MUSKINGUM COUNTY

ENGINEER'S OFFICE

(Old River Rd.-West (Bridge)

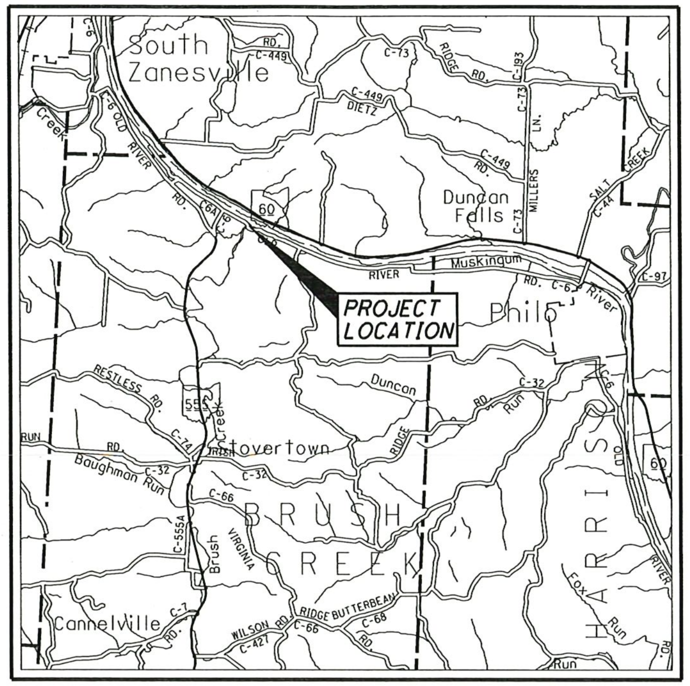
MUS-C.R.6-11.85
PART 2

BRUSH CREEK TOWNSHIP

MUSKINGUM COUNTY

FOR PART 1, SEE MUS-C.R.414-2.40

FOR PART 3, SEE MUS-C.R.71-5.74



LOCATION MAP

LATITUDE: N39°52'36" LONGITUDE: W81°58'30"

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 (2008)	1130
DESIGN YEAR ADT (2028)	1240
DESIGN HOURLY VOLUME (2028)	137
DIRECTIONAL DISTRIBUTION	54%
TRUCKS (24 HOUR B&C)	6%
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH

DESIGN FUNCTIONAL CLASSIFICATION: RURAL LOCAL

DESIGN EXCEPTIONS	APPROVAL DATE	SHEET NO.
LANE WIDTH	12/07/07	2
SHOULDER WIDTH	12/07/07	2
HORIZONTAL ALIGNMENT	12/07/07	6
VERTICAL ALIGNMENT	12/07/07	6
SUPERELEVATION	12/07/07	6

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-929-0988

PLAN PREPARED BY:

MUSKINGUM COUNTY ENGINEER'S OFFICE
DOUG DAVIS - COUNTY ENGINEER
155 REHL ROAD - ZANESVILLE, OHIO 43701

INDEX OF SHEETS:

FINAL PLAN
SUBMISSION

ENGINEERS SEAL:

STATE OF OHIO
DOUGLAS R. DAVIS
#56345
REGISTERED
PROFESSIONAL ENGINEER

SIGNED:

DATE:

STANDARD CONSTRUCTION DRAWINGS

AS-1-81	7/19/02	DS-1-92	7/18/03		
		PSBD-1-93	4/20/07		
BP-3.1	10/19/07	TST-1-99	10/17/03		
DM-1.4	4/21/06	MT-97.11	9/05/06		
DM-4.2	1/21/05	MT-101.60	9/20/06		
DM-4.3	7/19/02	MT-105.10	10/18/02		
DM-4.4	7/19/02	MT-105.11	10/18/02		
GR-1.1	7/16/04	TC-73.10	1/19/01		
GR-2.1	1/16/04				
GR-3.6	1/16/04				
GR-4.1	4/18/03				

SUPPLEMENTAL SPECIFICATIONS

800	1/18/08
832	4/25/06

SPECIAL PROVISIONS

2008-44-MUS

PROJECT DESCRIPTION

IMPROVEMENT OF 0.04 MILES OF C.R. 6 (OLD RIVER ROAD) BY REPLACING A SINGLE SPAN TRUSS BRIDGE OVER BRUSH CREEK AND APPROACH ROADWAY CONSTRUCTION INCLUDING GRADING, DRAINAGE AND ASPHALT CONCRETE PAVING.

PROJECT EARTH DISTURBED AREA:	0.39 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	0.14 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	NOT REQUIRED

2005 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 APPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 4.

WE THE COMMISSIONERS OF MUSKINGUM COUNTY, IN FORMAL SESSION, HEREBY APPROVE THESE PLANS.

Brian D. Hill — 3-13-08
MUSKINGUM COUNTY COMMISSIONER — DATE

John D. Bates — 3-13-08
MUSKINGUM COUNTY COMMISSIONER — DATE

MUSKINGUM COUNTY COMMISSIONER — DATE

APPROVED
DATE 3/13/08 MUSKINGUM COUNTY ENGINEER

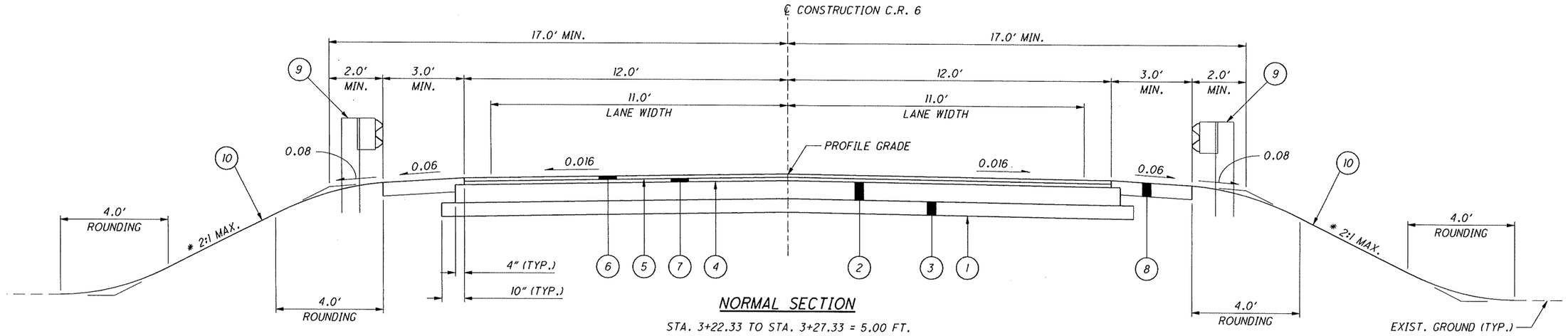
FEDERAL PROJECT NO. **FAN E033592**

PID NO. **24277**

CONSTRUCTION PROJECT NO. ------

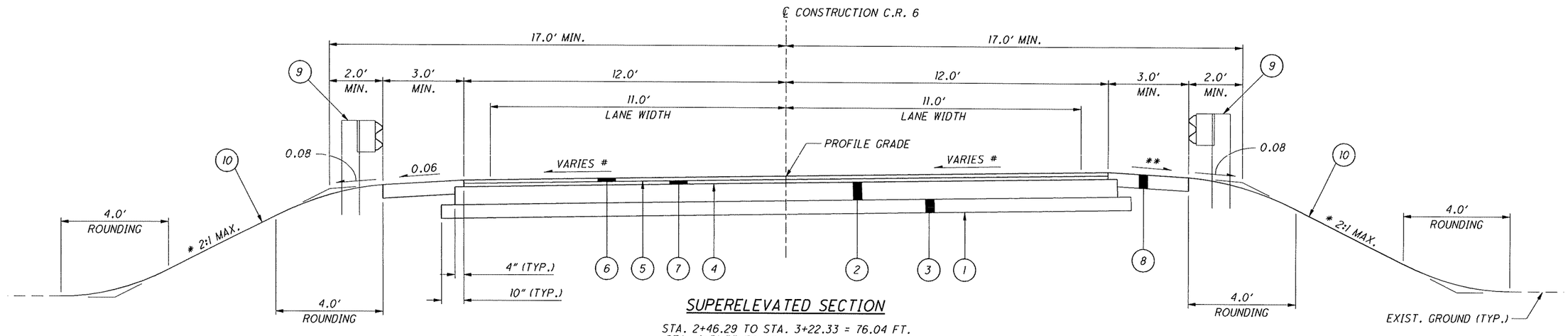
RAILROAD INVOLVEMENT **NONE**

MUS-C.R.6-11.85



NORMAL SECTION

STA. 3+22.33 TO STA. 3+27.33 = 5.00 FT.



SUPERELEVATED SECTION

STA. 2+46.29 TO STA. 3+22.33 = 76.04 FT.
STA. 4+51.33 TO STA. 5+32.37 = 81.04 FT.

TOTAL = 157.08 FT.

LEGEND

(1) ITEM 204 - SUBGRADE COMPACTION

(2) ITEM 301 - 8" ASPHALT CONCRETE BASE

(3) ITEM 304 - 6" AGGREGATE BASE

(4) ITEM 407 - TACK COAT

(5) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

(6) ITEM 448 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22

(7) ITEM 448 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22

(8) ITEM 411 - 8" STABILIZED CRUSHED AGGREGATE

(9) ITEM 606 - GUARDRAIL, TYPE 5

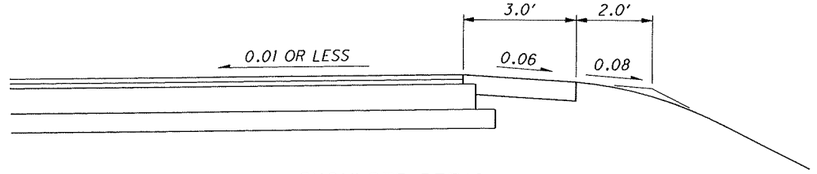
(10) ITEM 659 - SEEDING AND MULCHING

△ 0.08 FT./FT. DESIRABLE, 0.04 FT./FT. MINIMUM

* UNLESS OTHERWISE SHOWN ON THE CROSS SECTIONS

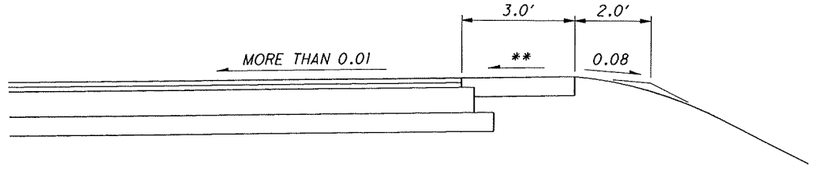
** SAME SLOPE AS PAVEMENT

** FOR HIGH SIDE SHOULDER SLOPES ON SUPERELEVATED SECTIONS SEE SHOULDER DETAILS, THIS SHEET



SHOULDER DETAIL

FOR PAVEMENT SLOPES OF LESS THAN 0.01 OR LESS



SHOULDER DETAIL

FOR PAVEMENT SLOPES MORE THAN 0.01

TYPICAL SECTIONS

MUS-C.R. 6-11.85

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ELECTRIC: AEP OHIO
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215-2373
PHONE: (800) 277-2177

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

INDIANA BAT NOTE

CLEARING OF ANY TREES THAT HAVE SUITABLE SUMMER BROOD REARING OR ROOSTING HABITAT FOR THE FEDERALLY ENDANGERED INDIANA BAT (E.G. TREES WITH EXFOLIATING BARK AND/OR CAVITIES), SHALL OCCUR BEFORE APRIL 15 OR AFTER SEPTEMBER 15 WHEN THE BATS WOULD NOT BE USING SUCH HABITAT.

ITEM 203 - EXCAVATION, AS PER PLAN

A QUANITY OF 50 CY IS INCLUDED FOR POSSIBLE ROADWAY UNDERCUT. THIS ITEM SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER.

ITEM 204 - GRANULAR MATERIAL, TYPE C, AS PER PLAN

A QUANITY OF 50 CY IS INCLUDED FOR POSSIBLE ROADWAY UNDERCUT. THIS ITEM SHALL BE USED AS DIRECTED BY THE ENGINEER.

INSTREAM WORK

INSTREAM WORK SHALL BE LIMITED WHERE PRACTICABLE. NO INSTREAM WORK SHALL OCCUR BETWEEN MARCH 15 AND JUNE 15 TO MINIMIZE PROJECT RELATED IMPACTS ON SPAWNING WARM WATER FISH SPECIES.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, REPAIR SEEDING AND MULCHING	7 SQ. YD
659, COMMERCIAL FERTILIZER	0.25 TON
659, LIME	0.03 ACRES
659, WATER	0.73 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

BANK STABILIZATION

BANK STABILIZATION WILL BE LIMITED TO WITHIN 50 FEET UPSTREAM AND DOWNSTREAM OF THE EXISTING STRUCTURE. BANK STABILIZATION WILL BE LIMITED TO REGRADING OF THE BANKS FROM TOE-OF-SLOPE (INSTREAM) TO THE TOP OF BANK AND WILL INCLUDE PLACEMENT OF ROCK CHANNEL PROTECTION WHERE REQUIRED. THIS EXCLUDES WORK SUCH AS WIDENING, DEEPENING OR RELOCATION. THE EXTENT OF SUCH STABILIZATION WILL BE KEPT TO A MINIMUM.

CONTRACTOR'S USE OF RIGHT-OF-WAY

THE CONTRACTOR SHALL NOT USE OR ENTER ANY AREA OUTSIDE OF THE RIGHT-OF-WAY LIMITS THAT ARE SHOWN ON THE PLANS.

WATERWAY PERMIT DETERMINATION (404/401) - LOCAL LET LPA PROJECTS

ALL PROJECTS INVOLVING JURISDICTIONAL WATERS OF THE UNITED STATES (STREAMS, RIVERS, NON-ISOLATED WETLANDS) AND/OR ISOLATED WETLANDS ARE SUBJECT TO REGULATION UNDER SECTIONS 404 AND 401 OF THE CLEAN WATER ACT, AND POSSIBLY OHIO EPA ISOLATED WETLAND LAW. THE OHIO DEPARTMENT OF TRANSPORTATION - OFFICE OF ENVIRONMENTAL SERVICES (OES) AND/OR THE UNITED STATES ARMY CORPS OF ENGINEERS (USACE) HAS DETERMINED THAT THE PROJECT MEETS THE CRITERIA OF NATIONWIDE PERMIT (NWP) 3 - MAINTENANCE; BASED UPON THE ANTICIPATED IMPACTS TO STREAM(S) AND/OR WETLAND(S). HOWEVER, THIS PERMIT DETERMINATION DID NOT INCLUDE THE USE OF TEMPORARY CONSTRUCTION ACCESS FILLS THAT MAY BE REQUIRED FOR CONSTRUCTION (I.E. CAUSEWAY STREAM CROSSINGS, CONSTRUCTION ACCESS PADS, COFFERDAMS, ETC.). INFORMATION REGARDING THE USE OF TEMPORARY CONSTRUCTION ACCESS FILLS MAY NOT HAVE BEEN KNOWN AT THE TIME OF THE PERMIT DETERMINATION. THE CONTRACTOR SHOULD BE AWARE THAT THE USE OF TEMPORARY FILL BELOW THE ORDINARY HIGH WATER MARK (OHWM), WHICH IS THE USACE'S JURISDICTIONAL LIMITS, WILL REQUIRE A PRE-CONSTRUCTION NOTIFICATION (PCN) AND AUTHORIZATION BY THE USACE UNDER NWP 33 - TEMPORARY CONSTRUCTION ACCESS AND DEWATERING. SHOULD TEMPORARY CONSTRUCTION ACCESS FILL BE REQUIRED, THE CONTRACTOR OR LOCAL PROJECT SPONSOR SHALL COORDINATE SUCH ACTIVITIES, INCLUDING THE PCN, WITH THE APPROPRIATE USACE DISTRICT OFFICE AND ALLOW 60 DAYS MINIMUM FOR PROCESSING WITH THE USACE. THE CONTRACTOR SHALL NOT UTILIZE TEMPORARY FILLS BELOW OHWM UNTIL SUCH ACTIVITY IS AUTHORIZED BY THE USACE. SHOULD A PCN BE REQUIRED, THE PCN SHALL INCLUDE PERTINENT INFORMATION (I.E. VOLUME AND SURFACE AREA OF TEMPORARY FILLS) AND DRAWINGS (PLAN AND PROFILE VIEW) OF TEMPORARY FILLS BELOW OHWM. ONLY CLEAN, NON ERODIBLE MATERIALS SHALL BE USED FOR TEMPORARY CONSTRUCTION ACCESS FILLS. ANY TEMPORARY FILLS BELOW OHWM SHALL BE REMOVED FOLLOWING COMPLETION OF THE AUTHORIZED ACTIVITY AND THE AREA OF STREAM WHEREM TEMPORARY FILL WAS LOCATED SHALL BE RESTORED TO ITS PRE-CONSTRUCTION CONDITION.

USACE DEFINITION OF OHWM - THE ORDINARY HIGH WATER MARK IS THE LINE ON THE SHORES ESTABLISHED BY THE FLUCTUATIONS OF WATER AND INDICATED BY PHYSICAL CHARACTERISTICS SUCH AS A CLEAR, NATURAL LINE IMPRESSED ON THE BANK; SHELVING; CHANGES IN THE CHARACTER OF THE SOIL; DESTRUCTION OF TERRESTRIAL VEGETATION; THE PRESENCE OF LITTER AND DEBRIS; OR THE APPROPRIATE MEANS THAT CONSIDER THE CHARACTERISTICS OF THE SURROUNDING AREAS.

CENTERLINE REFERENCES C.R. 6

STATION	OFFSET (FT.)	SIDE	NORTHING	EASTING	ELEVATION	DESCRIPTION
0+62.32	0.00	℄	684192.49	2115645.00		P.C.
1+96.63	0.00	℄	684129.59	2115763.69		P.I.
3+22.32	0.00	℄	684009.50	2115823.85		P.T.
4+46.33	0.00	℄	683898.62	2155879.39		P.C.
5+10.57	0.00	℄	683841.19	2115908.17		P.I.
5+71.33	0.00	℄	683808.26	2115963.32		P.T.

CALCULATED SEJ CHECKED ---

GENERAL NOTES

MUS-C.R.6-11.85

ITEM 614 - MAINTAINING TRAFFIC

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48"x30" ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES, GATES AND LIGHTS AS SHOWN ON SCD MT-101.60 AT THE LOCATIONS SHOWN DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS SHOWN ON THE PLANS.

ALL WORK AND TRAFFIC DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

DETOUR SIGNAGE

THE COUNTY SHALL ERECT AND MAINTAIN DETOUR SIGNAGE AS SHOWN ON THE PLANS.

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE COUNTY EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. THE COUNTY SHALL THEN PROVIDE AND INSTALL ALL DEVICES NECESSARY TO DEFINE THE ROUTE OF THE DETOUR AND SHALL MAINTAIN THE SAME THROUGHOUT THE DETOUR LIMITATION DATES. ALL TRAFFIC CONTROL DEVICES REQUIRED, OTHER THAN FOR THE DETOUR, SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR.

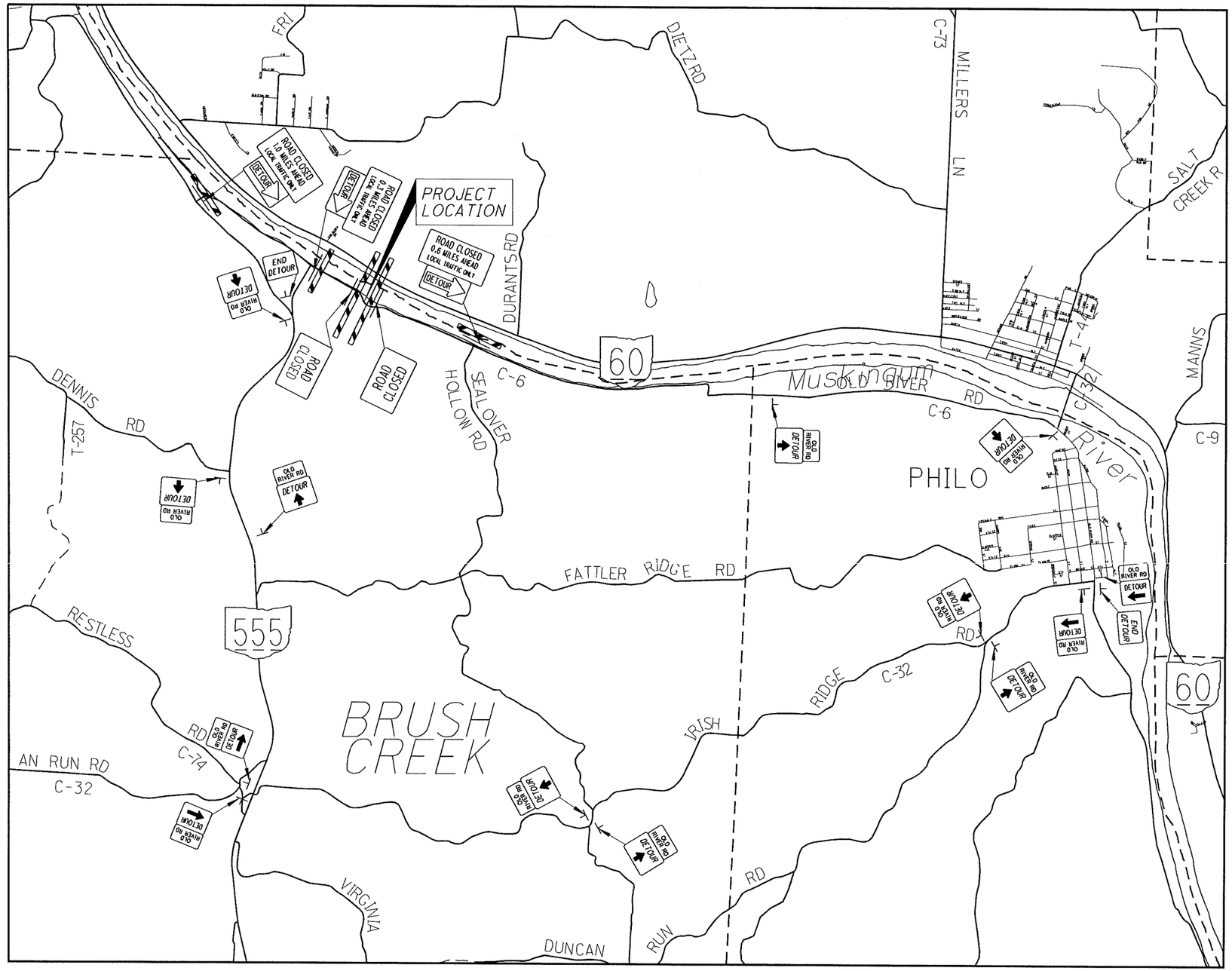
DETOUR LIMITATION

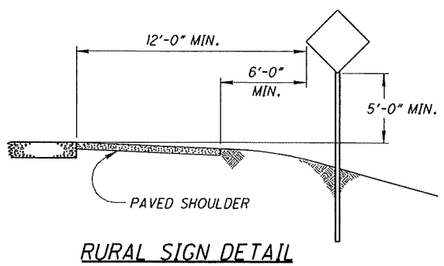
THE MAXIMUM LENGTH OF TIME FOR THE DETOUR ROUTE TO BE IN EFFECT SHALL BE NINETY (90) CONSECUTIVE DAYS. CONSTRUCTION WORK MAY BE PERFORMED BEFORE AND AFTER THE DETOUR LIMITATION DATES, BUT THERE SHALL BE NO RESTRICTIONS TO THROUGH OR LOCAL TRAFFIC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM THE CONSTRUCTION WORK WITHIN THE DETOUR LIMITATION TIME. THE FAILURE OF THE CONTRACTOR TO MEET THE DETOUR LIMITATION DATES WILL CAUSE SEPARATE LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07 TO BE ASSESSED. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF 108.07 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 2 M. GAL.





RURAL SIGN DETAIL

SIGN KEY

END DETOUR
M4-8A (30"x24")

OLD RIVER RD DETOUR
SPECIAL (30"x12") M4-9C (30"x24")

OLD RIVER RD DETOUR
SPECIAL (30"x12") M4-9L (30"x24")

OLD RIVER RD DETOUR
SPECIAL (30"x12") M4-9R (30"x24")

ROAD CLOSED X.X MILES AHEAD LOCAL TRAFFIC ONLY DETOUR
R11-3a (60"x30") M4-10L (48"x18")

ROAD CLOSED X.X MILES AHEAD LOCAL TRAFFIC ONLY DETOUR
R11-3a (60"x30") M4-10R (48"x18")

ROAD CLOSED
R11-2 (48"x30")

LEGEND

GATES AND BARRICADES AS SHOWN ON SCD MT-101.60

TYPE III BARRICADE

TYPICAL POST MOUNTED SIGN (SEE RURAL SIGN DETAIL)

HORIZONTAL SCALE IN FEET
0 750 1500 3000

CALCULATED SEJ
CHECKED ---

MAINTENANCE OF TRAFFIC DETOUR PLAN AND GENERAL NOTES

MUS-C.R.6-11.85

SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
								OFFICE CALCS		3	4	7	11						
																		ROADWAY	
										LUMP				201	11000	LUMP		CLEARING AND GRUBBING	
													283	203	10000	283	CU YD	EXCAVATION	
										50				203	10001	50	CU YD	EXCAVATION, AS PER PLAN	3
													14	203	20000	14	CU YD	EMBANKMENT	
								462						204	10000	462	SQ YD	SUBGRADE COMPACTION	
										50				204	30021	50	CU YD	GRANULAR MATERIAL, TYPE C, AS PER PLAN	3
										1				204	45000	1	HOUR	PROOF ROLLING	
												175		606	13000	175	FT	GUARDRAIL, TYPE 5	
												4		606	25000	4	EACH	ANCHOR ASSEMBLY, TYPE A	
												4		606	32160	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE TST	
																		EROSION CONTROL	
												130		601	32204	130	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	
													136	659	10000	136	SQ YD	SEEDING AND MULCHING	
										7				659	14000	7	SQ YD	REPAIR SEEDING AND MULCHING	
										0.25				659	20000	0.25	TON	COMMERCIAL FERTILIZER	
										0.03				659	31000	0.03	ACRE	LIME	
										0.73				659	35000	0.73	M GAL	WATER	
														832	30000	500	EACH	EROSION CONTROL	
																		PAVEMENT	
								99						301	46000	99	CU YD	ASPHALT CONCRETE BASE, PG64-22	
								77						304	20000	77	CU YD	AGGREGATE BASE	
								44						407	10000	44	GALLON	TACK COAT	
								44						407	14000	44	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
								24						411	10000	24	CU YD	STABILIZED CRUSHED AGGREGATE	
								21						448	46050	21	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
								15						448	47020	15	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
																		TRAFFIC CONTROL	
												10		626	00100	10	EACH	BARRIER REFLECTOR, TYPE A	
												0.04		642	00290	0.04	MILE	CENTER LINE	
																		MAINTENANCE OF TRAFFIC	
											2			616	10000	2	M GAL	WATER	
																		STRUCTURES (OVER 20')	
																		FOR BRIDGE NO. MUS-CR6-1185	13
														614	11000	LUMP		MAINTAINING TRAFFIC	
														623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
														624	10000	LUMP		MOBILIZATION	

CALCULATED SEJ
CHECKED ---

GENERAL SUMMARY

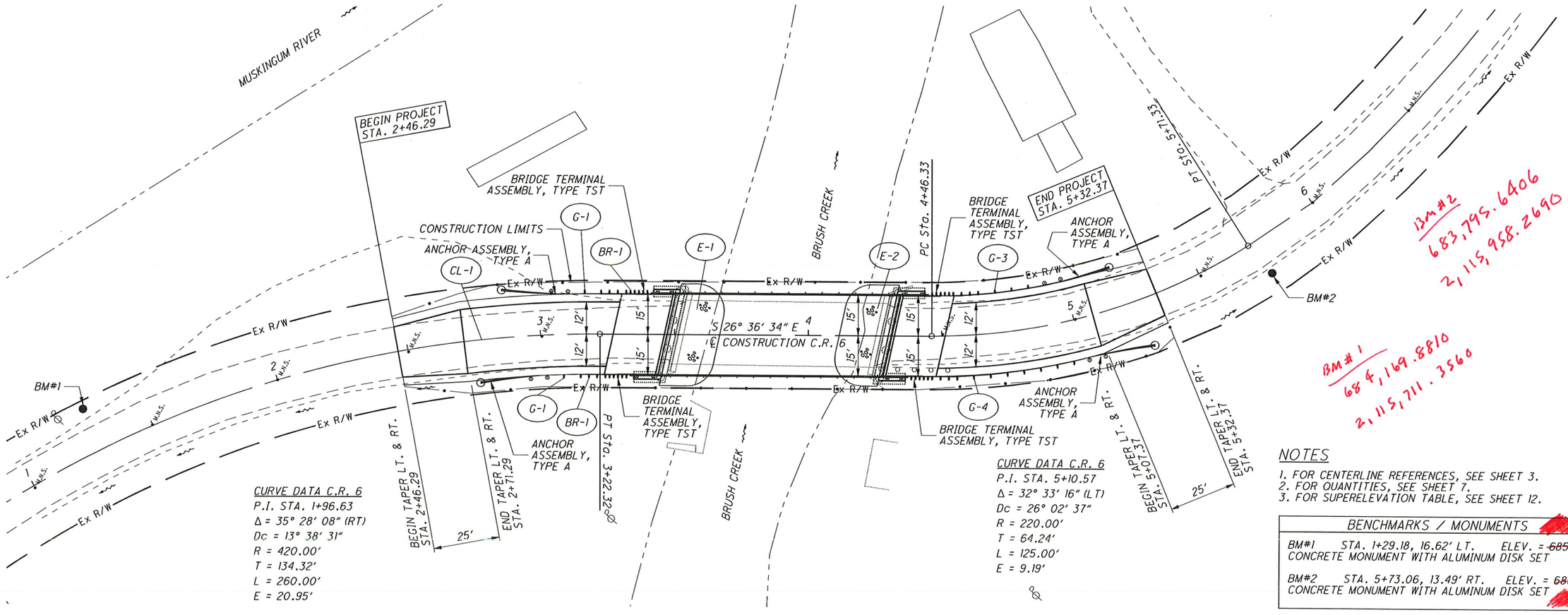
MUS-C.R.6-11.85

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	606 GUARDRAIL, TYPE 5	606 BRIDGE TERMINAL ASSEMBLY, TYPE TST	606 ANCHOR ASSEMBLY, TYPE A	626 BARRIER REFLECTOR, TYPE A	642 CENTER LINE DOUBLE SOLID												
					CU YD	FT	EACH	EACH	EACH	MILE												
G-1	6	2+86.70	3+41.53	LT		31.25	1	1														
G-2	6	2+75.78	3+33.76	RT		31.25	1	1														
G-3	6	4+44.90	5+18.85	LT		43.75	1	1														
G-4	6	4+37.13	5+25.25	RT		68.75	1	1														
E-1	6	3+44.41	3+66.52	LT/RT	65																	
E-2	6	4+12.13	4+34.22	LT/RT	65																	
BR-1	6	2+86.70	5+18.75	LT					5													
BR-2	6	4+44.90	5+25.25	RT					5													
CL-1	6	2+46.29	5+32.37	℄						0.04												
TOTALS CARRIED TO GENERAL SUMMARY					130	175	4	4	10	0.04												

CALCULATED SEJ
CHECKED ---

ESTIMATED QUANTITIES

MUS-C.R.6-11.85



CURVE DATA C.R. 6
P.I. STA. 1+96.63
Δ = 35° 28' 08" (RT)
Dc = 13° 38' 31"
R = 420.00'
T = 134.32'
L = 260.00'
E = 20.95'

CURVE DATA C.R. 6
P.I. STA. 5+10.57
Δ = 32° 33' 16" (LT)
Dc = 26° 02' 37"
R = 220.00'
T = 64.24'
L = 125.00'
E = 9.19'

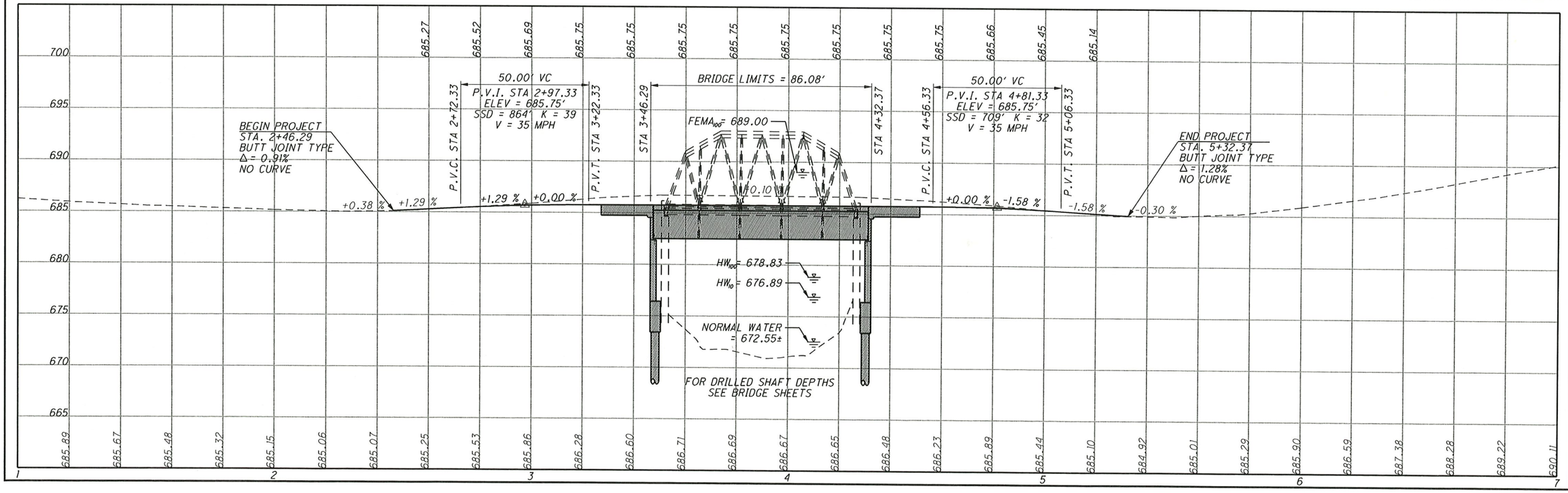
NOTES

1. FOR CENTERLINE REFERENCES, SEE SHEET 3.
2. FOR QUANTITIES, SEE SHEET 7.
3. FOR SUPERELEVATION TABLE, SEE SHEET 12.

BENCHMARKS / MONUMENTS

BM#1 STA. 1+29.18, 16.62' LT. ELEV. = ~~685.49~~
CONCRETE MONUMENT WITH ALUMINUM DISK SET

BM#2 STA. 5+73.06, 13.49' RT. ELEV. = ~~685.60~~
CONCRETE MONUMENT WITH ALUMINUM DISK SET



HORIZONTAL SCALE IN FEET
0 10 20 40

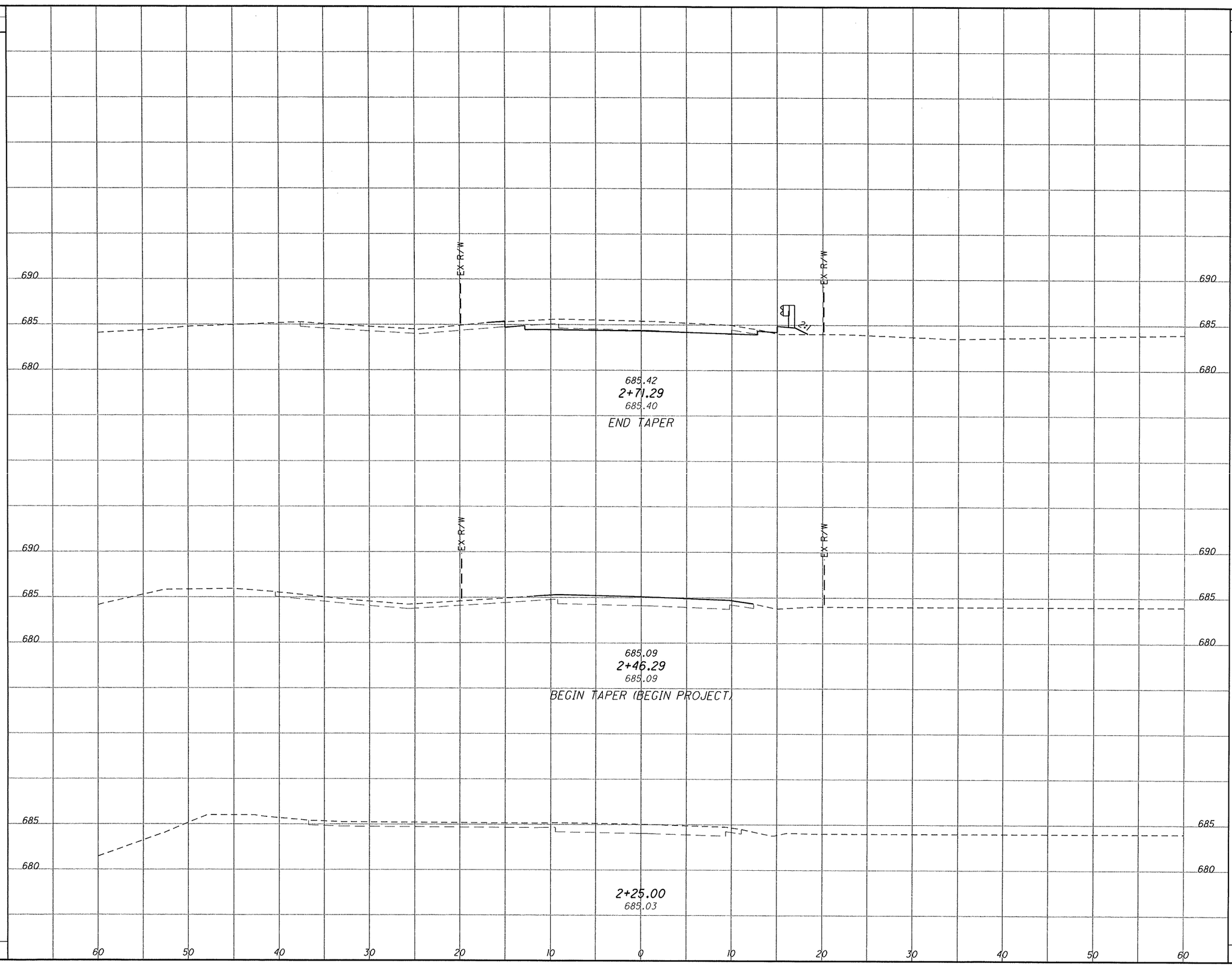
CALCULATED SEJ
CHECKED ---

PLAN AND PROFILE
STA. 1+00 TO STA. 7+00

MUS-C.R.6-11.85

6
22

SEEDING	
END WIDTH	SQ. YDS.
3.57	11
	14
6.16	
	25



END AREA		VOLUME	
CUT	FILL	CUT	FILL
28	2		
		13	1
0	0		
		0	0
		13	1

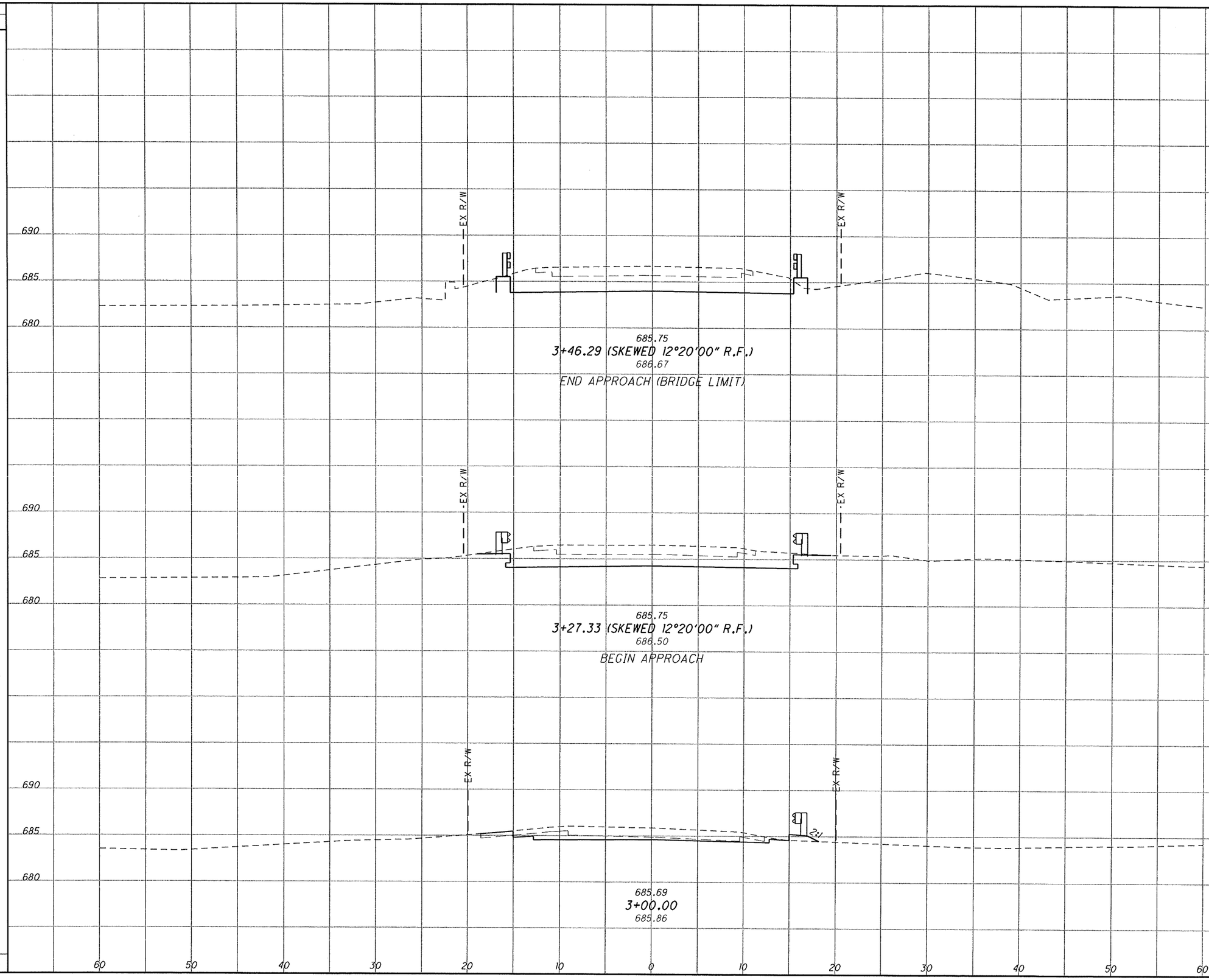
CALCULATED SEJ
CHECKED ---

CROSS SECTION
STA. 2+25.00 TO STA. 2+71.29

MUS-C.R.6-11.85

8
22

SEEDING	
END WIDTH	SQ. YDS.
0.70	3
	6
7.73	20
3.38	
	29



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		38	0
68	0		
		60	1
33	2		
		32	2
		130	3

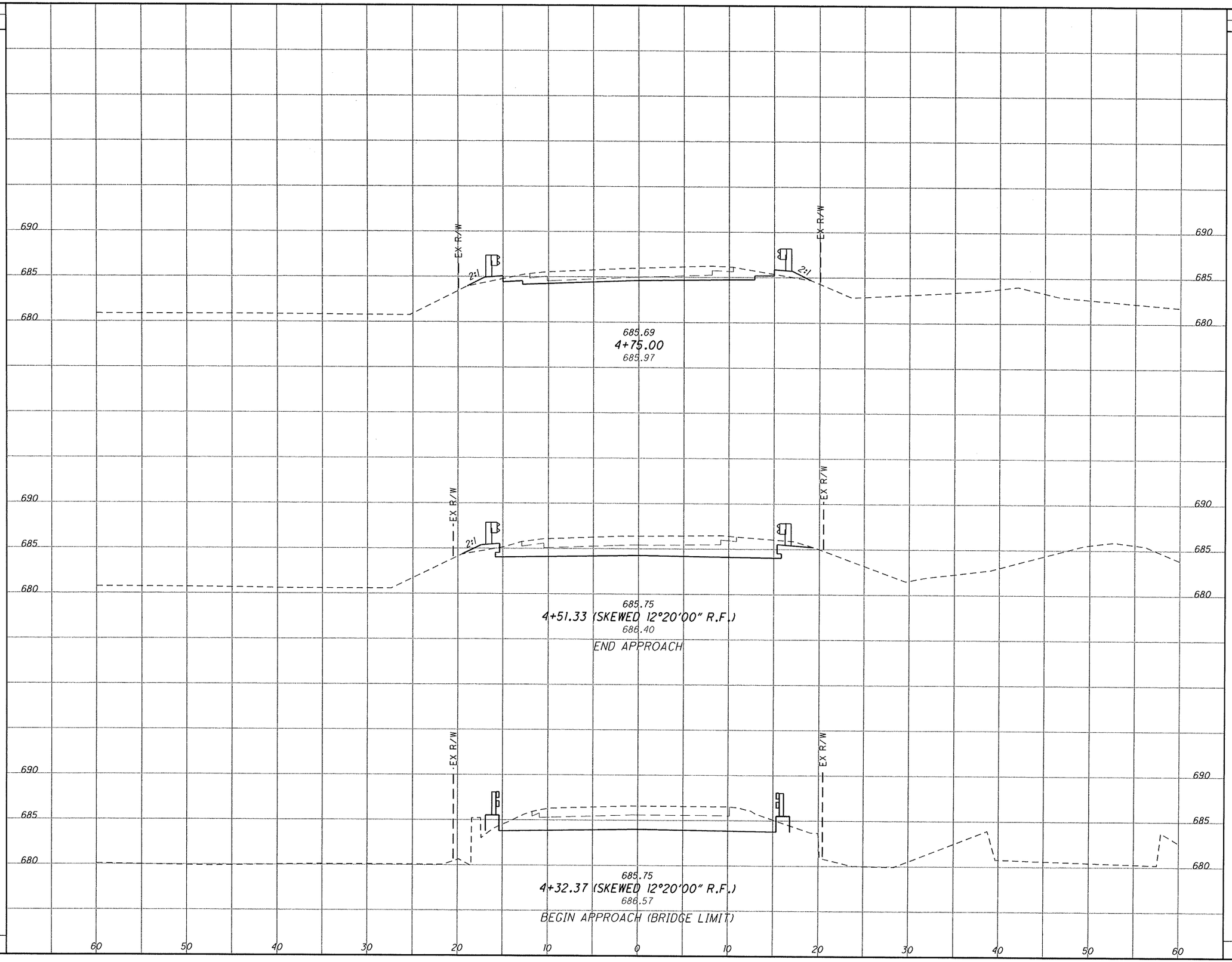
CALCULATED SEJ
CHECKED ---

CROSS SECTIONS
3+00.00 TO STA. 3+46.29

MUS-C.R.6-11.85

9/22

SEEDING	
END WIDTH	SQ. YDS.
8.48	30
	27
8.46	6
0.00	
	63



END AREA		VOLUME	
CUT	FILL	CUT	FILL
36	3	54	3
65	2	35	0
0	0	0	0
		89	3

CALCULATED SEJ
CHECKED ---

CROSS SECTIONS
4+32.37 TO STA. 4+75.00

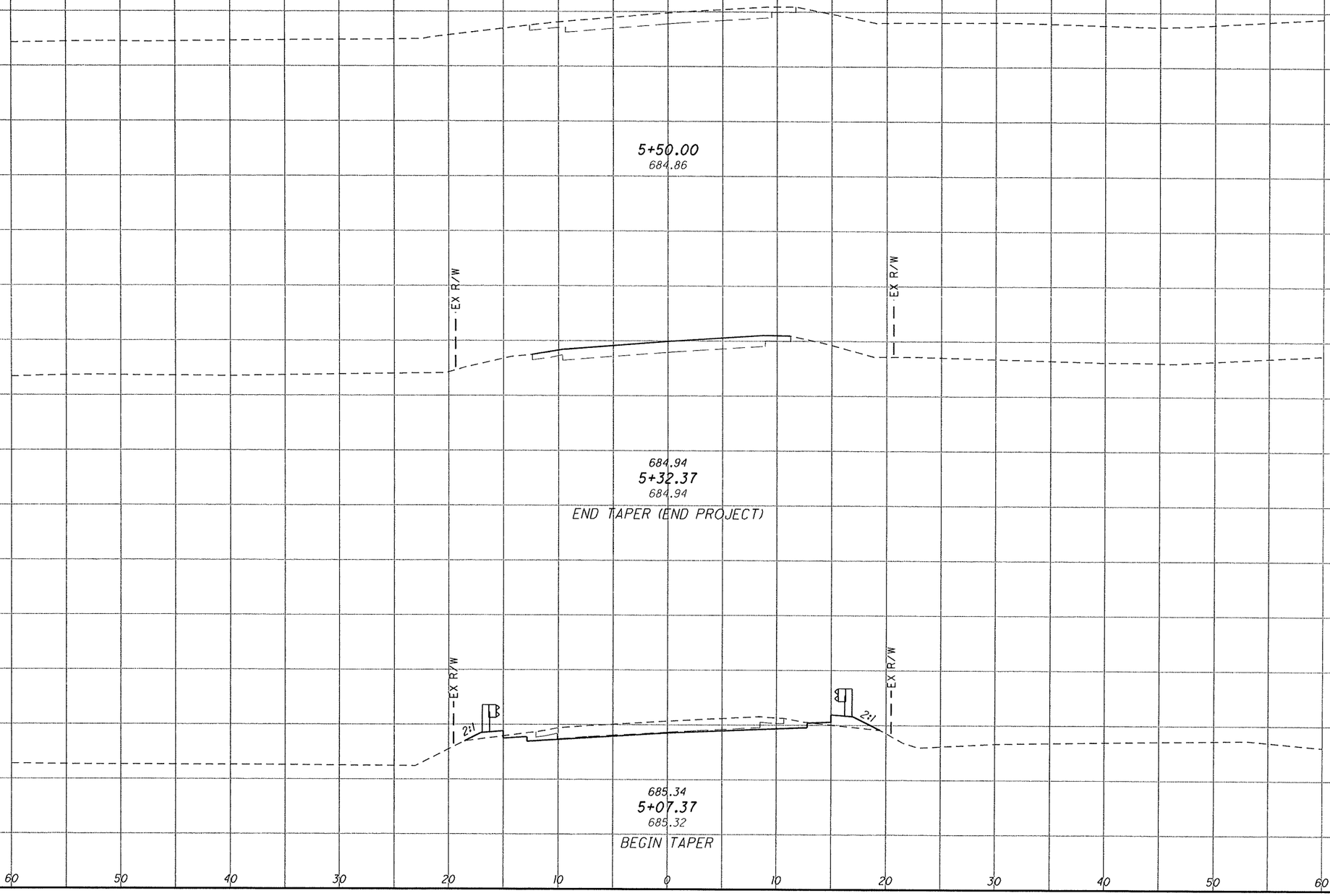
MUS-C.R.6-11.85

10
22

EARTHWORK QUANTITY SUB-SUBSUMMARY

STATION FROM	STATION TO	203 EXCAVATION	203 EMBANKMENT	659 SEEDING AND MULCHING
		CU. YD.	CU. YD.	SQ. YD.
2+25	2+71.29	13	1	25
3+00	3+46.29	130	3	29
4+32.37	4+75	89	3	63
5+07.37	5+50	51	7	19
TOTALS TO GENERAL SUMMARY		283	14	136

SEEDING END WIDTH	SEEDING SQ. YDS.
5.07	19
8.49	19



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		13	2
27	5		
		38	5
		51	7

CALCULATED SEJ
CHECKED ---

CROSS SECTIONS
STA. 5+07.37 TO STA. 5+50.00

MUS-C.R.6-11.85

11
22

SUPERELEVATION TABLE

P.I. STA. 1+19.63 | Dc = 13° 38′ 31″

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
685.32		+0.23	+0.0227	10.00	2+46.29	685.09	10.00	-0.0389	-0.39		684.70	MATCH EX.
685.54		+0.12	+0.0101	12.00	2+71.29	685.42	12.00	-0.0312	-0.37		685.05	
685.64		-0.05	-0.0044	12.00	3+00.00	685.69	12.00	-0.0224	-0.27		685.42	
685.56		-0.19	-0.0156	12.00	3+22.33	685.75	12.00	-0.0156	-0.19		685.56	P.T.

SUPERELEVATION TABLE

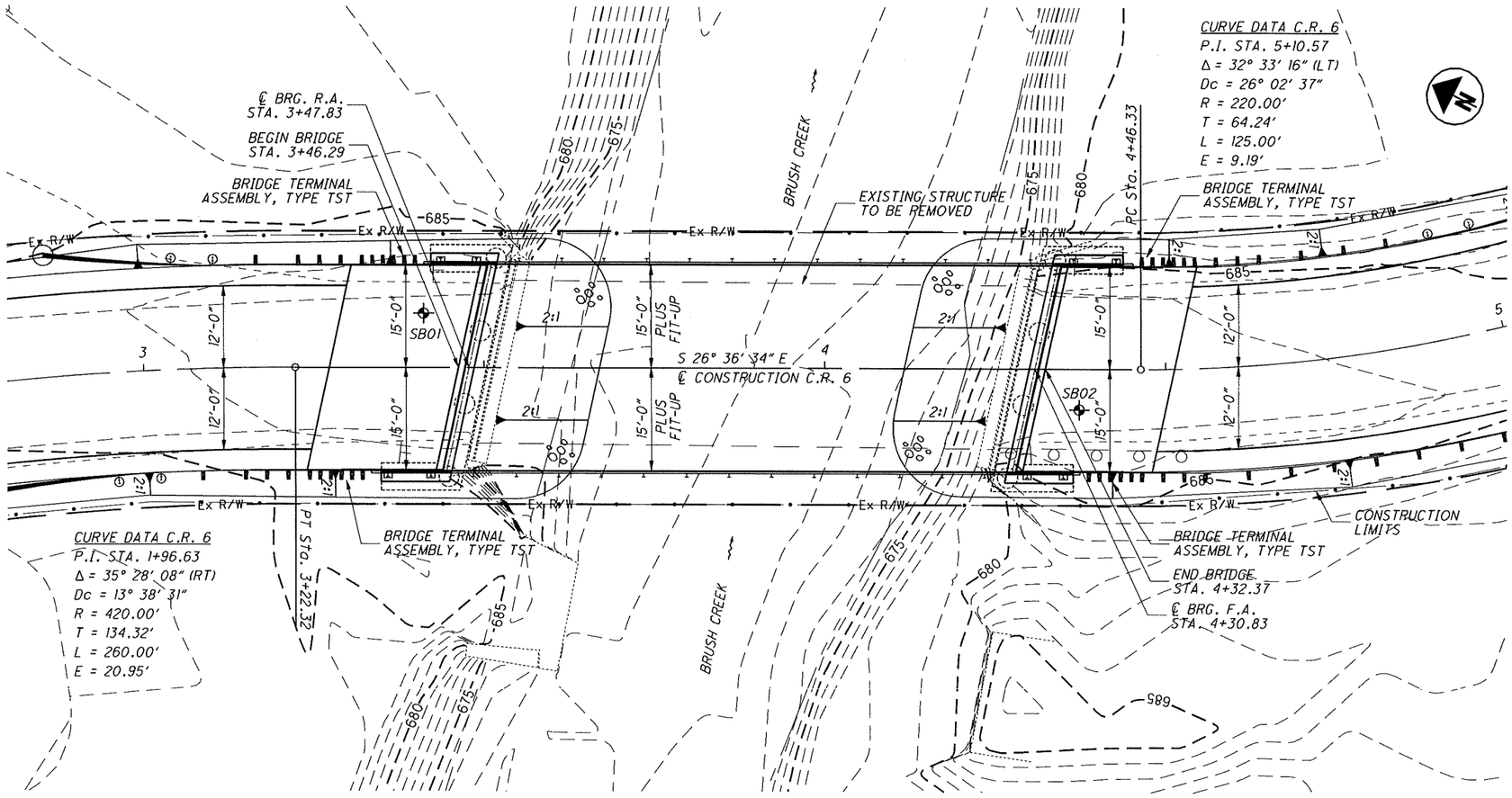
P.I. STA. 5+10.57 | 26° 02′ 37″

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
685.56		-0.19	-0.0156	12.00	4+46.33	685.75	12.00	-0.0156	-0.19		685.56	P.C.
685.25		-0.44	-0.0369	12.00	4+75.00	685.69	12.00	+0.0115	+0.14		685.83	
684.59		-0.75	-0.0623	12.00	5+07.37	685.34	12.00	+0.0409	+0.49		685.83	
684.12		-0.82	-0.0818	10.00	5+32.37	684.94	10.00	+0.0635	+0.64		685.58	MATCH EX.

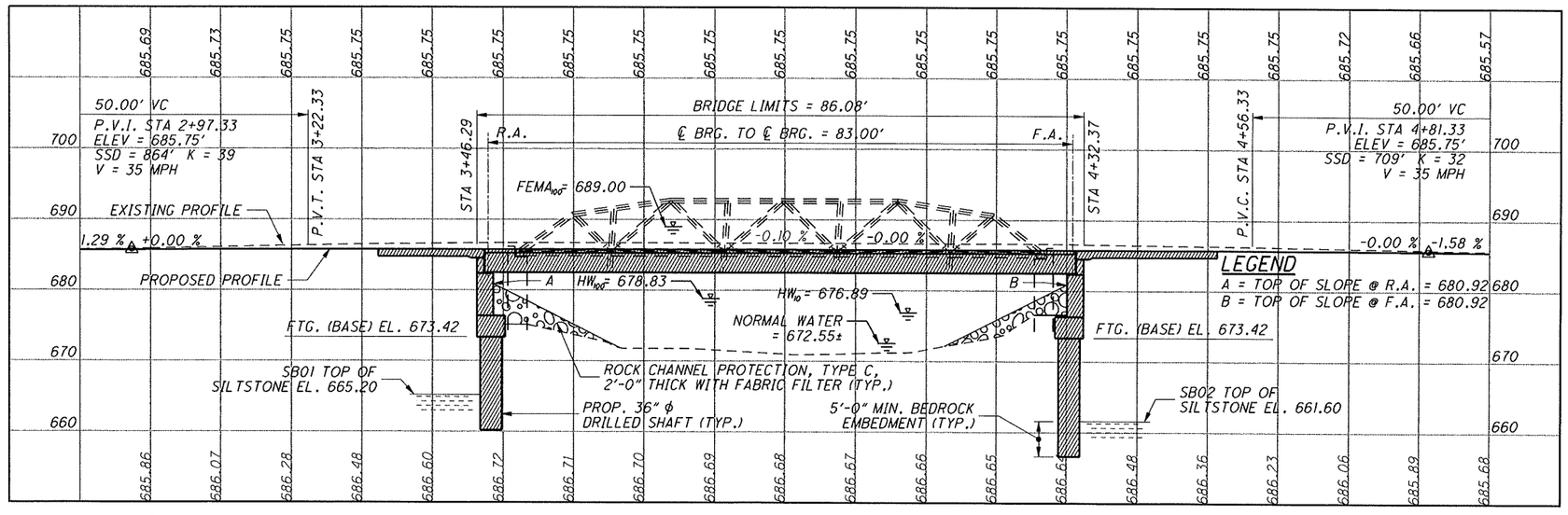
CALCULATED SEJ
CHECKED ---

SUPERELEVATION TABLE

MUS-C.R.6-11.85



PLAN



PROFILE ALONG ℄ CONSTRUCTION C.R. 6

NOTES

1. FOR ADDITIONAL BENCHMARK / MONUMENT INFORMATION SEE ROADWAY PLAN SHEET 6.
2. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
2008 ADT = 1130 2008 ADTT = 67
2028 ADT = 1240 2028 ADTT = 70
DIRECTIONAL DISTRIBUTION = 54%

LEGEND

ORIGINAL SOIL BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 25 SQ. MILES
Q (10) = 2140 V (10) = 7.65 FT/S
Q (100) = 3600 V (100) = 9.13 FT/S
STRUCTURE CLEARS THE 10 YEAR
DESIGN HW BY 5.61 FEET.

EXISTING STRUCTURE

TYPE: SINGLE SPAN STEEL TRUSS BRIDGE SUPPORTED ON CONCRETE WALL ABUTMENTS WITH CONCRETE FOOTING ON ROCK

SPANS: 74'-0" ± C/C BEARINGS
ROADWAY: 24'-0" ± F/F GUARDRAIL
LOADING: H10
SKEW: 12°00'00" R.F.
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
STRUCTURAL FILE NUMBER: 6035140
DATE BUILT: 1969
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE BOX BEAM BRIDGE SUPPORTED ON CONCRETE ABUTMENTS WITH CONCRETE FOOTING ON ROCK

SPANS: 83'-0" C/C BEARINGS
ROADWAY: 30'-0" (PLUS FIT-UP) F/F GUARDRAIL
LOADING: HS25 AND ALTERNATE MILITARY LOADING
SKEW: 12°20'00" R.F.
WEARING SURFACE: CONCRETE
FUTURE WEARING SURFACE: 60 PSF
APPROACH SLABS: 15'-0" LONG (AS-1-81)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
COORDINATES: LATITUDE 39°52'36" N
LONGITUDE 81°58'30" W

MUSKINGUM COUNTY
ENGINEER'S OFFICE
155 REHL ROAD
ZANESVILLE, OHIO 43701

REVIEWED	DATE
---	---
DRAWN	REVISED
SEJ	
DESIGNED	CHECKED
DRD	---

STRUCTURE FILE NUMBER 6035140

STA. 3+46.29
STA. 4+32.37

SITE PLAN
BRIDGE NO. MUS-006-1185
OVER BRUSH CREEK

MUS-C.R.6-11.85
PID No. 24277

1 / 10

13 / 22

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

DS-1-92 REVISED 07-18-03
PSBD-1-93 REVISED 07-21-06
TST-1-99 REVISED 10-17-03

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 INCLUDING THE 2003 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: HS25 AND THE ALTERNATE MILITARY LOADING.
FUTURE WEARING SURFACE: 60 PSF.

DESIGN DATA:

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

CONCRETE S MODIFIED - COMPRESSIVE STRENGTH 4000 PSI (DRILLED SHAFT)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI
SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7000 PSI
COMPRESSIVE STRENGTH (RELEASE) - 5000 PSI

PRESTRESSING STRAND:
AREA = 0.167 IN^2
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD

IPANEX CONCRETE WATERPROOFING
STEEL DRIP STRIP
SEALING OF CONCRETE SURFACES

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

THE EXISTING STEEL TRUSS AND GUARDRAIL SHALL BE REMOVED FOR STORAGE AND SHALL BECOME PROPERTY OF MUSKINGUM COUNTY. THE EXISTING TRUSS SHALL BE CUT INTO MANAGEABLE PIECES AS DIRECTED BY THE COUNTY ENGINEER. BOTH THE TRUSS AND GUARDRAIL SHALL BE DELIVERED TO A LOCATION DESIGNATED BY THE MUSKINGUM COUNTY ENGINEER. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 202, STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

CONTACT DOUG DAVIS AT THE MUSKINGUM COUNTY ENGINEER'S OFFICE AT (740) 454-0155 TO ARRANGE FOR MATERIALS TO BE RECEIVED BY THE COUNTY.

DRILLED SHAFTS

THE DESIGN LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 68.8 TONS AT THE ABUTMENTS. THIS LOAD IS RESISTED BY SHAFT END BEARING. THE ALLOWABLE END BEARING PRESSURE IS 10 TONS PER SQUARE FOOT. THE REINFORCING STEEL SHALL BE EPOXY COATED ACCORDING TO 709.00. PERMANENT STEEL CASING WILL BE REQUIRED TO PREVENT COLLAPSE AND GROUNDWATER INFILTRATION.

IF THE SOIL CONDITION ENCOUNTERED IN THE FIELD DEVIATES FROM THE INFORMATION PROVIDED IN THE FOUNDATION INVESTIGATION REPORT, THE COUNTY ENGINEER SHALL BE CONTACTED FOR ADVICE.

UTILITY LINES

THE UTILITY SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE 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.

BEARING PAD SHIMS

PLACE 1/8" THICK PREFORMED BEARING PAD SHIMS, PLAN AREA 10 INCHES BY 6 INCHES, UNDER THE ELASTOMERIC BEARING PADS WHERE REQUIRED FOR PROPER BEARING. FURNISH TWO SHIMS PER BEAM. THE COUNTY WILL MEASURE THIS ITEM BY THE TOTAL NUMBER SUPPLIED. THE COUNTY WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - 1/8" PREFORMED BEARING PADS. ANY UNUSED SHIMS WILL BECOME THE PROPERTY OF MUSKINGUM COUNTY.

ITEM 503 - COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN

THE CONTRACTOR SHALL PROVIDE MEANS FOR CONSTRUCTING THE PROJECT IN A MANOR THAT DOES NOT EXTEND OUTSIDE OF THE RIGHT-OF-WAY LIMITS SHOWN ON THESE PLANS. ANY SHEETING OR OTHER MATERIALS AND/ OR METHODS SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

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

ESTIMATED QUANTITIES

CALCULATED: SEJ DATE: 08/25/07 — CHECKED: DRD DATE: 08/25/07

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTS.	SUPER	GEN'L	SPEC & AS PER PLAN SHEET NO.
202	11003	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LUMP	2
503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN			LUMP	2
503	21101	200	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN			LUMP	2
509	10000	13487	POUND	EPOXY COATED REINFORCING STEEL	9399			
511	34435	47	CU YD	CLASS S CONCRETE, BRIDGE DECK, AS PER PLAN		47		2
511	43501	116	CU YD	CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING, AS PER PLAN	116			2
512	10100	159	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	73	86		
512	44400	19	SQ YD	TYPE B WATERPROOFING		19		
515	12090	6	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB33-48		6		
515	12080	2	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB33-36		2		
516	13600	195	SQ FT	1" PREFORMED EXPANSION JOINT FILLER			193	
516	31001	62	FT	JOINT SEALER, AS PER PLAN			62	9
516	41100	16	EACH	1/8" PREFORMED BEARING PAD			16	
516	43100	32	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), 10"x6"x1 1/2"			32	
517	70000	206.75	FT	RAILING (TWIN STEEL TUBE)		206.75		
518	21200	56	CU YD	POROUS BACKFILL WITH FILTER FABRIC	56			
518	22300	207	FT	STEEL DRIP STRIP		207		
518	40000	65	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	65			
518	40010	30	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	30			
524	94702	81	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK	81			
524	94704	40	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK	40			
526	15000	134	SY	REINFORCED CONCRETE APROACH SLAB (T=13")			134	

ITEM 511 - CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING, AS PER PLAN

THE CONTRACTOR SHALL INSTALL A METAL BENCHMARK DISK ON TOP OF NORTHEAST WINGWALL. THE DISK SHALL BE PLACED CAREFULLY ON A LEVELED SECTION AT A TURNED BACK PORTION THE WINGWALL. THE CONTRACTOR SHALL PROVIDE AN ELEVATION OF THE BENCHMARK, WHICH SHALL BE VERIFIED BY A PROFESSIONAL SURVEYOR. THE ELEVATION MEASURED SHALL USE NAVD 88 DATUM. THE DISK SHALL BE PROVIDED BY THE MUSKINGUM COUNTY ENGINEER. PAYMENT FOR ALL OTHER MATERIALS, LABOR AND INCIDENTALS NECESSARY TO INSTALL THE BENCHMARK DISK SHALL BE INCLUDED IN ITEM 511 - CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING, AS PER PLAN. IF THE METAL BENCHMARK IS DISTURBED PRIOR TO THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUPPLY A NEW DISK, RESET AND VERIFY ITS ELEVATION AT NO ADDITIONAL COST TO THE COUNTY.

ITEM 511 - CLASS S CONCRETE, BRIDGE DECK, AS PER PLAN

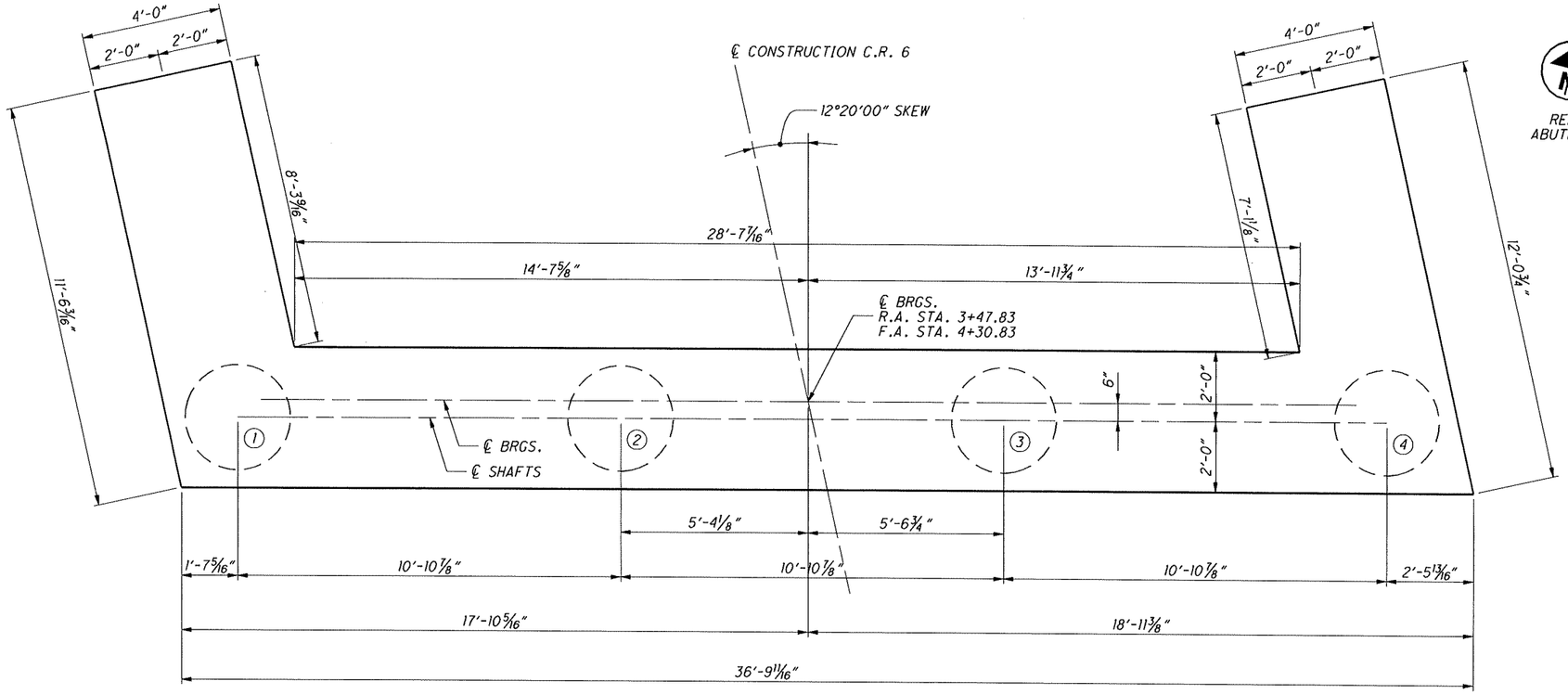
THE CONTRACTOR SHALL ENSURE THAT IPANEX WATERPROOFING IS ADDED TO THE CONCRETE MIXTURE AS REQUIRED BY THE ENGINEER. STANDARD CLASS S CONCRETE SHALL BE USED WITH THE ADDITION OF IPANEX WATERPROOFING AT A RATE OF 13.8 OZ PER 100 LB OF CEMENT OR CEMENTATIOUS MATERIAL. THIS COST SHALL BE INCLUDED IN ITEM 511-CLASS S CONCRETE, BRIDGE DECK, AS PER PLAN.

MUSKINGUM COUNTY
ENGINEER'S OFFICE
155 REHL ROAD
ZANESVILLE, OHIO 43701
MCEO

REVIEWED ---
DATE ---
STRUCTURE FILE NUMBER 6035140
DRAWN SEJ
REVISED ---
DESIGNED DRD
CHECKED ---

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. MUS-006-1185
OVER BRUSH CREEK

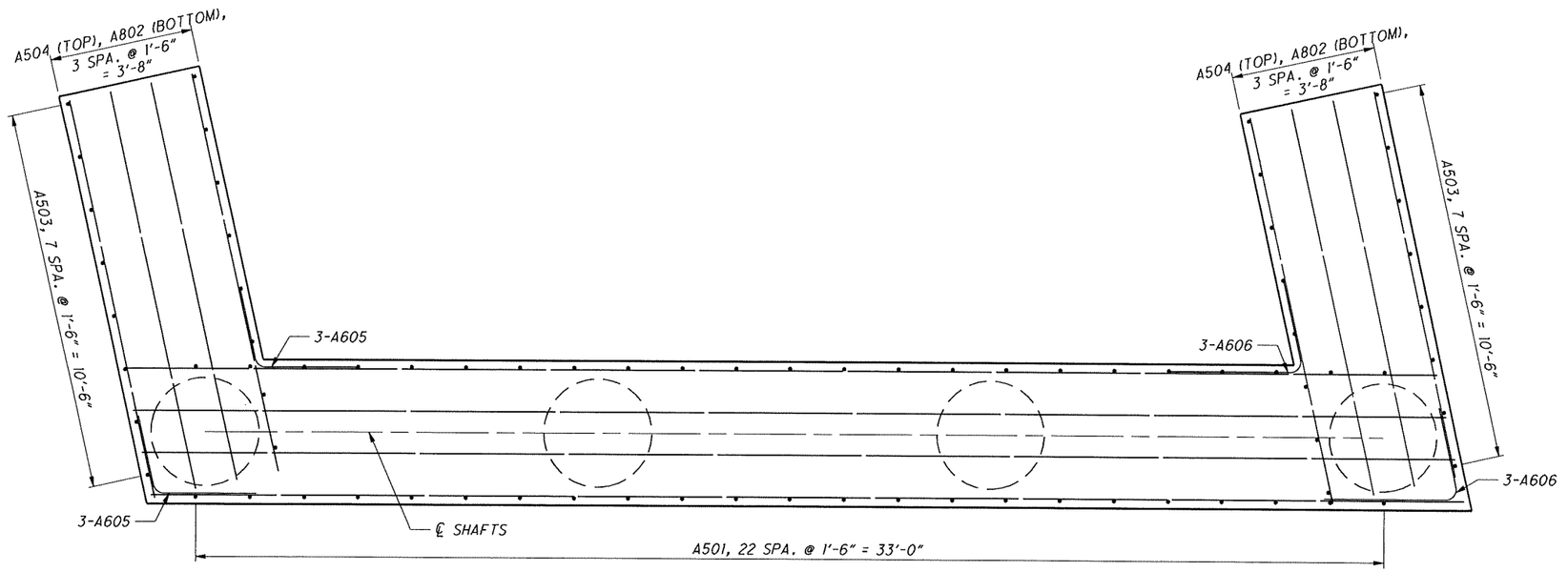
MUS-C.R. 6-11.85
PID No. 24277



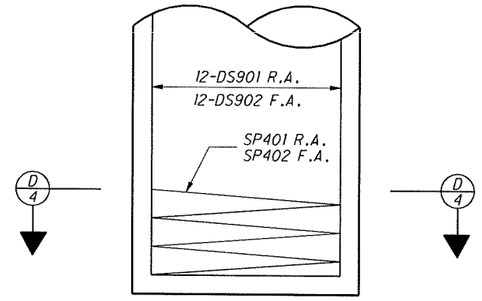
PLAN (REINFORCING STEEL NOT SHOWN)

REAR ABUTMENT

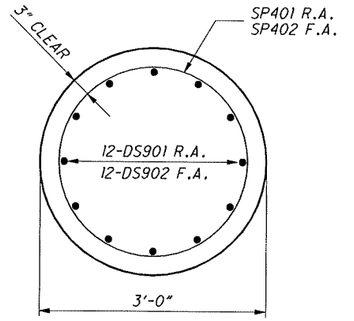
FORWARD ABUTMENT



PLAN (REINFORCING STEEL SHOWN)



DRILLED SHAFT DETAIL



D/4 DRILLED SHAFT SECTION

MUSKINGUM COUNTY ENGINEER'S OFFICE
155 REHL ROAD
ZANESVILLE, OHIO 43701

DESIGNED	DRAWN	REVIEWED	DATE
DRD	SEJ	---	---
CHECKED	REVISED	STRUCTURE FILE NUMBER	
---	---	6035140	

FOUNDATION PLAN

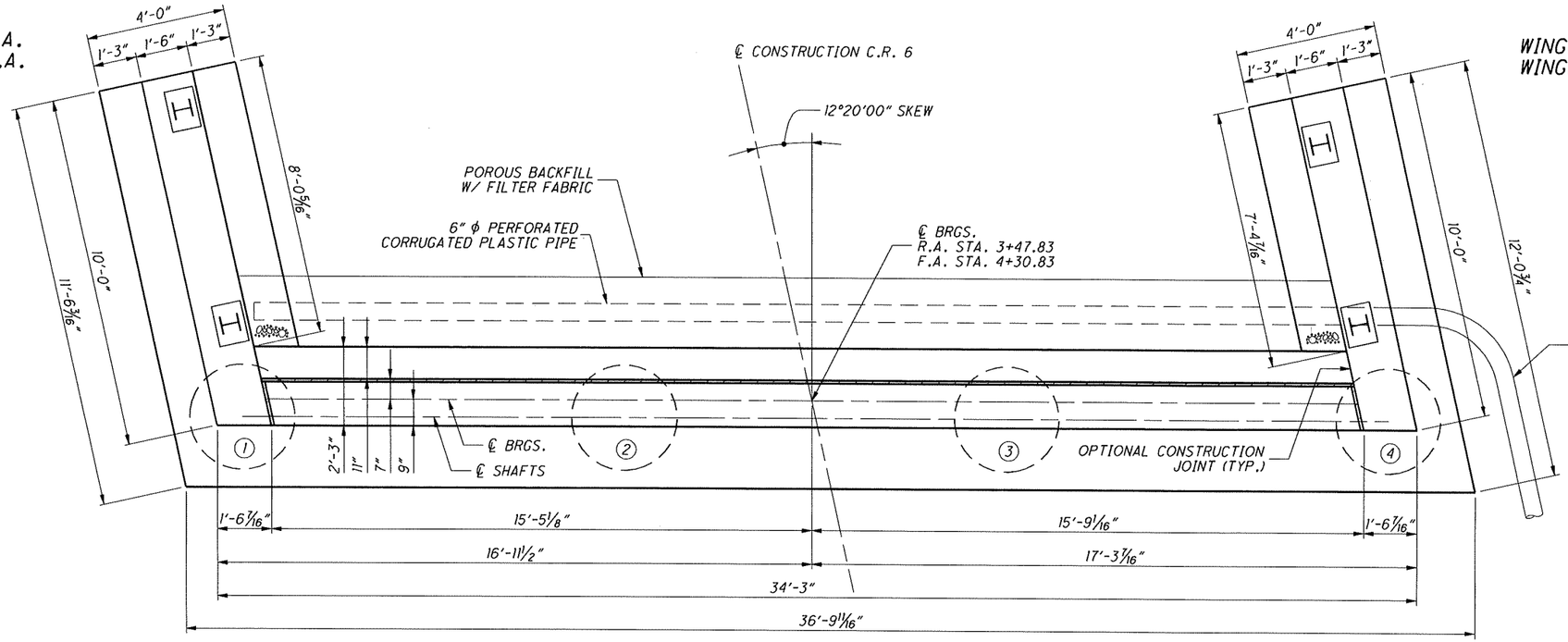
BRIDGE NO. MUS-006-1185
OVER BRUSH CREEK

MUS-C.R. 6-11.85
PID No. 24277

3 / 10

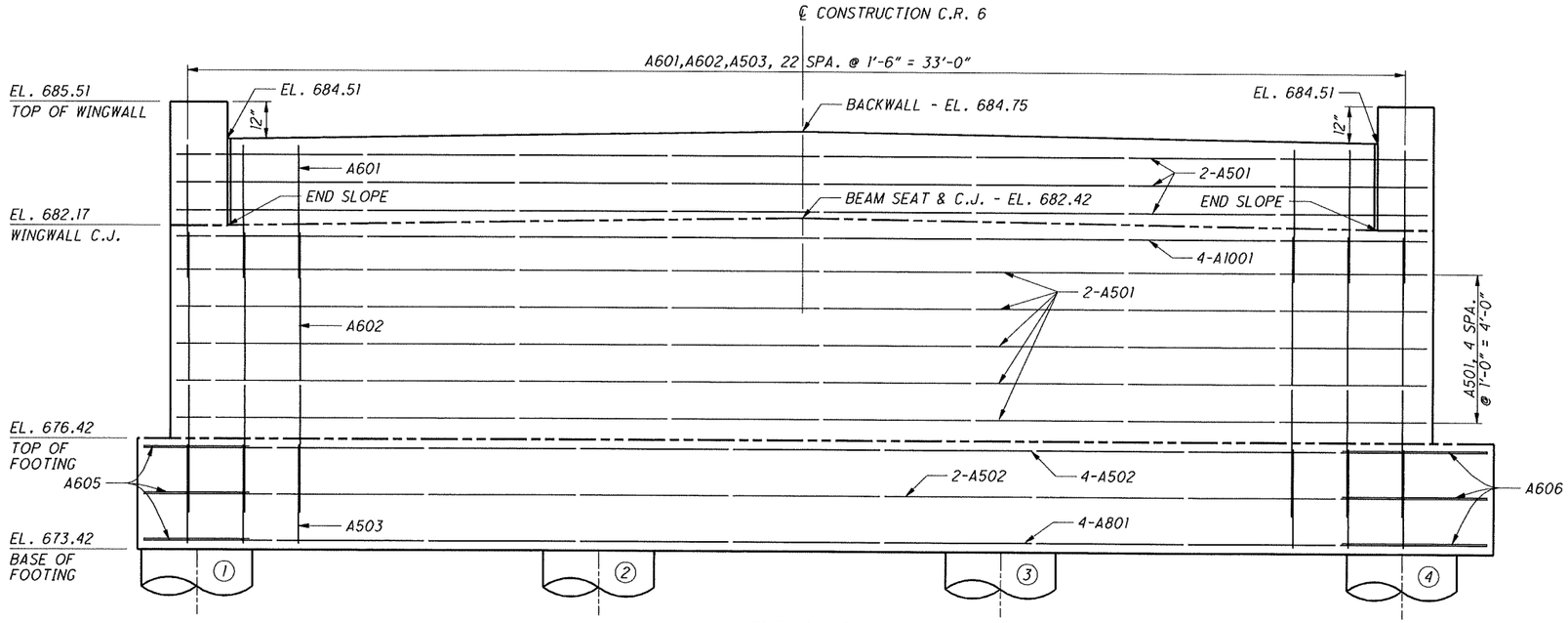
15 / 22

WINGWALL #1 - R.A.
WINGWALL #3 - F.A.



PLAN

WINGWALL #2 - R.A.
WINGWALL #4 - F.A.



ELEVATION

MUSKINGUM COUNTY ENGINEER'S OFFICE
155 REHL ROAD
ZANESVILLE, OHIO 43701

DESIGNED	DRAWN	REVIEWED	DATE
DRD	SEJ	---	---
CHECKED	REVISED	STRUCTURE FILE NUMBER	
---	---	6035140	

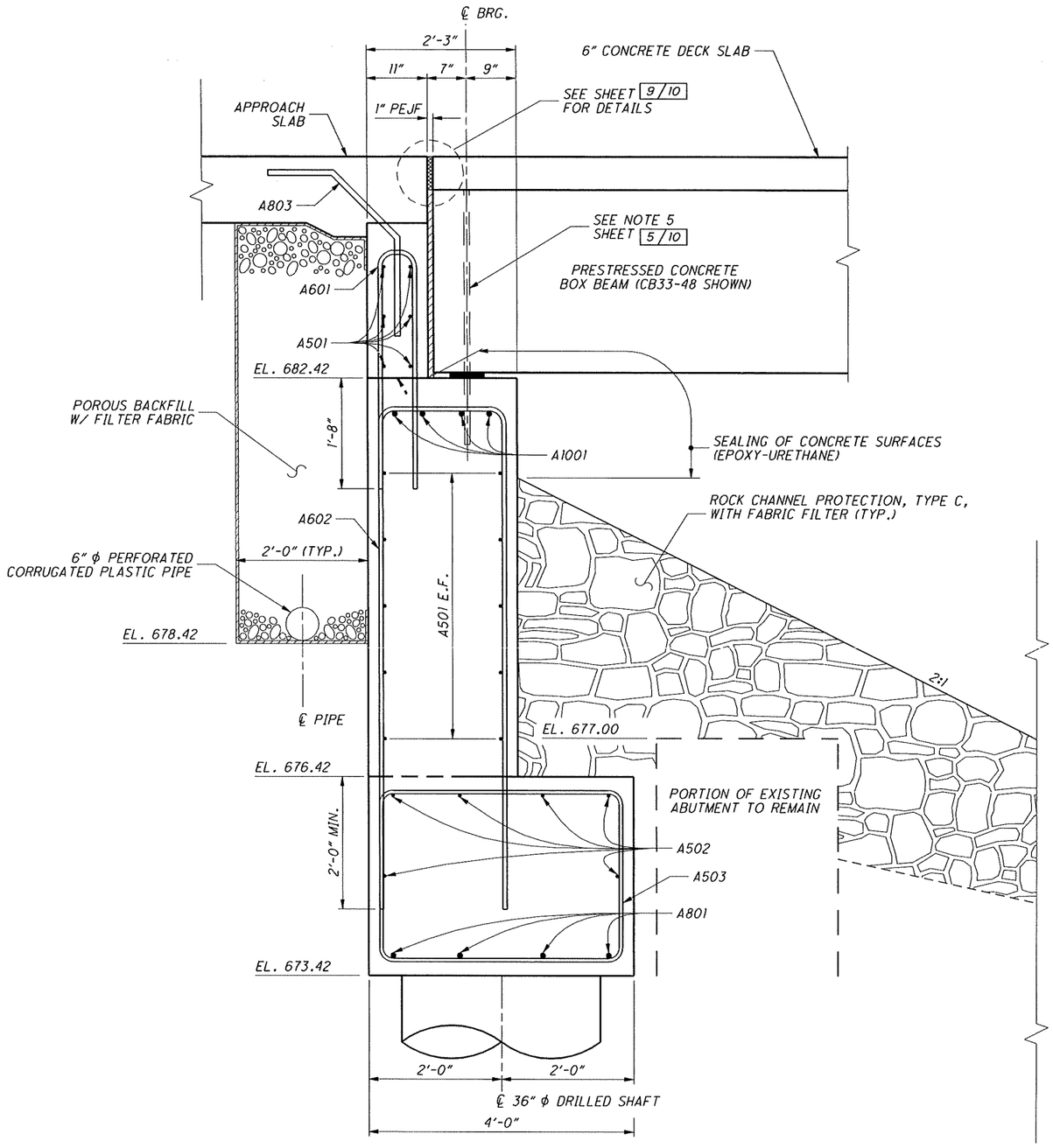
ABUTMENT DETAILS

BRIDGE NO. MUS-006-1185
OVER BRUSH CREEK

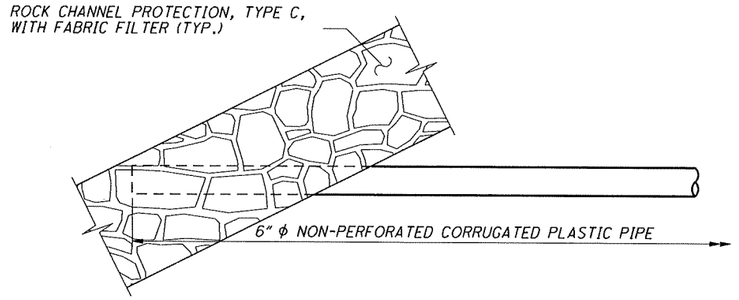
MUS-C.R. 6-11.85
PID No. 24277

4 / 10

16 / 22



TYPICAL ABUTMENT SECTION
AT ℄ OF CONSTRUCTION



DETAIL A
END TREATMENT OF 6" ϕ NON-PERFORATED CORRUGATED PLASTIC PIPE

LEGEND

C.J. = CONSTRUCTION JOINT
E.F. = EACH FACE
EQ. = EQUAL
F.F. = FAR FACE
N.F. = NEAR FACE
SPA. = SPACING
U.N.O. = UNLESS NOTED OTHERWISE

NOTES

1. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES.
2. ABUTMENT CONCRETE: DO NOT PLACE THE ABUTMENT CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT UNTIL THE PRESTRESSED CONCRETE BOX BEAMS HAVE BEEN ERECTED.
3. SEALING OF BEAM SEATS: IF THE BEAM SEATS ARE SEALED WITH AN EPOXY SEALER PRIOR TO SETTING BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE COUNTY WILL NOT PAY FOR THIS REMOVAL.
4. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE WINGWALLS.
5. SEE STD. DWG. PSBD-1-93 FOR ANCHOR DOWEL DETAILS (EXPANSION FOR BOTH THE REAR AND FORWARD ABUTMENTS).
6. TYPE B WATERPROOFING SHALL BE APPLIED TO ALL BEAM ENDS PER STD. DWG. PSBD-1-93.
7. SEE SHEET 9/10 FOR EXPANSION GAP JOINT FILLER DETAILS AND NOTES.
8. SEE SHEET 3/10 FOR DRILLED SHAFT REINFORCEMENT DETAILS.
9. FLUSH MOUNTER POST LOCATIONS SHALL BE LOCATED BY THE ENGINEER AFTER FIT-UP DIMENSIONS HAVE BEEN VERIFIED.
10. LAP SPLICE LENGTHS:
    #5 BAR = 33 INCHES, U.N.O.
    #8 BAR = 87 INCHES, U.N.O.

MUSKINGUM COUNTY
ENGINEER'S OFFICE
155 REHL ROAD
ZANESVILLE, OHIO 43701

DESIGNED DRD | DRAWN SEJ | CHECKED --- | REVIEWED --- | DATE ---

STRUCTURE FILE NUMBER 6035140

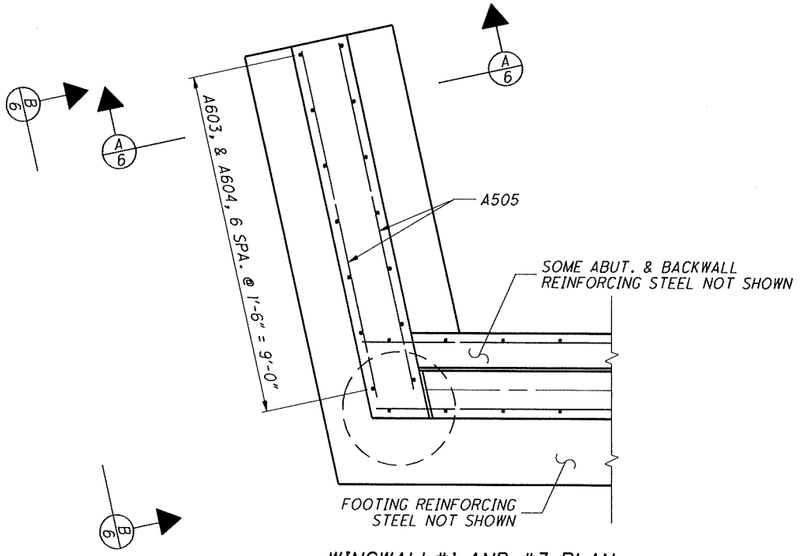
ABUTMENT DETAILS

BRIDGE NO. MUS-006-1185
OVER BRUSH CREEK

MUS-C.R. 6-11.85
PID No. 24277

5 / 10

17 / 22



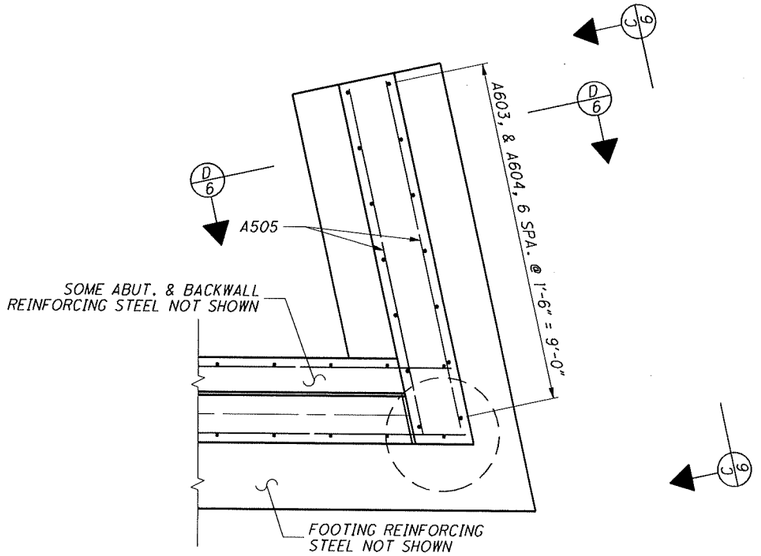
WINGWALL #1 AND #3 PLAN

REAR ABUTMENT

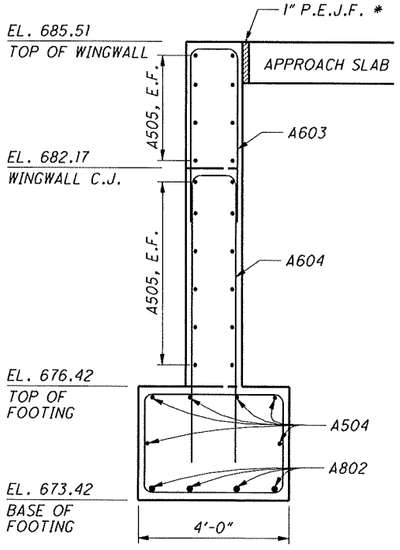
FORWARD ABUTMENT

NOTES

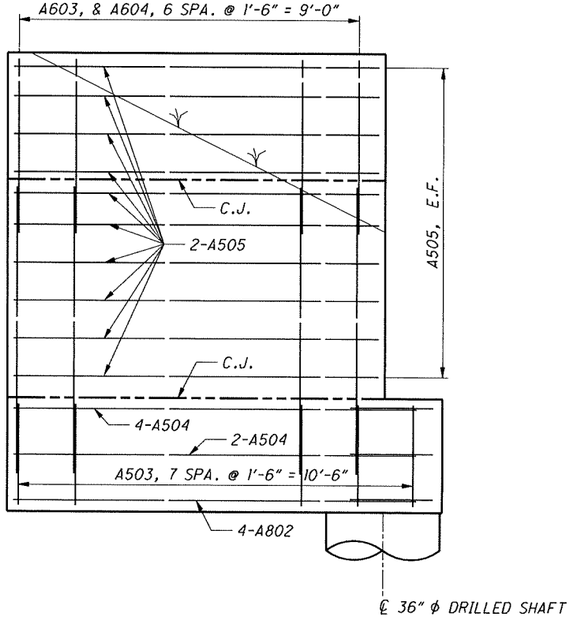
* JOINT TO HAVE 1" DEEP JOINT SEALER, HOT APPLIED, ODOT CMS 705.04.



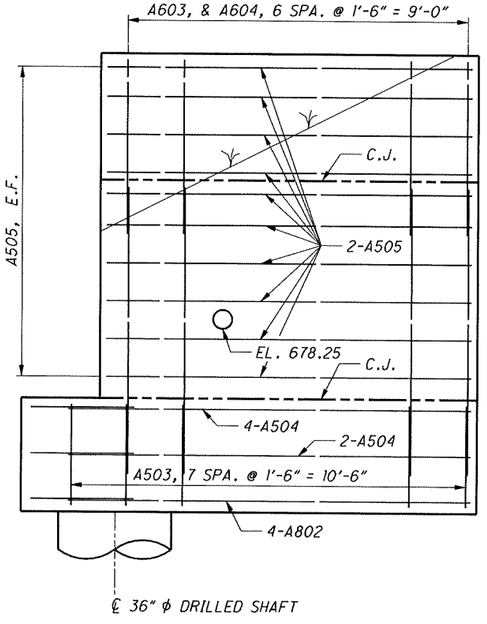
WINGWALL #2 AND #4 PLAN



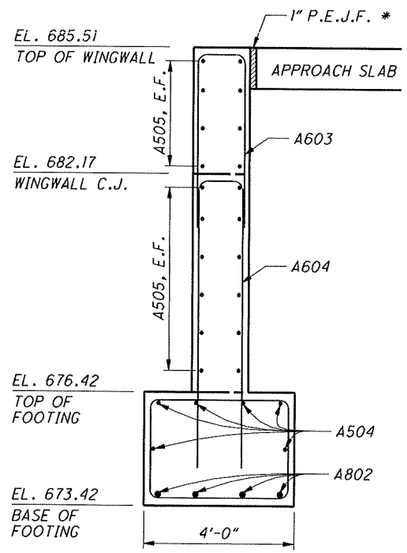
A/6 WINGWALL #1 AND #3 SECTION



B/6 WINGWALL #1 AND #3 ELEVATION



C/6 WINGWALL #2 AND #4 ELEVATION



D/6 WINGWALL #2 AND #4 SECTION

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ZANESVILLE, OHIO 43701

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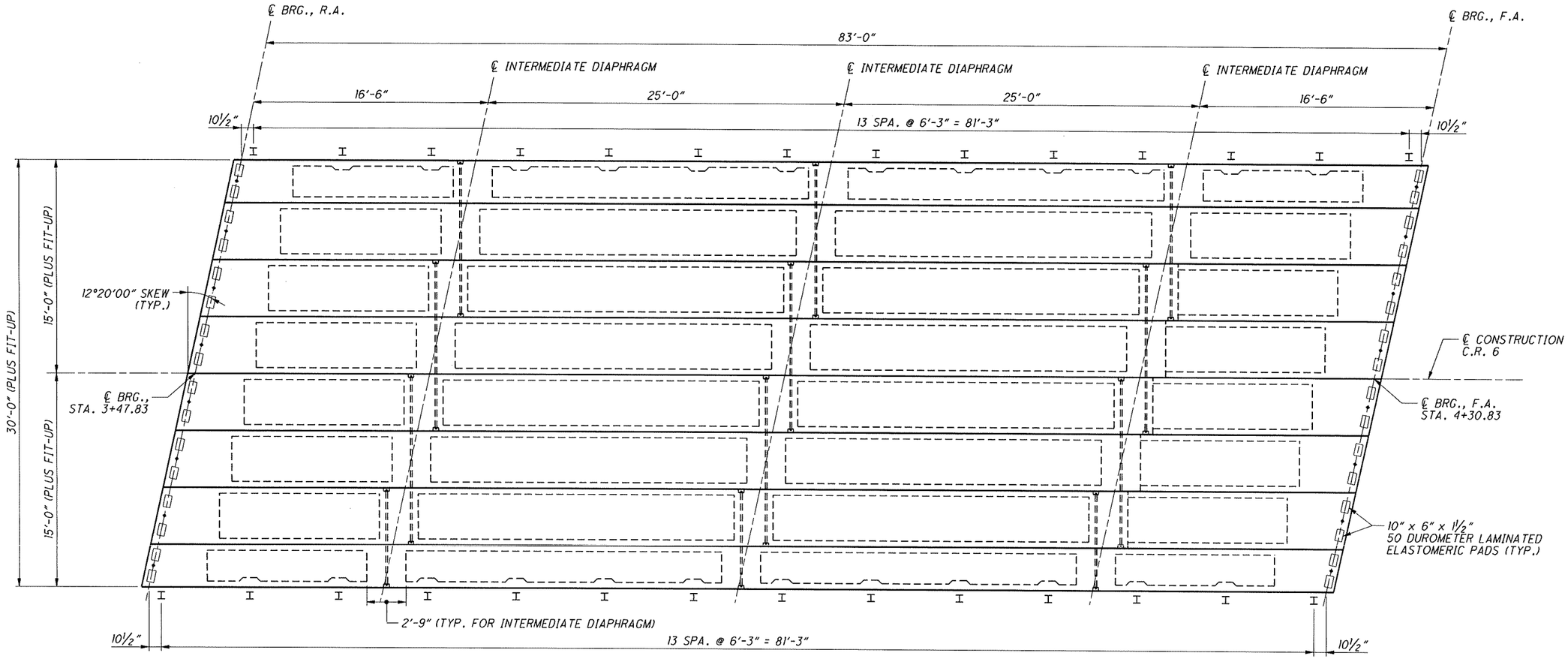
DRD	SEJ	---	---
CHECKED	REVISED	STRUCTURE FILE NUMBER	
---	---	6035140	

ABUTMENT DETAILS

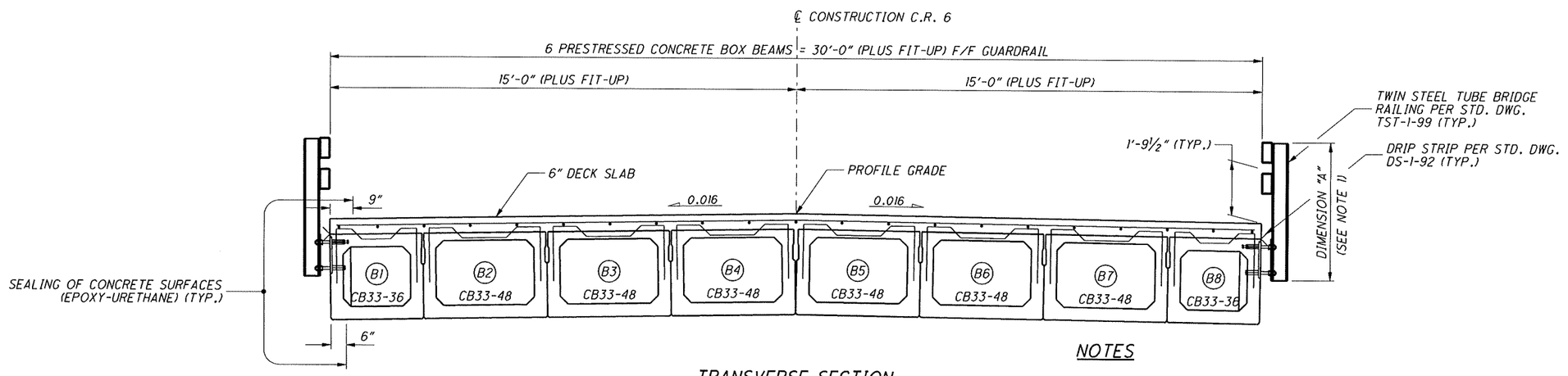
BRIDGE NO. MUS-006-1185
OVER BRUSH CREEK

MUS-C.R. 6-11.85

PID No. 24277



FRAMING PLAN



TRANSVERSE SECTION

NOTES

1. DIMENSION "A" SHALL BE EQUAL TO 4'-6", UNLESS SHOWN OTHERWISE IN THE PLANS. REFER TO STD. DWG. TST-1-99 FOR LOCATION OF ANCHOR BOLTS AND TUBING.

MUSKINGUM COUNTY ENGINEER'S OFFICE
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SUPERSTRUCTURE DETAILS

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OVER BRUSH CREEK

MUS-C.R.6-11.85
PID No. 24277

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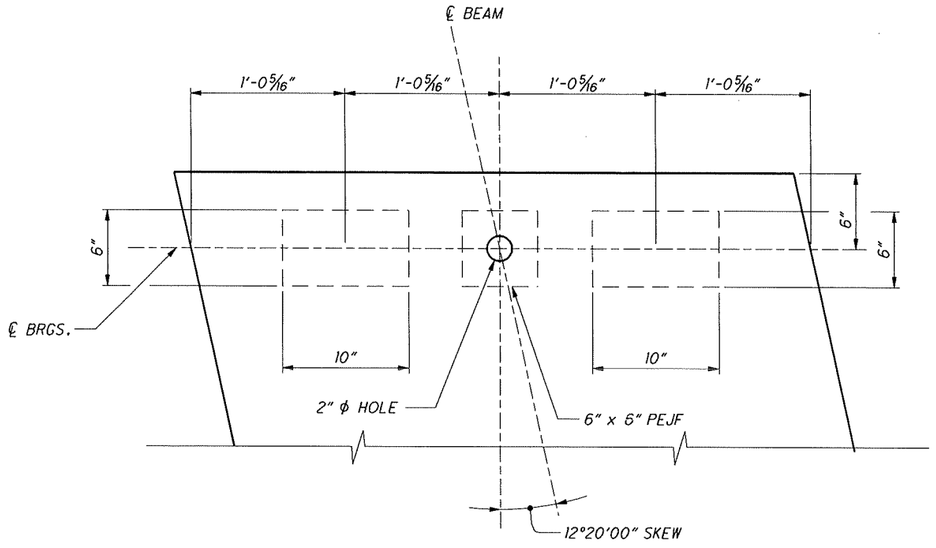
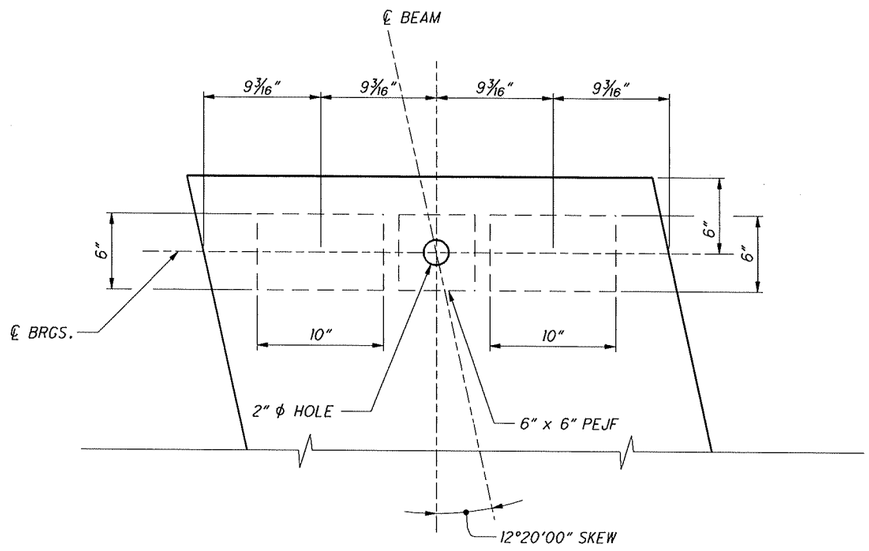
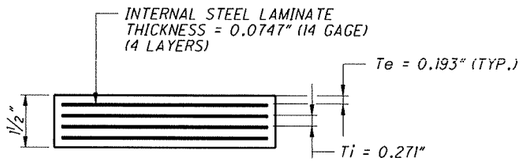


BEARING PAD LAYOUT (CB33-48)

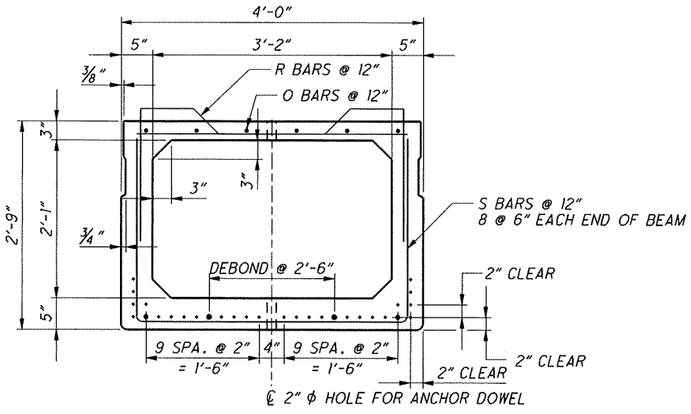


BEARING PAD LAYOUT (CB33-36)

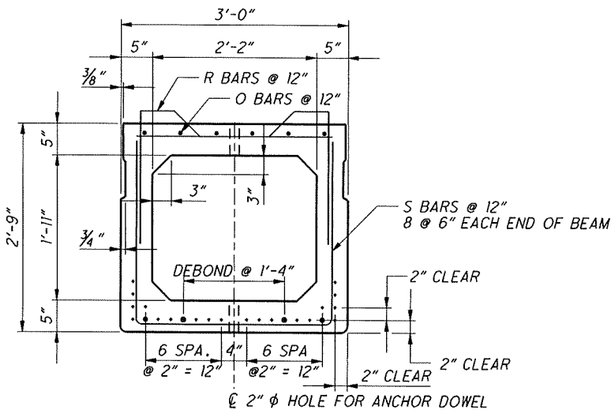


LAMINATED ELASTOMERIC BEARING PAD
10" x 6" x 1 1/2"

DEAD LOAD = 26.50 KIPS
LIVE LOAD = 13.50 KIPS
TOTAL LOAD = 46.00 KIPS

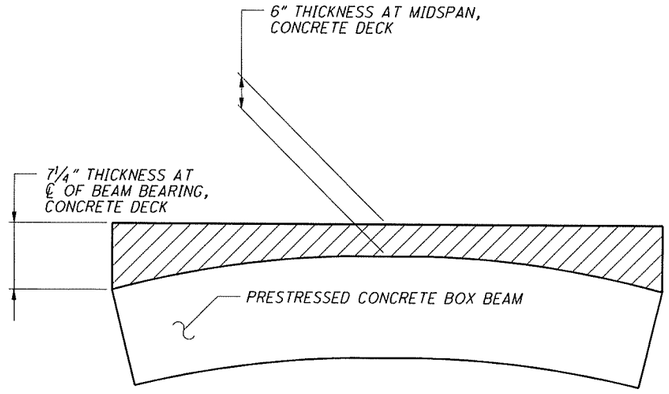


CB33-48



CB33-36

FOR ADDITIONAL DETAILS SEE STD. DWG. PSBD-1-93.



CONCRETE THICKNESS DIAGRAM

NOTES

1. CALCULATED CAMBER AT THE TIME OF RELEASE IS 1 3/8 INCHES.

   CALCULATED CAMBER AT THE TIME OF PAVING IS 2 INCHES.

   LONG TERM CAMBER IS 3 1/4 INCHES.

   CALCULATED DEFLECTION DUE TO DEAD LOAD APPLIED AFTER THE BEAMS ARE SET (WEIGHT OF CONCRETE DECK, RAILINGS, ETC.) IS 3/4 INCH.

2. THE ELASTOMERIC BEARINGS 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.

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STRUCTURE FILE NUMBER 6035140

ABUTMENT DETAILS

BRIDGE NO. MUS-006-1185
OVER BRUSH CREEK

MUS-C.R. 6-11.85

PID No. 24277

ITEM 516 - JOINT SEALER, AS PER PLAN

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A HOT APPLIED JOINT SEALER.

MATERIALS:

BINDER:

TYPE:	HOT APPLIED JOINT SEALER
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 mm. MAX. AT 140 DEGREES F.
PENETRATION:	9 mm. MAX. AT 77 DEGREES F. 1 mm. MIN. AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 cm. MIN. ASTM D 113
RESILIENCE:	60% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 * 0.05
POURING TEMP:	350 - 390 DEGREES F.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE BINDER.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE APPROVED ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SURFACE PREPARATION:

REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SLABS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT VELOCITY OF 3,000 FEET PER SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION.

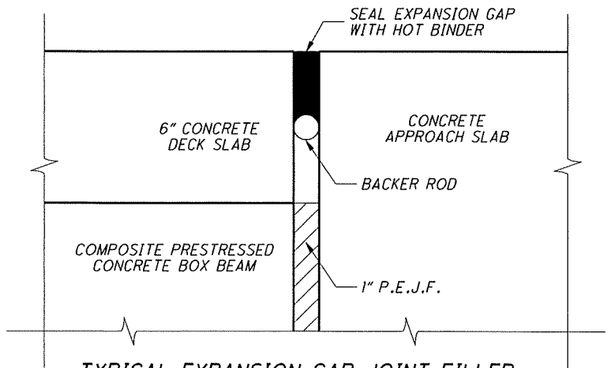
SEALING OF EXPANSION JOINT:

THE EXPANSION JOINT GAP IS TO BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1 1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

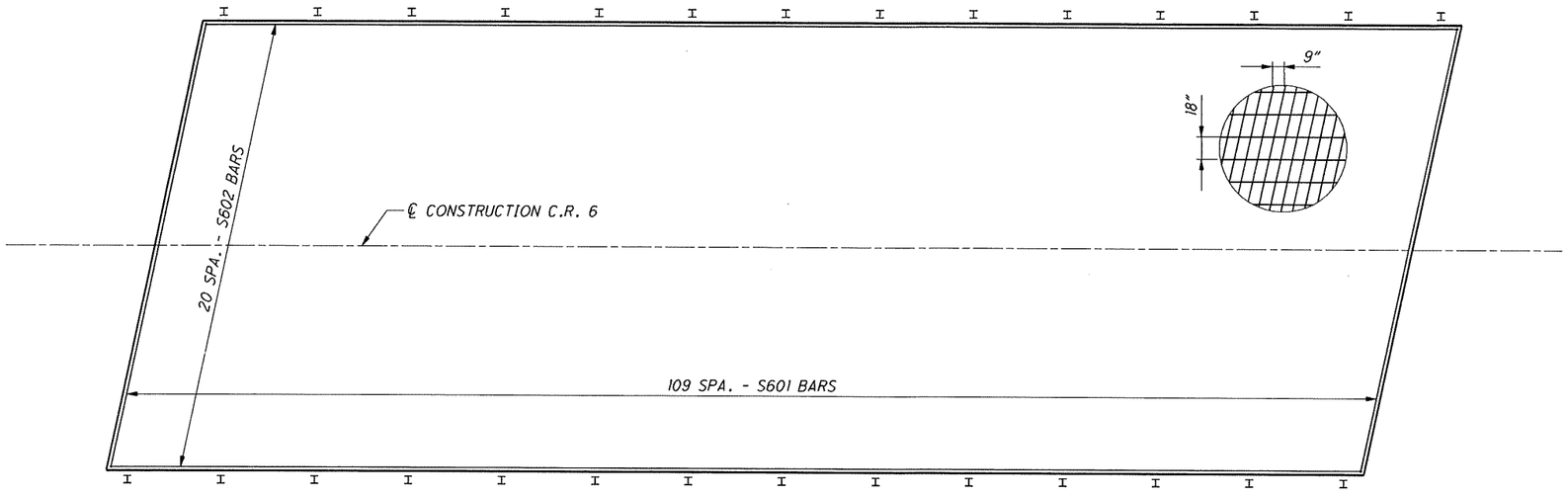
ONCE THE BACKER ROD IS PLACED, POUR THE HOT BINDER INTO THE EXPANSION GAP. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL METER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF FEET AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM 516 - JOINT SEALER, AS PER PLAN.



TYPICAL EXPANSION GAP JOINT FILLER



DECK SLAB PLAN

SCREED ELEVATIONS (FEET)

LOCATION			℄ BRG. REAR ABUT.	0.25 SPAN	0.50 SPAN	0.75 SPAN	℄ BRG. FWD. ABUT.
LEFT EDGE	15.00' LT	STATION	3+50.63	3+71.64	3+92.64	4+13.65	4+34.65
		ELEVATION	684.92	684.97	685.02	684.97	684.92
CROWN	0.00'	STATION	3+47.32	3+68.32	3+89.33	4+10.34	4+31.34
		ELEVATION	685.15	685.20	685.25	685.20	685.15
RIGHT EDGE	15.00' RT	STATION	3+44.01	3+65.01	3+86.02	4+07.02	4+28.03
		ELEVATION	684.92	684.97	685.02	684.97	684.92

NOTES

1. SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED, CALCULATED DEAD LOAD DEFLECTIONS.

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DECK SLAB PLAN
BRIDGE NO. MUS-006-1185
OVER BRUSH CREEK

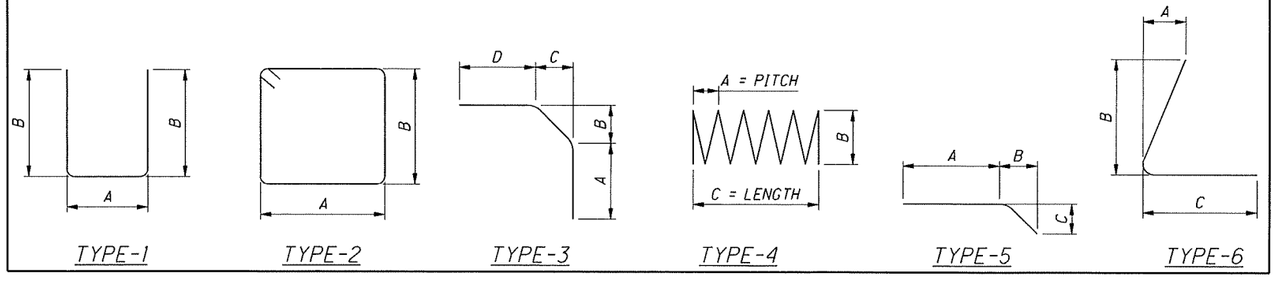
MUS-C.R. 6-11.85
PID No. 24277

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FWD	TOTAL				A	B	C	D	INC
ABUTMENTS											
A501	16	16	32	33'-11"	1132	STR					
A502	6	6	12	36'-5"	456	STR					
A503	39	39	78	12'-1¾"	989	2	3'-8"	2'-7"			
A504	12	12	24	10'-8"	267	STR					
A505	40	40	80	9'-4"	779	STR					
A601	23	23	46	7'-4⅜"	509	1	7"	3'-6"			
A602	23	23	46	16'-8⅜"	1154	1	1'-11"	7'-6"			
A603	14	14	28	9'-11⅜"	419	1	1'-2"	4'-6"			
A604	14	14	28	15'-11⅜"	671	1	1'-2"	7'-6"			
A605	6	6	12	4'-10⅞"	89	5	2'-4¼"	11⅜"	2'-2⅛"		
A606	6	6	12	6'-0⅞"	110	6	5⅛"	2'-7¼"	3'-8"		
A801	4	4	8	33'-11"	725	STR					
A802	8	8	16	10'-8"	456	STR					
A803	23	23	46	3'-10⅜"	475	3	1'-6"	1'-0"	1'-0"	1'-0"	
A1001	4	4	8	33'-11"	1168	STR					
			ABUTMENT TOTAL		9399						

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FWD	TOTAL				A	B	C	D	INC
DRILLED SHAFTS (SEE NOTE 3)											
SP401	4		4	-	792	4	4½"	2'-6"	13'-6"		
SP402		4	4	-	1012	4	4½"	2'-6"	17'-3"		
DS901	48		48	13'-0"	2122	STR					
DS902		48	48	16'-8"	2720	STR					
		DRILLED SHAFTS TOTAL			6646						

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FWD	TOTAL				A	B	C	D	INC
SUPERSTRUCTURE											
S601			34	35'-8"	1822	STR					
S602			91	23'-8"	2266	STR					
		SUPERSTRUCTURE TOTAL			4088						

BENDING DIAGRAMS



NOTES

1. ALL REINFORCING STEEL IS TO BE EPOXY COATED.
2. 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 DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.
3. PAYMENT FOR DRILLED SHAFT REINFORCING STEEL SHALL BE INCLUDED IN CORRESPONDING ITEMS 524.

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REINFORCING STEEL LIST

BRIDGE NO. MUS-006-1185
OVER BRUSH CREEK

MUS-C.R. 6-11.85
PID No. 24277

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