUCTION U.S. 30 WB

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR ABBREVIATIONS AND BRIDGE GEOMETRY DIAGRAM, SEE SHEET 11/16
3. BRIDGE LONGITUDINAL DIMENSIONS ARE ALONG THE CURVE AND TRANSVERSE DIMENSIONS ARE RADIAL.
4. SEE ROADWAY PLANS FOR DRAINAGE DETAILS.
5. ABUTMENT PILES: HP 10 X 42, DESIGN LOAD: 27 TONS PER PILE ESTIMATED LENGTH = 15'-0"

LEGEND

- BORING LOCATION

BENCHMARK

BENCHMARK #1: NO. 8 REBAR WITH ODOT R/W CAP SET IN CONCRETE
STA. 620+73.52, 31.37' LEFT, EL.992.98
BENCHMARK #2: NO. 5 REBAR WITH TRAVERSE POINT CAP
STA. 781+79.28, 57.57' LEFT, EL.968.50

TRAFFIC DATA

CURRENT ADT (2005) = 30,220
CURRENT ADTT (2005) = 6,648
DESIGN ADT (2025) = 43,930
DESIGN ADTT (2025) = 9,665

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPAN: 52'; 65'; 65'; 52' C/C BEARINGS
ROADWAY: 42'-0" F/F 2'-0" SAFETY CURBS
SKEW: 22°-26'-00" L.F.
ALIGNMENT: 2°-00'-00" CURVE RT.
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: AS-1-54 (25' LONG)
SUPERELEVATION: .064'/FT FOR FULL WIDTH
DATE BUILT: 1970
STRUCTURE FILE NO.: 8500568

PROPOSED WORK

1. REMOVE EXISTING DECK AND ABUTMENTS TO TOP OF FOOTING
2. EXTEND PIERS AND RECONSTRUCT ABUTMENTS TO ACCOMODATE A WIDER SUPERSTRUCTURE
3. ADD A BEAM LINE TO CONSTRUCT A NEW COMPOSITE DECK 50' WIDE T/T BARRIER
4. PATCH PIER CONCRETE
5. SEAL CONCRETE SURFACES
6. PAINT STRUCTURAL STEEL
7. CONSTRUCT FULL WIDTH APPROACH SLABS
8. PLACE & GRADE CRUSHED AGGREGATE SLOPE PROTECTION
9. COMPLETE WORK ITEMS TO FINISH THE PROJECT

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPAN: 52'; 2 @ 65'; 52' C/C BEARINGS
ROADWAY: 50'-0" T/T PARAPET
SKEW: 22°-26'-00" L.F.
LOADING: HS20 (CASE I), ALTERNATE MILITARY LOADING AND FWS OF 60#/SF
ALIGNMENT: 2°-00'-00" CURVE RT.
SUPERELEVATION: 0.066'/FT, FULL WIDTH
WEARING SURFACE: MONOLITHIC CONCRETE
APPROACH SLABS: AS-1-81 (25' LONG)
LONGITUDE: 81°54'44"
LATITUDE: 40°47'55"

DESIGN AGENCY
BARR ENGINEERING, INC.
1108 CITY PARK AVENUE, SUITE 200
COLUMBUS, OHIO 43206
(614) 224-1941 FAX (614) 224-0907

DESIGNED	DRAWN	REVIEWED	DATE
JEP	RLC	GEA	09/2003
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SRR		8500568	

WAYNE COUNTY
STA. 620+83.59
STA. 623+22.47

SITE PLAN
BRIDGE NO. WAY-250-1188L
OVER SR 83/U.S. 250

WAY-30/250-9.18/9.98

1/16

440/458

GENERAL NOTES

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD DRAWINGS:

A-1-69	REVISED	07-19-02	GR-3.2	REVISED	04-18-03
AS-1-81	REVISED	07-19-02	GSD-1-96	REVISED	07-19-02
BS-1-93	REVISED	07-19-02	RB-1-55	REVISED	02-02-59
EXJ-4-87	REVISED	07-19-02	SBR-1-99	REVISED	07-19-02
GR-3.1	REVISED	04-18-03	SICD-1-96	REVISED	07-19-02

AND TO SUPPLEMENTAL SPECIFICATIONS:

864, DATED 07-11-2000

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 INCLUDING THE INTERIM SPECIFICATIONS THRU 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS20-44, CASE (I) AND THE ALTERNATE MILITARY LOADING.
FUTURE WEARING SURFACE (FWS) OF 60 PSF.

DESIGN STRESSES:

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615, A616 OR A617
GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.
STRUCTURAL STEEL - ASTM A709, GRADE 50 - YIELD STRENGTH 50,000 P.S.I.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2-1/2" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

EXISTING STRUCTURE REMOVAL:

PROTECTION OF TRAFFIC:
PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR AT LEAST 30 DAYS BEFORE CONSTRUCTION BEGINS. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. MAINTAIN THE TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR. ALL COSTS ASSOCIATED WITH THIS TRAFFIC PROTECTION WILL BE INCLUDED WITH ITEM 202 FOR PAYMENT.

PAYMENT:

THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL, LABOR EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 202 AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

DESCRIPTION: THIS WORK SHALL CONSIST OF THE REMOVAL OF THE CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT, THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES [50 mm] OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES [50 mm] OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES [50 mm] OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STEEL BEAM MEMBERS THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS [16 KILOGRAMS] BUT NOT TO EXCEED 90 POUNDS [41 KILOGRAMS] UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER BRIDGE MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STEEL MEMBERS.

DECK REMOVALS: DUE TO THE POSSIBLE PRESENCE OF WELDED ATTACHMENTS TO EXISTING STRUCTURE STEEL (FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.), PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRINGERS WHICH ARE TO REMAIN. REPLACE OR REPAIR STRINGERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. SUBMIT PROPOSED REPAIRS, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, IN WRITING TO THE DIRECTOR AT LEAST 20 DAYS BEFORE PERFORMING REPAIR WORK.

EXTRANEOUS MEMBERS: REMOVE EXISTING EXTRANEOUS MEMBERS (I.E., FINISHING MACHINE AND FORM SUPPORTS, ETC., AND THE SUPPORT FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) ATTACHED BY WELDED CONNECTION TO THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACE SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

LOADING LIMITATIONS: NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF THE ALLOWABLE UNIT STRESSES AS DEFINED IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION, ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. SUBMIT STRUCTURAL ANALYSIS COMPUTATIONS, BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE REMOVAL METHODS OR EQUIPMENT TO THE DIRECTOR AT LEAST 20 DAYS BEFORE CONSTRUCTION BEGINS.

MEASURE & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 50 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):
THE ULTIMATE BEARING VALUE IS 54 TONS PER PILE FOR THE ABUTMENT PILES.

ABUTMENT PILES:
6 PILES 15 FEET LONG, ORDER LENGTH

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:

THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE TYPE B GRANULAR MATERIAL, 703.16.C, PLACED IN 6 INCH [150 mm] LIFTS AND COMPACTED IN ACCORDANCE WITH 304.04.

UTILITY LINES:

THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILTIY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:

GENERAL: THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMITTAL REQUIREMENTS: AN OHIO REGISTERED ENGINEER SHALL PREPARE, SEAL AND DATE PLANS FOR A JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS, SUFFICIENT TO PERFORM THE WORK DESCRIBED IN THE PLANS. SUBMIT THREE SETS OF THESE PLANS TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN.

JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE OHIO REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSIS OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE JACKING POINTS.
3. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT.
4. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES, PUMPS WITH 3 WAY RETRACTOR VALVE, PRESSURE GAGES, FLOW CONTROL VALVES, ETC., IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL JACKS FOR EACH ABUTMENT OR PIER SHALL BE CONNECTED TOGETHER. ALL JACKS AT EACH ABUTMENT OR PIER SHALL BE THE SAME SIZE.
5. ANALYSIS AND CALCULATIONS OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE AND ANY TEMPORARY OR PERMANENT SUPPORTS. DESIGN CALCULATIONS FOR ANY TEMPORARY OR PERMANENT SUPPORTS.
6. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF ANY TEMPORARY OR PERMANENT SUPPORTS. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.
7. A STEP BY STEP PROCEDURE DETAILING ALL STEPS IN THE JACKING OPERATION.
8. METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS WILL NOT BE PERMITTED.

JACKING SYSTEM REQUIREMENTS: THE ENTIRE SYSTEM INCLUDING JACKS SHALL HAVE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS. FOR LIFTS GREATER THAN 1 INCH [25 mm], JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT. JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOMED PISTON HEAD OR SOME OTHER DEVISE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK. DO NOT USE JACKS ALONE TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. USE TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY DIRECTOR. DO NOT USE SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM. HAVE SPARE EQUIPMENT AVAILABLE ON SITE IN ORDER TO PROCEED WITH THE JACKING IN THE EVENT OF BREAKDOWN. PROVIDE A LIST OF SPARE EQUIPMENT TO THE ENGINEER.

JACKING OPERATION REQUIREMENTS: AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY. THE ONLY EXCEPTION IS THE SITUATION WHERE THE WORK INVOLVES REPLACING OR REHABILITATING INDIVIDUAL BEARINGS; NO PERMANENT SHIMMING IS REQUIRED AND THE HEIGHT OF THE LIFT SHALL NOT EXCEED ¼ INCH [6 mm]. THE MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL 1 INCH [25 mm] OR LESS. IF THIS 1 INCH LIMIT IS TO BE EXCEEDED, PROVIDE CALCULATIONS SHOWING THAT THE SUPERSTRUCTURE COMPONENTS WILL NOT BE TEMPORARILY STRESSED BEYOND ALLOWABLE STRESSES AND THAT NO PERMANENT STRESSES WILL BE INDUCED IN THE COMPONENTS AFTER THEY OBTAIN THEIR FINAL POSITION. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH ODOT'S PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION". THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 519 - PATCHING OF CONCRETE SURFACES, AS PER PLAN
PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

A QUANTITY OF 50 SQ FT. HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

DESIGN AGENCY
BARR ENGINEERING, INC.
1108 CITY PARK AVENUE, SUITE 200
COLUMBUS, OHIO 43206
(614) 224-1941 FAX (614) 224-0907

DESIGNED	DRAWN	REVIEWED	DATE
SRR	RLC	ASB	09/2003
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JEP		8500568	

GENERAL NOTES
BRIDGE NO. WAY-250-1188L
OVER SR 83 / U.S. 250

WAY-30/250-
9.18/9.98

COMPUTED BY : SRR DATE : 09/2003
CHECKED BY : JEP DATE : 09/2003

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTS.	PIER	SUPER	GEN	AS PER PLAN SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/16
503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP				2/16
505	11100	LUMP		PILE DRIVING EQUIPTMENT MOBILIZATION				LUMP	
507	00100	120	FT	STEEL PILES HP 10X42 FURNISHED	120				
507	00150	90	FT	STEEL PILES HP 10X42 DRIVEN	90				
509	10000	147,774	POUND	EPOXY COATED REINFORCING STEEL	29,197	6094	112,483		
511	31500	442	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE			442		
511	41000	23	CU YD	CLASS C CONCRETE PIER ABOVE FOOTING		23			
511	44100	117	CU YD	CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING	117				
511	46500	25	CU YD	CLASS C CONCRETE FOOTING	13	12			
513	10260	37427	POUNDS	STRUCTURAL STEEL MEMBERS, LEVEL 3			37427		
513	20000	4074	EACH	WELDED STUD SHEAR CONNECTORS			4074		
513	95030	72	EACH	STRUCTURAL STEEL, MISC.: RETROFIT FOR COVERPLATE ENDS			72		
514	00100	LUMP		SURFACE PREPARATION OF EXISTING STEEL			LUMP		
514	00200	LUMP		FIELD PAINTING OF EXISTING STEEL, PRIME COAT			LUMP		
514	00300	LUMP		FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT			LUMP		
514	00400	LUMP		FIELD PAINTING OF EXISTING STEEL, FINISH COAT			LUMP		
514	00504	150	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			150		
516	11210	114	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			114		
516	13600	125	SQ FT	1" PREFORMED EXPANSION JOINT FILLER				125	
516	44100	14	EACH	ELASTOMERIC BEARING (1'-0" X 1'-0" X 2") WITH INTERNAL LAMINATES (NEOPRENE) AND STEEL LOAD PLATE (1'-1" X 1'-1" X 1½"),			14		
516	46000	1	EACH	BEARING DEVICE, BOLSTER		1			
516	46200	2	EACH	BEARING DEVICE, ROCKER		2			
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		2/16
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC	LUMP				
518	40000	114	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	114				
518	40012	45	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	45				
519	11101	50	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN		50			2/16
526	25000	278	SQ YD	REINFORCED CONCRETE APPROACH SLABS, (T=15")				278	
864	10100	1098	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	167	385	546		

INSPECTION OF EXISTING STRUCTURAL STEEL:

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND BEAMS OR GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511, SUPERSTRUCTURE CONCRETE. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT CAN BE MADE.

REINFORCING STEEL LAP LENGTHS

NO. 4 BAR = 1'-11"
NO. 5 BAR = 2'-5"
NO. 6 BAR = 2'-11"
NO. 8 BAR = 4'-11"
NO. 9 BAR = 6'-2"

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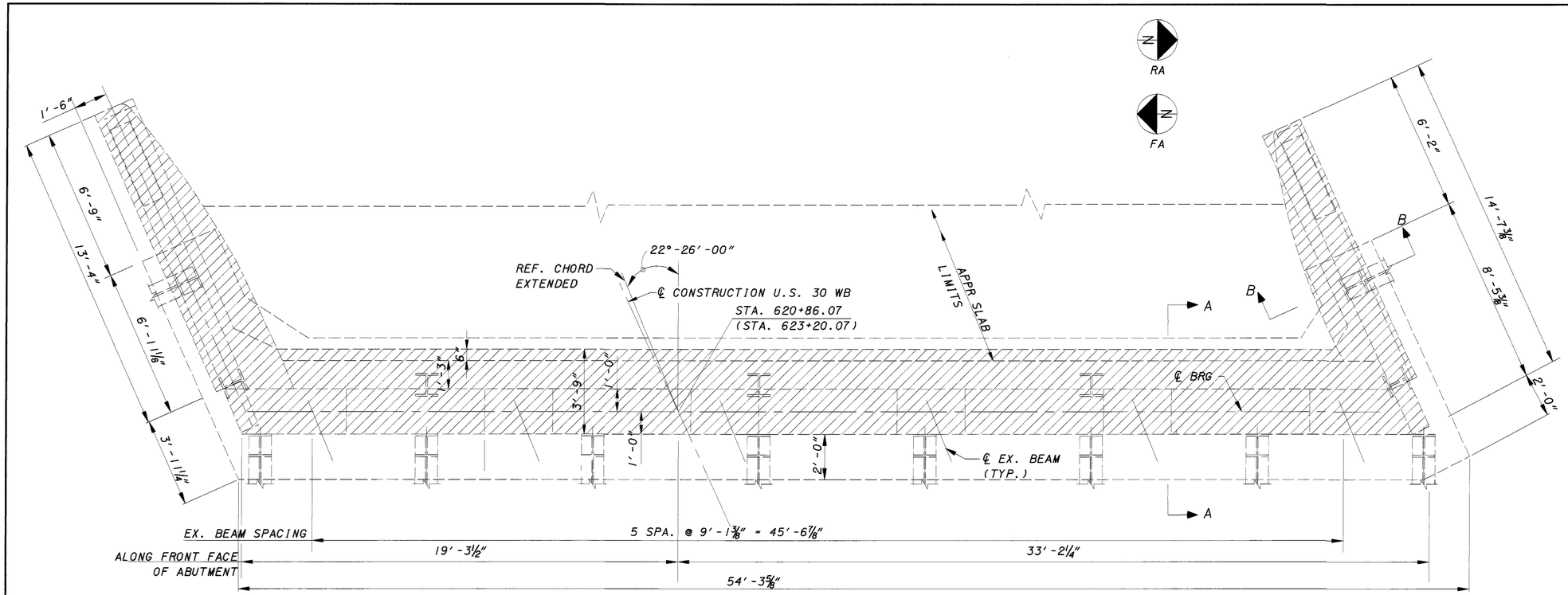
REVIEWED ASB DATE 09/2003
STRUCTURE FILE NUMBER 8500568
DRAWN RLC REVISED
DESIGNED SRR CHECKED JEP

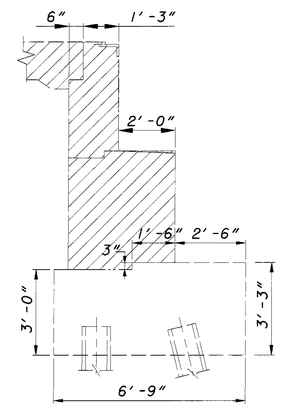
ESTIMATED QUANTITIES & GENERAL NOTES
BRIDGE NO. WAY-250-1188L
OVER SR 83 / U.S. 250

WAY-30/250-
9.18/9.98

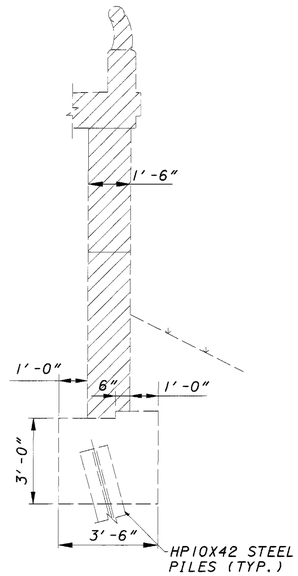


PLAN

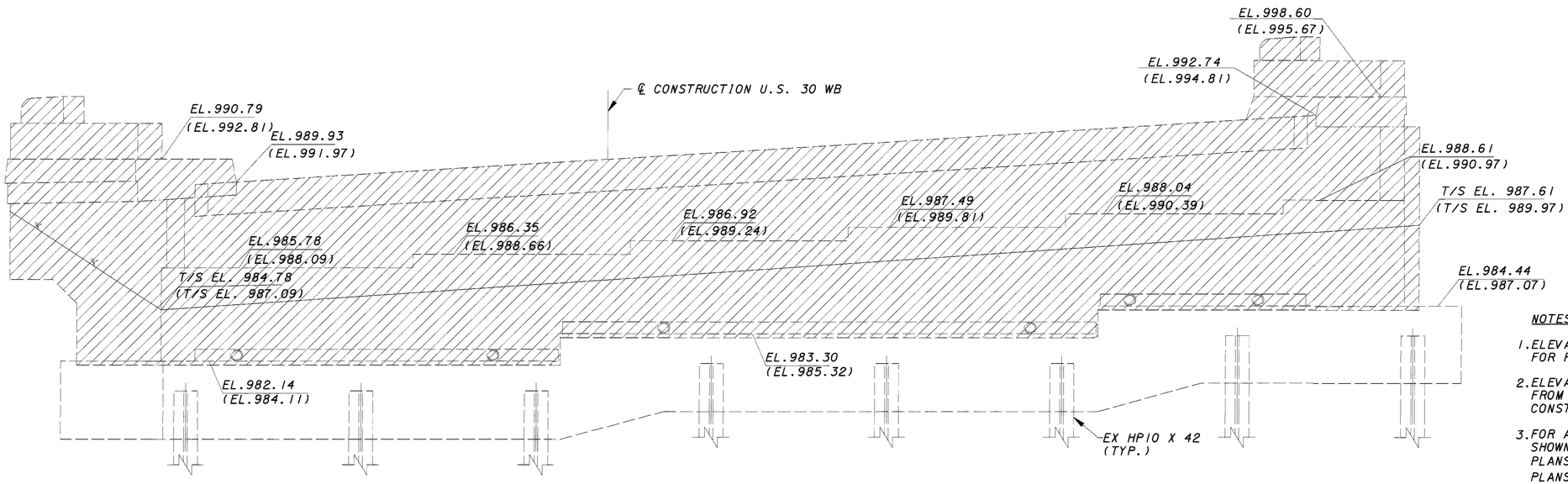
(RA SHOWN, FA SIMILAR)



SECTION A-A



SECTION B-B



ELEVATION

(RA SHOWN, FA SIMILAR)

LEGEND:

▨ - REMOVAL AREA

NOTES:

1. ELEVATIONS IN PARENTHESIS ( ) ARE FOR FA
2. ELEVATIONS AND DIMENSIONS OBTAINED FROM FIELD SURVEY AND ORIGINAL CONSTRUCTION PLANS.
3. FOR ADDITIONAL DETAILS NOT SHOWN, SEE ORIGINAL CONSTRUCTION PLANS. EXISTING CONSTRUCTION PLANS CAN BE OBTAINED FROM THE OFFICE OF STRUCTURAL ENGINEERING, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223.

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COLUMBUS, OHIO 43206
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KCS	KCS	ASB	09/2003
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JEP		8500568	

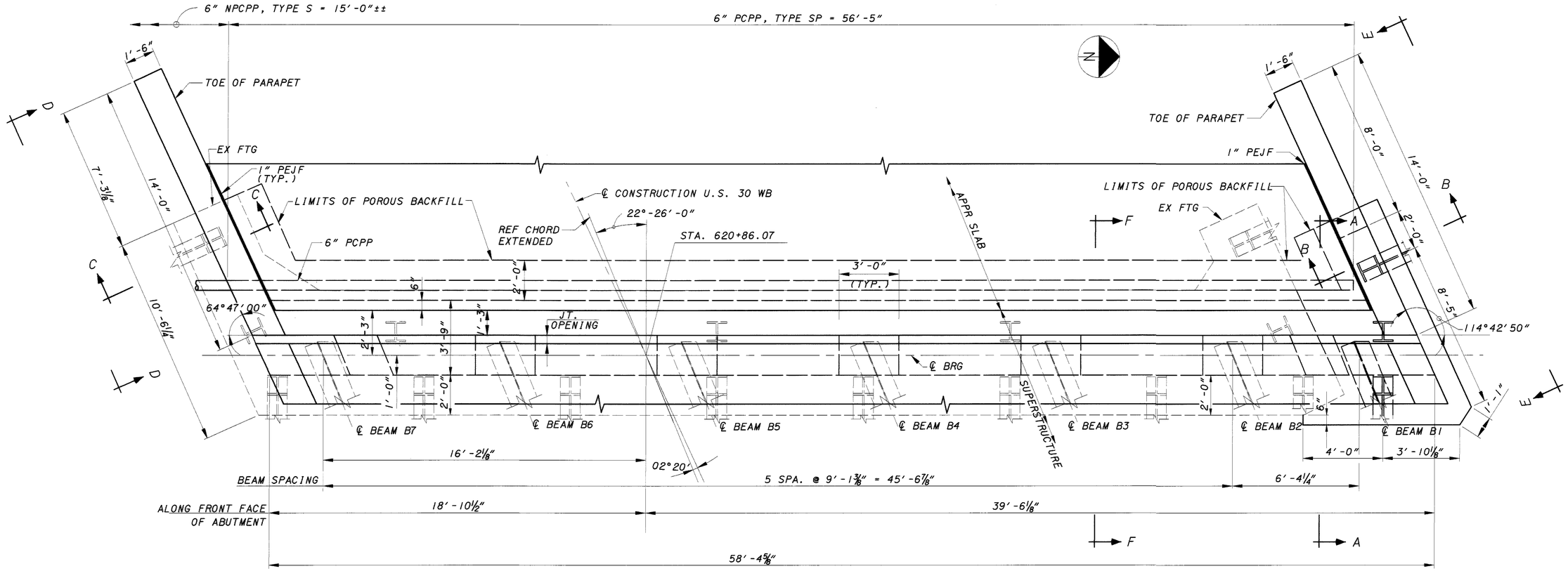
EXISTING ABUTMENT DETAILS

BRIDGE NO. WAY-250-1/88L
OVER SR83/U.S. 250

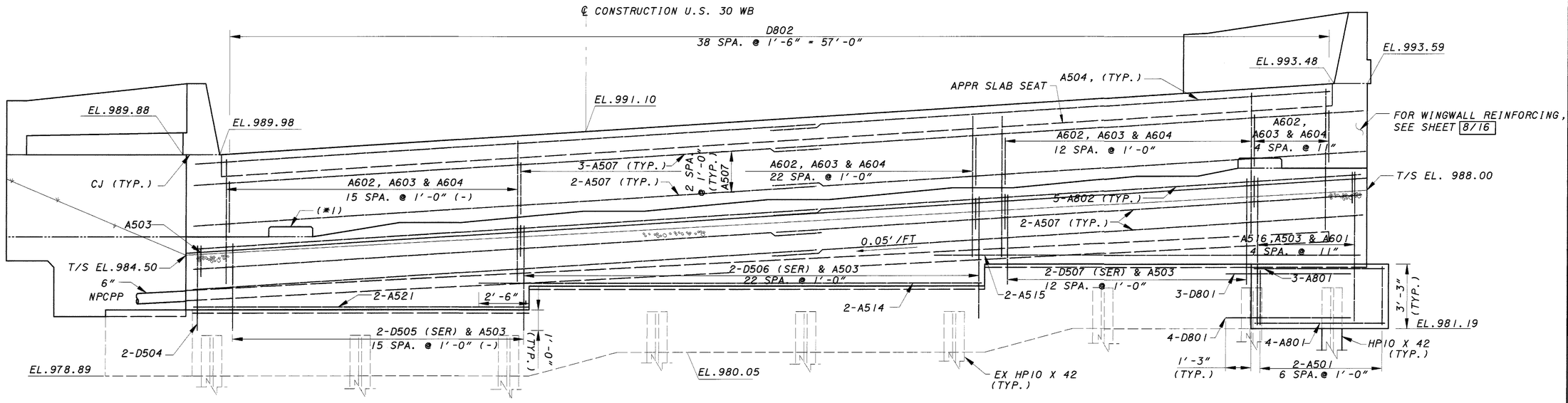
WAY-30/250-9.18/9.98

4/16

443/458



PLAN



ELEVATION

(*1)-FOR SEISMIC PEDESTAL DETAILS, SEE SHEET 8/16

NOTES:
1. SEE SHEET 11/16 FOR STANDARD ABBREVIATIONS.
2. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET 7/16.
3. FOR VIEW D-D & E-E, SEE SHEET 8/16.
4. FOR ELASTOMERIC BEARING DETAILS, SEE SHEET 13/16.
5. FOR BEAM SEAT ELEVATIONS, SEE SHEET 7/16.

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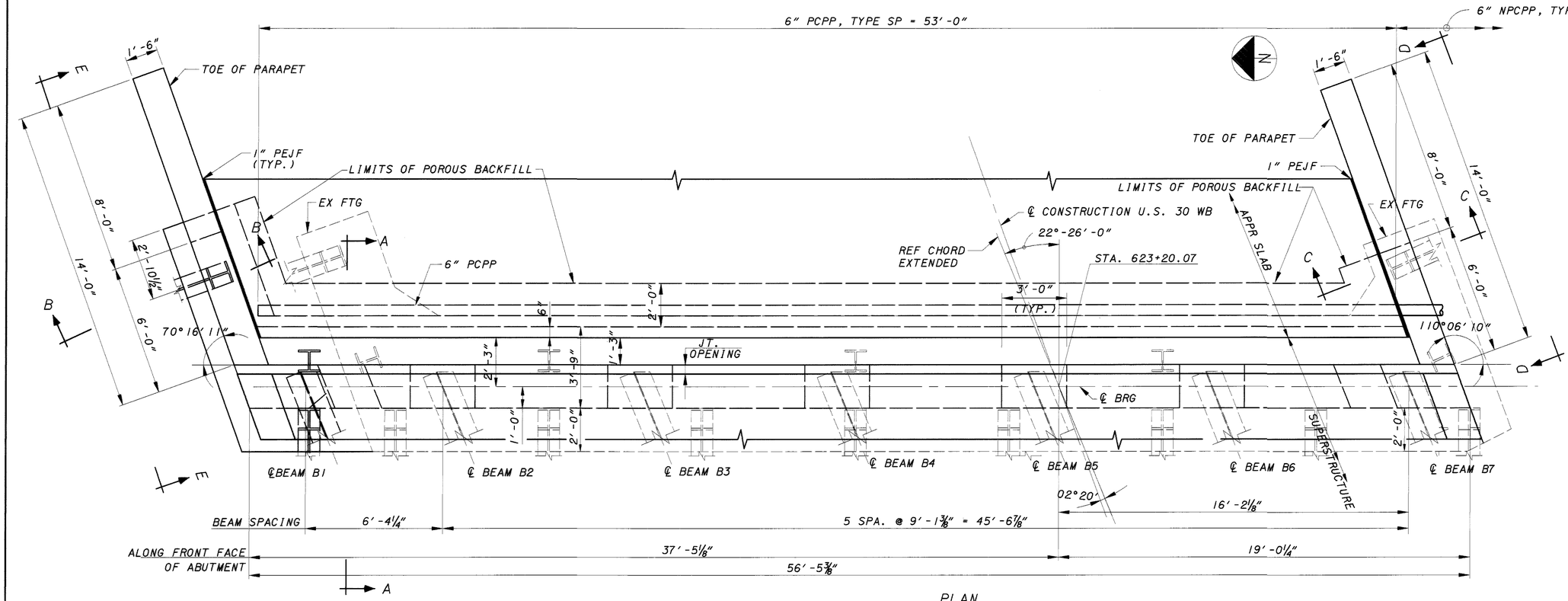
REAR ABUTMENT DETAILS

BRIDGE NO. WAY-250-11.88L
OVER SR83/U.S. 250

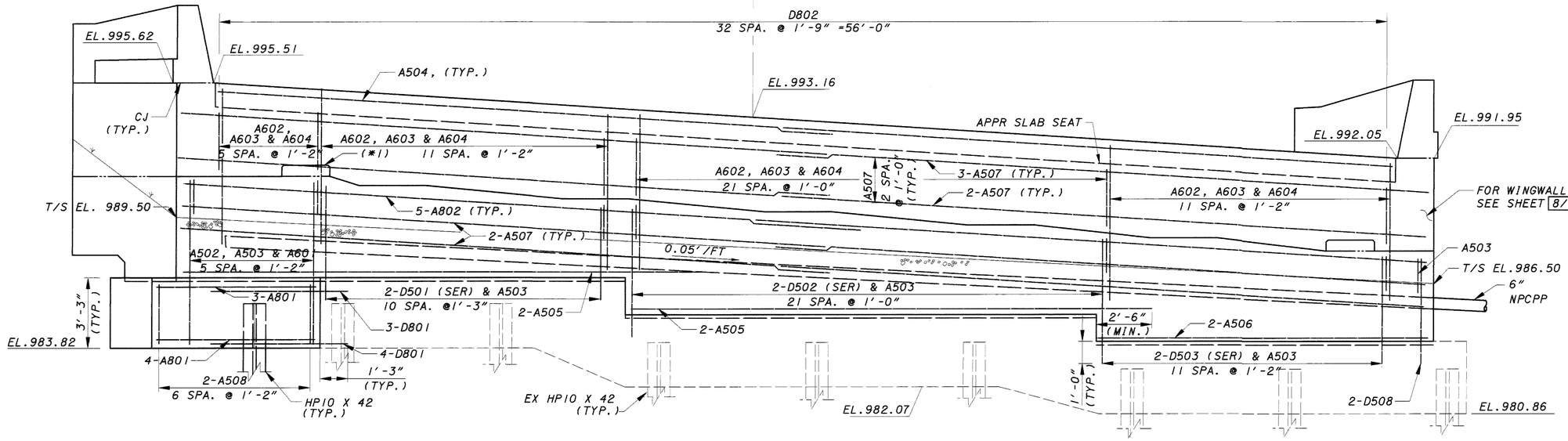
WAY-30/250-9.18/9.98

5/16

444/458



PLAN



(*1)-FOR SEISMIC PEDESTAL DETAILS, SEE SHEET 8/16

ELEVATION

NOTES:
1. SEE SHEET 11/16 FOR STANDARD ABBREVIATIONS.
2. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET 7/16.
3. FOR VIEW D-D & E-E, SEE SHEET 8/16.
4. FOR ELASTOMERIC BEARING DETAILS, SEE SHEET 13/16.
5. FOR BEAM SEAT ELEVATIONS, SEE SHEET 7/16.

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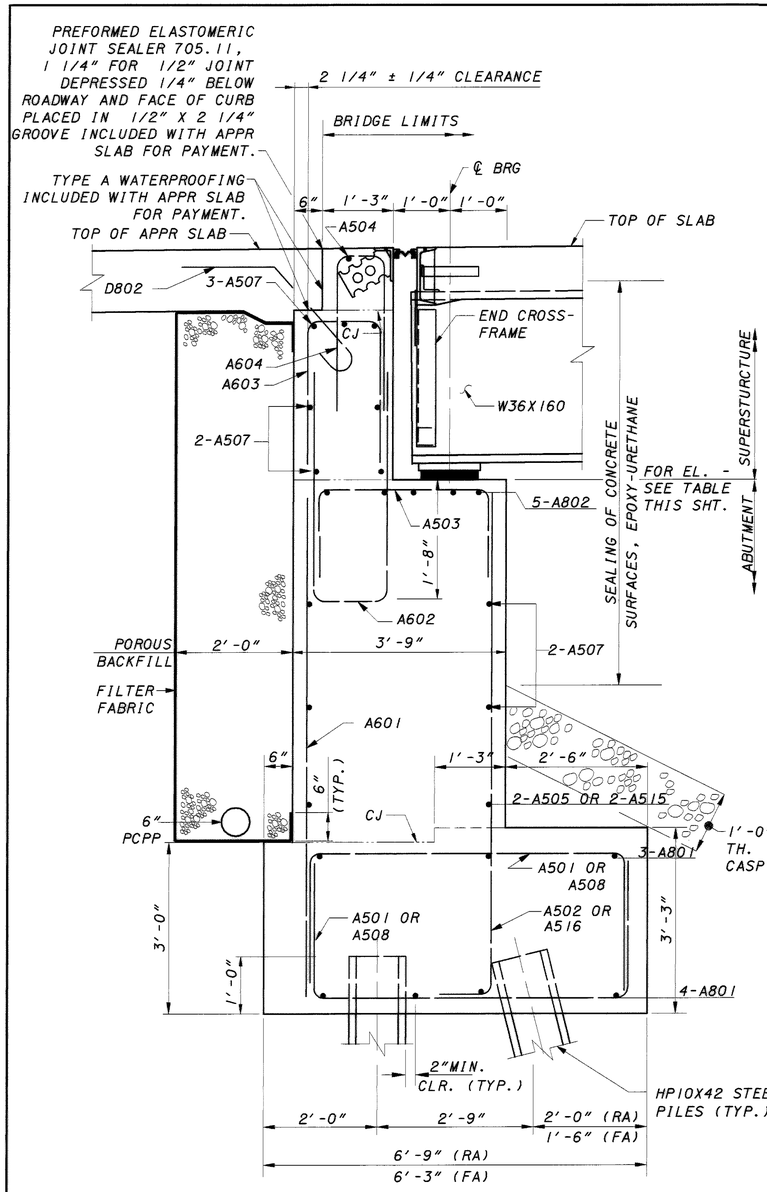
FORWARD ABUTMENT DETAILS

BRIDGE NO. WAY-250-1188L
OVER SR83/U.S.250

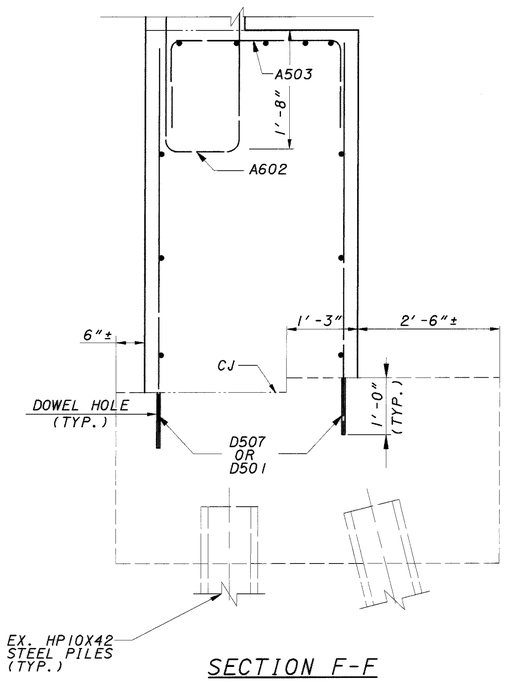
WAY-30/250-9.18/9.98

6/16

445/458

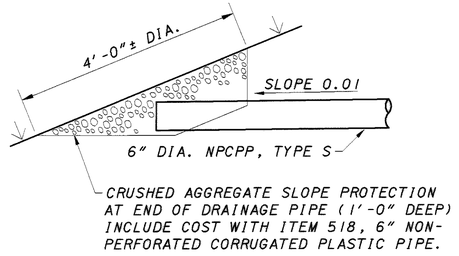


SECTION A-A

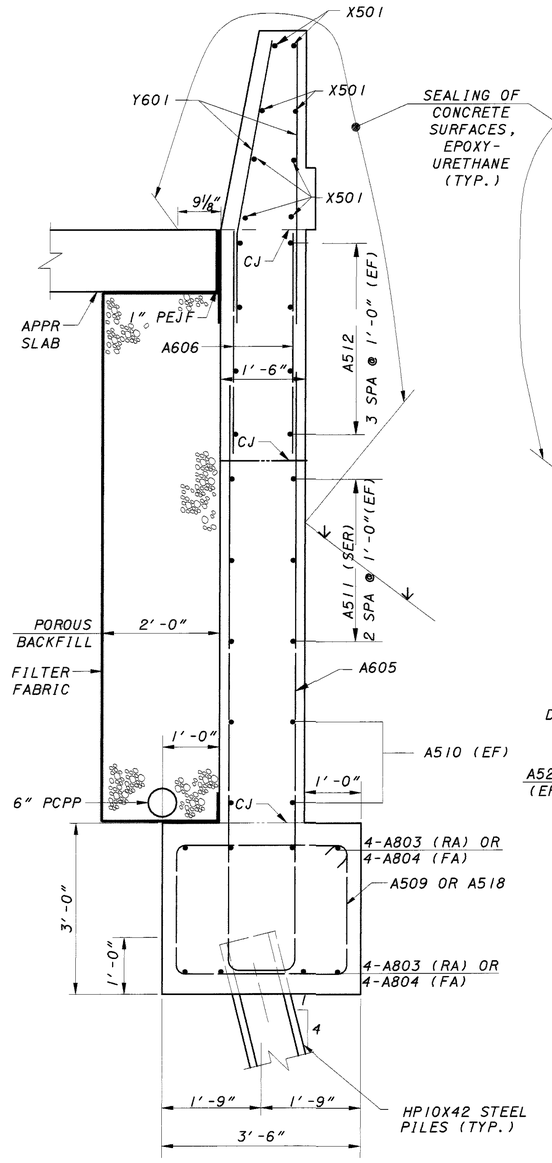


SECTION F-F

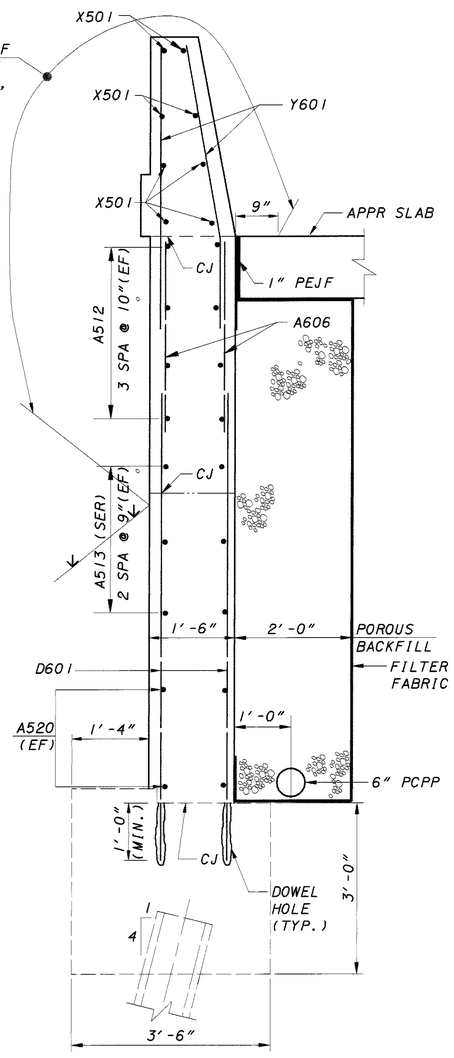
(FOR ADDITIONAL DETAILS NOT SHOWN, SEE SECTION A-A)



TERMINATION OF 6" NPCPP DETAIL



SECTION B-B



SECTION C-C

BEAM SEAT ELEVATIONS							
	BEAM NO. 1	BEAM NO. 2	BEAM NO. 3	BEAM NO. 4	BEAM NO. 5	BEAM NO. 6	BEAM NO. 7
REAR ABUTMENT	989.21	988.80	988.23	987.64	987.06	986.49	985.90
FORWARD ABUTMENT	991.32	990.90	990.31	989.73	989.13	988.53	987.94

NOTES:

1. LIST OF STANDARD ABBREVIATIONS, SEE SHEET 11/16 .
2. ELEVATIONS LISTED IN PARENTHESES () ARE FOR FA
3. SEE SHEET 14/16 FOR STRIP SEAL JOINT DETAILS
4. LAP LENGTH, NO. 4 BAR = 1'-11"
   NO. 5 BAR = 2'-5"
   NO. 6 BAR = 2'-11"
   NO. 8 BAR = 4'-11"
   NO. 9 BAR = 6'-2"

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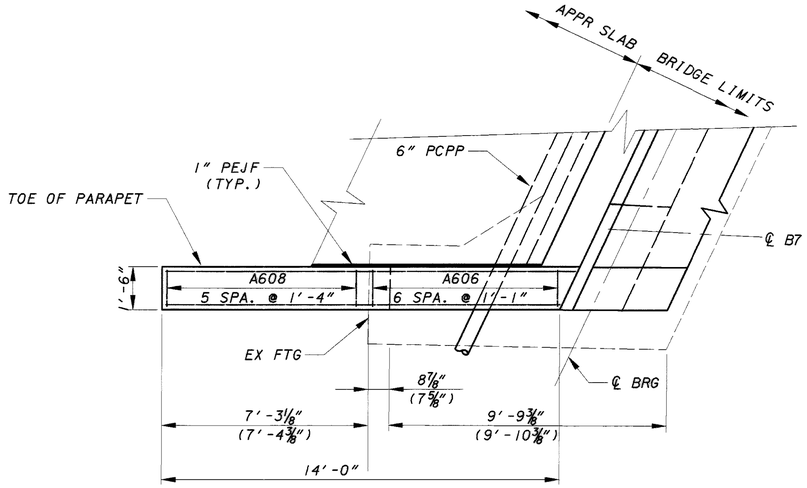
ABUTMENT DETAILS
BRIDGE NO. WAY-250-11.88L
OVER SR 83/U.S. 250

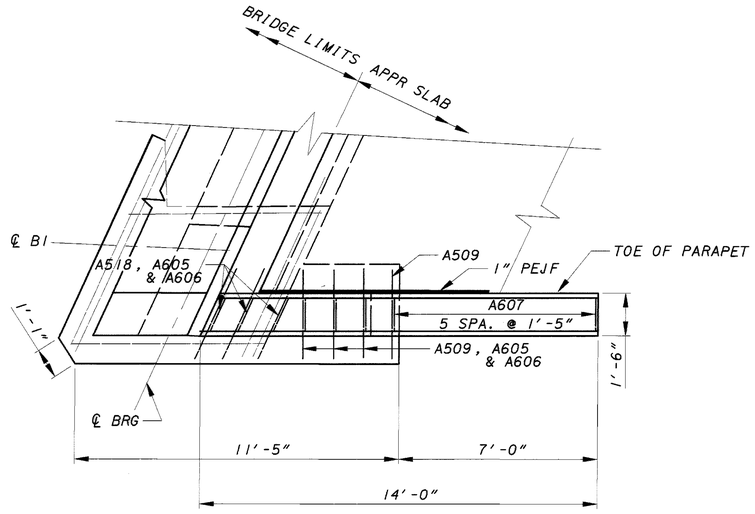
WAY-30/250-9.18/9.98

7/16

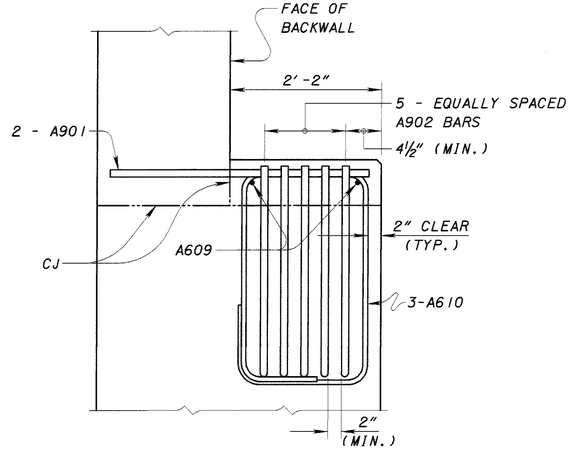
446/458



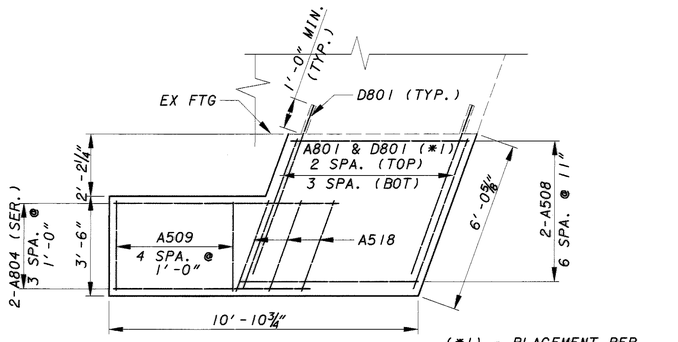
WINGWALL PLAN
(VIEW D-D)



WINGWALL PLAN
(VIEW E-E)

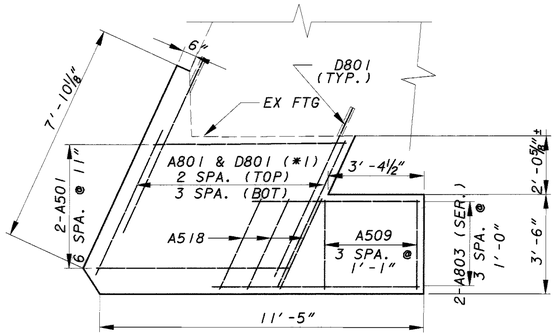


SECTION F-F
(ALONG ℄ OF PEDESTAL)

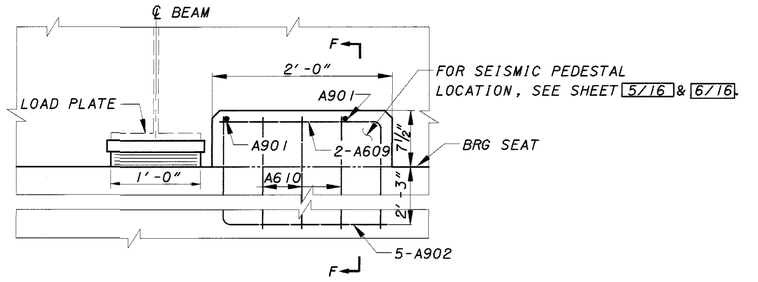


FOOTING PLAN
(FA)
(FOR VIEW E-E)

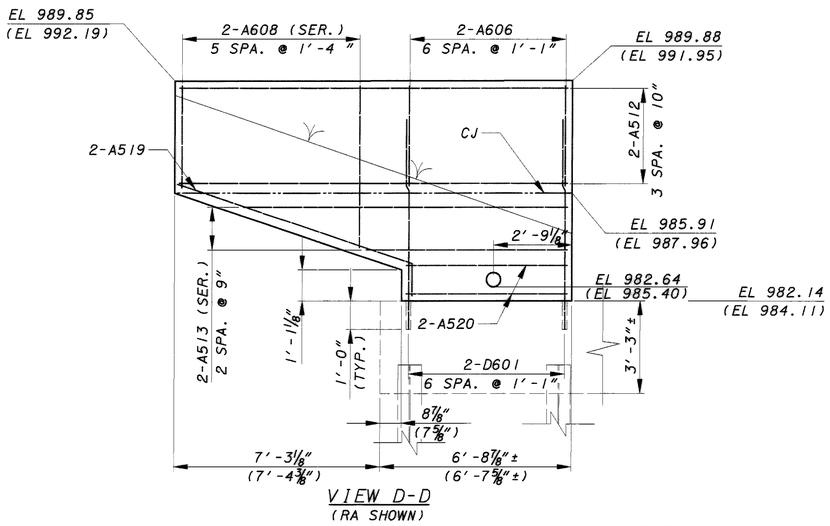
(*1) - PLACEMENT PER SECTION A-A, SHEET 7/16



FOOTING PLAN
(RA)
(FOR VIEW E-E)

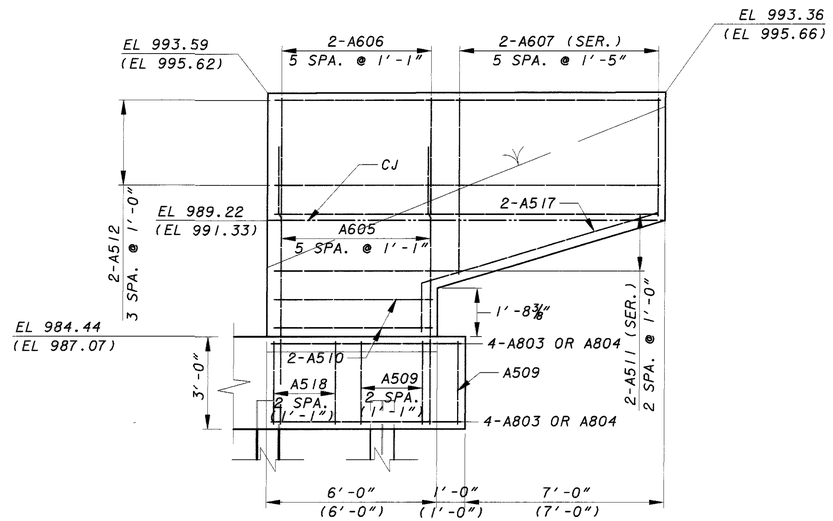


SEISMIC PEDESTAL DETAIL
(FOR DETAILS NOT SHOWN, SEE STD. DWG. A-1-69)



VIEW D-D
(RA SHOWN)

NOTES:
1. SEE SHEET 11/16 FOR STANDARD ABBREVIATIONS.
2. FOR LOCATION OF VIEWS D-D, AND E-E, SEE SHEET 5/16 & 6/16 .
3. ELEVATIONS AND DIMENSIONS FOR FORWARD ABUTMENT ARE SHOWN IN PARENTHESIS.



VIEW E-E
(RA SHOWN)

DESIGN AGENCY
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1108 CITY PARK AVENUE, SUITE 200
COLUMBUS, OHIO 43206
(614) 224-1941 FAX (614) 224-0907

DESIGNED	DRAWN	REVIEWED	DATE
KCS	KCS	ASB	09/2003
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JEP		8500568	

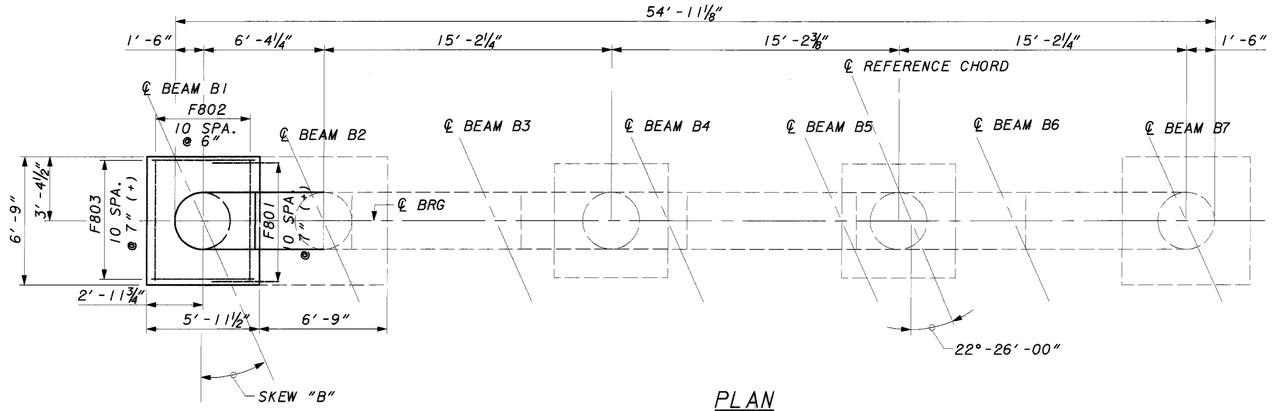
ABUTMENT DETAILS
BRIDGE NO. WAY-250-1/18.81
OVER SR83/U.S.250

WAY-30/250-9.18/9.98

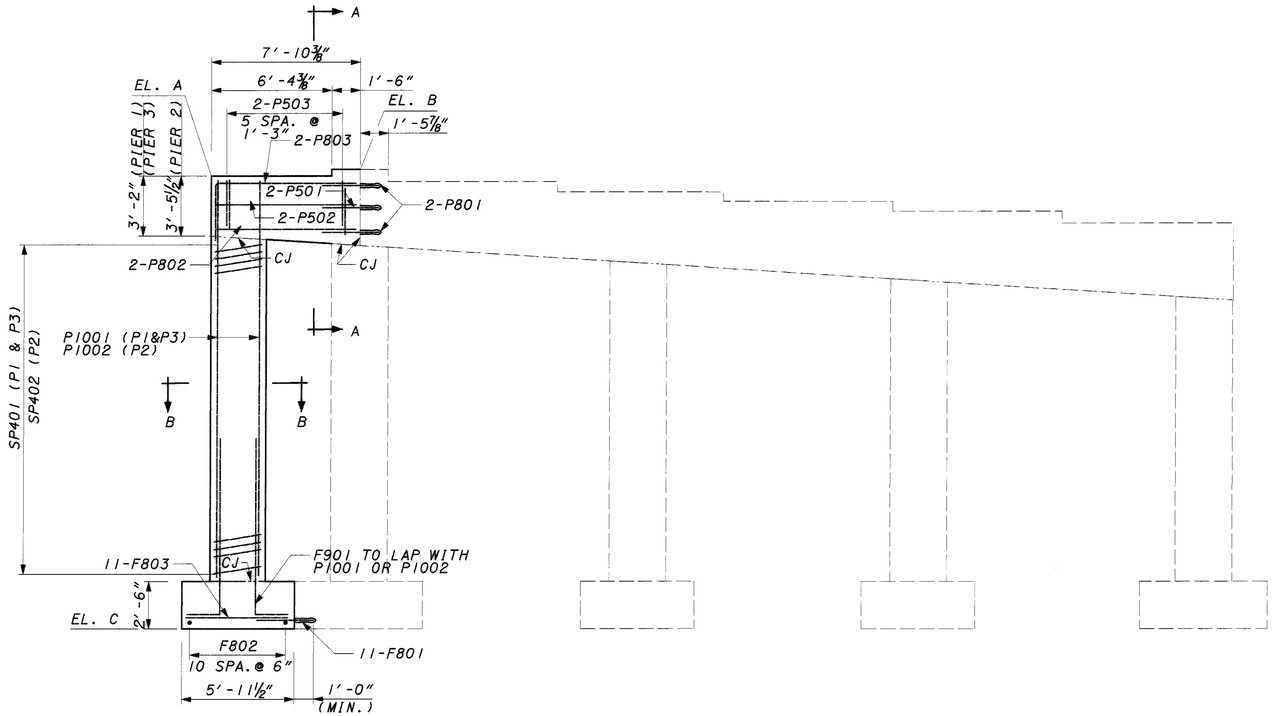
8/16

447/458

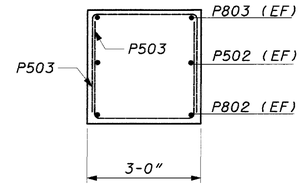
PIER NO.	SKEW "B"	EL. A	EL. B	EL. C
PIER 1	24°-07'-00"	988.68	989.03	965.11
PIER 2	22°-49'-00"	989.27	989.33	967.32
PIER 3	20°-44'-00"	989.86	990.20	966.22



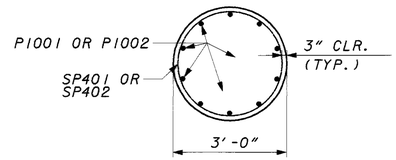
PLAN



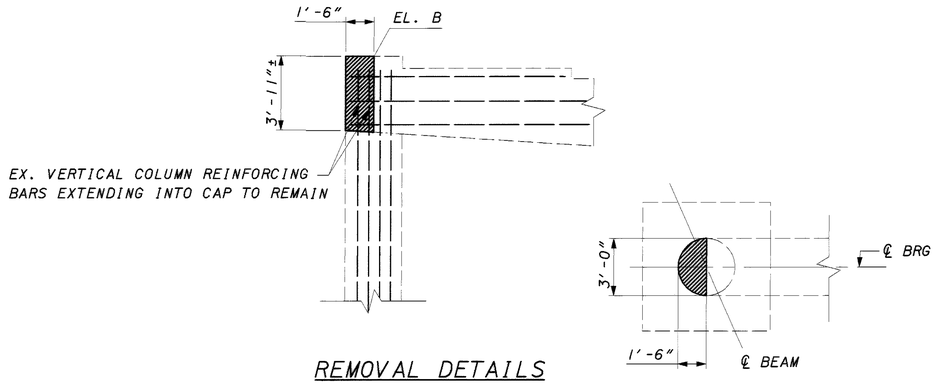
ELEVATION



SECTION A-A



SECTION B-B



REMOVAL DETAILS

LEGEND

▨ - REMOVAL AREA

NOTES:

1. FOR ADDITIONAL EXISTING PIER INFORMATION, SEE ORIGINAL CONSTRUCTION PLANS

2. FOR LIST OF STANDARD ABBREVIATIONS, SEE SHEET 11/16

DESIGN AGENCY
BARR ENGINEERING, INC.
1108 CITY PARK AVENUE, SUITE 200
COLUMBUS, OHIO 43206
(614) 224-1941 FAX (614) 224-0907

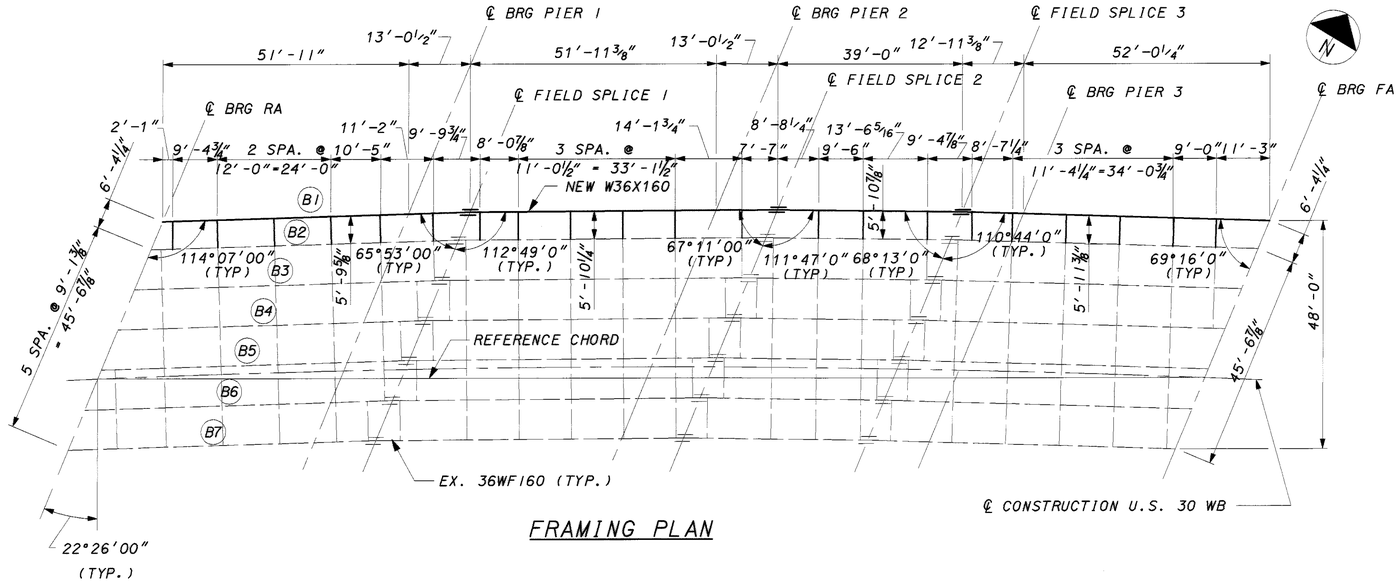
DESIGNED	DRAWN	REVIEWED	DATE
JEP	KCS	GEA	09/2003
CHECKED	REVISED	STRUCTURE FILE NUMBER	
ASB		8500568	

PIER DETAILS
BRIDGE NO. WAY-250-1188L
OVER SR 83 /U.S. 250

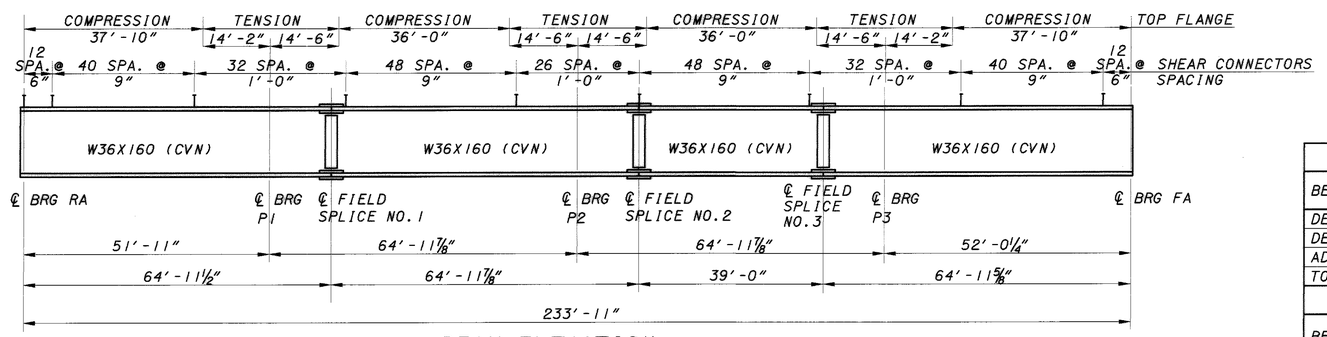
WAY-30/250-9.18/9.98

9/16

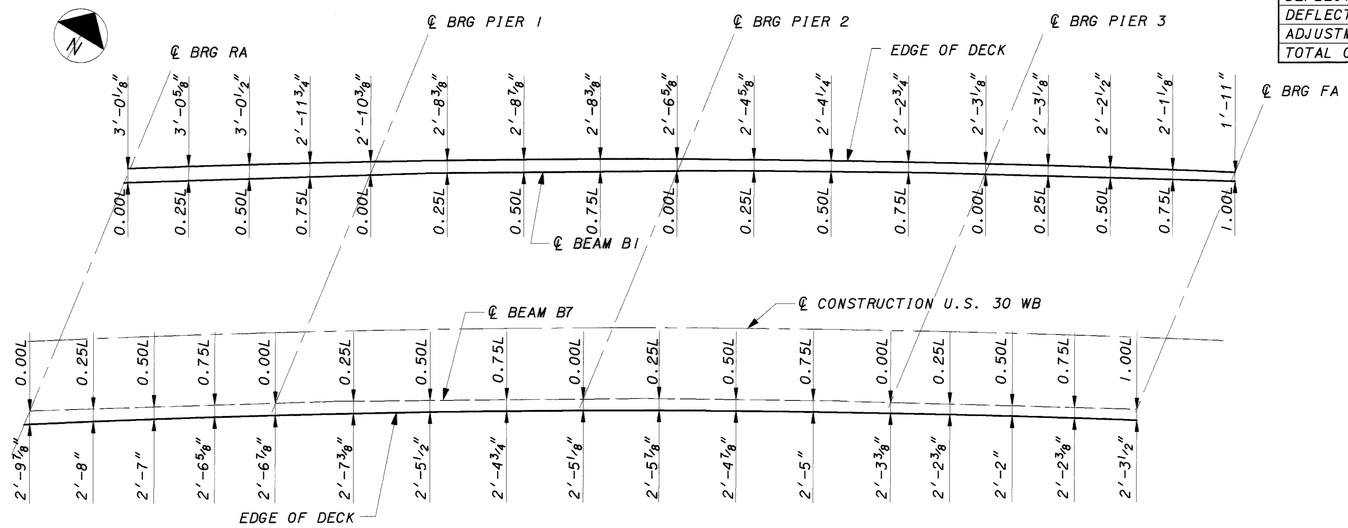
448/458



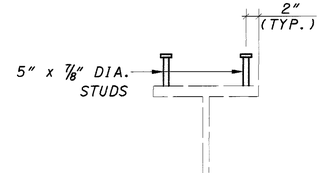
FRAMING PLAN



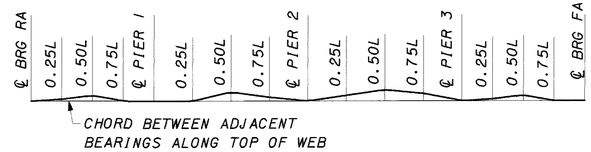
BEAM ELEVATION



DECK OVERHANG DIMENSIONS



SHEAR CONNECTOR DETAIL



CAMBER DIAGRAM

DEFLECTION AND CAMBER							
BEAM B1	SPAN 1			SPAN 2			
	0.25L	0.50L	0.75L	SPLICE 1	0.25L	0.50L	0.75L
DEFLECTION DUE TO WEIGHT OF STEEL	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"
DEFLECTION DUE TO REMAINING DEAD LOAD	3/16"	1/4"	1/8"	3/16"	3/16"	1/4"	3/16"
ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	0"	0"	0"
TOTAL CAMBER	1/4"	5/16"	3/16"	1/4"	1/4"	5/16"	1/4"

DEFLECTION AND CAMBER								
BEAM B1	SPAN 3					SPAN 4		
	SPLICE 2	0.25L	0.50L	0.75L	SPLICE 3	0.25L	0.50L	0.75L
DEFLECTION DUE TO WEIGHT OF STEEL	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"
DEFLECTION DUE TO REMAINING DEAD LOAD	3/16"	3/16"	1/4"	3/16"	3/16"	1/8"	1/4"	3/16"
ADJUSTMENT DUE TO VERTICAL CURVE	0"	0"	0"	0"	0"	0"	0"	0"
TOTAL CAMBER	1/4"	1/4"	5/16"	1/4"	1/4"	3/16"	5/16"	1/4"

NOTES:

1. WELDED ATTACHMENT

WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION" . FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF THE FLANGE, BE NOT MORE THAN 2" LONG AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

2. CHARPY V-NOTCH TOUGHNESS REQUIREMENT

WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), THE MATERIAL SHALL MEET MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF CMS.

3. REFER TO STD. DWG. BS-1-93 FOR SPLICE DETAILS.

4. ALL STRUCTURAL STEEL SHALL BE A709[M] GRADE 50

4. FOR FIELD SPLICE DETAILS, SEE SHEET 13/16 .

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COLUMBUS, OHIO 43206
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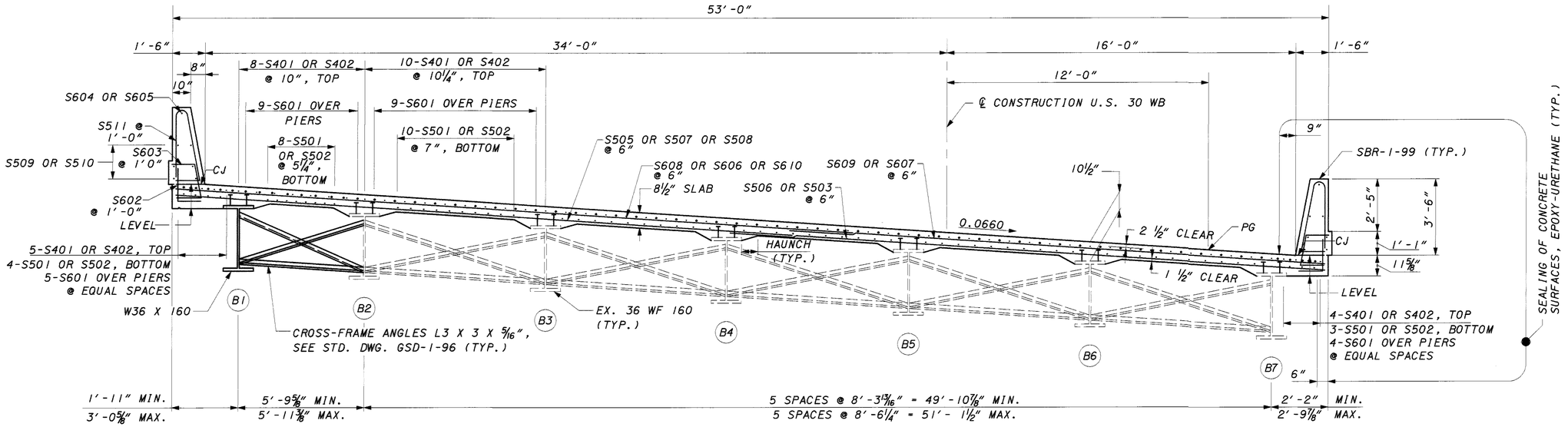
CHECKED	REVISED	STRUCTURE FILE NUMBER	
ASB		8500568	

SUPERSTRUCTURE DETAILS
BRIDGE NO.WAY-250-1188L
OVER SR 83/ U.S. 250

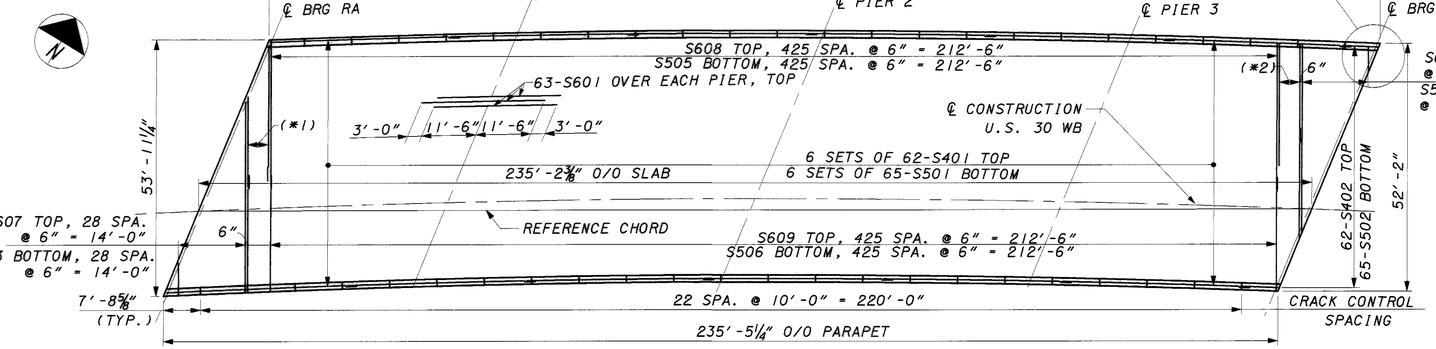
WAY-30/250-9.18/9.98

10/16

449/458



TRANSVERSE SECTION

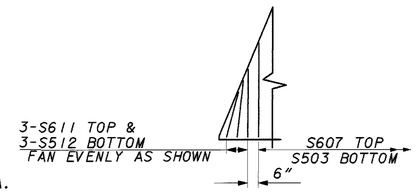


DECK PLAN

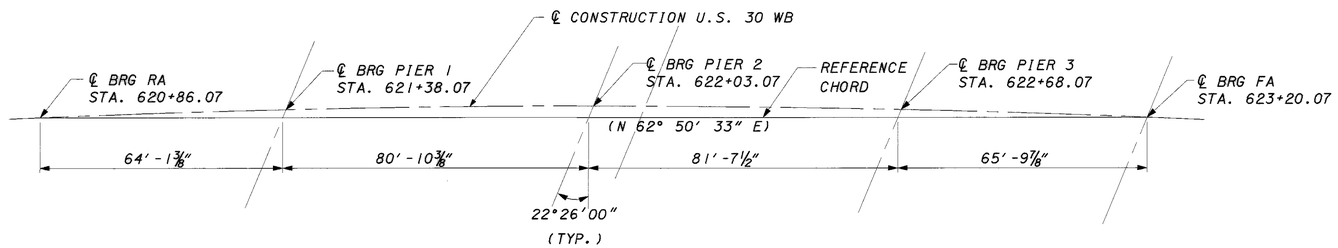
(*1) - S606 TOP, 10 SPA. @ 6" = 5'-0"
S507 BOTTOM, 10 SPA. @ 6" = 5'-0"

(DIMENSIONS MEASURED ALONG OR PERPENDICULAR TO REFERENCE CHORD)

(*2) - S610 TOP, 10 SPA. @ 6" = 5'-0"
S508 BOTTOM, 10 SPA. @ 6" = 5'-0"



DETAIL G



BRIDGE GEOMETRY DIAGRAM

ABBREVIATIONS:

ABUT.	- ABUTMENT	INT.	- INTEGRAL
APPR.	- APPROACH	JT.	- JOINT
APROX.	- APPROXIMATE	PCPP	- PERFORATED CORRUGATED POLYETHYLENE PIPE
BRG	- BEARING, BEARINGS	NPCPP	- NON-PERFORATED CORRUGATED POLYETHYLENE PIPE
BTA	- BRIDGE TEMINAL ASSEMBLY	O/O	- OUT TO OUT
CASP	- CRUSHED AGGREGATE SLOPE PROTECTION	RA	- REAR ABUTMENT
CIP	- CAST IN PLACE	RCP	- ROCK CHANNEL PROTECTION
CONC.	- CONCRETE	R/W	- RIGHT-OF-WAY
CPP	- CORRUGATED PLASTIC PIPE	SPA	- SPACING, SPACINGS
DIA.	- DIAMETER	STA.	- STATION
EL.	- ELEVATION	TBR	- TO BE REMOVED
EMBED.	- EMBEDMENT	TH.	- THICK
E/P	- EDGE OF PAVEMENT	T/CURB	- TOE OF CURB
E/S	- EDGE OF SHOULDER	T/S	- TOP OF SLOPE
EXP	- EXPANSION	T/T	- TOE TO TOE
EX.	- EXISTING	TYP.	- TYPICAL
FA	- FORWARD ABUTMENT		
FTG	- FOOTING		

NOTES:

1. DECK SLAB DEPTH FOR CONCRETE QUANTITY

   THE DIMENSION SHOWN FROM THE TOP OF THE CONCRETE DECK SLAB TO THE TOP OF THE TOP FLANGE IS THE THEORETICAL DESIGN DIMENSION INCLUDING A DESIGN HAUNCH THICKNESS OF 2". THE DEPARTMENT WILL PAY FOR SUPERSTRUCTURE CONCRETE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

2. CONCRETE DECK HAUNCH WIDTH

   A HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 1'-0".

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SUPERSTRUCTURE DETAILS
BRIDGE NO. WAY-250-1188L
OVER SR 83/U.S. 250

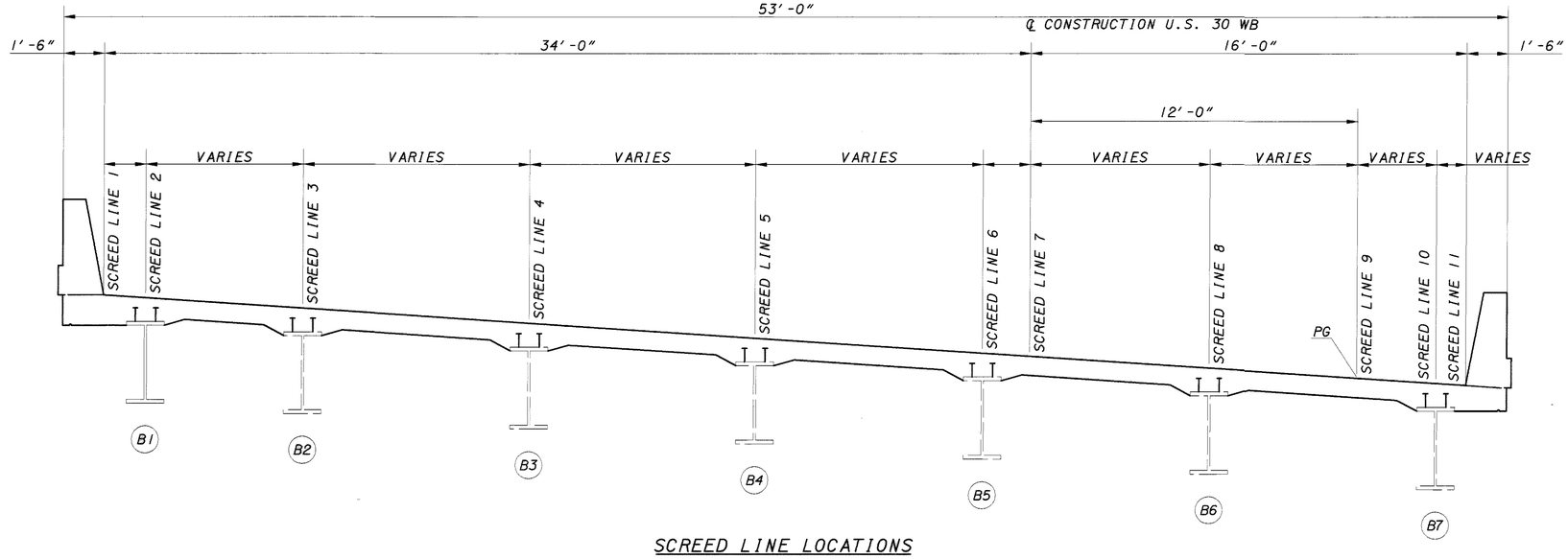
WAY-30/250-
9.18/9.98

11/16

450
458

SCREED ELEVATIONS TABLE

		SCREED LINE 1		SCREED LINE 2		SCREED LINE 3		SCREED LINE 4		SCREED LINE 5		SCREED LINE 6		SCREED LINE 7		SCREED LINE 8		SCREED LINE 9		SCREED LINE 10		SCREED LINE 11	
SPAN NO.	LOCATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION
SPAN NO.1	0.00 L	621+01.56	993.48	621+00.88	993.38	620+98.27	992.97	620+94.51	992.40	620+90.73	991.81	620+86.93	991.24	620+86.07	991.10	620+83.10	990.66	620+80.51	990.26	620+79.26	990.07	620+78.64	989.98
	0.20 L	621+11.81	993.58	621+11.12	993.48	621+08.53	993.08	621+04.80	992.50	621+01.05	991.91	620+97.28	991.33	620+96.47	991.20	620+93.48	990.76	620+90.96	990.36	620+89.66	990.17	620+89.11	990.08
	0.40 L	621+22.07	993.68	621+21.38	993.57	621+18.81	993.17	621+15.11	992.59	621+11.39	992.01	621+07.64	991.42	621+06.87	991.30	621+03.88	990.84	621+01.41	990.46	621+00.09	990.27	620+99.58	990.18
	0.60 L	621+32.32	993.76	621+31.65	993.66	621+29.10	993.26	621+25.43	992.67	621+21.74	992.10	621+18.03	991.51	621+17.27	991.39	621+14.29	990.93	621+11.86	990.55	621+10.53	990.35	621+10.05	990.27
	0.80 L	621+42.57	993.85	621+41.94	993.74	621+39.41	993.34	621+35.77	992.76	621+32.11	992.18	621+28.42	991.60	621+27.67	991.47	621+24.72	991.01	621+22.32	990.63	621+20.99	990.43	621+20.52	990.35
SPAN NO.2	0.00 L	621+52.83	993.93	621+52.24	993.83	621+49.74	993.43	621+46.13	992.85	621+42.49	992.27	621+38.84	991.69	621+38.07	991.56	621+35.17	991.10	621+32.77	990.72	621+31.47	990.52	621+30.99	990.44
	0.20 L	621+65.65	994.05	621+65.15	993.97	621+62.67	993.57	621+59.09	992.99	621+55.50	992.39	621+51.88	991.81	621+51.07	991.68	621+48.25	991.23	621+45.83	990.84	621+44.59	990.65	621+44.08	990.56
	0.40 L	621+78.47	994.17	621+77.95	994.09	621+75.49	993.69	621+71.96	993.10	621+68.40	992.52	621+64.82	991.94	621+64.07	991.80	621+61.23	991.34	621+58.90	990.97	621+57.61	990.76	621+57.16	990.69
	0.60 L	621+91.29	994.29	621+90.78	994.20	621+88.35	993.80	621+84.85	993.21	621+81.33	992.63	621+77.79	992.04	621+77.07	991.92	621+74.23	991.46	621+71.96	991.08	621+70.65	990.88	621+70.25	990.80
	0.80 L	622+04.11	994.39	622+03.63	994.31	622+01.23	993.90	621+97.77	993.32	621+94.28	992.73	621+90.78	992.14	621+90.07	992.02	621+87.26	991.56	621+85.03	991.19	621+83.72	990.97	621+83.34	990.91
SPAN NO.3	0.00 L	622+16.93	994.50	622+16.50	994.42	622+14.13	994.01	622+10.71	993.43	622+07.26	992.85	622+03.80	992.26	622+03.07	992.13	622+00.31	991.67	621+98.09	991.29	621+96.81	991.09	621+96.42	991.02
	0.20 L	622+29.75	994.62	622+29.40	994.55	622+27.05	994.14	622+23.67	993.56	622+20.26	992.97	622+16.84	992.38	622+16.07	992.25	622+13.39	991.79	622+11.16	991.42	622+09.93	991.21	622+09.51	991.14
	0.40 L	622+42.58	994.74	622+42.23	994.68	622+39.91	994.28	622+36.56	993.68	622+33.19	993.10	622+29.81	992.51	622+29.07	992.38	622+26.40	991.92	622+24.22	991.54	622+22.97	991.33	622+22.59	991.26
	0.60 L	622+55.40	994.85	622+55.08	994.80	622+52.79	994.39	622+49.48	993.80	622+46.15	993.21	622+42.80	992.62	622+42.07	992.49	622+39.43	992.03	622+37.28	991.66	622+36.04	991.44	622+35.68	991.38
	0.80 L	622+68.22	994.95	622+67.96	994.91	622+65.69	994.50	622+62.41	993.91	622+59.12	993.33	622+55.81	992.73	622+55.07	992.59	622+52.48	992.14	622+50.35	991.76	622+49.13	991.55	622+48.76	991.48
SPAN NO.4	0.00 L	622+81.05	995.06	622+80.76	995.01	622+78.52	994.60	622+75.28	994.01	622+72.03	993.42	622+68.76	992.83	622+68.07	992.70	622+65.47	992.24	622+63.41	991.87	622+62.15	991.65	622+61.85	991.59
	0.20 L	622+91.31	995.15	622+91.02	995.11	622+88.80	994.70	622+85.59	994.11	622+82.37	993.51	622+79.13	992.92	622+78.47	992.80	622+75.87	992.33	622+73.86	991.97	622+72.59	991.74	622+72.31	991.69
	0.40 L	623+01.57	995.25	623+01.30	995.21	622+99.09	994.80	622+95.92	994.21	622+92.73	993.61	622+89.52	993.02	622+88.87	992.90	622+86.29	992.43	622+84.31	992.07	622+83.04	991.85	622+82.78	991.79
	0.60 L	623+11.83	995.35	623+11.58	995.31	623+09.40	994.90	623+06.26	994.30	623+03.10	993.71	622+99.92	993.11	622+99.27	992.99	622+96.72	992.53	622+94.76	992.16	622+93.50	991.94	622+93.25	991.88
	0.80 L	623+22.09	995.43	623+21.89	995.40	623+19.73	994.99	623+16.62	994.39	623+13.49	993.79	623+10.34	993.21	623+09.67	993.08	623+07.17	992.62	623+05.21	992.25	623+03.98	992.02	623+03.72	991.97
	1.00 L	623+32.35	995.51	623+32.20	995.49	623+30.06	995.07	623+26.98	994.48	623+23.88	993.90	623+20.76	993.30	623+20.07	993.16	623+17.63	992.70	623+15.66	992.33	623+14.47	992.11	623+14.18	992.05



SCREED LINE LOCATIONS

DESIGN AGENCY
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1108 CITY PARK AVENUE, SUITE 200
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(614) 224-1941 FAX (614) 224-0907

REVIEWED	DATE
ASB	09/2003
DRAWN	REVISED
KCS	
DESIGNED	CHECKED
KCS	JEP

STRUCTURE FILE NUMBER 8500568

SCREED ELEVATIONS
BRIDGE NO. WAY-250-1/88L
OVER SR83/U.S. 250

WAY-30/250-9.18/9.98

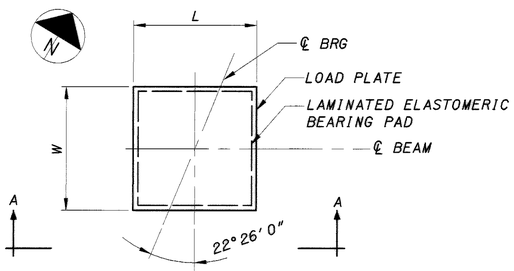
12/16

451/458

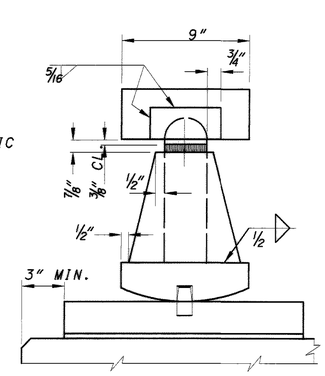
LAMINATED ELASTOMERIC BEARINGS

LOCATION	BEARING DIMENSIONS						STEEL LOAD PLATE	REACTIONS		MAXIMUM
	L	W	ti	te	T	N	LENGTH X WIDTH X THICKNESS	DL	LL	DESIGN LOAD
ABUTMENTS	1'-0"	1'-0"	3/8"	1/4"	2"	4	1'-1" X 1'-1" X 1 1/2"	62 k	32 k	94 k

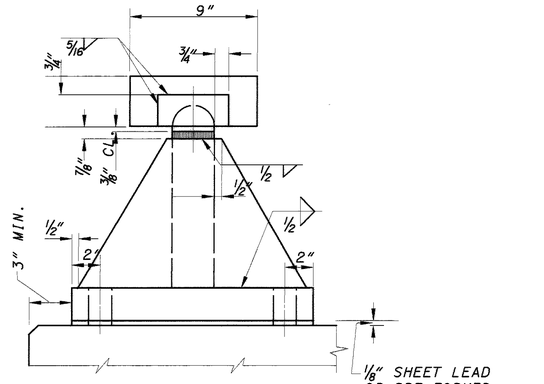
ti = THICKNESS OF INTERNAL LAYER
te = THICKNESS OF EXTERNAL LAYER
T = TOTAL THICKNESS OF ELASTOMERIC BEARING
N = NO. OF STEEL LAMINATES
INTERNAL STEEL LAMINATE THICKNESS = 0.0747"
DUROMETER OF ELASTOMER = 50 DUROMETER
LOAD PLATE THICKNESS IS MEASURED AT CL BEARINGS.



PLAN
(EXPANSION BEARING)

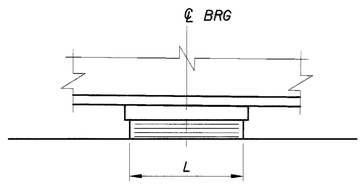


EXPANSION BEARING (R-175)
(PIER 1 & PIER 3-BEAM 1)

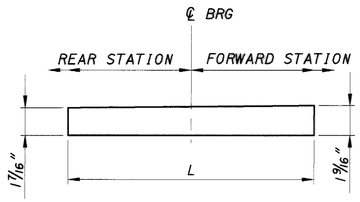


FIXED BEARING (B-175)
(PIER 2-BEAM1)

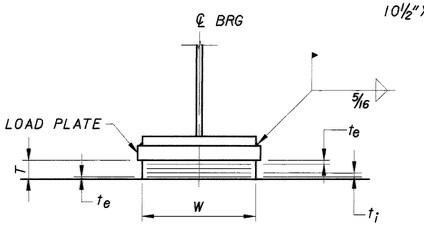
FOR ADDITIONAL DETAILS, SEE STD. DWG. RB-1-55



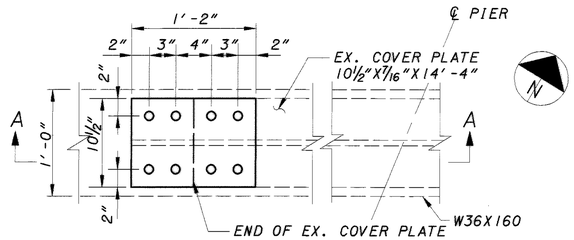
VIEW A-A



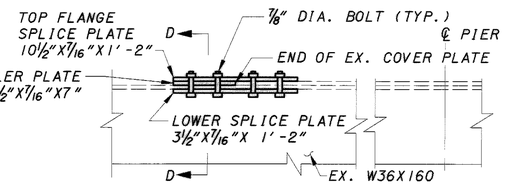
BEVEL LOAD PLATE DETAIL



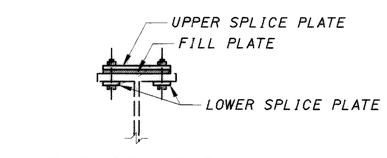
LAMINATED ELASTOMERIC EXPANSION BEARING
(ABUTMENTS)
(FOR ADDITIONAL DETAILS, SEE STD. DWG. SICD-1-96)



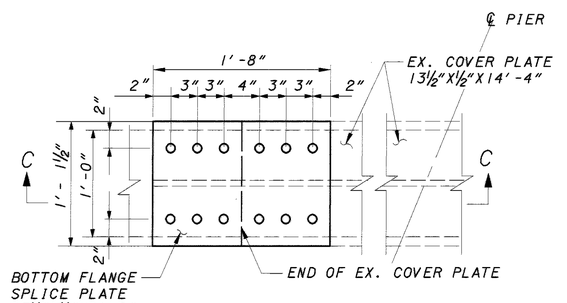
TOP FLANGE PLAN VIEW
(ONE END SHOWN, OPPOSITE SIMILAR)
(BEAMS 2-7)



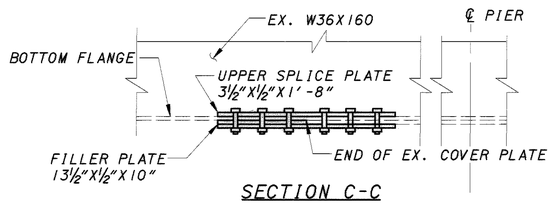
SECTION A-A



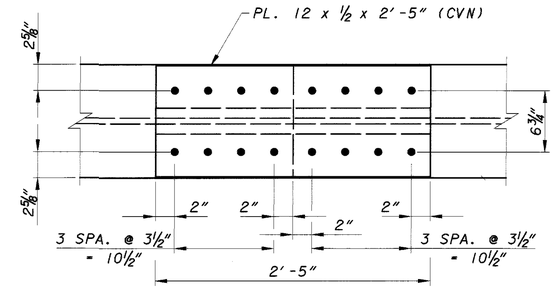
SECTION D-D
(TOP FLANGE SHOWN,
BOTTOM FLANGE SIMILIAR)



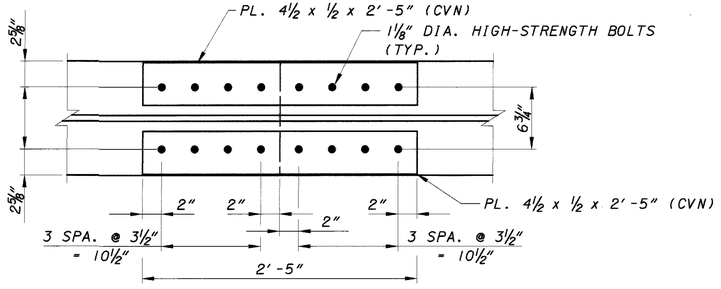
BOTTOM FLANGE
(ONE END SHOWN, OPPOSITE SIMILAR)
(BEAMS 2-7)



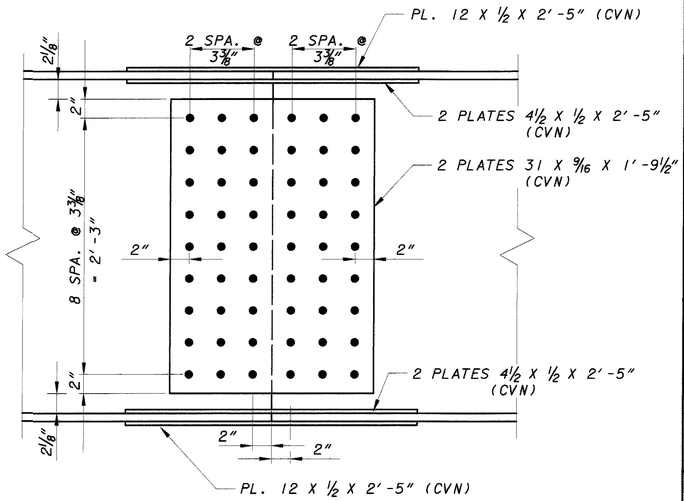
SECTION C-C



PLAN - TOP FLANGE
(BEAM 1 - EXTERIOR
PORTION OF FLANGE SHOWN)



PLAN - BOTTOM FLANGE
(BEAM 1 - INTERIOR
PORTION OF FLANGE SHOWN)



FIELD SPLICE DETAILS
(BEAM 1)
(FOR ADDITIONAL DETAILS, SEE STD. DWG. BS-1-93)

NOTES:

1. ELASTOMERIC BEARINGS
THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

2. LOAD PLATE
THE STEEL LOAD PLATE SHALL BE THE SAME MATERIAL AS THE ATTACHED STRUCTURAL STEEL AND BE SIMILARLY CLEANED AND COATED. SURFACE PREPARATION AND PRIMING SHALL BE DONE IN THE SHOP AND BE INCLUDED IN THE PRICE BID FOR THE BEARINGS. FIELD COATS SHALL BE INCLUDED IN THE PRICE BID FOR PAINTING MAIN STRUCTURAL STEEL.

THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

3. RETROFIT FOR COVERPLATE ENDS
THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE RETROFIT SPLICE PLATES. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 513, STRUCTURAL STEEL, MISC. (RETROFIT FOR COVERPLATE ENDS).

DESIGN AGENCY
BARR ENGINEERING, INC.
1108 CITY PARK AVENUE, SUITE 200
COLUMBUS, OHIO 43206
(614) 224-1941 FAX (614) 224-0907

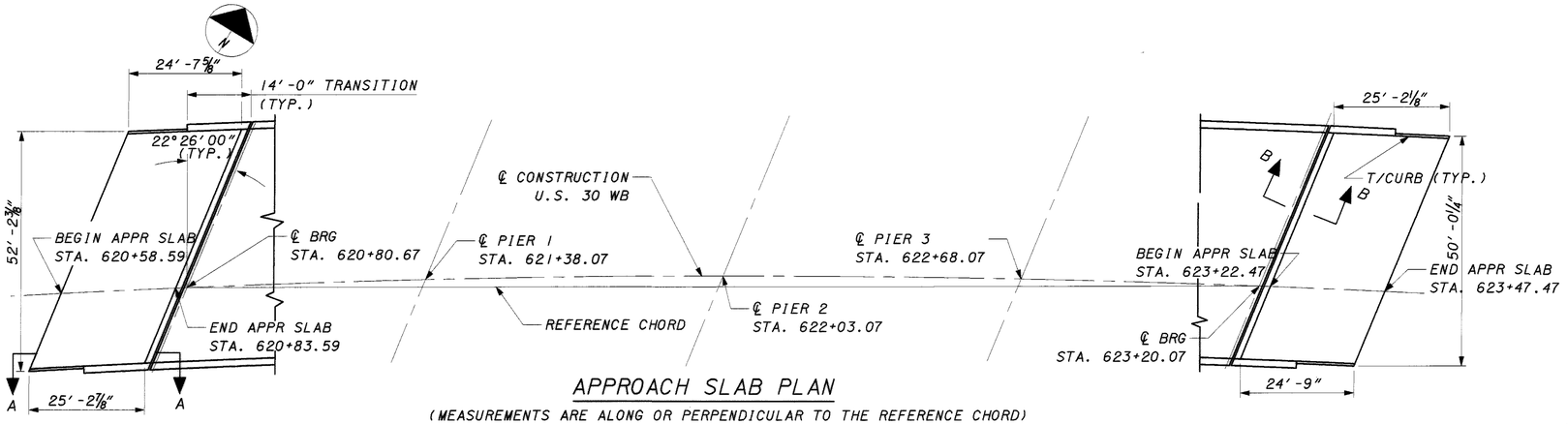
REVISED	DATE
ASB	09/2003
STRUCTURE FILE NUMBER	8500568
DRAWN	KCS
REVISED	
DESIGNED	KCS
CHECKED	JEP

BEARING & SPLICE DETAILS
BRIDGE NO. WAY-250-1/8.8L
OVER SR83/U.S.250

WAY-30/250-9.18/9.98

13/16

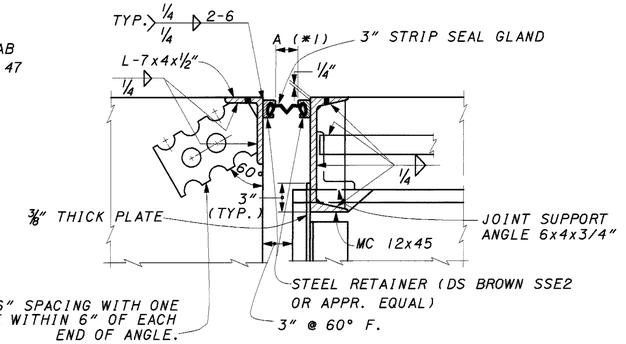
452/458



APPROACH SLAB PLAN

(MEASUREMENTS ARE ALONG OR PERPENDICULAR TO THE REFERENCE CHORD)

(*1) - FOR DIMENSION A, SEE TABLE BELOW

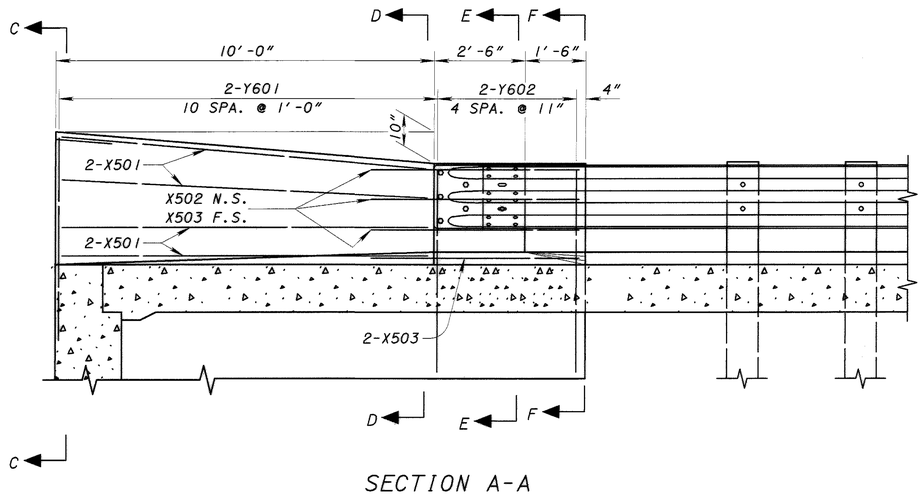


SECTION B-B

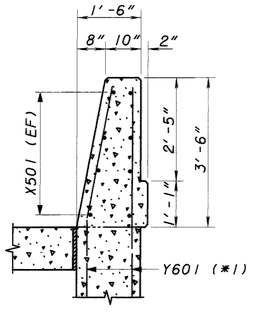
(FOR DETAILS NOT SHOWN SEE STD. DWG. EXJ-4-87)

AMBIENT TEMPERATURE F°	DIMENSION "A"
30°	1 7/8"
40°	1 13/16"
50°	1 11/16"
60°	1 5/8"
70°	1 9/16"
80°	1 7/16"
90°	1 3/8"

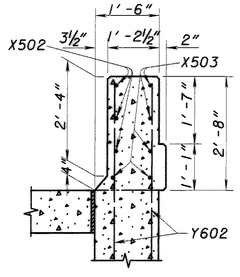
BACKWALL SHALL BE BATTERED TO OBTAIN DIM. A



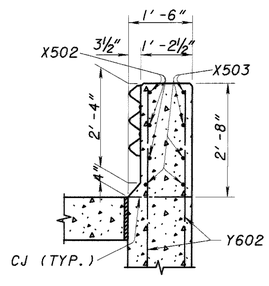
SECTION A-A



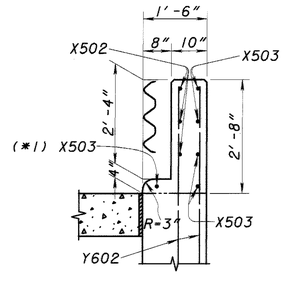
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

(*1)-FIELD BEND IF NECESSARY

NOTES:

1. INSTALLATION OF SEAL
   DURING INSTALLATION OF THE SUPPORT/ARMOR FOR THE SUPERSTRUCTURE SIDE OF THE EXPANSION JOINT SEAL, THE SEATING OF BEAMS ON BEARINGS SHALL BE CAREFULLY OBSERVED TO ASSURE THAT POSITIVE BEARING IS MAINTAINED. PROPER VERTICAL FIT OF THE SUPPORT/ARMOR ON THE BEAMS SHALL BE ACHIEVED BY POSITIONING OF THE BEVEL FILL PLATES RATHER THAN BY CLAMPING FORCES.
2. STRIP SEAL GLAND
   STRIP SEAL GLAND SIZE SHALL BE 3".
3. FOR ADDITIONAL NOTES & DETAILS SEE STD. DWG. EXJ-4-87, SBR-1-99, GR-3.1, AND GR-3.2.

DESIGN AGENCY
BARR ENGINEERING, INC.
1108 CITY PARK AVENUE, SUITE 200
COLUMBUS, OHIO 43206
(614) 224-1941 FAX (614) 224-0907

DESIGNED JEP | DRAWN KCS | CHECKED ASB | REVIEWED GEA | DATE 09/2003 | REVISED | STRUCTURE FILE NUMBER 8500568

APROACH SLAB & SUPERSTRUCTURE DETAILS
BRIDGE NO.WAY-250-1188L
OVER SR 83/ U.S. 250

WAY-30/250-9.18/9.98

14/16

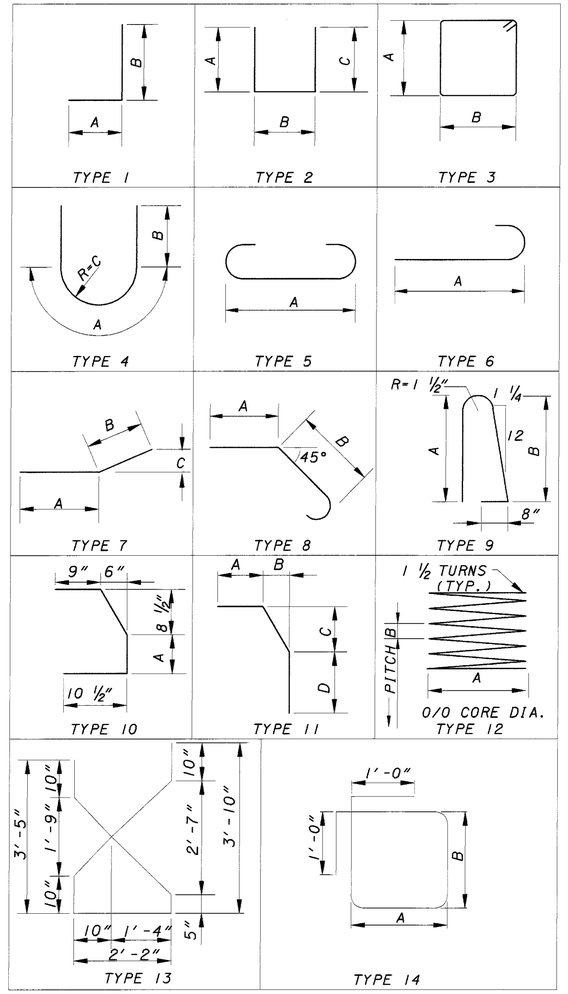
453/458

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	INCR.
ABUTMENT									
D501	2	4'-1"	1262	STR					
	S.O.	TO							1"
	11	5'-1"							
D502	2	5'-6"	3098	STR					
	S.O.	TO							1/8"
	22	5'-9"							
D503	2	4'-9"	1552	STR					
	S.O.	TO							1"
	12	5'-7"							
D504	2	4'-3"	9	STR					
D505	2	4'-3"	1886	STR					
	S.O.	TO							1"
	16	5'-2"							
D506	2	4'-1"	2903	STR					
	S.O.	TO							1"
	23	6'-0"							
D507	2	4'-5"	1573	STR					
	S.O.	TO							1"
	13	5'-3"							
D508	2	4'-8"	10	STR					
D601	28	7'-3"	305	STR					
D801	14	6'-0"	224	STR					
D802	72	4'-8"	889	8	1'-5"	2'-5"			
A501	14	11'-6"	168	2	2'-9"	6'-3"	2'-9"		
A502	6	8'-3"	51	1	1'-0"	7'-4"			
A503	110	6'-0"	688	2	1'-6"	3'-3"	1'-6"		
A504	4	28'-6"	119	STR					
A505	4	23'-4"	97	STR					
A506	2	14'-6"	30	STR					
A507	44	29'-11"	1373	STR					
A508	14	11'-0"	161	2	2'-9"	5'-9"	2'-9"		
A509	9	10'-6"	99	3	2'-6"	3'-0"			
A510	8	5'-6"	46	STR					
A511	2	6'-8"	757	STR					
	S.O.	TO							3'-5"
	3	13'-6"							
A512	32	13'-6"	451	STR					
A513	2	7'-0"	692	STR					
	S.O.	TO							2'-3"
	3	11'-5"							
A514	2	24'-10"	52	STR					
A515	2	21'-0"	44	STR					
A516	5	8'-2"	42	1	1'-0"	7'-3"			
A517	4	10'-2"	42	7	1'-8"	8'-7"	2'-5"		
A518	6	11'-0"	70	3	2'-6"	3'-3"			
A519	4	9'-8"	40	7	1'-1"	8'-8"	2'-9"		
A520	8	6'-3"	52	STR					
A521	2	16'-6"	34	STR					

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	INCR.
ABUTMENT									
A601	11	7'-3"	120	STR					
A602	109	9'-7"	1576	2	4'-4"	1'-3"	4'-4"		
A603	109	5'-9"	948	2	2'-5"	1'-3"	2'-5"		
A604	109	4'-5"	730	2	2'-0"	0'-9"	2'-0"		
A605	12	21'-2"	382	2	10'-3"	1'-0"	10'-3"		
A606	52	3'-6"	273	STR					
A607	2	4'-1"	1109	STR					
	S.O.	TO							5"
	6	6'-2"							
A608	2	3'-7"	1000	STR					
	S.O.	TO							5"
	6	5'-8"							
A609	8	4'-3"	51	1	1'-8"	2'-9"			
A610	12	10'-7"	191	14	1'-10"	2'-10"			
A801	14	5'-7"	209	STR					
A802	20	30'-3"	1615	STR					
A803	1	5'-10"	838	STR					
	S.O.	TO							6"
	4	7'-3"							
A804	1	6'-11"	950	STR					
	S.O.	TO							4"
	4	7'-11"							
A901	8	3'-4"	91	STR					
A902	20	4'-4"	295	1	1'-8"	2'-9"			
		ABUTMENT TOTAL = 29,197 LBS							
PIER									
P501	6	3'-6"	22	STR					
P502	6	7'-6"	47	STR					
P503	36	7'-3"	272	2	2'-6"	2'-6"	2'-6"		
P801	12	3'-6"	112	STR					
P802	6	7'-6"	120	STR					
P803	6	10'-2"	162	1	2'-10"	7'-6"			
F801	33	3'-6"	308	STR					
F802	33	6'-3"	551	STR					
F803	33	5'-5"	477	STR					
F901	30	10'-5"	1064	1	1'-6"	9'-3"			
P1001	20	21'-3"	1828	STR					
P1002	10	19'-8"	846	STR					
SP401	2	147'-0"	196	12	2'-6"	11"			
SP402	1	132'-8"	89	12	2'-6"	11"			
		PIER TOTAL = 6094 LBS							

BENDING DIAGRAMS



NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. "STR" IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
4. S.O. DENOTES SERIES OF.
5. REFER TO C.M.S. SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
6. ALL REINFORCING STEEL CLEARANCES ARE 2" UNLESS OTHERWISE NOTED.
7. SPIRAL REINFORCING BAR SPACERS:
CONCRETE SPACERS OR OTHER APPROVED NONCORROSIVE SPACING DEVICES SHALL BE USED AT SUFFICIENT INTERVAL (NEAR THE BOTTOM AND AT INTERVALS NOT EXCEEDING 10 FEET) TO INSURE CONCENTRIC SPACING FOR THE ENTIRE CAGE LENGTH. SPACERS SHALL BE CONSTRUCTED OF APPROVED MATERIAL EQUAL IN QUALITY AND DURABILITY TO THE CONCRETE SPECIFIED FOR THE SHAFT. THE SPACERS SHALL HAVE ADEQUATE DIMENSIONS TO ENSURE A MINIMUM 3 INCH CLEAR SPACE BETWEEN THE OUTSIDE OF THE REINFORCING CAGE AND THE DESIGN DIMENSION OF THE DRILLED SHAFT OR COLUMN. CYLINDRICAL CONCRETE FEET (BOTTOM SUPPORTS) SHALL BE PROVIDED TO ENSURE THAT THE BOTTOM OF THE CAGE IS MAINTAINED AT THE PROPER DISTANCE ABOVE THE BASE.

DESIGN AGENCY
BARR ENGINEERING INC.
1100 CITYWIDE PLAZA SUITE 200
COLUMBUS, OH 43206
TEL. 614.224-1941 FAX (614)224-0907

DESIGNED	DRAWN	REVIEWED	DATE
JEP	RLC	ASB	09/2003
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SRR		8500568	

REINFORCING STEEL LIST
BRIDGE NO. WAY-250-1188L
WAY-250 OVER SR-83 / USR-250

WAY-30/250-9.18/9.98

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	INCR.
SUPERSTRUCTURE									
S401	372	40′-0″	9940	STR					
S402	62	7′-6″	311	STR					
S501	390	40′-0″	16271	STR					
S502	65	10′-5″	707	STR					
S503	2	6′-0″	696	STR					
	S.O.	TO							1′-3″
	29	40′-0″							
S505	426	27′-2″	12070	STR					
S506	426	28′-9″	12775	STR					
S507	1	21′-8″	316	STR					
	S.O.	TO							1′-2″
	11	33′-4″							
S508	1	21′-8″	312	STR					
	S.O.	TO							1′-1″
	11	32′-8″							
S512	2	3′-3″	25	STR					
	S.O.	TO							9″
	3	4′-9″							
S601	189	26′-0″	7381	STR					
S606	1	17′-8″	388	STR					
	S.O.	TO							1′-2″
	11	29′-4″							
S607	2	6′-0″	2004	STR					
	S.O.	TO							1′-3″
	29	40′-0″							
S608	426	31′-5″	20102	STR					
S609	426	24′-10″	15889	STR					
S610	1	17′-8″	382						
	S.O.	TO							1′-1″
	11	28′-8″							
S611	2	3′-3″	36	STR					
	S.O.	TO							9″
	3	4′-9″							

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	INCR.
PARAPETS									
S509	72	40′-0″	3001	STR					
S510	12	10′-0″	125	STR					
S511	470	7′-5″	3636	9	3′-3″	3′-0″			
S602	470	2′-6″	1765	1	1′-1″	1′-7″			
S603	470	3′-7″	2530	10	1′-7″				
S604	12	40′-0″	721	STR					
S605	2	10′-0″	30	STR					
X501	32	10′-0″	334	STR					
X502	12	5′-6″	69	14					
X503	20	5′-6″	115	STR					
Y601	44	6′-0″	397	STR					
Y602	20	5′-2″	155	STR					
		SUPERSTRUCTURE TOTAL = 112,483 LBS							
		GRAND TOTAL = 147,774 LBS							

DESIGN AGENCY
BARR ENGINEERING INC.
1100 CITYPLACE ONE, SUITE 200
COLUMBUS, OH 43206
TEL. 614.224-1941 FAX (614.224-0907

DESIGNED	DRAWN	REVIEWED	DATE
JEP	RLC	ASB	09/2003
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SRR		8500568	

REINFORCING STEEL LIST
BRIDGE NO. WAY-250-1188L
WAY-250 OVER SR-83 / USR-250

WAY-30/250-9.18/9.98

16/16

455/458