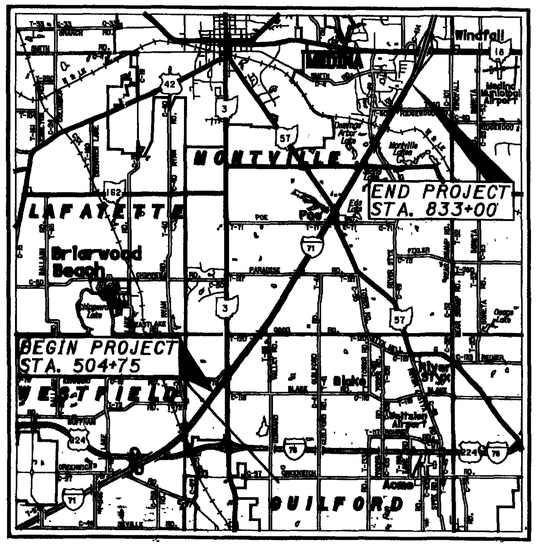
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
MED-71-9.56

GUILFORD & MONTVILLE TOWNSHIPS
MEDINA COUNTY



LOCATION MAP

LONGITUDE: 81°50'00" W LATITUDE: 41°05'00" N

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)	36,700
DESIGN YEAR ADT (2025)	58,330
DESIGN HOURLY VOLUME (2025)	5,833
DIRECTIONAL DISTRIBUTION	60%
TRUCKS (24 HOUR B&C)	26%
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH

DESIGN FUNCTIONAL CLASSIFICATION - RURAL INTERSTATE

DESIGN EXCEPTIONS NONE

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:

Ohio Department of Transportation

ROADWAY
ODOT District One - Production
1885 N. McCullough Lima, Ohio 45801

BRIDGES
ODOT Cent. Office - Office of Production
1980 W. Broad Columbus, Ohio 43223

NOISE WALLS
Engineering Associates, Inc.
1935 Eagle Pass Wooster, Ohio 44691

INDEX OF SHEETS:

ENGINEERS SEAL - ROADWAY:	ENGINEERS SEAL - NOISE WALLS:	ENGINEERS SEAL - BRIDGE:
STATE OF OHIO DARREN J. SCHIMMOELLER E-67072 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO A. FREDERICK SELING, JR E-46722 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO TEDDY A. ANTONIOS #E-54493 REGISTERED PROFESSIONAL E...
SIGNED: Darren J. Schimmoeller DATE: 11-30-04	SIGNED: A. Frederick Seling Jr. DATE: 01/11/05	SIGNED: Teddy Antonios DATE: 11/17/2004
THE ENGINEER'S SEAL IN THIS BOX APPLIES TO ALL NON-BRIDGE AND NON-NOISE WALL SHEETS.	THE ENGINEER'S SEAL IN THIS BOX APPLIES TO ALL NOISE WALL SHEETS.	THE ENGINEER'S SEAL IN THIS BOX ENCOMPASSES ALL BRIDGES FROM SHEET 253 TO 545.

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/28/00				TC-12.30	1/19/01					
BP-5.1	7/28/00	GR-5.1	4/18/03	AS-1-81	7/19/02	TC-21.20	1/19/01	MT-35.10	4/20/01	CB-2.2	7/19/02
BP-9.1	10/17/03	GR-5.3	4/18/03	BS-1-93	7/19/02	TC-22.10	1/19/01	MT-95.30	4/19/02	CB-3.1	7/19/02
		GR-6.1	4/18/03	DS-1-92	7/19/02	TC-22.20	1/19/01	MT-95.40	7/18/03	CB-3.2	7/19/02
F-1.1	7/16/04	GR-6.2	4/18/03	GSD-1-96	7/19/02	TC-41.10	1/19/01	MT-95.82	4/19/02	HW-1.1	7/20/01
F-2.1	7/28/00			ICD-1-82	7/19/02	TC-41.20	1/19/01	MT-99.20M	1/30/95	HW-2.1	7/19/02
F-3.1	7/28/00	RM-1.1	4/18/03			TC-42.10	1/19/01	MT-99.30	4/16/04	HW-2.2	7/19/02
F-3.3	7/28/00	RM-4.2	4/18/03	PCB-91	7/19/02	TC-42.20	4/20/01	MT-99.31	4/16/04	MH-1.1	7/19/02
F-3.4	7/28/00	RM-4.3	4/18/03	PSID-1-99	7/19/02	TC-51.11	4/20/01	MT-101.60	10/18/02	DM-1.1	7/18/03
		RM-4.5	4/18/03	SICD-1-96	7/19/02	TC-52.10	4/20/01	MT-101.70	10/18/02	DM-1.2	7/19/02
GR-1.1	7/16/04	RM-4.6	4/18/03	TST-1-99	7/19/02	TC-52.20	4/20/01	MT-102.10	10/18/02	DM-4.1	7/19/02
GR-2.1	4/18/03					TC-61.10	1/19/01	MT-105.10	10/18/02	DM-4.3	7/19/02
GR-2.2	4/18/03	MH-1.2	7/19/02							DM-4.4	7/19/02
GR-3.1	4/18/03					TC-65.10	10/19/01	MT-105.11	10/18/02		
GR-3.2	4/18/03					TC-65.11	10/19/01				
GR-4.2	10/17/03					TC-73.10	1/19/01	HL-50.11	7/20/01		

SUPPLEMENTAL SPECIFICATIONS

802	7/19/02
832	4/17/04
833	2/12/03
837	3/9/99
846	4/19/02
864	7/11/00
880	10/18/02
894	10/18/02
908	4/18/03
937	3/9/99
954	9/9/97

SPECIAL PROVISIONS

NWP 3 & 14
6/2/04

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE RECONSTRUCTION OF 6.57 MILES OF I-71 INCLUDING THE ADDITION OF A THIRD LANE IN EACH DIRECTION IN MEDIAN AREA. NEW GUARDRAIL, NEW OR RECONSTRUCTED DRAINAGE IN THE MEDIAN, AND THE RECONSTRUCTION OF ALL MAINLINE STRUCTURES.

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 NOT REQUIRE THE CLOSING TO TRAFFIC OF MAINLINE I.R. 71 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF THE TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA	- 157.60 AC.
CONTRACTOR EARTH DISTURBED AREA	- 165.00 AC.
N.O.I. EARTH DISTURBED AREA	- 322.60 AC.

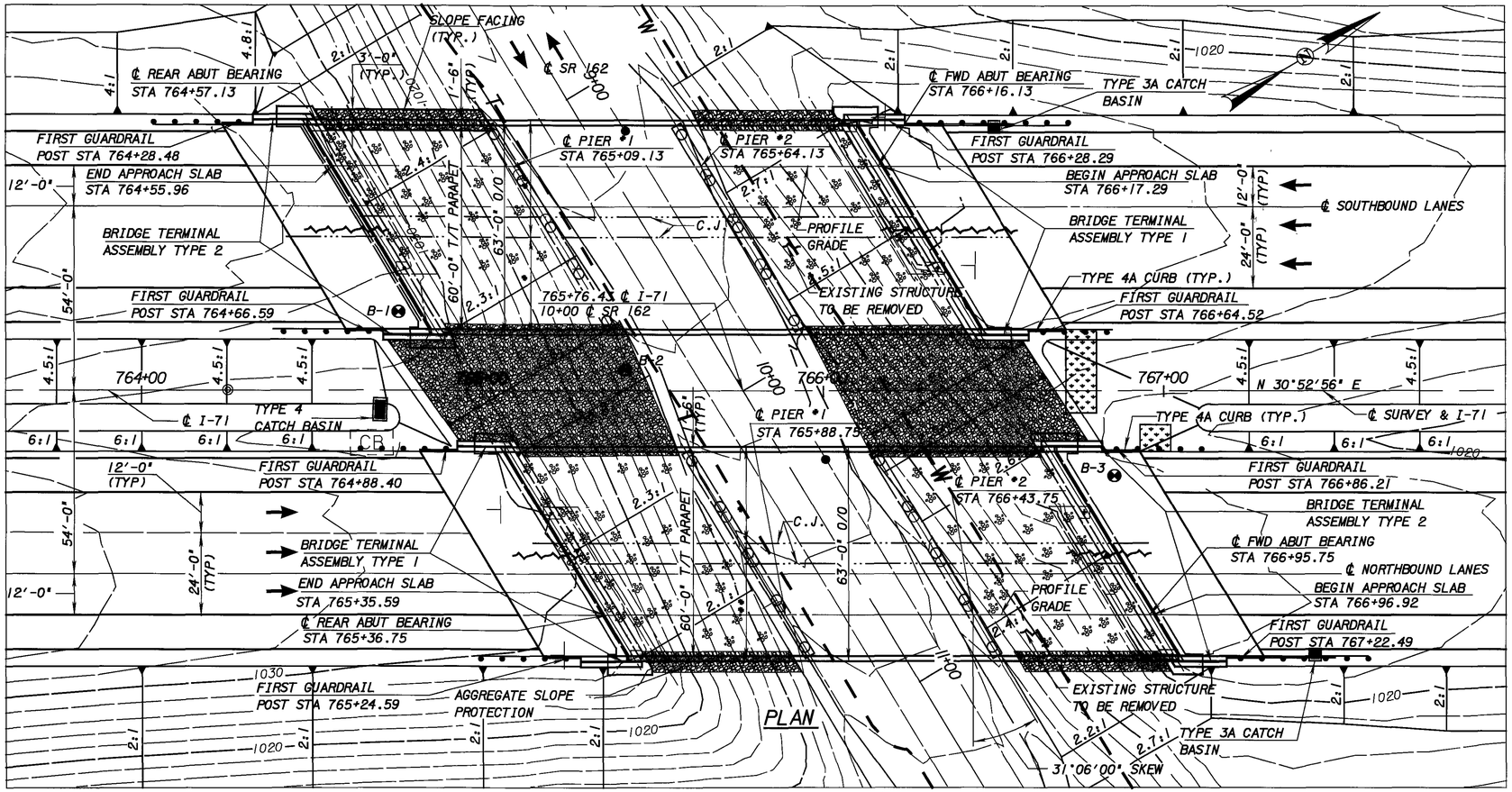
UNDER AUTHORITY OF SECTION 4511.21, DIVISION (I) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME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

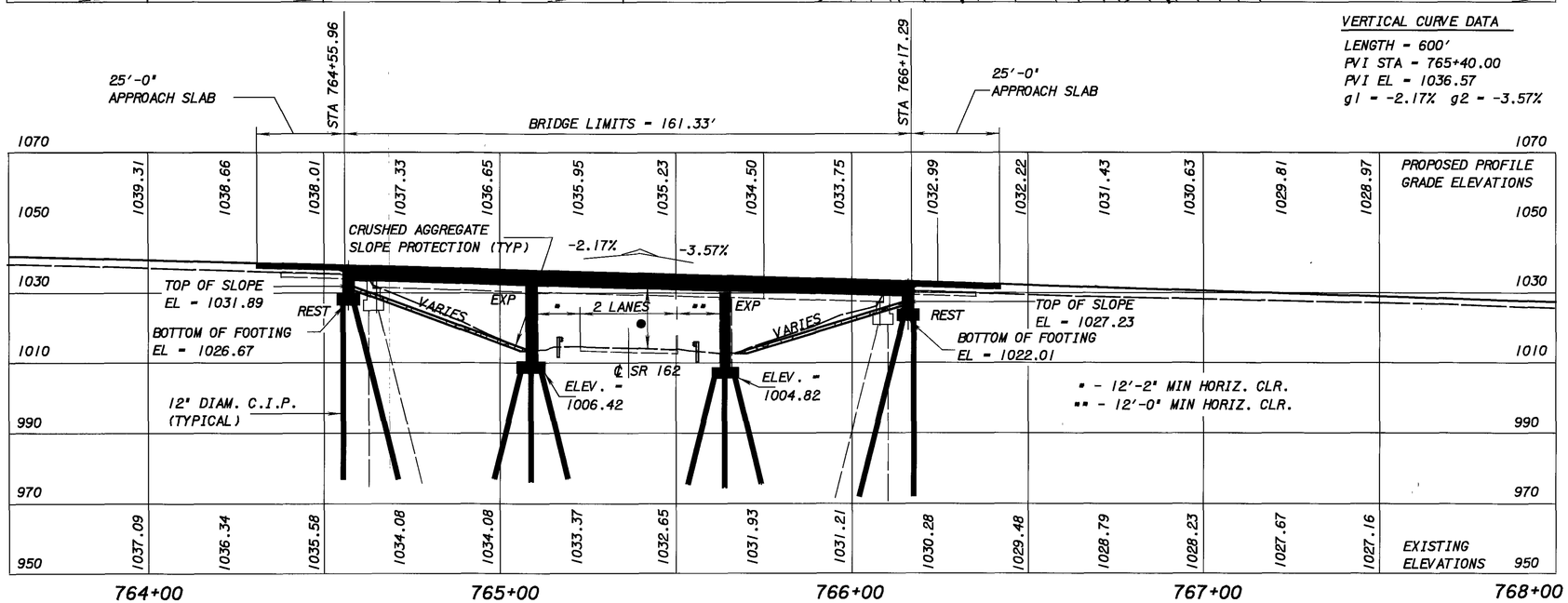
APPROVED Thomas M. O'Leary
DATE 1-12-05 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor
DATE 4-13-05 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E035(346)
PID NO. 14018
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
MED-71-9.56
1 / 624

MED - IR 71 - 9.56
050343 PID - 14018
DIST 03 7/13/2005





PROFILE ALONG PROFILE GRADE

BENCHMARK DATA

BM * 91 - ℄ MON FND. ; STATION 764+25.31; 0.29' LT
ELEV. = 1031.071 FEET

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET 4/624

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS.

PILES ARE 12" DIA CIP. THE ESTIMATED PAY LENGTHS FOR THE ABUTMENTS ARE 50' AND THE PIERS ARE 40 FEET.

DESIGN TRAFFIC:
2006 ADT = 42540 2006 ADTT = 10848
2026 ADT = 60040 2026 ADTT = 15310
DIRECTIONAL DISTRIBUTION = 55%

LEGEND

EXP - EXPANSION
B ORIGINAL SOIL BORING LOCATION
REST - RESTRAINED
* - PHASE 1
** - PHASE 2
C.J. - CONSTRUCTION JOINT
● MIN VERTICAL CLEARANCE FOR LEFT STRUCTURE = 17'-4"
REQUESTED MIN VERTICAL CLEARANCE = 17'-0"

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 44'-0"±, 55'-0"±, 44'-0"± ℄ BEARING
ROADWAY: 39'-8"± CURB TO CURB
LOADING: CF 2000
SKEW: 31°06'00" RF
APPROACH SLABS: 25'-0"LONG
ALIGNMENT: STRAIGHT
CROWN: 0.0156
STRUCTURAL FILE NUMBER: 5203368
DATE BUILT: 1959
DISPOSITION: TO BE REMOVED

PROPOSED STRUCTURE

TYPE: 3-SPAN CONTINUOUS A572 /A709 STEEL BEAM WITH COMPOSITE REINFORCED CONCRETE DECK ON CAP & COLUMN PIERS AND SEMI-INTEGRAL ABUTMENTS
SPANS: 52'-0", 55'-0", 52'-0" ℄ BEARING
ROADWAY: 60'-0" T/T PARAPET
LOADING: HS25 CASE I AND ALTERNATE MILITARY
FUTURE WEARING SURFACE: 60 PSF
SKEW: 31°06'00" RF
APPROACH SLABS: 25'-0"LONG (AS-1-81)
WEARING SURFACE: MONOLITHIC CONCRETE
ALIGNMENT: TANGENT
CROWN: 0.0156
COORDINATES: LATITUDE N41°06 24 "
LONGITUDE W81°49 01 "

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DATE: 12/08/03
REVISED: DB
STRUCTURE FILE NUMBER: 5203376
DRAWN: BCW
REVISED:
DESIGNED: BCW
CHECKED: TAA

MEDINA COUNTY
STA. 764+55.96
STA. 766+17.29

SITE PLAN
MED-71-1.450L
OVER SR 162

MED-71-9.56

1/34

283/624

GENERAL NOTES

STANDARD DRAWINGS AND SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-81	DATED (REVISED) 07-19-02
DS-1-92	DATED (REVISED) 07-18-03
PCB-91	DATED (REVISED) 07-19-02
BS-1-93	DATED (REVISED) 07-19-02
GSD-1-96	DATED (REVISED) 07-19-02
SICD-1-96	DATED (REVISED) 07-19-02

AND TO SUPPLEMENTAL SPECIFICATIONS:

864	DATED	07-11-00
894	DATED	10-18-02
954	DATED	09-09-97

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT DESIGN MANUAL.

DESIGN LOADING:

HS25, CASE I AND THE ALTERNATE MILITARY LOADING.
FUTURE WEARING SURFACE (FWS) OF 60 LBS/FT^2

DESIGN DATA:

CLASS HP CONCRETE, BRIDGE DECK - COMPRESSIVE STRENGTH 4500 PSI

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (PIER)

CLASS C CONCRETE SUBSTRUCTURE- COMPRESSIVE STRENGTH 4000 PSI

REINFORCING STEEL - ASTM A615 OR A996
GRADE 60 MINIMUM YIELD STRENGTH 60 KSI. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

STRUCTURAL STEEL - ASTM A709 GRADE 50
- YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD - EPOXY COATED REINFORCING STEEL, 2½" CONCRETE COVER.

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

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

REMOVAL OF EXISTING STRUCTURE:

STRUCTURE SHALL BE REMOVED IN STAGES UPON RECEIVING PERMISSION FROM THE ENGINEER WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:

THE BACKFILL MATERIAL BEHIND THE ABUTMENT SHALL BE TYPE B GRANULAR MATERIAL,703.16C PLACED AND COMPACTED IN 6" LIFTS

UTILITY NOTES

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

ITEM 516 SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN

INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1-1/4" X #10 GAGE (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D751	0.094 +/- 0.01
BREAKING STRENGTH, GRAB, LBS, MINIMUM (LONG. X TRANS.)	D751	700 X 700
ADHESIVE STRIP, 1" WIDE X 2" LONG, LBS MINIMUM	D751	9
BURST STRENGTH, PSI MINIMUM	D751	1400
HEAT AGING, 70 HR, 212 DEGREES F, 180 DEGREES BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP. BRITTLENESS, 1 HR, 40 DEGREES F, BEND AROUND 1/4" MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

SHEET PILING

SHEET PILING SHALL HAVE A MINIMUM SECTION MODULUS OF 36 CUBIC INCHES PER FOOT OF WALL FOR ASTM A-328 OR SHALL MEET THE REQUIRMENT OF ASTM-A572 WITH A MINIMUM SECTION MODULUS OF 27 CUBIC INCHES PER FOOT OF WALL. THE EMBEDMENT LENGTH FOR THE PILING SHALL BE 19 FEET.

THE MINIMUM YIELD STRENGTH OF ASTM A-328 SHALL BE 36 KSI AND THE MINIMUM YEILD STRENGHT FOR ASTM A572 SHALL BE 50 KSI.

TRAFFIC MAINTENANCE:

SEE ROADWAY PLANS FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES AND DETAILS.

SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

EPOXY-URETHANE SHALL BE THE LIGHT NEUTRAL COLOR MEETING FEDERAL COLOR STANDARD NO. 17778 AS PER THE DETAILS IN THE PLAN.

DRIP GROOVES:

THE DRIP GROOVES AS DETAILED ON STANDARD CONSTRUCTION DRAWINGS SHALL NOT BE CONSTRUCTED.

ITEM 511, CLASS C CONCRETE, AS PER PLAN:

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE.

SURVEY DISC ON STRUCTURE:

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 100 TONS PER PILE FOR THE REAR AND FORWARD ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 100 TONS PER PILE FOR THE PIER.

ABUTMENT PILES:
42 PILES 55 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEMS

PIER PILES:
64 PILES 45 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEMS

BATTERED PILES:

THE BLOW COUNT FOR BATTERED PILES SHALL BE THE BLOW COUNT DETERMINED FOR VERTICAL PILES OF THE SAME ULTIMATE BEARING VALUE DIVIDED BY AN EFFICIENCY FACTOR (D). COMPUTE THE EFFICIENCY FACTOR (D) AS FOLLOWS:

$$D = 1 - UG / \sqrt{(1+G^2)}$$

U = COEFFECIENT OF FRICTION, WHICH IS ESTIMATED AT 0.05 FOR DOUBLE-ACTING AIR OPERATED OR DIESEL HAMMERS; 0.1 FOR SINGLE-ACTING AIR OPERATED OR DIESEL HAMMERS; AND 0.2 FOR DROP HAMMERS.

G = RATE OF BATTER = 1 / 4

ITEM 514- FIELD PAINTING STRUCTURAL STEEL, FINISH COAT.

FIELD PAINTING STRUCTURAL STEEL , FINISH COAT SHALL BE THE LIGHT NEUTRAL COLOR MEETING FEDERAL COLOR STANDARD NO. 17778.

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

PROTECTION OF TRAFFIC

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.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVISED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

GENERAL NOTES
MED-71-1450L
OVER S.R. 162

MED-71-9.56

2 / 34

284
624

GENERAL NOTES CONTINUED

ITEM 511 CLASS HP CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN

ITEM 511 CLASS HP CONCRETE, SUBSTRUCTURE, AS PER PLAN

GENERAL REQUIREMENTS.

THE PROVISIONS OF ITEM 511 SHALL APPLY EXCEPT AS NOTED BELOW.

MIX OPTIONS:

ALL SUPERSTRUCTURE CONCRETE SHALL BE THIS MIX (HP4, AS PER PLAN). ALL OTHER STRUCTURE CONCRETE SHALL BE THIS MIX OR MIX 2 CONCRETE THE FOLLOWING PROPORTIONS WILL BE USED AS A STARTING MIX DESIGN.

CONCRETE TABLE:

QUANTITIES PER CUBIC YARD AGGREGATES (SSD)
HP4, AS PER PLAN (GGBF SLAG + MICROSILICA)

AGGREGATE TYPE	FINE AGGRE. (LB)	#8 COARSE* AGGRE. (LB)	#57 COARSE* AGGRE. (LB)	TOTAL (LB)	CEMENT CONTENT (LB)	GGBF SLAG. (LB)	MICRO-SILICA (LB)	WATER TO CEMENTITIOUS RATIO +/-.02	AIR CONTENT +/-2%
GRAVEL	1245	360	1315	2920	400	170	30	0.42	7
LIMESTONE	1245	360	1335	2940	400	170	30	0.42	7
SLAG	1245	315	1155	2715	400	170	30	0.42	7

* ALL COARSE AGGREGATE WILL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD):

NATURAL SAND AND GRAVEL 2.62
LIMESTONE SAND 2.68
LIMESTONE 2.65
SLAG 2.30
FLY ASH 2.65
GGBF SLAG 2.90
MICROSILICA SOLIDS 2.20
PORTLAND CEMENT 3.15.

FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAT PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED.

PARAPET CONSTRUCTION (FORMED AND POURED)

FORMS SHALL NOT BE REMOVED UNTIL AT LEAST 2 HOURS AFTER THE FINAL SET. DETERMINATION OF THE FINAL SET SHALL BE AS PER ASTM C266 (GILLMORE NEEDLE). TESTING SHALL BE PERFORMED BY THE CONTRACTOR AT NO COST TO THE STATE.

THE MINIMUM CONCRETE SLUMP DURING PLACEMENT OF FORMED CONCRETE PARAPETS SHALL BE 6 INCHES, WITH A MAXIMUM SLUMP OF 8 INCHES.

ANCHOR BOLTS FOR FENCE POSTS SHALL BE CAST IN PLACE.

PARAPET CONSTRUCTION (SLIP FORMED)

SLIP FORMING SHALL NOT BE PERFORMED DIRECTLY OVER AREAS WHERE THERE IS OR WILL BE VEHICULAR OR PEDESTRIAN TRAFFIC (WHICH INCLUDES RAILROADS AND WATER CRAFTS). AT THESE LOCATIONS, THE PARAPETS SHALL BE FORMED AND POURED.

THE CONTRACTOR IS ONLY ALLOWED THE OPTION OF SLIP FORMING BRIDGE PARAPETS OVER NON TRAVELED WAYS, AND ONLY AFTER THE SUCCESSFUL COMPLETION OF A TEST SECTION TWENTY FEET LONG. A MINIMUM OF 3 DAYS AFTER PLACING THE TEST SECTION, THE CONTRACTOR SHALL CORE THE TEST SECTION (AMINIMUM OF 3 CORES) AT LOCATIONS AS DIRECTED BY THE ENGINEER. APPROVAL TO SLIP FORM SHALL NOT BE GRANTED UNTIL AFTER THE CORING AND AFTER A SUCCESSFUL SLIP FORMING RESULT IS OBTAINED.

IN ADDITION TO THE REQUIREMENTS OF THE LAST PARAGRAPH OF 511.11 THE ENGINEER WILL INSPECT THE SLIP FORMED SURFACE FOR HORIZONTAL CRACKING 6 MONTHS AFTER COMPLETION OF THE SLIP FORMING OPERATION. ANY ADDITIONAL CRACKS FOUND SHALL BE REPAIRED AS PER THE SPECIFICATIONS AT NO ADDITIONAL COST TO THE STATE.

THE MINIMUM CONCRETE SLUMP DURING PLACEMENT OF SLIP FORMED CONCRETE PARAPETS SHALL BE 1 INCH, WITH A MAXIMUM SLUMP OF 1½ INCHES.

THE WATER CEMENT RATIO FOR SLIP FORMED PARAPETS SHALL NOT BE LESS THAN THE WATER CEMENT RATIO USED FOR THE DECK CONCRETE. REDUCE SLUMP BY LIMITING THE USE OF SUPERPLASTICIZERS.

CRACK CONTROL JOINTS

FOR BOTH SLIP FORMED AND FORMED AND POURED PARAPETS, THE CONTRACTOR SHALL CONSTRUCT 1½" DEEP AND ¼" WIDE CRACK CONTROL JOINTS SPACED AT A MINIMUM OF 6' AND A MAXIMUM OF 8' ON CENTER. THE CRACK CONTROL JOINTS SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE TOP OF THE CONCRETE DECK. THE CONTRACTOR MAY EITHER FORM THE CRACK CONTROL JOINTS IN WITH FORM LINERS, OR , WITHIN 24 HOURS OF PLACEMENT, SAW CUT THE CRACK CONTROL JOINTS IN WITH THE USE OF AN EDGE GUIDE, FENCE, OR JIG WHICH IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE ENTIRE LENGTH OF EACH CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 1½" WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E.

BASIS OF PAYMENT

BAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNITS	DESCRIPTION
511E50101	CUBIC YARD	CLASS HP CONCRETE , BRIDGE DECK (PARAPET), AS PER PLAN
511E50200	CUBIC YARD	CLASS HP CONCRETE , SUBSTRUCTURE, AS PER PLAN
511E52000	LUMP SUM	CLASS HP CONCRETE , TEST SLAB

ITEM 894 - HIGH PERFORMANCE CONCRETE, FOR BRIDGE DECK WITH WARRANTY, AS PER PLAN:

SUPERSTRUCTURE CONCRETE FOR THE DECK SHALL BE INCLUDED WITH THIS ITEM FOR PAYMENT.

THE CONTRACTOR SHALL SEAL ALL PHASE CONSTRUCTION JOINTS AS DETAILED ON THE TRANSVERSE DECK SECTION AND ALL PATCHED PORTABLE CONCRETE BARRIER ANCHOR HOLES. THE LIMITS OF THE SEALER APPLICATION SHALL BE AT LEAST 2" FROM THE EDGE OF THE PATCHED ANCHOR HOLE.

PAYMENT FOR THE ABOVE SEALING SHALL BE INCLUDED WITH THE HIGH PERFORMANCE CONCRETE ITEM.

GENERAL REQUIREMENTS.

THE PROVISIONS OF ITEM 511 AND ITEM 894 SHALL APPLY EXCEPT AS NOTED BELOW.

MIX OPTIONS:

ALL SUPERSTRUCTURE CONCRETE SHALL BE THIS MIX (HP4, AS PER PLAN).

CONCRETE TABLE:

QUANTITIES PER CUBIC YARD AGGREGATES (SSD)
HP4, AS PER PLAN (GGBF SLAG + MICROSILICA)

AGGREGATE TYPE	FINE AGGRE. (LB)	#8 COARSE* AGGRE. (LB)	#57 COARSE* AGGRE. (LB)	TOTAL (LB)	CEMENT CONTENT (LB)	GGBF SLAG. (LB)	MICRO-SILICA (LB)	WATER TO CEMENTITIOUS RATIO +/-.02	AIR CONTENT +/-2%
GRAVEL	1245	360	1315	2920	400	170	30	0.42	7
LIMESTONE	1245	360	1335	2940	400	170	30	0.42	7
SLAG	1245	315	1155	2715	400	170	30	0.42	7

* ALL COARSE AGGREGATE WILL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD):

NATURAL SAND AND GRAVEL 2.62
LIMESTONE SAND 2.68
LIMESTONE 2.65
SLAG 2.30
FLY ASH 2.65
GGBF SLAG 2.90
MICROSILICA SOLIDS 2.20
PORTLAND CEMENT 3.15.

FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAT PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: DIST 3 | CHECKED: TAA
DRAWN: NOK | REVISED:
REVIEWED: BCW | DATE: 9/23/03
STRUCTURE FILE NUMBER: 5203376

GENERAL NOTES
MED-71-1450L
OVER S.R. 162

MED-71-9.56

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FUNDING *		ESTIMATED QUANTITIES									
IM	NHS	ITEM	EXTENSION	GRAND TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NUMBER
LUMP	LUMP	202	11002	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LUMP	LUMP	LUMP		2 /34
107	27	202	22900	134	SQ YD	APPROACH SLAB REMOVED				134	
LUMP	LUMP	503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING				LUMP	
LUMP	LUMP	503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP				
LUMP	LUMP	505	11100	LUMP		PILE DRIVING EQUPMENT MOBILIZATION				LUMP	
3728	932	507	00500	4660	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	2100	2560			
4152	1038	507	00550	5190	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	2310	2880			
116488	29122	509	10000	145610	POUND	EPOXY COATED REINFORCING STEEL	16385	41482	87743		
10	2	510	10000	12	EACH	DOWEL HOLES WITH NON-SHRINK, NON-METALLIC GROUT	12				
54	13	511	41001	67	CU YD	CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN		67			2 /34
78	20	511	42501	98	CU YD	CLASS C CONCRETE, PIER CAP, AS PER PLAN		98			2 /34
65	16	511	44101	81	CU YD	CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	81				2 /34
170	43	511	46501	213	CU YD	CLASS C CONCRETE FOOTING, AS PER PLAN	124	89			2 /34
47	12	511	50101	59	CU YD	CLASS HP CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN			59		3 /34
38	9	511	50201	47	CU YD	CLASS HP CONCRETE, SUBSTRUCTURE, AS PER PLAN	47				3 /34
LUMP	LUMP	511	52000	LUMP		CLASS HP CONCRETE, TEST SLAB					
6	1	512	44400	7	SQ YD	TYPE B WATERPROOFING	7				
LUMP	LUMP	513	10060	LUMP		STRUCTURAL STEEL MEMBERS, LEVEL 3			LUMP		
3590	898	513	20000	4488	EACH	WELDED STUD SHEAR CONNECTORS			4488		
LUMP	LUMP	514	00300	LUMP		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, (PROPOSAL NOTE 891)			LUMP		
LUMP	LUMP	514	00400	LUMP		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, (PROPOSAL NOTE 891)			LUMP		
17	4	516	13600	21	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	21				
120	30	516	13900	150	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	150				
128	32	516	14021	160	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	160				5 /34
13	3	516	44000	16	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE		16			
						(NEOPRENE), (12"x15"x $1\frac{5}{16}$" PAD AND 13"x16"x$1\frac{5}{8}$" PLATE)					
13	3	516	44101	16	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),	16				23 / 34 24 / 34
						AS PER PLAN (10"x13"x$2\frac{1}{16}$" PAD) AND 12"x14"x$1\frac{1}{2}$" PLATE)					
LUMP	LUMP	518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC	LUMP				
118	29	518	40000	147	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	147				
44	11	518	40010	55	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	55				
1	1	523	20000	2	EACH	DYNAMIC LOAD TESTING				2	
276	69	526	25000	345	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15")			345		
793	198	601	20000	991	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION				991	
750	188	864	10100	938	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	108	413	417		
228	57	894	10001	285	CU YD	HIGH PERFORMANCE CONCRETE, FOR BRIDGE DECK WITH WARRANTY, AS PER PLAN			285		3 /34

* ALL QUANTITIES ARE SPLIT 80% IM & 20% NHS

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DB | DATE 12/8/03 | STRUCTURE FILE NUMBER 5203376
DRAWN JV | REVISED
DESIGNED JV | CHECKED TAA

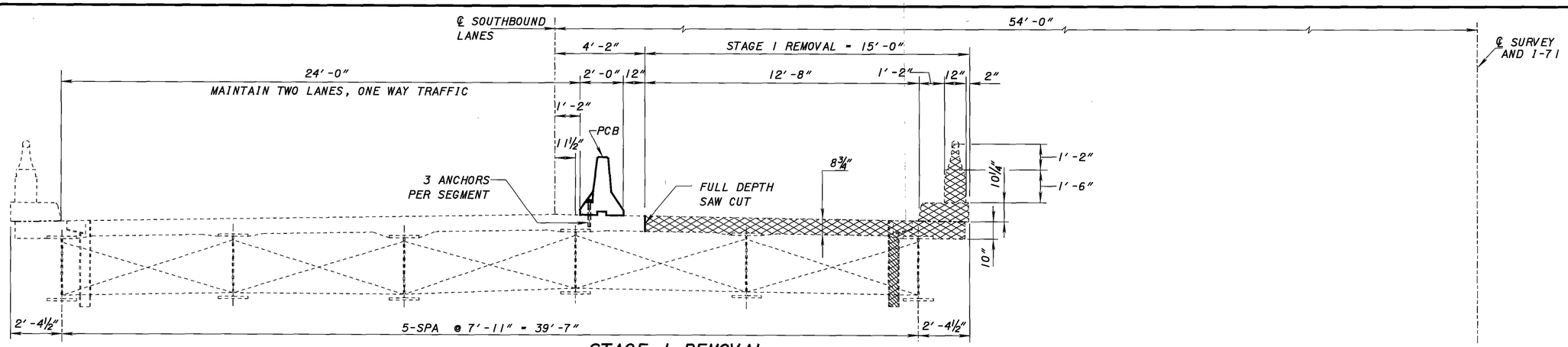
ESTIMATED QUANTITES
MED-71-1450 L
I-71 OVER S.R. 162

MED-71-9.56

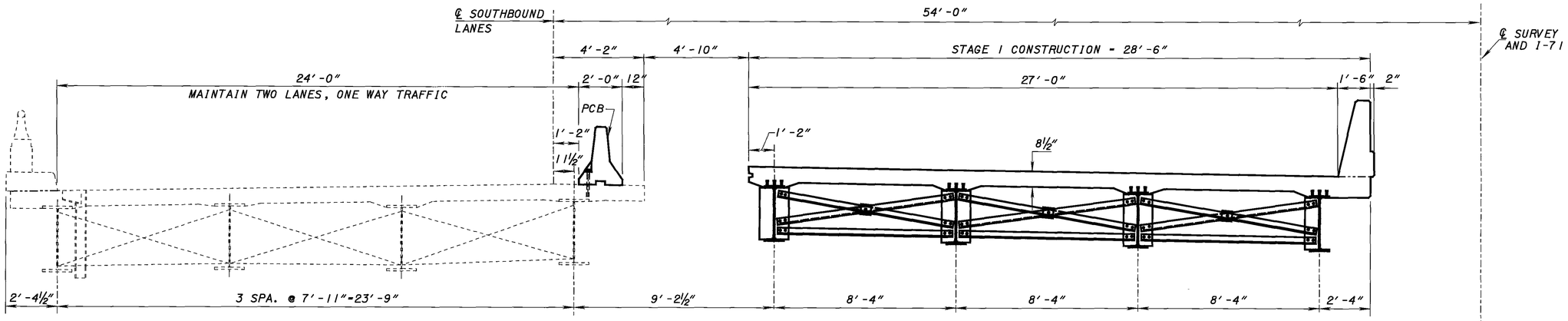
4/34

286/624

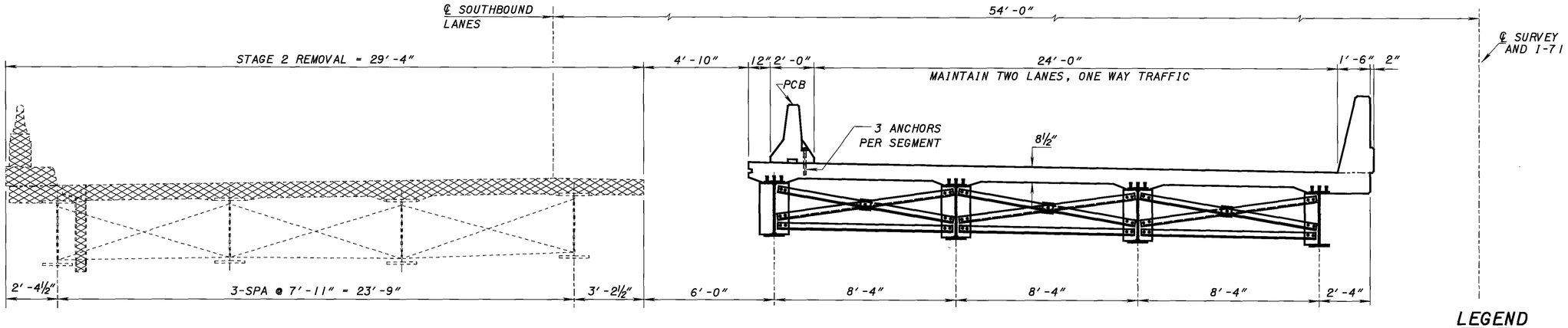
DESIGN FILE: I:\projects\14018\Struct\estqty.dgn
WORKSTATION: GSCHLETT DATE: 3/3/2005



STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE 2 REMOVAL

LEGEND

PORTION OF STRUCTURE TO BE REMOVED

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TGM	TGM	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

STAGE CONSTRUCTIONDETAILS

MED-71-1450 L
I-71 OVER S.R. 162

MED-71-9.56

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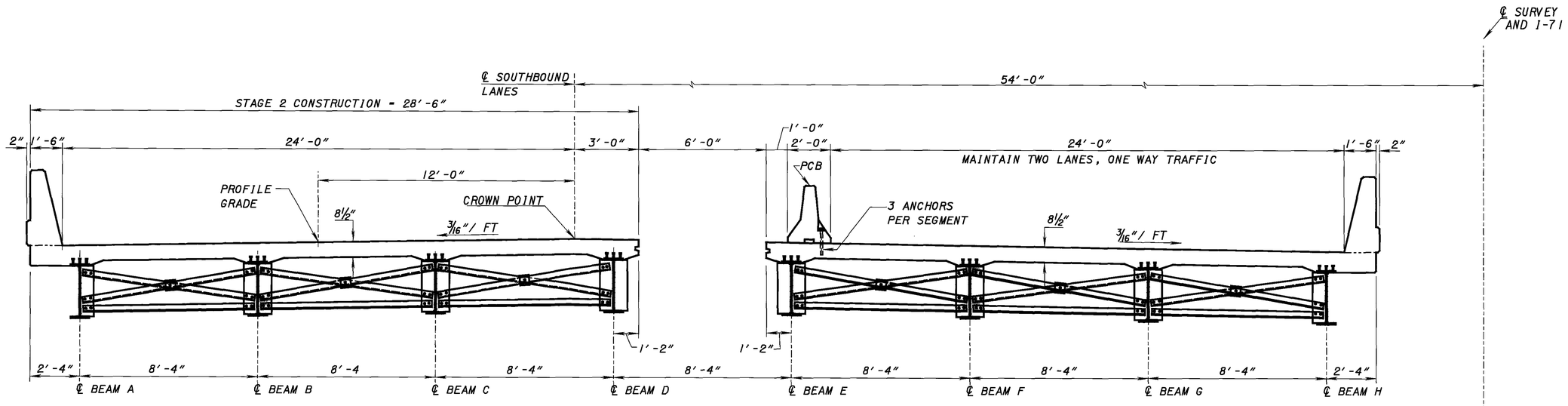
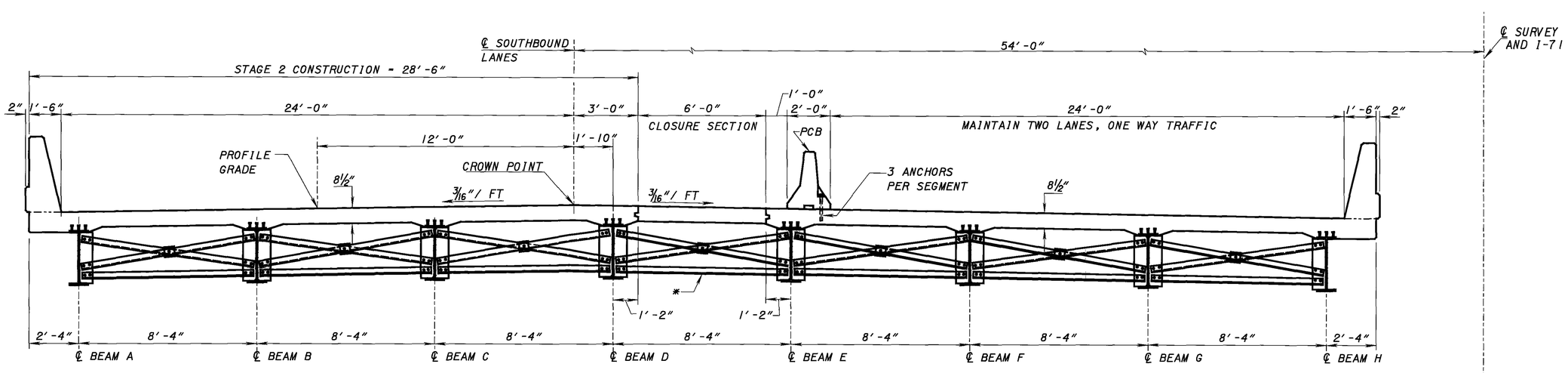


STAGE 2 CONSTRUCTION



CLOSURE SECTION CONSTRUCTION

PROPOSED WORK

1. REMOVE STAGE 1 PART OF EXISTING BRIDGE. MAINTAIN TRAFFIC ON THE REMAINING PORTION OF THE EXISTING BRIDGE.
2. CONSTRUCT STAGE 1 SUBSTRUCTURE AND SUPERSTRUCTURE.
3. MAINTAIN TRAFFIC ON NEW BRIDGE. REMOVE REST OF EXISTING BRIDGE.
4. CONSTRUCT STAGE 2 SUBSTRUCTURE AND SUPERSTRUCTURE.
5. CONNECT TWO STAGES WITH CLOSURE POUR.

NOTES AND LEGEND

PCB BARRIER SHALL BE ANCHORED TO EXISTING AND PROPOSED BRIDGE DECK. THREE (3) ANCHORS PER BARRIER SEGMENT ARE REQUIRED ON THE TRAFFIC SIDE OF THE BARRIER. THE ANCHOR BOLT PATTERN SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. SEE STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.

* PLACE CROSS FRAMES IN POSITION PRIOR TO POURING OF THE CLOSURE POUR.

PCB- PORTABLE CONCRETE BARRIER, BRIDGE MOUNTED.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TGM | DRAWN: TGM | REVIEWED: DB | DATE: 12/8/03
CHECKED: BCW | REVISED | STRUCTURE FILE NUMBER: 5203376

STAGE CONSTRUCTION DETAILS
MED-71-1450L
I-71 OVER S.R. 162

MED-71-9.56

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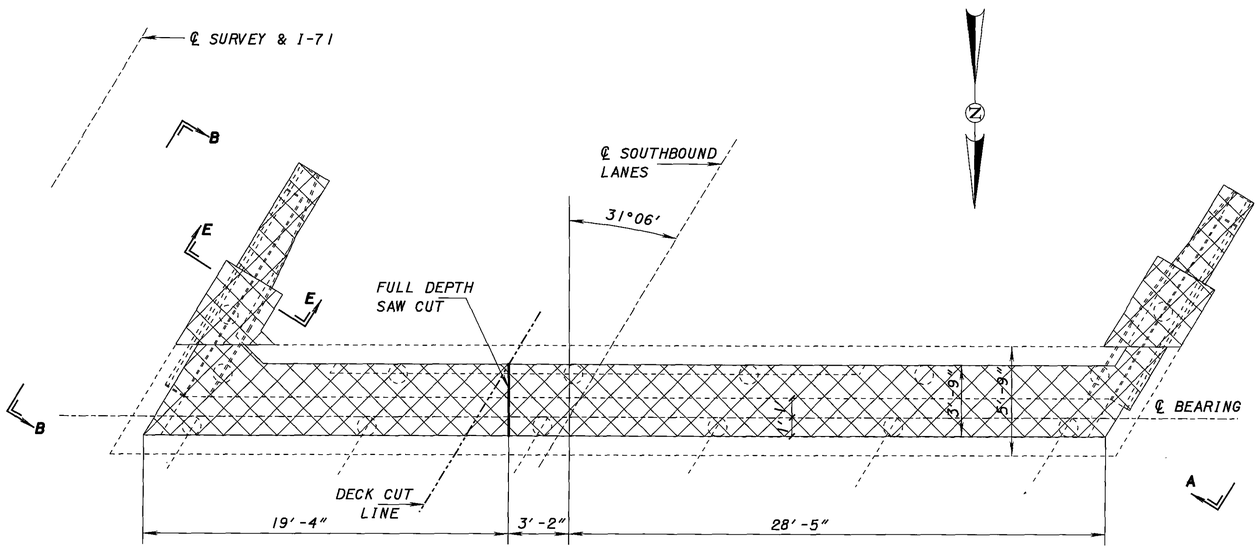
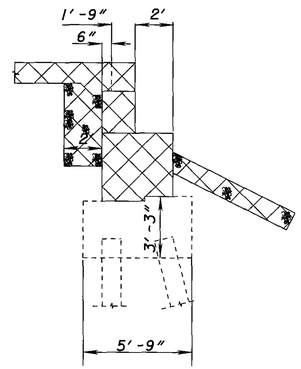
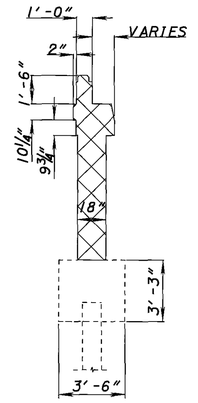


PLAN

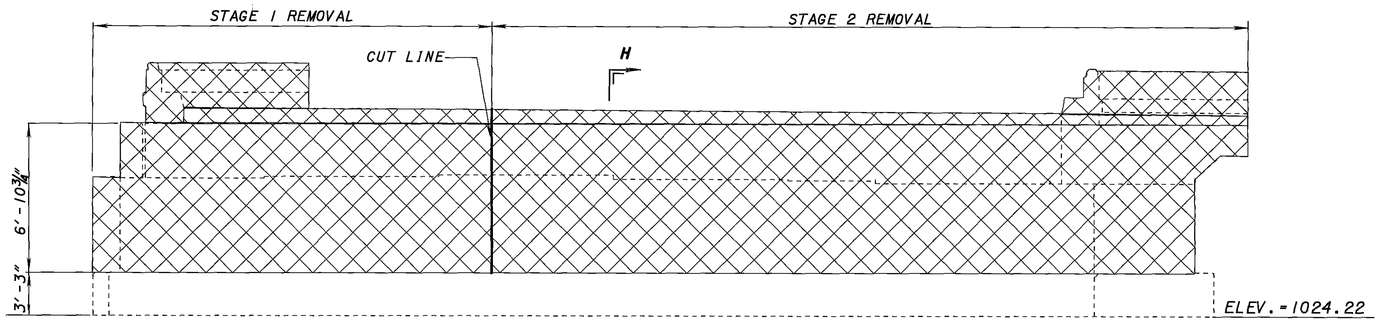


SECTION Ⓗ—Ⓗ

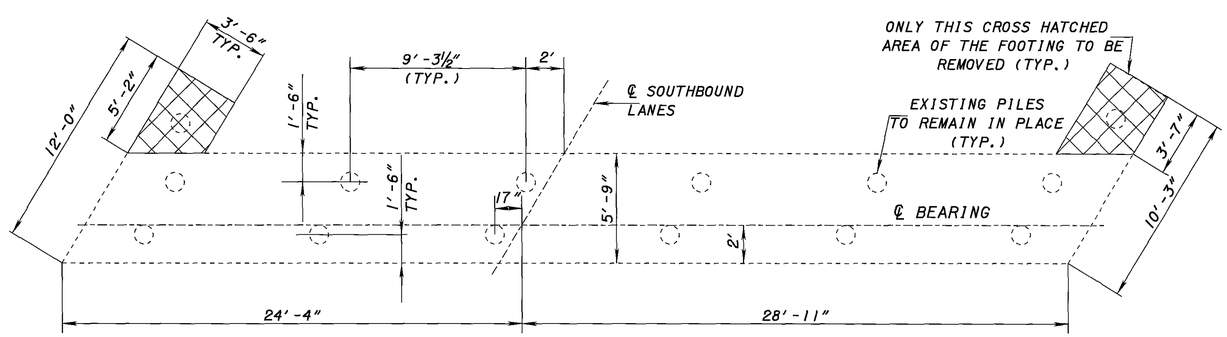


SECTION Ⓔ—Ⓔ

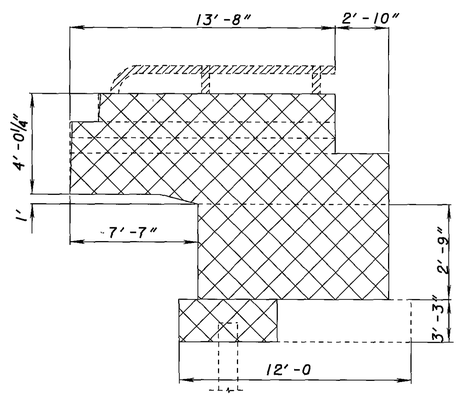
INDICATES REMOVAL



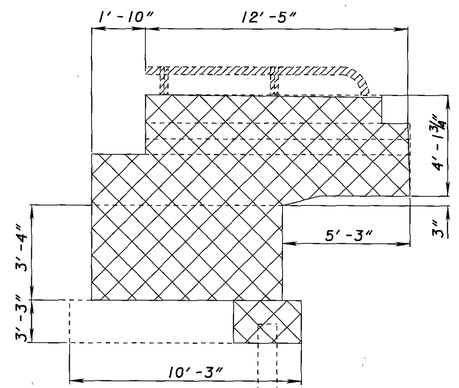
ELEVATION



FOOTING PLAN



VIEW B-B



VIEW A-A

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

REAR ABUTMENT REMOVAL

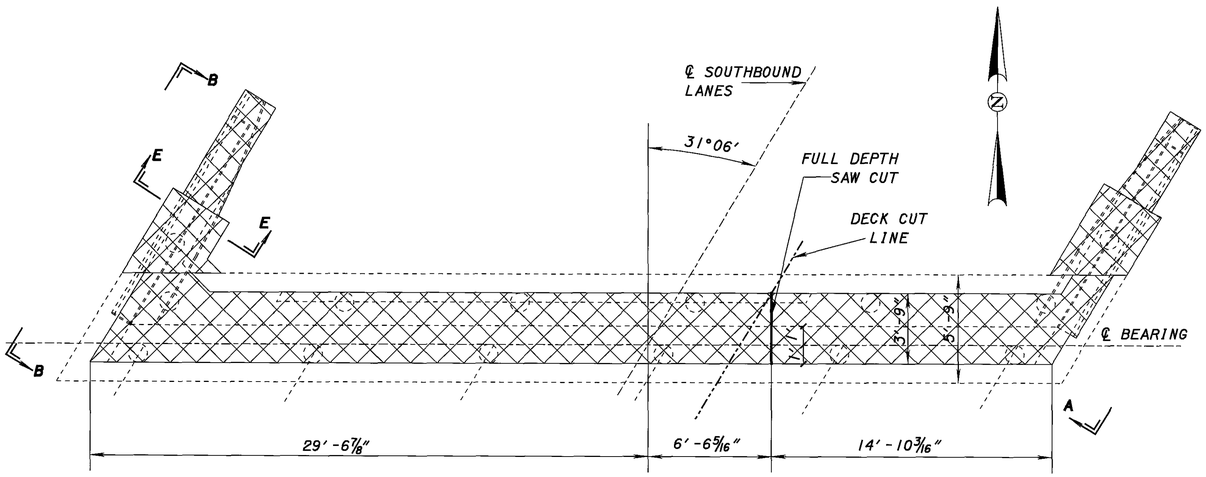
MED-71-1450L

OVER S.R. 162

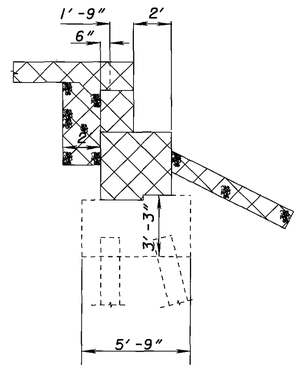
MED-71-9.56

7/34

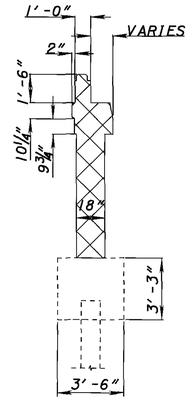
289/624



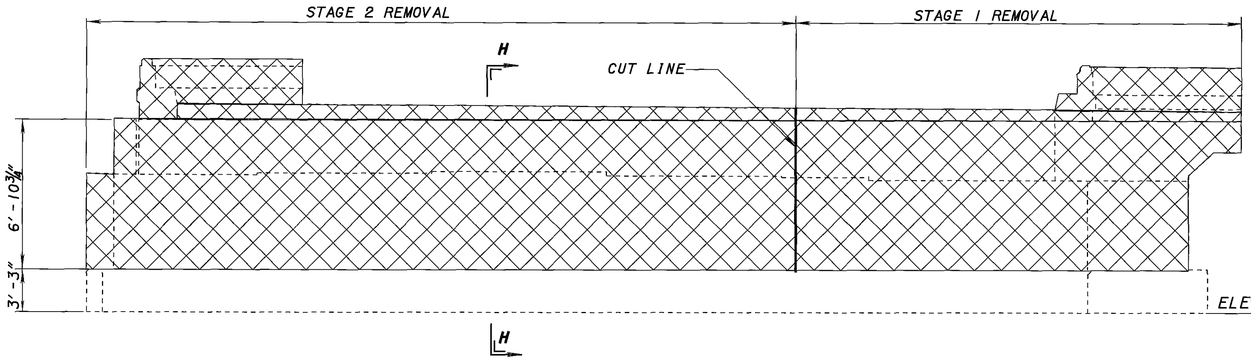
PLAN



SECTION (H)—(H)

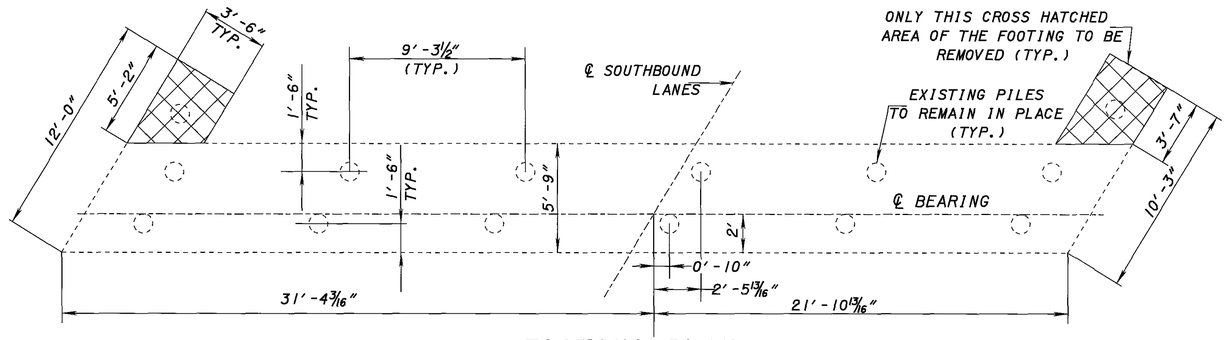


SECTION (E)—(E)

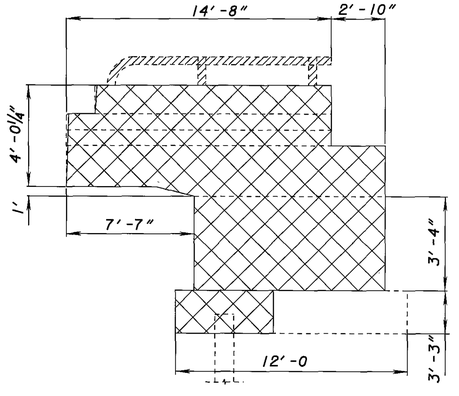


ELEVATION

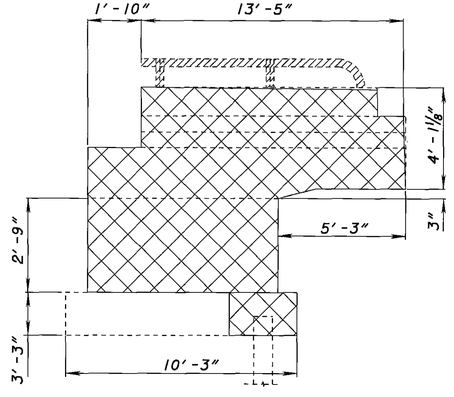
INDICATES REMOVAL



FOOTING PLAN



VIEW B-B



VIEW A-A

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

FORWARD ABUTMENT REMOVAL
MED-71-1450L
OVER S.R. 162

MED-71-9.56

8 / 34

290
624

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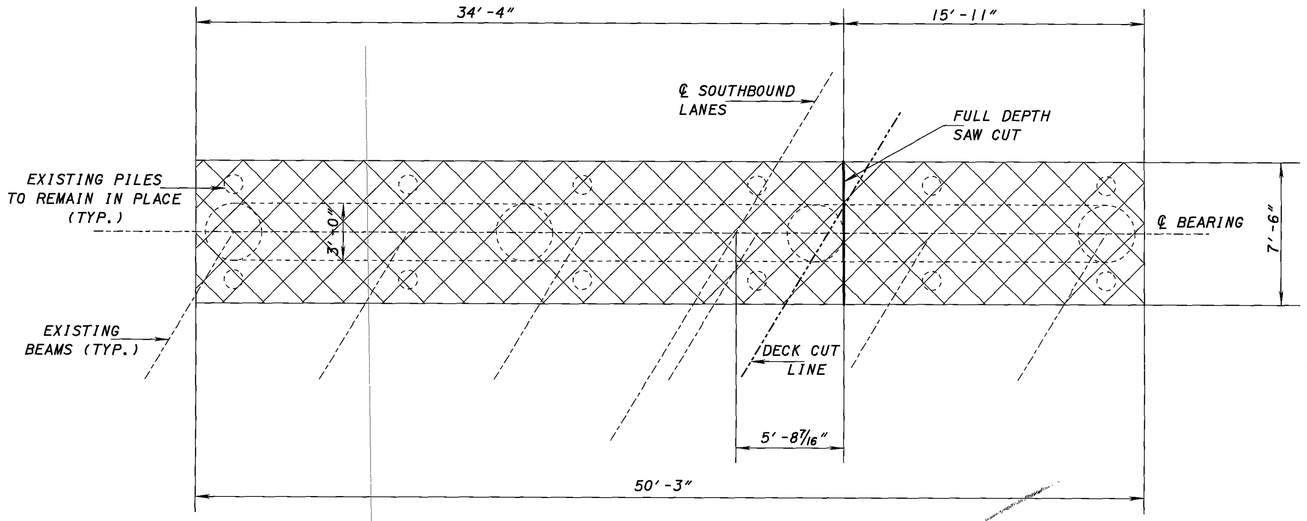
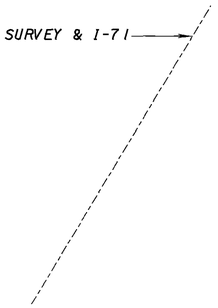
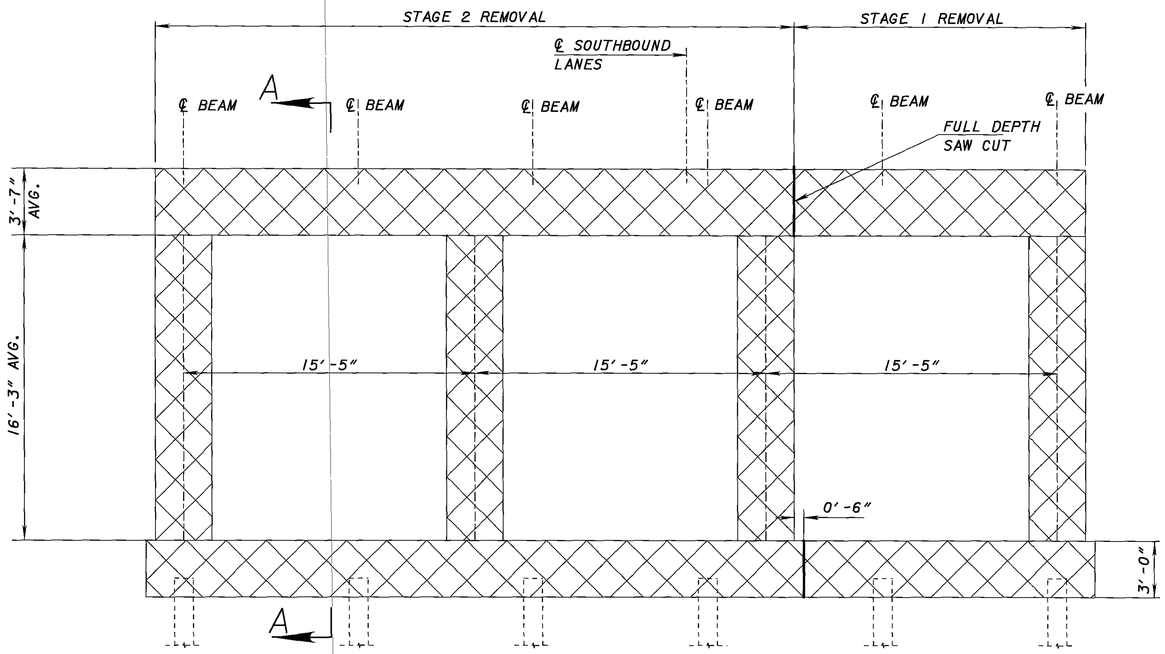


PLAN
PIER 1 & PIER 2

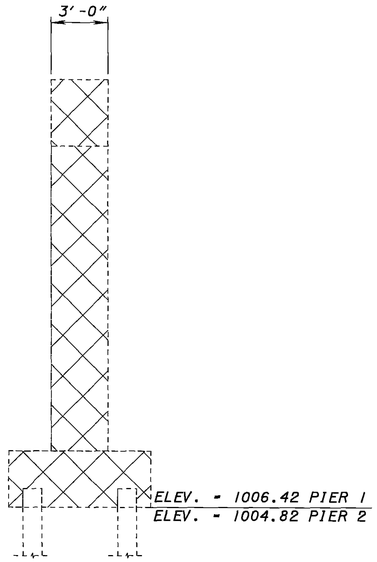


LEGEND

INDICATES REMOVAL



ELEVATION
PIER 1 & PIER 2



SECTION A-A

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

PIER REMOVAL
MED-71-1450L
OVER S.R. 162

MED-71-9.56

9/34

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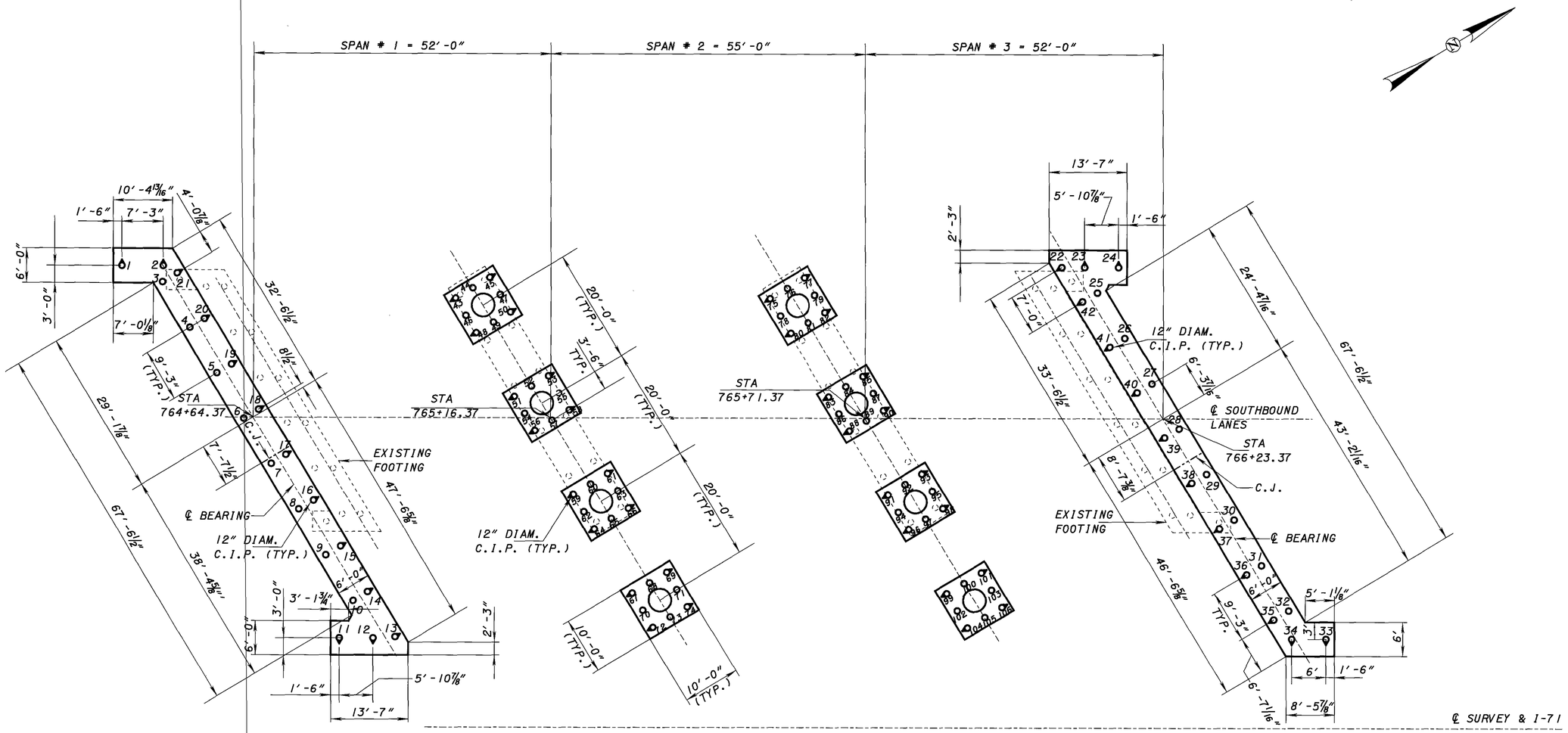
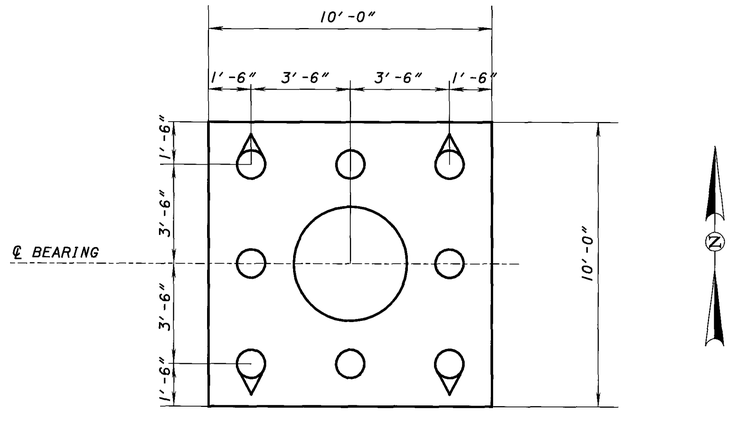


FOOTING LAYOUT - PLAN

LEGEND AND NOTES

- ◌ - EXISTING PILES
- O - PROPOSED PILES
- ⚲ - BATTERED PILES 4V:1H

ALL PILES ARE 12" DIAMETER C.I.P.



PIER FOOTING DETAIL (TYP.)

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA | DRAWN: TAA | CHECKED: BCW | REVIEWED: DB | DATE: 12/8/03 | REVISED | STRUCTURE FILE NUMBER: 5203376

FOUNDATION LAYOUT

MED-71-1450L
I-71 OVER S.R. 162

MED-71-9.56

10 / 34

292 / 624

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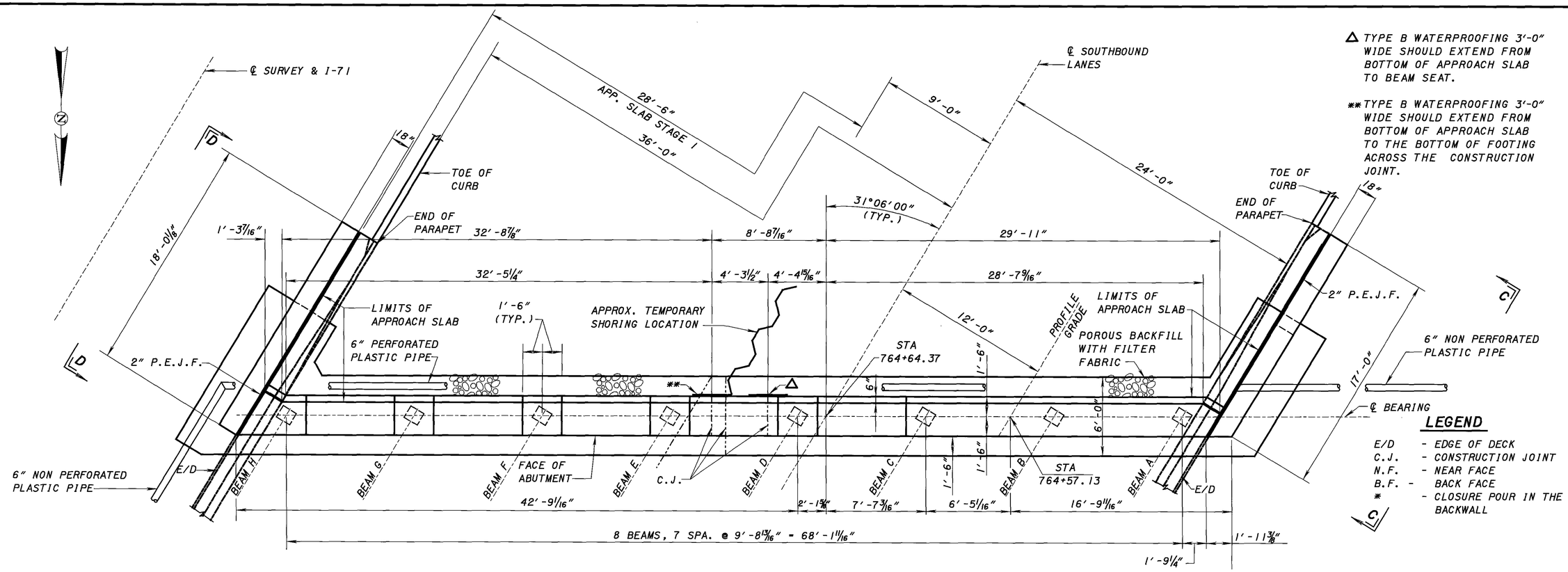
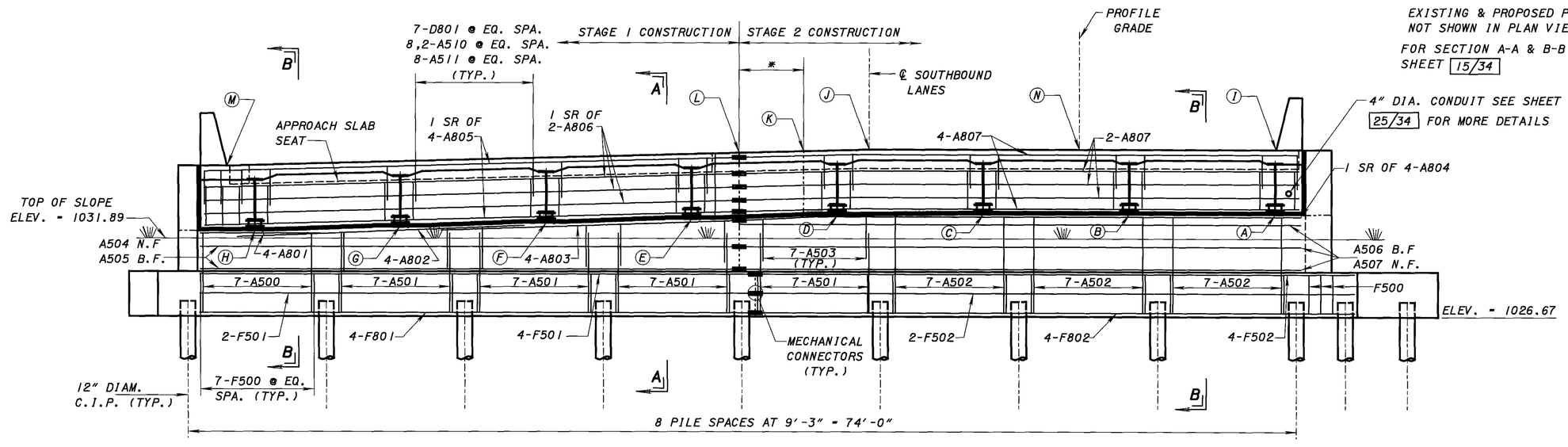


PLAN

LOCATION / ELEVATION	ELEVATIONS													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
ELEVATION	1033.52	1033.52	1033.52	1033.45	1033.19	1032.92	1032.65	1032.39	1037.82	1037.81	1037.69	1037.60	1036.66	1037.82



ELEVATION

NOTES

FOR VIEW C-C & D-D SEE SHEET 12/34

ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

EXISTING & PROPOSED PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY.

FOR SECTION A-A & B-B SEE SHEET 15/34

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA | DRAWN: TAA | REVIEWED: DB | DATE: 12/8/03
CHECKED: BCW | REVISED: | STRUCTURE FILE NUMBER: 5203376

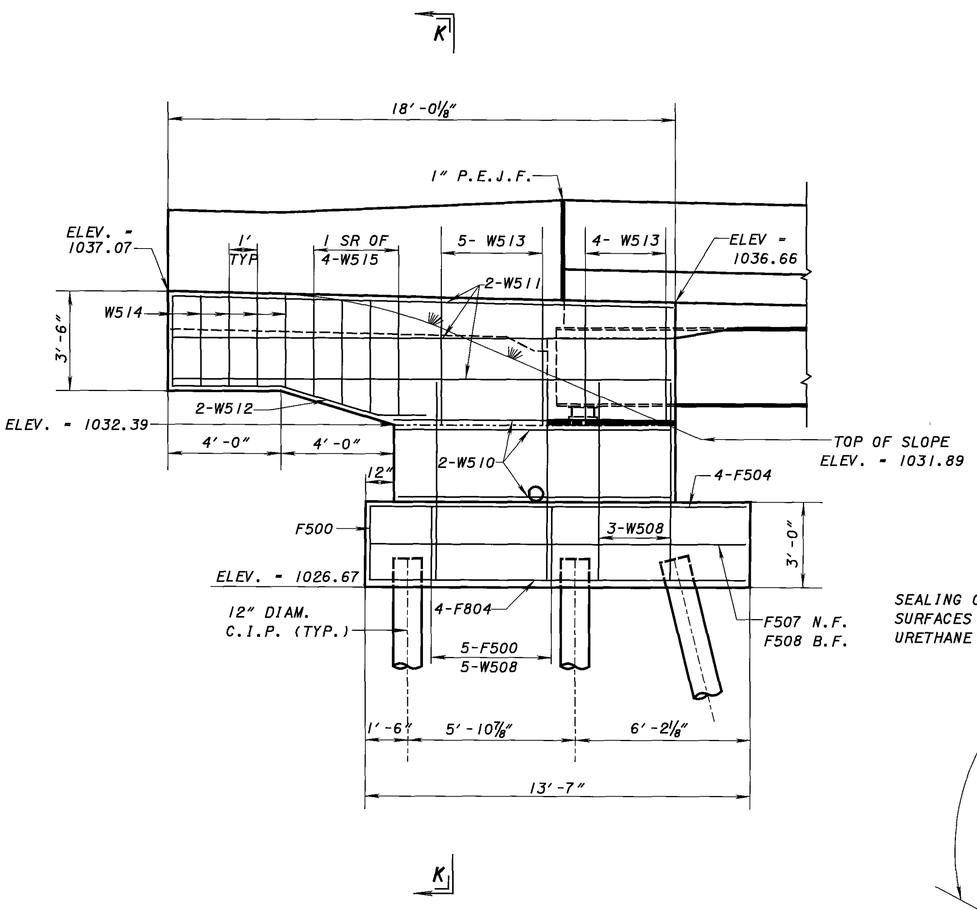
REAR ABUTMENT
MED-71-1450L
I-71 OVER S.R. 162

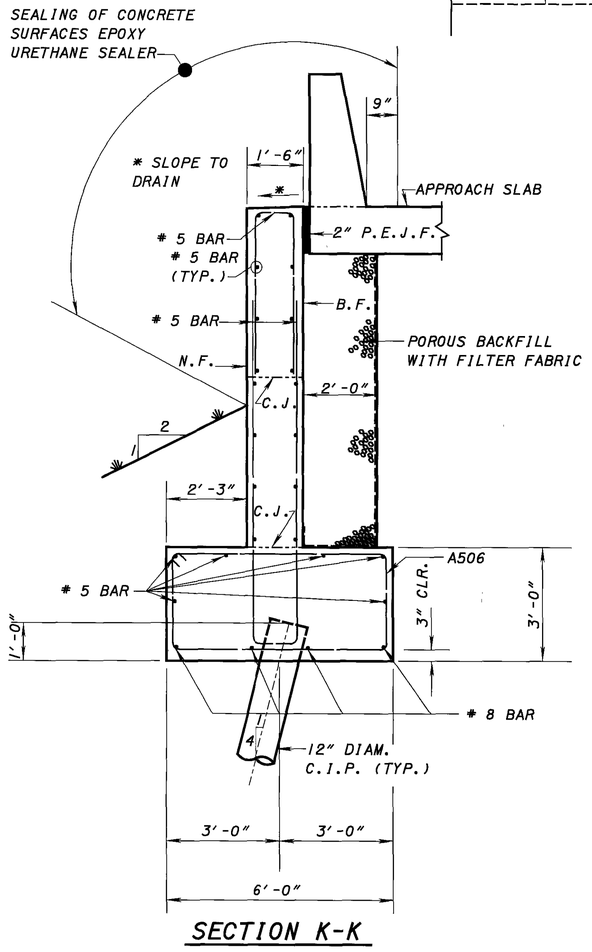
MED-71-9.56

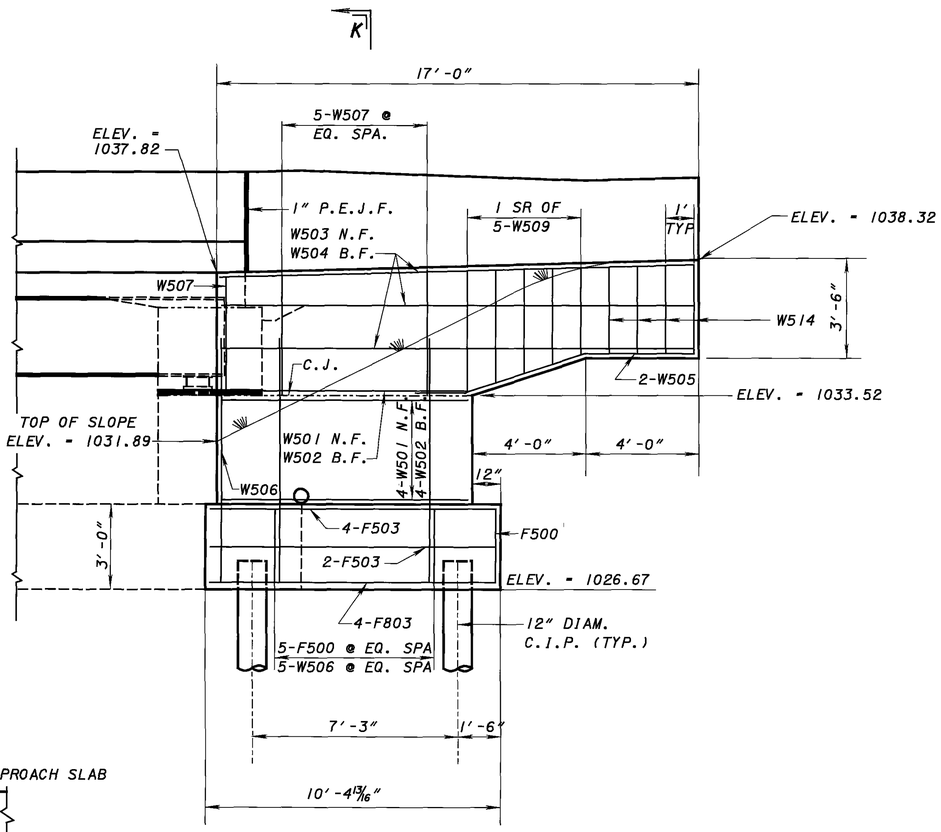
11/34

293/624

i:\pr\project\Med\1408\bridge07l_1450L\07l_1450Lra01.dgn 16-NOV-2004 4:20PM tmakris







NOTES

FOR VIEW C-C & D-D SEE SHEET 11/34

LEGEND

C.J. - CONSTRUCTION JOINT
N.F. - NEAR FACE
B.F. - BACK FACE

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: DB DATE: 12/8/03 STRUCTURE FILE NUMBER: 5203376
DRAWN: TAA REVISED:
DESIGNED: TAA CHECKED: BCW

REAR ABUTMENT WINGWALL DETAIL

MED-71-1450L
OVER S.R. 162

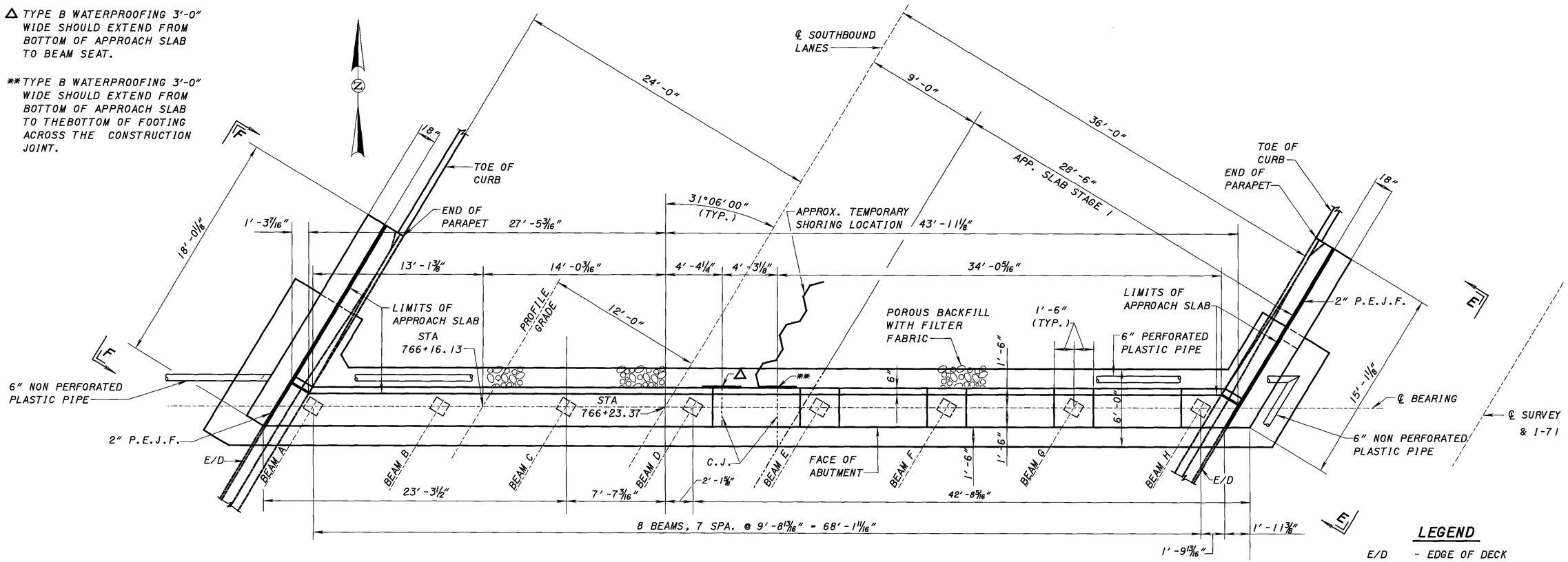
MED-71-9.56

12/34

294/624

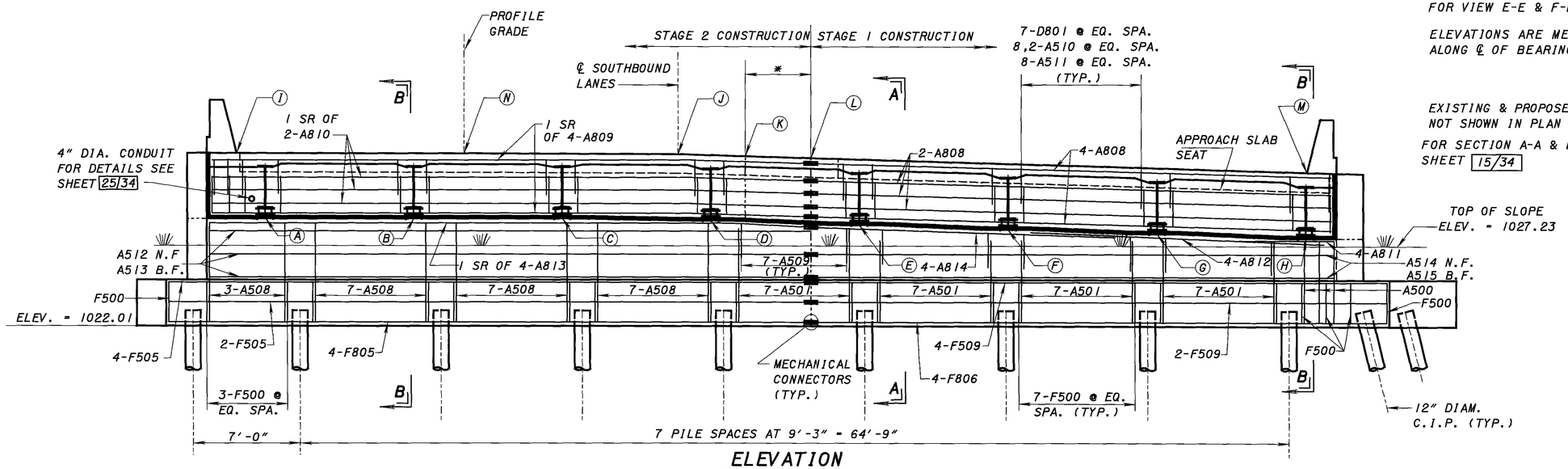
△ TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO BEAM SEAT.

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO THEBOTTOM OF FOOTING ACROSS THE CONSTRUCTION JOINT.



PLAN

LOCATION / ELEVATION	ELEVATIONS													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
ELEVATION	1029.00	1029.00	1029.00	1028.87	1028.59	1028.30	1028.02	1027.73	1033.30	1033.23	1033.11	1032.98	1032.00	1033.27



ELEVATION

LEGEND

E/D - EDGE OF DECK
C.J. - CONSTRUCTION JOINT
N.F. - NEAR FACE
B.F. - BACK FACE
* - CLOSURE POUR IN THE BACKWALL

NOTES

FOR VIEW E-E & F-F SEE SHEET 14/34

ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

EXISTING & PROPOSED PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY.

FOR SECTION A-A & B-B SEE SHEET 15/34

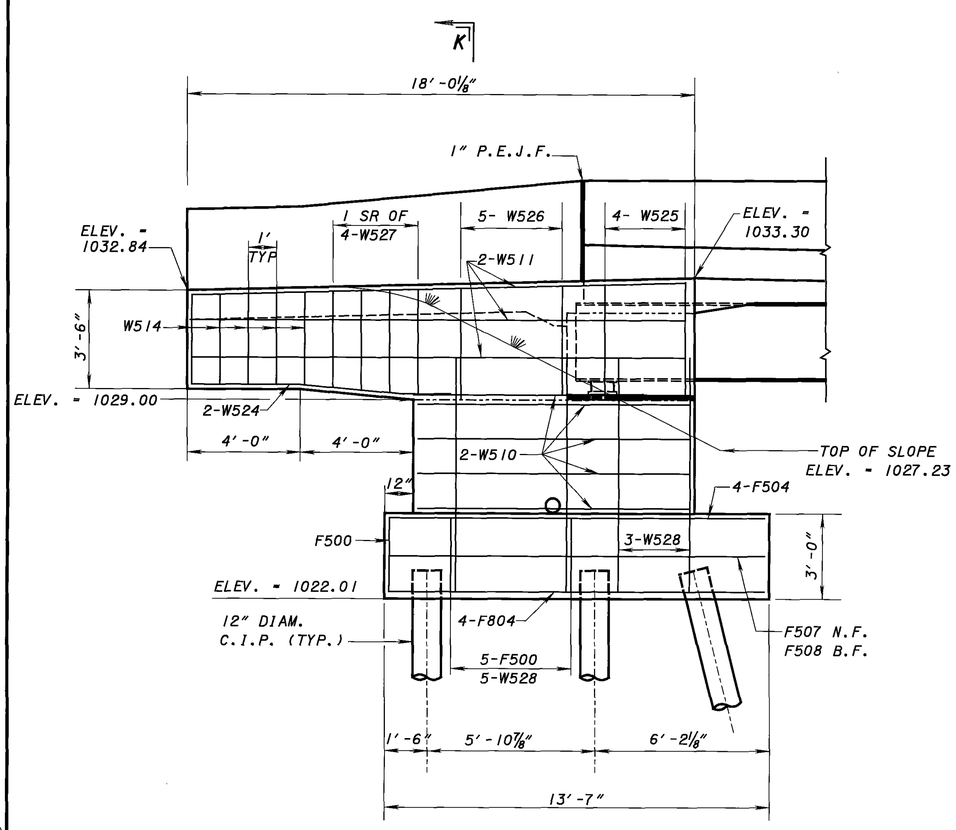
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA | DRAWN: TAA | CHECKED: BCW | REVISED:
REVIEWED: DB | DATE: 12/8/03 | STRUCTURE FILE NUMBER: 5203376

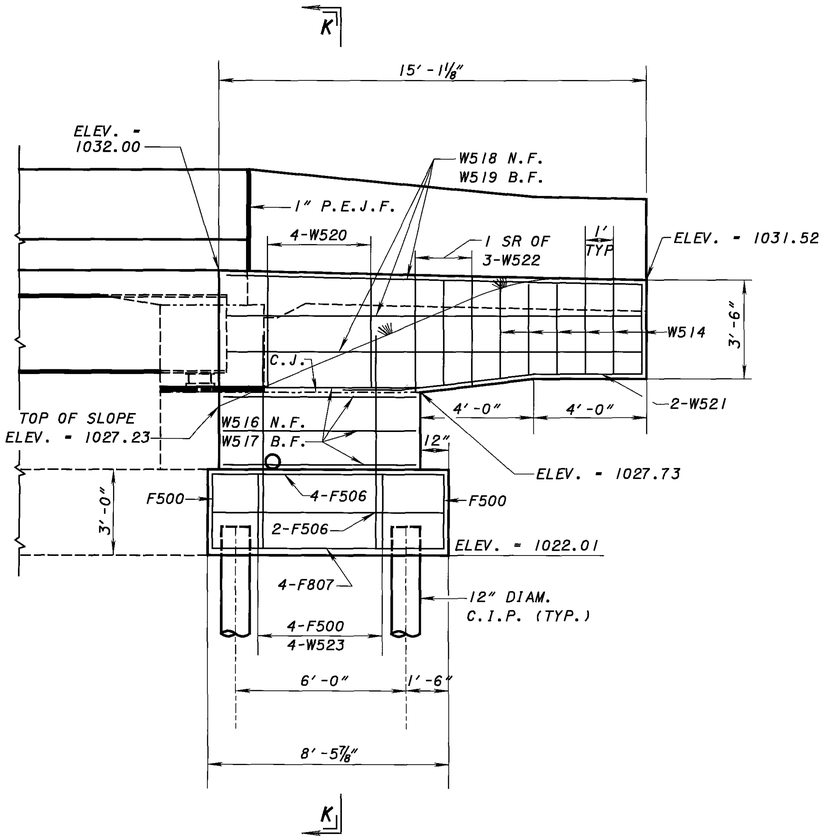
FORWARD ABUTMENT
MED-71-1450L
I-71 OVER S.R. 162

MED-71-9.56

13/34

295/624





NOTES

FOR VIEW E-E & F-F SEE SHEET 13/34

FOR SECTION K-K SEE SHEET 12/34

LEGEND

C.J. - CONSTRUCTION JOINT
N.F. - NEAR FACE
B.F. - BACK FACE

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

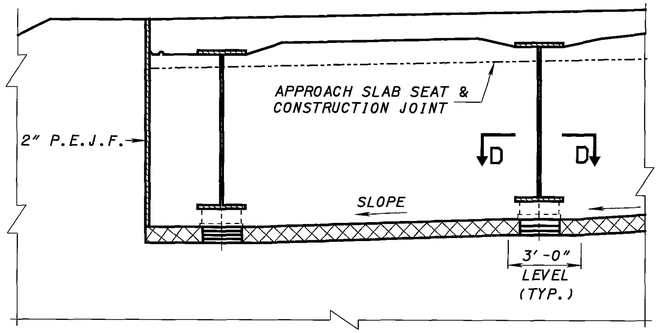
FORWARD ABUTMENT WINGWALL DETAILS

MED-71-1450L
OVER S.R. 162

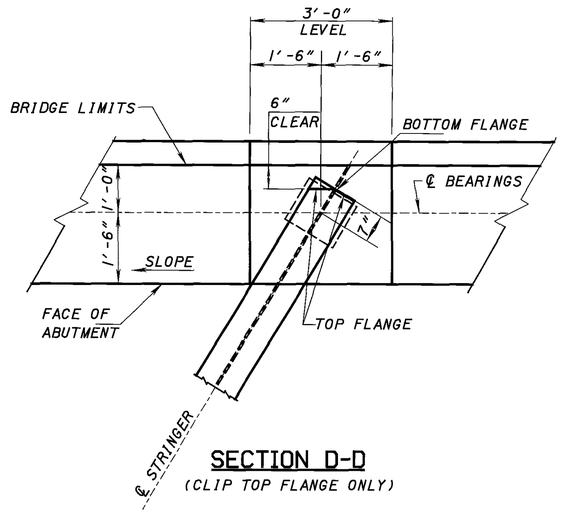
MED-71-9.56

14/34

296/624

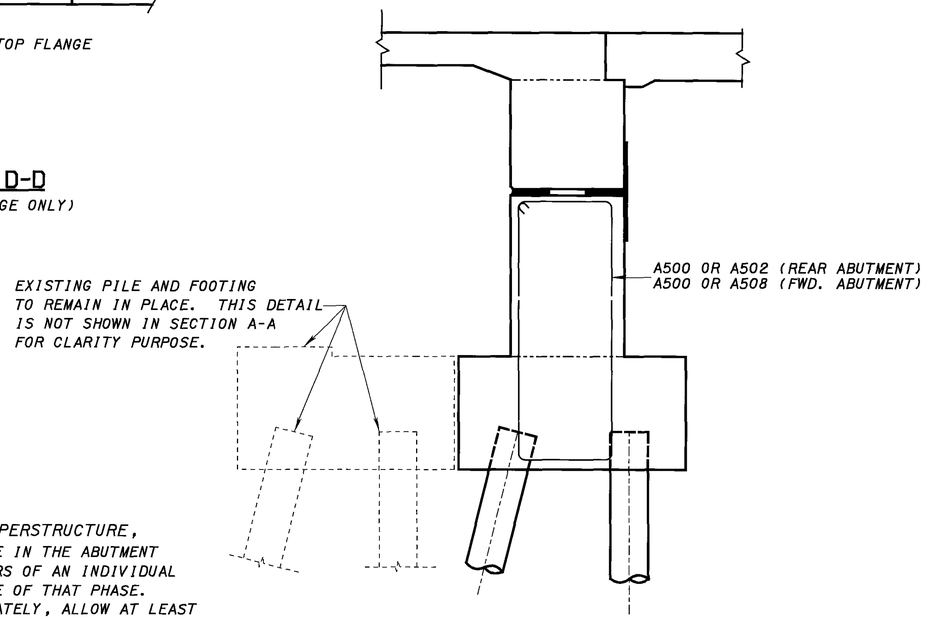


PART ELEVATION OF BEAM SEAT



SECTION D-D

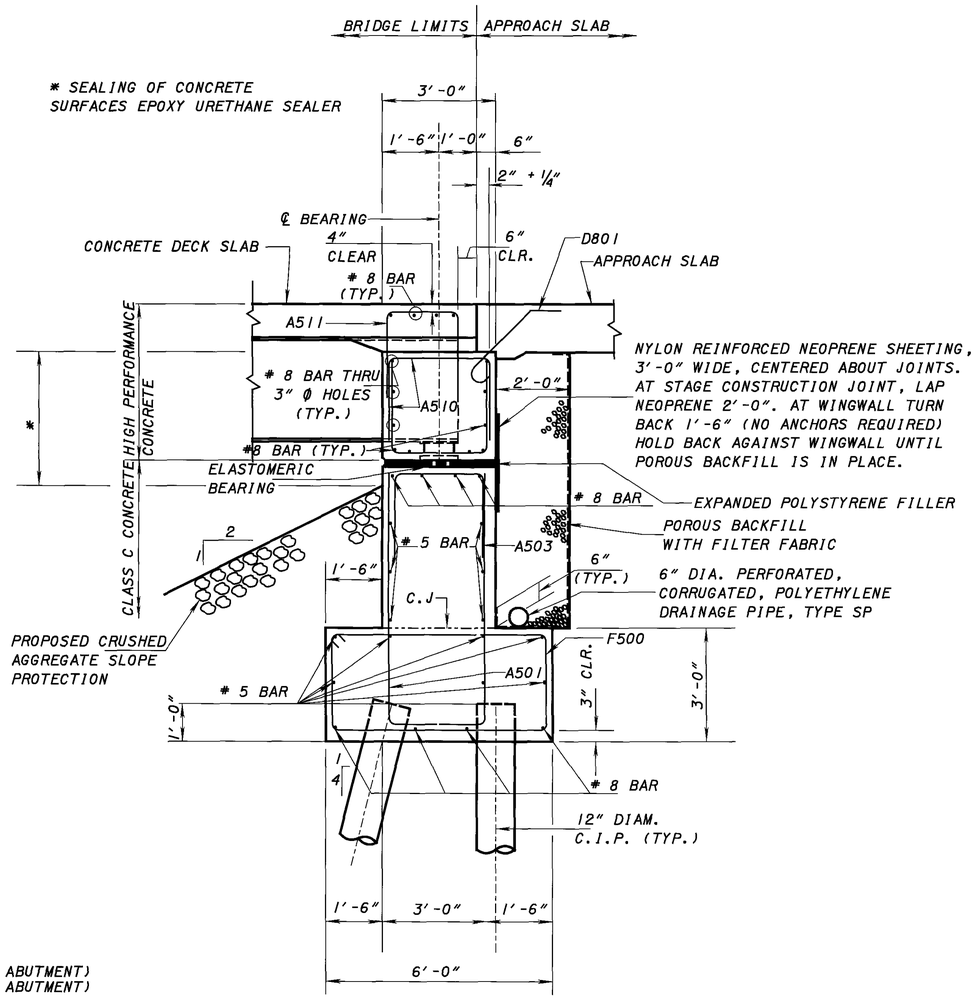
(CLIP TOP FLANGE ONLY)



SECTION B-B

THE ONLY DIFFERENCE BETWEEN SECTION A-A AND B-B IS THE VERTICAL RE-STEEL A500 OR A502 OR A516 SHOWN IN SECTION B-B AND A501 AND A503 SHOWN IN SECTION A-A ARE DIFFERENT SHAPES. A500, A502 AND A516 ARE TYPE 3 SHAPE WHILE A501 IS A TYPE 2 . A500, A502 AND A516 ARE ONE CONTINUOUS BAR.

FOR ADDITIONAL INFORMATION NOT SHOWN IN SECTION B-B SEE SECTION A-A



SECTION A-A

NOTES

ABUTMENT DIAPHRAGM CONCRETE, STEEL SUPERSTRUCTURE, PHASED CONSTRUCTION: PLACE THE CONCRETE IN THE ABUTMENT DIAPHRAGM ENCASING STRUCTURAL STEEL MEMBERS OF AN INDIVIDUAL PHASE SEPARATELY OR WITH THE DECK CONCRETE OF THAT PHASE. IF THE DIAPHRAGM CONCRETE IS PLACED SEPARATELY, ALLOW AT LEAST 48 HOURS OF SET TIME BEFORE PLACING DECK CONCRETE. LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND THE DECK CONCRETE AT THE APPROACH SLAB SEAT.

PROVIDE 3" Ø HOLE THRU WEB AS NOTED, PAYMENT TO BE INCLUDED AS INCIDENTAL WITH ITEM 513 STRUCTURAL STEEL. PAYMENT FOR THE EXPANDED POLYSTYRENE FILLER TO BE INCLUDED WITH ITEM 511 HIGH PERFORMANCE CONCRETE AS INCIDENTAL.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

MISCELLANEOUS DETAILS

MED-71-1450L
OVER S.R. 162

MED-71-9.56

15 / 34

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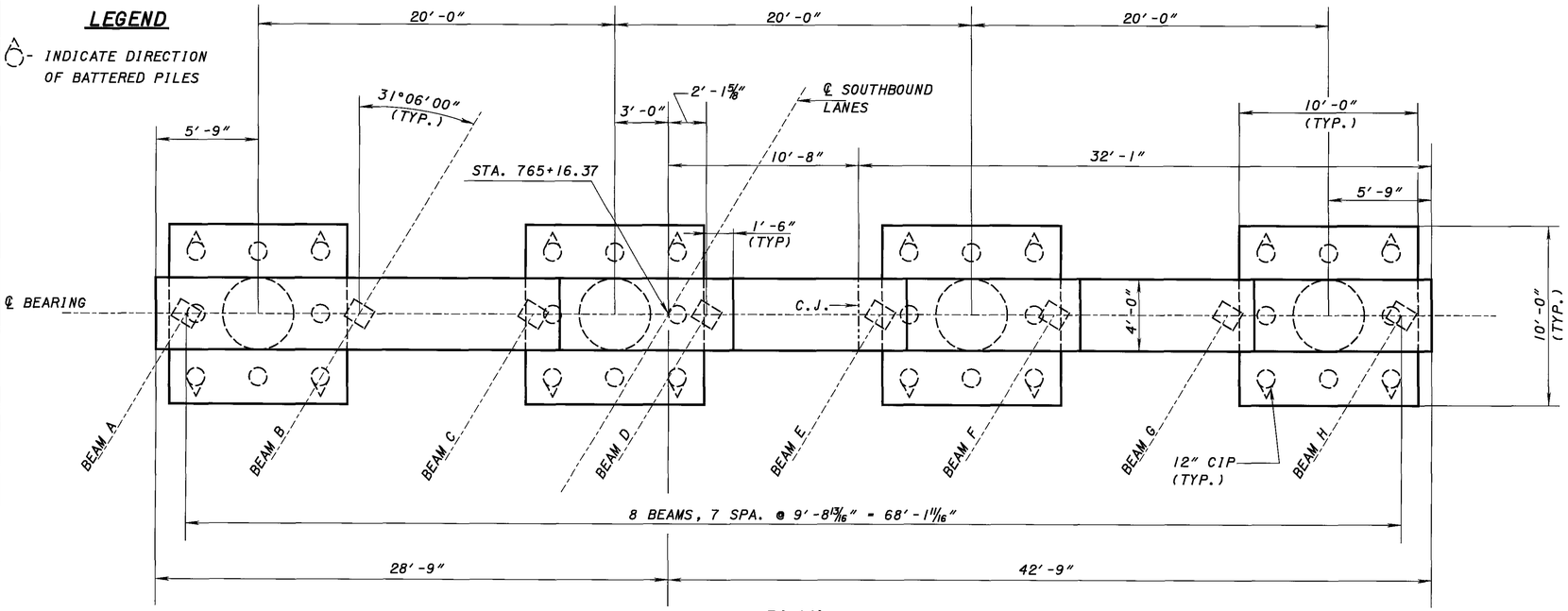
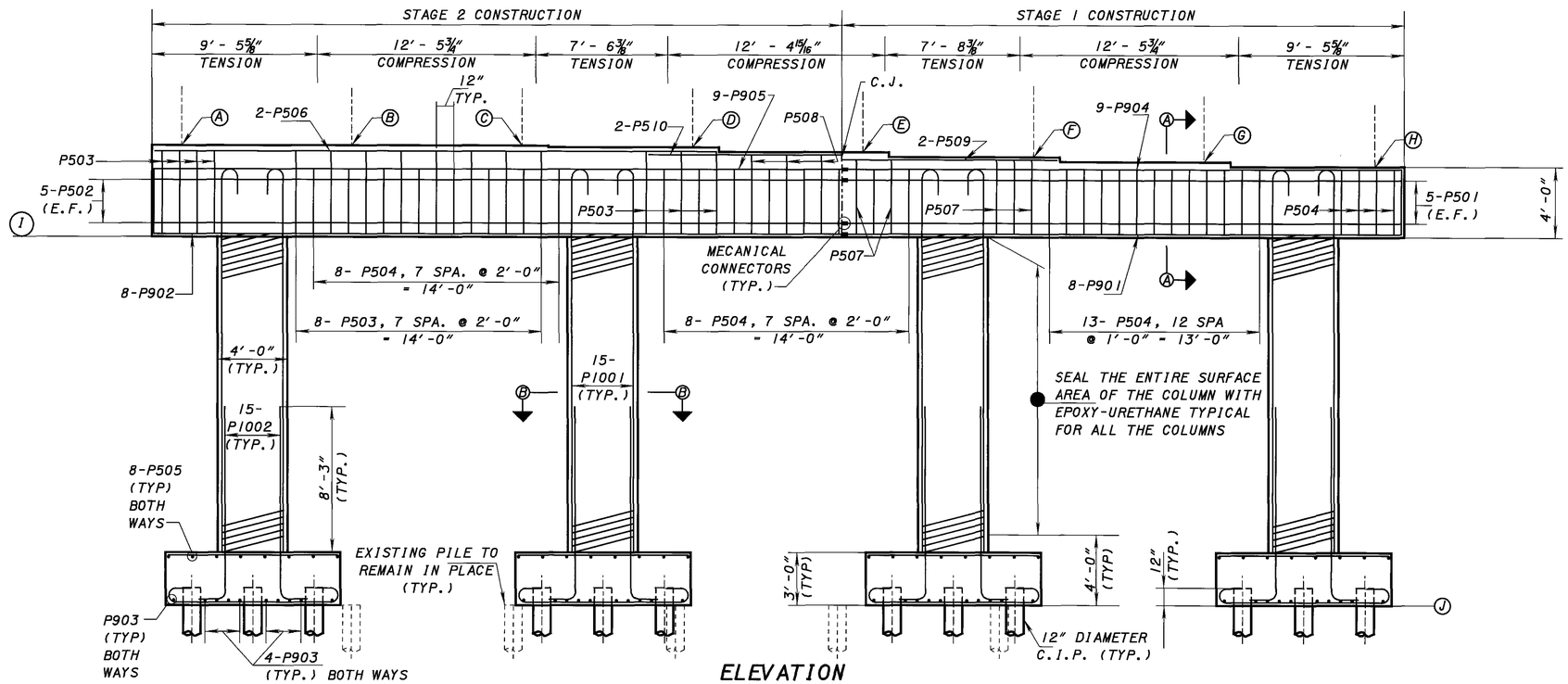
LEGEND

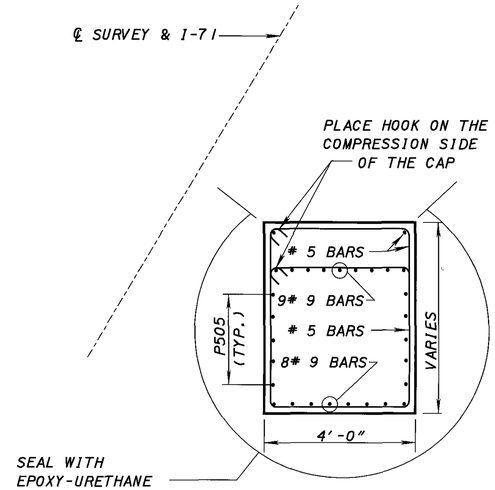
△ - INDICATE DIRECTION OF BATTERED PILES



PLAN

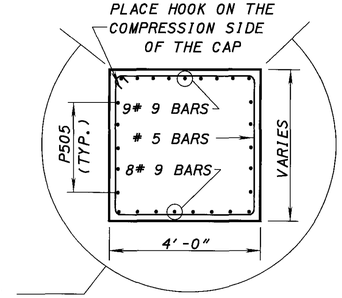


ELEVATION



SECTION A-A

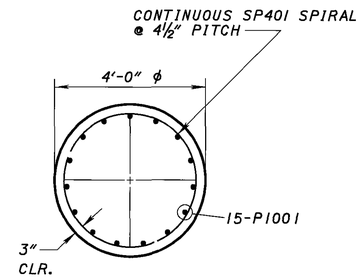
STAGE 2



SECTION A-A

STAGE 1

ELEVATION	
PIER 1	
A	1032.54
B	1032.54
C	1032.54
D	1032.45
E	1032.18
F	1031.90
G	1031.63
H	1031.36
I	1027.36
J	1006.42



SECTION B-B

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

PIER 1 DETAILS

MED-71-1450L
OVER S.R. 162

MED-71-9.56

16 / 34

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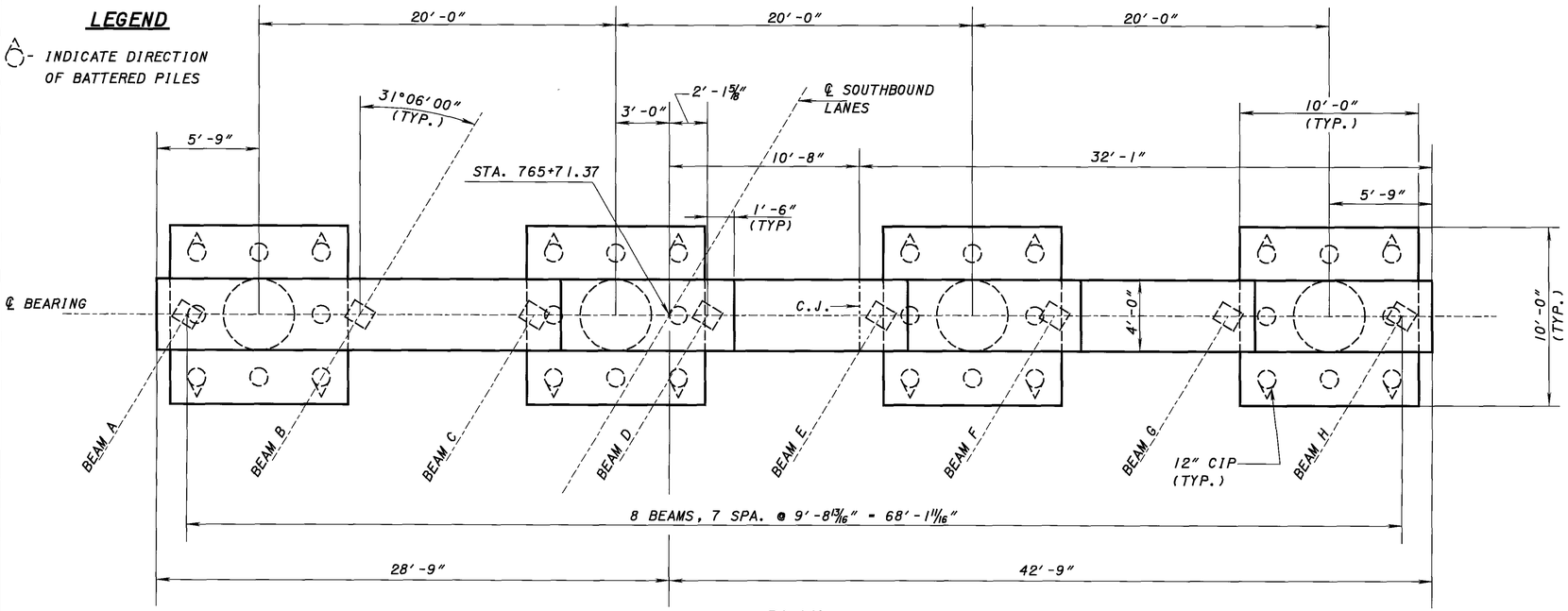
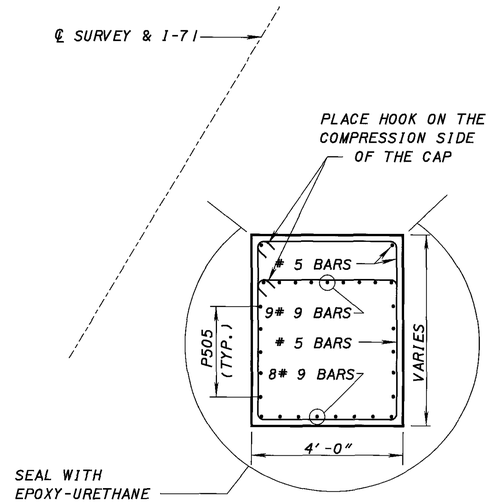
LEGEND

△ - INDICATE DIRECTION OF BATTERED PILES

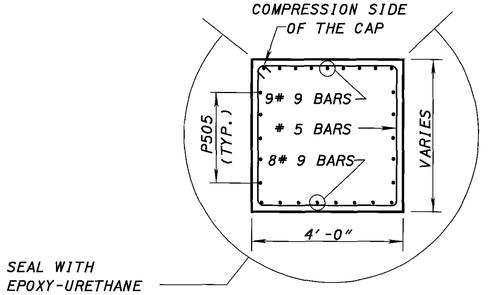


PLAN



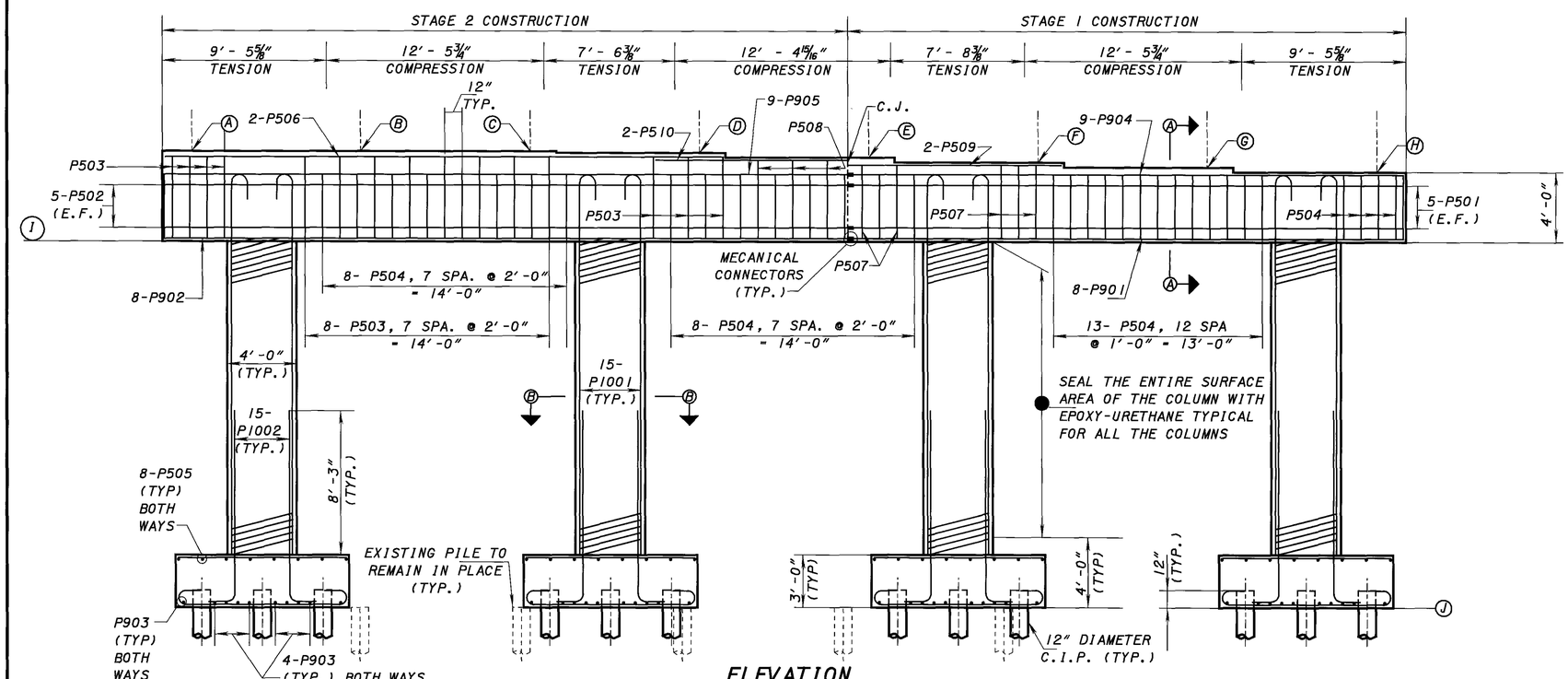
SECTION A-A

STAGE 2



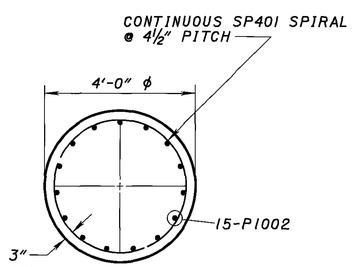
SECTION A-A

STAGE 1



ELEVATION

ELEVATION	
PIER 2	
A	1030.97
B	1030.97
C	1030.97
D	1030.86
E	1030.58
F	1030.30
G	1030.03
H	1029.75
I	1025.75
J	1004.82



SECTION B-B

DESIGN AGENCY: ODOT CENTRAL OFFICE / OFFICE OF PRODUCTION

DESIGNED: TAA | DRAWN: TAA | REVIEWED: DB | DATE: 12/8/03

CHECKED: BCW | REVISED: | STRUCTURE FILE NUMBER: 5203376

PIER 2 DETAILS

MED-71-1450L
OVER S.R. 162

MED-71-9.56

17 / 34

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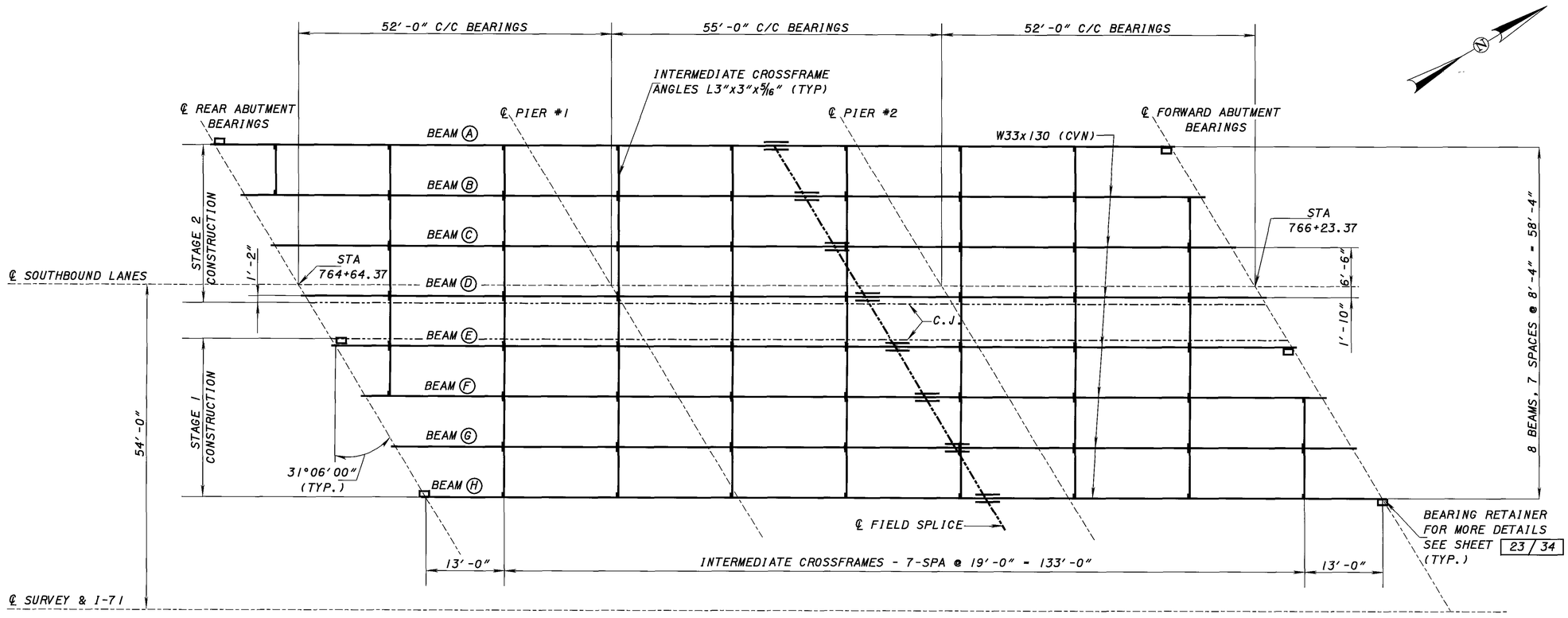
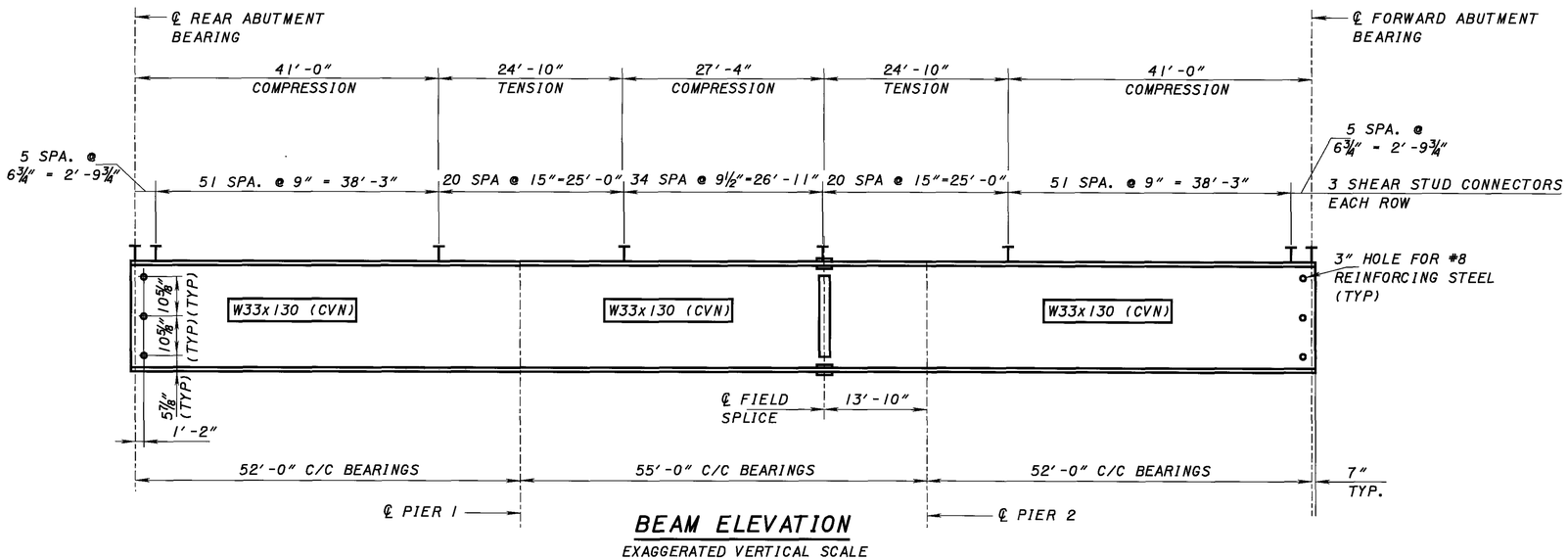
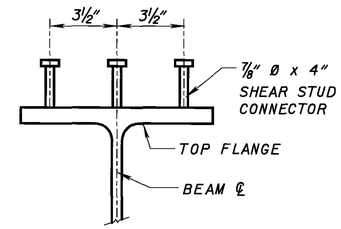


FRAMING PLAN



BEAM ELEVATION

EXAGGERATED VERTICAL SCALE



TYPICAL SECTION SHEAR CONNECTOR DETAIL

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

SUPERSTRUCTURE DETAILS

MED-71-1450 L
I-71 OVER S.R. 162

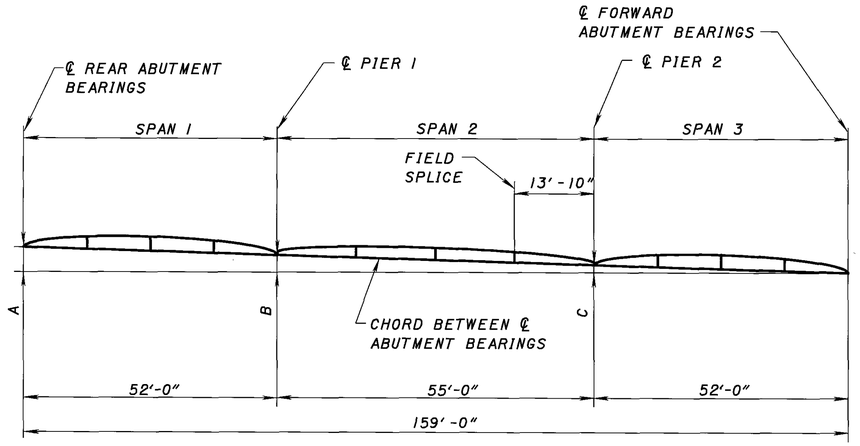
MED-71-9.56

18/34

300/624

16-NOV-2004 4:20PM tmakris

I:\pr\project\Med\1408\bridge071_1450L\071_1450Lsd01.dgn



BLOCKING AND CAMBER DIAGRAM

STEEL IN UNLOADED POSITION

DEFLECTION AND CAMBER, INCHES									
	SPAN 1			SPAN 2			SPAN 3		
LOCATION OF POINT	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
BEAM DEFLECTION	0	0	0	0	0	0	0	0	0
REMAINING DL DEFLECTION	5/16	7/16	1/4	1/16	1/8	1/16	5/16	7/16	1/4
SHOP CAMBER	5/16	7/16	1/4	1/16	1/8	1/16	5/16	7/16	1/4

THE VERTICAL CURVE CORRECTION IS NEGLIGIBLE DUE TO THE CURVE DATA, THEREFORE IT IS NOT INCLUDED IN THE FINAL SHOP CAMBER.

DIMENSION / BEAM #	BEAM A	BEAM B	BEAM C	BEAM D	BEAM E	BEAM F	BEAM G	BEAM H
A	4'-6 3/8"	4'-6 3/16"	4'-6 1/4"	4'-7"	4'-7 3/16"	4'-7 1/16"	4'-7 5/8"	4'-7 3/4"
B	3'-1 5/16"	3'-1 1/2"	3'-1 5/8"	3'-1 3/4"	3'-1 5/16"	3'-2 1/16"	3'-2 1/4"	3'-2 3/8"
C	1'-6 1/2"	1'-6 5/8"	1'-6 11/16"	1'-6 3/4"	1'-6 13/16"	1'-2 1/16"	1'-7"	1'-7 1/16"

NOTES

FOR FIELD SPLICE DETAILS SEE STD. DWG. BS-1-93 (50 KSI).

FOR SCREED TABLE SEE SHEETS 20/34.

WELDED ATTACHMENT:
WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FACIA STRINGER 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 FLANGE, BE NOT MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAT 3/4" THICK.

3"ϕ HOLES DRILLED IN THE PROPOSED BEAM SHALL BE PAID UNDER ITEM 513 STRUCTURAL STEEL. THIS PAYMENT IS INCIDENTAL TO THE PAY ITEM.

STRUCTURAL STEEL SHALL BE ASTM A709 STEEL.

ALL BEAM LENGTH DIMENSIONS ARE AT 60 °F.

LATERAL AND LONGITUDINAL SPACING OF WELDED STUD CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE BOLTS PROVIDED THAT AT LEAST THE NUMBER OF STUDS SPECIFIED IN THE BEAM ELEVATION ARE PROVIDED.

STRUCTURAL STEEL:
WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

ALL BOLTED FIELD SPLICES ARE OPTIONAL, THE CONTRACTOR MAY OMIT THE SPLICES AS DETAILED IN THE PLANS.

PENDING ANY CHANGES AS DESCRIBED ABOVE AND TYPE OF CROSSFRAME USED, THE SPACING OF THE INTERMEDIATE CROSSFRAMES SHALL BE ADJUSTED TO AVOID CONFLICT WITH THE SPLICES. THE NUMBER OF CROSSFRAMES SHALL REMAIN THE SAME, A MAXIMUM SPACING OF 19'-0" WILL BE ALLOWED AND SHALL REMAIN IN LINE ACROSS THE WIDTH OF THE STRUCTURE.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED TAA | DRAWN TAA | CHECKED BCW | REVISED
REVISED DB | DATE 12/8/03 | STRUCTURE FILE NUMBER 5203376

SUPERSTRUCTURE DETAILS
MED-71-1450 L
I-71 OVER S.R. 162

MED-71-9.56

19/34

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SCREED ELEVATION

LOCATION	LEFT TOE OF PARAPET		BEAM A		BEAM B		PROFILE GRADE		BEAM C		℄ SOUTHBOUND LANES		BEAM D	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ REAR ABUTMENT	764+49.89	1037.82	764+50.39	1037.82	764+55.42	1037.82	764+57.13	1037.82	764+60.45	1037.82	764+64.37	1037.81	764+65.47	1037.75
1/4 SPAN	764+62.89	1037.48	764+63.39	1037.48	764+68.42	1037.47	764+70.13	1037.47	764+73.45	1037.46	764+77.37	1037.46	764+78.47	1037.40
MIDSPAN	764+75.89	1037.12	764+76.39	1037.12	764+81.42	1037.12	764+83.13	1037.11	764+86.45	1037.11	764+90.37	1037.10	764+91.47	1037.04
3/4 SPAN	764+88.89	1036.77	764+89.39	1036.77	764+94.42	1036.76	764+96.13	1036.76	764+99.45	1036.75	765+03.37	1036.74	765+04.47	1036.68
℄ PIER # 1	765+01.89	1036.41	765+02.39	1036.41	765+07.42	1036.40	765+09.13	1036.39	765+12.45	1036.39	765+16.37	1036.38	765+17.47	1036.32
1/4 SPAN	765+15.64	1036.02	765+16.14	1036.02	765+21.17	1036.01	765+22.88	1036.01	765+26.20	1036.00	765+30.12	1035.99	765+31.22	1035.93
MIDSPAN	765+29.39	1035.64	765+29.89	1035.63	765+34.92	1035.62	765+36.63	1035.62	765+39.95	1035.61	765+43.87	1035.60	765+44.97	1035.54
3/4 SPAN	765+43.14	1035.24	765+43.64	1035.24	765+48.67	1035.23	765+50.38	1035.22	765+53.70	1035.21	765+57.62	1035.20	765+58.72	1035.14
℄ PIER # 2	765+56.89	1034.84	765+57.39	1034.84	765+62.42	1034.83	765+64.13	1034.82	765+67.45	1034.81	765+71.37	1034.80	765+72.47	1034.73
1/4 SPAN	765+69.89	1034.46	765+70.39	1034.46	765+75.42	1034.44	765+77.13	1034.44	765+80.45	1034.43	765+84.37	1034.41	765+85.47	1034.35
MIDSPAN	765+82.89	1034.08	765+83.39	1034.08	765+88.42	1034.06	765+90.13	1034.05	765+93.45	1034.04	765+97.37	1034.02	765+98.47	1033.96
3/4 SPAN	765+95.89	1033.69	765+96.39	1033.69	766+01.42	1033.67	766+03.13	1033.66	766+06.45	1033.65	766+10.37	1033.63	766+11.47	1033.57
℄ FORWARD ABUTMENT	766+08.89	1033.30	766+09.39	1033.30	766+14.42	1033.28	766+16.13	1033.27	766+19.45	1033.25	766+23.37	1033.23	766+24.47	1033.17

SCREED ELEVATION

LOCATION	STAGE 2 CONSTR JT		STAGE 1 CONSTR JT		BEAM E		BEAM F		BEAM G		BEAM H		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ REAR ABUTMENT	764+66.18	1037.72	764+69.80	1037.52	764+70.50	1037.49	764+75.53	1037.22	764+80.56	1036.95	764+85.58	1036.69	764+86.08	1036.66
1/4 SPAN	764+79.18	1037.36	764+82.80	1037.17	764+83.50	1037.13	764+88.53	1036.86	764+93.56	1036.60	764+98.58	1036.33	764+99.08	1036.30
MIDSPAN	764+92.18	1037.01	764+95.80	1036.81	764+96.50	1036.77	765+01.53	1036.51	765+06.56	1036.24	765+11.58	1035.96	765+12.08	1035.94
3/4 SPAN	765+05.18	1036.65	765+08.80	1036.45	765+09.50	1036.41	765+14.53	1036.14	765+19.56	1035.87	765+24.58	1035.60	765+25.08	1035.57
℄ PIER # 1	765+18.18	1036.28	765+21.80	1036.09	765+22.50	1036.05	765+27.53	1035.77	765+32.56	1035.50	765+37.58	1035.23	765+38.08	1035.20
1/4 SPAN	765+31.93	1035.89	765+35.55	1035.69	765+36.25	1035.66	765+41.28	1035.38	765+46.31	1035.11	765+51.33	1034.83	765+51.83	1034.80
MIDSPAN	765+45.68	1035.50	765+49.30	1035.30	765+50.00	1035.26	765+55.03	1034.98	765+60.06	1034.71	765+65.08	1034.43	765+65.58	1034.40
3/4 SPAN	765+59.43	1035.10	765+63.05	1034.90	765+63.75	1034.86	765+68.78	1034.58	765+73.81	1034.31	765+78.83	1034.03	765+79.33	1034.00
℄ PIER # 2	765+73.18	1034.70	765+76.80	1034.49	765+77.50	1034.46	765+82.53	1034.18	765+87.56	1033.90	765+92.58	1033.62	765+93.08	1033.59
1/4 SPAN	765+86.18	1034.31	765+89.80	1034.11	765+90.50	1034.07	765+95.53	1033.79	766+00.56	1033.51	766+05.58	1033.23	766+06.08	1033.20
MIDSPAN	765+99.18	1033.92	766+02.80	1033.72	766+03.50	1033.68	766+08.53	1033.40	766+13.56	1033.11	766+18.58	1032.83	766+19.08	1032.80
3/4 SPAN	766+12.18	1033.53	766+15.80	1033.32	766+16.50	1033.28	766+21.53	1033.00	766+26.56	1032.72	766+31.58	1032.43	766+32.08	1032.40
℄ FORWARD ABUTMENT	766+25.18	1033.13	766+28.80	1032.93	766+29.50	1032.89	766+34.53	1032.60	766+39.56	1032.32	766+44.58	1032.03	766+45.08	1032.00

SCREED SETTING ELEVATIONS GIVEN ARE TO THE TOP OF CONCRETE DECK AND ARE REQUIRED PRIOR TO PLACEMENT OF CONCRETE. SINCE THE BEAM IS NOT CAMBERED BECAUSE THE DEFLECTION IS NEGLIGIBLE, ALLOWANCE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE IS NOT INCLUDED IN THE SCREED ELEVATIONS. THEREFORE, THE SCREED ELEVATIONS ARE THE FINAL DECK ELEVATIONS.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED TAA | DRAWN NOK | CHECKED BCW | REVISED

REVISED DB | DATE 12/8/03

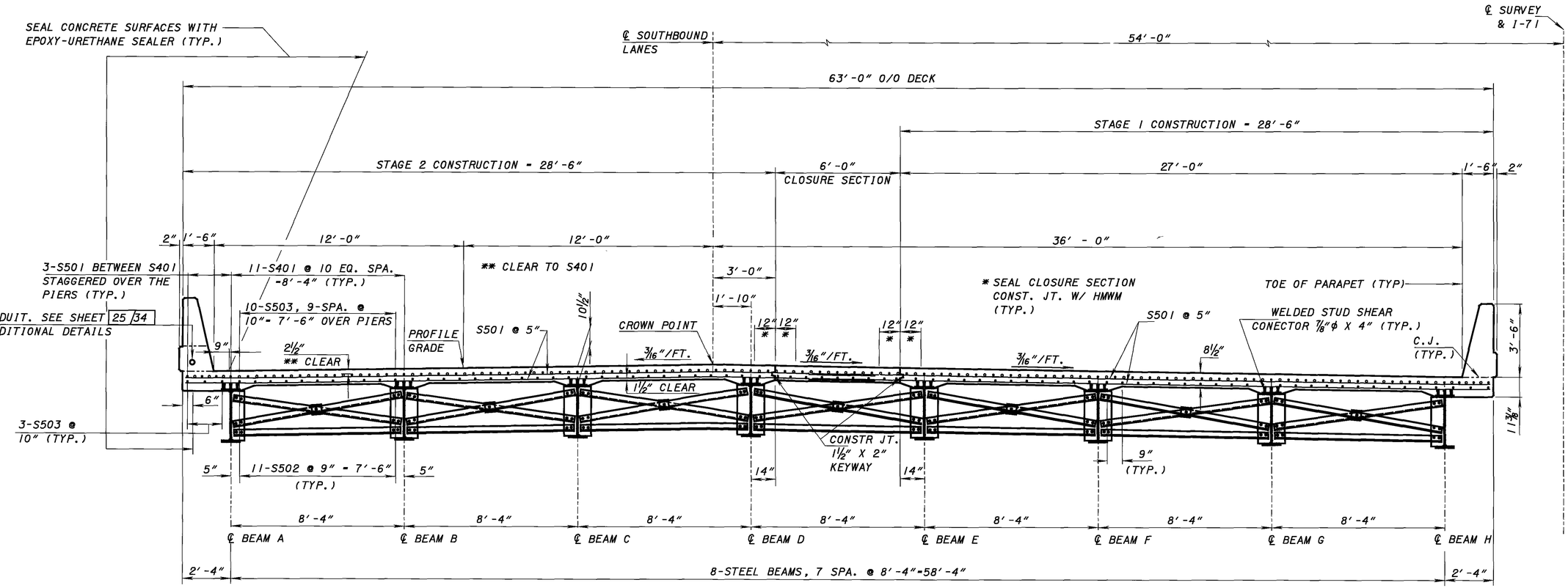
STRUCTURE FILE NUMBER 5203376

SUPERSTRUCTURE DETAILS

MED-7 I-1450L
I-7 I OVER SR 162

MED-7 I-9.56

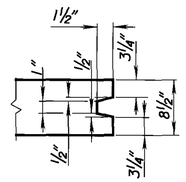
302
624



TRANSVERSE SECTION

NOTES

1. ALL REINFORCING STEEL IS EPOXY COATED.
2. FOR PARAPET DETAILS, SEE SHEET 26/34.
3. REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH ITEM 509, REINFORCING STEEL.
4. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACETHE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ±3 INCHES
5. FOR LONGITUDINAL REINFORCEMENTS IN PARAPET SEE SHEET 26/34 .



KEYWAY DETAILS AT CLOSURE SECTION

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TGM	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

TRANSVERSE SECTION
MED-71-1450L
I-71 OVER S.R. 162

MED-71-9.56

21/34

303/624

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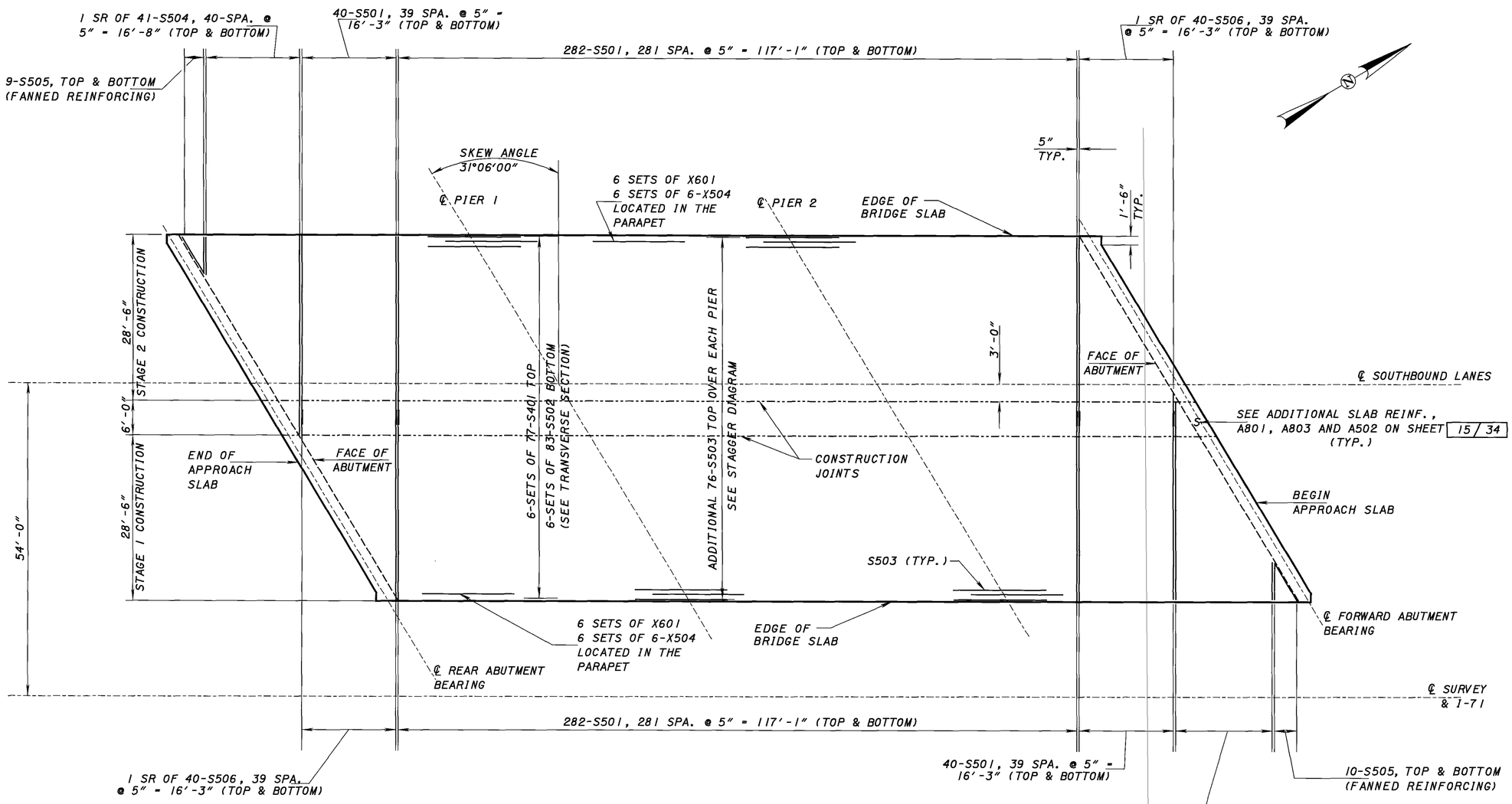
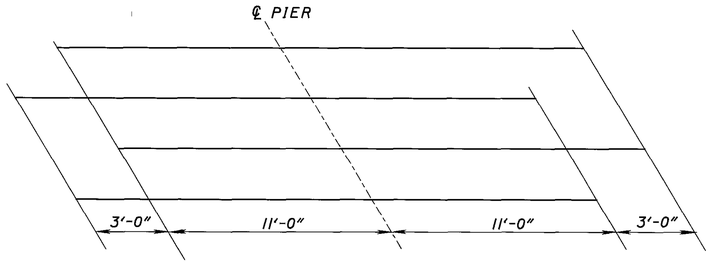


DECK REINFORCEMENT

MINIMUM LAP FOR # 4 BAR - 2'-0"
MINIMUM LAP FOR # 5 BAR - 2'-6"



STAGGER OF S501 BARS OVER PIERS

NOTES

CONCRETE PARAPET NOT SHOWN FOR CLARITY.
FOR DETAILS, SEE SHEET 25 & 26/34

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA
DRAWN: TAA
REVIEWED: DB
DATE: 12/8/03
CHECKED: BCW
REVISED:
STRUCTURE FILE NUMBER: 5203376

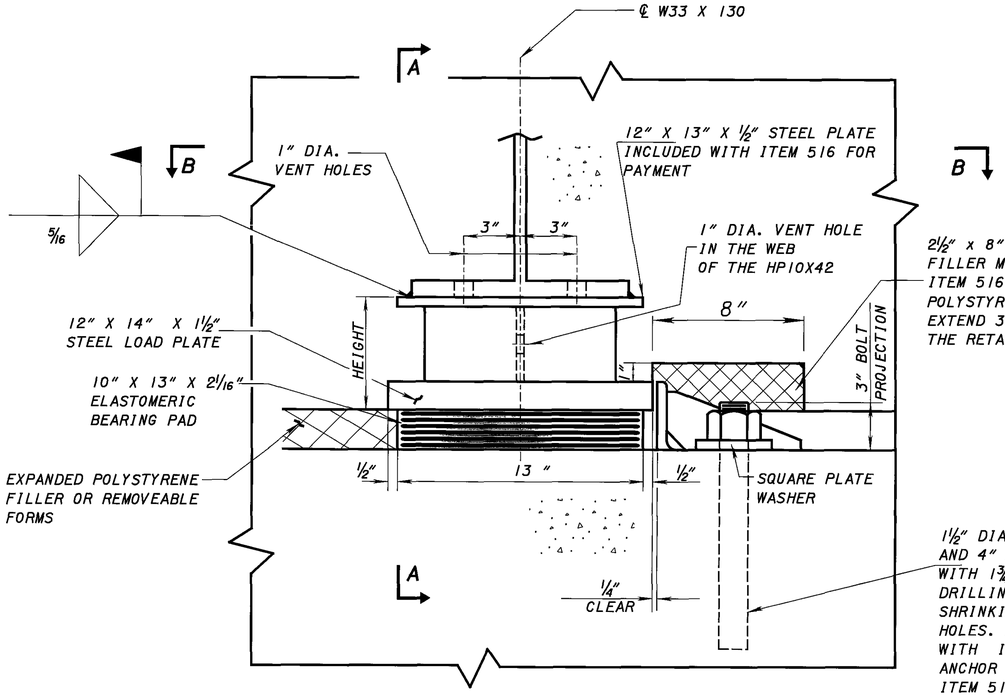
SUPERSTRUCTURE DETAILS

MED-71-1450 L
I-71 OVER S.R.162

MED-71-9.56

22/34

304/624



2½" x 8" x 2'-0" POLYSTYRENE FILLER MATERIAL INCLUDED WITH ITEM 516 FOR PAYMENT. POLYSTYRENE FILLER MATERIAL TO EXTEND 3" BEYOND THE END OF THE RETAINER ON EACH SIDE.

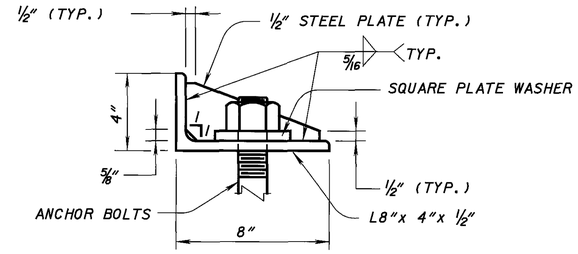
1½" DIA. X 12" LONG ANCHOR BOLT WITH NUT AND 4" X 4" X ½" SQUARE PLATE WASHER WITH 1¾" DIA. HOLES. WHEN FIELD DRILLING, GROUT WITH EPOXY NON-SHRINKING GROUT IN 1¾" X 10" DEEP HOLES. PAYMENT SHALL BE INCLUDED WITH ITEM 510, DOWELL HOLES AND ANCHOR BOLT SHALL BE INCLUDED WITH ITEM 516 FOR PAYMENT.

REINFORCING STEEL IN THE VICINITY OF THE BEARING RETAINER SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING RETAINER ANCHOR HOLES.

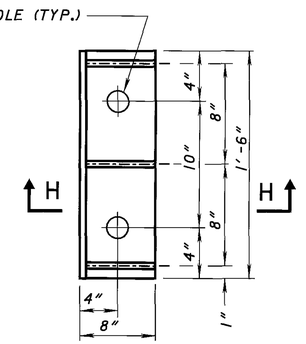
REAR AND FORWARD ABUTMENT LAMINATED ELASTOMERIC EXPANSION BEARING

BEARING TABLE												
BEARING LOCATION	TYPE	L	W	t_i In.	t_o In.	n_1	n_2	STEEL LOAD ℄	HEIGHT	DL, Kips	LL, Kips	TOTAL, Kips
REAR & FORWARD ABUTMENT	EXP	10"	13"	¼"	.17"	5	6	12" x 14" x 1½"	6"	64	59	123
PIER 1 & PIER 2	EXP	12"	15"	¼"	.17"	3	4	13" x 16" x 1⅝"	N/A	99	66	165

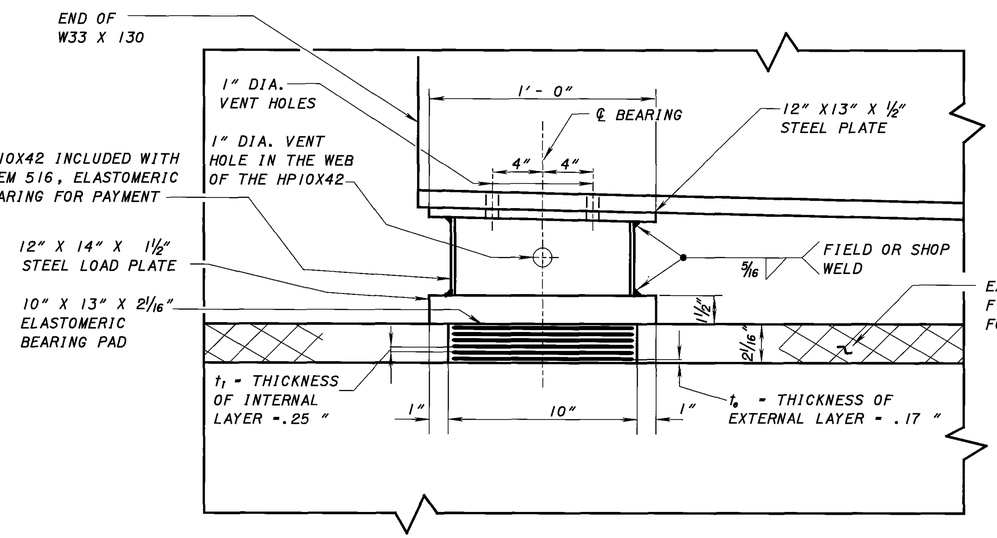
n_1 - NUMBER OF INTERNAL ELASTOMER LAYERS, t_i ELASTOMER LAYERS ARE 50 DUROMETERS
n_2 - NUMBER OF STEEL LAMINATES, 0.0747" THICKNESS



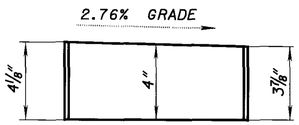
SECTION H-H



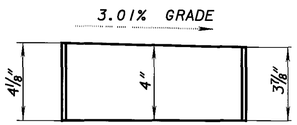
BEARING RETAINER ASSEMBLY



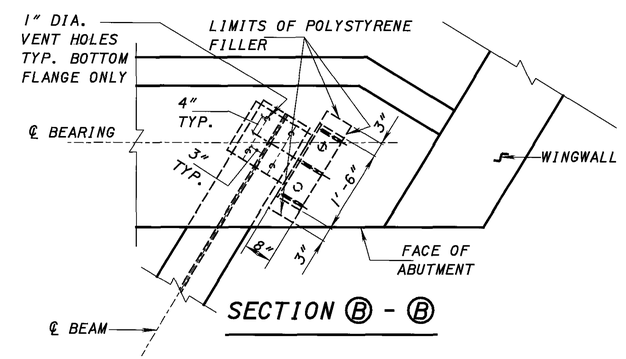
SECTION Ⓐ - Ⓐ
LAMINATED ELASTOMERIC EXPANSION ABUTMENT BEARING



HP 10x42 BEVELED DETAIL
(AT REAR ABUTMENT)



HP 10x42 BEVELED DETAIL
(AT FORWARD ABUTMENT)



SECTION Ⓑ - Ⓑ

BEARING RETAINER- PLAN

FOR LOCATION SEE SHEET 18 / 34

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA
DRAWN: NOK
CHECKED: BCW
REVIEWED: DB
DATE: 12/8/03
REVISED:
STRUCTURE FILE NUMBER: 5203376

BEARING PAD DETAILS
MED-71-1450L
1 - 71 OVER SR 162

MED-71-9.56

23 / 34

305
624

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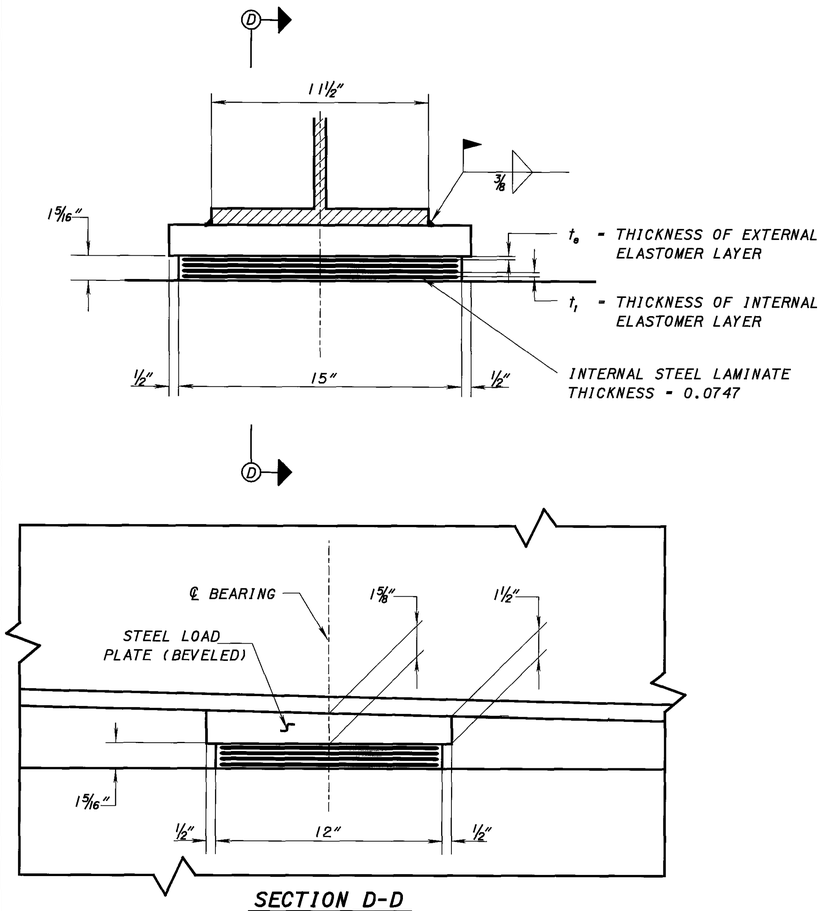
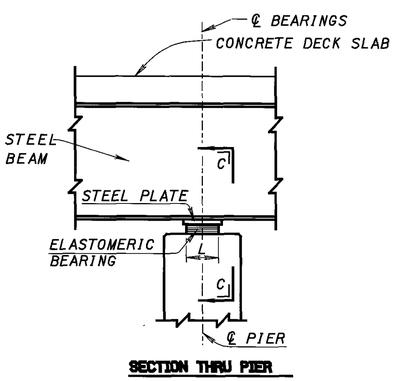
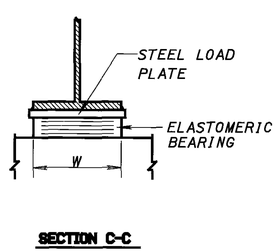


SECTION D-D

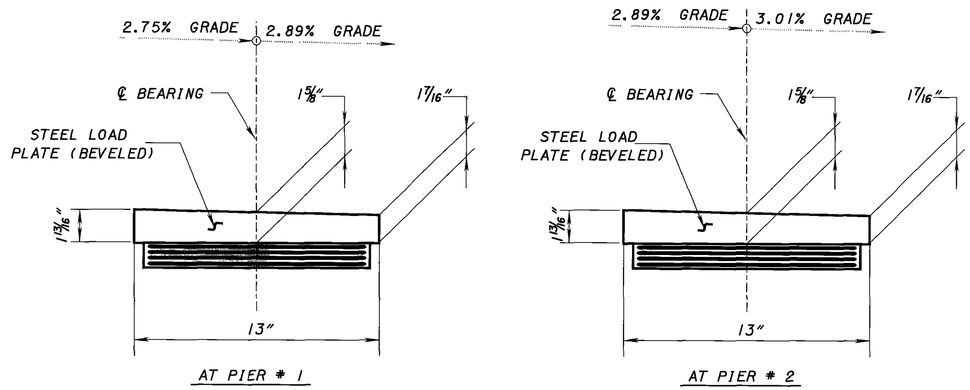
LAMINATED ELASTOMERIC EXPANSION PIER BEARING



SECTION THRU PIER



SECTION C-C



LOAD PLATE BEVELED DETAILS

NOTES:

INSTALLATION PROCEDURE: ANCHOR BOLTS SHALL BE EITHER CAST IN PLACE BY USE OF A TEMPLATE OR FIELD DRILLED AND GROUTED AT THE CONTRACTOR'S OPTION. CARE SHALL BE TAKEN TO ASSURE THAT THE ANCHOR BOLTS DO NOT INTERFERE WITH REINFORCING STEEL.

MATERIALS: THE HP SHAPE (SUPPORT MEMBER) SHALL BE A36 STEEL. THE STEEL PLATES AND STEEL RETAINER ASSEMBLY . SHALL BE THE SAME GRADE OF STEEL AS THE STEEL BEAM. THE HP SHAPE AND THE STEEL PLATES AND STEEL RETAINER ASSEMBLY SHALL HAVE THE SAME PROTECTIVE COATING AS THE STRUCTURAL STEEL. BEFORE THE BACKWALL IS POURED WITH CLASS HP CONCRETE, THE HP SHAPE & STEEL PLATES SHALL BE PAINTED.

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

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.

BEARING REPOSITIONING: IF THE STEEL BEAMS ARE ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE SIXTH OF THE BEARING HEIGHTS AT 60°F ± 10°F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, VENT HOLES, PROTECTIVE COATING, HP10x42, STEEL PLATES, ANCHOR BOLTS, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

10" x 13" x 2 1/16" WITH 12" x 14" x 1½" LOAD PLATE, AS PER PLAN (ABUTMENT)
12" x 15" x 15/16" WITH 12" x 14" x 15/8" LOAD PLATE (PIER #1 & #2)

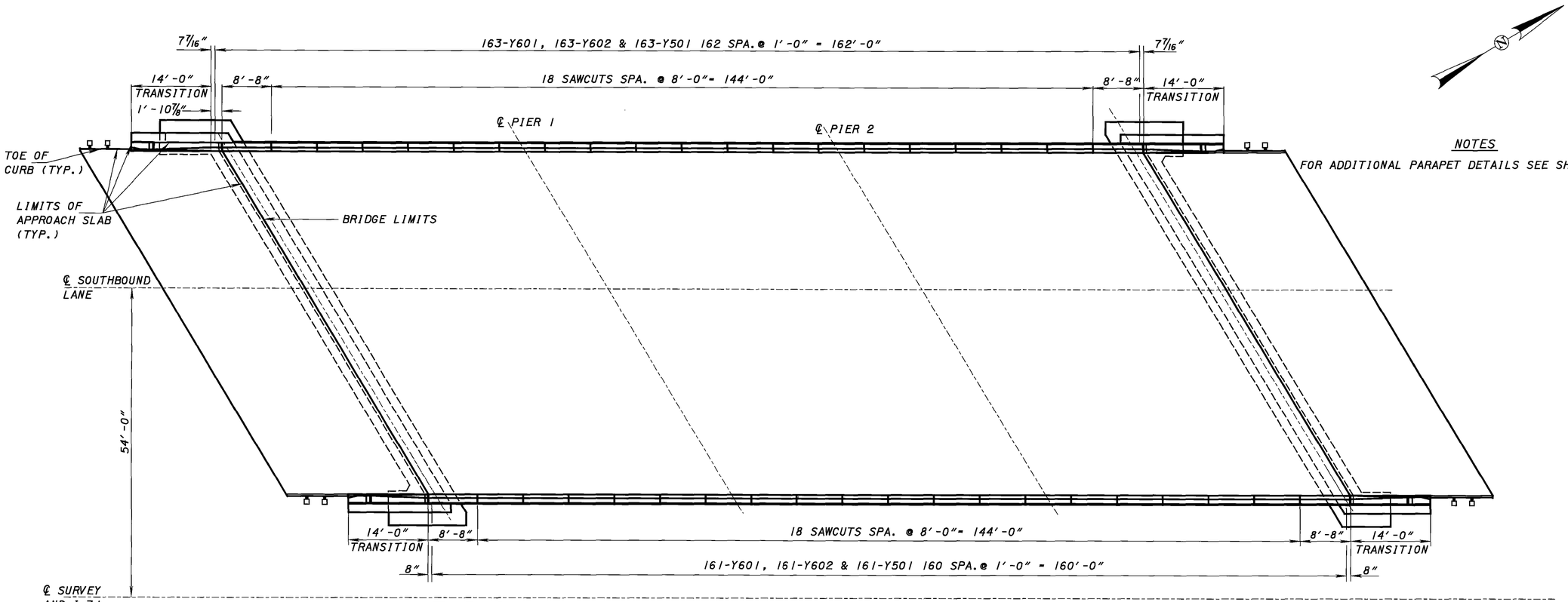
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA
DRAWN: NOK
CHECKED: BCW
REVIEWED: DB
DATE: 12/8/03
REVISED:
STRUCTURE FILE NUMBER: 5203376

BEARING PAD DETAILS
MED-71-1450 L
I-71 OVER SR 162

MED-71-9.56

24 / 34

306
624



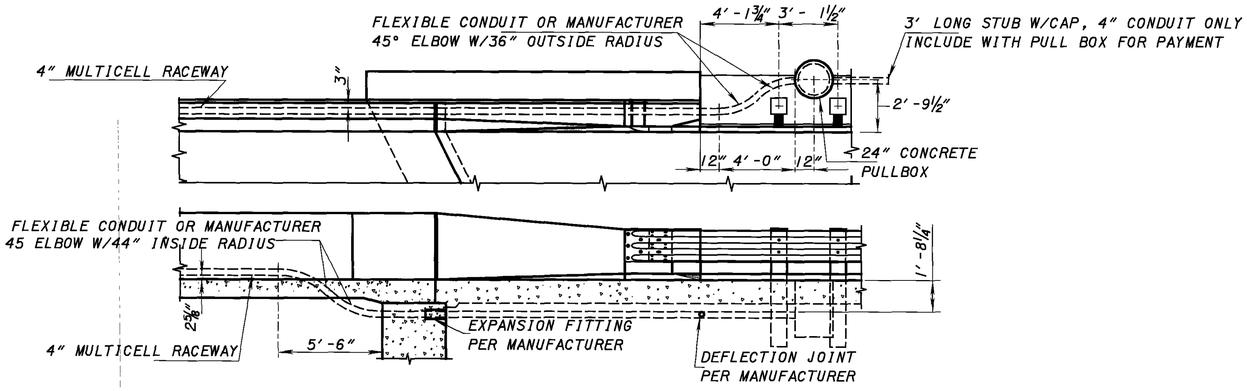
NOTES

FOR ADDITIONAL PARAPET DETAILS SEE SHEET 26/34

625	625
PULL BOX, CONCRETE 24", 725.08, AS PER PLAN	CONDUIT MISC: 4" MULTICELL RACEWAY
EACH	FEET
2	191

QUANTITIES CARRIED TO GENERAL NOTES SHEET 15/624

PLAN



CONDUIT DETAILS.

NOTES:

ITEM 625, CONDUIT, MISC.: 4" MULTICELL RACEWAY:

THE ITS RACEWAY SHALL CONSIST OF A FACTORY ASSEMBLED SYSTEM OF (4) INNERDUCTS WITHIN A PROTECTIVE OUTERDUCT. IN GENERAL THE OUTERDUCT SHALL BE PVC CAPABLE OF BURIAL OR CONCRETE ENCASEMENT.

THE ELBOWS, BENDS, OR FITTINGS REQUIRED FOR THE CONSTRUCTION SHALL BE STANDARD UNITS MADE BY THE RACEWAY MANUFACTURER.

THE INNERDUCTS SHALL BE NOMINAL 1", SCHEDULE 40 PVC PER 725.05 WITH A BELL INSERTION DEPTH OF 2" MINIMUM.

THE COUPLING SHALL BE DESIGNED IN A MANNER TO PERMIT EASY FIELD ASSEMBLY. THE COUPLING SHALL BE MARKED OR KEYED IN A MANNER TO ENSURE THE INNERDUCTS ARE PROPERLY ALIGNED, ANY COLOR CODES ARE CONTINUED AND THE ADJOINING SECTION IS INSERTED TO THE PROPER DEPTH IN THE BELL. ALL KEYS AND/OR MARKINGS SHALL BE VISIBLE AFTER ASSEMBLY BEFORE BURIAL. THE SEALING SYSTEM SHALL BE DESIGNED TO ASSURE AIR INTEGRITY OF EACH INDIVIDUAL INNERDUCT AND WATER INTEGRITY OF THE ENTIRE SYSTEM.

WHERE MULTICELL DUCT IS TO REMAIN EMPTY, A 1/4" NYLON ROPE SHALL BE INSTALLED IN EACH EMPTY DUCT. THE ROPE WILL REMAIN TO BE USED FOR A FUTURE CABLE INSTALLATION.

THE CONDUIT SHALL BE PLACED IN THE OUTSIDE SHOULDER PARAPET FOR BOTH THE LEFT AND RIGHT STRUCTURES. FINAL INSTALLATION DETAILS WILL BE BASED ON COORDINATION WITH CONTRACTOR AND CONDUIT MANUFACTURER AND APPROVED BY THE PROJECT ENGINEER.

THE RACEWAY WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 625 - CONDUIT MISC.: 4" MULTICELL RACEWAY. THIS PRICE SHALL INCLUDE THE INCIDENTAL COST OF THE FITTINGS AND ALL OTHER ITEMS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM. AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY THE PROJECT ENGINEER.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BCW		5203376	

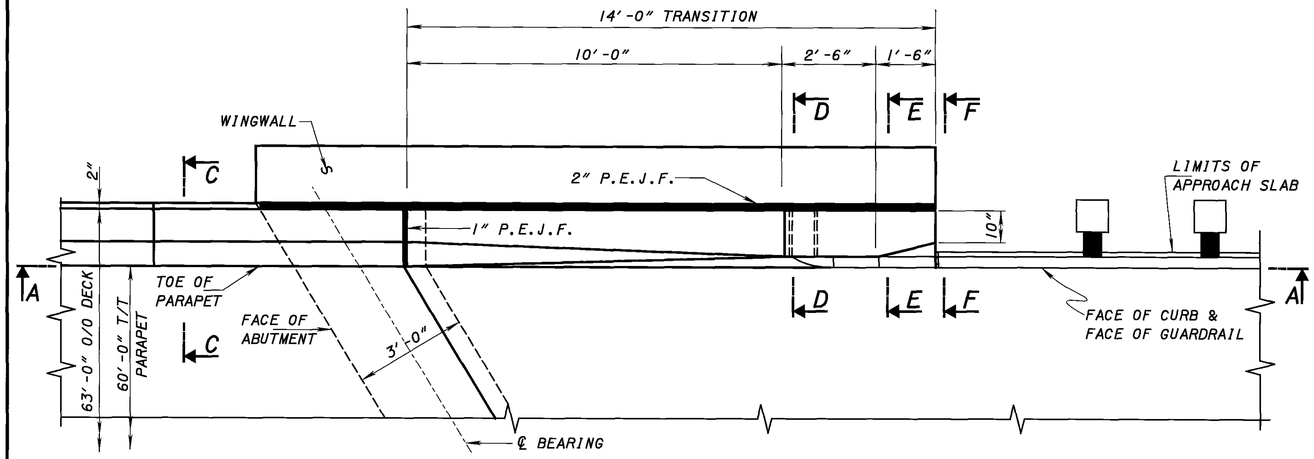
PARAPET AND CONDUIT DETAILS

MED-71-1450L
OVER S.R. 162

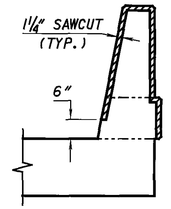
MED-71-9.56

25/34

307/624

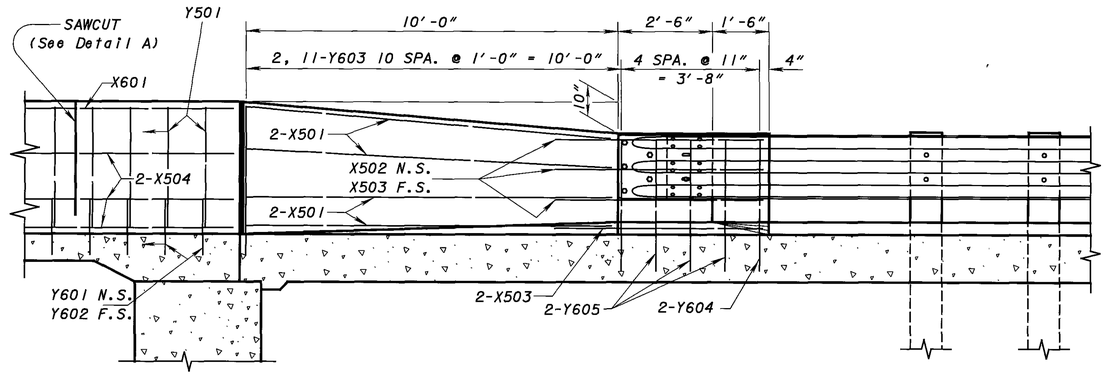


PART PLAN AT ABUTMENT

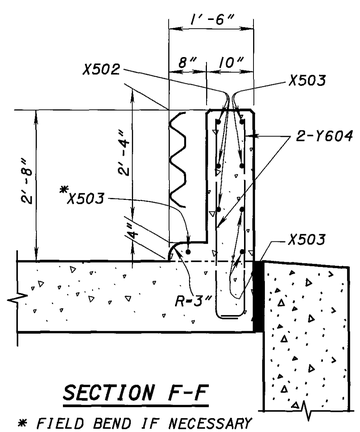


DETAIL A

(Section through sawcut)
Sawcut Perimeter = 7'-6"

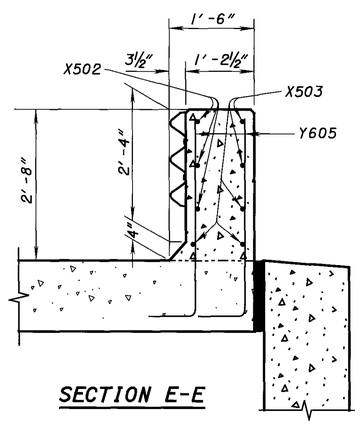


SECTION A-A

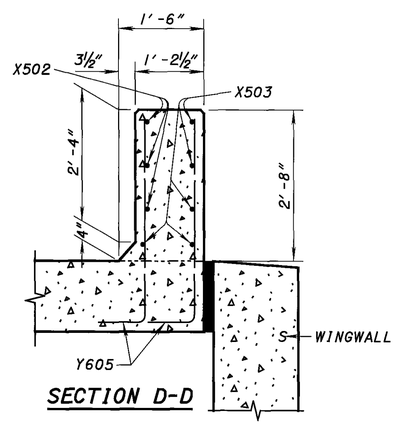


SECTION F-F

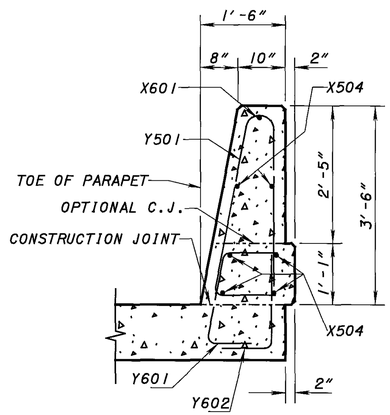
* FIELD BEND IF NECESSARY



SECTION E-E



SECTION D-D



SECTION C-C

Area = 4.26 ft²

NOTES

CONTROL JOINTS FOR CONCRETE PARAPETS: *THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.*

THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM ONE-HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

QUANTITIES *OF CONCRETE, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 511 CLASS HP CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN.*

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

SECTION A-A REFLECTS STANDARD CONSTRUCTION DETAIL GR-3.1 FOR THE APPROACH END OF THE BRIDGE. FOR THE TRAILING END OF THE BRIDGE USING BRIDGE TERMINAL ASSEMBLY, TYPE 2, REFER TO STANDARD GR-3.2.

FOR ADDITIONAL PARAPET DETAILS SEE SHEET 25/34

MIN. LAP SPLICES: #5 BAR - 2'-6"
#6 BAR - 3'-0"

LEGEND: N.S. - NEAR SIDE
F.S. - FAR SIDE

DESIGN AGENCY: ODOT CENTRAL OFFICE / OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
TAA	TAA	DB	12/8/03
CHECKED	REVISED		STRUCTURE FILE NUMBER
BCW			5203376

PARAPET DETAILS

MED-71-1450L
OVER S.R. 162

MED-71-9.56

MARK	NUMBER					LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 1 STAGE I	PIER 1 STAGE II	PIER 2 STAGE I	PIER 2 STAGE II	TOTAL		LB		A	B	C	D	E	R	INC
	PIERS														
SP401	2	2	2	2	8	18'-1"	2970	27	4½"	3'-6"					
P501	10		10		20	31'-11"	666	STR							
P502		10		10	20	39'-3"	819	STR							
P503		15		15	30	17'-11"	561	3	3'-8"	4'-10"					
P504	19	14	19	14	66	15'-7"	1072	3	3'-8"	3'-8"					
P505	32	32	32	32	128	9'-8"	1291	STR							
P506		2		2	4	32'-0"	134	STR							
P507	4		4		8	16'-7"	138	3	3'-8"	4'-2"					
P508		3		3	6	17'-3"	108	3	3'-8"	4'-6"					
P509	2		2		4	12'-1"	51	STR							
P510		2		2	4	11'-0"	46	STR							
P901	8		8		16	31'-11"	1736	STR							
P902		8		8	16	39'-3"	2135	STR							
P903	40	40	40	40	160	12'-2"	6619	17	9'-8"						
P904	9		9		18	35'-7"	2178	1	3'-8"	31'-11"					
P905		9		9	18	42'-11"	2627	1	3'-8"	39'-3"					
P1001	30	30	30	30	120	22'-10"	11790	16	21'-5"						
P1002	30	30	30	30	120	12'-8"	6541	1	1'-9"	10'-11"					
						TOTAL	41482 LB								

MARK	NUMBER					LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR ABUT STAGE I	REAR ABUT STAGE II	FWD ABUT STAGE I	FWD ABUT STAGE II	TOTAL		LB		A	B	C	D	E	R	INC
	ABUTMENTS														
F500	34	37	33	36	140	17'-5"	2543	3	5'-8"	2'-7"					
F501	6				6	38'-10"	243	STR							
F502		6			6	40'-0"	250	STR							
F503		6			6	10'-1"	63	STR							
F504	4			4	8	13'-3"	111	STR							
F505				6	6	41'-0"	257	STR							
F506			6		6	8'-2"	51	STR							
F507	1			1	2	13'-3"	28	STR							
F508	1			1	2	11'-0"	23	STR							
F509			6		6	37'-10"	237	STR							
F801	4				4	38'-10"	415	STR							
F802		4			4	40'-0"	427	STR							
F803		4			4	10'-1"	108	STR							
F804	4			4	8	13'-3"	283	STR							
F805				4	4	41'-0"	438	STR							
F806			4		4	37'-10"	404	STR							
F807			4		4	8'-2"	87	STR							
						SUB TOTAL	5968 LB								

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTON

REVIEWED DB
DATE 12/8/03
STRUCTURE FILE NUMBER 5203376

DRAWN JAV
REVISED

DESIGNED JAV
CHECKED TAA

REINFORCING STEEL LIST

MED-71-1450L
I-71 OVER SR-162

MED-71-9.56

MARK	NUMBER					LENGTH	WEIGHT	TYPE	DIMENSIONS					
	REAR ABUT STAGE I	REAR ABUT STAGE II	FWD ABUT STAGE I	FWD ABUT STAGE II	TOTAL		LB		A	B	C	D	R	INC
ABUTMENTS (CONTINUED)														
A500	7		3		10	16'-7"	177	3	2'-8"	5'-2"				
A501	21	7	23	5	56	13'-4"	779	2	5'-4"	2'-8"	5'-4"			
A502		21			21	18'-7"	407	3	2'-8"	6'-2"				
A503	21	7			28	8'-0"	234	2	2'-8"	2'-8"	2'-8"			
A504	2				2	36'-1"	76	STR						
A505	2				2	34'-5"	72	STR						
A506		3			3	39'-5"	124	STR						
A507		3			3	37'-4"	117	STR						
A508				24	24	15'-6"	393	3	2'-8"	6'-5"				
A509			23	5	28	7'-8"	224	2	2'-6"	2'-8"	2'-6"			
A510	60	60	56	64	240	7'-10"	1961	2	2'-7"	2'-8"	2'-7"			
A511	30	30	28	32	120	7'-0"	855	2	2'-7"	1'-10"	2'-7"			
A512				3	3	39'-2"	123	STR						
A513				3	3	37'-6"	117	STR						
A514			2		2	36'-1"	76	STR						
A515			2		2	34'-3"	72	STR						
A801	4				4	8'-0"	86	STR						
A802	4				4	19'-1"	204	STR						
A803	4				4	19'-10"	212	STR						
		1 SR			1 SR	37'-6"								
A804		0F			0F	T0	409	STR						6"
		4			4	39'-0"								
	2 SR				2 SR	32'-8"								
A805	0F				0F	T0	731	STR						1.02'
	4				4	35'-9"								
	3 SR				3 SR	32'-8"								
A806	0F				0F	T0	548	STR						3'-1"
	2				2	35'-9"								
A807		14			14	36'-4"	1336	STR						
A808			14		14	34'-2"	1277	STR						
				2 SR	2 SR	35'-9"								
A809				0F	0F	T0	799	STR						1'-1"
				4	4	39'-0"								
				3 SR	3 SR	35'-9"								
A810				0F	0F	T0	599	STR						3'-3"
				2	2	39'-0"								
A811			4		4	6'-2"	65	STR						
A812			4		4	19'-1"	204	STR						
				1 SR	1 SR	37'-6"			32'-5"					
A813				0F	0F	T0	409	19	T0	5'-1"	0'-3"			
				4	4	39'-1"			34'-0"					0'-5"
A814			4		4	19'-11"	213	STR						
D801	27	27	24	30	108	5'-4"	1538	18	3'-0"	1'-0"	1'-0"			
							SUB-TOTAL	14437 LB						

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DB | DATE 12/8/03 | STRUCTURE FILE NUMBER 5203376
DRAWN JAV | REVISED
DESIGNED JAV | CHECKED TAA

REINFORCING STEEL LIST

MED-71-1450L
I-71 OVER S.R. 162

MED-71-9.56

28 / 34

310
624

MARK	NUMBER					LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR ABUT STAGE I	REAR ABUT STAGE II	FWD ABUT STAGE I	FWD ABUT STAGE II	TOTAL		LB		A	B	C	D	E	R	INC
WING WALLS															
W501		5			5	8'-9"	45	STR							
W502		5			5	9'-5"	50	STR							
W503		3			3	16'-10"	53	STR							
W504		3			3	17'-5"	55	STR							
W505		2			2	10'-9"	23	35	3'-10"	3'-10"	2'-6"	1'-5"			
W506		6			6	18'-4"	115	2	8'-7"	1'-2"	8'-7"				
W507		6			6	9'-6"	60	2	4'-2"	1'-2"	4'-2"				
W508	8				8	16'-2"	135	2	7'-6"	1'-2"	7'-6"				
		1 SR			1 SR	9'-5"				3'-1"					
W509		OF			OF	TO	55	3	1'-2"	TO					0'-3¼"
		5			5	11'-7"				4'-2"					
W510	6			10	16	9'-7"	160	STR							
W511	6			6	12	17'-7"	220	STR							
W512	2				2	10'-4"	22	35	3'-10"	3'-10"	2'-6"	1'-0"			
W513	9				9	9'-2"	86	2	4'-0"	1'-2"	4'-0"				
W514	5	4	6	5	20	9'-7"	200	3	3'-2"	1'-2"					
	1 SR				1 SR	9'-11"				3'-4"					
W515	OF				OF	TO	46	3	1'-2"	TO					0'-4"
	4				4	11'-11"				4'-4"					
W516			4		4	6'-10"	29	STR							
W517			4		4	7'-6"	32	STR							
W518			3		3	14'-10"	47	STR							
W519			3		3	15'-6"	49	STR							
W520			4		4	8'-10"	37	2	3'-10"	1'-2"	3'-10"				
W521			2		2	10'-2"	21	35	3'-10"	3'-10"	2'-6"	0'-4"			
			1 SR		1 SR	10'-5"				3'-7"					
W522			OF		OF	TO	34	3	1'-2"	TO					0'-1½"
			3		3	10'-11"				3'-10"					
W523			4		4	16'-2"	67	2	7'-6"	1'-2"	7'-6"				
W524				2	2	10'-4"	22	35	3'-10"	3'-10"	2'-6"	0'-4"			
W525				4	4	9'-4"	39	2	4'-1"	1'-2"	4'-1"				
W526				5	5	8'-10"	46	2	3'-10"	1'-2"	3'-10"				
				1 SR	1 SR	10'-0"				3'-5"					
W527				OF	OF	TO	44	3	1'-2"	TO					
				4	4	10'-9"				3'-9"					0'-1⅓"
W528				8	8	18'-8"	156	2	8'-9"	1'-2"	8'-9"				
						TOTAL	1948 LB								

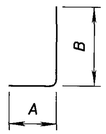
DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTON

DESIGNED	DRAWN	REVIEWED	DATE
JAV	JAV	DB	12/8/03
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TAA		5203376	

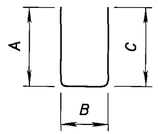
REINFORCING STEEL LIST

MED-71-1450L
I-71 OVER SR-162

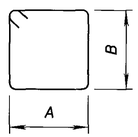
MED-71-9.56



TYPE-1



TYPE-2



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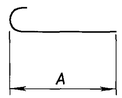

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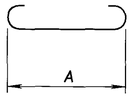
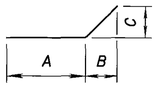
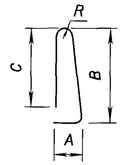


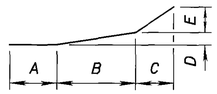
TYPE-17



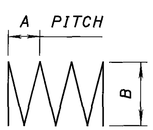
TYPE-19



TYPE-23



TYPE-25



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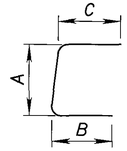
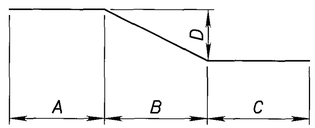


TYPE-33



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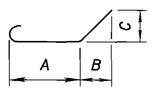

TYPE-18

NOTES

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, P601 IS A NUMBER 6 BAR. BAR DIMENSIONS ARE SHOWN OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

ALL REINFORCING STEEL TO BE EPOXY COATED.

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS					
	SUPER STAGE I	SUPER STAGE II	TOTAL		LB		A	B	C	D	E / R	INC
SUPERSTRUCTURE (DECK)												
S401	210	252	462	28'-0"	8641	STR						
S501	644	644	1288	32'-7"	43772	STR						
S502	222	276	498	28'-0"	14543	STR						
S503	68	84	152	25'-0"	3963	STR						
	2 SR	2 SR	4 SR	7'-6"								
S504	OF	OF	OF	TO	3564	STR						8"
	41	41	41	34'-2"								
S505	20	18	38	6'-6"	258	STR						
	2 SR	2 SR	4 SR	5'-9"								
S506	OF	OF	OF	TO	3199	STR						8 1/4"
	40	40	40	32'-7"								
				SUB-TOTAL	77940 LB							
SUPERSTRUCTURE (PARAPET AND TRANSITIONS)												
X501	16	16	32	10'-0"	334	STR						
X502	6	6	12	5'-6"	69	25	1'-8"	2'-5"	1'-5"	0'-1 1/2"	0'-5"	
X503	10	10	20	5'-6"	115	STR						
X504	36	36	72	28'-11"	2172	STR						
X601	6	6	12	29'-5"	530	STR						
Y501	163	161	324	7'-5"	2506	23	1'-1"	3'-2"	3'-0"		0'-2 3/4"	
Y601	163	161	324	3'-10"	1865	33	1'-8"	1'-1"	1'-1"			
Y602	163	161	324	2'-9"	1338	1	1'-1"	1'-8"				
	4 SR	4 SR		4'-7"				3'-6"				
Y603	OF	OF	88	TO	661	1	1'-1"	TO				1"
	11	11		5'-5"				4'-4"				
Y604	4	4		4'-0"	48	1	3'-6"	0'-6"				
Y605	12	12	24	4'-7"	165	1	1'-1"	3'-6"				
				SUB-TOTAL	9803 LB							

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: JAV | DRAWN: JAV | CHECKED: TAA | REVISED | REVIEWED: DB | DATE: 12/8/03
STRUCTURE FILE NUMBER: 5203376

REINFORCING STEEL LIST

MED-71-1450L
I-71 OVER S.R. 162

MED-71-9.56

30 / 34

312 / 624