



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
MOT-70-22.890
BUTLER TOWNSHIP
CITY OF VANDALIA
MONTGOMERY COUNTY

PROJECT DESCRIPTION
THE FINAL PHASE OF A 3-PHASE RECONSTRUCTION OF I-70/I-75 SYSTEM INTERCHANGE. THIS IMPROVEMENT INCLUDES CONSTRUCTION OF FOUR NEW RAMPS (ONE-EXTERIOR; THREE INTERIOR); CONSTRUCTION OF SEVEN HIGHWAY BRIDGES; RECONSTRUCTION OF CSXT RAILROAD BRIDGE (STRUCTURE NO. MOT-70-27425) OVER I-70; TEMPORARY RAILROAD RUNAROUND WITH STRUCTURE OVER I-70; RECONSTRUCTION OF APPROXIMATELY 2.1 km OF I-70 MAINLINE AND 2.2 km OF I-75 MAINLINE UPGRADE.

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 REVISED CODE OF OHIO.

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.

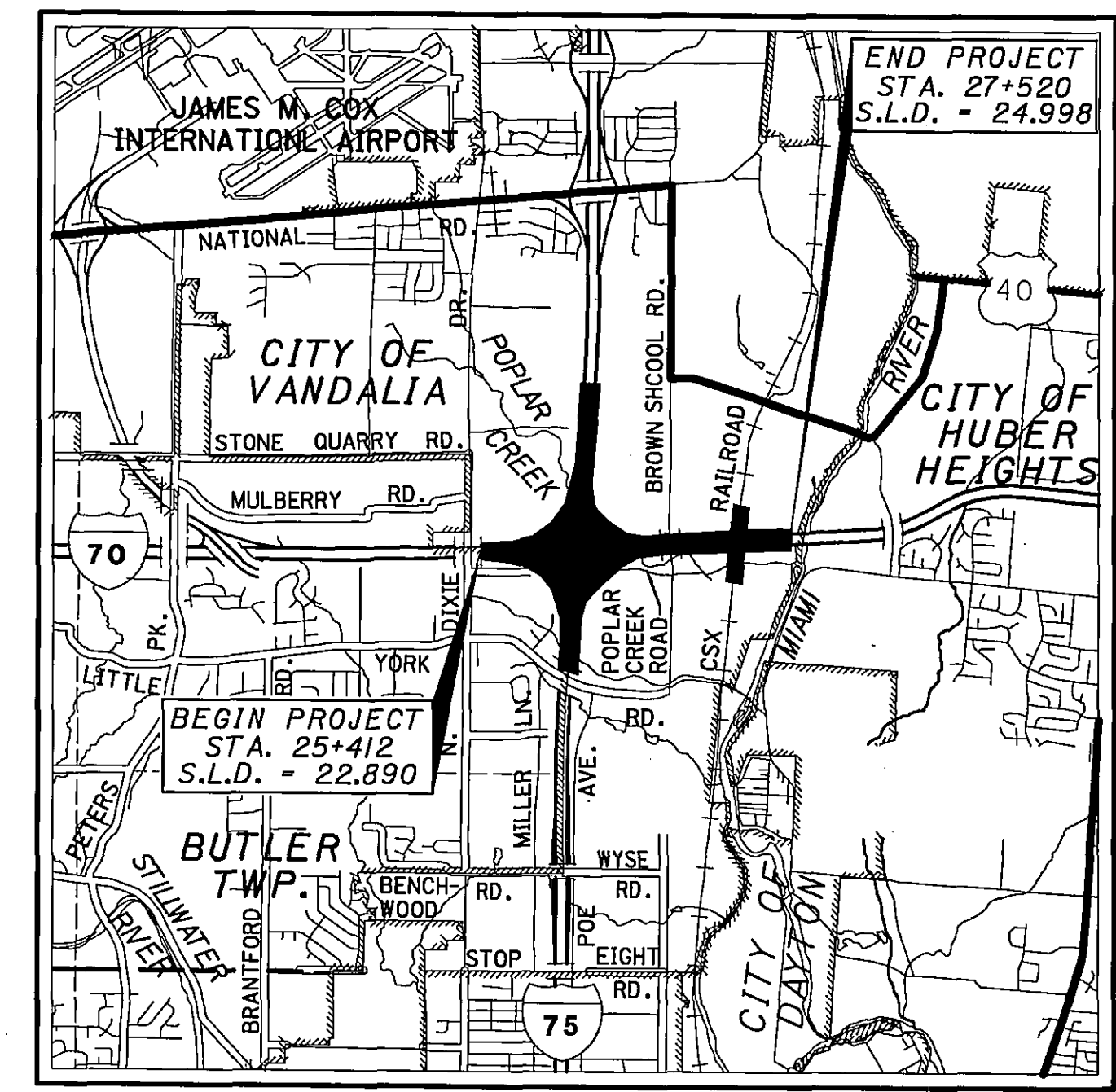
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS SHOWN ON SHEETS NO. 62 - 64, AND THAT THE PROVISIONS FOR MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE REVISED CODE OF OHIO, 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 *William T. Harris*
DATE 7/26/04 DISTRICT DEPUTY DIRECTOR

APPROVED *London Proctor*
DATE 9-3-04 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. **G020677**
PID NO. **19069**
CONSTRUCTION PROJECT NO. **CSXT RAILROAD**
RAILROAD INVOLVEMENT **MOT-70-22.890**
1245



LOCATION MAP

LATITUDE: 39°51'55"N LONGITUDE: 84°11'20"W
SCALE IN KILOMETERS
0 1 2 3 4

INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA = 25.63 HECTARES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 4.80 HECTARES
NOTICE OF INTENT EARTH DISTURBED AREA = 30.43 HECTARES

DESIGN DESIGNATION (SEE SHEET 2)
DESIGN EXCEPTIONS (SEE SHEET 2)

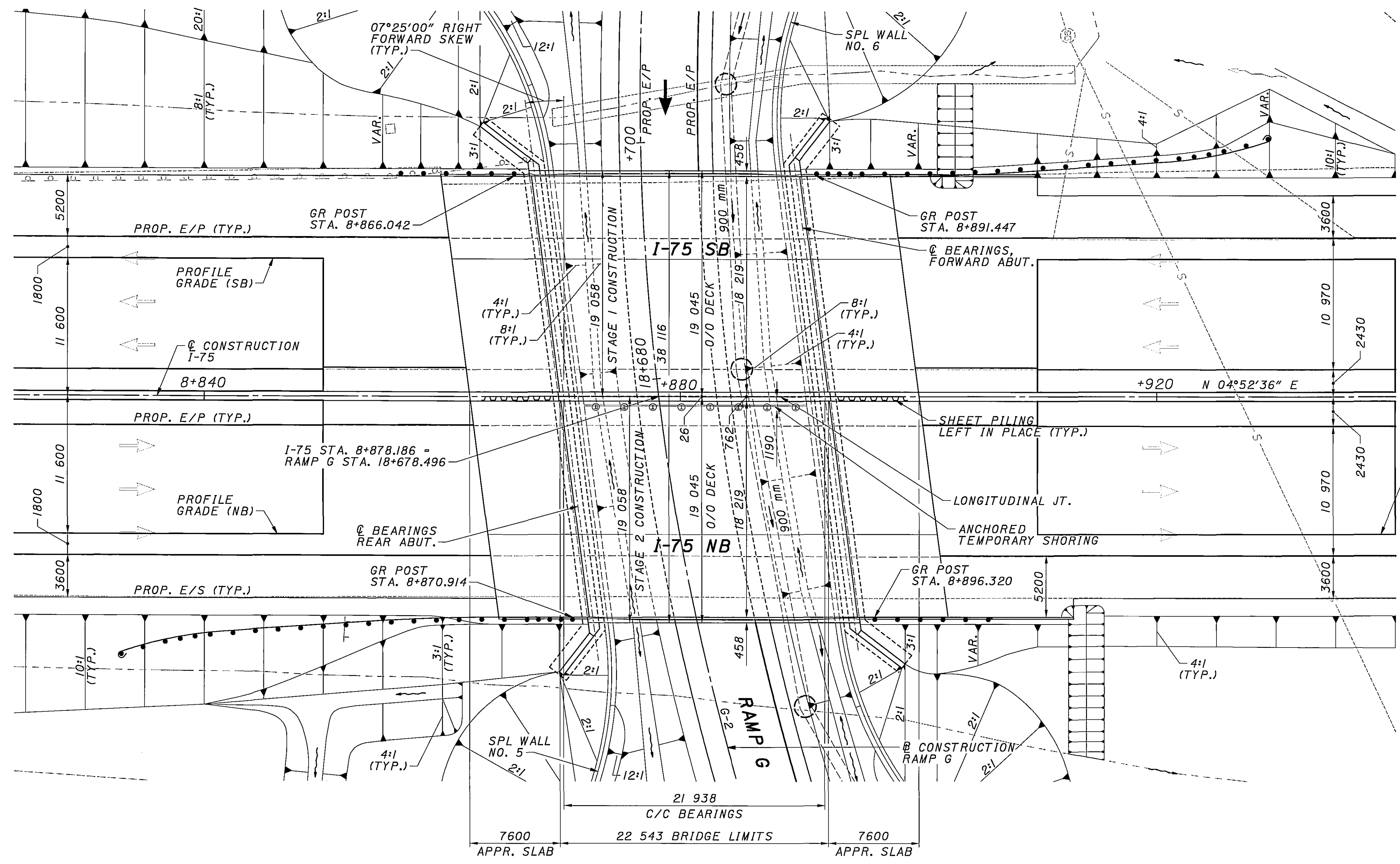
UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

ENGINEERS SEAL
SIGNED *Samuel Lee*
DATE 7/26/04

PLAN PREPARED BY:
CH2MHILL
ONE DAYTON CENTRE, SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OHIO 45402-1828
TEL: 937.228.4285
FAX: 937.228.7572

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STANDARD CONSTRUCTION DRAWINGS
(SEE SHEET 2)



GENERAL PLAN

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 1. FOR STAGED CONSTRUCTION PLANS, SEE SHEET 5.

DESIGN AGENCY
CH2MHILL
 ONE DAYTON CENTRE SUITE 1100
 ONE SOUTH MAIN STREET
 DAYTON, OH 45402-1828

DATE 09/03
 REVIEWED MRM
 STRUCTURE FILE NUMBER 5709075/5709083

DRAWN JTC
 CHECKED RV

GENERAL PLAN
 BRIDGE NO. MOT-75-32689 L&R
 I-75 MAINLINE OVER RAMP G

MOT-70-22.890

2 / 34

1050
 1245

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-81	REVISED	07-19-02
BR-1	REVISED	07-19-02
PCB-91	REVISED	07-19-02
PSID-1-99	REVISED	07-18-03
SICD-1-96	REVISED	07-19-02

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

864	DATED	07-11-00	898	DATED	07-18-03
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DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), 2002, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: MS-22.5, AND THE ALTERNATE MILITARY LOADING. FUTURE WEARING SURFACE (FWS) OF 2.87 kPa.

DESIGN DATA:

QC/QA CONCRETE, CLASS QSC2, FOR SUPERSTRUCTURE - COMPRESSIVE STRENGTH 31.0 MPa (DECK, SEMI-INTEGRAL BACKWALLS AND PARAPETS)
 QC/QA CONCRETE, CLASS QSCI, FOR SUBSTRUCTURE - COMPRESSIVE STRENGTH 27.5 MPa (SEMI-INTEGRAL ABUTMENT STEMS, WINGWALLS, AND FOOTINGS)
 REINFORCING STEEL - ASTM A615M OR A996M, GRADE 420, MINIMUM YIELD STRENGTH 420 MPa
 STRUCTURAL STEEL (HP PEDESTAL) - ASTM A709 GRADE 50 - YIELD STRENGTH 350 MPa
 CONCRETE FOR PRESTRESSED BEAMS - COMPRESSIVE STRENGTH (FINAL) - 48.3 MPa
 COMPRESSIVE STRENGTH (RELEASE) - 34.5 MPa
 PRESTRESSING STRAND - AREA = 99 mm²
 ULTIMATE STRENGTH = 1860 MPa
 INITIAL STRESS = 1395 MPa (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL AND 65 mm CONCRETE COVER.

MONOLITHIC WEARING SURFACE: IS ASSUMED, FOR DESIGN PURPOSES, TO BE 25 mm THICK.

CONVERSION OF STANDARD BRIDGE DRAWINGS: THE STANDARD BRIDGE DRAWINGS REFERENCED IN THIS PLAN ARE IN ENGLISH UNITS. ANY CONVERSION OF DIMENSIONS REQUIRED TO CONSTRUCT THE ITEMS SHOWN ON THE STANDARDS IS THE RESPONSIBILITY OF THE CONTRACTOR. REFER TO 109.02 OF THE 2002 CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR A LISTING OF CONVERSION FACTORS. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD METRIC VALUES WHERE SUITABLE.

UTILITY LINES: THE UTILITIES SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN: UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE TYPE B GRANULAR MATERIAL, 703.16.C, PLACED AND COMPACTED IN 150 mm LIFTS. FOR EXCAVATION PAYMENT LIMITS, SEE THIS SHEET.

PILES TO BEDROCK: DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES TO A MINIMUM RESISTANCE OF 20 BLOWS PER 25 mm OR BY CONTACTING HARD BEDROCK AND THE PILE RECEIVING AT LEAST 20 BLOWS. SELECT HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE ULTIMATE BEARING CAPACITY IS 650 kN PER PILE FOR THE ABUTMENT PILES.

REAR ABUTMENT PILES:
 HP 310 x 79, 40 PILES 14.5 METERS LONG, ORDER LENGTH
 FORWARD ABUTMENT PILES:
 HP 310 x 79, 40 PILES 14.5 METERS LONG, ORDER LENGTH

ITEM SPECIAL - RETAINING WALL, MISC: TEMPORARY SHORING USING DRIVEN SOLDIER PILES AND LAGGING WITH TIEBACK ANCHORS. FOR SPECIFICATIONS, NOTES, AND DETAILS OF THE ANCHORED TEMPORARY SHORING ALONG THE I-75 STAGE CONSTRUCTION JOINT, SEE TEMPORARY SHORING PLAN SHEETS 625, 632 - 635 OF 1245.

ITEM 504, STEEL SHEET PILING LEFT IN PLACE: THE STEEL SHEET PILING AT THE REAR APPROACH SLAB SHALL HAVE A MINIMUM SECTION MODULUS OF 1.88 x 10⁶ mm³ /m AND A MINIMUM TIP ELEVATION OF 264.60. THE STEEL SHEET PILING AT THE FORWARD APPROACH SLAB SHALL HAVE A MINIMUM SECTION MODULUS OF 1.88 x 10⁶ mm³ /m AND A MINIMUM TIP ELEVATION OF 264.30.

THE SHEET PILING SHALL BE DRIVEN BEHIND THE ABUTMENT FOOTINGS, WITH THE LEFT FACE OF THE SHEETING LOCATED ALONG THE I-75 CENTERLINE. THE SHORING SHALL BE USED TO SUPPORT THE STAGE 1 APPROACH SLAB, PAVEMENT AND EMBANKMENT DURING STAGE 2 ABUTMENT EXCAVATION. THE TOP OF THE SHEETING SHALL BE TRIMMED TO THE LEVEL OF THE APPROACH SLAB SUBGRADE PRIOR TO CONSTRUCTING THE STAGE 2 APPROACH SLABS.

PRIOR TO STAGE 1 ABUTMENT BACKFILLING, THE CONTRACTOR SHALL ENCLOSE THE GAP BETWEEN THE ABUTMENT FOOTING AND THE BACK OF THE ABUTMENT STEM BY ATTACHING AN EXTENSION ON THE SHEET PILING, PROVIDING INTERNAL SUPPORT, OR BY OTHER MEANS ACCEPTABLE TO THE ENGINEER. THE METHOD USED SHALL ALLOW THE SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL TO BE CONSTRUCTED CONTINUOUSLY ACROSS THE STAGE CONSTRUCTION JOINT AT THE I-75 CENTERLINE.

FOR ADDITIONAL DETAILS OF THE SHEET PILING LEFT IN PLACE, SEE TEMPORARY SHORING PLAN SHEETS 632 AND 633 OF 1245.

ITEM 515, DRAPED STRAND CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4, AS PER PLAN: FOR PRESTRESSED CONCRETE I-BEAM REQUIREMENTS, SEE SHEET 17.

ITEM 515, INTERMEDIATE DIAPHRAGMS, AS PER PLAN: FOR INTERMEDIATE DIAPHRAGM REQUIREMENTS, SEE SHEET 17.

ITEM 516, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN: FOR BEARING REQUIREMENTS, SEE SHEET 20.

ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN: INSTALL A 1 METER WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 32 mm x 3 mm (LENGTH x SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 25 mm OUTSIDE DIAMETER, 3 mm GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 225 mm. 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 150 mm, (±), 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 150 mm, (±), FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF THE ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 150 mm, 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 300 mm IN LENGTH, OR 150 mm IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 2.5 mm 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 GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, mm	D 751	2.5 ± 0.25
BREAKING STRENGTH, GRAB, N, MINIMUM (LONG. x TRANS.)	D 751	3130 x 3130
ADHESIVE STRIP, 25 mm WIDE x 50 mm LONG, N MINIMUM	D 751	27
BURST STRENGTH, MPa MINIMUM	D 751	9.65
HEAT AGING, 70 HRS., 100°C, 180° BEND W/O CRACKING	D 2136	NO CRACKING OF COATING
LOW TEMP. BRITTLENESS, 1 HR., -40°C, BEND AROUND 6 mm MANDREL	D 2136	NO CRACKING OF COATING

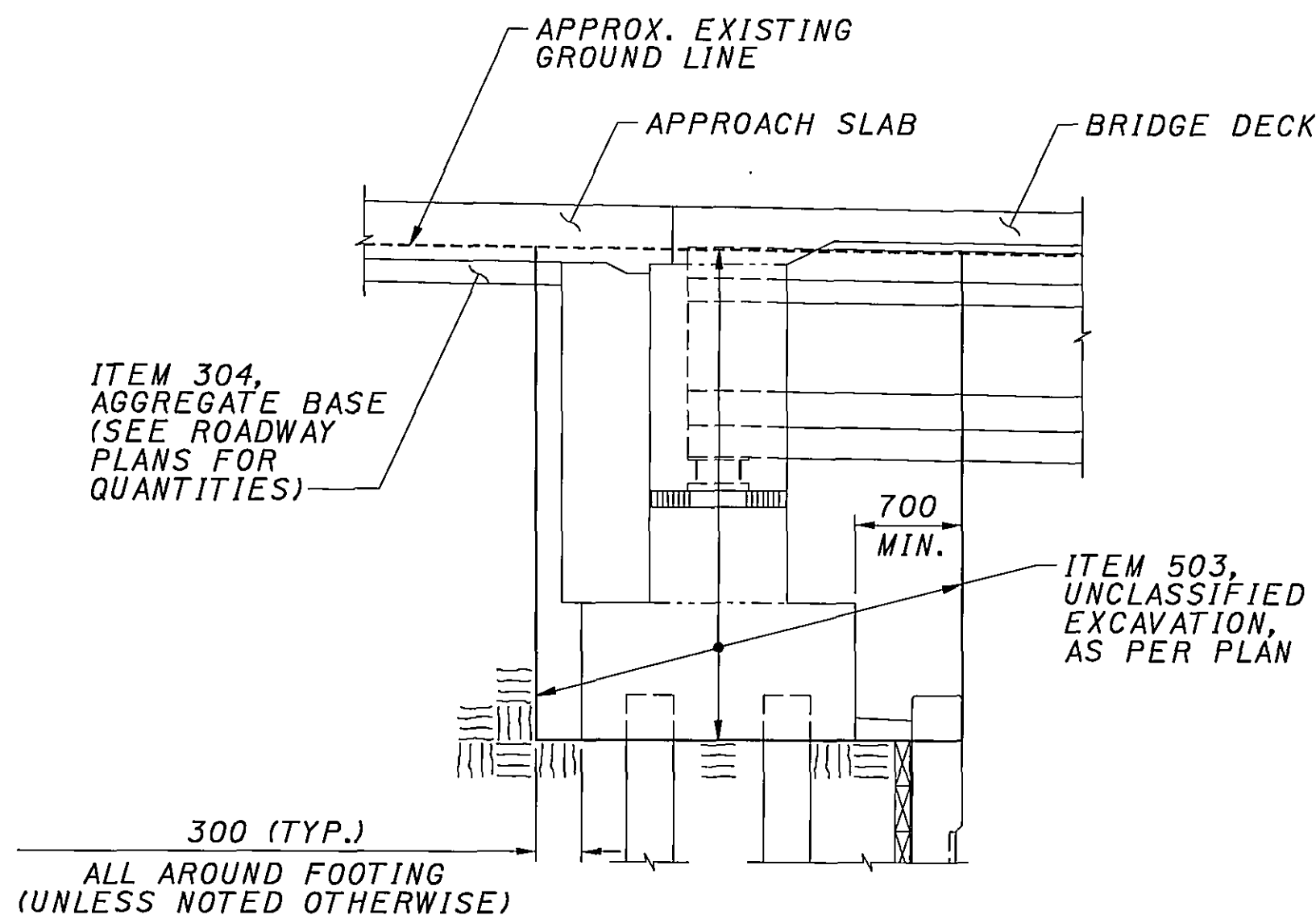
METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF METERS.

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.

ITEM 526, REINFORCED CONCRETE APPROACH SLABS (T=375mm), AS PER PLAN: CONCRETE FOR THE APPROACH SLABS AND APPROACH SLAB PARAPETS SHALL BE CLASS S, CMS 499. APPROACH SLABS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET 31.

ITEM 864, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): THE FINISH COAT COLOR FOR ALL FASCIA BEAMS SHALL BE BLUE, MEETING NO. FS-595B-15065. THE FINISH COAT COLOR FOR THE REMAINING CONCRETE SURFACES TO RECEIVE THE SEALER SHALL BE WHITE, MEETING NO. FS-595B-17875.

ITEM 898, QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE, AS PER PLAN: THE UNREINFORCED CONCRETE SLAB BETWEEN ABUTMENT FOOTINGS AND SOLDIER PILE AND LAGGING RETAINING WALLS, INCLUDING THE 705.04 JOINT SEALER, SHALL BE INCLUDED IN ITEM 898, QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE, AS PER PLAN FOR PAYMENT. JOINTS IN THE CONCRETE SLAB SHALL BE IN ACCORDANCE WITH CMS SECTION 601.10.



ABUTMENT EXCAVATION PAYMENT LIMITS

DESIGN AGENCY
CH2M HILL
 ONE DAYTON CENTRE SUITE 1100
 DAYTON, OH 45402-1828

DATE 09/03
 REVIEWED MRM
 STRUCTURE FILE NUMBER 5709075/5709083
 DRAWN JTC
 CHECKED RV

GENERAL NOTES
 BRIDGE NO. MOT-75-32689 L&R
 I-75 MAINLINE OVER RAMP G

MOT-70-22-890

3 / 34

1051
 1245

ABBREVIATIONS

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS:

< = ANGLE
 & = AND
 @ = AT
 AASHTO = AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
 ABUT. = ABUTMENT
 ADT = AVERAGE DAILY TRAFFIC
 ADTT = AVERAGE DAILY TRUCK TRAFFIC
 A.P.P. = AS PER PLAN
 APPR. = APPROACH
 APPROX. = APPROXIMATE
 ASTM = AMERICAN SOCIETY OF TESTING AND MATERIALS

@ = BASELINE
 BOT. = BOTTOM
 BOT./FTG. = BOTTOM OF FOOTING
 BRGS. = BEARINGS
 B/W = BETWEEN

@ = CENTERLINE
 C/C = CENTER TO CENTER
 C & G = CURB AND GUTTER
 CJ = CONSTRUCTION JOINT
 CLR. = CLEAR
 CMS = CONSTRUCTION AND MATERIAL SPECIFICATIONS
 CONC. = CONCRETE
 COND. = CONDUCTOR
 CONN. = CONNECTION
 CONSTR. = CONSTRUCTION
 CORR. = CORRECTED
 CPP = CORRUGATED PLASTIC PIPE
 CU = CUBIC

DEFL. = DEFLECTION
 ° = DEGREE
 φ/DIA. = DIAMETER
 DIM. = DIMENSION
 DL = DEAD LOAD
 DWG. = DRAWING

E/E = EDGE TO EDGE
 EF = EACH FACE
 EL./ELEV. = ELEVATION
 E/P = EDGE OF PAVEMENT
 E/S = EDGE OF SHOULDER
 EQ. = EQUAL
 EXIST. = EXISTING
 EXP. = EXPANSION
 EXT. = EXTENSION

F.A. = FORWARD ABUTMENT
 FF = FAR FACE
 F/F = FACE TO FACE

FTG. = FOOTING
 FWD. = FORWARD
 FWS = FUTURE WEARING SURFACE

GEN. = GENERAL
 GR = GUARDRAIL

HORIZ. = HORIZONTAL
 HPC = HIGH PERFORMANCE CONCRETE
 HR = HOUR

JT. = JOINT

KG = KILOGRAM
 KN = KILONEWTON
 kPa = KILOPASCAL

LF = LEFT FORWARD
 LL = LIVE LOAD
 LOC = LOCATION
 LONG. = LONGITUDINAL
 LT. = LEFT

M/m = METER
 MAX. = MAXIMUM
 MH = MANHOLE
 MIN. = MINIMUM
 MISC. = MISCELLANEOUS
 mm = MILLIMETERS
 MPa = MEGAPASCAL

N = NEWTON
 NO. = NUMBER
 NB = NORTHBOUND
 NF = NEAR FACE

O/O = OUT TO OUT

± = PLUS OR MINUS
 PC = POINT OF CURVATURE
 P/PL = PLATE
 PEJF = PREFORMED EXPANSION JOINT FILLER
 P.G. = PROFILE GRADE
 P.I. = POINT OF INTERSECTION
 PROJ. = PROJECTION
 PROP. = PROPOSED
 PT. = POINT
 P.V.I. = POINT OF VERTICAL INTERSECTION

R = RADIUS
 R.A. = REAR ABUTMENT
 RDWY. = ROADWAY
 RECON. = RECONSTRUCT
 REFR. = REFERENCE
 REQ'D = REQUIRED
 RF = RIGHT FORWARD
 RT. = RIGHT

SB = SOUTHBOUND
 SPA = SPACE
 SPL = SOLDIER PILE AND LAGGING
 SQ = SQUARE
 STA. = STATION
 STD. = STANDARD
 STR = STRAIGHT
 SUPER. = SUPERSTRUCTURE

T = THICKNESS
 T/BEDROCK = TOP OF BEDROCK
 TBM = TEMPORARY BENCH MARK
 TEMP. = TEMPORARY
 T.O.S. = TOP OF SLOPE
 T/PARAPET = TOE OF PARAPET
 TRANS. = TRANSVERSE
 TYP. = TYPICAL

VAR. = VARIES
 V.C. = VERTICAL CURVE
 VERT. = VERTICAL

W/O = WITHOUT
 WT. = WEIGHT

ESTIMATED QUANTITIES

BRIDGE MOT-75-32689

CALCULATED BY: JTC/DGS
 CHECKED BY: RV

DATED: 08/03
 DATED: 08/03

AS PER PLAN SHEET REF.

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	GEN.	AS PER PLAN SHEET REF.
503	21101	814	CU METER	UNCLASSIFIED EXCAVATION, AS PER PLAN		814		3
504	11100	73	SQ METER	STEEL SHEET PILING LEFT IN PLACE (MIN. S = 1.88 x 10 ⁶ mm ³ /m)			73	
505	11100	LUMP	LUMP	PILE DRIVING EQUIPMENT MOBILIZATION		LUMP		
507	00200	1160	METER	STEEL PILES, HP 310 x 79, FURNISHED		1160		
507	00250	1040	METER	STEEL PILES, HP 310 x 79, DRIVEN		1040		
509	10000	57037	KILOGRAM	EPOXY COATED REINFORCING STEEL	45263	11774		
515	15021	14	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4, AS PER PLAN	14			3
515	20001	12	EACH	INTERMEDIATE DIAPHRAGMS, AS PER PLAN	12			3
516	13400	24	SQ METER	19 mm PREFORMED EXPANSION JOINT FILLER		24		
516	13600	38	SQ METER	25 mm PREFORMED EXPANSION JOINT FILLER	33	5		
516	13900	8	SQ METER	51 mm PREFORMED EXPANSION JOINT FILLER		8		
516	14021	98	METER	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN		98		3
516	44301	28	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (375 x 101 x 450 PAD WITH 400 x 51 x 475 STEEL LOAD PLATE), AS PER PLAN		28		3
518	21230	LUMP	LUMP	POROUS BACKFILL WITH FILTER FABRIC		LUMP		
518	40000	98	METER	150 mm PERFORATED CORRUGATED PLASTIC PIPE		98		
518	40010	10	METER	150 mm NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		10		
526	25001	570	SQ METER	REINFORCED CONCRETE APPROACH SLABS (T=375), AS PER PLAN			570	3
SPECIAL	61060000	LUMP	LUMP	RETAINING WALL, MISC.; TEMPORARY SHORING USING DRIVEN SOLDIER PILES AND LAGGING WITH TIEBACK ANCHORS			LUMP	3
864	10100	700	SQ METER	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	354	346		
892	10200	206	CU METER	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK) WITH WARRANTY	206			
898	11000	26	CU METER	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET)	26			
898	11100	97	CU METER	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE	97			
898	20001	230	CU METER	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE, AS PER PLAN		230		3

DRAINAGE QUANTITIES

BRIDGE PLAN SHEET NO.	604		
	PRECAST REINFORCED CONCRETE OUTLET		
	EACH		
7	1		
8	1		
12	1		
13	1		
TOTALS CARRIED TO SHEET NO. 150	4		

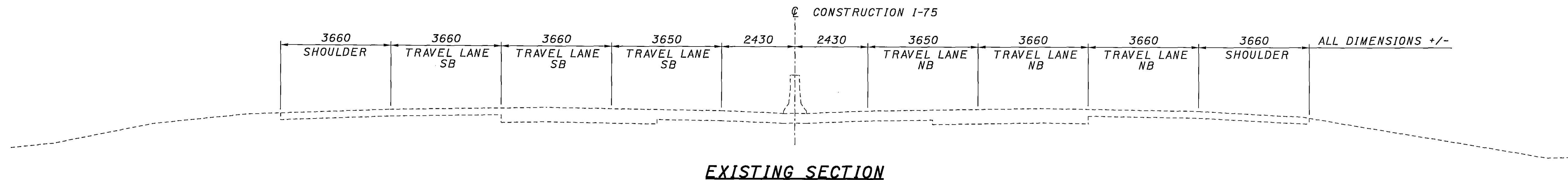
DESIGN AGENCY
CH2M HILL
 ONE DAYTON CENTRE, SUITE 1100
 ONE SOUTH MAIN STREET
 DAYTON, OH 45402-1828

DATE
 09/03
 STRUCTURE FILE NUMBER
 5709075/5709083

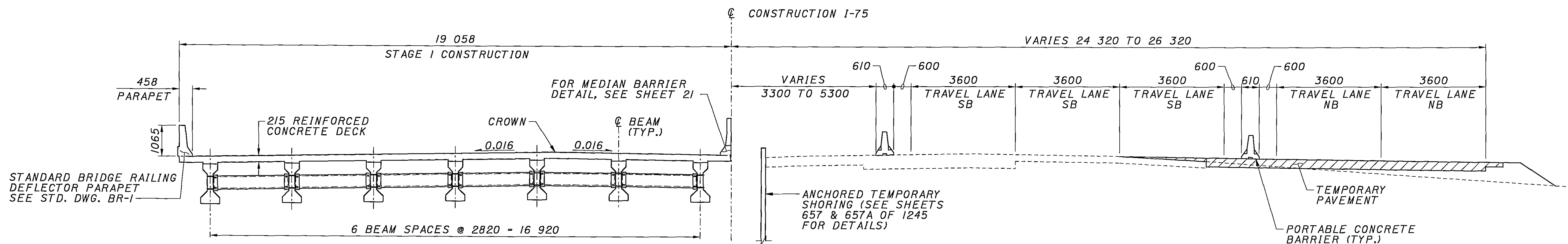
DESIGNED
 JTC/DGS
 CHECKED
 RV

ESTIMATED QUANTITIES
 BRIDGE NO. MOT-75-32689 L&R
 I-75 MAINLINE OVER RAMP G

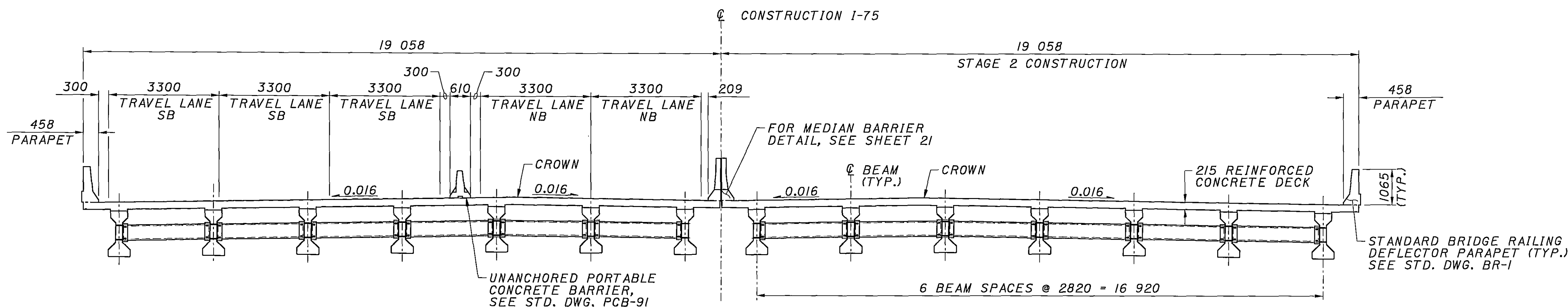
MOT-70-22.890



EXISTING SECTION



STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION

PROPOSED WORK:

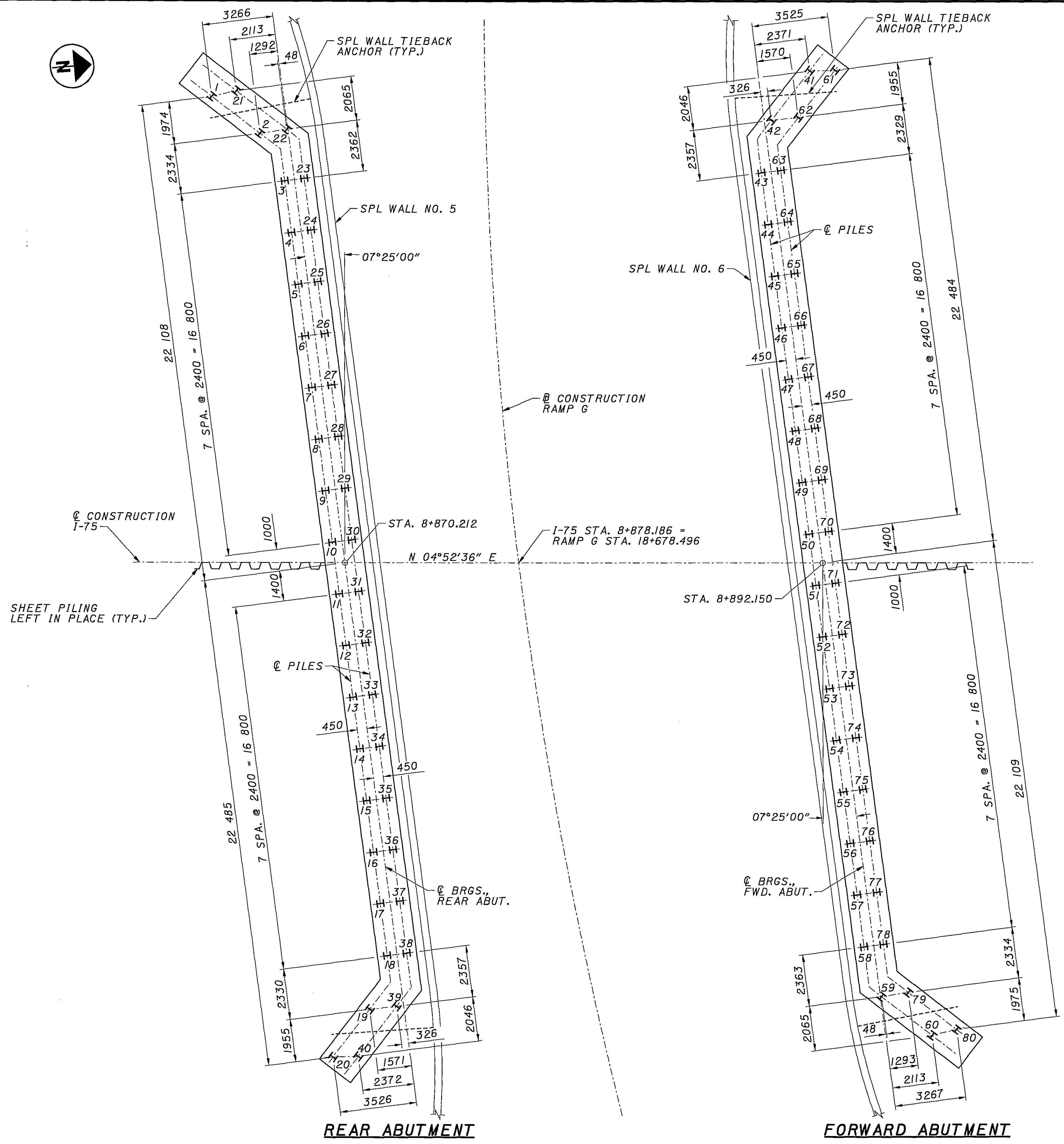
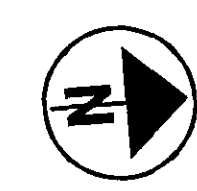
IN GENERAL, THE PROPOSED WORK SHALL CONSIST OF THE CONSTRUCTION OF THE PROPOSED I-75 TWIN BRIDGES OVER RAMP G IN STAGES. CONSTRUCTION OPERATIONS ARE TO BE PERFORMED WHILE MAINTAINING TWO-WAY, FIVE LANE (3 SB, 2 NB) TRAFFIC ON I-75. THE MAJOR ITEMS OF WORK REQUIRING STAGED CONSTRUCTION ARE DESCRIBED BELOW. SOME PROJECT WORK ITEMS, SUCH AS SEALING OF CONCRETE SURFACES, MAY BE PERFORMED AT THE CONTRACTOR'S DISCRETION DURING THE CONTRACT SCHEDULE PERIOD; HOWEVER, THE PERFORMANCE OF ALL WORK MUST BE COORDINATED TO SATISFY MAINTENANCE OF TRAFFIC AND SAFETY REQUIREMENTS. SEE M.O.T. PLANS FOR ADDITIONAL MAINTENANCE OF TRAFFIC REQUIREMENTS.

A. STAGE 1 CONSTRUCTION:

1. INSTALL PORTABLE CONCRETE BARRIER ON BRIDGE APPROACHES ACCORDING TO MAINTENANCE OF TRAFFIC PLANS.
2. CONSTRUCT ANCHORED TEMPORARY SHORING AND SHEET PILING LEFT IN PLACE ALONG I-75 CENTERLINE AS SHOWN ON PLANS.
3. EXCAVATE TO BOTTOM OF SEMI-INTEGRAL ABUTMENT FOOTING; DRIVE ABUTMENT PILES.
4. CONSTRUCT LEFT SOLDIER PILE & LAGGING ABUTMENT BREASTWALL AND WINGWALL SECTIONS AS EXCAVATION PROCEEDS DOWN TO THE PROPOSED BOTTOM OF WALL.
5. CONSTRUCT LEFT (SOUTHBOUND LANES) SEMI-INTEGRAL ABUTMENT SECTION TO THE BEAM SEAT ELEVATIONS.
6. ERECT 7 LEFT (SOUTHBOUND LANES) PRESTRESSED CONCRETE BEAMS AND CONSTRUCT LEFT REINFORCED CONCRETE DECK, PARAPET, MEDIAN BARRIER, SEMI-INTEGRAL BACKWALL, AND APPROACH SLAB SECTIONS.

B. STAGE 2 CONSTRUCTION:

1. INSTALL PORTABLE CONCRETE BARRIER AND ROUTE TRAFFIC ONTO COMPLETED STAGE 1 PORTION OF BRIDGE AS SHOWN ON BRIDGE AND MAINTENANCE OF TRAFFIC PLANS.
2. EXCAVATE TO BOTTOM OF SEMI-INTEGRAL ABUTMENT FOOTING; DRIVE ABUTMENT PILES.
3. CONSTRUCT RIGHT SOLDIER PILE & LAGGING ABUTMENT BREASTWALL AND WINGWALL SECTIONS AS EXCAVATION PROCEEDS DOWN TO THE PROPOSED BOTTOM OF WALL.
4. REMOVE ANCHORED TEMPORARY SHORING ALONG I-75 CENTERLINE AS EXCAVATION PROCEEDS DOWN TO THE PROPOSED RAMP SUBGRADE.
5. CONSTRUCT RIGHT (NORTHBOUND LANES) SEMI-INTEGRAL ABUTMENT SECTION TO THE BEAM SEAT ELEVATIONS.
6. ERECT 7 RIGHT (NORTHBOUND LANES) PRESTRESSED CONCRETE BEAMS AND CONSTRUCT RIGHT REINFORCED CONCRETE DECK, PARAPET, MEDIAN BARRIER, SEMI-INTEGRAL BACKWALL, AND APPROACH SLAB SECTIONS.
7. COMPLETE REMAINING WORK, SUCH AS SEALING OF CONCRETE SURFACES, AS APPLICABLE.
8. REMOVE PORTABLE CONCRETE BARRIER AND OPEN COMPLETED BRIDGE TO TWO-WAY, SIX LANE TRAFFIC ACCORDING TO MAINTENANCE OF TRAFFIC PLANS.



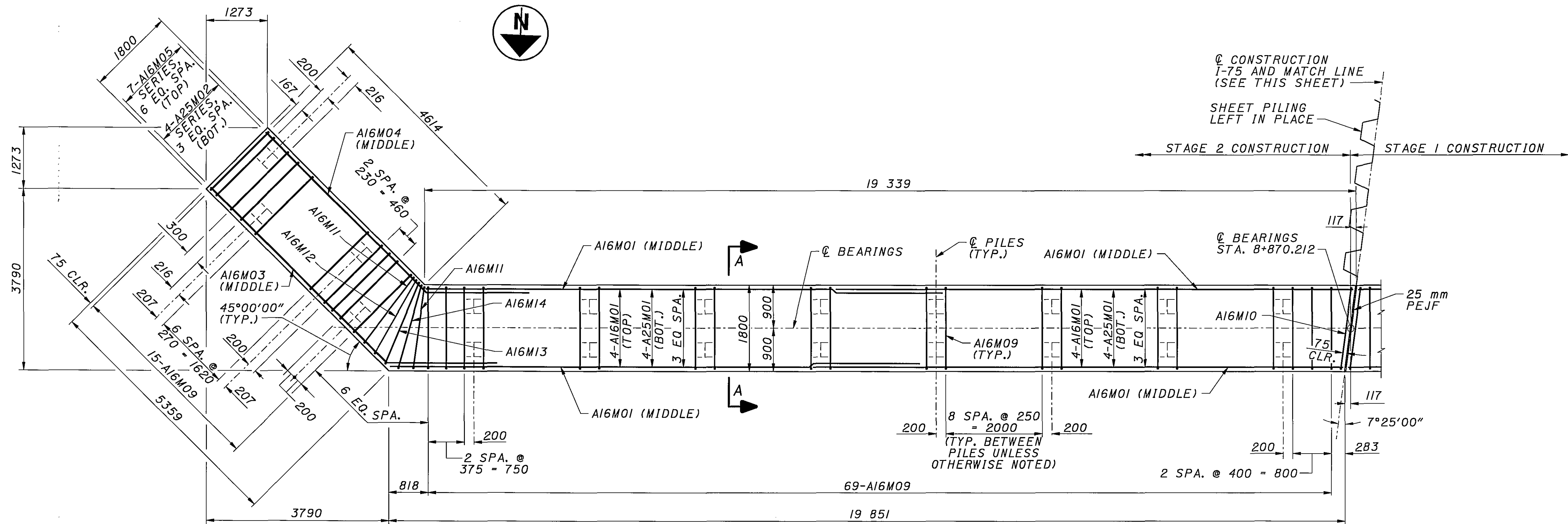
LEGEND:

I# - HP 310 x 79 PILE

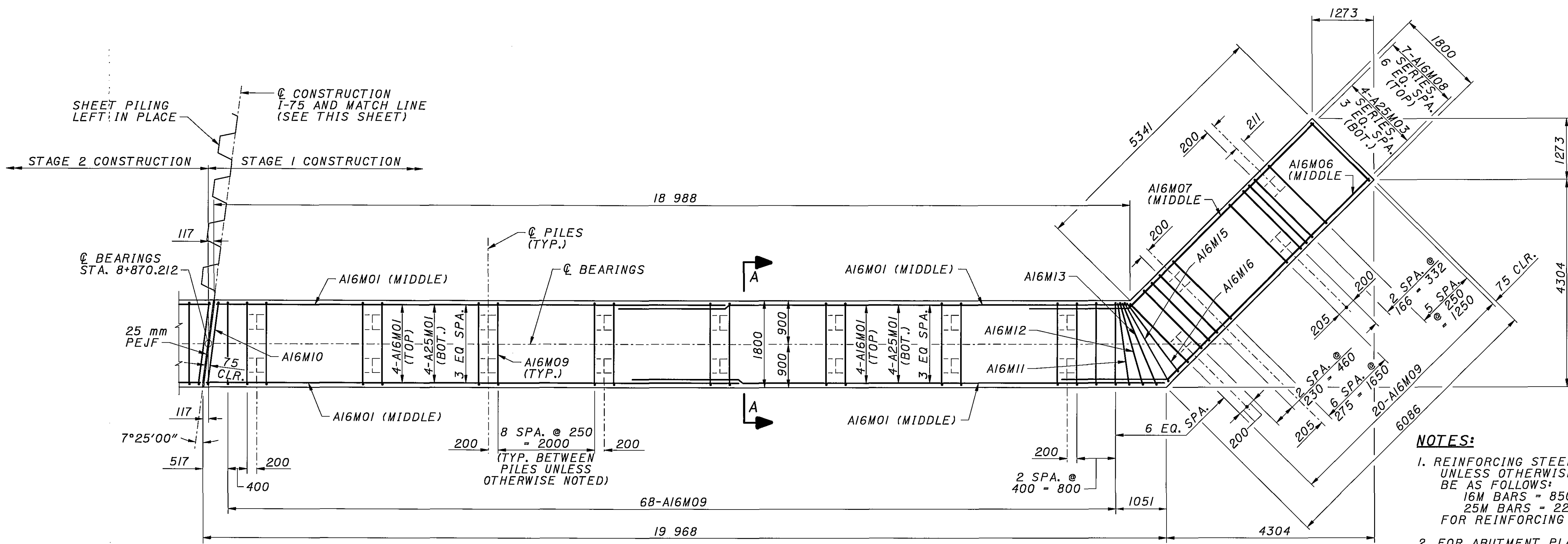
NOTES:

1. IN GENERAL, THE BRIDGE AND SOLDIER PILE AND LAGGING RETAINING WALL CONSTRUCTION SEQUENCE SHALL BE AS FOLLOWS:
 - A. EXCAVATE TO ABUTMENT BOTTOM OF FOOTING ELEVATION.
 - B. DRIVE ABUTMENT PILES.
 - C. DRILL SOLDIER PILE ENCASEMENT HOLES, INSTALL SOLDIER PILES, AND CAST ENCASEMENTS.
 - D. EXCAVATE PROGRESSIVELY TO FINISHED GRADE, INSTALLING TIEBACK ANCHORS AS EXCAVATION PROGRESSES.
 - E. CAST ABUTMENT FOOTINGS.
 - F. COMPLETE REMAINING BRIDGE SUBSTRUCTURE AND SUPERSTRUCTURE CONSTRUCTION.
- FOR DETAILED CONSTRUCTION REQUIREMENTS, REFER TO SOLDIER PILE AND LAGGING RETAINING WALL PLANS ON SHEETS 663 THROUGH 718 OF 1245.
2. FOR ABUTMENT PLANS AND DETAILS, SEE SHEETS 7 - 16 OF 34.
3. FOR TEMPORARY SHORING PLANS, SEE SHEETS 625 - 643 OF 1245.

DESIGN AGENCY ONE DAYTON CENTRE, SUITE 1100 ONE SOUTH WALTON WAY DAYTON, OH 45402-1828			
DESIGNED	RGS	CHECKED	JTC
DRAWN	DGS	REVIEWED	MFR
DATE	09/03	STRUCTURE FILE NUMBER	5709075/5709083
PILE LAYOUT PLAN BRIDGE NO. MOT-75-32689 L&R I-75 MAINLINE OVER RAMP G			
MOT-70-22.890			
6 / 34			
1054 1245			

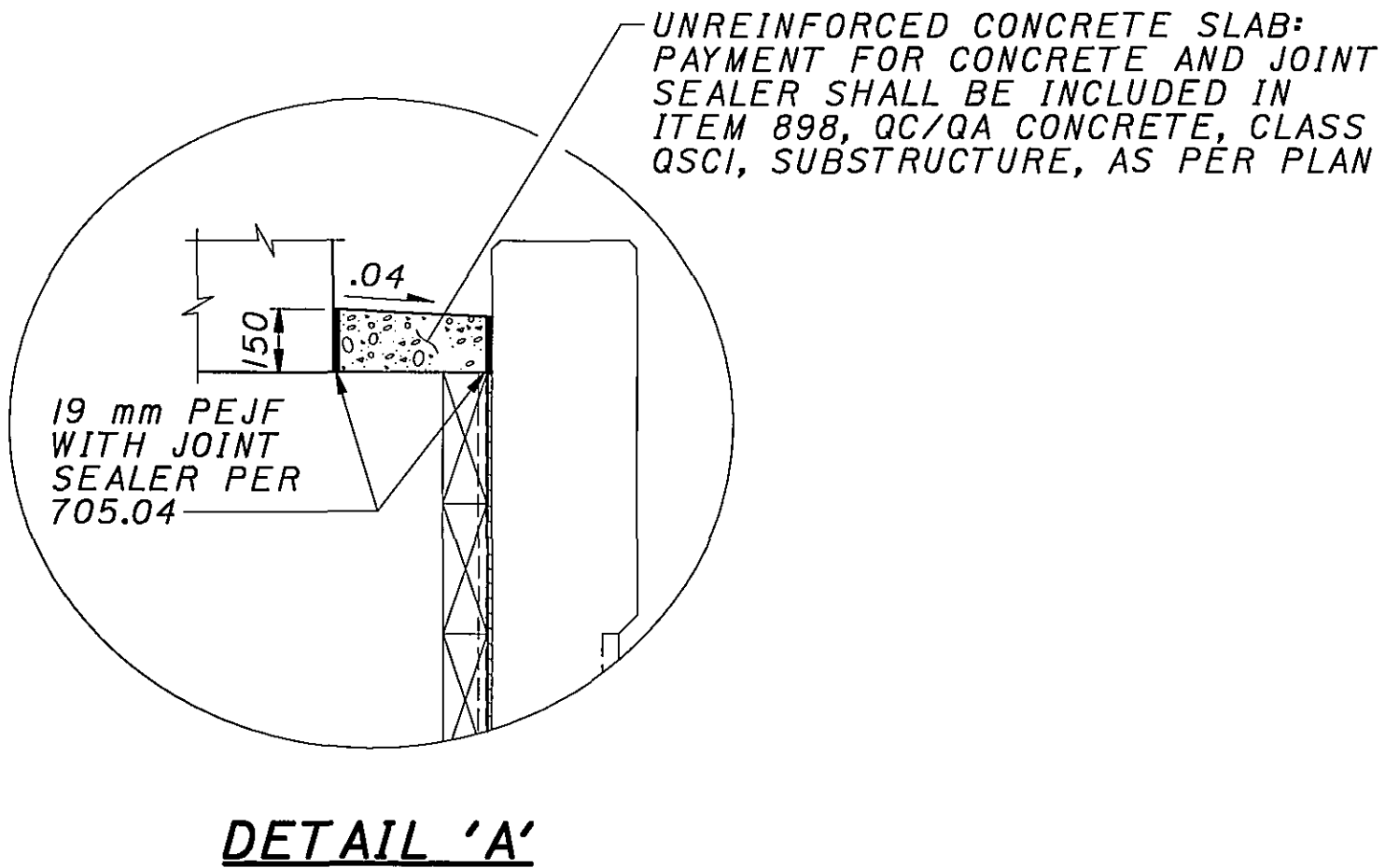
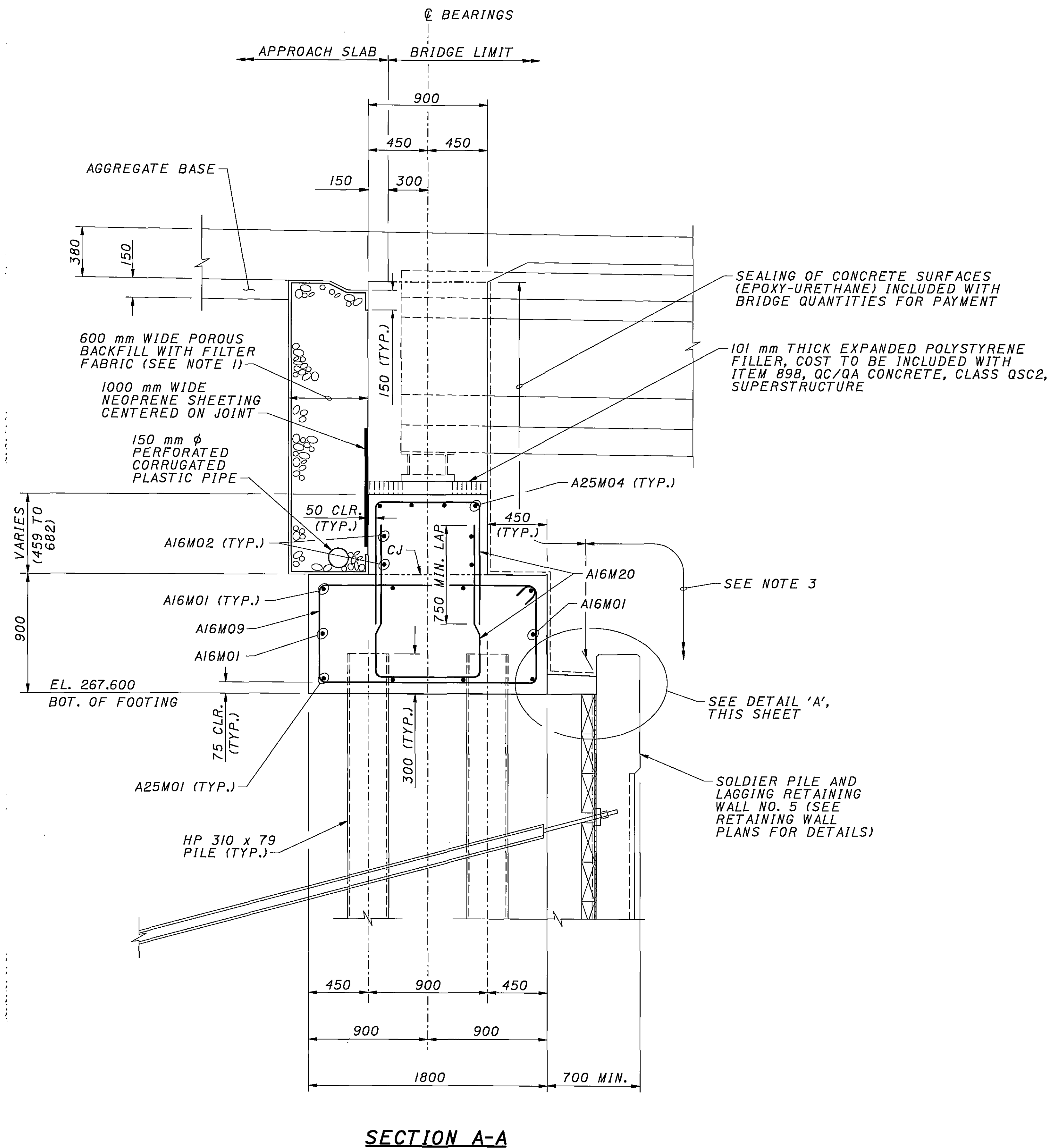


PARTIAL FOOTING PLAN
(NORTHBOUND STRUCTURE)



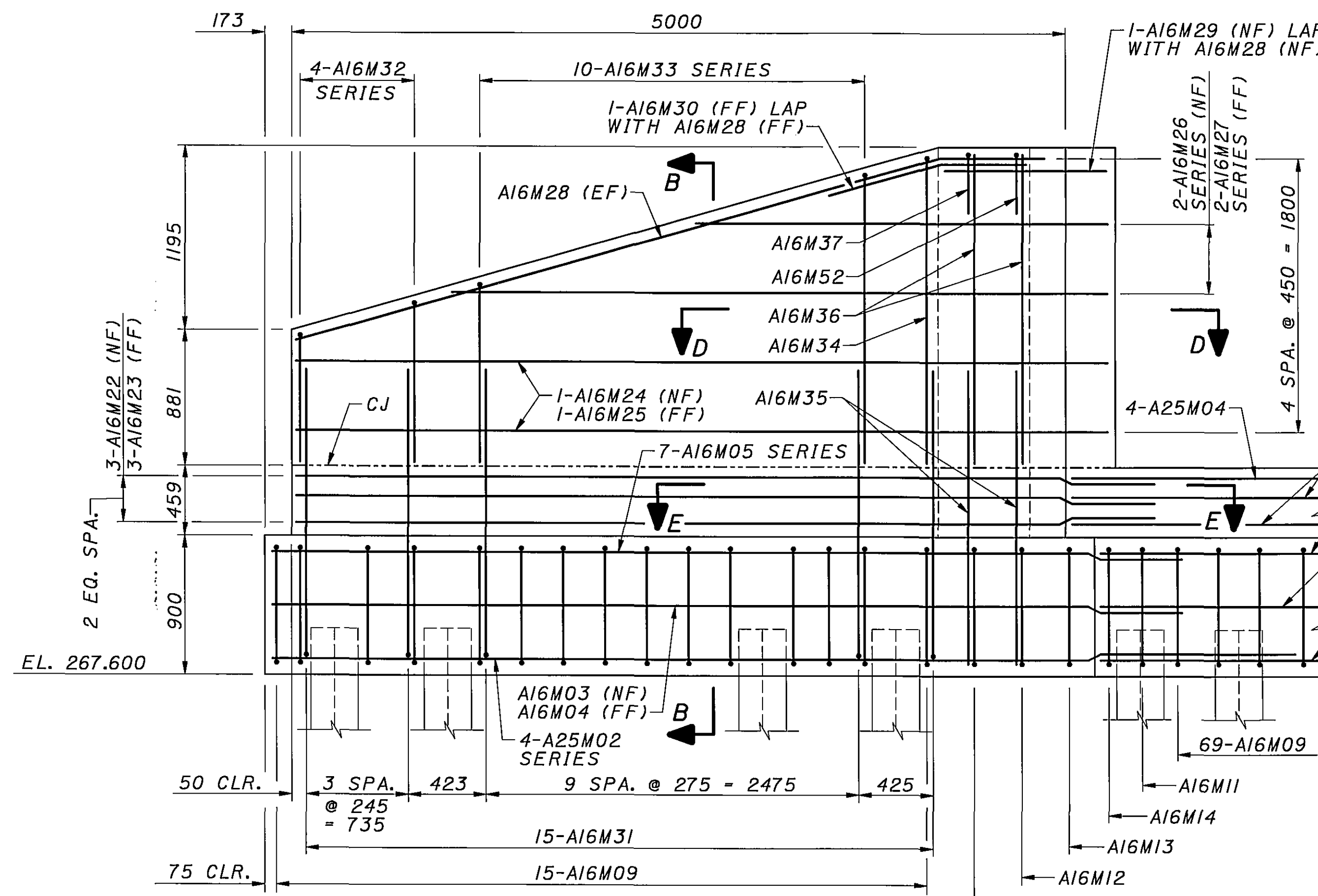
PARTIAL FOOTING PLAN
(SOUTHBOUND STRUCTURE)

- NOTES:**
1. REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED, LAPS SHALL BE AS FOLLOWS:
16M BARS = 850 mm MIN.
25M BARS = 2200 mm MIN.
FOR REINFORCING STEEL LIST, SEE SHEETS 32 & 33.
 2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEETS 7 & 8.
 3. FOR SECTION A-A, SEE SHEET 10.
 4. FOR PILE LAYOUT PLAN, SEE SHEET 6.
 5. FOR TEMPORARY SHORING PLANS, SEE SHEETS 625 - 643 OF 1245.

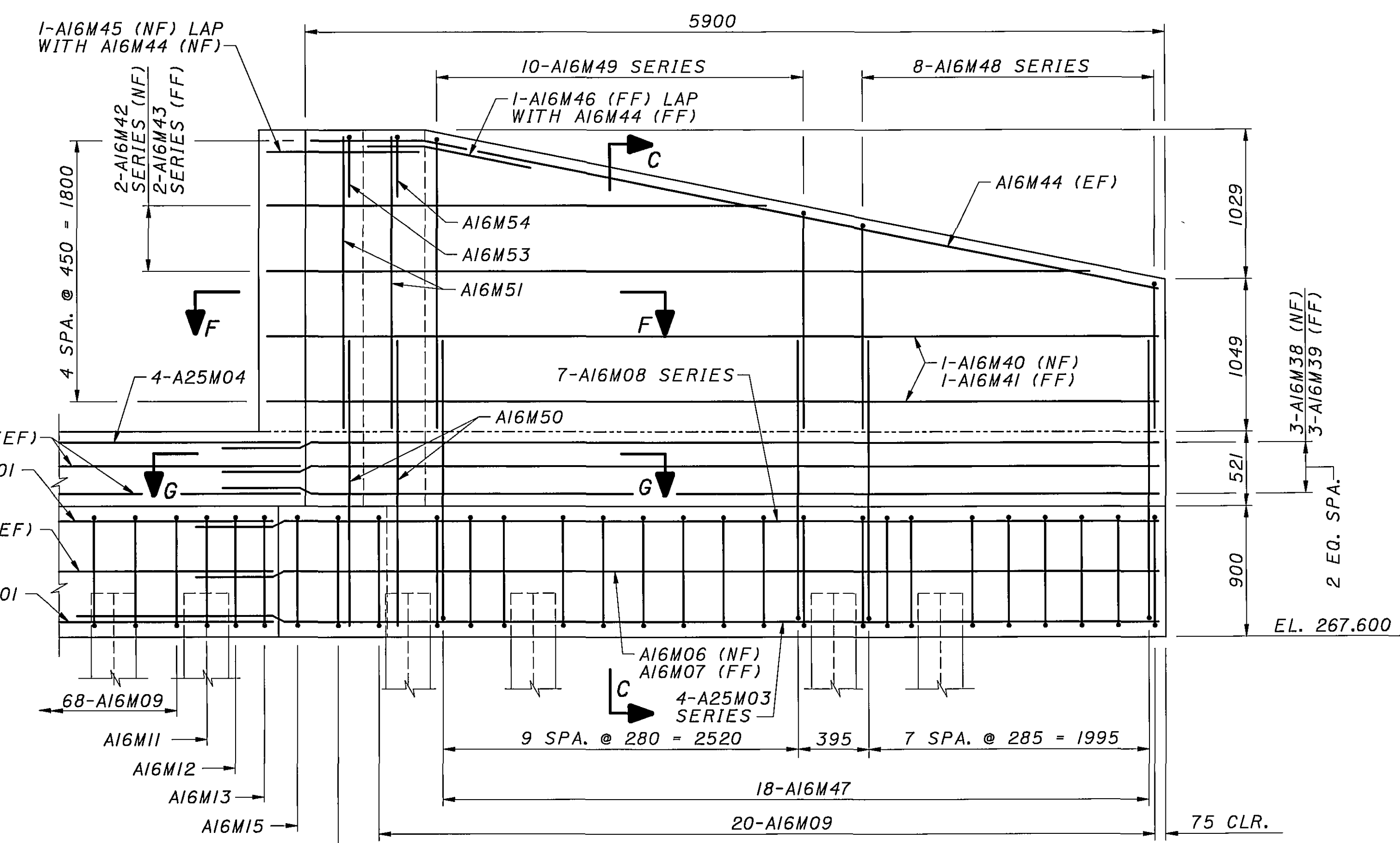


- NOTES:**
1. POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK, SHALL EXTEND UP TO THE BOTTOM SURFACE OF THE APPROACH SLAB, TO 300 mm BELOW THE EMBANKMENT SURFACE FOR THE WINGWALLS, AND Laterally TO THE ENDS OF THE WINGWALL. COST TO BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC FOR PAYMENT.
 2. FOR ABUTMENT PLAN, ELEVATION, AND LOCATION OF SECTION A-A, SEE SHEETS 7 & 8.
 3. ADDITIONAL SEALING OF CONCRETE SURFACES IS INCLUDED WITH SOLDIER PILE AND LAGGING RETAINING WALL QUANTITIES FOR PAYMENT.
 4. 1000 mm WIDE NEOPRENE SHEETING INCLUDED WITH ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN FOR PAYMENT.

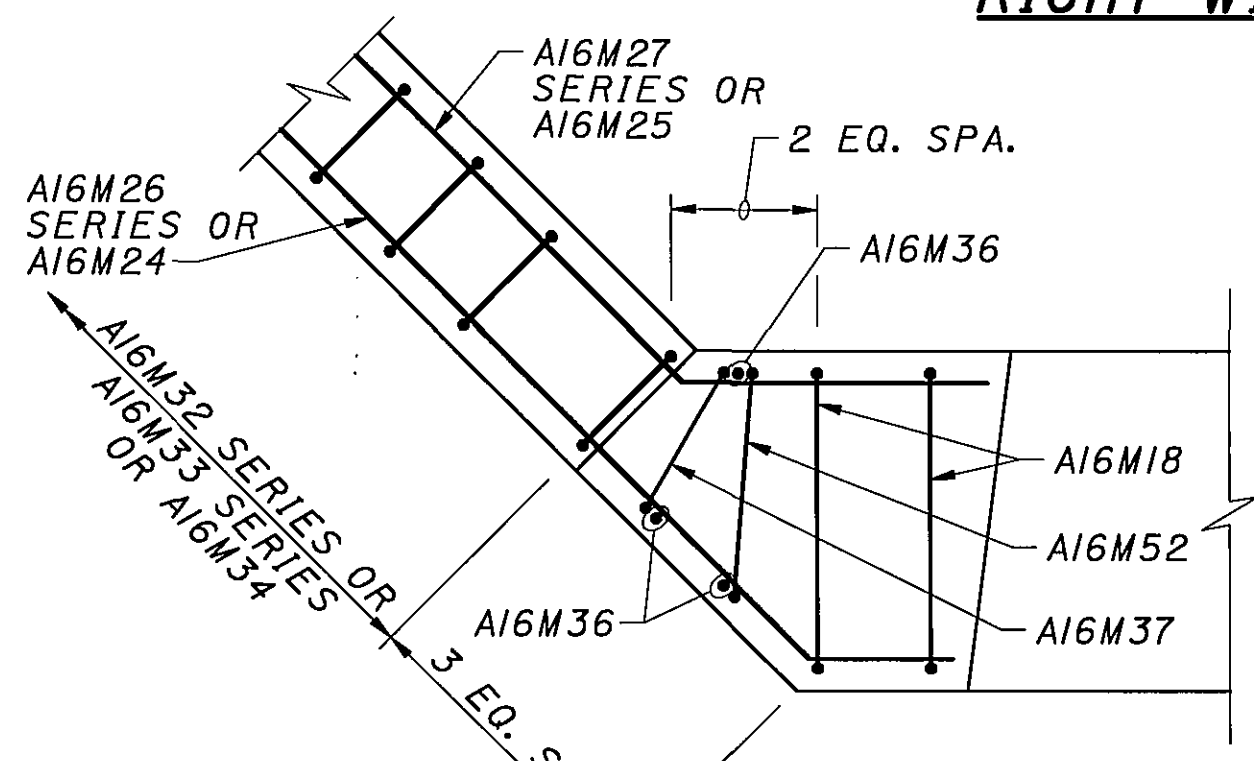
DESIGN AGENCY CH2MHILL ONE DAYTON CENTRE, SUITE 1100 ONE SOUTH MAIN STREET DAYTON, OH 45402-1828	
DATE 09/03	STRUCTURE FILE NUMBER 5709075/5709083
REVIEWED MRM	CHECKED JTC
DRAWN RDG	REVISIONS REVISED
DESIGNED DGS	CHECKED JTC
REAR ABUTMENT DETAILS BRIDGE NO. MOT-75-32689 L&R I-75 MAINLINE OVER RAMP G	
MOT-70-22.890	
10 / 34	
1058 1245	



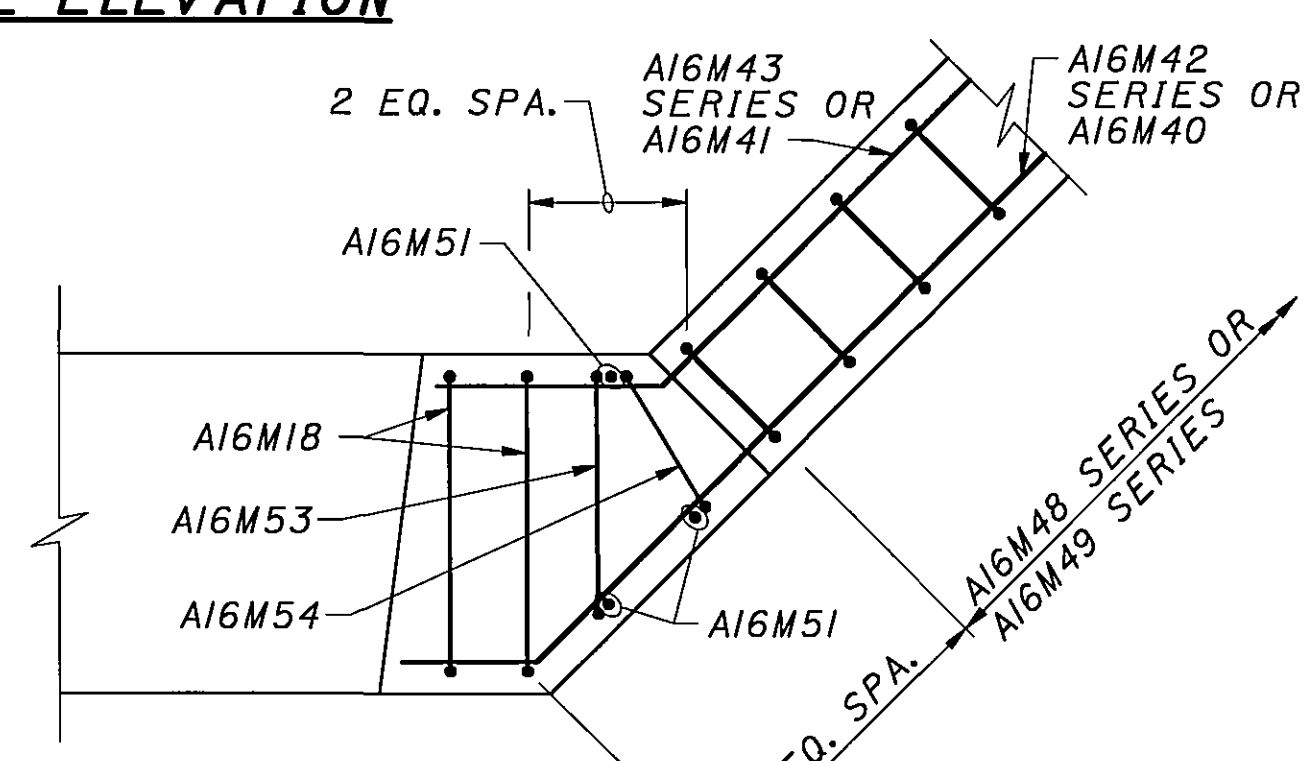
RIGHT WINGWALL ELEVATION



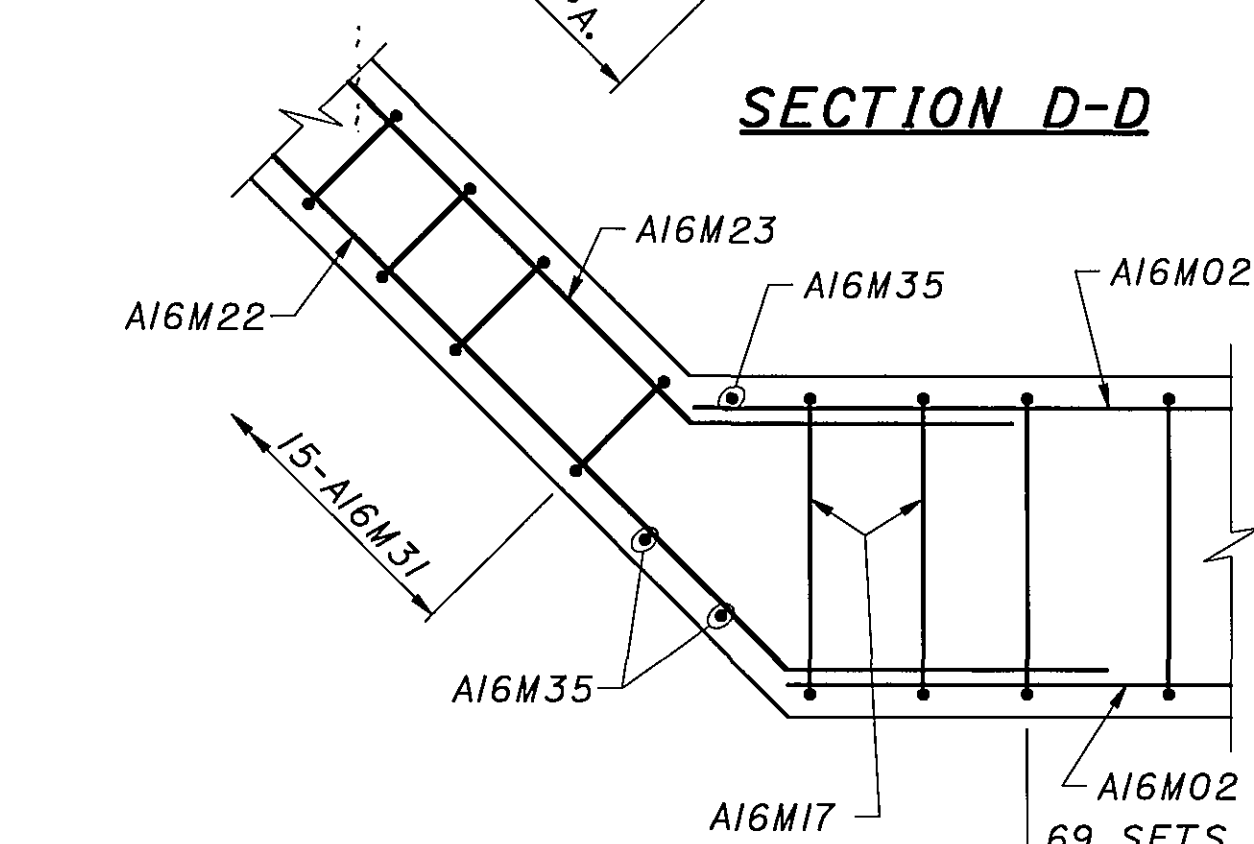
LEFT WINGWALL ELEVATION



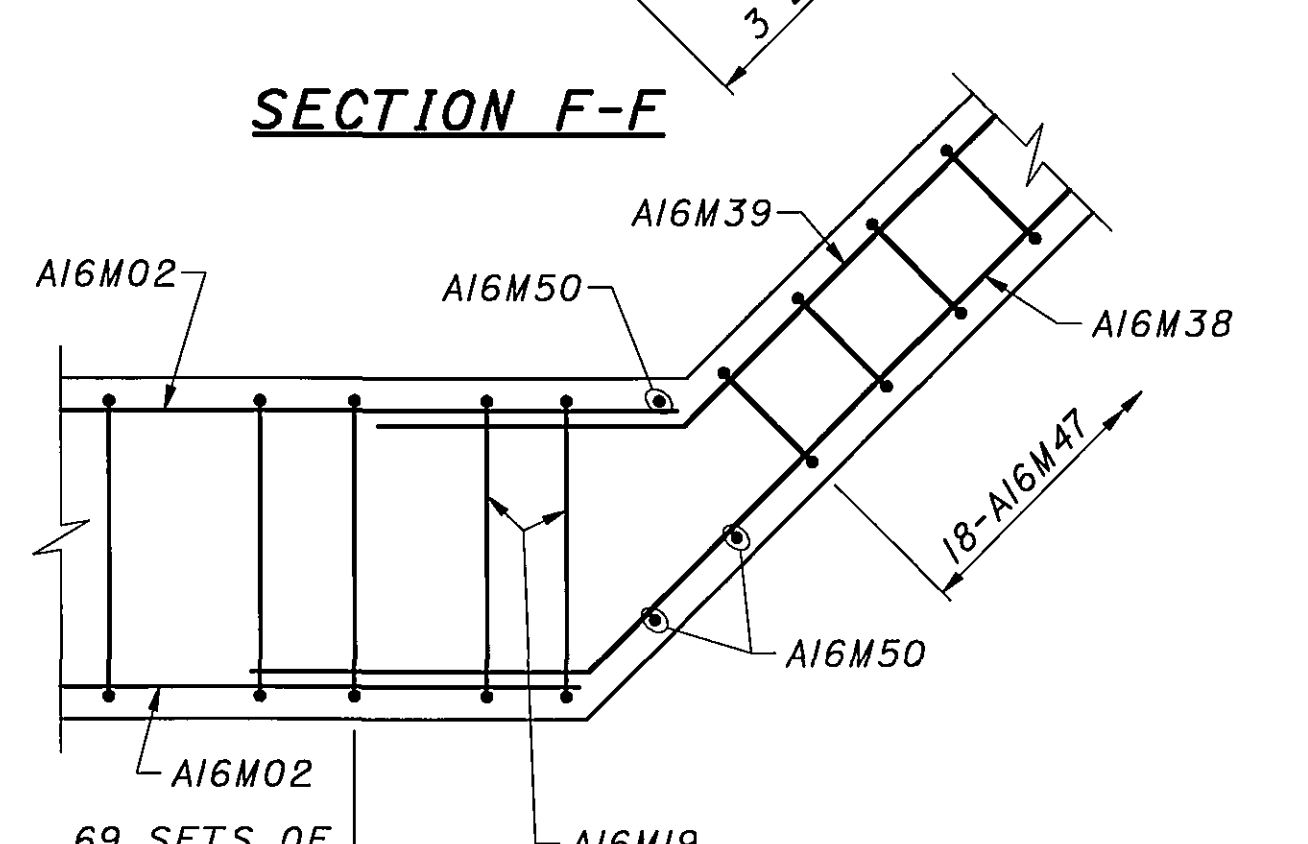
SECTION D-D



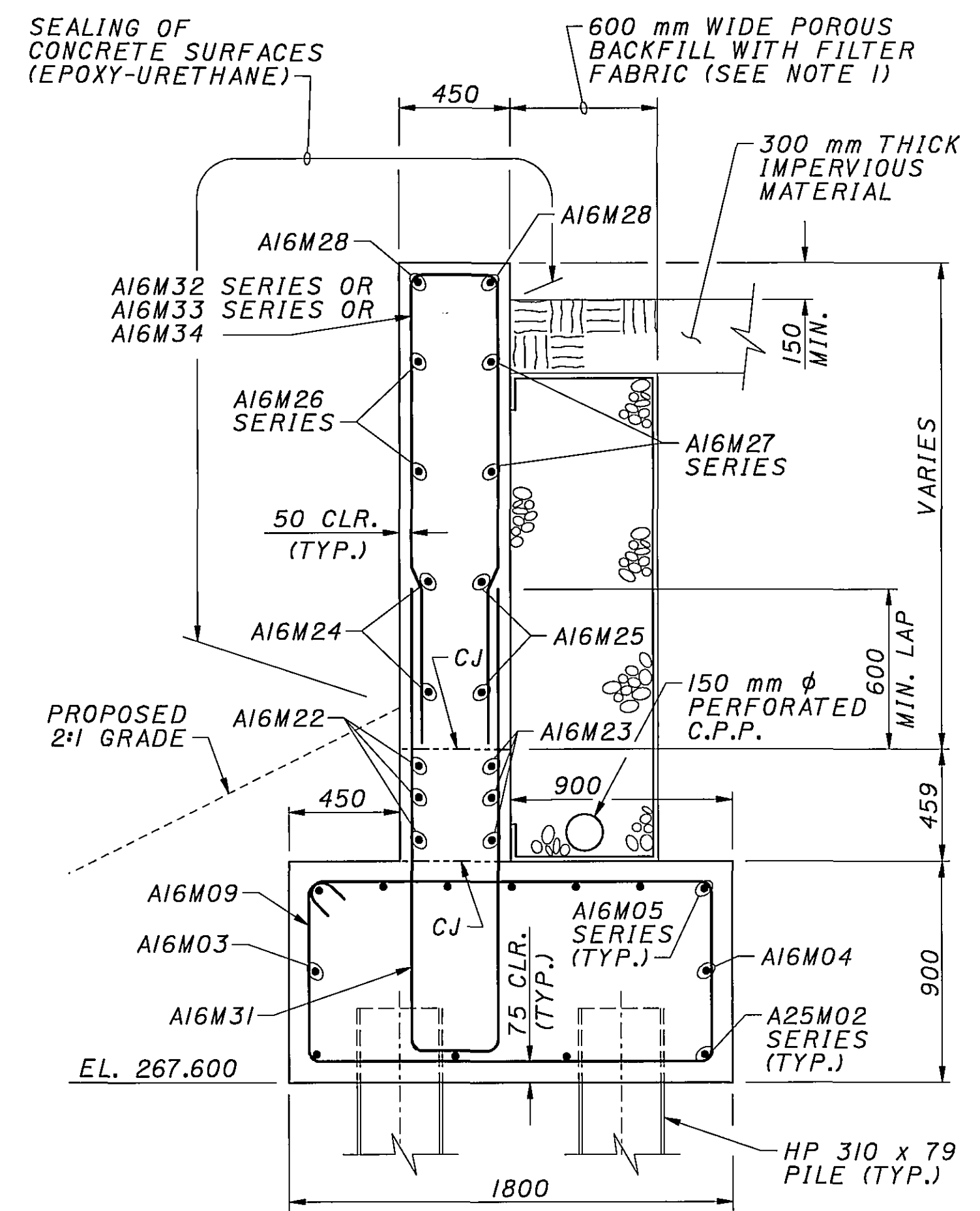
SECTION F-F



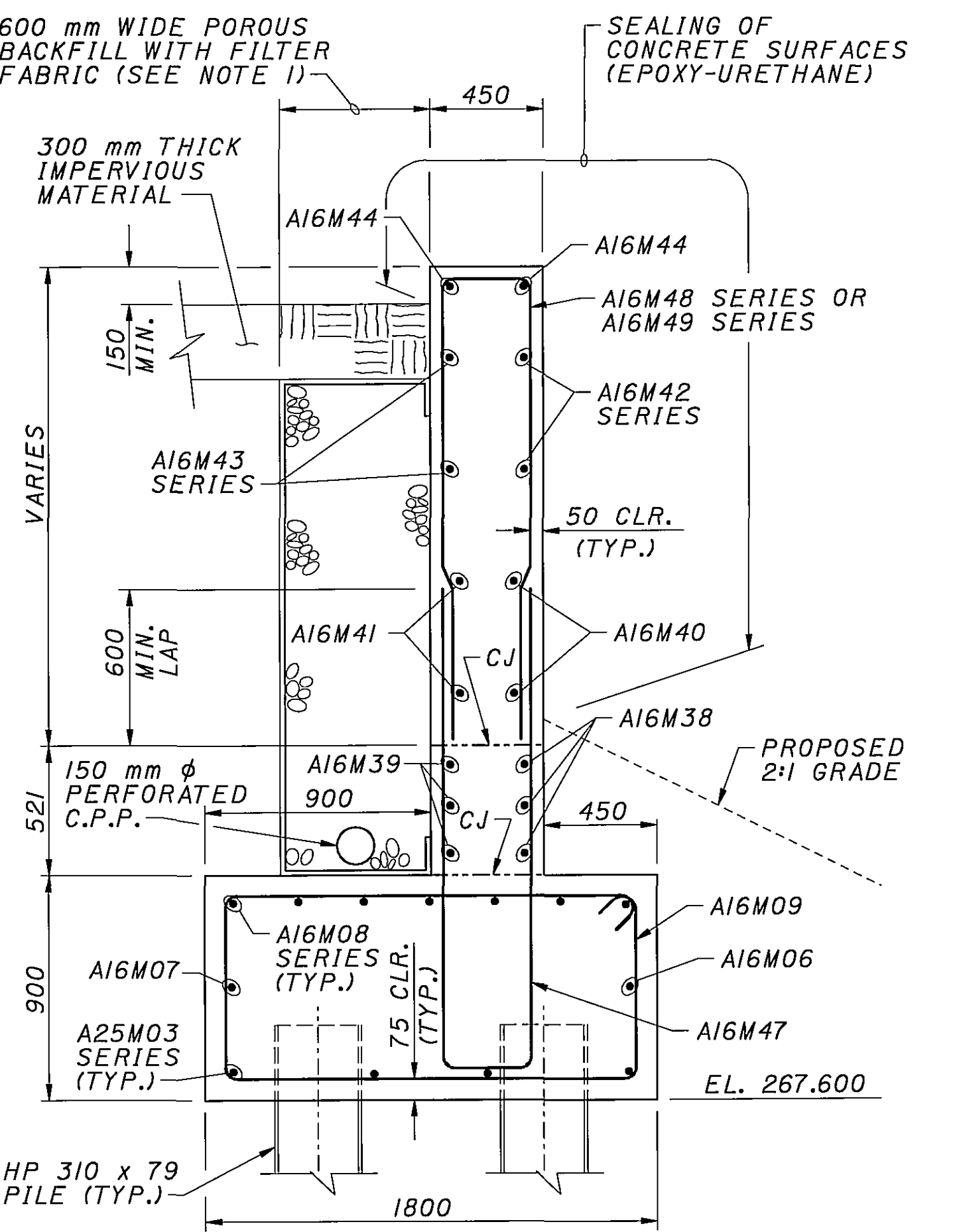
SECTION E-E



SECTION G-G



SECTION B-B



SECTION C-C

- NOTES:**
1. POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK, SHALL EXTEND UP TO THE BOTTOM SURFACE OF THE APPROACH SLAB, TO 300 mm BELOW THE EMBANKMENT SURFACE FOR THE WINGWALLS, AND Laterally TO THE ENDS OF THE WINGWALL. COST TO BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC.
 2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEETS 7 & 8.
 3. FOR ABUTMENT AND FOOTING DETAILS, SEE SHEETS 9 & 10.
 4. FOR PILE LAYOUT PLAN, SEE SHEET 6.

DESIGN AGENCY
CH2MHILL
ONE DAYTON CENTER SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OH 45402-1828

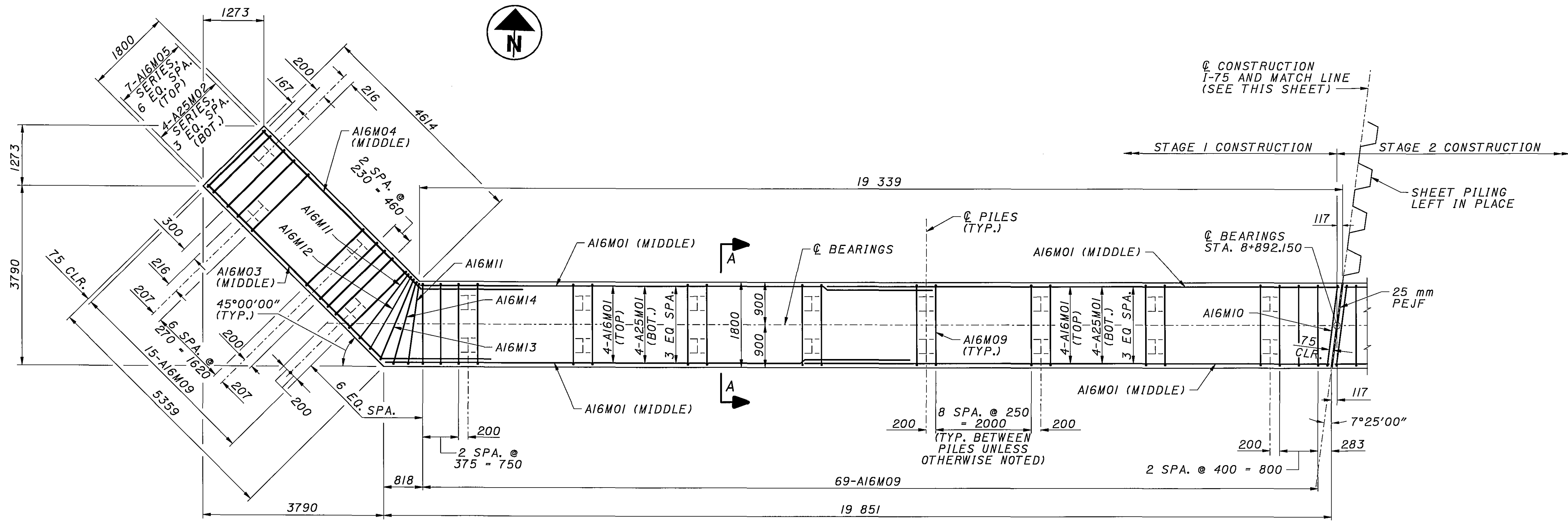
REAR ABUTMENT WINGWALL DETAILS
BRIDGE NO. MOT-75-32689 L&R
I-75 MAINLINE OVER RAMP G

DESIGNED	DGS	CHECKED	JTC
DRAWN	RDG	REVISED	
REVIEWED	MRM	DATE	09/03
STRUCTURE FILE NUMBER	5709075709083		

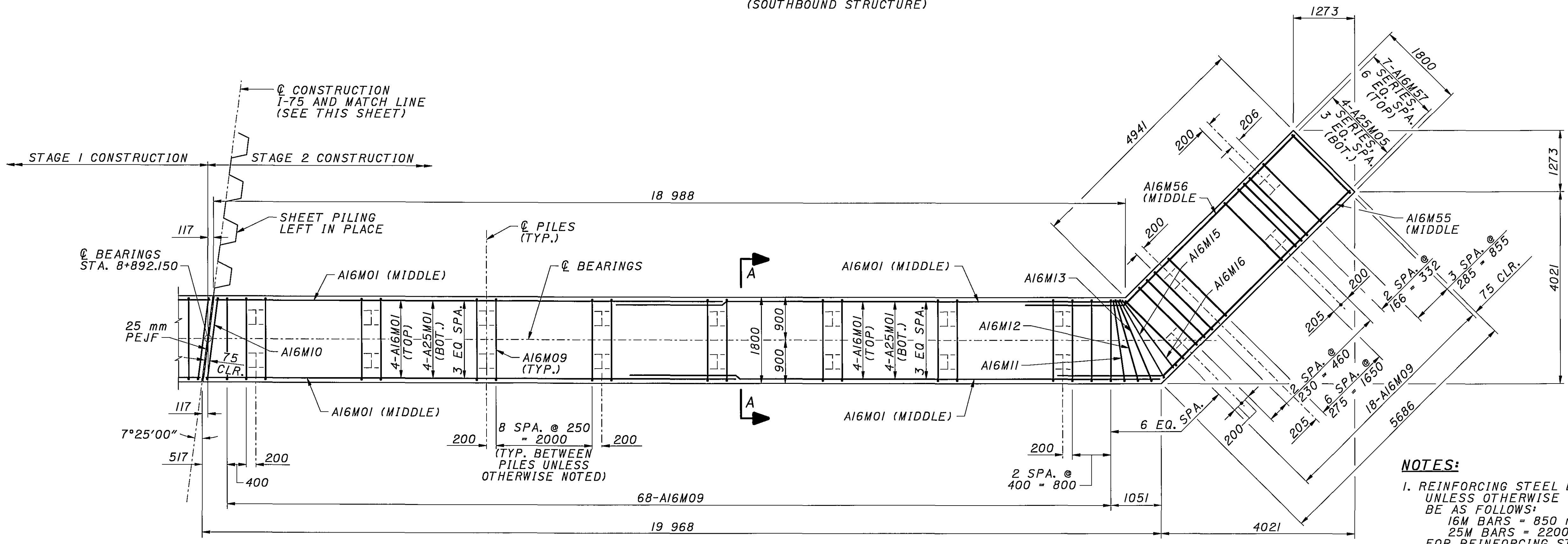
MOT-70-22.890

11/34

1059
1245



PARTIAL FOOTING PLAN
(SOUTHBOUND STRUCTURE)



PARTIAL FOOTING PLAN
(NORTHBOUND STRUCTURE)

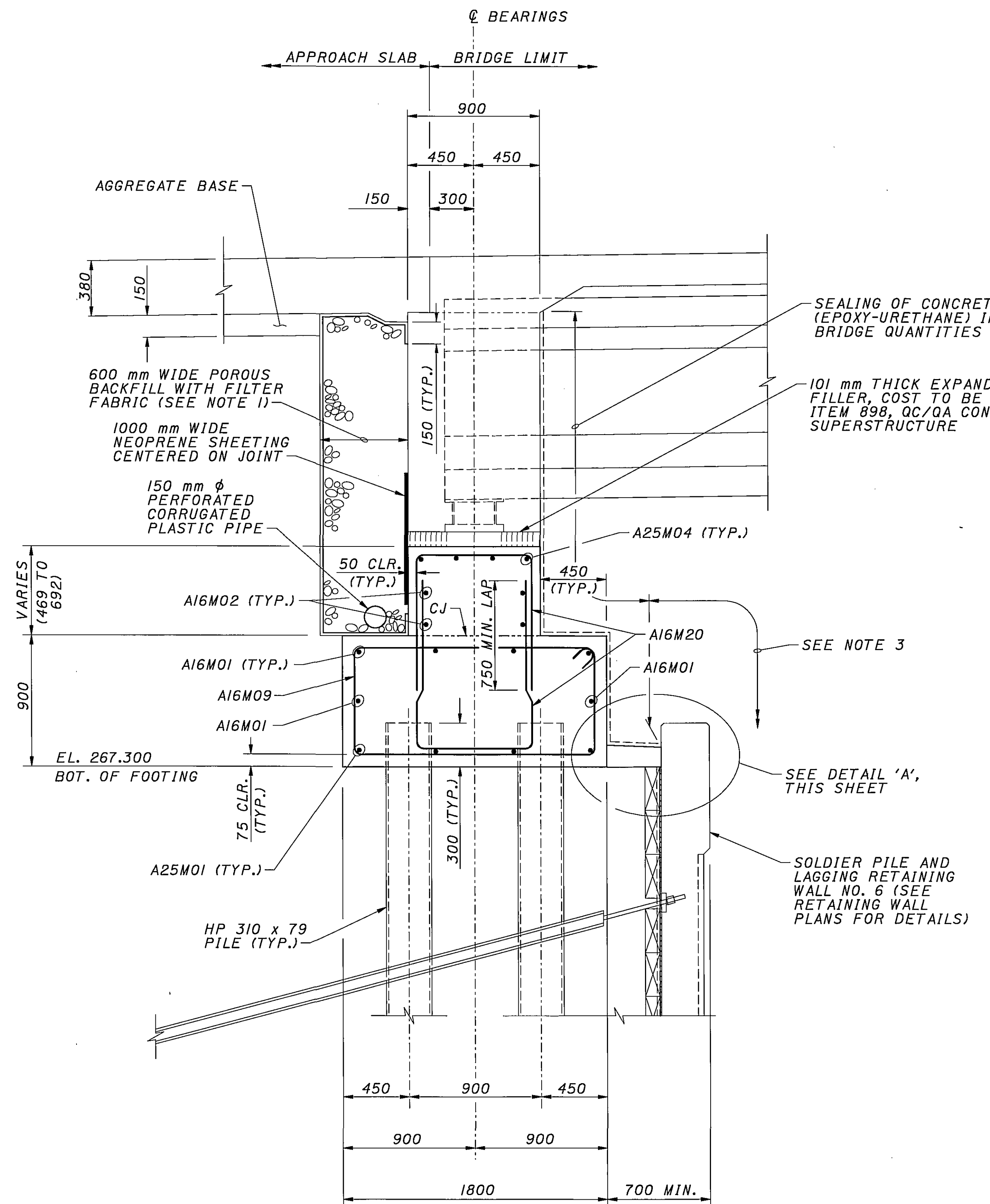
- NOTES:**
1. REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED, LAPS SHALL BE AS FOLLOWS:
16M BARS = 850 mm MIN.
25M BARS = 2200 mm MIN.
FOR REINFORCING STEEL LIST, SEE SHEETS 32 & 33.
 2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEETS 12 & 13.
 3. FOR SECTION A-A, SEE SHEET 15.
 4. FOR PILE LAYOUT PLAN, SEE SHEET 6.
 5. FOR TEMPORARY SHORING PLANS, SEE SHEETS 625 - 643 OF 1245.

DESIGN AGENCY
CH2M HILL
ONE DAYTON CENTRE SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OH 45402-1828

DATE 09/03
REVIEWED MRM
DRAWN RDG
DESIGNED DGS
CHECKED RV

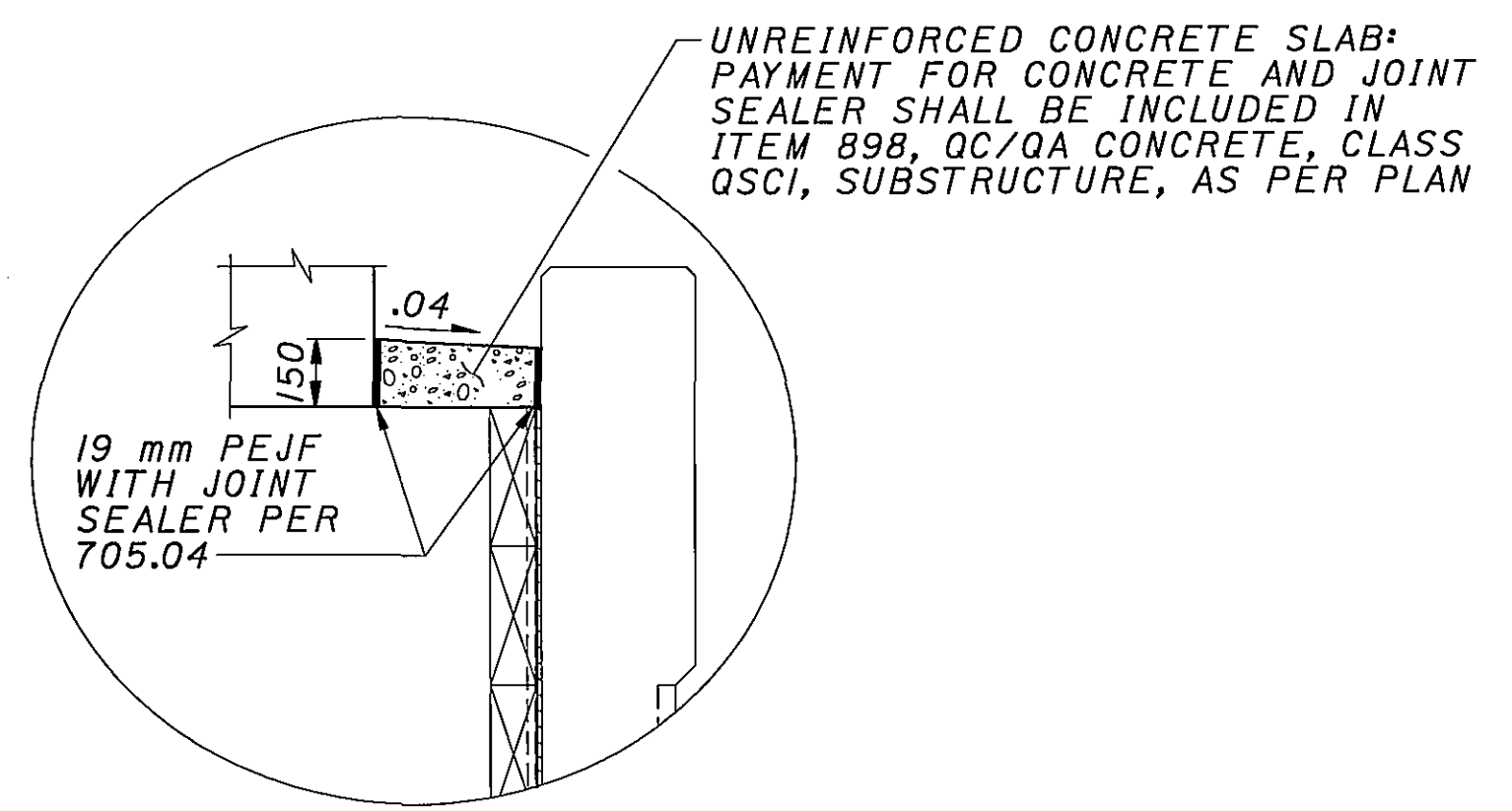
FORWARD ABUTMENT FOOTING PLAN
BRIDGE NO. MOT-75-32689 L&R
I-75 MAINLINE OVER RAMP

MOT-70-22.890



SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) INCLUDED WITH BRIDGE QUANTITIES FOR PAYMENT

101 mm THICK EXPANDED POLYSTYRENE FILLER, COST TO BE INCLUDED WITH ITEM 898, QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE

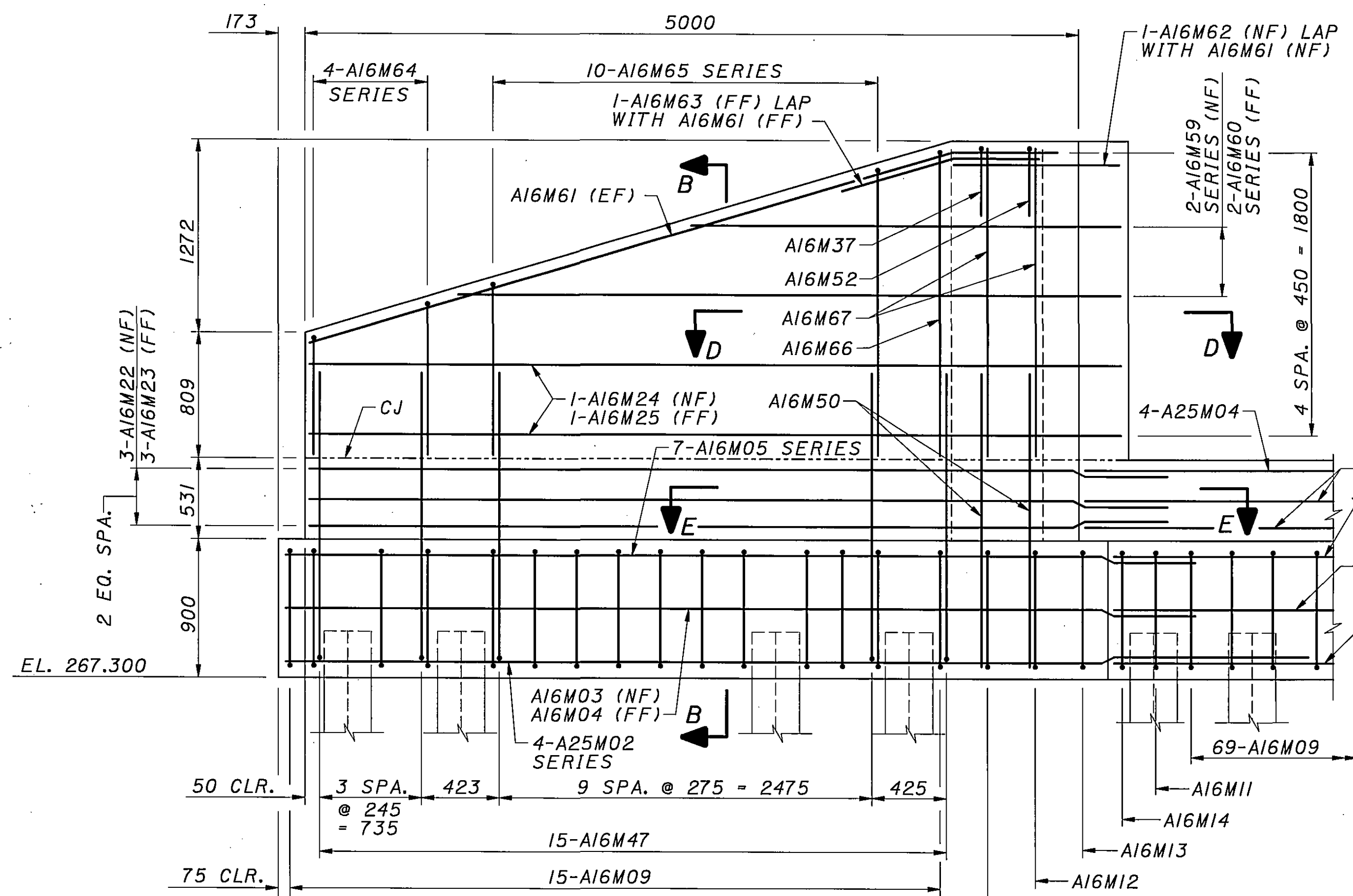


- NOTES:**
1. POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK, SHALL EXTEND UP TO THE BOTTOM SURFACE OF THE APPROACH SLAB, TO 300 mm BELOW THE EMBANKMENT SURFACE FOR THE WINGWALLS, AND Laterally TO THE ENDS OF THE WINGWALL. COST TO BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC FOR PAYMENT.
 2. FOR ABUTMENT PLAN, ELEVATION, AND LOCATION OF SECTION A-A, SEE SHEETS 12 & 13.
 3. ADDITIONAL SEALING OF CONCRETE SURFACES IS INCLUDED WITH SOLDIER PILE AND LAGGING RETAINING WALL QUANTITIES FOR PAYMENT.
 4. 1000 mm WIDE NEOPRENE SHEETING INCLUDED WITH ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN FOR PAYMENT.

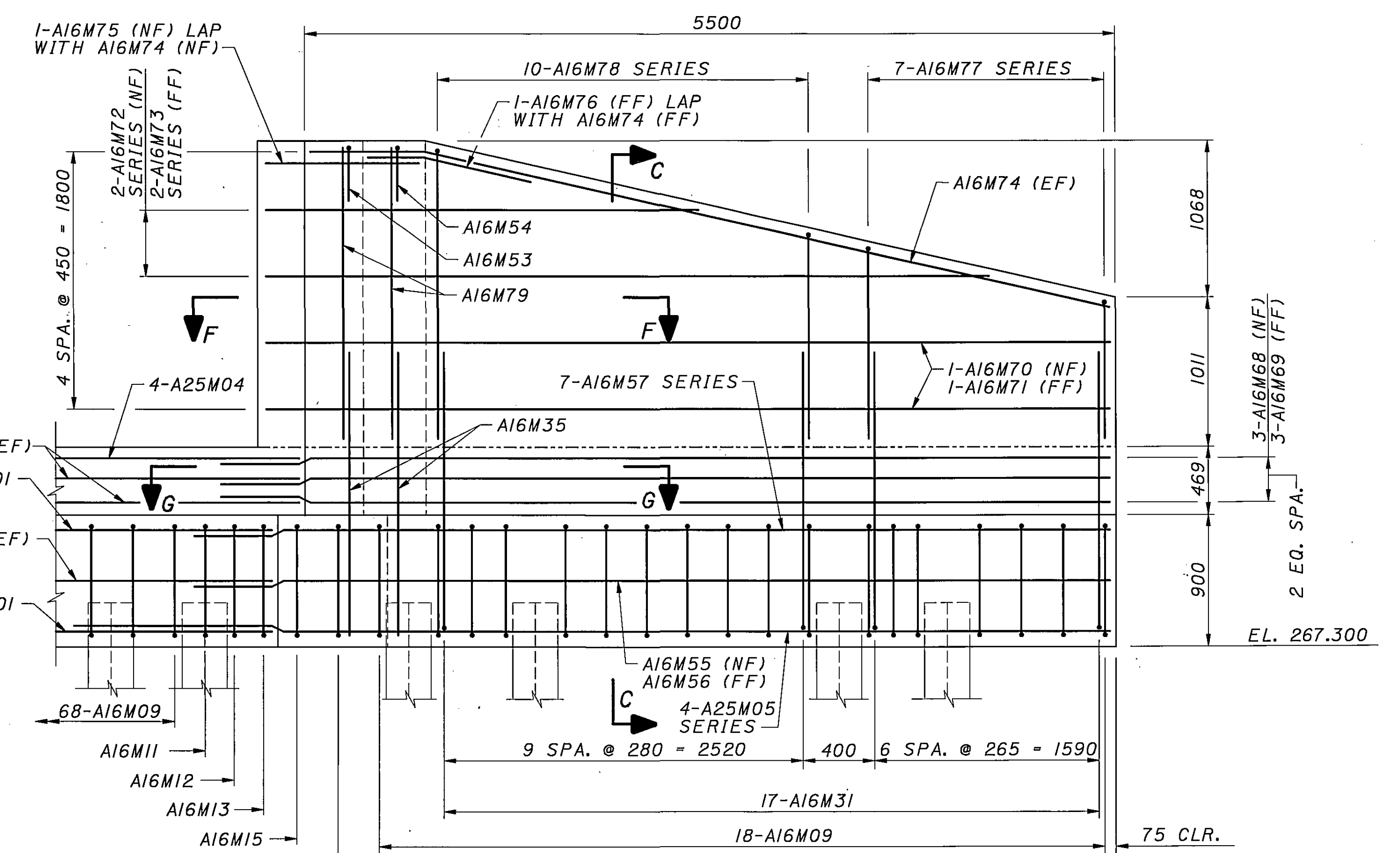
DESIGNED	DGS	CHECKED	RV
DRAWN	RDG	REVISED	
REVIEWED	MRM	DATE	09/03
STRUCTURE FILE NUMBER	5709075/5709083		

FORWARD ABUTMENT DETAILS
 BRIDGE NO. MOT-75-32689 L&R
 I-75 MAINLINE OVER RAMP

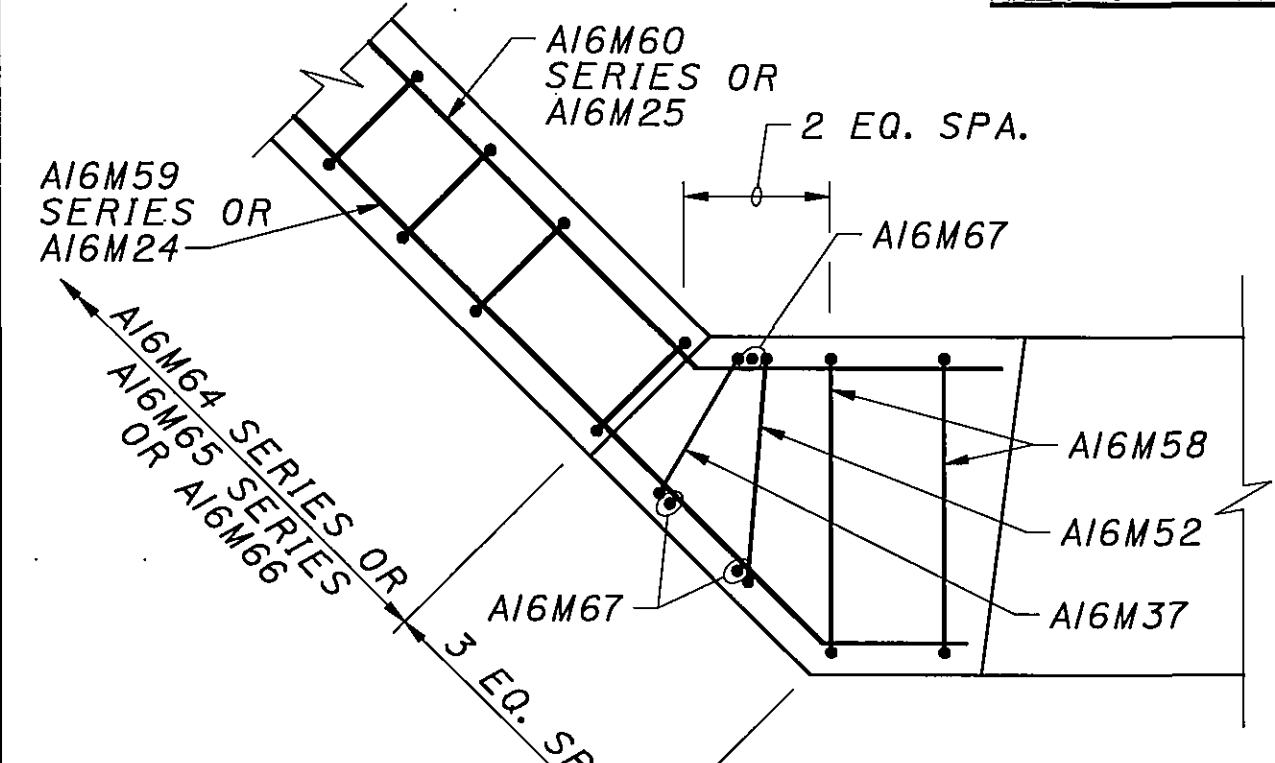
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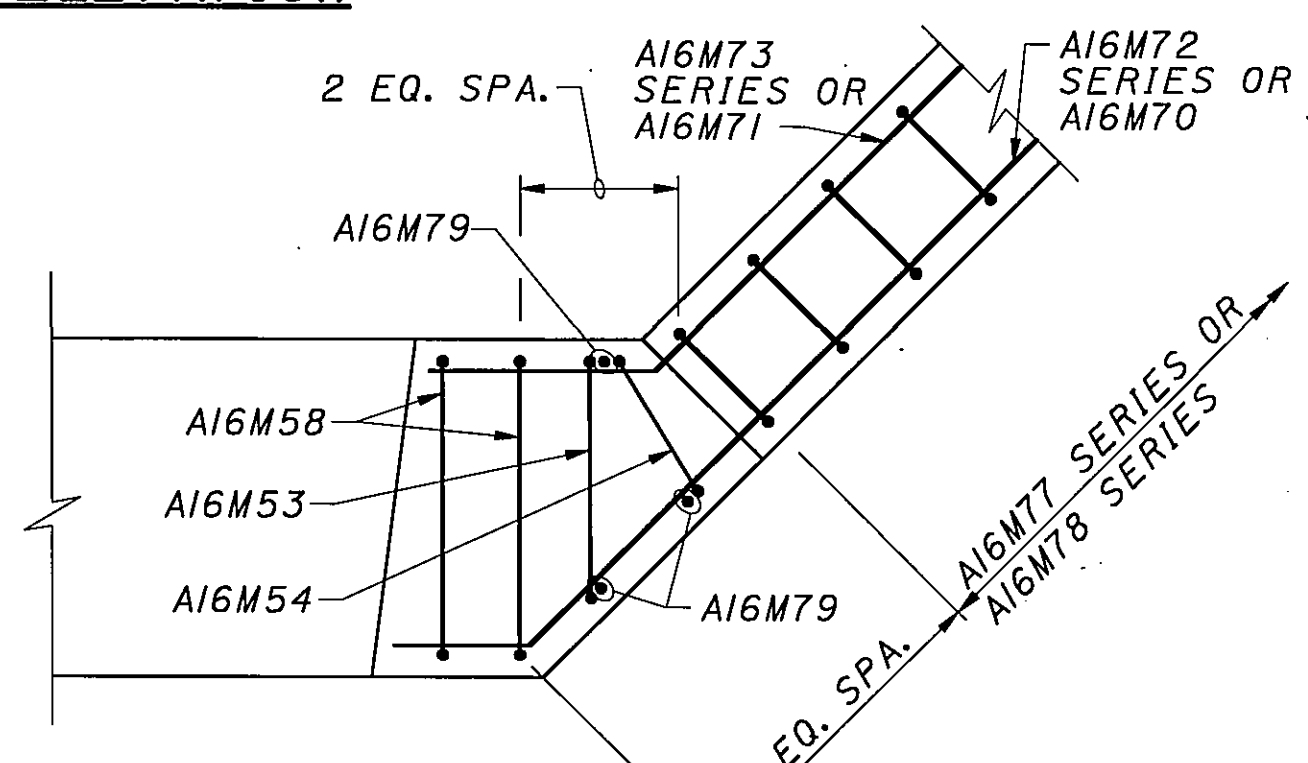
LEFT WINGWALL ELEVATION



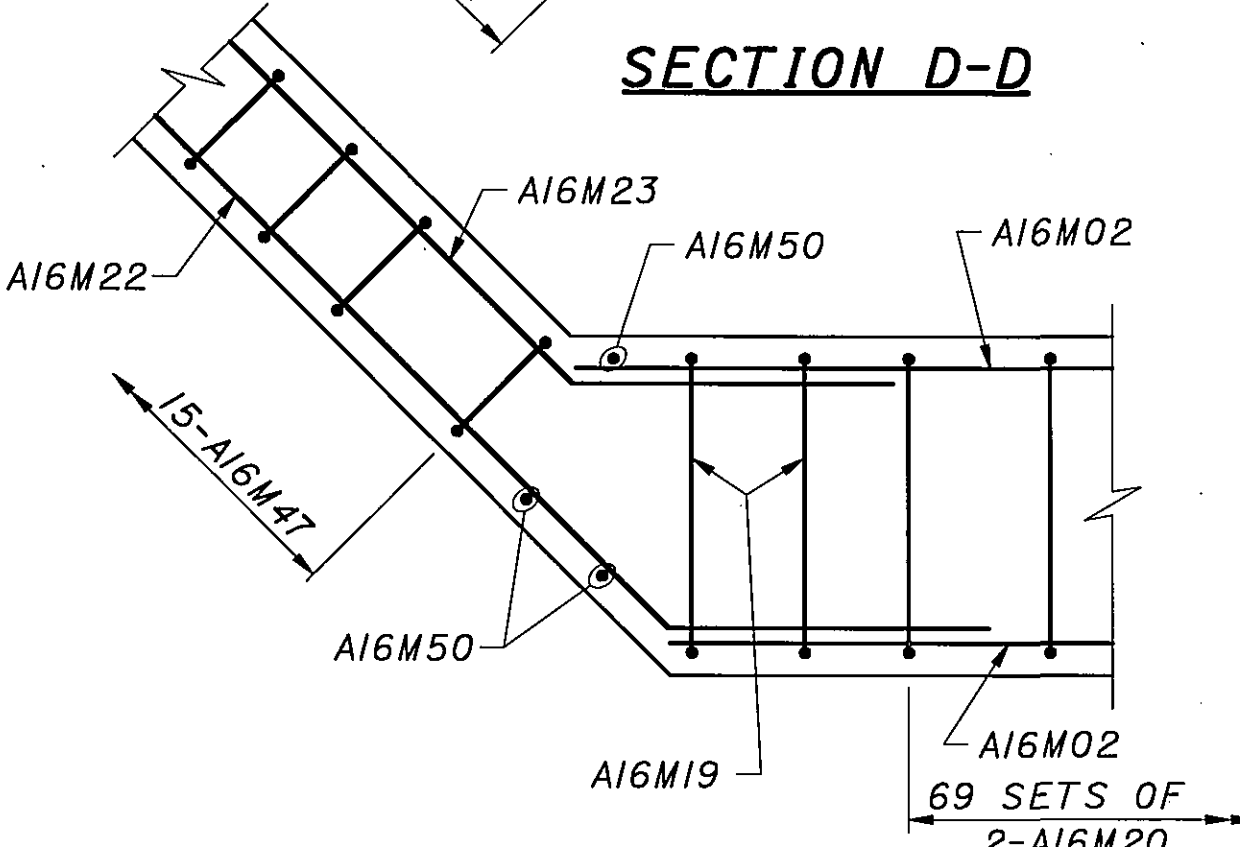
RIGHT WINGWALL ELEVATION



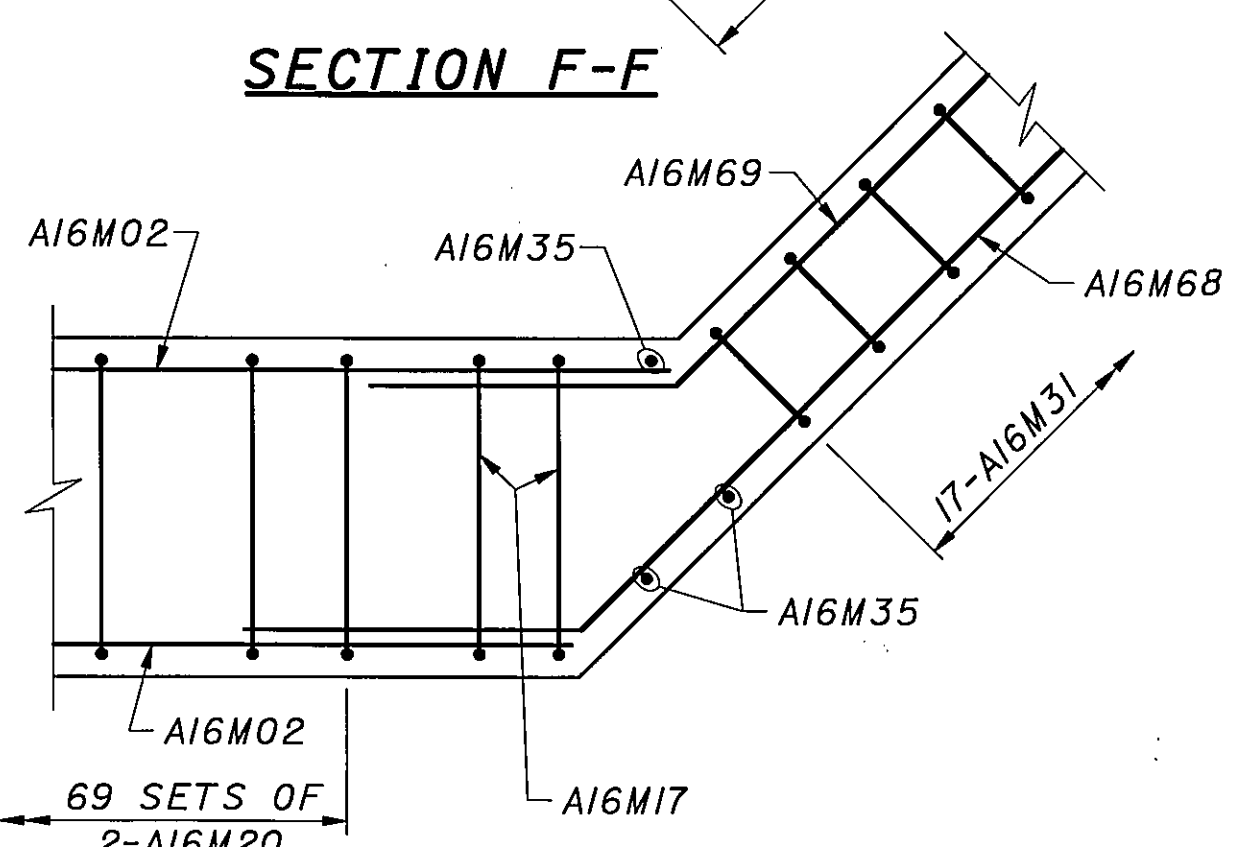
SECTION D-D



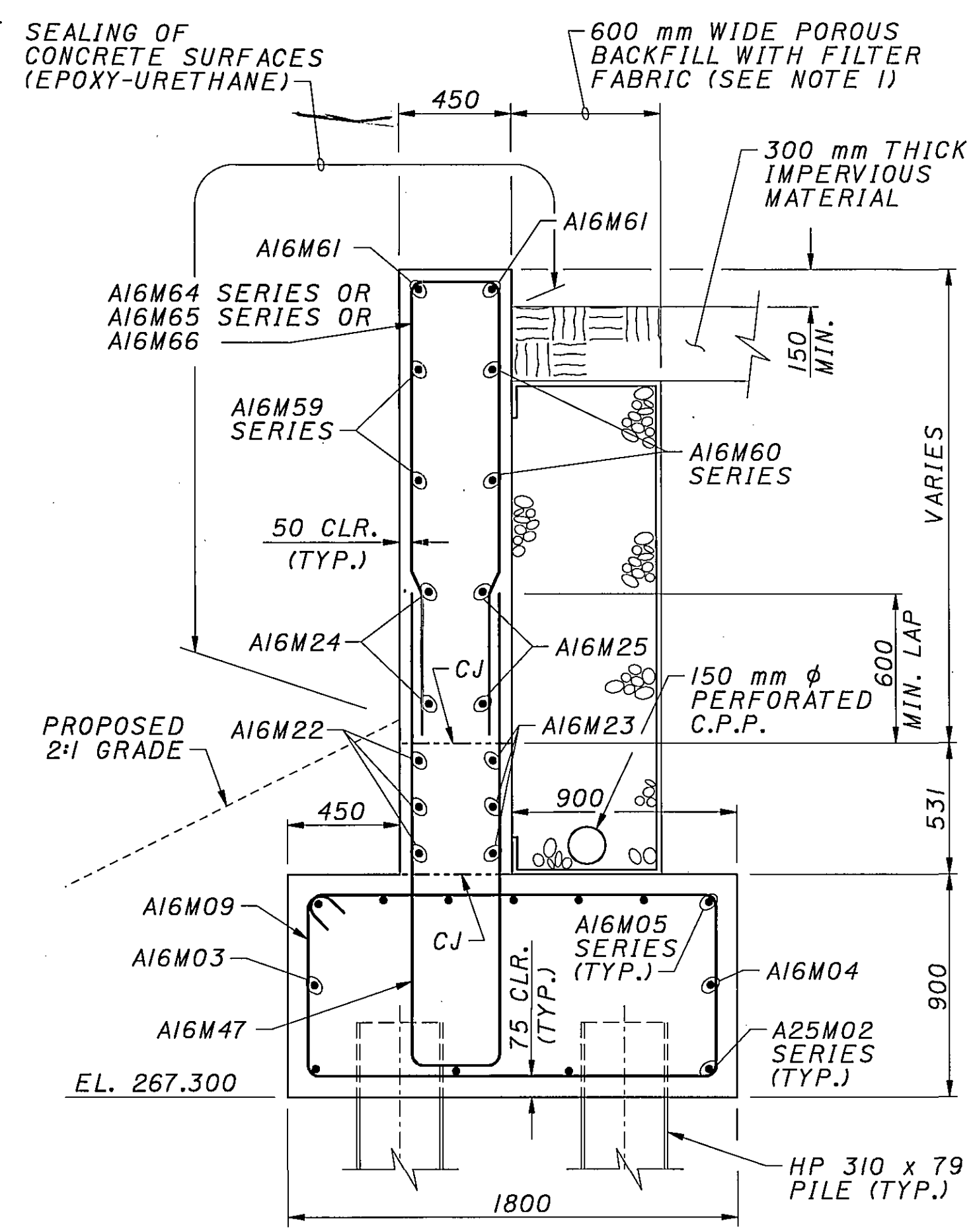
SECTION F-F



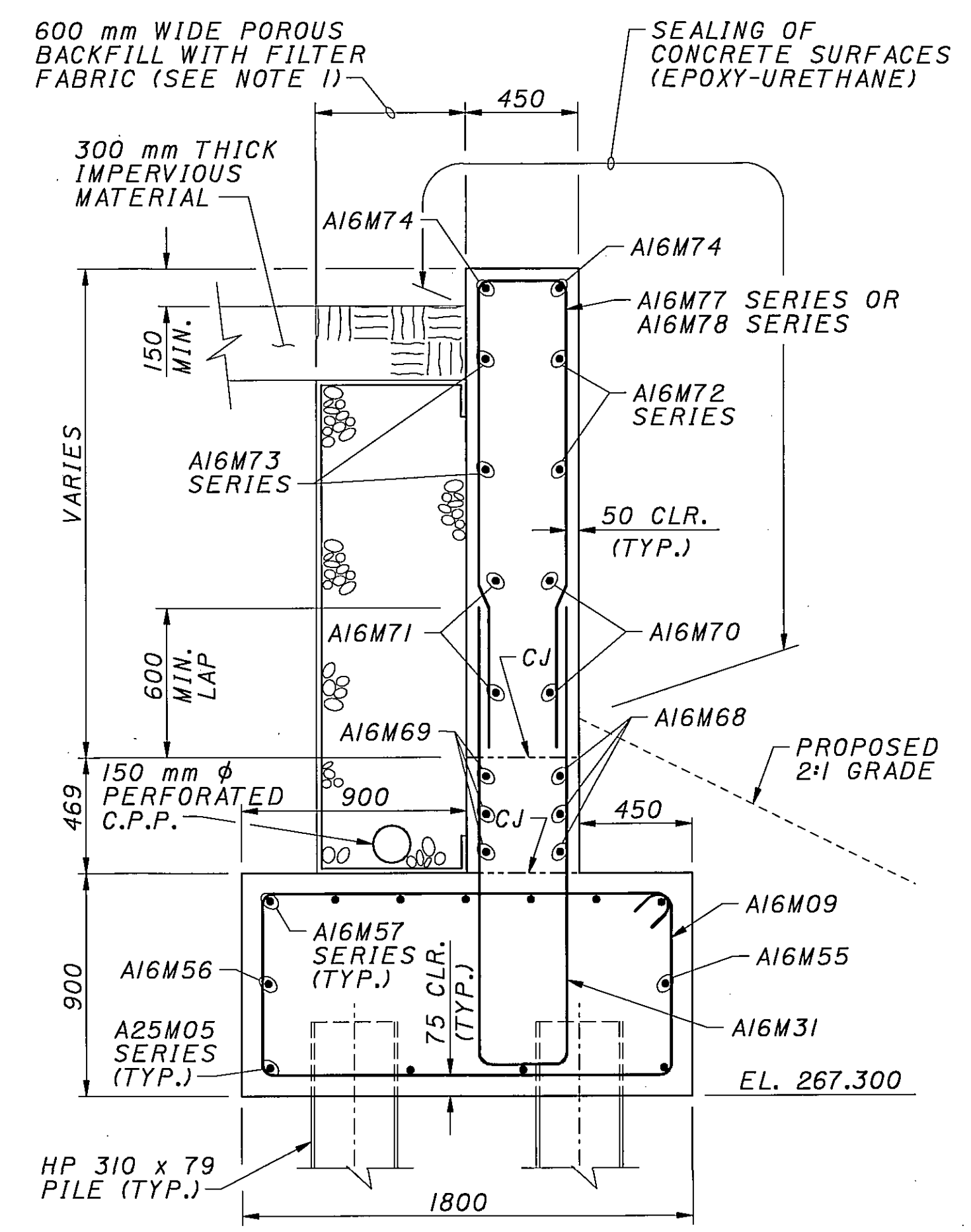
SECTION E-E



SECTION G-G

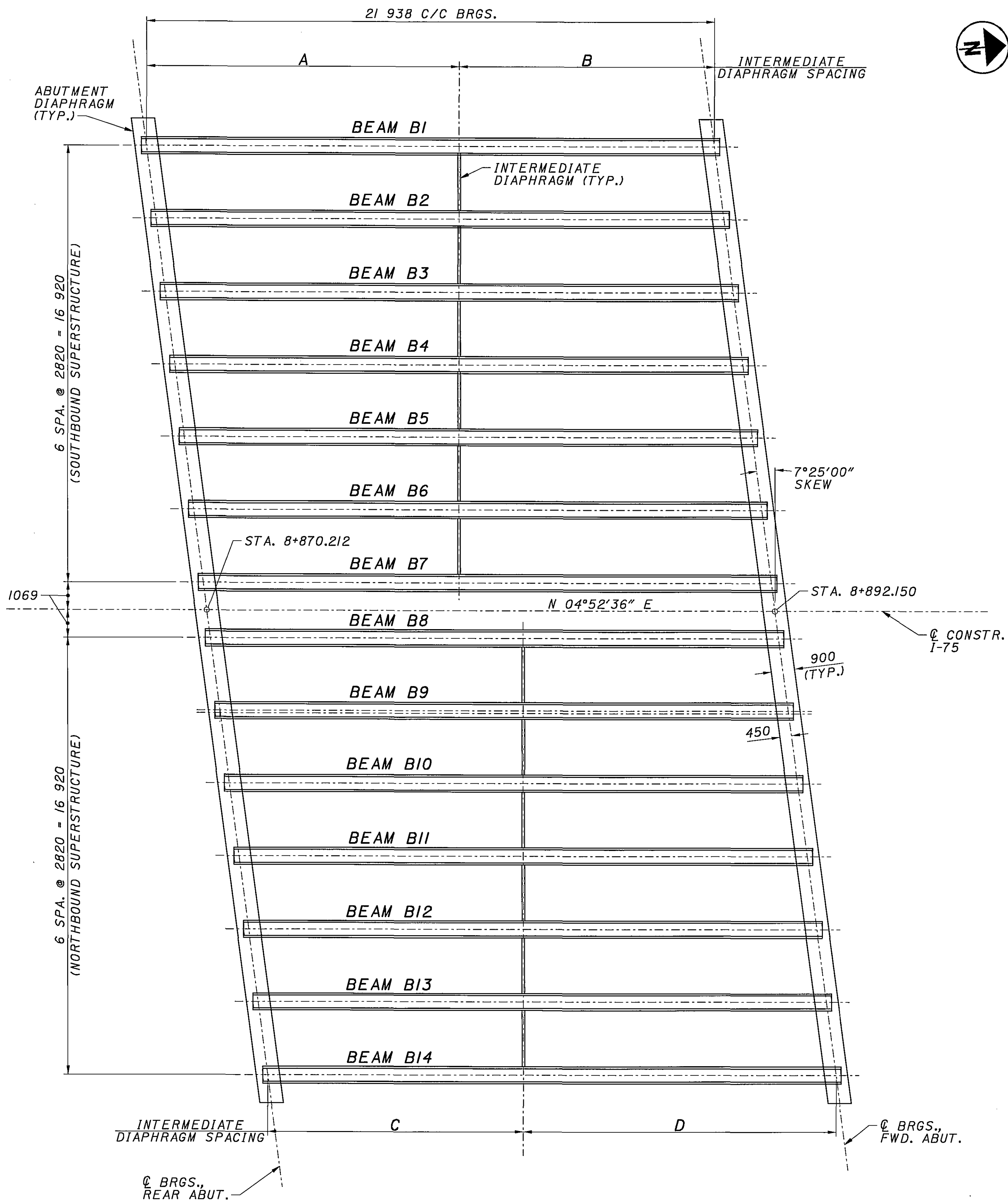


SECTION B-B



SECTION C-C

- NOTES:**
1. POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK, SHALL EXTEND UP TO THE BOTTOM SURFACE OF THE APPROACH SLAB, TO 300 mm BELOW THE EMBANKMENT SURFACE FOR THE WINGWALLS, AND Laterally TO THE ENDS OF THE WINGWALL. COST TO BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC.
 2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEETS 12 & 13.
 3. FOR ABUTMENT AND FOOTING DETAILS, SEE SHEETS 14 & 15.
 4. FOR PILE LAYOUT PLAN, SEE SHEET 6.



FRAMING PLAN

FRAMING PLAN DIMENSIONS					
BEAM	A	B	BEAM	C	D
B1	12 070	9 868	B8	12 070	9 868
B2	11 703	10 235	B9	11 703	10 235
B3	11 336	10 602	B10	11 336	10 602
B4	10 969	10 969	B11	10 969	10 969
B5	10 602	11 336	B12	10 602	11 336
B6	10 235	11 703	B13	10 235	11 703
B7	9 868	12 070	B14	9 868	12 070

NOTES:

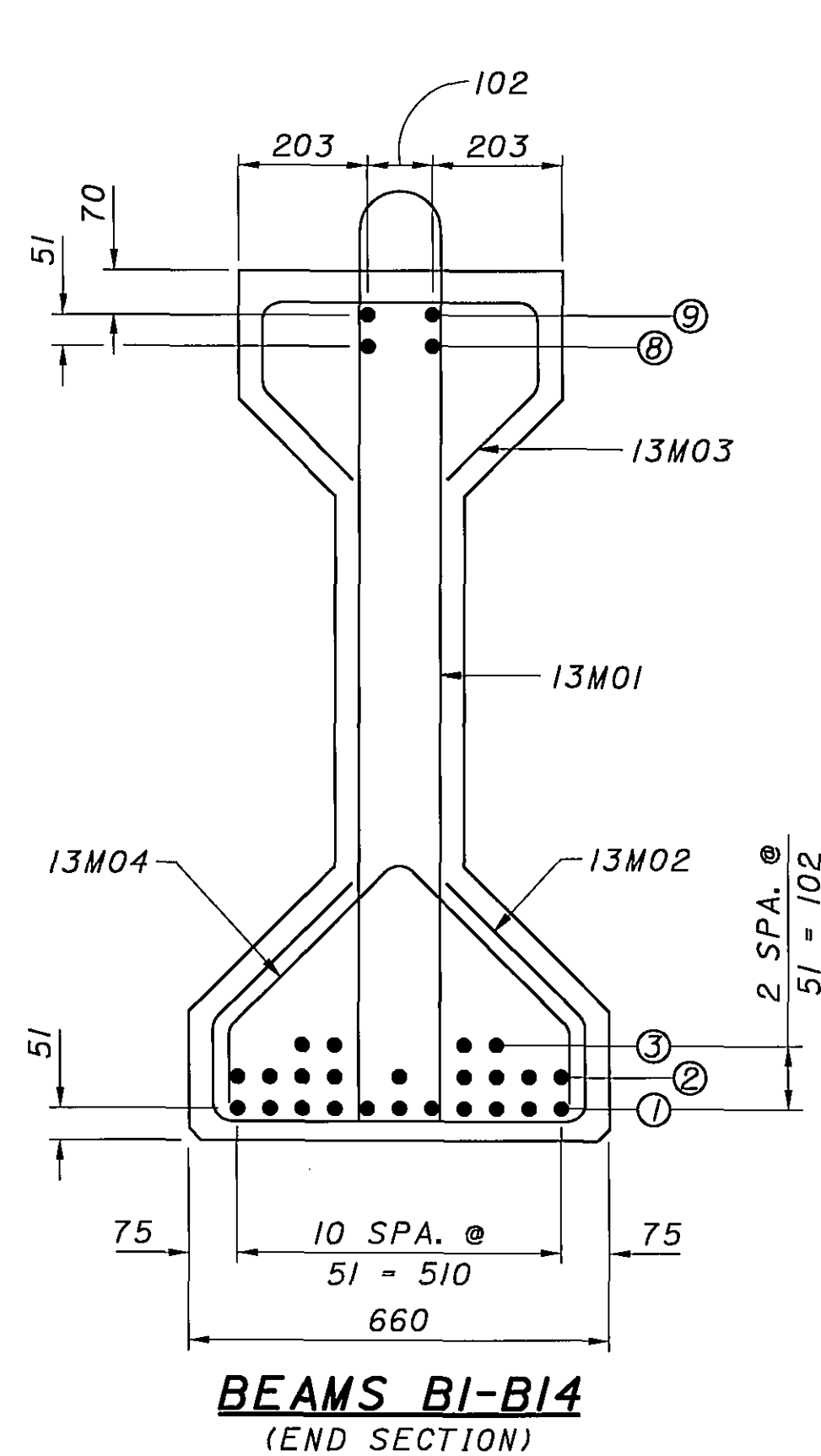
- ALL FABRICATION, CONSTRUCTION AND MATERIAL REQUIREMENTS, AND PRESTRESSED CONCRETE I-BEAM, DIAPHRAGM, AND BEARING PLATE DETAILS SHALL BE IN ACCORDANCE WITH CMS 515 AND STANDARD CONSTRUCTION DRAWING PSID-I-99, EXCEPT AS NOTED BELOW.
- ITEM 515, DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4, AS PER PLAN:**
 TEMPORARY STABILITY FOR DECK PLACEMENT: THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF SUFFICIENT ADDITIONAL DIAPHRAGMS, SUPPORTS, AND BRACING TO ASSURE THAT THE I-BEAMS WILL REMAIN STABLE AND IN CORRECT HORIZONTAL AND VERTICAL ALIGNMENT DURING AND AFTER PLACEMENT OF THE CONCRETE DECK. THE ADDITIONAL SUPPORT DESIGN SHALL CONSIDER THE WEIGHT OF THE WET CONCRETE IN THE DECK OVERHANGS, THE DECK FINISHING MACHINE, AND ALL OTHER CONSTRUCTION LOADS PRESENT DURING PLACEMENT OF THE CONCRETE DECK. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTING ANY DEFICIENCIES RESULTING FROM INSTABILITY OF THE I-BEAMS DUE TO INADEQUATE TEMPORARY CONSTRUCTION SUPPORT, TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.
 BASIS OF PAYMENT: IN ADDITION TO THE ITEMS LISTED IN 515.19, ALL COSTS ASSOCIATED WITH THE REQUIRED THREADED RODS, BEARING SOLE PLATES, HP BEARING PEDESTALS, AND TEMPORARY BRACING SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED FOR PAYMENT WITH ITEM 515, DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4, AS PER PLAN.
- ITEM 515, INTERMEDIATE DIAPHRAGMS, AS PER PLAN:**
 - INTERMEDIATE DIAPHRAGMS MAY BE CAST-IN-PLACE CONCRETE OR GALVANIZED STRUCTURAL STEEL, AS SHOWN ON STANDARD CONSTRUCTION DRAWING PSID-I-99. ONLY ONE TYPE OF INTERMEDIATE DIAPHRAGM MAY BE USED ON THE BRIDGE. IF CAST-IN-PLACE CONCRETE INTERMEDIATE DIAPHRAGMS ARE SELECTED, THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL INTERMEDIATE DIAPHRAGM DIMENSIONS AND REINFORCING DETAILS IN ACCORDANCE WITH STD. DWG. PSID-I-99.
 - IF GALVANIZED STRUCTURAL STEEL INTERMEDIATE DIAPHRAGMS ARE SELECTED BY THE CONTRACTOR, THE SQUARE PLATE WASHERS, HIGH STRENGTH BOLTS, ROUND WASHERS, AND NUTS ON THE EXTERIOR SIDE OF THE FASCIA BEAMS SHALL BE PAINTED WITH A FINISH COAT TO MATCH THE COLOR OF THE CONCRETE SEALER USED ON THE PRESTRESSED BEAMS. PAINT, SURFACE PREPARATION, AND APPLICATION SHALL BE IN ACCORDANCE WITH 514.
 BASIS OF PAYMENT: ALL COSTS ASSOCIATED WITH THE WORK DESCRIBED IN ITEMS (3.A) AND (3.B) ABOVE, INCLUDING DIAPHRAGM CONNECTION PAINTING, SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED FOR PAYMENT WITH ITEM 515, INTERMEDIATE DIAPHRAGMS, AS PER PLAN.
- ALL PRESTRESSED CONCRETE I-BEAMS SHALL BE TANGENT AND PARALLEL TO THE CONSTRUCTION CHORD.
- FOR BRIDGE CONSTRUCTION SEQUENCE, SEE SHEET 5.
- FOR BEARING DETAILS, SEE SHEET 20.

DESIGN AGENCY
CH2M HILL
 ONE DAYTON CENTRE SUITE 1100
 ONE SOUTH MAIN STREET
 DAYTON, OH 45402-1828

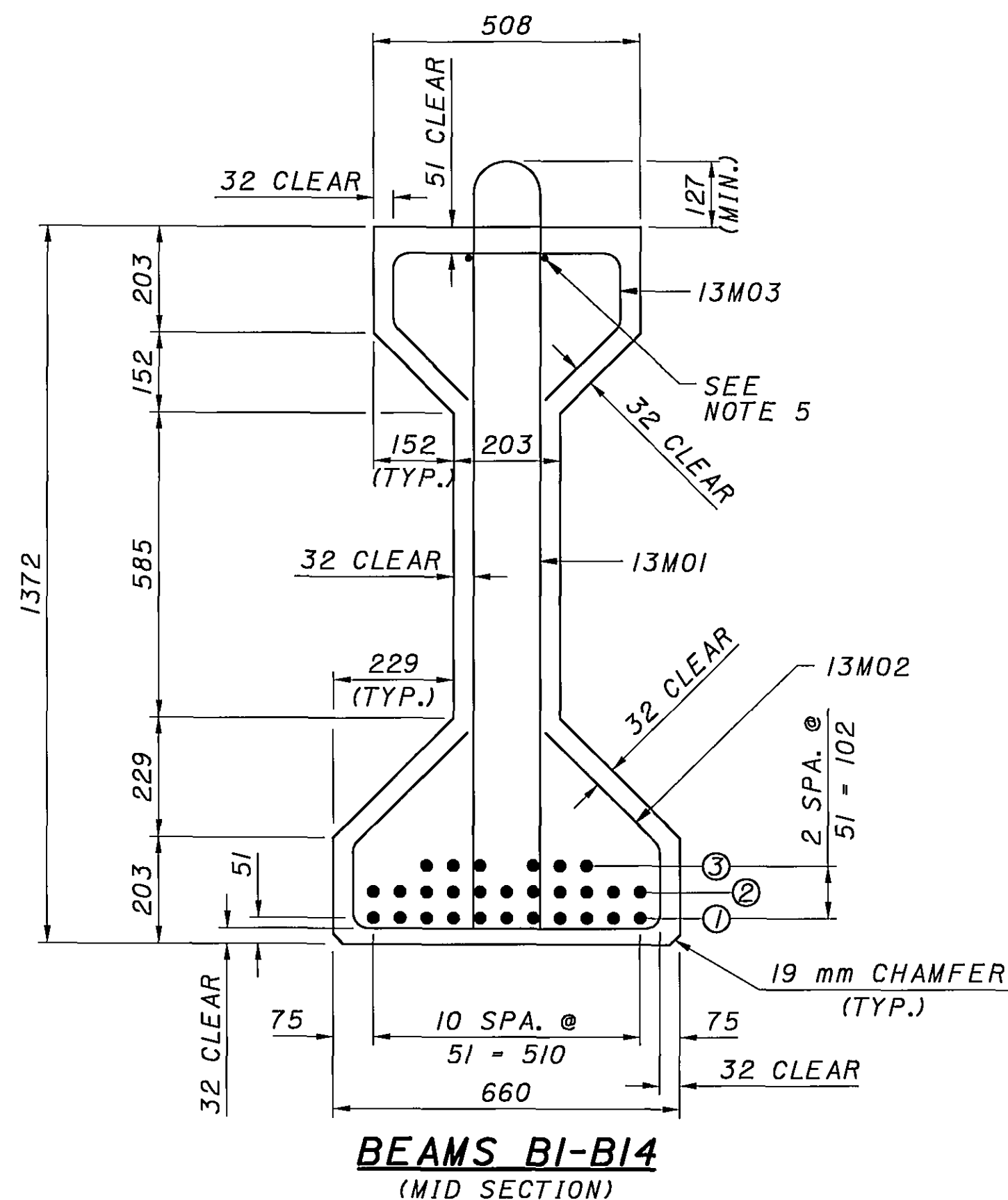
DATE 09/03
 REVIEWED MFM
 STRUCTURE FILE NUMBER 5709075/5709083
 DRAWN JTC
 DESIGNED JTC
 CHECKED RV

FRAMING PLAN
 BRIDGE NO. MOT-70-32689 L&R
 I-75 MAINLINE OVER RAMP G

MOT-70-22.890

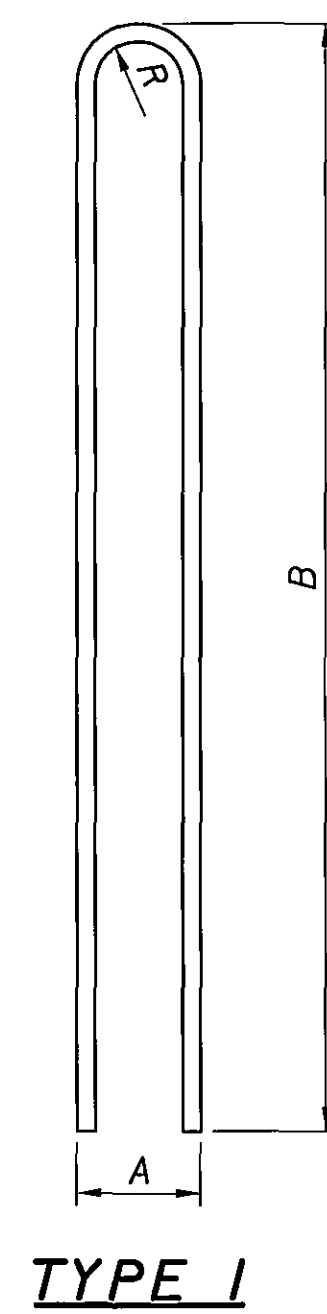


BEAMS BI-BI4
(END SECTION)

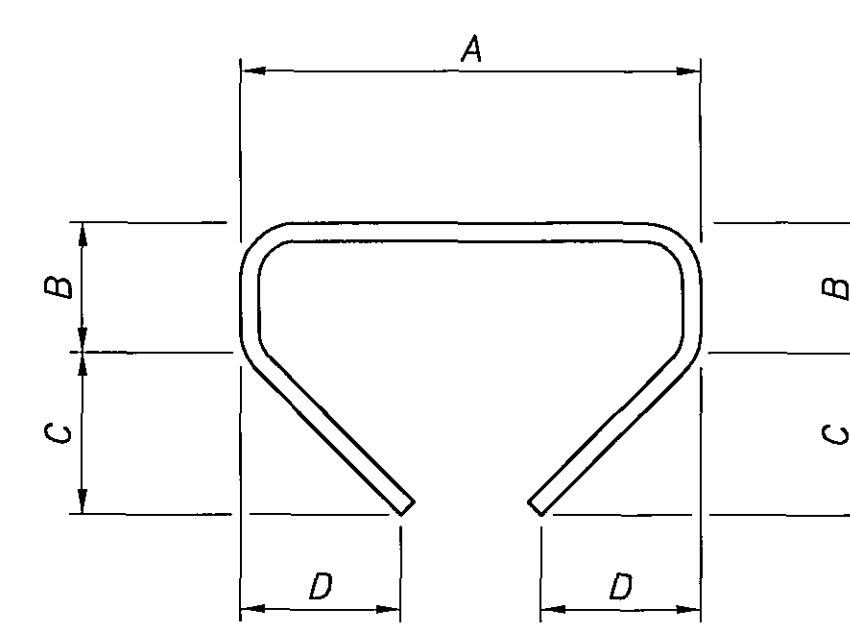


BEAMS BI-BI4
(MID SECTION)

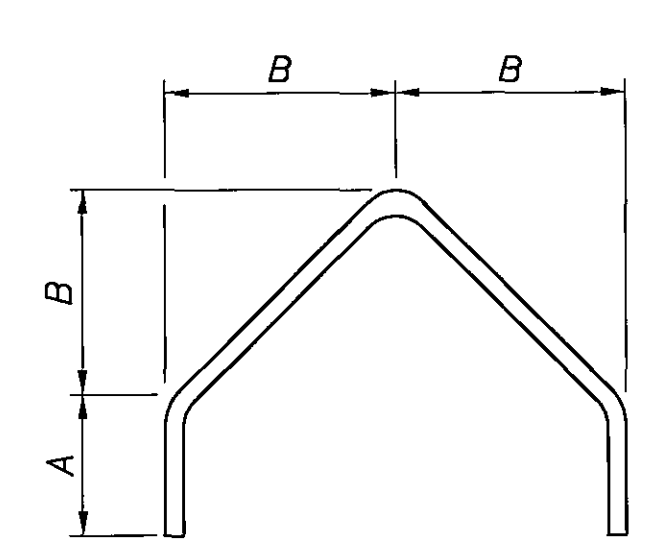
NOTE: ALL DIMENSIONS AS SHOWN FOR MID SECTION UNLESS NOTED OTHERWISE



TYPE 1



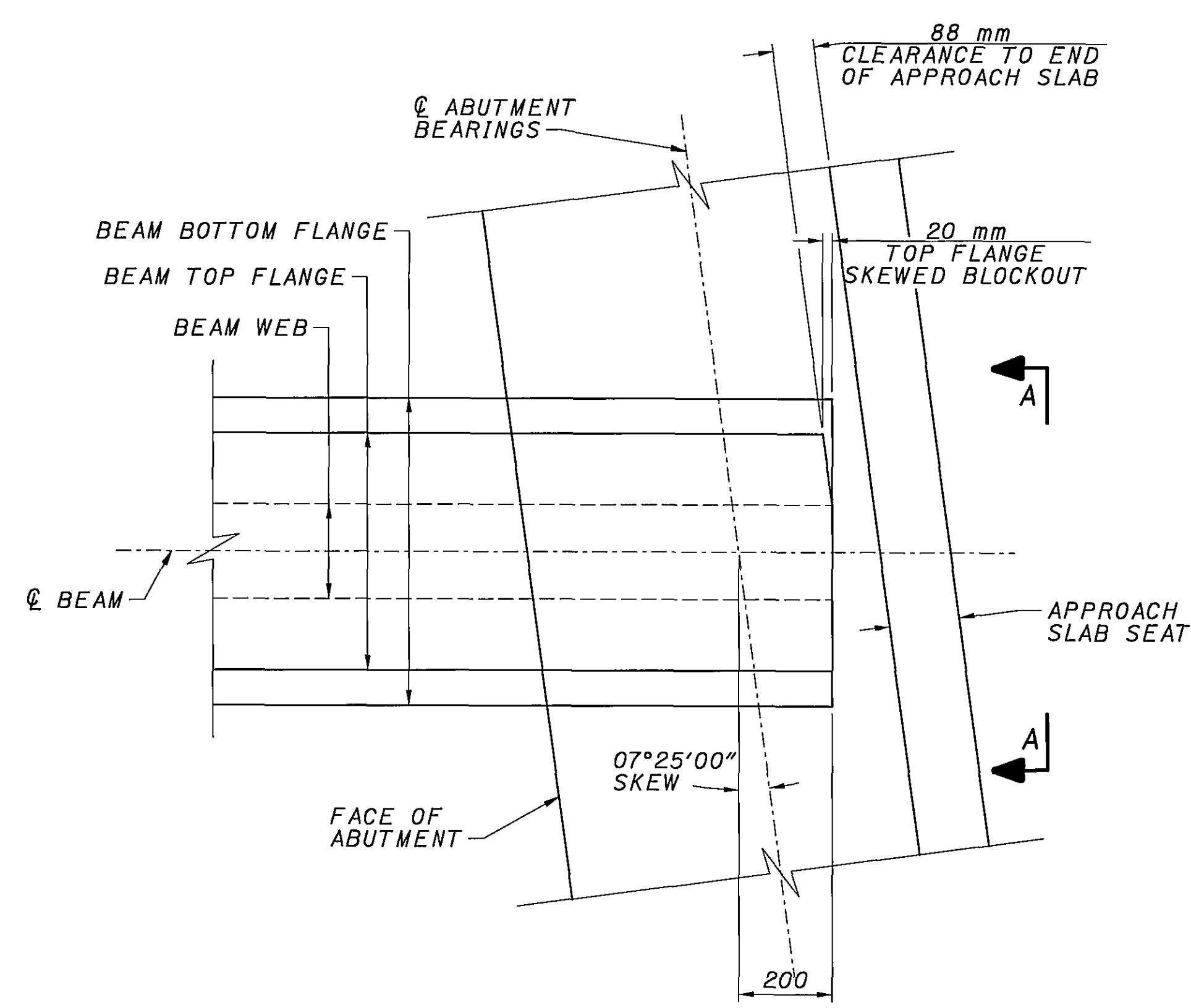
TYPE 2



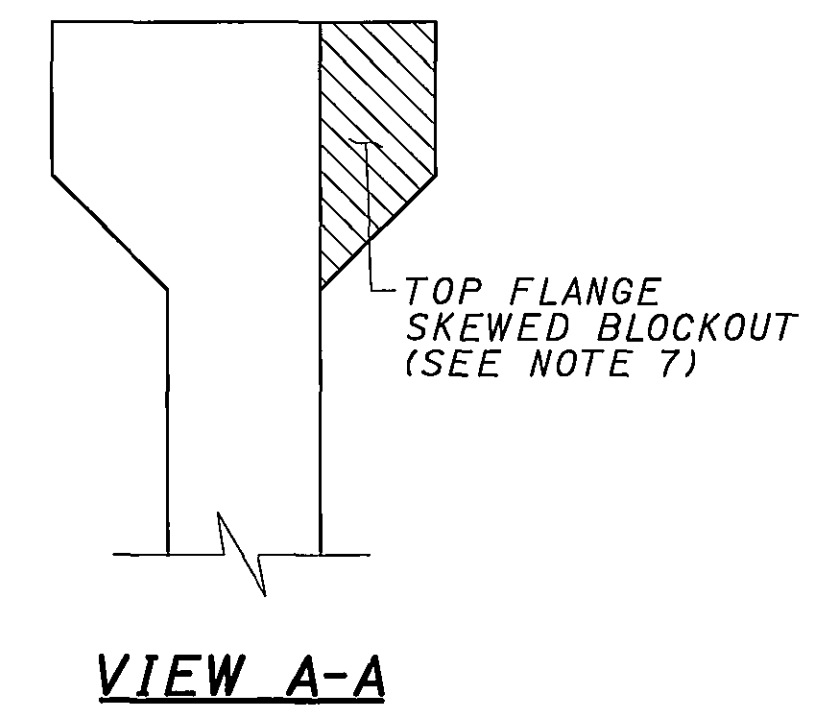
TYPE 4

BAR BENDING DIMENSIONS						
MARK	TYPE	DIMENSIONS (mm)				
		A	B	C	D	R
13M01	1	140	1473			57
13M02	2	597	159	216	216	
13M03	2	445	140	140	140	
13M04	4	159	298			

BEAM PRESTRESSING STRANDS, MATERIALS, AND REINFORCEMENT																					
BEAM MARK	NUMBER OF STRANDS PER ROW														TOTAL STRANDS	CONCRETE STRENGTHS		13M01 BARS REQ'D	13M02 BARS REQ'D	13M03 BARS REQ'D	13M04 BARS REQ'D
	END SECTION							MID SECTION								f'ci	f'c				
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	①	②	③	④	⑤							
BI-BI4	11	9	4	0	0	0	0	2	2	11	11	6	0	0	28	34.5 MPa	48.3 MPa	93	99	93	12



TYPICAL BEAM END DETAIL

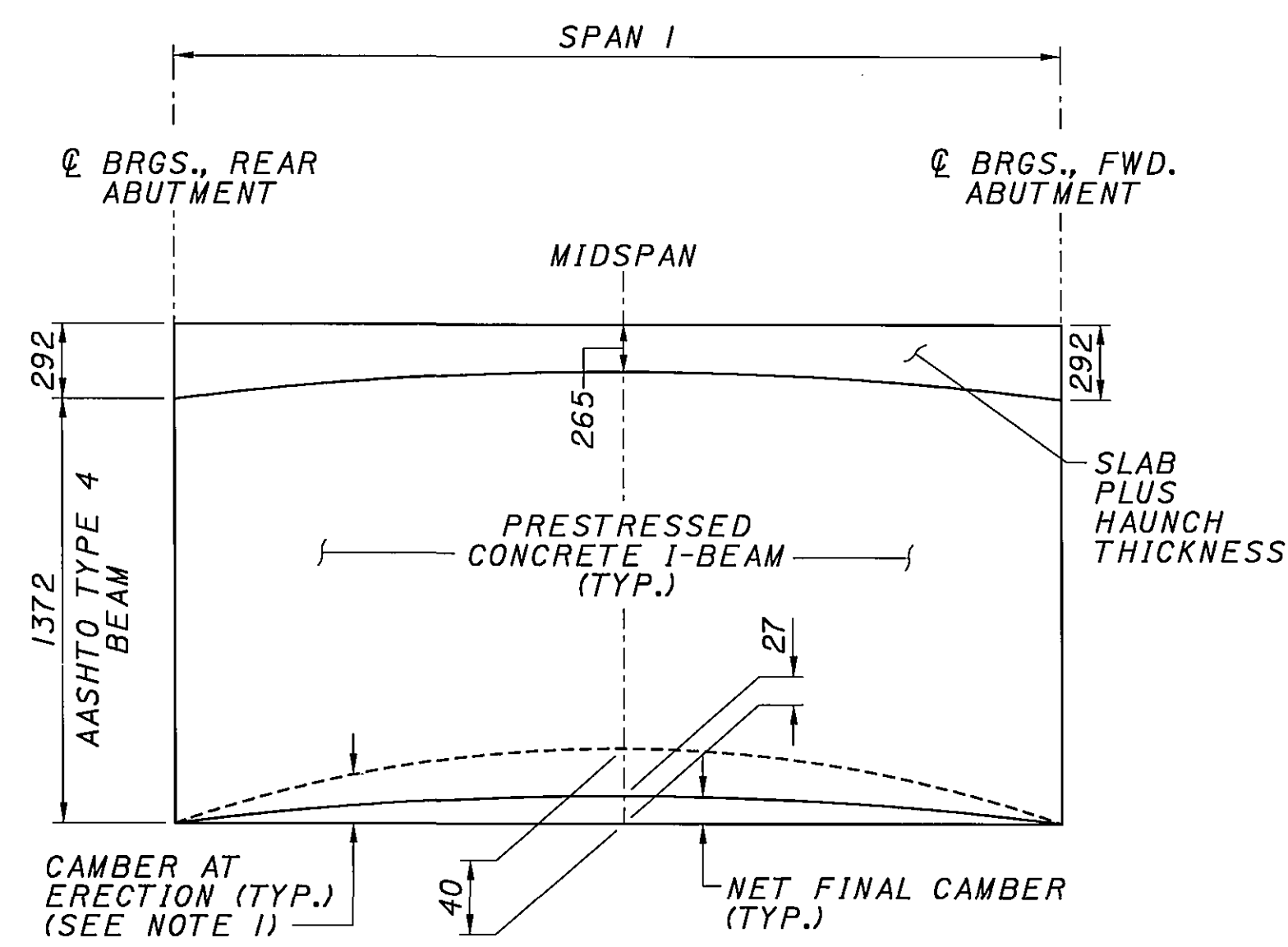
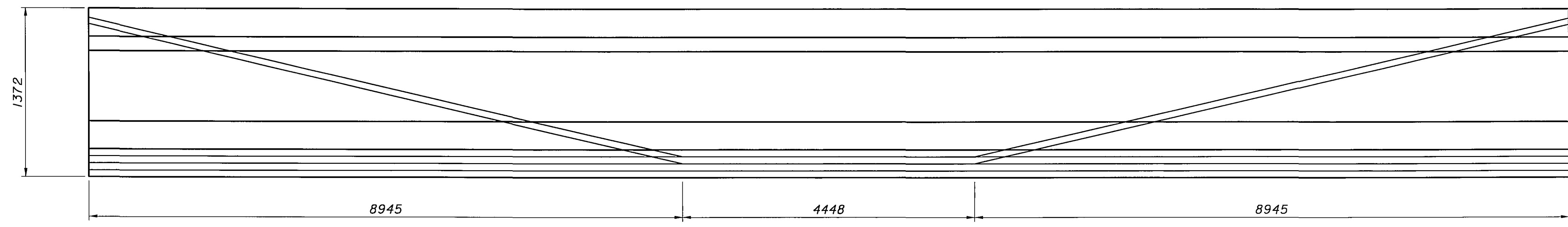
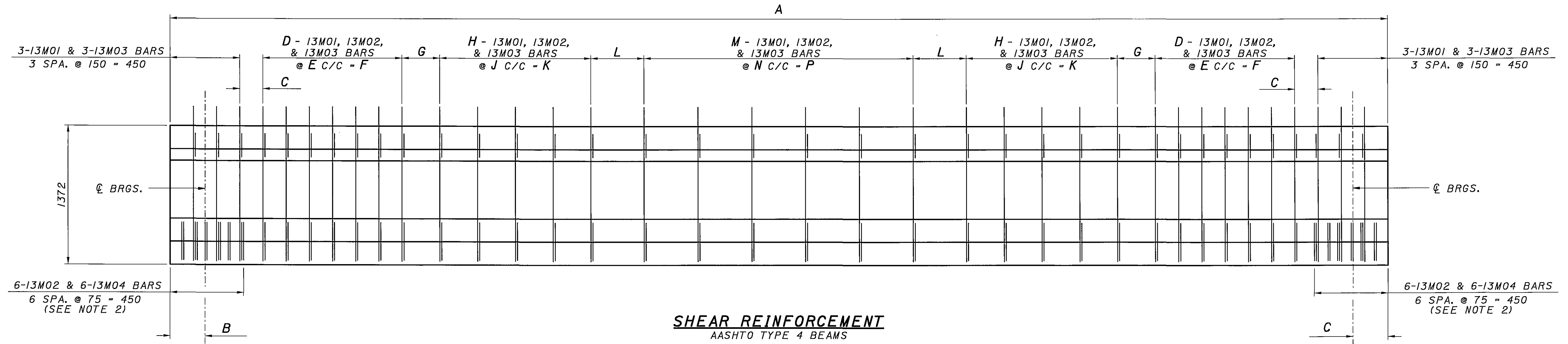


VIEW A-A

NOTES:

- FOR FABRICATION, CONSTRUCTION, AND MATERIAL REQUIREMENTS, PRESTRESSED CONCRETE I-BEAM DETAILS, DIAPHRAGM DETAILS, AND BEARING PLATE DETAILS, SEE STANDARD CONSTRUCTION DRAWING PSID-I-99.
- ALL PRESTRESSED CONCRETE MEMBERS SHALL BE AASHTO TYPE 4 I-BEAMS.
- ALL PRESTRESSING STRANDS SHALL BE GRADE 1860 MPa SEVEN WIRE, UNCOATED, LOW RELAXATION STRAND, WITH A NOMINAL AREA OF 98.7 SQUARE MILLIMETERS.
- NO DEBONDING OF STRANDS IS REQUIRED.
- TWO CONTINUOUS 13M BARS SHALL BE PROVIDED IN THE TOP FLANGE AS SHOWN FOR THE FULL LENGTH OF THE BEAMS. LAP LENGTHS FOR THE 13M LONGITUDINAL BARS SHALL BE 600 mm MINIMUM. LONGITUDINAL BAR LENGTHS AND LAP LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR.
- BEAM REINFORCING MARKS ON THE PROJECT PLANS CORRESPOND TO THE MARKS SHOWN ON STANDARD CONSTRUCTION DRAWING PSID-I-99 AS FOLLOWS:

C401	13M01
C402	13M02
C403	13M03
C405	13M04
- TO MAINTAIN CONCRETE COVER AT THE APPROACH SLAB SEAT, PROVIDE A BLOCKOUT OF THE TOP FLANGE AT THE ABUTMENT END OF EACH BEAM, PARALLEL TO THE ABUTMENT SKEW. BEAM END ANCHORAGE REINFORCEMENT AND SPACING SHOWN ON STANDARD CONSTRUCTION DRAWING PSID-I-99, SHEET 2 OF 8 SHALL NOT BE ALTERED.
- ALL MILD REINFORCING STEEL SHALL BE EPOXY COATED, GRADE 420.



BEAM DIMENSIONS AND SHEAR REINFORCEMENT															
BEAM MARK	A	B	C	D	E	F	G	H	J	K	L	M	N	P	APPROX. BEAM WEIGHT (kg)
BI-B14	22 338	200	150	11	150	1500	225	11	225	2250	294	43	300	12 600	27,325

- NOTES:**
- CAMBER VALUE AT ERECTION CORRESPONDS TO A TIME 60 DAYS AFTER RELEASE OF PRESTRESS.
 - FOR ANCHORAGE REINFORCEMENT, SEE STANDARD CONSTRUCTION DRAWING PSID-I-99, SHEET 2 OF 8.

DESIGN AGENCY
CH2M HILL
 ONE DAYTON CENTER, SUITE 1100
 ONE SOUTH MAIN STREET
 DAYTON, OH 45402-1828

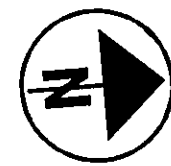
DESIGNED: JTC
 CHECKED: RV
 DRAWN: DGS
 REVISION:
 REVIEWED: MRM
 DATE: 09/03
 STRUCTURE FILE NUMBER: 570907 5/5709083

PRESTRESSED I-BEAM ELEVATIONS
 BRIDGE NO. MOT-75-32689 L&R
 I-75 MAINLINE OVER RAMP C

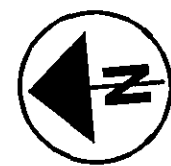
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19/34

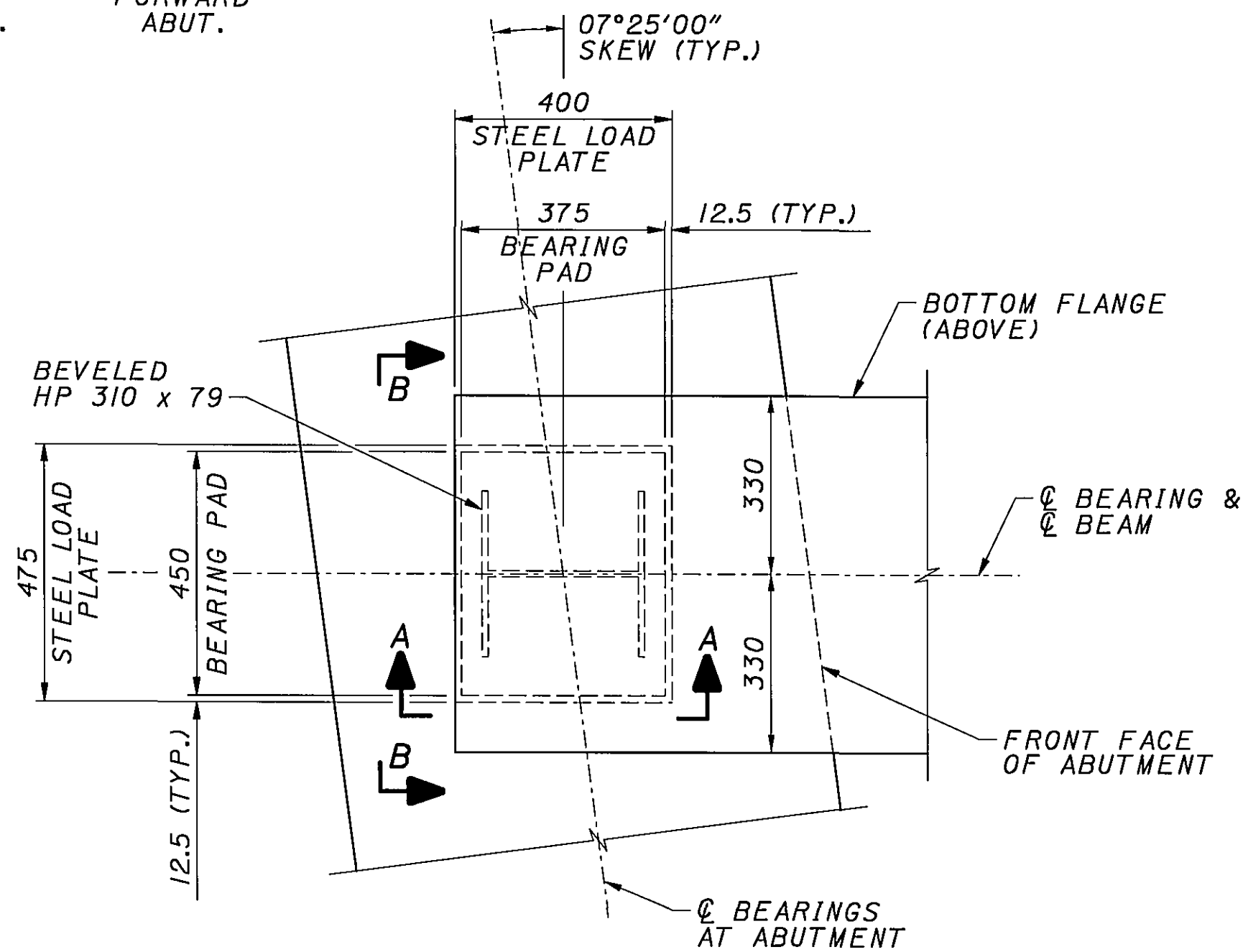
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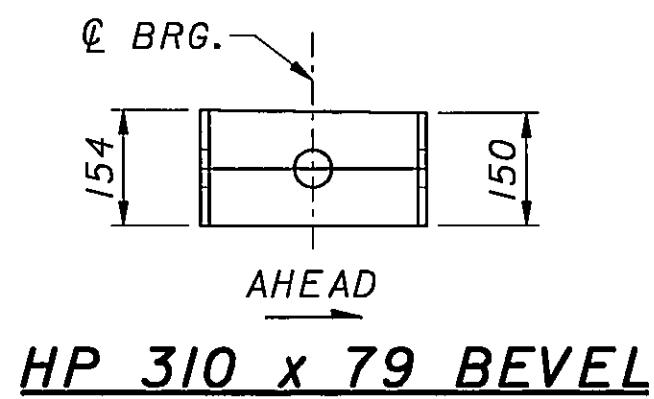
REAR ABUT.



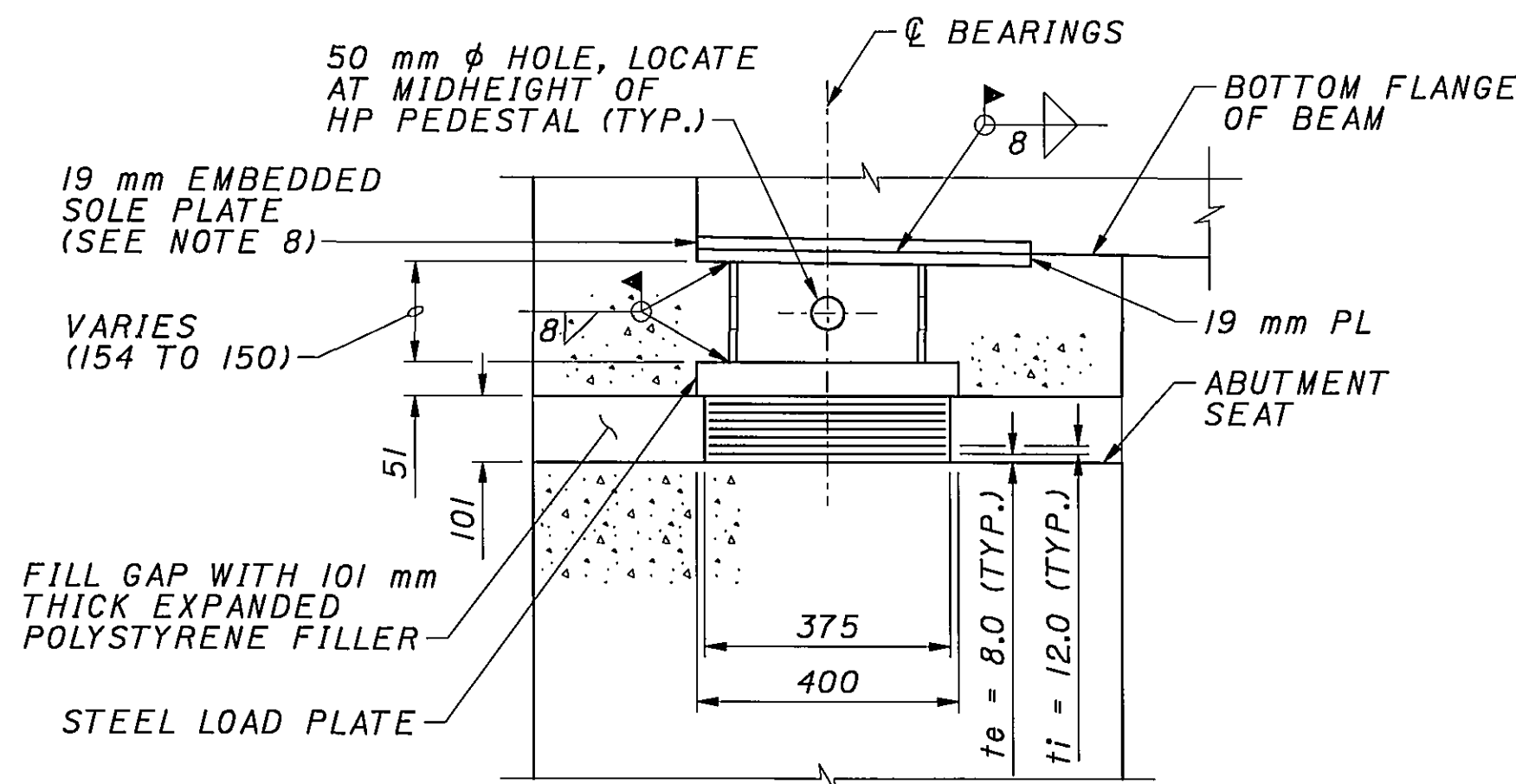
FORWARD ABUT.



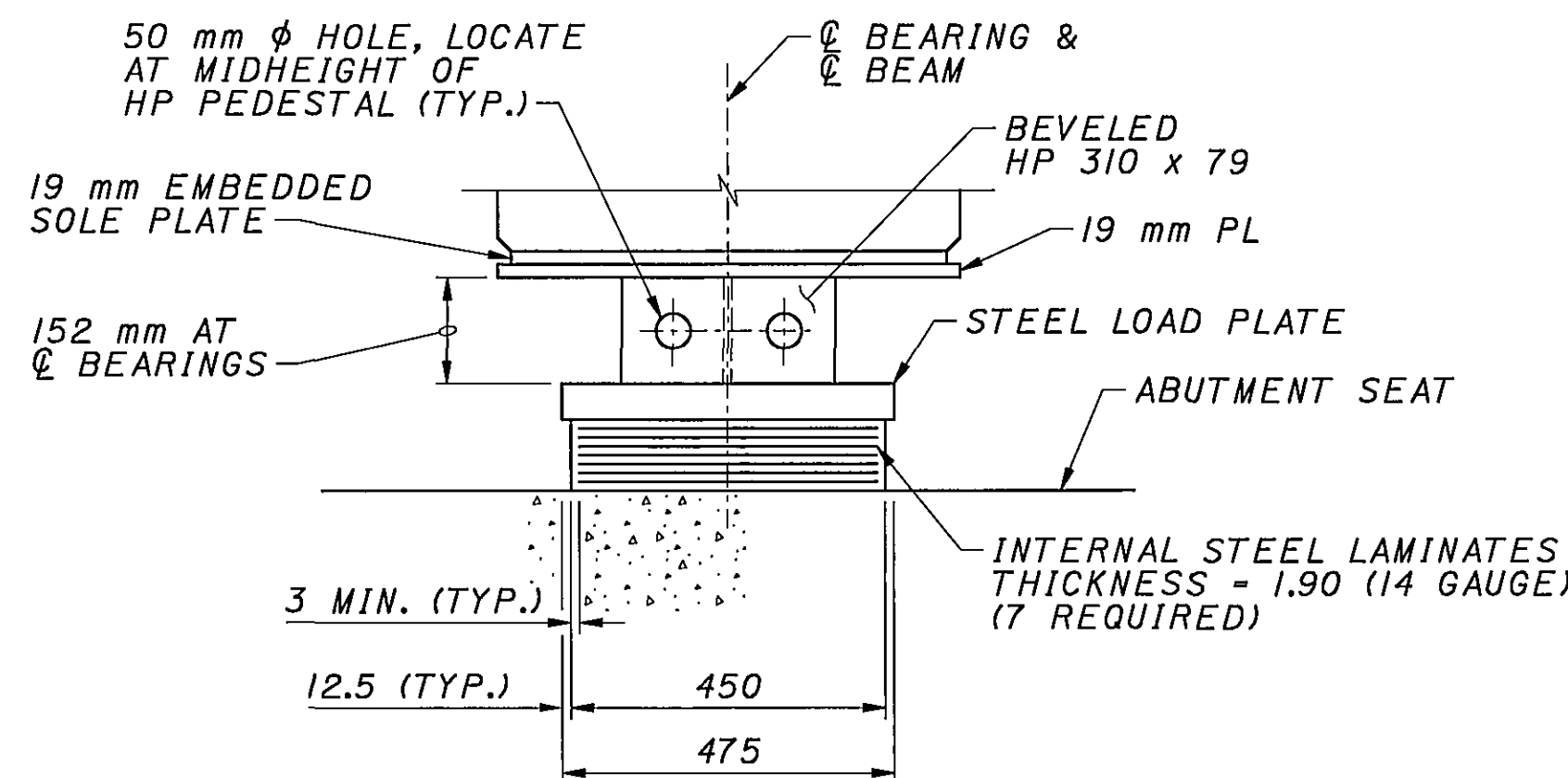
PLAN



HP 310 x 79 BEVEL



ELEVATION A-A



ELEVATION B-B

LAMINATED ELASTOMERIC EXPANSION BEARING DETAILS

REAR AND FORWARD ABUTMENTS

BEARING NOTES:

- ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARINGS, DIVISION II, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 OF SECTION 14, BEARINGS, DIVISION I, DESIGN. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.
- LOAD PLATES: THE STEEL LOAD PLATE SHALL MEET THE REQUIREMENTS OF STRUCTURAL STEEL ASTM A709.
- THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
- WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 150° C AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- BEARING REPOSITIONING: IF THE BEAMS ARE ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 26° C OR LOWER THAN 4° C AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 15° C (±) 5° C, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 15° C (±) 5° C.
- BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS AS DETAILED. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATES (NEOPRENE), AS PER PLAN.

 REAR ABUTMENT (BEAMS B1 THRU B14):
 BEARING PAD: 375 x 101 x 450
 LOAD PLATE: 400 x 51 x 475

 FWD. ABUTMENT (BEAMS B1 THRU B14):
 BEARING PAD: 375 x 101 x 450
 LOAD PLATE: 400 x 51 x 475
- THE HP 310 x 79 BEARING PEDESTALS SHALL MEET THE REQUIREMENTS OF STRUCTURAL STEEL ASTM A709 GRADE 50 AND SHALL BE GALVANIZED IN ACCORDANCE WITH 711.02. PAYMENT FOR THE HP 310 x 79 BEARING PEDESTAL SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 515, DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4, AS PER PLAN.
- FOR ADDITIONAL BEARING NOTES AND DETAILS, SEE STD. DWG. PSID-I-99, SHEET 4 OF 8.
- SHOP PRIME COAT APPLICATION: STEEL SURFACES WHICH ARE EMBEDDED IN CONCRETE INCLUDING THE STEEL LOAD PLATES, SHALL RECEIVE A MIST OF SHOP PRIME COAT, AS SPECIFIED IN CMS SECTION 513.
- BEARINGS SHALL BE DESIGNED FOR THE FOLLOWING LOADS:

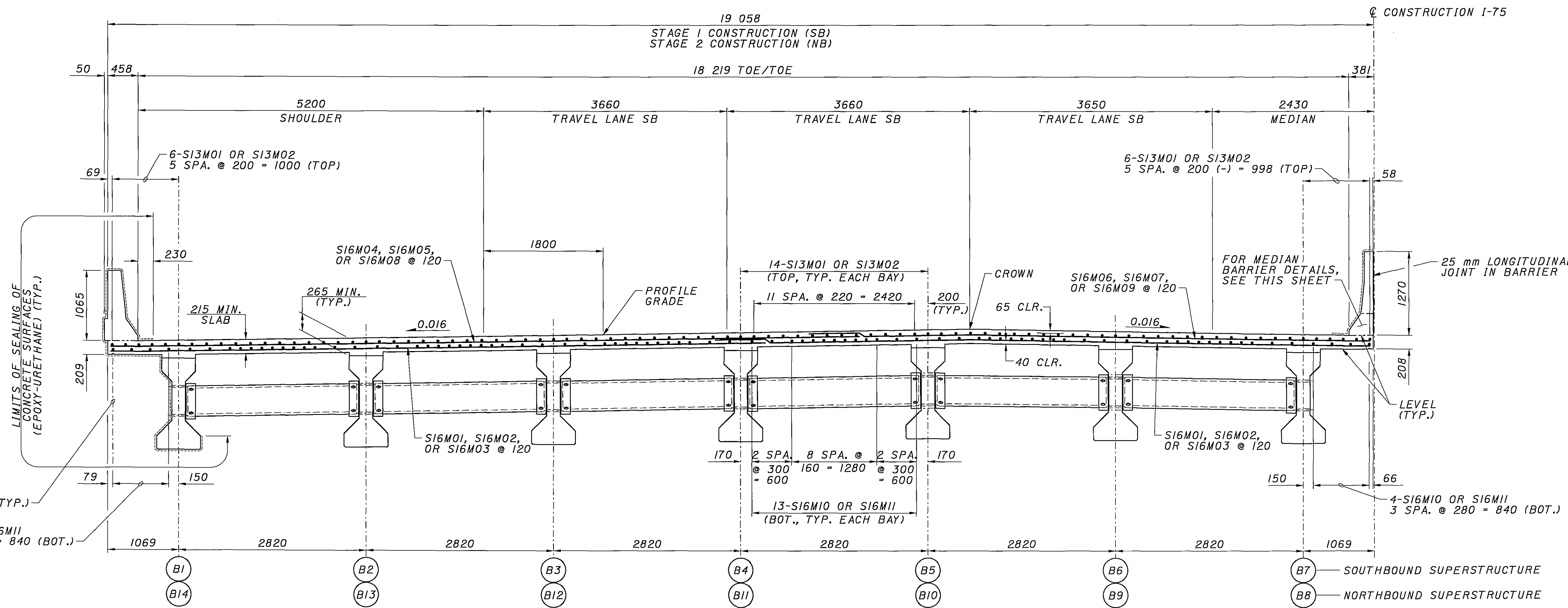
	REAR ABUTMENT	FWD. ABUTMENT
MAX. DEAD LOAD =	567 kN	567 kN
MAX. LIVE LOAD =	293 kN	293 kN
TOTAL DESIGN LOAD =	860 kN	860 kN

LEGEND:

- te = THICKNESS OF EXTERNAL ELASTOMER LAYER
- ti = THICKNESS OF INTERNAL ELASTOMER LAYER

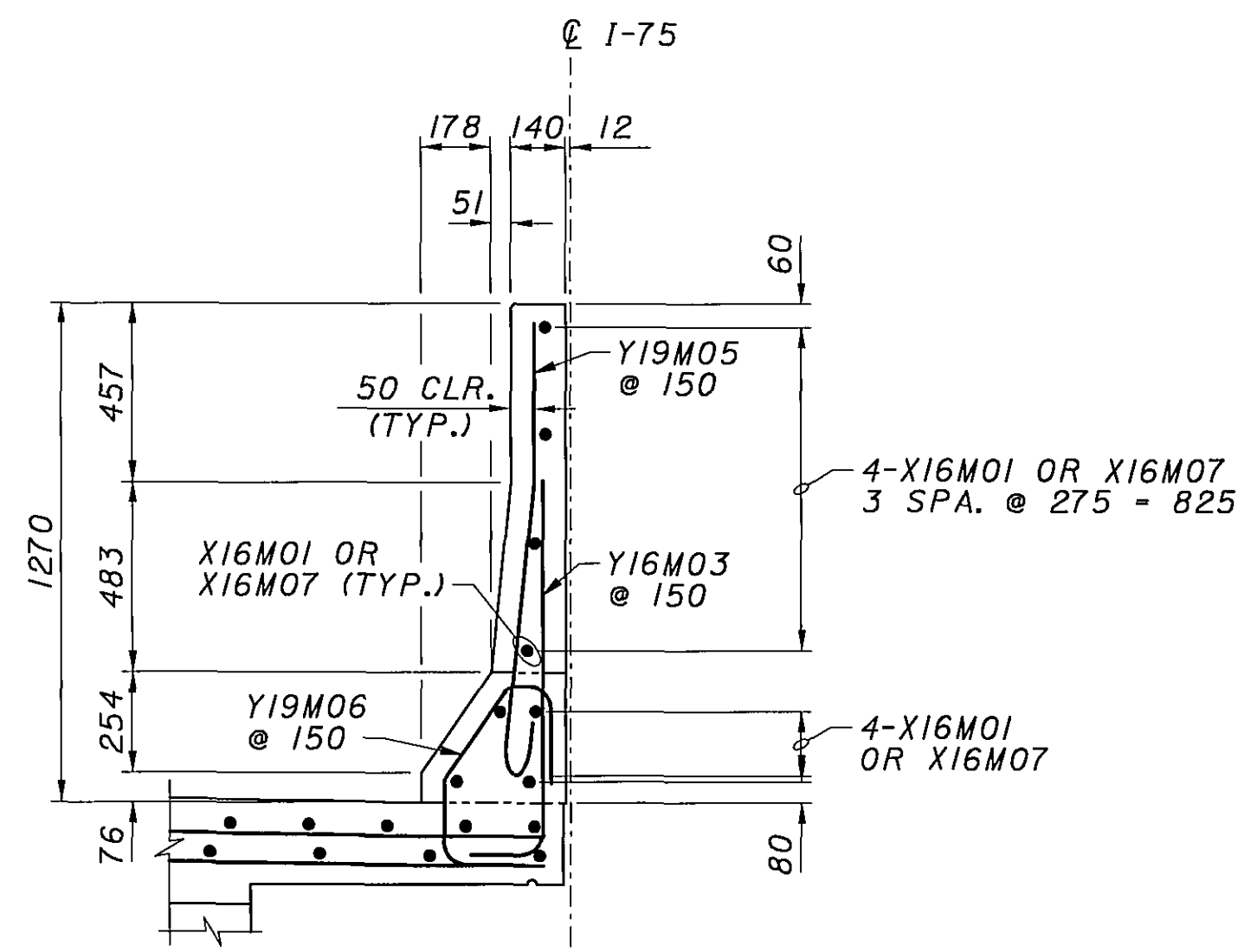
NOTES:

- FOR ABUTMENT SEAT ELEVATIONS AT THE CENTERLINE OF BEARINGS, SEE SHEETS 7, 8, 12 & 13.
- FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEETS 25 - 28.

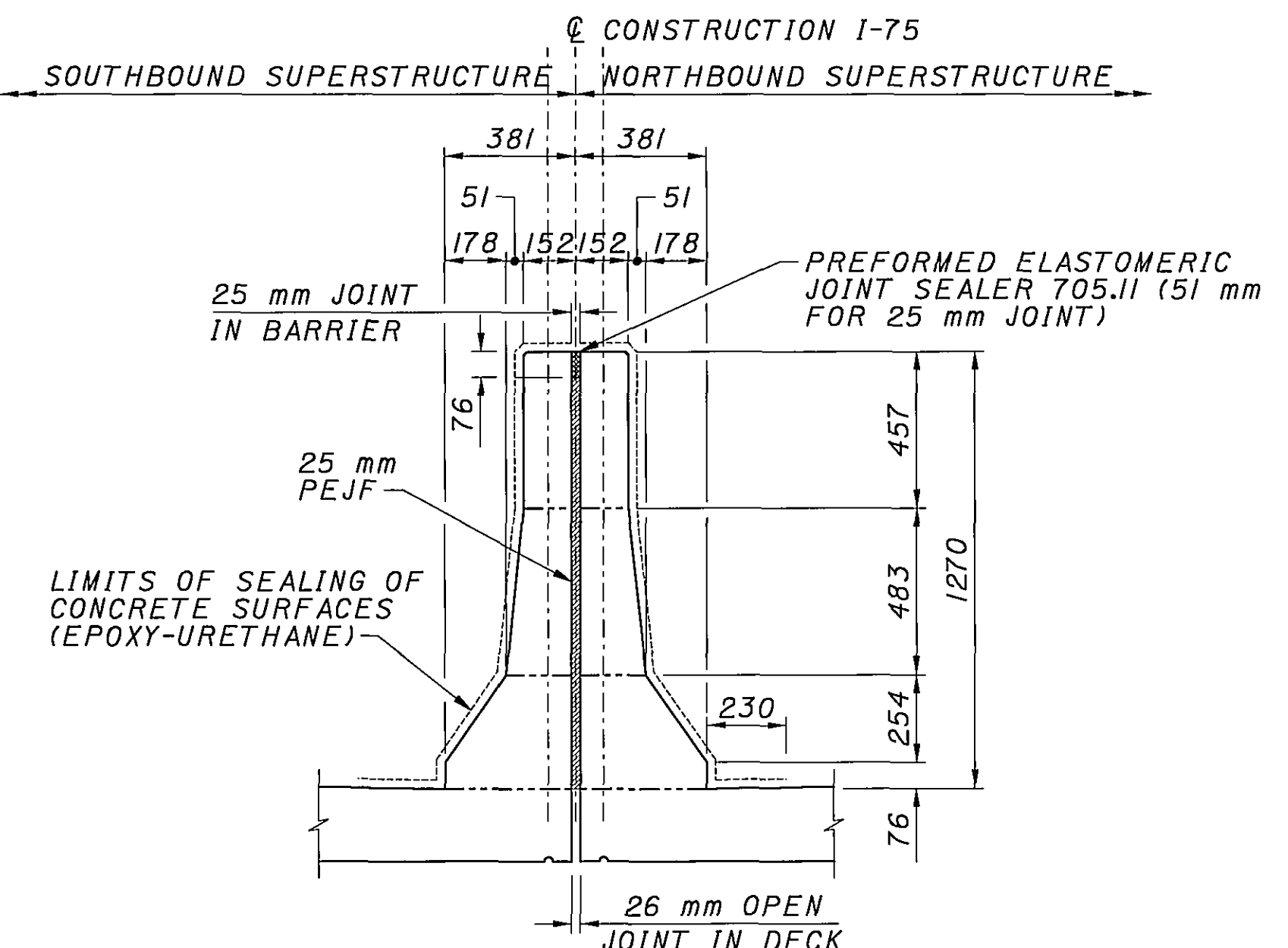


TYPICAL TRANSVERSE SECTION

(UNLESS OTHERWISE NOTED, SOUTHBOUND SUPERSTRUCTURE SHOWN, NORTHBOUND SUPERSTRUCTURE SIMILAR BUT OPPOSITE HAND)



MEDIAN BARRIER REINFORCING DETAIL



MEDIAN BARRIER DETAIL

LEGEND:

(B#) - BEAM DESIGNATION

NOTES:

1. DECK SLAB THICKNESS FOR CONCRETE QUANTITY: THE TOPPING THICKNESSES SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP OF THE TOP FLANGE ALONG THE CENTERLINE OF THE I-BEAM ARE THEORETICAL DIMENSIONS. THE HAUNCH DEPTH IS THE TOPPING THICKNESS MINUS THE DESIGN SLAB THICKNESS. PAYMENT FOR SUPERSTRUCTURE CONCRETE IS BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE THEORETICAL HAUNCH DEPTHS AT MID-SPAN AND AT EACH BEAM BEARING EVEN THOUGH DEVIATION FROM THE DIMENSIONS SHOWN MAY BE NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. ONCE ALL BEAMS ARE SET IN THEIR FINAL POSITION, THE ACTUAL CAMBER FOR EACH MEMBER WILL BE THE TOP OF BEAM ELEVATION AT MID-SPAN MINUS THE AVERAGE TOP OF BEAM ELEVATION AT EACH BEARING. THE ACTUAL TOPPING THICKNESS AT MID-SPAN WILL BE THE THEORETICAL DIMENSION MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER. FOR CAMBER DIAGRAM, SEE SHEET 19.
2. FOR SLAB PLAN, SEE SHEETS 22 & 23.
3. FOR PARAPET DETAILS, SEE SHEETS 29 & 30.

DESIGN AGENCY
CH2MHILL
ONE DAYTON CENTRE SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OH 45402-1828

DATE 09/03
REVIEWED MRM
DRAWN DGS
DESIGNED DGS
CHECKED RV

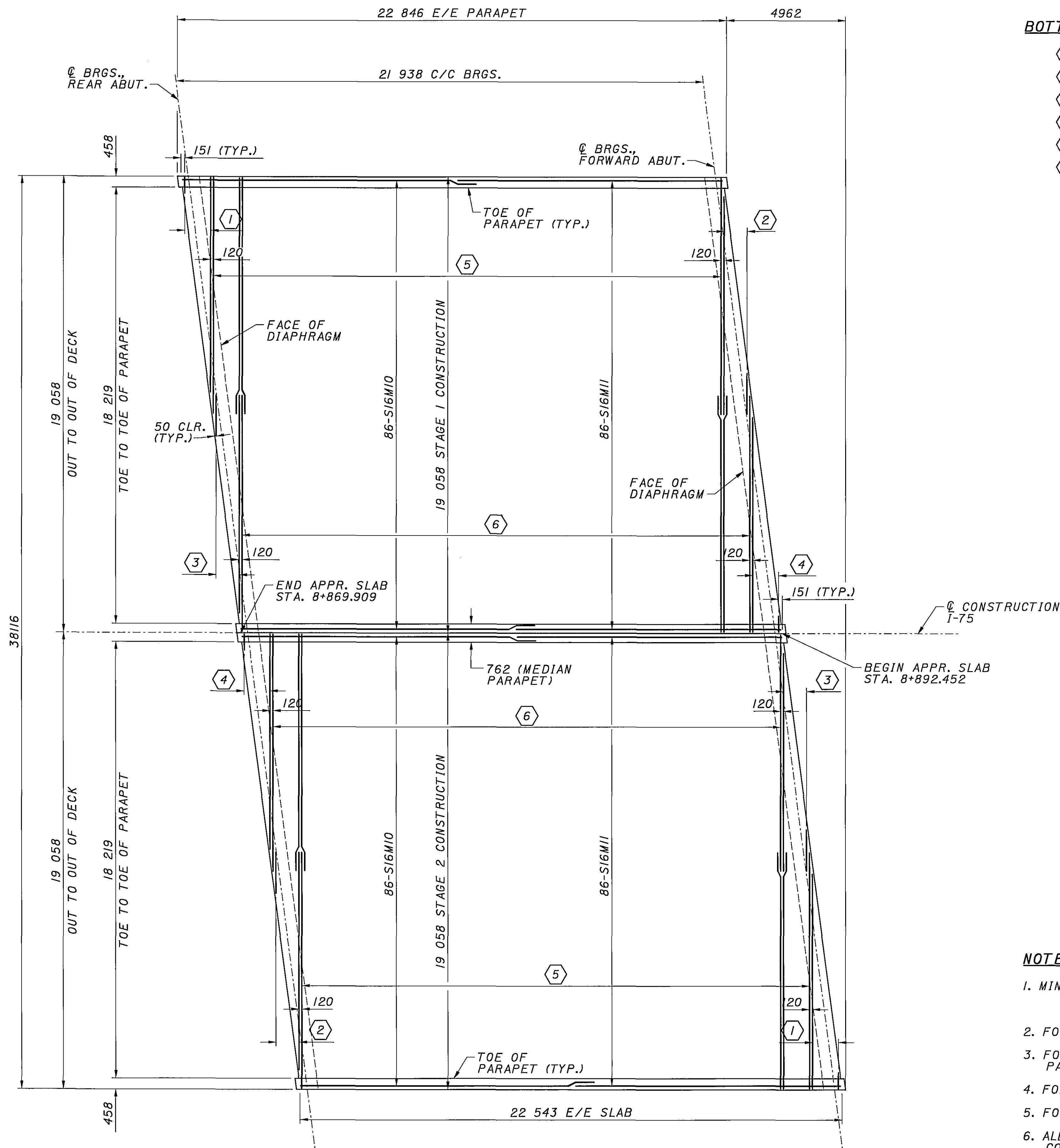
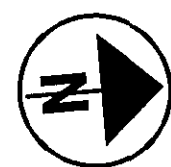
STRUCTURE FILE NUMBER 5709075/5709083

TYPICAL TRANSVERSE SECTION
BRIDGE NO. MOT-75-52689 L&R
I-75 MAINLINE OVER RAMP G

MOT-70-22.890

21/34

1069
1245



BOTTOM SLAB REINFORCEMENT

- ① 10 - S16M01 SERIES @ 120
- ② 9 - S16M02 SERIES @ 120
- ③ 9 - S16M02 SERIES @ 120
- ④ 10 - S16M01 SERIES @ 120
- ⑤ 177 - S16M03 @ 120
- ⑥ 177 - S16M03 @ 120

PLAN
BOTTOM SLAB REINFORCEMENT

NOTES:

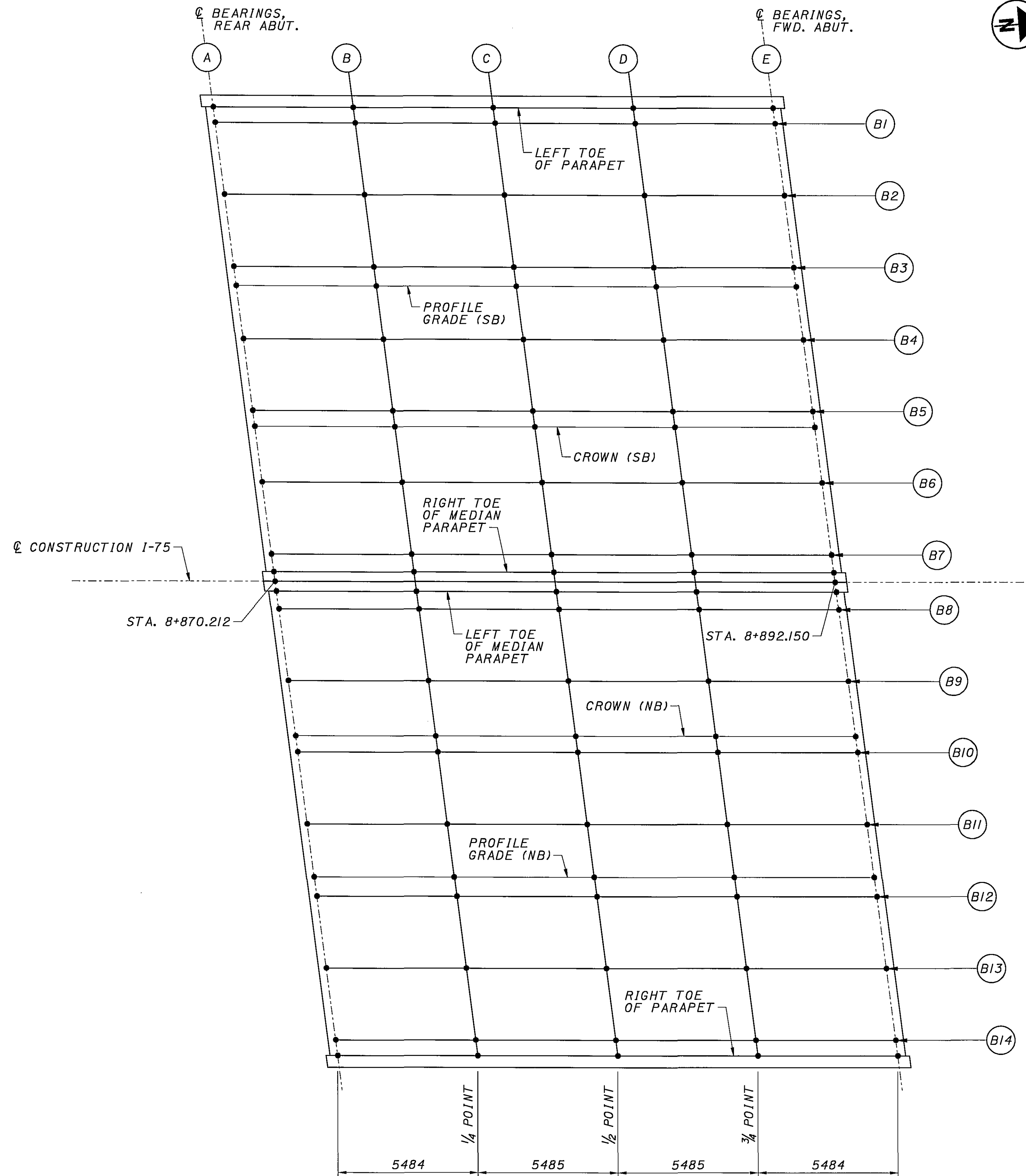
1. MINIMUM REINFORCING STEEL SPLICE LENGTHS:
13M BARS = 600 mm
16M BARS = 750 mm
2. FOR STAGED CONSTRUCTION PLANS, SEE SHEET 5.
3. FOR TYPICAL TRANSVERSE SECTION AND MEDIAN PARAPET DETAILS, SEE SHEET 21.
4. FOR PARAPET ELEVATIONS, SEE SHEET 29.
5. FOR PARAPET DETAILS, SEE SHEET 30.
6. ALL REINFORCING STEEL SHALL BE EPOXY COATED CONFORMING TO ITEM 509. BENT OR CUT STEEL SHALL BE COATED OR PATCHED AND TREATED WITH EPOXY MATERIAL AS SPECIFIED IN CMS SECTION 709.00. PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 509, EPOXY COATED REINFORCING STEEL.

DESIGN AGENCY
CH2MHILL
ONE DAYTON CENTRE SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OH 45402-1828

DESIGNED	DGS	CHECKED	RV
DRAWN	DGS	REVISOR	
REVIEWED	MRM	STRUCTURE FILE NUMBER	5709075/5709083
DATE	09/03		

SLAB PLAN - I
BRIDGE NO. MOT-75-32689 L&R
I-75 MAINLINE OVER RAMP G

MOT-70-22.890



SCREED ELEVATION LAYOUT

SCREED ELEVATIONS - SOUTHBOUND SUPERSTRUCTURE						
LOCATION		A	B	C	D	E
LEFT TOE OF PARAPET	STA.	8+867.791	8+873.275	8+878.760	8+884.244	8+889.729
	ELEV.	270.995	270.931	270.862	270.786	270.706
BEAM B1	STA.	8+867.870	8+873.355	8+878.839	8+884.324	8+889.808
	ELEV.	271.004	270.939	270.871	270.795	270.714
BEAM B2	STA.	8+868.237	8+873.722	8+879.206	8+884.691	8+890.175
	ELEV.	271.044	270.981	270.912	270.836	270.755
BEAM B3	STA.	8+868.605	8+874.089	8+879.574	8+885.058	8+890.543
	ELEV.	271.084	271.021	270.953	270.876	270.795
PROFILE GRADE	STA.	8+868.702	8+874.187	8+879.671	8+885.156	8+890.640
	ELEV.	271.095	271.032	270.963	270.887	270.806
BEAM B4	STA.	8+868.972	8+874.456	8+879.941	8+885.425	8+890.910
	ELEV.	271.125	271.061	270.993	270.916	270.835
BEAM B5	STA.	8+869.339	8+874.823	8+880.308	8+885.792	8+891.277
	ELEV.	271.165	271.102	271.033	270.957	270.875
CROWN	STA.	8+869.421	8+874.905	8+880.390	8+885.874	8+891.359
	ELEV.	271.174	271.111	271.042	270.966	270.884
BEAM B6	STA.	8+869.706	8+875.190	8+880.675	8+886.159	8+891.644
	ELEV.	271.135	271.072	271.003	270.927	270.846
BEAM B7	STA.	8+870.073	8+875.557	8+881.042	8+886.526	8+892.011
	ELEV.	271.085	271.021	270.952	270.876	270.796
RIGHT TOE OF MEDIAN PARAPET	STA.	8+870.162	8+875.647	8+881.131	8+886.616	8+892.100
	ELEV.	271.073	271.009	270.940	270.864	270.783

SCREED ELEVATIONS - NORTHBOUND SUPERSTRUCTURE						
LOCATION		A	B	C	D	E
LEFT TOE OF MEDIAN PARAPET	STA.	8+870.262	8+875.746	8+881.231	8+886.715	8+892.200
	ELEV.	271.072	271.007	270.938	270.862	270.782
BEAM B8	STA.	8+870.351	8+875.836	8+881.320	8+886.805	8+892.289
	ELEV.	271.082	271.017	270.948	270.872	270.792
BEAM B9	STA.	8+870.718	8+876.203	8+881.687	8+887.172	8+892.656
	ELEV.	271.122	271.058	270.990	270.914	270.832
CROWN	STA.	8+871.003	8+876.488	8+881.972	8+887.457	8+892.941
	ELEV.	271.153	271.090	271.021	270.945	270.863
BEAM B10	STA.	8+871.085	8+876.570	8+882.054	8+887.539	8+893.023
	ELEV.	271.142	271.079	271.010	270.934	270.852
BEAM B11	STA.	8+871.452	8+876.937	8+882.421	8+887.906	8+893.390
	ELEV.	271.092	271.029	270.960	270.884	270.802
PROFILE GRADE	STA.	8+871.722	8+877.207	8+882.691	8+888.176	8+893.660
	ELEV.	271.055	270.992	270.923	270.847	270.766
BEAM B12	STA.	8+871.819	8+877.304	8+882.788	8+888.273	8+893.757
	ELEV.	271.042	270.979	270.910	270.834	270.752
BEAM B13	STA.	8+872.187	8+877.671	8+883.156	8+888.640	8+894.125
	ELEV.	270.992	270.929	270.860	270.784	270.702
BEAM B14	STA.	8+872.554	8+878.038	8+883.523	8+889.007	8+894.492
	ELEV.	270.942	270.878	270.809	270.733	270.652
RIGHT TOE OF PARAPET	STA.	8+872.633	8+878.118	8+883.602	8+889.087	8+894.571
	ELEV.	270.931	270.867	270.798	270.722	270.642

NOTES:

1. SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. SCREED LOCATIONS 'B1' THROUGH 'B14' ARE LOCATED DIRECTLY ABOVE CORRESPONDING BEAM CENTERLINES. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.
2. FOR TYPICAL TRANSVERSE SECTION, SEE SHEET 21.
3. FOR SLAB PLAN, SEE SHEETS 22 & 23.

LEGEND:

- (B#) - BEAM DESIGNATION
- (X) - SCREED LOCATION

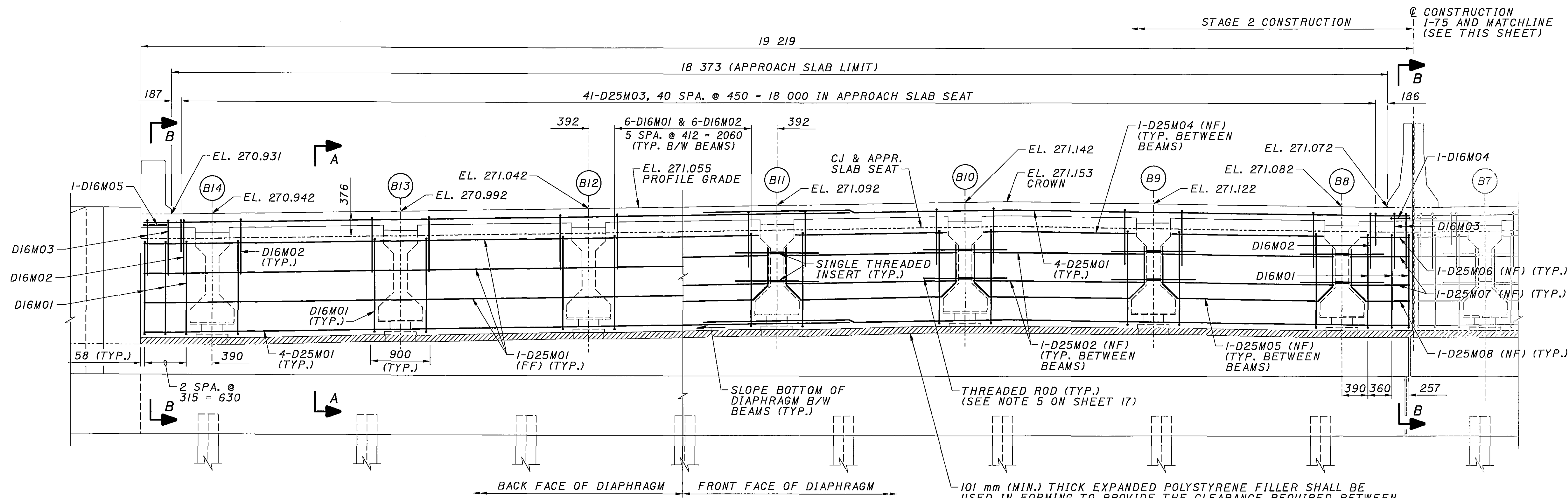
DESIGN AGENCY
CH2M HILL
 ONE DAYTON CENTRE SUITE 1100
 ONE SOUTH MAIN STREET
 DAYTON, OH 45402-1828

DATE
 09/03
 REVISION
 MFM
 STRUCTURE FILE NUMBER
 5709075/5709083

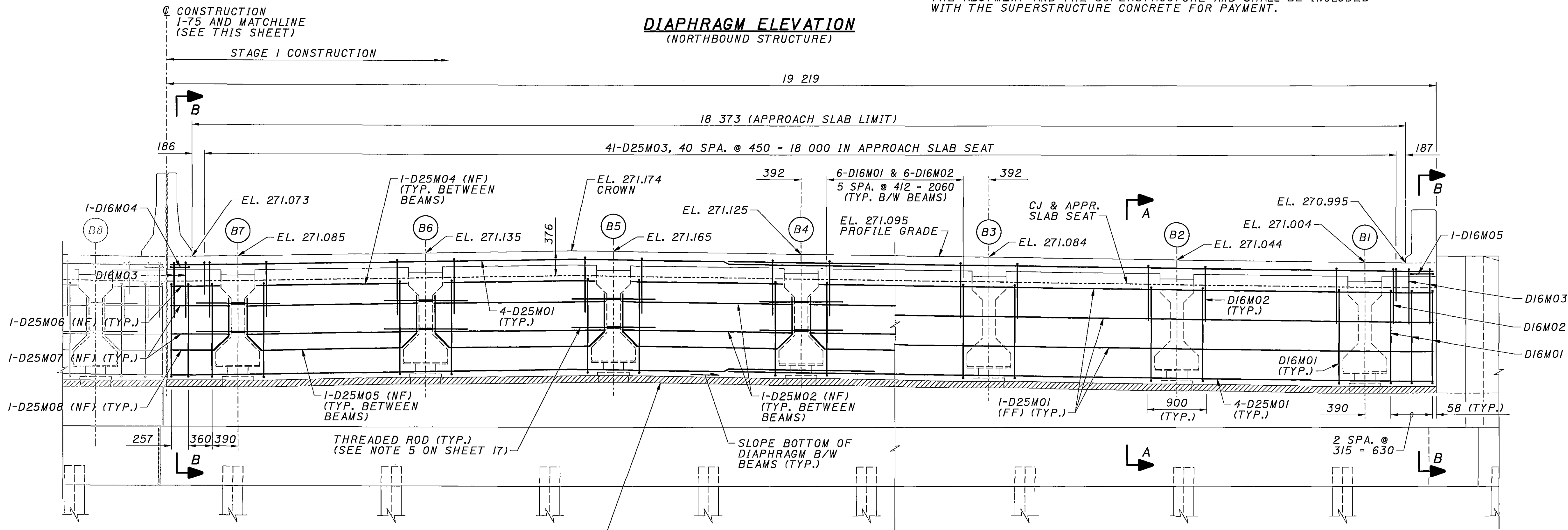
DRAWN
 JTC
 CHECKED
 RV

SCREED ELEVATIONS
 BRIDGE NO. MOT-75-32689 L&R
 I-75 MAINLINE OVER RAMP G

MOT-70-22-890



DIAPHRAGM ELEVATION
(NORTHBOUND STRUCTURE)



DIAPHRAGM ELEVATION
(SOUTHBOUND STRUCTURE)

NOTES:
1. FOR REAR ABUTMENT DIAPHRAGM NOTES, SEE SHEET 26.

DESIGN AGENCY
CH2MHILL
ONE DAYTON CENTRE SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OH 45402-1828

DATE 09/03
REVIEWED MRM
STRUCTURE FILE NUMBER 570907 5/5709083

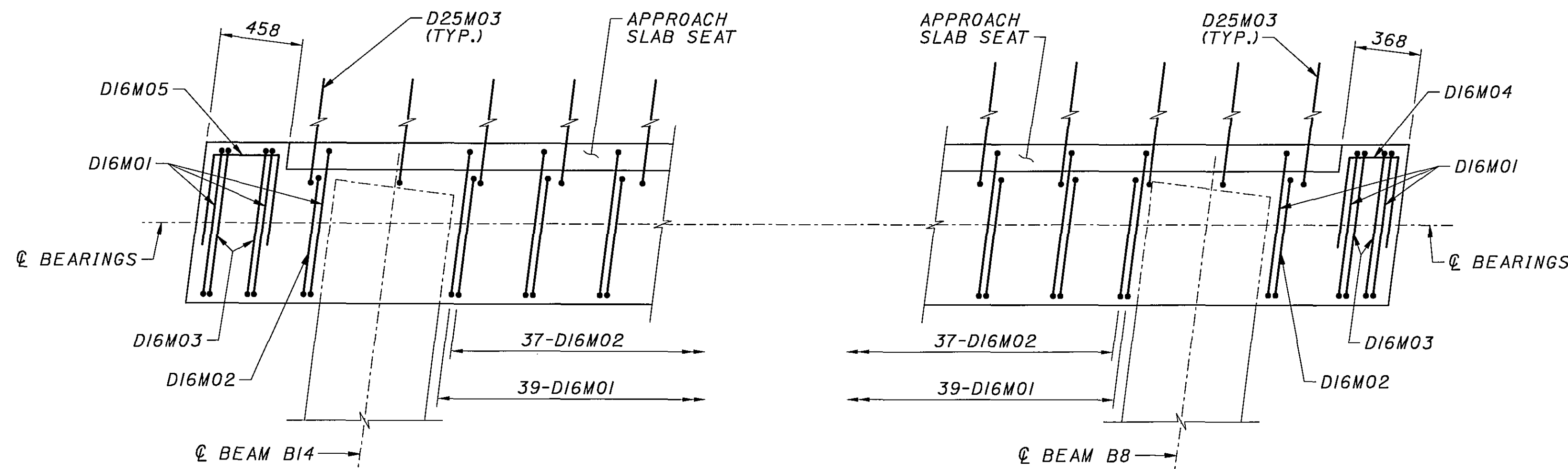
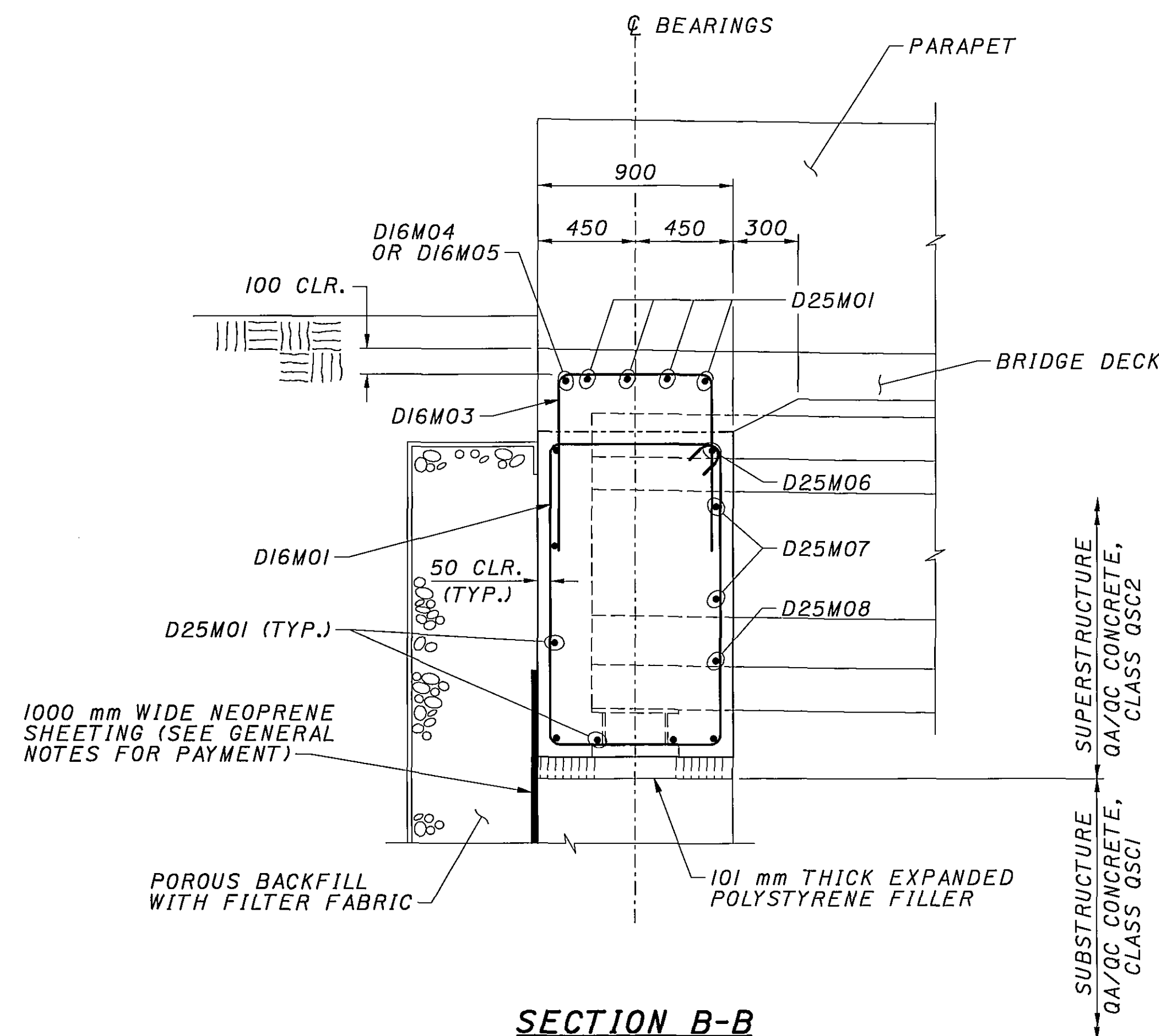
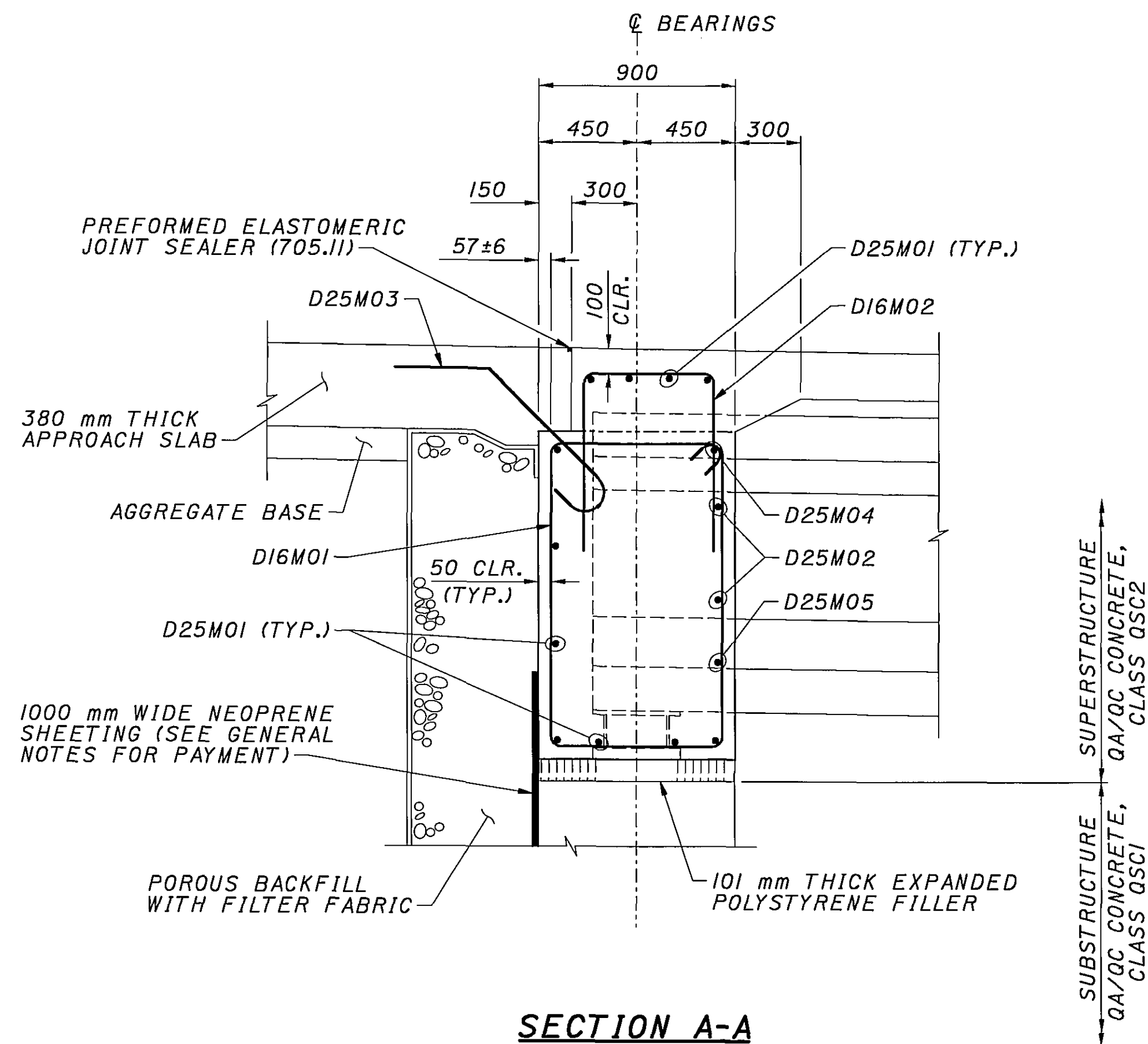
DESIGNED JTC
CHECKED RV

REAR ABUTMENT DIAPHRAGM ELEVATION
BRIDGE NO. MOT-75-32689 L&R
I-75 MAINLINE OVER RAMP G

MOT-70-22.890

25/34

1073
1245



(NORTHBOUND STRUCTURE SHOWN
SOUTHBOUND SIMILAR BUT OPPOSITE HAND)



NOTES:

- DIAPHRAGM ELEVATION IS SHOWN ALONG THE CENTERLINE OF BEARINGS.
- REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED, LAPS SHALL BE AS FOLLOWS:
NO. 25M BARS = 2200 mm MIN.
FOR REINFORCING STEEL LIST, SEE SHEET 33.
- FOR REAR ABUTMENT PLAN AND DETAILS, INCLUDING BRIDGE SEAT ELEVATIONS, SEE SHEETS 7 - II.
- FOR BEARING DETAILS, SEE SHEET 20.
- ABUTMENT DIAPHRAGM, PRESTRESSED I-BEAM SUPERSTRUCTURE: PLACE THE CONCRETE ENCASING THE PRESTRESSED I-BEAM STRUCTURAL MEMBERS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE.
- 25 mm PEJF LOCATED ON VERTICAL END FACE OF APPROACH SLAB SEAT SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE METER FOR ITEM 526, REINFORCED CONCRETE APPROACH SLAB (375 mm), AS PER PLAN.

DESIGN AGENCY
CH2MHILL
ONE DAYTON CENTRE, SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OH 45402-1828

DATE 09/03
REVIEWED MRW
STRUCTURE FILE NUMBER 5709075/5709053

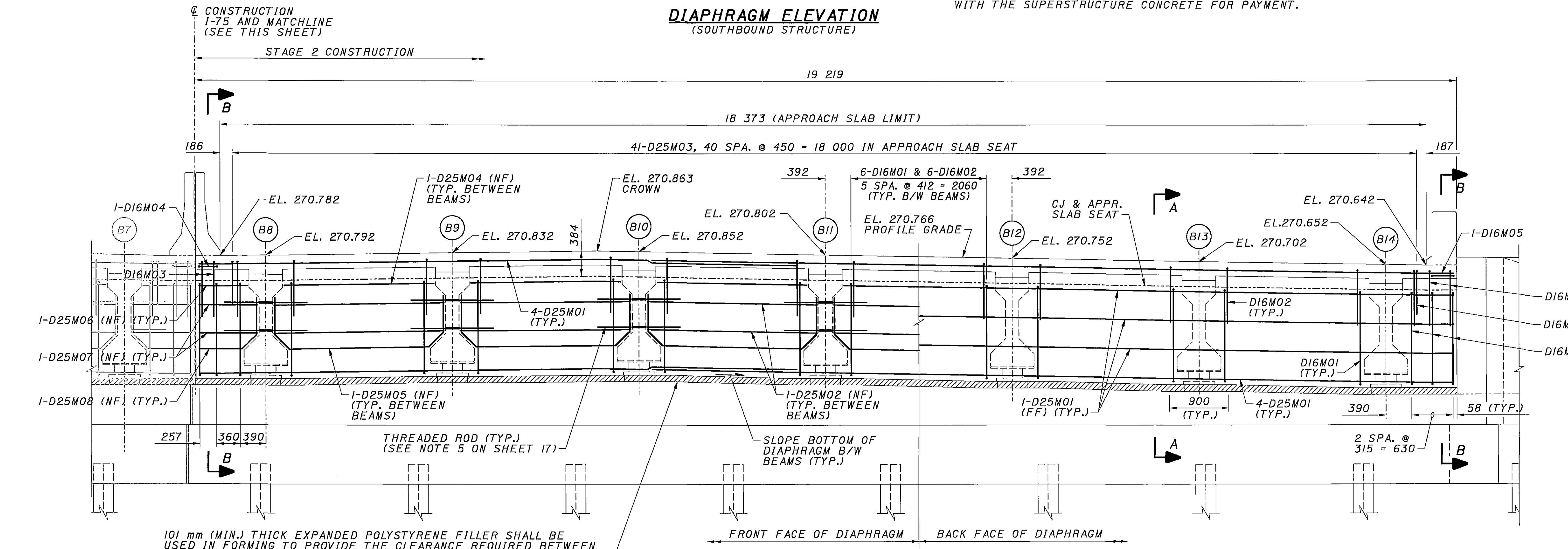
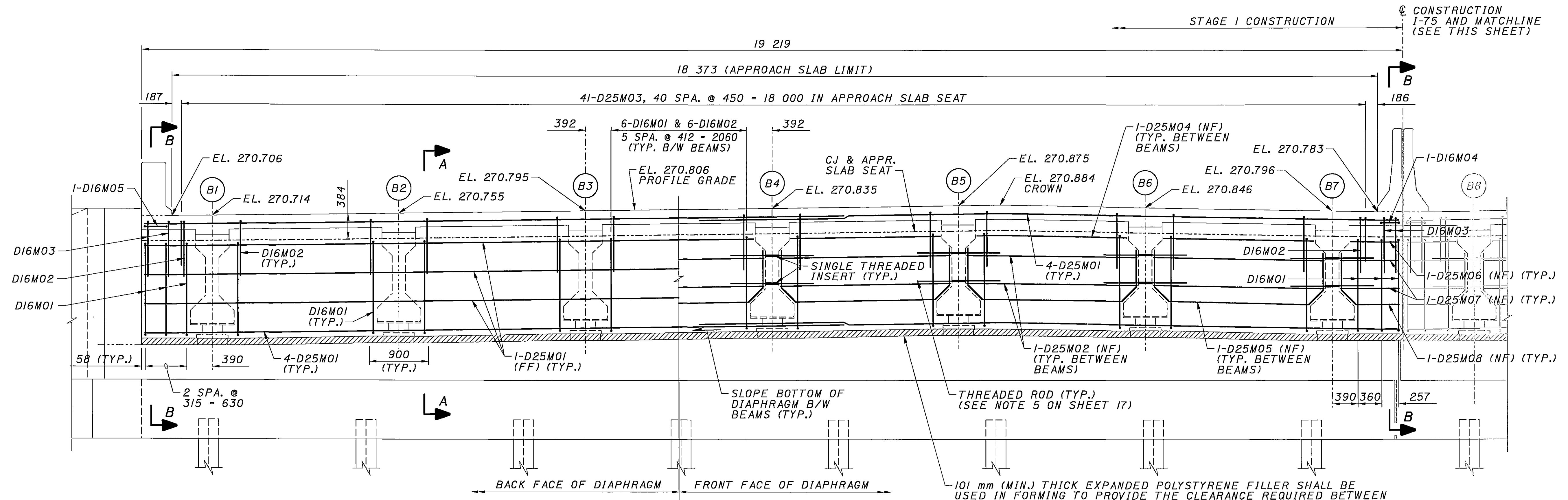
DRAWN JTC
DESIGNED JTC
CHECKED RV

REAR ABUTMENT DIAPHRAGM PLAN AND SECTIONS
BRIDGE NO. MOT-75-52689 L&R
I-75 MAINLINE OVER RAMP G

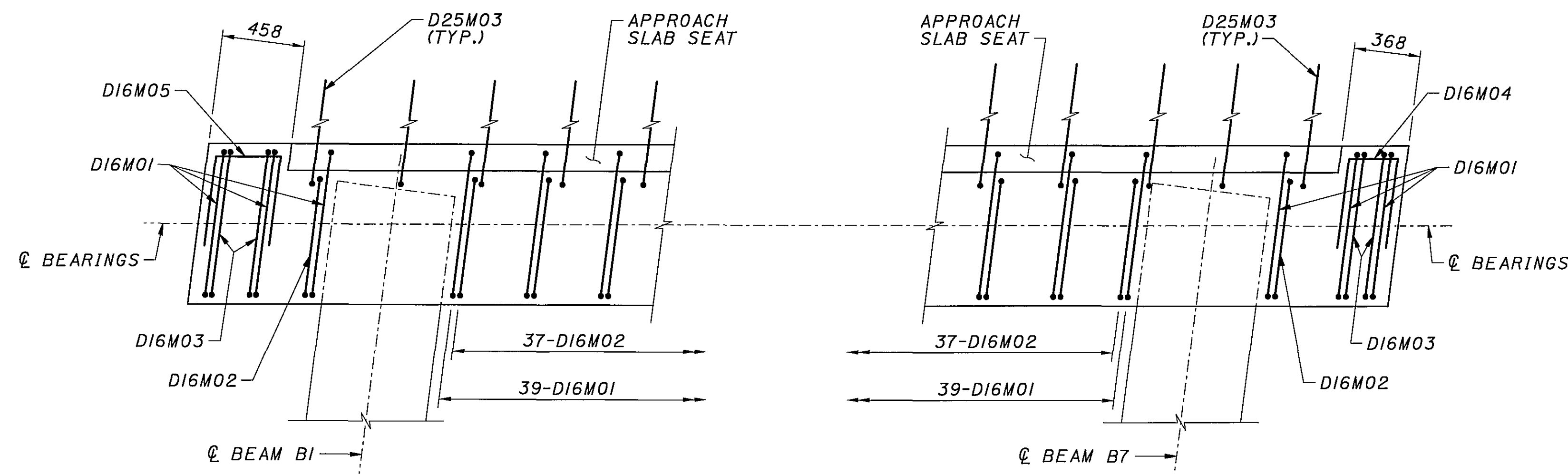
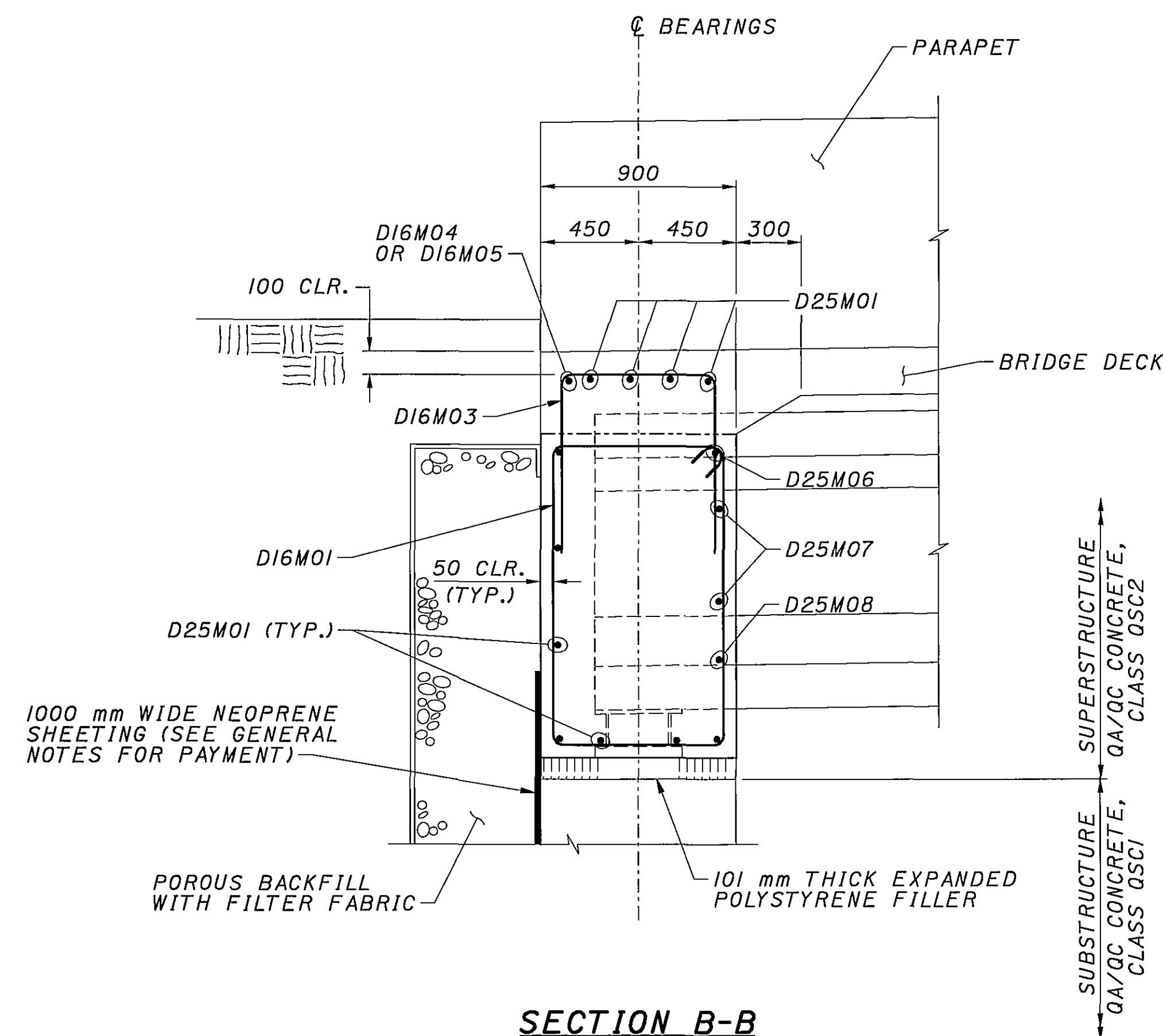
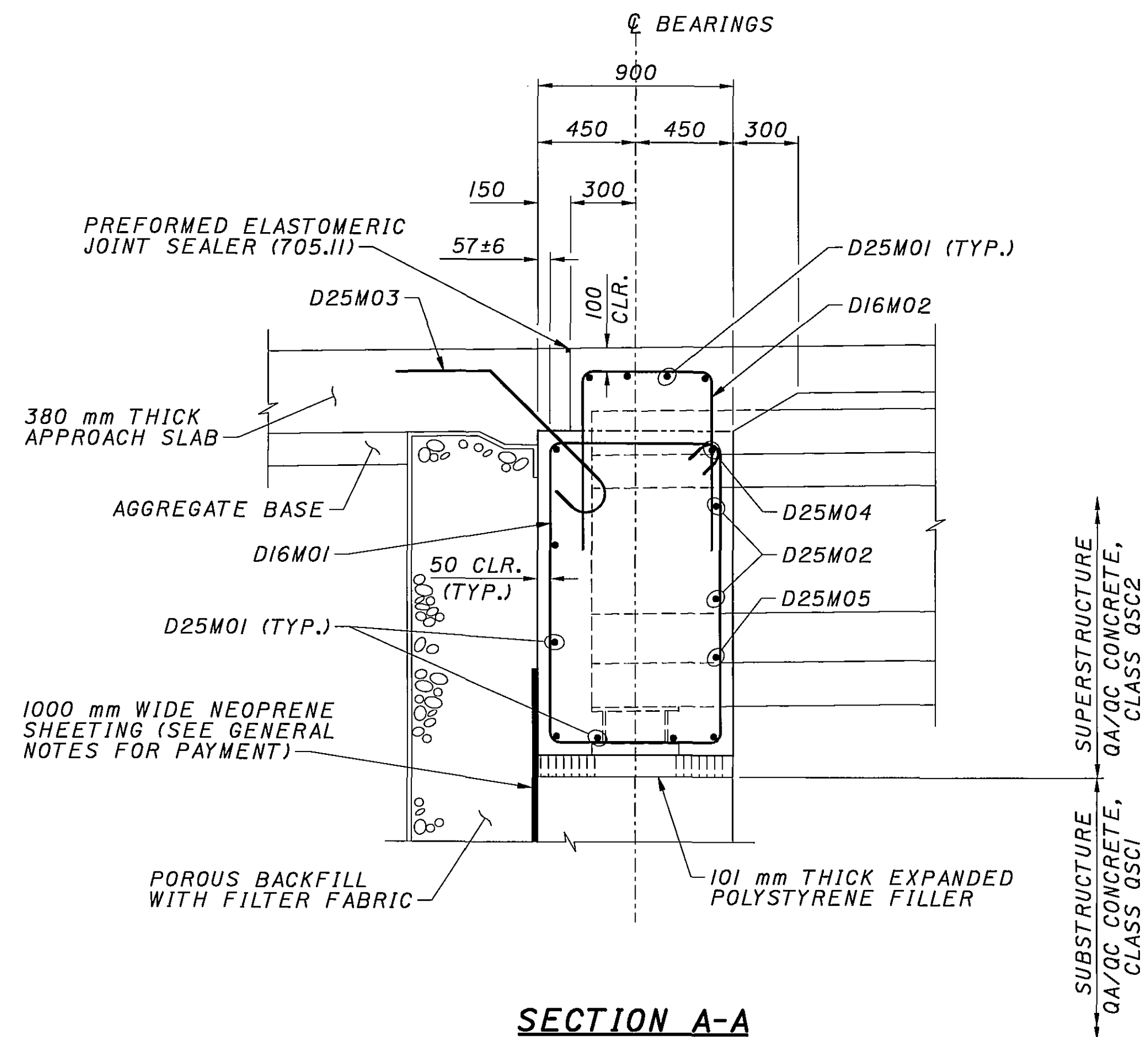
MOT-70-22.890

26/34

1074
1245



NOTES:
1. FOR FORWARD ABUTMENT DIAPHRAGM NOTES, SEE SHEET 28.



(SOUTHBOUND STRUCTURE SHOWN
NORTHBOUND SIMILAR BUT OPPOSITE HAND)

NOTES:

1. DIAPHRAGM ELEVATION IS SHOWN ALONG THE CENTERLINE OF BEARINGS.
2. REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED, LAPS SHALL BE AS FOLLOWS:
NO. 25M BARS = 2200 mm MIN.
FOR REINFORCING STEEL LIST, SEE SHEET 33.
3. FOR FORWARD ABUTMENT PLAN AND DETAILS, INCLUDING BRIDGE SEAT ELEVATIONS, SEE SHEETS 12 - 16.
4. FOR BEARING DETAILS, SEE SHEET 20.
5. ABUTMENT DIAPHRAGM, PRESTRESSED I-BEAM SUPERSTRUCTURE: PLACE THE CONCRETE ENCASING THE PRESTRESSED I-BEAM STRUCTURAL MEMBERS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE.
6. 25 mm PEJF LOCATED ON VERTICAL END FACE OF APPROACH SLAB SEAT SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE METER FOR ITEM 526, REINFORCED CONCRETE APPROACH SLAB (375 mm), AS PER PLAN.

DESIGN AGENCY: **CH2M HILL**
 ONE DAYTON CENTRE SUITE 1100
 ONE SOUTH MAIN STREET
 DAYTON, OH 45402-1828

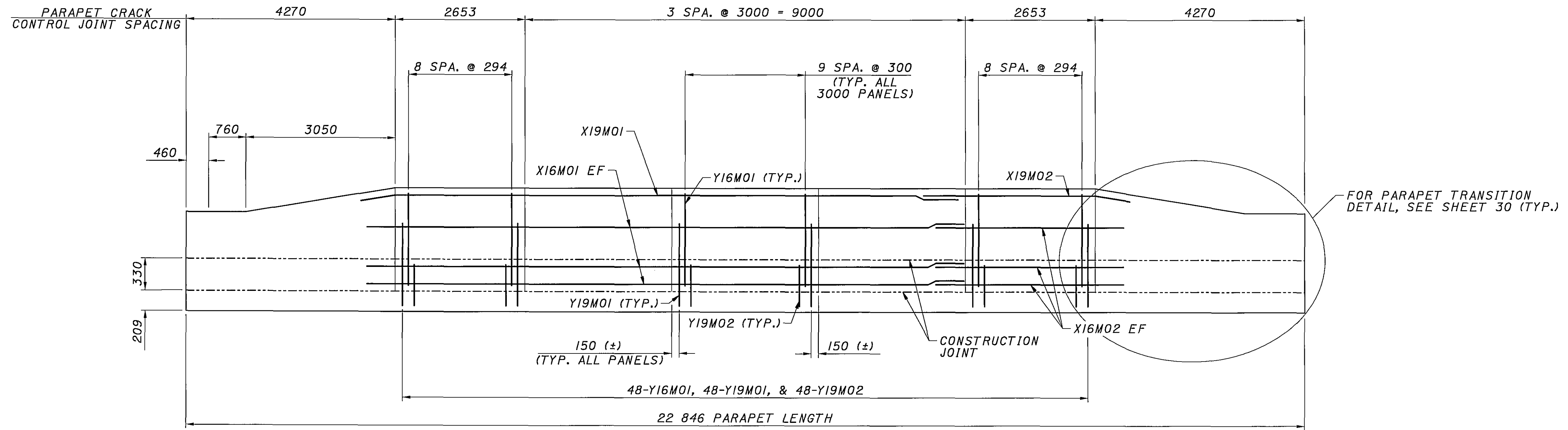
DATE	09/03
REVIEWED	MRM
STRUCTURE FILE NUMBER	5709075/5709083
DRAWN	JTC
CHECKED	RV

FORWARD ABUTMENT DIAPHRAGM PLAN AND SECTIONS
 BRIDGE NO. MOT-70-32689 L&R
 I-75 MAINLINE OVER RAMP G

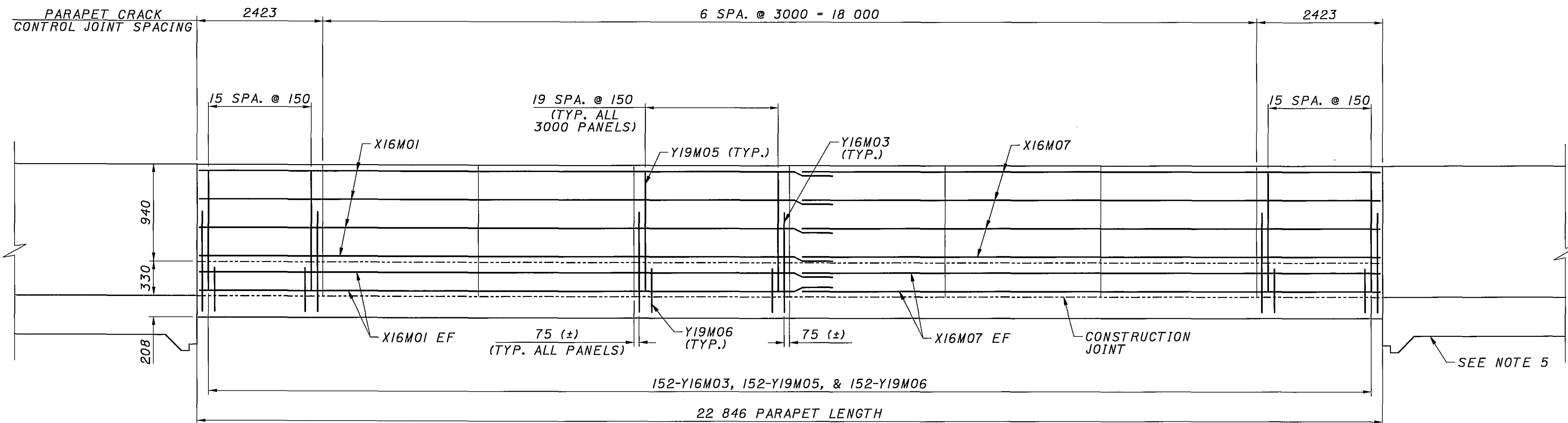
MOT-70-22-890

28/34

1076
1245



OUTSIDE PARAPET ELEVATION



MEDIAN PARAPET ELEVATION

NOTES:

1. FOR MEDIAN BARRIER DETAILS, SEE SHEET 21.
2. FOR OUTSIDE PARAPET DETAILS, SEE SHEET 30.
3. MINIMUM REINFORCING STEEL SPLICE LENGTHS:
 16M BARS = 500 mm
 19M BARS = 550 mm
4. ALL REINFORCING STEEL SHALL BE EPOXY COATED CONFORMING TO ITEM 509. BENT OR CUT STEEL SHALL BE COATED OR PATCHED AND TREATED WITH EPOXY MATERIAL AS SPECIFIED IN CMS SECTION 709.00. PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 509, EPOXY COATED REINFORCING STEEL.
5. FOR DETAILS OF PARAPET ON APPROACH SLAB, SEE SHEET 31.

DESIGN AGENCY
CH2MHILL
 ONE DAYTON CENTRE, SUITE 1100
 ONE SOUTH MAIN STREET
 DAYTON, OH 45402-1828

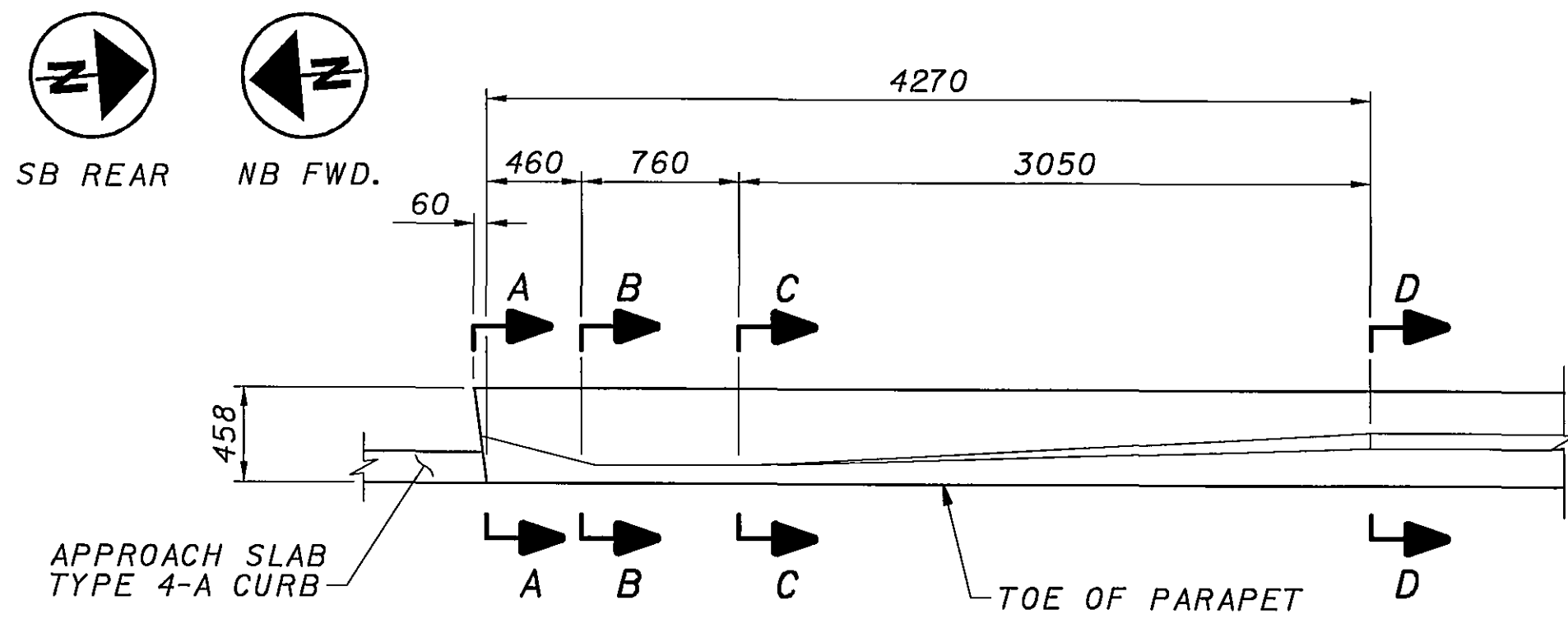
DESIGNED	DGS	CHECKED	RV
DRAWN	DGS	REVISED	
REVIEWED	MRM	STRUCTURE FILE NUMBER	5709075/5709003
DATE	09/03		

PARAPET ELEVATION
 BRIDGE NO. MOT-75-32689 L&R
 I-75 MAINLINE OVER RAMP G

MOT-70-22.890

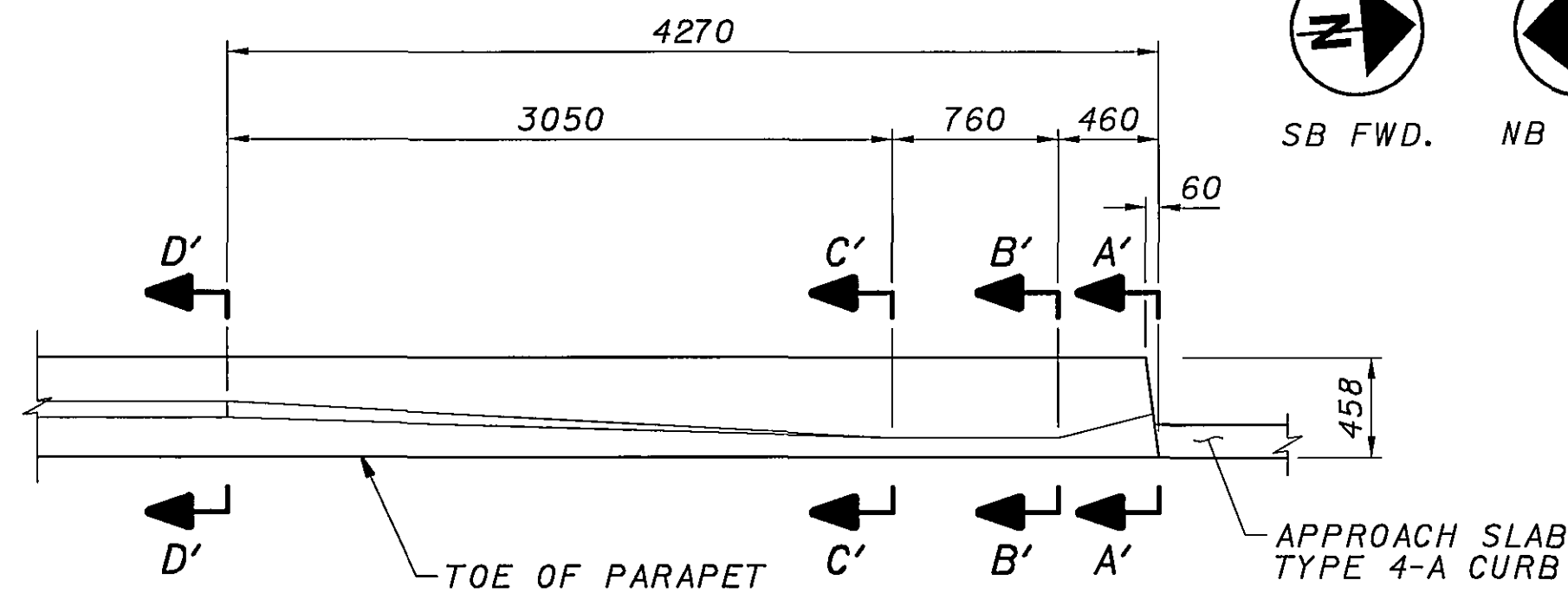
29/34

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 1245



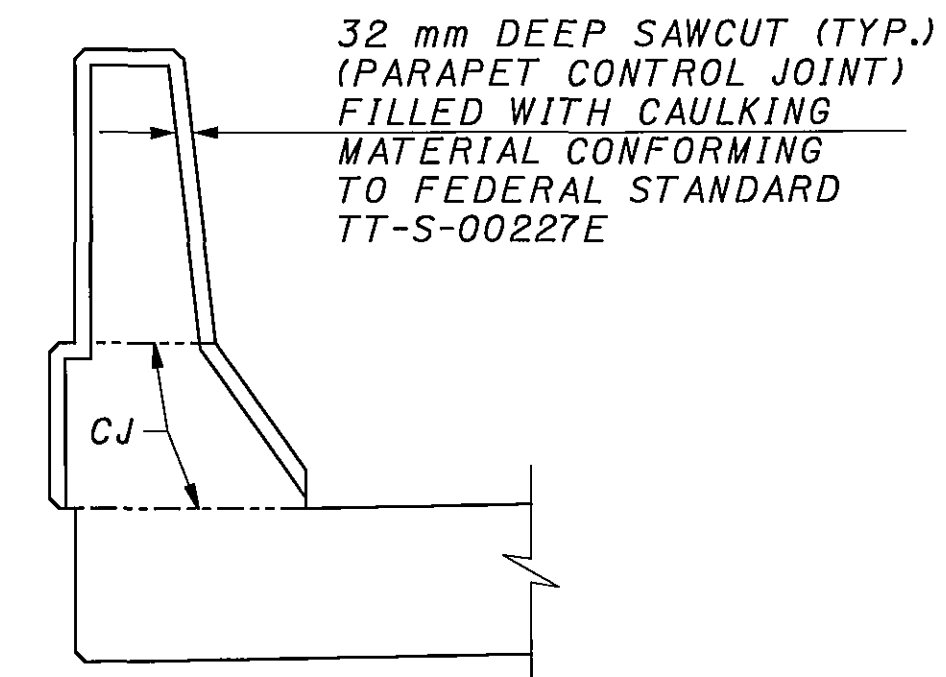
PARAPET END PLAN

SB STRUCTURE - REAR PARAPET TRANSITION
NB STRUCTURE - FORWARD PARAPET TRANSITION

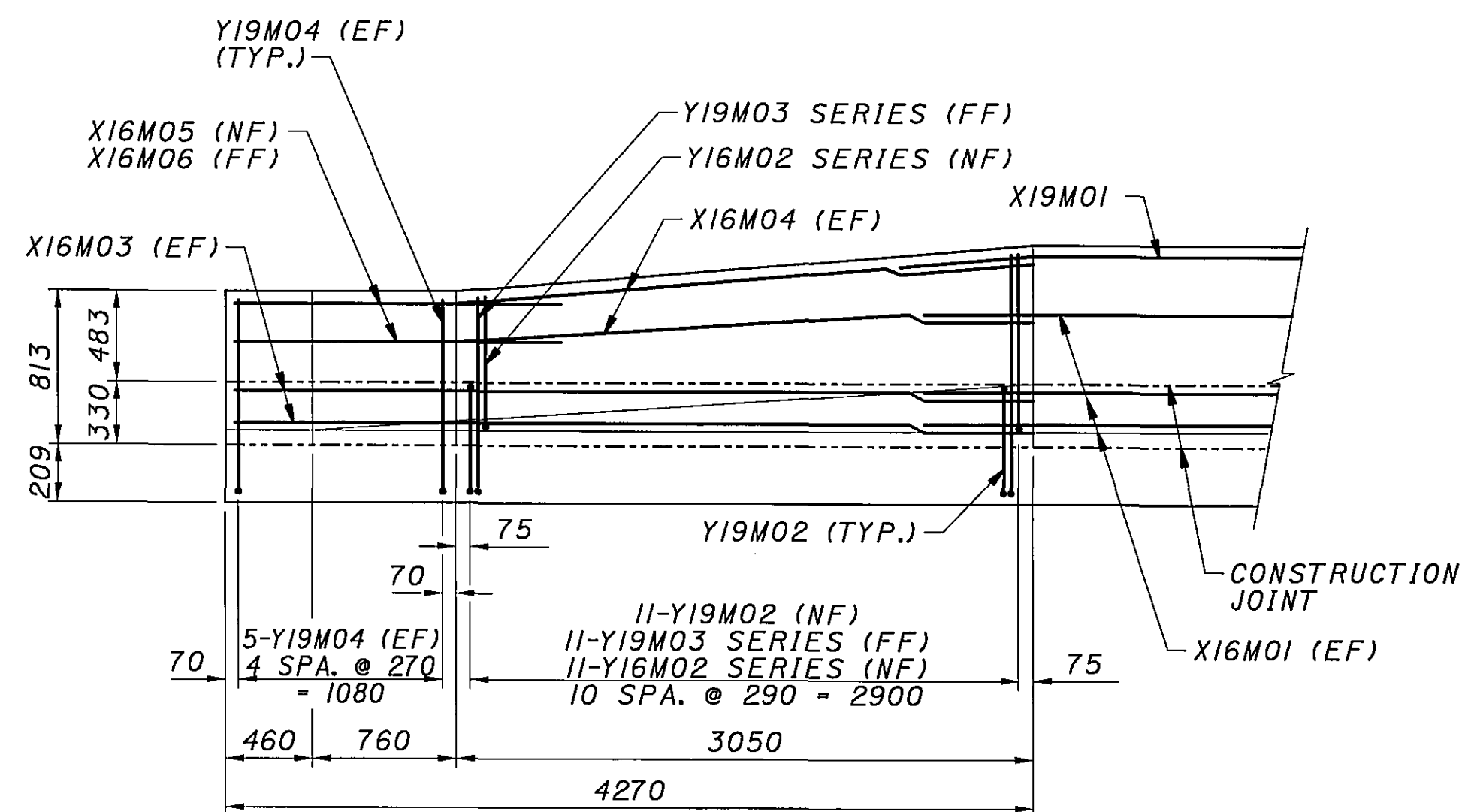


PARAPET END PLAN

SB STRUCTURE - FORWARD PARAPET TRANSITION
NB STRUCTURE - REAR PARAPET TRANSITION

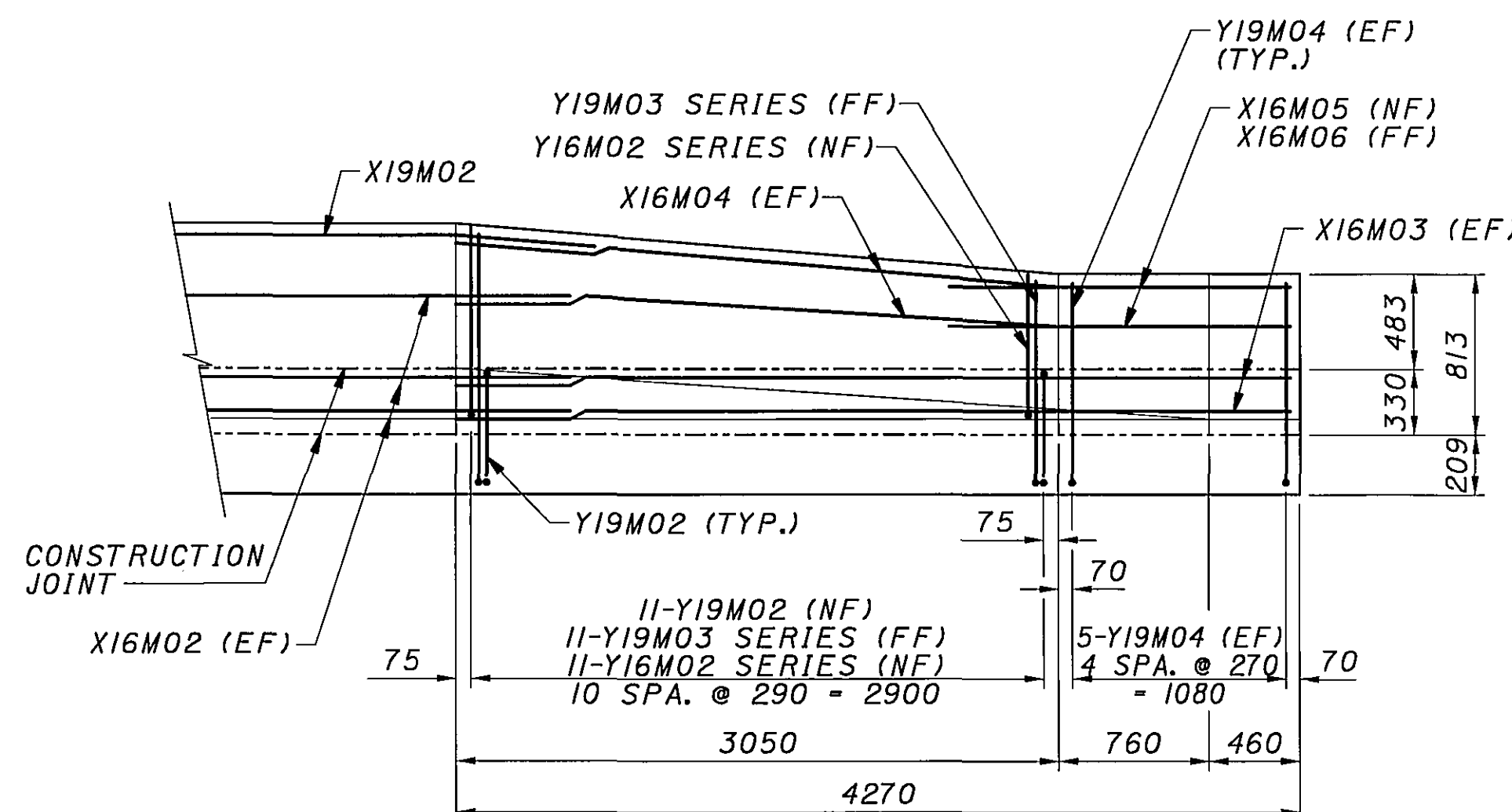


TYPICAL PARAPET CONTROL JOINT DETAIL



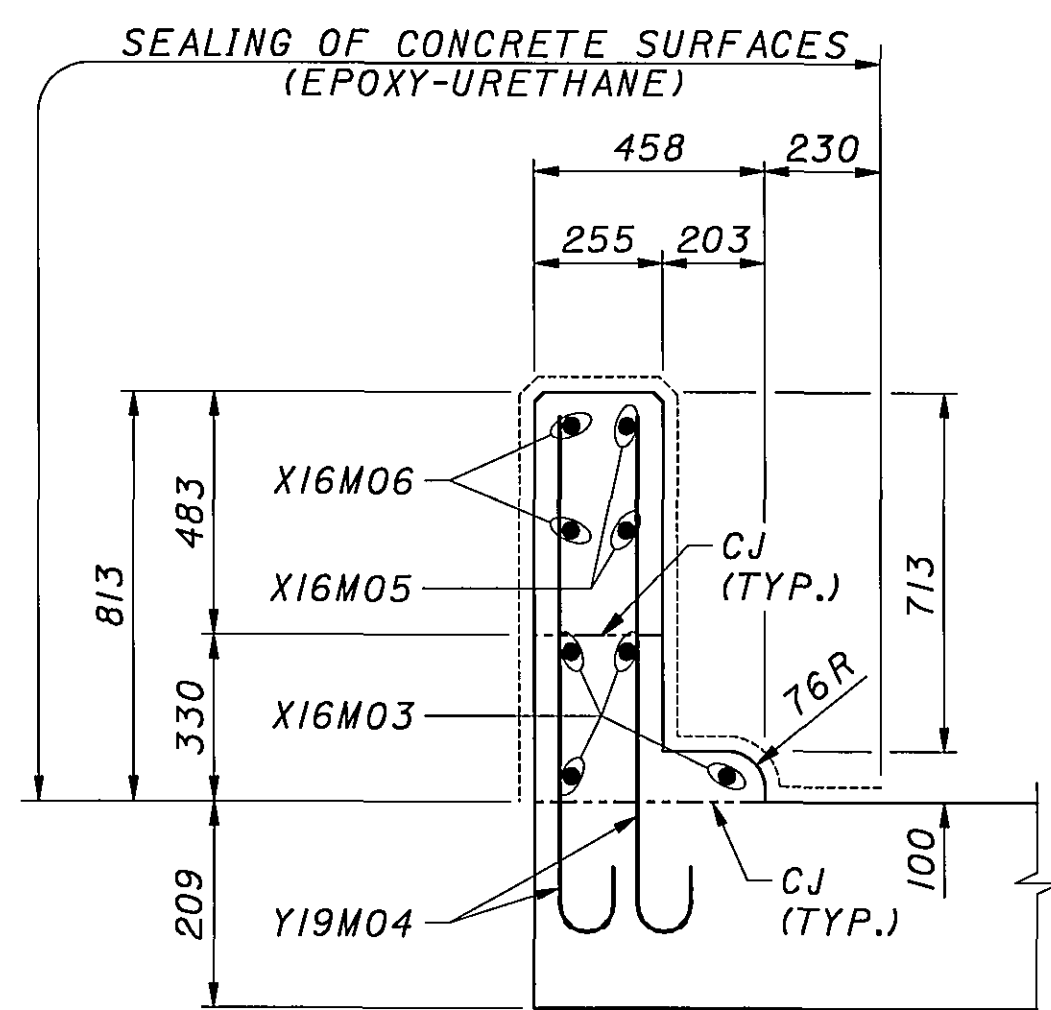
PARAPET END ELEVATION

SB STRUCTURE - REAR PARAPET TRANSITION
NB STRUCTURE - FORWARD PARAPET TRANSITION



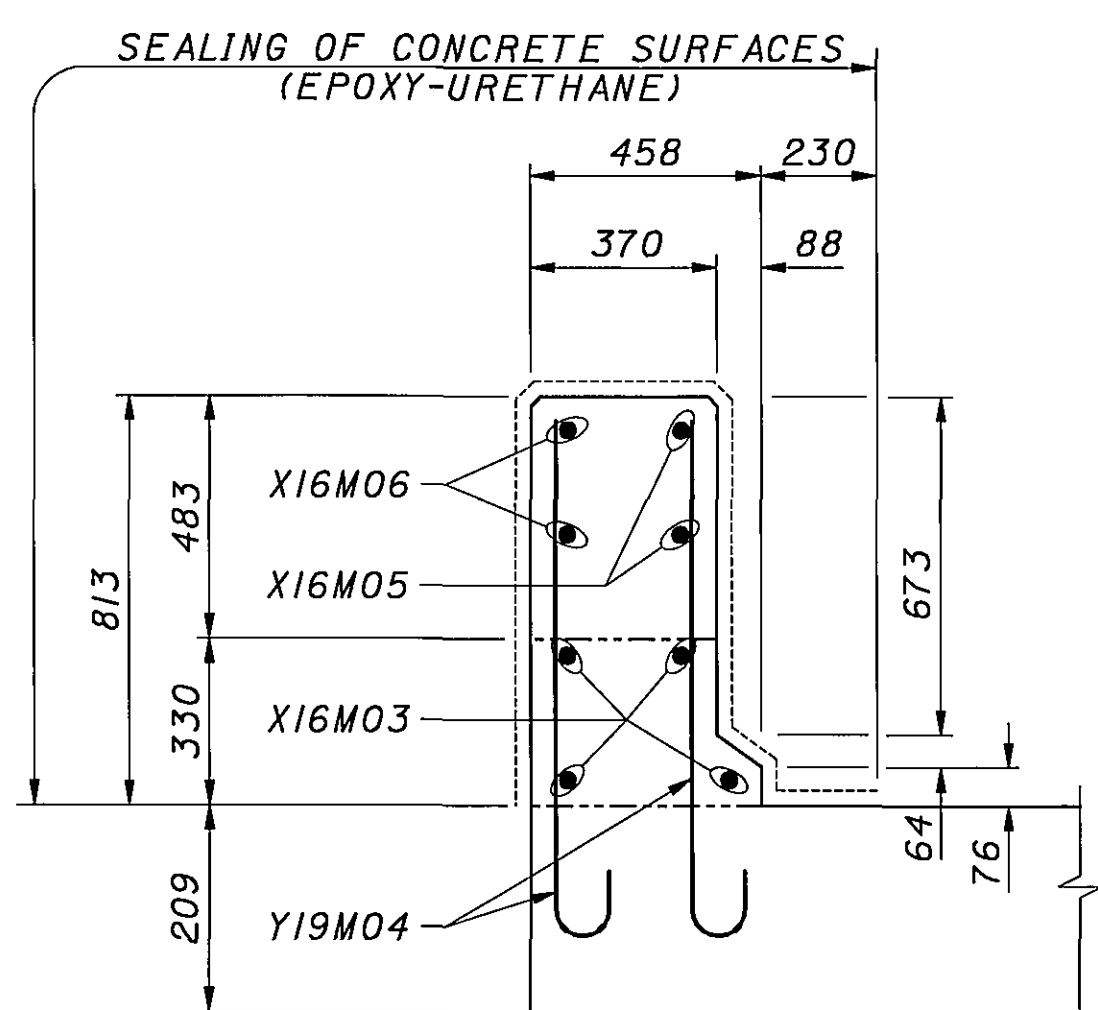
PARAPET END ELEVATION

SB STRUCTURE - FORWARD PARAPET TRANSITION
NB STRUCTURE - REAR PARAPET TRANSITION



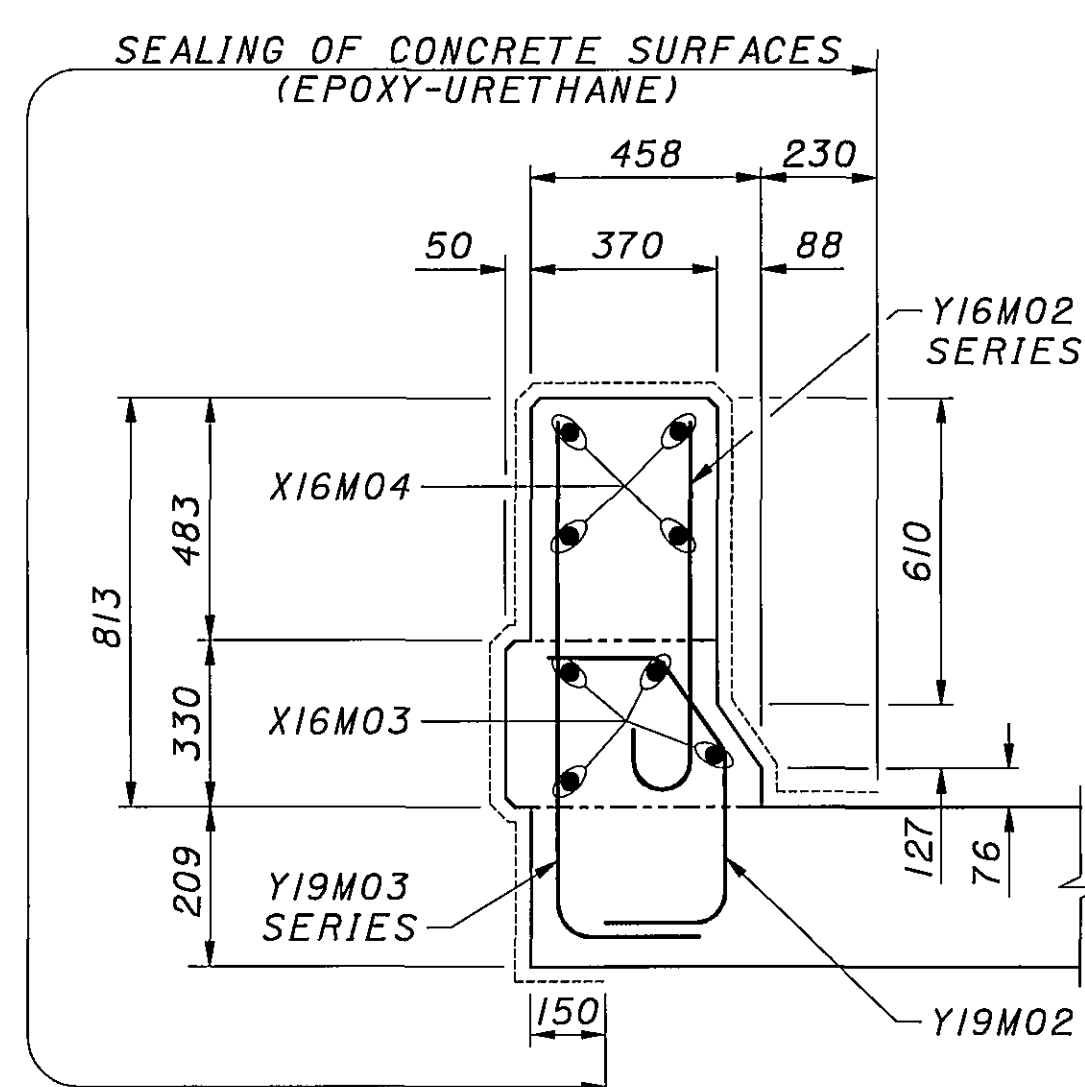
SECTION A-A

(SECTION A'-A' SIMILAR BUT OPPOSITE HAND)



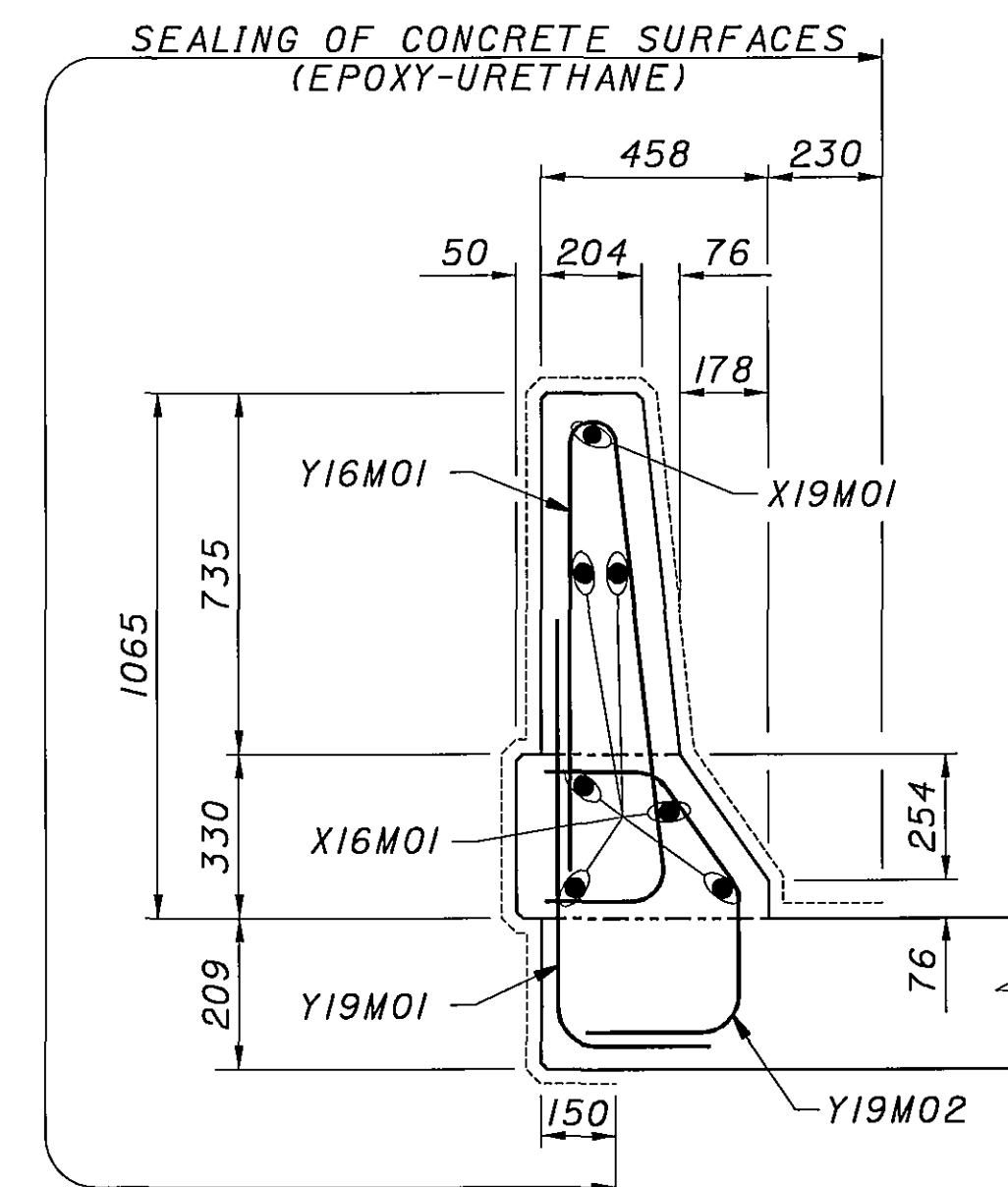
SECTION B-B

(SECTION B'-B' SIMILAR BUT OPPOSITE HAND)



SECTION C-C

(SECTION C'-C' SIMILAR BUT OPPOSITE HAND)



SECTION D-D

(SECTION D'-D' SIMILAR BUT OPPOSITE HAND)

NOTES:

1. FOR ENTIRE PARAPET ELEVATION, SEE SHEET 29.

DESIGN AGENCY
CH2MHILL
ONE DAYTON CENTRE SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OH 45402-1828

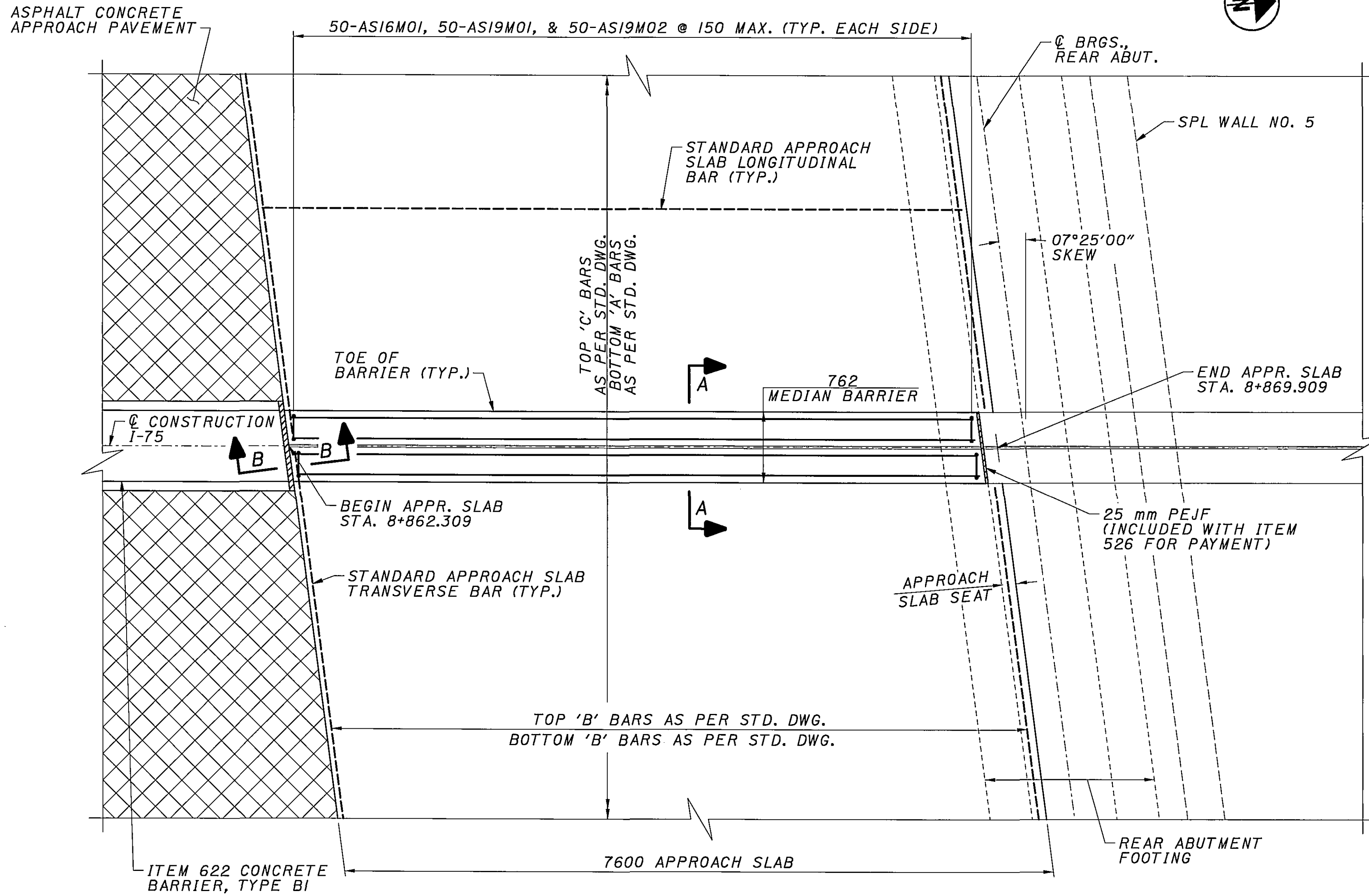
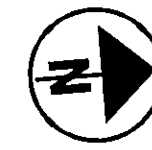
DATE 09/03
REVIEWED MRM
DRAWN DGS
DESIGNED DGS
CHECKED RV
STRUCTURE FILE NUMBER 5709075/5709083

PARAPET DETAILS
BRIDGE NO. MOT-75-32689 L&R
I-75 MAINLINE OVER RAMP G

MOT-70-22.890

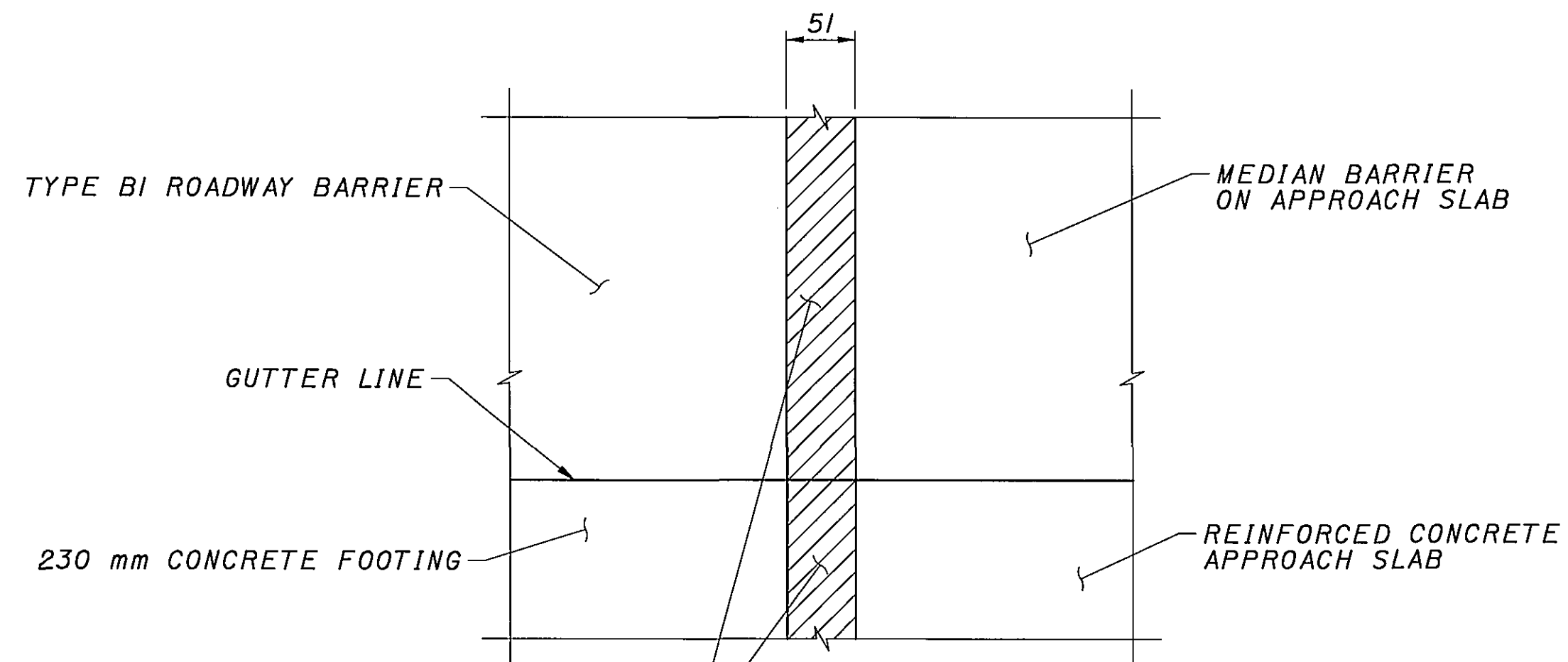
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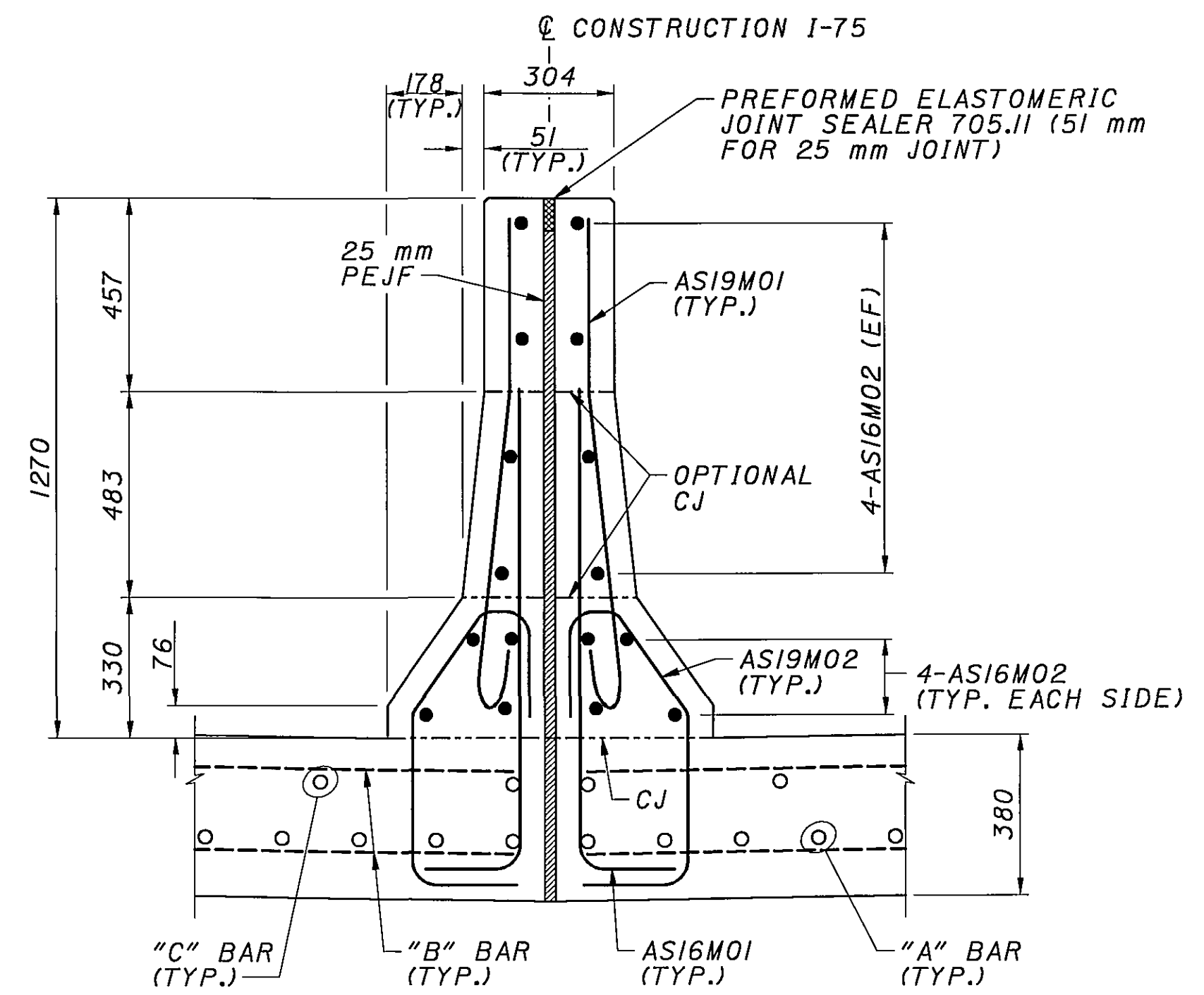


**PARTIAL PLAN - MEDIAN BARRIER
APPROACH SLAB AT REAR ABUTMENT**

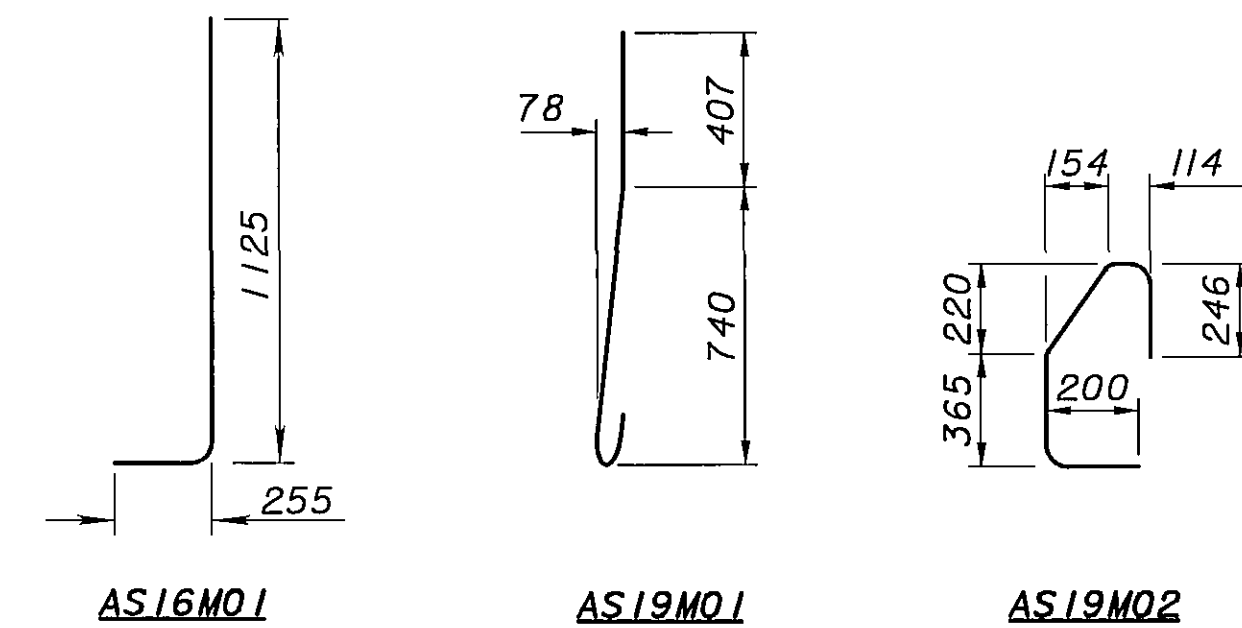
APPROACH SLAB AT FORWARD ABUTMENT SIMILAR BUT OPPOSITE HAND



SECTION B-B



SECTION A-A



APPROACH SLAB MEDIAN BARRIER REINFORCING BAR LIST

MARK	QUANTITY	LENGTH	TYPE
ASI6M01	200	1340	BENT
ASI6M02	32	7290	STR
ASI9M01	200	1250	BENT
ASI9M02	200	1125	BENT

NOTE: BAR QUANTITIES GIVEN FOR BOTH APPROACH SLABS

NOTES:

- REINFORCEMENT SHOWN IS IN ADDITION TO STANDARD APPROACH SLAB REINFORCEMENT. FOR STANDARD APPROACH SLAB DETAILS, SEE STANDARD DRAWING AS-I-81.
- THE FOLLOWING SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE METER FOR ITEM 526, REINFORCED CONCRETE APPROACH SLAB (T=375 mm), AS PER PLAN:
 - CLASS 'S' CONCRETE FOR APPROACH SLAB AND MEDIAN BARRIER
 - ALL ASSOCIATED REINFORCING STEEL
 - ALL PREFORMED EXPANSION JOINT FILLERS
 - ALL ASSOCIATED JOINT SEALERS

SUBSTRUCTURE - ABUTMENT

MARK	REAR ABUTMENT	FORWARD ABUTMENT	TOTAL	LENGTH (mm)	WEIGHT (kg)	TYPE	DIMENSIONS (mm)						
							A	B	C	D	E	R	INC.
A16M01	24	24	48	10350	772	STR							
A16M02	16	16	32	10455	520	STR							
A16M03	1	1	2	6085	19	19	5245	601	601				
A16M04	1	1	2	5425	17	19	4585	601	601				
A16M05	1 SERIES OF 7	1 SERIES OF 7	2 SERIES OF 7	5425 TO 6085	126	33	7	4585	5245	601	601		110
A16M06	1	1	1	6815	11	19	5975	601	601				
A16M07	1	1	1	6155	10	19	5315	601	601				
A16M08	1 SERIES OF 7		1 SERIES OF 7	6155 TO 6815	71	33	7	5315	5975	601	601		110
A16M09	172	170	342	4955	2631	3	1650	750					
A16M10	2	2	4	4985	31	3	1665	750					
A16M11	3	3	6	4995	47	3	1670	750					
A16M12	2	2	4	5075	32	3	1710	750					
A16M13	2	2	4	5225	33	3	1785	750					
A16M14	1	1	2	5155	17	3	1750	750					
A16M15	1	1	2	5275	17	3	1810	750					
A16M16	1	1	2	5105	16	3	1725	750					
A16M17	2	2	4	4500	28	2	1890	800	1890				
A16M18	4		4	4730	30	2	2005	800	2005				
A16M19	2	2	4	4630	29	2	1955	800	1955				
A16M20	276	276	552	2920	2502	2	1100	800	1100				
A16M21	4	4	8	2855	36	2	1065	805	1065				
A16M22	3	3	6	5760	54	19	4920	601	601				
A16M23	3	3	6	5000	47	19	4160	601	601				
A16M24	2	2	4	5295	33	19	4920	272	272				
A16M25	2	2	4	4955	31	19	4160	569	569				
A16M26	1 SERIES OF 2		1 SERIES OF 2	2815 TO 4390	12	33	2	2440	4015	272	272		1575
A16M27	1 SERIES OF 2		1 SERIES OF 2	2475 TO 4050	11	33	2	1680	3255	569	569		1575
A16M28	2		2	5075	16	19	4300	755	216				
A16M29	1		1	1125	2	19	750	272	272				
A16M30	1		1	1545	3	19	750	390	704				
A16M31	15	17	32	4050	202	2	1890	350	1890				
A16M32	1 SERIES OF 4		1 SERIES OF 4	1930 TO 2350	14	36	4	830	1040	350			70
A16M33	1 SERIES OF 10		1 SERIES OF 10	2590 TO 4010	52	36	10	1160	1870	350			79
A16M34	1		1	4250	7	2	1990	350	1990				
A16M35	3	3	6	1890	18	STR							
A16M36	3		3	2005	10	STR							
A16M37	1	1	2	1115	4	2	375	445	375				
A16M38	3		3	6660	32	19	5820	601	601				
A16M39	3		3	5900	28	19	5060	601	601				
A16M40	2		2	6175	20	19	5820	258	258				
A16M41	2		2	5645	18	19	5060	420	420				
A16M42	1 SERIES OF 2		1 SERIES OF 2	3480 TO 5700	15	33	2	3125	5345	258	258		2220
A16M43	1 SERIES OF 2		1 SERIES OF 2	2945 TO 5165	13	33	2	2360	4580	420	420		2220
A16M44	2		2	5910	19	19	5135	769	156				
A16M45	1		1	1105	2	19	750	258	258				
A16M46	1		1	1335	3	19	750	328	495				
A16M47	18	15	33	4190	215	2	1960	350	1960				
A16M48	1 SERIES OF 8		1 SERIES OF 8	2260 TO 3070	34	36	8	995	1400	350			58
A16M49	1 SERIES OF 10		1 SERIES OF 10	3230 TO 4250	59	36	10	1480	1990	350			57
A16M50	3	3	6	1960	19	STR							
A16M51	3		3	2005	10	STR							
A16M52	1	1	2	1285	4	2	375	615	375				
A16M53	1	1	2	1280	4	2	375	610	375				
A16M54	1	1	2	1090	4	2	375	420	375				
A16M55	1	1	1	6415	10	19	5575	601	601				
A16M56	1	1	1	5755	9	19	4915	601	601				
A16M57		1 SERIES OF 7	1 SERIES OF 7	5755 TO 6415	67	33	7	4915	5575	601	601		110
A16M58		4	4	4740	30	2	2010	800	2010				
A16M59		1 SERIES OF 2	1 SERIES OF 2	2715 TO 4195	11	33	2	2340	3820	272	272		1480
A16M60		1 SERIES OF 2	1 SERIES OF 2	2370 TO 3850	10	33	2	1575	3055	569	569		1480
A16M61		2	2	5100	16	19	4325	751	229				
A16M62		1	1	1125	2	19	750	272	272				
A16M63		1	1	1545	3	19	750	379	710				
A16M64		1 SERIES OF 4	1 SERIES OF 4	1790 TO 2230	13	36	4	760	980	350			73
A16M65		1 SERIES OF 10	1 SERIES OF 10	2490 TO 4000	51	36	10	1110	1865	350			84
A16M66		1	1	4260	7	2	1995	350	1995				
A16M67		3	3	2010	10	STR							
A16M68		3	3	6260	30	19	5420	601	601				
A16M69		3	3	5500	26	19	4660	601	601				
A16M70		2	2	5775	18	19	5420	258	258				
A16M71		2	2	5245	17	19	4660	420	420				
A16M72		1 SERIES OF 2	1 SERIES OF 2	3215 TO 5185	14	33	2	2860	4830	258	258		1970
A16M73		1 SERIES OF 2	1 SERIES OF 2	2685 TO 4655	12	33	2	2100	4070	420	420		1970
A16M74		2	2	5530	18	19	4755	765	175				
A16M75		1	1	1105	2	19	750	258	258				
A16M76		1	1	1335	3	19	750	316	503				
A16M77		1 SERIES OF 7	1 SERIES OF 7	2200 TO 2920	28	36	7	965	1325	350			60
A16M78		1 SERIES OF 10	1 SERIES OF 10	3100 TO 4250	58	36	10	1415	1990	350			64
A16M79		3	3	2005	10	STR							

NOTES:

- FOR REINFORCING BAR BENDS AND NOTES, SEE SHEET 34.
- FOR REMAINING ABUTMENT BAR LIST, SEE SHEET 33.

DESIGN AGENCY
CH2M HILL
 ONE DAYTON CENTRE, SUITE 1100
 ONE SOUTH MAIN STREET
 DAYTON, OH 45402-1828

DATE
 09/03
 REVIEWED
 MRM
 STRUCTURE FILE NUMBER
 5709075/5709083
 DESIGNED
 RDG
 CHECKED
 JTC

REINFORCING STEEL LIST 1
 BRIDGE NO. MOT-75-32689 L&R
 I-75 MAINLINE OVER RAMP G

MOT-70-22.890

SUBSTRUCTURE - ABUTMENT CONT'D

MARK	REAR ABUTMENT	FORWARD ABUTMENT	TOTAL	LENGTH (mm)	WEIGHT (kg)	TYPE	DIMENSIONS (mm)							
							A	B	C	D	E	R	INC.	
A25M01	16	16	32	11030	1403	STR								
A25M02	1 SERIES OF 4	1 SERIES OF 4	2 SERIES OF 4	6775 TO 7435	226	33	4	4585	5245	1556	1556			220
A25M03	1 SERIES OF 4		1 SERIES OF 4	7505 TO 8165	125	33	4	5315	5975	1556	1556			220
A25M04	16	16	32	11130	1416	STR								
A25M05		1 SERIES OF 4	1 SERIES OF 4	7105 TO 7765	119	33	4	4915	5575	1556	1556			220
TOTAL WEIGHT					11774									

SUPERSTRUCTURE - DECK

MARK	QUANTITY ON NB STRUCTURE	QUANTITY ON SB STRUCTURE	TOTAL	LENGTH (mm)	WEIGHT (kg)	TYPE	DIMENSIONS (mm)							
							A	B	C	D	E	R	INC.	
S13M01	89	89	178	12200	2159	STR								
S13M02	89	89	178	10845	1919	STR								
S16M01	2 SERIES OF 10	2 SERIES OF 10	4 SERIES OF 10	660 TO 8955	299	29	10	660	8955					922
S16M02	2 SERIES OF 9	2 SERIES OF 9	4 SERIES OF 9	1700 TO 9075	302	29	9	1700	9075					922
S16M03	354	354	708	9850	10824	STR								
S16M04	1 SERIES OF 12	1 SERIES OF 12	2 SERIES OF 12	660 TO 10800	214	29	12	660	10800					922
S16M05	1 SERIES OF 11	1 SERIES OF 11	2 SERIES OF 11	1275 TO 10495	201	29	11	1275	10495					922
S16M06	1 SERIES OF 8	1 SERIES OF 8	2 SERIES OF 8	1210 TO 7660	111	29	8	1210	7660					921
S16M07	1 SERIES OF 9	1 SERIES OF 9	2 SERIES OF 9	660 TO 8030	122	29	9	660	8030					921
S16M08	175	175	350	11265	6120	STR								
S16M09	178	178	356	8435	4661	STR								
S16M10	86	86	172	12200	3257	STR								
S16M11	86	86	172	10995	2936	STR								
TOTAL WEIGHT					33125									

SUPERSTRUCTURE - PARAPET

MARK	QUANTITY ON NB STRUCTURE	QUANTITY ON SB STRUCTURE	TOTAL	LENGTH (mm)	WEIGHT (kg)	TYPE	DIMENSIONS (mm)							
							A	B	C	D	E	R	INC.	
X16M01	14	14	28	12200	531	STR								
X16M02	6	6	12	3835	72	STR								
X16M03	8	8	16	4220	105	STR								
X16M04	8	8	16	3050	76	STR								
X16M05	4	4	8	1725	22	25	555	737	413	38	127			
X16M06	4	4	8	1725	22	STR								
X16M07	8	8	16	11125	277	STR								
Y16M01	48	48	96	2130	318	23	205	990	915			38		
Y16M02	2 SERIES OF 11	2 SERIES OF 11	4 SERIES OF 11	920 TO 1170	72	30	11	740	990					25
Y16M03	152	152	304	1215	574	1	255	1000						
X19M01	1	1	2	12200	55	STR								
X19M02	1	1	2	4210	19	STR								
Y19M01	48	48	96	1105	238	1	305	850						
Y19M02	70	70	140	1030	323	14	265	340	215	150	230			
Y19M03	2 SERIES OF 11	2 SERIES OF 11	4 SERIES OF 11	1270 TO 1525	138	28	11	1015	1270	305				26
Y19M04	20	20	40	1220	110	16	1015							
Y19M05	152	152	304	1250	850	53	407	740	78					
Y19M06	152	152	304	930	632	40	200	216	220	154	114			
TOTAL WEIGHT					4434									

SUPERSTRUCTURE - DIAPHRAGM

MARK	REAR ABUTMENT	FORWARD ABUTMENT	TOTAL	LENGTH (mm)	WEIGHT (kg)	TYPE	DIMENSIONS (mm)							
							A	B	C	D	E	R	INC.	
D16M01	84	84	168	4555	1188	3	800	1400						
D16M02	76	76	152	2240	529	2	835	650	835					
D16M03	8	8	16	2390	60	2	835	800	835					
D16M04	2	2	4	1190	8	2	500	270	500					
D16M05	2	2	4	1280	8	2	500	360	500					
D25M01	44	44	88	10660	3727	STR								
D25M02	24	24	48	2585	493	STR								
D25M03	82	82	164	1500	978	18	800	305	305					
D25M04	12	12	24	2280	218	STR								
D25M05	12	12	24	3830	366	44	570	220	220	2120				
D25M06	4	4	8	730	24	STR								
D25M07	8	8	16	885	57	STR								
D25M08	4	4	8	1510	48	13	570	220	220	655				
TOTAL WEIGHT					7704									

NOTES:

1. FOR REINFORCING BAR BENDS AND NOTES, SEE SHEET 34.

DESIGN AGENCY
CH2M HILL
ONE DAYTON CENTRE, SUITE 1100
ONE SOUTH MAIN STREET
DAYTON, OH 45402-1828

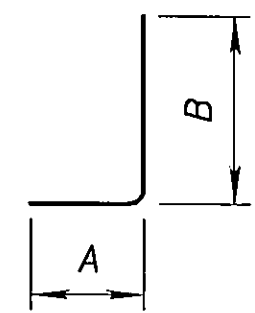
DESIGNED
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RV

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DGS
REVISED

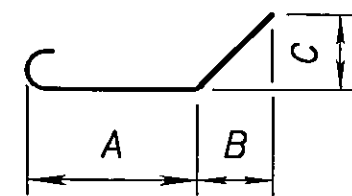
REVIEWED
MRM
DATE
09/03
STRUCTURE FILE NUMBER
5709075/5709083

REINFORCING STEEL LIST II
BRIDGE NO. MOT-75-32689 L&R
I-75 MAINLINE OVER RAMP G

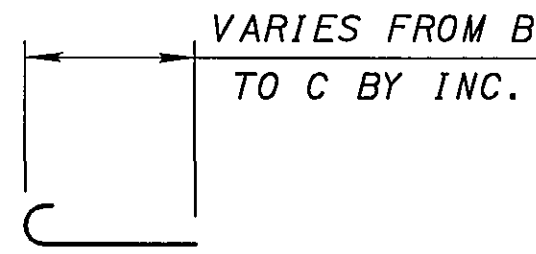
MOT-70-22.890



TYPE-1

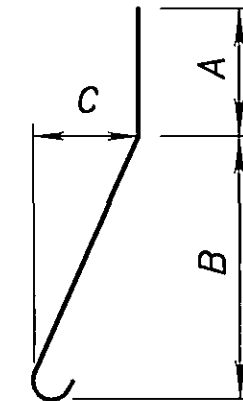


TYPE-18

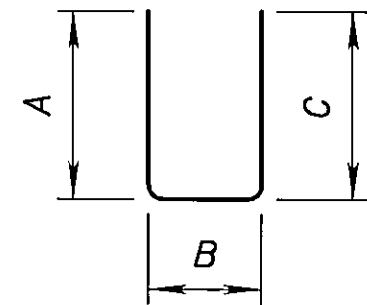


A = NO. OF BARS IN SERIES

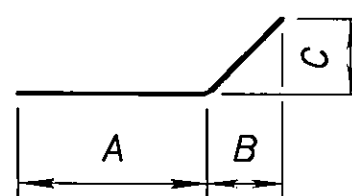
TYPE-30



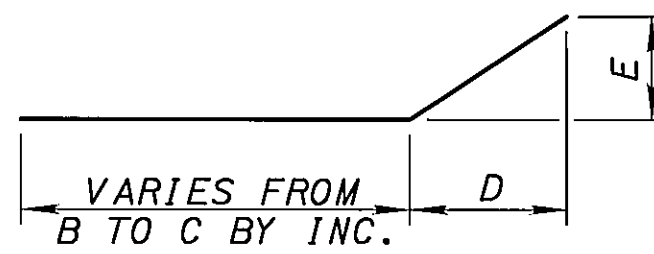
TYPE-53



TYPE-2

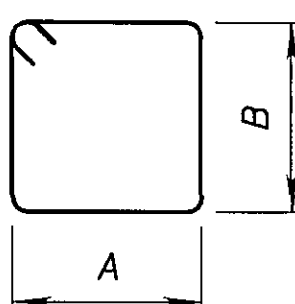


TYPE-19

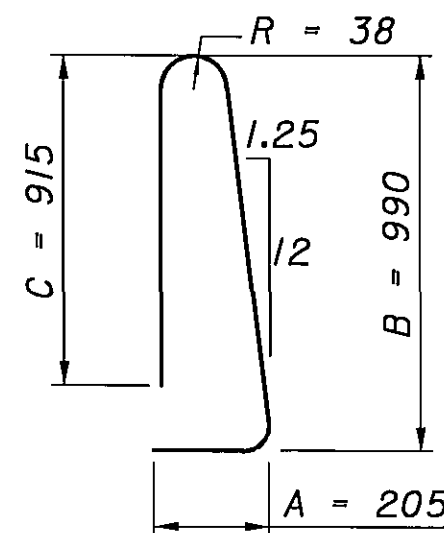


A = NO. OF BARS IN SERIES

TYPE-33

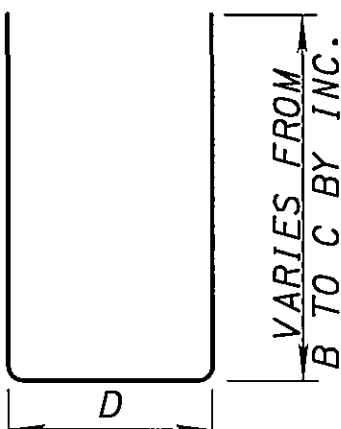


TYPE-3



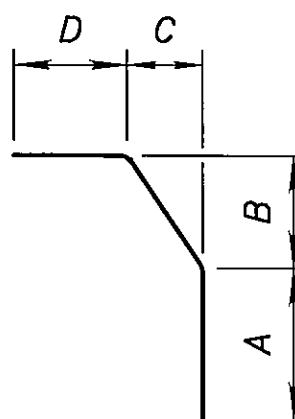
TYPE-23

(FOR 1065 mm PARAPET ONLY)

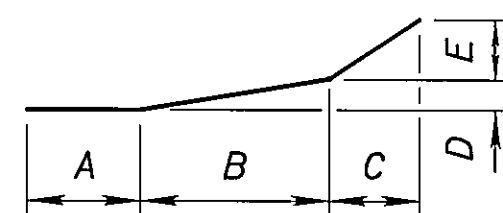


A = NO. OF BARS IN SERIES

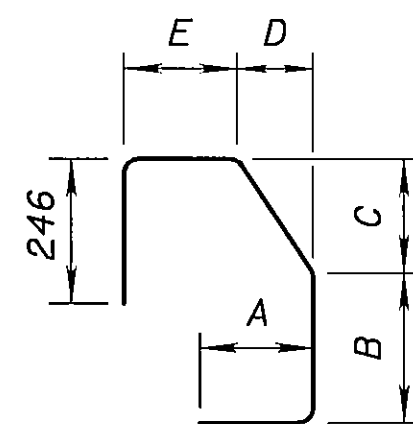
TYPE-36



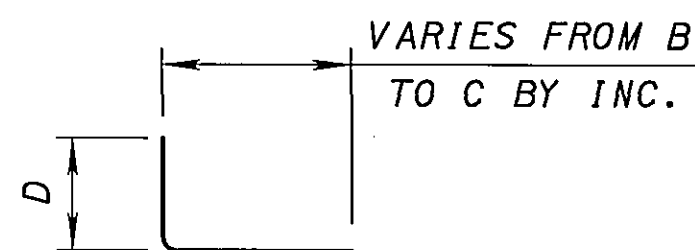
TYPE-13



TYPE-25

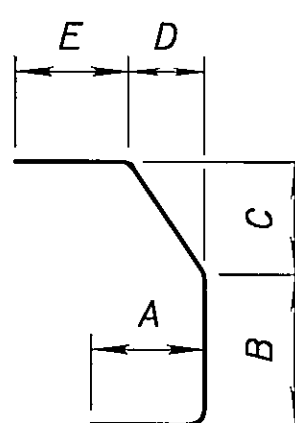


TYPE-40

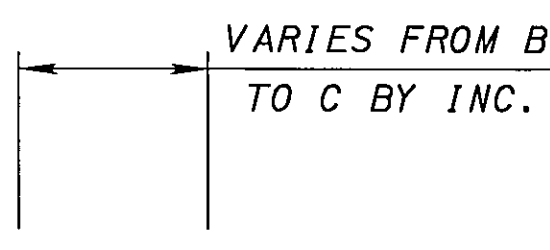


A = NO. OF BARS IN SERIES

TYPE-28

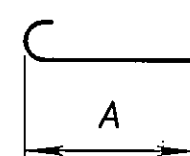


TYPE-14

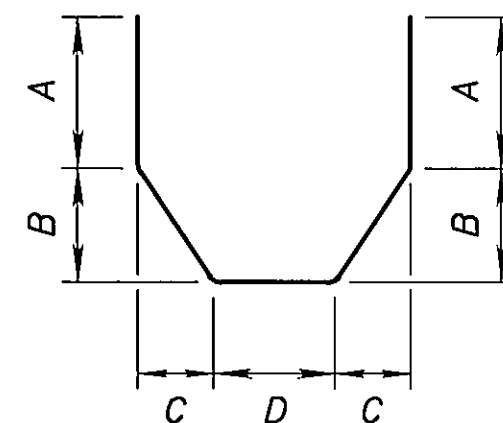


A = NO. OF BARS IN SERIES

TYPE-29



TYPE-16



TYPE-44

NOTES:

1. ALL DIMENSIONS ARE MEASURED OUT-TO-OUT OF BAR UNLESS NOTED OTHERWISE.
2. RADIUS DIMENSION 'R' IS TO OUTSIDE OF BAR. RADIUS DIMENSION 'I.R.' IS TO INSIDE OF BAR.
3. THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
4. FOR STANDARD HOOK DIMENSIONS, SEE SECTION 509.05 OF THE SPECIFICATIONS.
5. ALL REINFORCING STEEL SHALL BE EPOXY COATED, GRADE 420.
6. PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 509, EPOXY COATED REINFORCING STEEL.
7. REINFORCING SAMPLES: REFER TO CMS SECTIONS 106.03, 700, 709.01 THROUGH 709.05, AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURE BY THE ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH 509.08.