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OHIO TURNPIKE COMMISSION

THE JAMES W. SHOCKNESSY OHIO TURNPIKE
THIRD LANE CONSTRUCTION

CONTRACT 77-01-01 PART A
THIRD LANE CONSTRUCTION
M.P. 151.77 TO M.P. 155.78
LORAIN COUNTY
CUYAHOGA COUNTY

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SLOPE REPAIR NEAR LINDBERGH BOULEVARD
M.P. 157.60 TO M.P. 157.70
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FIBER OPTIC CABLE, AS-BUILTS

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AS-2 ——— 12-26-97
AS-3 ——— 6-11-98
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AS-5 ——— 11-11-97
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CB-3 ——— 11-11-97
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CBR-1 ——— 5-3-00
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CBR-3 ——— 6-11-98
DJ-1 ——— 11-11-97
DJ-2 ——— 11-11-97
DJ-5 ——— 11-11-97
DR-1 ——— 1-1-97
EPA-1 ——— 5-31-00
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GR-1 ——— 12-10-99
GR-2 ——— 3-20-00
JB-1 ——— 1-1-97
MCC-1 ——— 1-1-97
MCC-2 ——— 1-1-97
RPM-1 ——— 2-25-00
TC-1 ——— 9-11-98
TCB-1 ——— 5-18-01
TCB-3 ——— 12-10-99
TCR-1 ——— 4-28-98
TCR-2 ——— 4-28-98
TCR-9 ——— 2-23-00
TCR-9.1 ——— 1-24-01
TCR-9.3 ——— 1-24-01
TCR-10 ——— 1-12-98
TCR-11PM ——— 1-12-98
TCR-11PS ——— 1-12-98
TCR-12 ——— 2-4-00
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TCR-14 ——— 6-4-01
TCR-15 ——— 2-25-00
UD-1 ——— 1-1-97
XOV-3 ——— 1-1-97

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BP-2.1 ——— 7-28-00
BP-3.1 ——— 7-28-00
BP-5.1 ——— 7-28-00
GR-1.1M ——— 10-21-97
GR-1.2M ——— 1-3-96
GR-1.3M ——— 11-30-94
GR-2.1M ——— 4-14-98
GR-3.1M ——— 10-21-97
GR-3.2M ——— 10-21-97
GR-4.2M ——— 10-21-97
GR-5.3 ——— 11-30-94
RM-4.5 ——— 10-21-97
HL-20.11M ——— 3-31-95
HL-30.11M ——— 3-31-95
HL-30.22M ——— 3-31-95
HL-50.21M ——— 8-31-94
HL-60.11M ——— 5-1-95
HW-2.2M ——— 7-12-95
I-2.1M ——— 4-14-98
DM-1.1M ——— 10-21-97
RM-4.2M ——— 10-21-97
RM-4.3M ——— 10-21-97
RM-4.4M ——— 10-21-97
DM-2.1M ——— 6-30-95
DM-4.2M ——— 6-30-95
DM-4.3 ——— 4-29-99
DM-4.4 ——— 4-29-99
MH-1.1M ——— 10-21-97
MH-1.2M ——— 9-6-95
MT-35.10 ——— 4-20-01
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MT-96.11M ——— 1-30-95
MT-96.20M ——— 1-30-95
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MT-105.11M ——— 4-25-94
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TC-12.30 ——— 1-19-01
TC-15.115 ——— 1-19-01
TC-21.10 ——— 1-19-01
TC-21.20 ——— 1-19-01
TC-21.40M ——— 2-1-94
TC-22.20 ——— 1-19-01
TC-31.21 ——— 4-20-01
TC-32.10M ——— 3-31-94
TC-32.11M ——— 3-31-94
TC-41.10 ——— 1-19-01
TC-41.20 ——— 1-19-01
TC-41.40M ——— 3-31-94
TC-41.50 ——— 1-19-01
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TC-51.12 ——— 4-20-01
TC-52.10 ——— 4-20-01
TC-52.20 ——— 4-20-01
TC-65.10M ——— 11-1-95
TC-65.11M ——— 11-1-95
TC-72.20 ——— 1-19-01
PCB-91 ——— 7-6-99
RB-1-55M ——— 10-25-94
BS-1-93 ——— 12-19-94
FB-1-82M ——— 12-19-94

APPROVED FOR
THE OHIO TURNPIKE COMMISSION
BY
D F Costrigano
CHIEF ENGINEER
6/12/01
DATE

RECOMMENDED FOR APPROVAL
BY
URS
D. Scott Buchanan
REVIEW CONSULTANT
6-11-01
DATE

GENERAL SUMMARY

8 OF 43	9 OF 43	37 OF 43	Part A A27	A28	A29	A30	A31	A32	A33	Part B B7			Item No.	Approx. Quantity	Unit	Item Description	Ref. Sheet
																ROADWAY	
			LUMP							LUMP			201	Lump Sum		Clearing and Grubbing	A12
			121										202	121	Sq. Yd.	Approach Slab Removed	
			307										202	307	Lin. Ft.	Concrete Barrier Removed	
			16							204			202	220	Lin. Ft.	Concrete Barrier Removed, As Per Plan	A11, B4
			1303										202	1303	Lin. Ft.	Pipe Removed, 24" and Under	
			16										202	16	Lin. Ft.	Pipe Removed Over 24"	
1500			6709										202	8209	Lin. Ft.	Guardrail Removed	
			248										202	248	Lin. Ft.	Guardrail Removed, Barrier Design	
1000			450							613			202	2063	Lin. Ft.	Guardrail Removed for Reuse	
			41										202	41	Each	Guard Post Removed	
										1			202	1	Each	Attenuator Removed, As Per Plan	B4
			26							2			202	28	Each	Catch Basin Removed	
			1										202	1	Each	Catch Basin Abandoned	
			337										202	337	Lin. Ft.	Fence Removed	
			360										202	360	Lin. Ft.	Fence Removed for Reuse	
			8										202	8	Sq. Yd.	Gutter Removed	
			14										202	14	Each	Bridge Terminal Assembly Removed	
			3										202	3	Each	Flood Gate Removed	A14
8													202	8	Each	Anchor Assembly Removed, Type T	
			1760										SPECIAL	1760	Lin. Ft.	Pipe Cleanout, 15" to 36"	A14
			438										SPECIAL	438	Lin. Ft.	Pipe Cleanout, Over 36"	A14
			709										SPECIAL	709	Lin. Ft.	Box Culvert Cleanout	A14
			462										SP 202J	462	Lin. Ft.	Plug and Fill Existing Conduit	
			10										SP 202K	10	Each	Anchor Assembly, Type E (ET-2000), Removed for Storage	
8													SP 202L	8	Each	Anchor Assembly, Type E (ET-2000), Removed for Reuse	
										20591			203	20591	Cu. Yd.	Excavation Not Including Embankment Construction, As Per Plan	
			43089										203	43089	Cu. Yd.	Excavation Not Including Embankment Construction	
										20368			203	20368	Cu. Yd.	Embankment, As Per Plan	B5
			25459										203	25459	Cu. Yd.	Embankment	
			42							4			203	46	Hour	Proof Rolling	
			128381							835			203	129216	Sq. Yd.	Subgrade Compaction	A11
			8291							100			203	8391	Lin. Ft.	Ditch Cleanout	A11
			60000										SP 205	60000	Sq. Yd.	Lime Modified Subgrade	
			60000										SP 205	60000	Sq. Yd.	Cement Modified Subgrade	
			2500										SP 205	2500	Ton	Lime	
			2900										SP 205	2900	Ton	Cement	
			580										SP 205	580	M. Gal.	Water	
			28										604	28	Each	Monument Assembly	A11
1500			713										606	2213	Lin. Ft.	Guardrail, Type 5, Using Steel Posts	
			16										606	16	Each	Bridge Terminal Assembly, Type 1, Using Steel Posts	
8													606	8	Each	Anchor Assembly, Type T	
			120										SP 606	120	Each	Guardrail Post, Steel, 9 Ft.	
1000			400							613			SP 606	2013	Lin. Ft.	Guardrail, Rebuilt, Type 5	
				360									607	360	Lin. Ft.	Fence Rebuilt, Type 47, As Per Plan	A11
				5528									622	5528	Lin. Ft.	Concrete Barrier, Type B-50, As Per Plan	A12
				6022									622	6022	Lin. Ft.	Concrete Barrier, Type C-50, As Per Plan	A12
				307									622	307	Lin. Ft.	Concrete Barrier, Type D, As Per Plan	A12
				304									622	304	Lin. Ft.	Portable Concrete Barrier, 32", As Per Plan	A12
				6157									SP 622C	6157	Lin. Ft.	Median Wall (Design Height 2 feet)	
				1203									SP 622C	1203	Lin. Ft.	Median Wall (Design Height 4 feet)	
				333									SP 853A	333	Cu. Yd.	Low Strength Mortar Backfill, Type 2	
										1000			SPECIAL	1000	Cu. Yd.	No. 2 Aggregate, Using 703.01	B4
				5000									SPECIAL	5000	Sq. Yd.	Geogrid	A12
				1									SPECIAL	1	Each	Inertia Barrier	

NO.	REVISION	BY	DATE

OHIO TURNPIKE COMMISSION

GENERAL SUMMARY

URS — Akron Cleveland Columbus, 564 White Pond Drive, Akron, Ohio 44320-1100, (330) 836-9111

DATE: JUNE 2001	SCALE: N.T.S.
77-01-01	SHEET 2 OF 43

GGA.DWG DCA DRAWN BY: MSS 04/19/00 LINK: J:\TPIKE\7026100\00PROJEC\43-00-04\43004BID.XLS

GENERAL SUMMARY

8 OF 43	9 OF 43	37 OF 43	Part A A27	Part A A28	Part A A29	Part A A30	Part A A31	Part A A32	Part A A33	Part B B7					Item No.	Approx. Quantity	Unit	Item Description	Ref. Sheet
																		EROSION CONTROL	
				995						1500					207	2495	Sq. Yd.	Temporary Seeding and Mulching	
				5600						1000					207	6600	Lin. Ft.	Filter Fabric Fence	A13
				2184						200					207	2384	Cu. Yd.	Temporary Benches, Dams and Sediment Basins	
										250					207	250	Sq. Yd.	Temporary Ditch Protection	
				1200						50					207	1250	Each	Straw or Hay Bales	
				39											601	39	Cu. Yd.	Rock Channel Protection, Type B with Filter	
				185						46					601	231	Cu. Yd.	Rock Channel Protection, Type C with Filter	
				438						50					601	488	Cu. Yd.	Rock Channel Protection, Type C without Filter	
										183					601	183	Cu. Yd.	Dumped Rock Fill, Type C	
				5667						1000					659	6667	Sq. Yd.	Seeding and Mulching	A13
				250						400					659	650	Sq. Yd.	Repair Seeding and Mulching	
				0.51						0.86					659	1.37	Ton	Commercial Fertilizer	
				2.33											659	2.33	Ton	Agricultural Liming	
				13						36					659	49	M. Gal.	Water	
										5430					667	5430	Sq. Yd.	Seeding and Jute Matting	
																		DRAINAGE	
				4199						100					603	4299	Lin. Ft.	6" Conduit, Type B, 707.17 Non-Perforated ASTM D 3034 (SDR 35), SS931 or SS944	
				200											603	200	Lin. Ft.	6" Conduit, Type E	
				1830						620					603	2450	Lin. Ft.	6" Conduit, Type F, 707.17 Non-Perforated ASTM D 3034 (SDR 35), SS931 or SS944	
				200						100					603	300	Lin. Ft.	8" Conduit, Type B	
				200						100					603	300	Lin. Ft.	8" Conduit, Type F	
				91						81					603	172	Lin. Ft.	12" Conduit, Type F, 707.01 (Except Galvanized), 707.05 Type C Without Paved Invert, or 707.16	
				765						28					603	793	Lin. Ft.	15" Conduit, Type B, 706.02	
				142											603	142	Lin. Ft.	15" Conduit, Type B, 706.02, As Per Plan	A195
				21											603	21	Lin. Ft.	15" Conduit, Type B, 706.02 3000 D-Load	
				98											603	98	Lin. Ft.	15" Conduit, Type B, 706.02 with Class A Bedding	A14
				1035											603	1035	Lin. Ft.	Conduit, Bored or Jacked, 15", Type B, 706.02	A14
				40						62					603	102	Lin. Ft.	15" Conduit, Type F, 707.01 (Except Galvanized), 707.05 Type C Without Paved Invert, or 707.16	A14
				12											603	12	Lin. Ft.	15" Conduit, Type C, 706.02	
					56										603	56	Lin. Ft.	18" Conduit, Type A, 706.02	
					1876										603	1876	Lin. Ft.	18" Conduit, Type B, 706.02	
					1171										603	1171	Lin. Ft.	18" Conduit, Type B, 706.02 3000 D-Load	
					21										603	21	Lin. Ft.	18" Conduit, Type B, 706.02 with Class A Bedding	
					233										603	233	Lin. Ft.	Conduit, Bored or Jacked, 18", Type B, 706.02	A14
					176										603	176	Lin. Ft.	18" Conduit, Type F, 707.01 (Except Galvanized), 707.05 Type C Without Paved Invert, or 707.16	A14
					150										603	150	Lin. Ft.	54" Conduit, Type A, SS942, SS946 or SS948	A13
										1					SP 604	1	Each	Catch Basin, No. CB-1	
					1										SP 604	1	Each	Catch Basin, No. CB-1, As Per Plan	A14
					38										SP 604	38	Each	Catch Basin, Median Wall	
					5										SP 604	5	Each	Inlet, No. 3B50 Double Grate	
					18										SP 604	18	Each	Inlet, No. 3B50 Double Grate, As Per Plan	A14
					14										SP 604	14	Each	Inlet, No. 3C50 Double Grate	
					4										SP 604	4	Each	Inlet, No. 3C50, Double Grate, As Per Plan	A14
					8										SP 604	8	Each	Manhole, No. 3	
					59046					8069					SP 605	67115	Lin. Ft.	6" Shallow Pipe Underdrain, 707.15, with Fabric Wrap	
					2160										SP 605	2160	Lin. Ft.	6" Unclassified Pipe Underdrain, 707.15, with Fabric Wrap	
					400					250					SP 605	650	Lin. Ft.	Aggregate Drain, Type I, with Fabric Wrap	
					400										SP 605	400	Lin. Ft.	Aggregate Drain, Type II	
					400					250					SP 605	650	Lin. Ft.	Aggregate Drain, Type II, with Fabric Wrap	

NO.	REVISION	BY	DATE

OHIO TURNPIKE COMMISSION

GENERAL SUMMARY

URS — Akron Cleveland Columbus, 564 White Pond Drive, Akron, Ohio 44320-1100, (330) 836-9111

DATE: JUNE 2001	SCALE: N.T.S.
77-01-01	SHEET 3 OF 43

GGB DWG DCA DRAWN BY: MSS 05/24/00 LINK: J:\TPIKE\70261100\00PROJECT\43-00-04\43004BID.XLS

GENERAL SUMMARY

8 OF 43	9 OF 43	37 OF 43	Part A A27	A28	A29	A30	A31	A32	A33	Part B B7				Item No.	Approx. Quantity	Unit	Item Description	Ref. Sheet
																	DRAINAGE CONT'D	
					2					1				SPECIAL	3	Each	12" Precast Flared End Section	A14
					26					1				SPECIAL	27	Each	15" Precast Flared End Section	A14
					17									SPECIAL	17	Each	18" Precast Flared End Section	A14
					4									SPECIAL	4	Each	42" Precast Flared End Section	A14
					100									SPECIAL	100	Gallon	Sealing Reinforced Concrete Pipe Joints	A14
					440									SPECIAL	440	Lin. Ft.	Surface Preparation	A14
					16					12				SPECIAL	28	Each	Precast Reinforced Concrete Outlet	A12
																	PAVEMENT	
						350								254	350	Sq. Yd.	Pavement Planing, Bituminous (t= Varies 1-1/4" to 2")	
						160								254	160	Sq. Yd.	Pavement Planing, Bituminous (t=1")	
						35884				67				254	35951	Sq. Yd.	Pavement Planing, Bituminous (t=3")	
						6882								254	6882	Sq. Yd.	Pavement Planing, Bituminous (t=1-1/4")	
						34994				126				SP 302	35120	Cu. Yd.	Bituminous Aggregate Base, PG 64-22	
						26694				178				SP 304	26872	Cu. Yd.	Aggregate Base	A11
						8380				39				SP 402	8419	Cu. Yd.	Asphalt Concrete Base Course or Recycled Asphalt Concrete Base Course, PG 64-22	
						5842								SP 402	5842	Cu. Yd.	Asphalt Concrete Base Course or Recycled Asphalt Concrete Base Course, PG 70-22 (FR)	
						3659				28				SP 404	3687	Cu. Yd.	Asphalt Concrete Surface Course, Using Crushed Slag, PG 64-22	
						2119								SP 404	2119	Cu. Yd.	Asphalt Concrete Surface Course, Using Crushed Slag, PG 70-22 (FR)	
						67954								SP 404A	67954	Lin. Ft.	Joint Sealer	
						4355				81				SP 407	4436	Gallon	Tack Coat	
						16533				49				SP 407	16582	Gallon	Intermediate Tack Coat	
						49274				302				SP 408	49576	Gallon	Prime Coat	
						200				597				SP 609	797	Lin. Ft.	Asphalt Concrete Curb, PG 64-22, Standard Type I	
						852								SP 611	852	Sq. Yd.	Class C Concrete, Approach Slab, Using Type I Cement (T=12")	
						20								SP 611A	20	Each	Grout Hole	
						4								SP 611A	4	Cu. Yd.	Grout	
						7951								SP 617	7951	Sq. Yd.	Shoulder Preparation	
						98								SP 617	98	Cu. Yd.	Compacted Aggregate	
						2								SP 617	2	M. Gal.	Water	
						74				60				SP 627	134	Ton	Stone Shoulder Protection	
						1500								SP 629	1500	Sq. Yd.	Paving Fabric	
						1500								SP 629	1500	Sq. Yd.	Paving Fabric (Composite)	
						80								SPECIAL	80	Sq. Yd.	Diamond Grinding	A12
						80								SPECIAL	80	Sq. Yd.	Thin Concrete Overlay	A12
																	TRAFFIC CONTROL	
							634							SP 626	634	Each	Raised Pavement Marker - Stimsonite Model 101 LPCR	
							526							SP 626	526	Each	Replacement Prismatic Retro-Reflector	
							50							SP 626	50	Each	Replacement Raised Pavement Marker Casting - Stimsonite Model 101LPCR	
							31							630	31	Cu. Yd.	Concrete for Anchor Base Foundation	
							35							630	35	Cu. Yd.	Concrete for Anchor Base Foundation, As Per Plan	
							153							630	153	Lin. Ft.	Ground Mounted Support, No. 3 Post	
							6							630	6	Each	Ground Mounted Support, No. 3 Post, As Per Plan	A214
							54							630	54	Lin. Ft.	Ground Mounted Support, W10x22 Beam	

NO.	REVISION	BY	DATE

OHIO TURNPIKE COMMISSION

GENERAL SUMMARY

URS — Akron Cleveland Columbus, 564 White Pond Drive, Akron, Ohio 44320-1100, (330) 836-9111

DATE: JUNE 2001 | SCALE: N.T.S.

77-01-01 | SHEET 4 OF 43

GGC.DWG DCA DRAWN BY: MSS 05/24/00 LINK: J:\TPIKE/7026100/00PROJECT/43-00-04/43004B10.XLS

GENERAL SUMMARY

8 OF 43	9 OF 43	37 OF 43	Part A A27	Part A A28	Part A A29	Part A A30	Part A A31	Part A A32	Part A A33	Part B B7	Part B	Part B	Item No.	Approx. Quantity	Unit	Item Description	Ref. Sheet
																TRAFFIC CONTROL CONT'D	
							1						630	1	Each	Overhead Sign Support, Type TC-7.65, Design 6, 69 Foot Span	
							1						630	1	Each	Overhead Sign Support, Type TC-7.65, Design 8, 79 Foot Span	
							3						630	3	Each	Overhead Sign Support, Type TC-12.30, Design 12, 28 Foot Arm, As Per Plan	A214
							1						630	1	Each	Sign Support Assembly, Pole Mounted	
							12						630	12	Each	Sign Support Assembly, Bridge Mounted, As Per Plan	A214
							280						630	280	Sq. Ft.	Sign Erected, Flat Sheet, As Per Plan	A214
							500						630	500	Sq. Ft.	Sign Erected, Extrusheet, As Per Plan	A214
							3						630	3	Each	Removal of Overhead Mounted Sign and Reerection	
							1						630	1	Each	Removal of Overhead Mounted Sign and Reerection, As Per Plan	A214
							12						630	12	Each	Removal of Ground Mounted Sign and Storage, As Per Plan	A214
							5						630	5	Each	Removal of Ground Mounted Sign and Reerection	
							2						630	2	Each	Removal of Temporary Overlay Sign and Storage, As Per Plan	A214
							14						630	14	Each	Removal of Ground Mounted Post Support and Storage, As Per Plan	
							1						630	1	Each	Removal of Overhead Mounted Sign and Disposal	
							3						630	3	Each	Removal of Overhead Mounted Sign and Storage, As Per Plan	A214
							2						630	2	Each	Removal of Overhead Sign Support and Storage, Type TC-12.30, As Per Plan	A214
							1						630	1	Each	Removal of Overhead Sign Support and Storage, Type TC-7.65, As Per Plan	A214
							1						630	1	Each	Removal of Ground Mounted Major Sign and Storage, As Per Plan	A214
							1						630	1	Each	Removal of Ground Mounted Major Sign and Reerection	
							5						630	5	Each	Removal of Ground Mounted Beam Support and Storage, As Per Plan	A214
								1					631	1	Each	Sign Service	
								2					631	2	Each	Sign Wired	
								1					631	1	Each	Disconnect Switch with Enclosure, Type X	
								3					631	3	Each	Ballast, Remote, Type CMRI-250-480	
								1					631	1	Each	Ballast, Wiring Enclosure, Type A	
								3					631	3	Each	Mercury Vapor Luminaire, Type TC-31.21 with 250 Watt Lamp	
								3					631	3	Each	Removal of Luminaire and Storage, As Per Plan	A214
								1					631	1	Each	Removal of Luminaire and Reerection	
								3					631	3	Each	Removal of Ballast and Storage, As Per Plan	A214
								1					631	1	Each	Removal of Ballast and Reerection	
								1					631	1	Each	Removal of Disconnect Switch and Storage, As Per Plan	A214
	1.94							16.97					642	19.02	Mile	Edge Line, Type 1, As Per Plan	A214, B5
								15.94					642	15.94	Mile	Lane Line, Type 1, As Per Plan	A214
								3181					642	3181	Lin. Ft.	Channelizing Line, Type 1	
								350					642	350	Sq. Ft.	Island Marking, Type 1	
								2200					642	2200	Lin. Ft.	Transverse Line, Type 1, White	
								0.62					642	0.62	Mile	Removal of Pavement Marking	
								350					642	350	Lin. Ft.	Removal of Pavement Marking	
	176	14						285					SP 802	475	Each	Barrier Reflector, Type A	
								420					SP 802	420	Each	Barrier Reflector, Type B	
								16.15		0.11			SPECIAL	16.26	Mile	Sonic Nap Alert Pattern (SNAP)	

NO.	REVISION	BY	DATE

OHIO TURNPIKE COMMISSION

GENERAL SUMMARY

URS — Akron Cleveland Columbus, 564 White Pond Drive, Akron, Ohio 44320-1100, (330) 836-9111

DATE: JUNE 2001 | SCALE: N.T.S.

77-01-01 | SHEET 5 OF 43

GCD.DWG DCA DRAWN BY: MSS 05/24/00 LINK: J:\TPIKE\7026100\00PROJECC\43-00-04\A3004BID.XLS

GENERAL SUMMARY

8 OF 43	9 OF 43	37 OF 43	Part A A27	A28	A29	A30	A31	A32	A33	Part B B7			Item No.	Approx. Quantity	Unit	Item Description	Ref. Sheet
																Miscellaneous Culvert Work	
								Lump Sum					202	Lump Sum		Structure Removed, As Per Plan	
								48					503	48	Cu. Yd.	Unclassified Excavation	
								Lump Sum					503	Lump Sum		Cofferdams, Cribs and Sheeting	
								3229					SP 509	3229	Pound	Epoxy Coated Reinforcing Steel, Grade 60	
								12					510	12	Each	Dowel Holes, Using SP 853 Grout Anchoring	
								19					511	19	Cu. Yd.	Class C Concrete, Headwall Above Footing	
								18					511	18	Cu. Yd.	Class C Concrete, Headwall Footing	
								286					516	286	Sq. Ft.	1/4" Preformed Expansion Joint Filler	
								340					516	340	Lin. Ft.	PVC Waterstop	
								15					518	15	Cu. Yd.	Porous Backfill with Filter Fabric	
								1344					SP 519A	1344	Sq. Ft.	Patching Overhead Concrete Structures	
								27					SP 536	27	Sq. Yd.	Concrete Weatherproofing, Substructure	
																For Ohio Turnpike Over Chestnut Ridge Road (M.P.152.0), See Sheet A250.	
																For Ohio Turnpike Over Exit 9 Ramp (M.P.152.2), See Sheet A272.	
																For Ohio Turnpike Over Lorain Road (M.P.152.3), See Sheet A293.	
																For Ohio Turnpike Over Norfolk Southern R.R. (M.P.152.6), See Sheet A317.	
																LIGHTING	
									7				625	7	Each	Ground Rod	
									12				625	12	Each	Luminaire, Underpass 100 Watt High Pressure Sodium 120 Volt 713.13	
									3				625	3	Each	Service To Underpass Lighting, As Per Plan	A237
									95				625	95	Lin. Ft.	Conduit, 1 1/2", 713.07	
									18				625	18	Lin. Ft.	Conduit, 4"	
									3				625	3	Each	Pull Box, 713.08, 24"	
									1				625	1	Each	Pull Box, 713.08, 18"	
									2				625	2	Each	Cable Splicing Kit	
									510				625	510	Lin. Ft.	Trench, 24" Deep	
									2				625	2	Each	Power Service, As Per Plan	A237
									1				625	1	Each	5kV 240/480V Buckbooster Type Transformer	
									20730				SP 625	20730	Lin. Ft.	Conduit, 4" with 3 Cell Innerduct, 713.07	
									20730				SP 625	20730	Lin. Ft.	Conduit, 4" with 4 Cell Innerduct, 713.07	
									458				SP 625	458	Lin. Ft.	Conduit, 4" with 3 Cell Innerduct, 713.04 or 713.07, Schedule 80	
									452				SP 625	452	Lin. Ft.	Conduit, 4" with 4 Cell Innerduct, 713.04 or 713.07, Schedule 80	
									49				SP 625	49	Lin. Ft.	Conduit, Jacked or Drilled Under Pavement, 4" with 3 Cell Innerduct, 713.04 or 713.07, Schedule 80	
									93				SP 625	93	Lin. Ft.	Conduit, Jacked or Drilled Under Pavement, 4" with 4 Cell Innerduct, 713.04 or 713.07, Schedule 80	
									67				SP 625A	67	Each	Junction Box, Polymer Concrete, 18" x 8" x 8"	

NO.	REVISION	BY	DATE

OHIO TURNPIKE COMMISSION

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DATE: JUNE 2001 | SCALE: N.T.S.

77-01-01 | SHEET 6 OF 43

CGE.DWG DCA DRAWN BY: MSS 05/24/00 LINK: J:\TPIKE\7026100\00PROJECT\43-00-04\43004BID.XLS

GENERAL SUMMARY

8 OF 43	9 OF 43	37 OF 43	Part A A27	A28	A29	A30	A31	A32	A33	Part B B7				Item No.	Approx. Quantity	Unit	Item Description	Ref. Sheet
																	Maintenance of Traffic	
									71					614	71	Each	Barrier Reflector, Type B	
									42					614	42	Each	Barrier Reflector, Type B2	
									146					614	146	Each	Object Marker	
									100					614	100	Hour	Law Enforcement Officer with Patrol Car	
									0.60					614	0.60	Mile	Temporary Edge Line, Class I 740.05, Type C	
	12.65													614	12.65	Mile	Temporary Edge Line, Class I 642 Paint	
									46					614	46	Lin. Ft.	Temporary Stop Line, Class I 740.05, Type C	
									360					614	360	Lin. Ft.	Temporary Dotted Line, Class I 740.05, Type C	
	4	1												614	5	Each	Temporary Impact Attenuator, As Per Plan	
									193					615	193	Sq. Yd.	Temporary Pavement, Class A, As Per Plan	A15
									1080					622	1080	Lin. Ft.	Portable Concrete Barrier, 32"	
	LUMP	LUMP.												SP 622A	Lump Sum		Temporary Concrete Barrier (Furnished by Commission)	A15
	4434	132												SP 622A	4566	Each	Concrete Barrier Delineator	
	426													SP 622B	426	Each	Delineator	
	883													SP 626A	883	Each	Construction Zone Marker, One- Way Model, White	
		64												SP 626A	64	Each	Construction Zone Marker, One- Way Model, Yellow	
	0.94	0.40												SP 641	1.34	Mile	4" Temporary White Edge Line	
	1.51	0.40												SP 641	1.91	Mile	4" Temporary Yellow Edge Line	
	1.43	0.28												SP 641	1.71	Mile	8" Temporary White Edge Line	
	3290													SP 641	3290	Lin. Ft.	4" Temporary Dotted Line	
	8.55	0.40												SP 641	8.95	Mile	6" Temporary White Lane Line	
	2.43	0.28												SP 641	2.71	Mile	8" Temporary Channelizing Line	
	2.13	0.28												SP 641	2.41	Mile	8" Temporary Yellow Edge Line	
	11.30	1.20												SP 641A	12.50	Mile	Temporary Removal of Existing Pavement Marking	
	10.72													SP 641B	10.72	Mile	Removal of Pavement Marking, Grinding	
									10					SPECIAL	10	Each	Flexible Tubular Markers, Removed and Reset	A15
																	GENERAL	
														103.05	Lump Sum		Premium for Contract Performance Bond and Payment Bond	
														SP 113	Lump Sum		Railroad Protective Liability Insurance	
														SP 128	Lump Sum		Survey of Local Roads	
														SP 614	Lump Sum		Maintaining Traffic	
														SP 619	Lump Sum		Field Office	
														SP 619	Lump Sum		Field Laboratory	
														SP 623	Lump Sum		Construction Layout Survey	
														624	Lump Sum		Mobilization	

NO.	REVISION	BY	DATE

OHIO TURNPIKE COMMISSION

GENERAL SUMMARY

URS — Akron Cleveland Columbus, 564 White Pond Drive, Akron, Ohio 44320-1100, (330) 836-9111

DATE: JUNE 2001 | SCALE: N.T.S.

77-01-01 | SHEET 7 OF 43

GGF.DWG DCA DRAWN BY: MSS 05/24/00 LINK: J:\TPIKE/7026100/00PROJECC/43-00-04/43004B00.XLS

MAINTENANCE OF TRAFFIC GENERAL NOTES

1. THE CONTRACTOR'S RESPONSIBILITY TO THE SAFETY OF THE MOTORING PUBLIC WHILE PERFORMING THE REQUIREMENTS OF HIS CONSTRUCTION CONTRACT WITHIN THE PROJECT LIMITS SHALL BE IN ACCORDANCE WITH THESE MAINTENANCE OF TRAFFIC PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS, THE CURRENT EDITION, LATEST REVISION OF THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND THE APPLICABLE PROVISIONS OF THE "STANDARD PROCEDURE OF MAINTENANCE AND CONTRACTORS OPERATIONS UNDER TRAFFIC ON THE TURNPIKE", LATEST REVISION.

2. ALL MAINTENANCE OF TRAFFIC DEVICES, DRUMS, SIGNS, FLASHING ARROW PANELS, FLAGGERS, ETC. AS SHOWN AND LOCATED ON THE MAINTENANCE OF TRAFFIC DRAWINGS SHALL BE INCORPORATED FOR THE VARIOUS PHASES OF WORK AREAS UNDER NORMAL TRAFFIC CONDITIONS. IF SPECIAL TRAFFIC CONDITIONS EXIST, THESE MAINTENANCE OF TRAFFIC PLANS MAY HAVE TO BE MODIFIED. HOWEVER, NO MODIFICATIONS TO THE LAYOUT OF THE DEVICES SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS TO BE MADE UNLESS APPROVED BY THE CHIEF ENGINEER.

3. SINCE FLAGGERS ARE RESPONSIBLE FOR HUMAN SAFETY AND MAKE THE GREATEST NUMBER OF CONTACTS WITH THE TRAVELING PUBLIC OF ALL CONSTRUCTION PERSONNEL, IT IS IMPORTANT THEY ARE MENTALLY ALERT, COURTEOUS BUT WITH A FIRM MANNER, PROPERLY ATTIRED WITH A NEAT APPEARANCE, AWARE OF THEIR RESPONSIBILITY FOR THE SAFETY OF THE MOTORISTS AND THE CONSTRUCTION PERSONNEL, AND INFORMED OF THE EXACT TRAFFIC MOVEMENTS THAT THEY ARE TO CONTROL. FLAGGERS SHALL WEAR BRIGHT ORANGE VESTS OR JACKETS WHICH ARE TO BE REFLECTORIZED FOR NIGHTTIME OPERATIONS. FLAGGERS ARE TO USE RED FLAGS. (RED FLAGS SHALL BE A MINIMUM OF 24" X 24" IN SIZE.) THE USE OF FLAGGERS SHALL BE AS DIRECTED BY THE ENGINEER. HOWEVER, AS A MINIMUM THE CONTRACTOR SHOULD EXPECT TO PROVIDE A FLAGGER AT LOCATIONS WHERE VEHICLES AND/OR EQUIPMENT MERGES INTO AND OUT OF THE TURNPIKE TRAFFIC FLOW PATTERN.

4. LENGTH AND DURATION OF SINGLE LANE CLOSURE AND RESTRICTION SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

5. OHIO TURNPIKE MAINTENANCE OF TRAFFIC PHASE DATES, LANE REDUCTION TIME LIMITATIONS, AND LIQUIDATED DAMAGE CLAUSES ARE CONTAINED IN THE FOLLOWING SPECIAL PROVISIONS:
   SP 103 – TIME OF COMPLETION
   SP 104 – ACCESS TO TURNPIKE AND RESTRICTIONS
   SP 111 – TIME OF THE ESSENCE – LIQUIDATED DAMAGES

6. THE CONTRACTOR SHALL PROVIDE A 48 HOUR NOTICE TO THE OHIO TURNPIKE COMMISSION CHIEF ENGINEER PRIOR TO INSTALLING AND CHANGING MAINTENANCE OF TRAFFIC PHASES.

7. TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED BY THE CONTRACTOR AS PER SPECIAL PROVISION SP 641. TEMPORARY REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE AS PER SPECIAL PROVISION SP 641A.

8. CONSTRUCTION ZONE MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS AND SHALL CONFORM TO ITEM SP 626A – "CONSTRUCTION ZONE MARKERS" OF THE SPECIAL PROVISIONS.

9. ALL TEMPORARY CONCRETE BARRIER SHOWN ON THE PLANS FOR MAINLINE MAINTENANCE OF TRAFFIC WILL BE AS PER SPECIAL PROVISION SP 622A. THE SAME BARRIER CAN BE USED FOR THE VARIOUS PHASES. THE COST FOR TRANSPORTION, INSTALLING, MAINTAINING, RESETTING, REMOVAL AND STORING THE TEMPORARY CONCRETE BARRIER FOR EACH PHASE SHALL BE INCLUDED IN THE ORIGINAL UNIT COST OF SUPPLYING THE BARRIER FOR ITEM SP 622A (FURNISHED BY COMMISSION).

10. ITEM 614 TEMPORARY IMPACT ATTENUATOR, AS PER PLAN.
THIS WORK SHALL CONSIST OF STORING, FURNISHING, INSTALLING AND SUBSEQUENTLY REMOVING IMPACT ATTENUATORS, AS REQUIRED IN THE PLANS. THIS ITEM SHALL INCLUDE ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEMS IN COMPLIANCE WITH NCHRP 350, TEST LEVEL 3.
THE IMPACT ATTENUATOR SYSTEM CAN BE ANY OF THE FOLLOWING:

ENERGY ABSORPTION SYSTEMS, INC.
QUAD GUARD CZ SYSTEM
REACT 350
ONE EAST WACKER DRIVE
CHICAGO, IL 60601
(312) 467-6750

TRINITY INDUSTRIES INC.
TRACC
1170 NORTH STATE ST.
GIRARD, OHIO 44420
800-321-2755

THE ATTENUATORS SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION, REPAIRING, AND OTHERWISE RESTORING THE IMPACT ATTENUATOR IN ACCORDANCE WITH THE MANUFACTURER'S MAINTENANCE INSTRUCTIONS WHILE IT IS IN USE ON THE PROJECT. SUCH REPAIRS SHALL BE PERFORMED WITHIN TWENTY-FOUR (24) HOURS OF NOTIFICATION OF THE INCIDENT WHICH CAUSED DAMAGE TO THE ATTENUATOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL NECESSARY MATERIALS AND EQUIPMENT REQUIRED TO PERFORM THE ABOVE DESCRIBED RESTORATION OF THE ATTENUATOR.
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR EACH, ITEM 614 – TEMPORARY IMPACT ATTENUATOR, AS PER PLAN, WHICH PRICE SHALL BE CONSIDERED FULL PAYMENT FOR STORING FURNISHING, INSTALLING, AND SUBSEQUENTLY REMOVING AT THE SPECIFIED LOCATIONS.

11. ALL DRUMS ORGINALLY FURNISHED FOR THIS PROJECT SHALL BE NEW PLASTIC SAFETY TYPE AS SHOWN ON OHIO TURNPIKE COMMISSION STANDARD DRAWING TCR-2. THESE DRUMS ARE PERMITTED FOR REUSE IN SUBSEQUENT CONSTRUCTION PHASES PROVIDED THEY ARE FREE OF DAMAGE AND DISPLAY THE REQUIRED REFLECTORIZATION AS DETERMINED BY THE ENGINEER. ANY DRUM DETERMINED TO BE UNACCEPTABLE BY THE ENGINEER SHALL BE REPLACED WITH A NEW DRUM. PAYMENT FOR PLASTIC SAFETY DRUMS INCLUDING THE SETTING, MAINTENANCE, REPLACEMENT AND SUBSEQUENT REMOVAL SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM SP 614-MAINTAINING TRAFFIC. IN ADDITION TO THE DRUM PLACEMENT REQUIREMENT AS SHOWN ON THE PLANS THE CONTRACTOR SHALL INSTALL AND MAINTAIN DURING ANY PHASE OR STAGE, WHILE TRAFFIC IS POSITIONED ON THE SHOULDER, TWO DRUMS IN ADVANCE OF EACH GUARDRAIL TERMINAL ASSEMBLY ET-2000. THE FIRST DRUM SHALL BE PLACED DIRECTLY IN FRONT OF THE ET-2000 FACE AND THE SECOND DRUM SPACED 50 FEET IN ADVANCE OF THE FIRST DRUM.

12. ALL TEMPORARY SIGNS ALONG THE MAINLINE SHALL BE FURNISHED AND INSTALLED BY THE OHIO TURNPIKE COMMISSION, UNLESS NOTED, BUT MAINTAINED BY THE CONTRACTOR. ALL PERMANENT SIGNS, OR PORTIONS THEREOF, AS REQUIRED BY THE PLANS, SHALL BE COVERED BY THE CONTRACTOR. SIGN COVERS WILL BE FURNISHED BY THE COMMISSION. THE CONTRACTOR SHALL RETURN THE SIGN COVERS TO THE COMMISSION AT THE END OF THE CONTRACT. SIGN OVERLAYS SHALL BE OF THE SAME COLOR AS THE BACKGROUND OF THE SIGN AND SHALL BE HIGH INTENSITY GRADE SHEETING (TYPE G) ON 0.080 INCH THICK ALUMINUM SECURLY RIVETED TO THE SIGN FACE, AND SHALL BE FURNISHED, INSTALLED AND REMOVED BY THE CONTRACTOR.

13. FINAL SIGN AND OTHER MAINTENANCE OF TRAFFIC DEVICE LOCATIONS MAY HAVE TO BE ADJUSTED TO FIT GEOMETRIC ROADWAY CONDITIONS AS DIRECTED BY THE ENGINEER.

14. THE CONTRACTOR'S REQUEST FOR USE OF A NIGHT WORK ZONE SHALL COMPLY WITH SP 110 AND INCLUDE THE TYPE OF WORK TO BE DONE, THE DURATION OF THE WORK, LOCATION OF THE INTENDED WORK, AND THE CONTRACTOR'S PROPOSED LIGHTING PLAN. TEMPORARY LIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE SUCH THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE HIGHWAY. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS. ALL TEMPORARY LIGHTING REQUIRED FOR NIGHT WORK SHALL BE INCIDENTAL AND INCLUDED IN THE LUMP SUM BID FOR ITEM SP 614 – MAINTAINING TRAFFIC.

15. THE OHIO TURNPIKE COMMISSION HAS ASSIGNED AN OVERALL CONSTRUCTION MANAGEMENT FIRM FOR THIS THIRD LANE WIDENING PROJECT. HOWEVER, EACH CONTRACTOR WHICH HAS WORK LIMITS ADJACENT TO ANOTHER CONTRACTOR WORK LIMITS HAS THE RESPONSIBILITY TO COORDINATE AND MUTUALLY COOPERATE WITH EACH OTHERS WORK ACTIVITIES DURING THE ENTIRE CONSTRUCTION PROCESS AS PER SP 107.

16. IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT IN WRITING ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE CHIEF ENGINEER.

17. AMBER FLASHING LIGHTS SHALL BE USED ON ALL VEHICLES AND/OR EQUIPMENT FOR INGRESS AND EGRESS OF THE WORK ZONE. WHILE IN THE WORK ZONE LIMITS THE FLASHERS ARE TO BE TURNED OFF.

18. IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE MANUAL, THE TURNPIKE CHIEF ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

19. PAYMENT FOR THE ABOVE, UNLESS SPECIFIED SEPARATELY, SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM SP 614 – MAINTAINING TRAFFIC WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS TO COMPLETE THE ABOVE WORK.

20. THE CONTRACTOR MAY PERFORM MEDIAN BRIDGE SUBSTRUCTURE WORK AS IN PHASE 1 (ANYTIME PRIOR TO PHASE 2), SUBJECT TO THE APPROVAL OF THE ENGINEER. SUBSTRUCTURE WORK, AS WELL AS MATERIAL AND EQUIPMENT LAYDOWN AREAS, WILL REQUIRE GUARDRAIL PROTECTION IN ACCORDANCE WITH OTC STANDARD DRAWING GR-1. THE CONTRACTOR SHALL PROVIDE A DETAILED ACCESS PLAN FOR INGRESS AND EGRESS TO THE WORK SITE AND FOR LAYDOWN LOCATIONS. THE EXTENT OF THE LAYDOWN AREAS SHALL BE MINIMIZED AS MUCH AS POSSIBLE AND ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
THE FOLLOWING CONTINGENCY QUANTITIES ARE INCLUDED, FOR USE AS DIRECTED BY THE ENGINEER FOR EXTENDING GUARDRAIL AS REQUIRED:

ITEM 202 GUARDRAIL REMOVED FOR REUSE	1000 L.F.
ITEM 202 GUARDRAIL REMOVED	1500 L.F.
ITEM 202 ANCHOR ASSEMBLY REMOVED, TYPE T	8 EACH
ITEM SP202L ANCHOR ASSEMBLY, TYPE E (ET-2000), REMOVED AND RESET	8 EACH
ITEM 606 GUARDRAIL, TYPE 5, USING STEEL POSTS	1500 L.F.
ITEM 606 ANCHOR ASSEMBLY, TYPE T	8 EACH
ITEM SP606 GUARDRAIL REBUILT, TYPE 5	1000 L.F.

INFORMATIONAL NOTE TO CONTRACTOR – ODOT HAS AWARDED A CONSTRUCTION PROJECT FOR STATE ROUTE 10 THAT CROSSES OVERHEAD OF THE TURNPIKE AT MP 152.06.

NO.	REVISION	BY	DATE

OHIO TURNPIKE COMMISSION

MAINTENANCE OF TRAFFIC GENERAL NOTES

URS
Akron Cleveland Columbus
564 White Pond Drive
Akron, Ohio 44320-1100
(330) 836-9111

DATE:	JUNE 2001	SCALE:	N.T.S.
CONTRACT:	77-01-01	SHEET:	8 OF 43

DESIGNED BY: EWK	CHECKED BY: DSB
DATE: MAY 2000	DATE: MAY 2000
DRAWN BY: JJS	REVISED BY:
DATE: MAY 2000	DATE:
CAD FILE NAME:	K/70261OO/02PROJ/MOT/QUICK/GENNOTE

SEQUENCE OF CONSTRUCTION

THE ADDITION OF A THIRD DIRECTIONAL LANE AND A BARRIER WALL MEDIAN ALONG THE OHIO TURNPIKE SHALL BE ACCOMPLISHED WHILE TRAFFIC IS BEING MAINTAINED IN ACCORDANCE WITH THE ENCLOSED MAINTENANCE OF TRAFFIC PLANS.

PHASE ONE CONSTRUCTION (FALL OF 2001)

THE EXISTING OUTSIDE SHOULDER IS TO BE MILLED AND RESURFACED. WHERE OUTSIDE SHOULDERS HAVE PREVIOUSLY BEEN RESURFACED, THE SNAPS ARE TO BE REMOVED. SEE THE ROADWAY CONSTRUCTION PLANS FOR SHOULDER BUILD UP AND WORK LIMITS. THIS CONSTRUCTION ELEMENT SHOULD BE A SHORT WORK EFFORT AND IS COVERED IN SPECIAL PROVISION SP 104.

THE OUTSIDE SHOULDER SNAP REMOVAL MUST BE COMPLETED BEFORE THE MEDIAN BRIDGE WORK IS STARTED.

THE CONTRACTOR SHALL CONSTRUCT THE EMERGENCY PARKING AREAS AND MAY BEGIN THE MAINLINE BRIDGE PIER AND ABUTMENT CONSTRUCTION IN THE MEDIAN (SUBJECT TO THE PROVISIONS OF SP 614). NO EXISTING BRIDGE PARAPETS ARE PERMITTED TO BE REMOVED.

PHASE ONE MAINTENANCE OF TRAFFIC (FALL OF 2001)

INSTALL WESTBOUND LEAD-IN SIGNING RELATIVE TO REDUCING THE EXISTING TWO DIRECTION LANES TO ONE. INSTALL EASTBOUND LEAD-IN SIGNING RELATIVE TO REDUCING THE EXISTING THREE DIRECTIONAL LANES TO ONE. THE MAINTENANCE OF TRAFFIC SHALL BE AS PER PHASE 1 TYPICAL SECTION.

TWO DIRECTIONAL LANES SHALL BE MAINTAINED AT ALL TIMES FOR MEDIAN BRIDGE WORK UNLESS A REQUEST FOR REDUCING TO A SINGLE LANE CONDITION IS GRANTED BY THE OHIO TURNPIKE COMMISSION CHIEF ENGINEER.

PHASE TWO CONSTRUCTION (2002)

THE MAJOR ELEMENT OF THIS PHASE IS THE CONSTRUCTION OF THE TURNPIKE MEDIAN WHICH INCLUDES AN ADDITIONAL DIRECTIONAL LANE, A WIDENED SHOULDER AND A MEDIAN BARRIER SAFETY WALL. ALL EXISTING MAINLINE BRIDGES ARE TO BE WIDENED.

PHASE TWO MAINTENANCE OF TRAFFIC (2002)

TWO LANES OF TRAFFIC ARE TO BE USED ALONG THE TURNPIKE USING THE DRIVING LANE AND RECONSTRUCTED OUTSIDE SHOULDER. SEE PHASE TWO MAINTENANCE OF TRAFFIC TYPICAL SECTION. PRIOR TO THE WORK ZONE TRAFFIC WILL BE SHIFTED TO THE RIGHT USING DEVICES AS SHOWN IN THE PLANS. TRUCKS WILL BE DIRECTED TO USE THE LEFT MOST LANE. SETTING THE TEMPORARY CONCRETE BARRIER SHALL BE AS PER TCB-1.

FOR INSTALLATION OF THE BRIDGE EXPANSION JOINT STRIP SEAL THE CONTRACTOR HAS THREE LANES OF PAVEMENT AND BOTH SHOULDERS TO PROVIDE SHORT TERM LANE SHIFTS. USE OHIO TURNPIKE COMMISSION STANDARD DRAWING TCR-12 FOR SIGN AND DRUM PLACEMENT.

PHASE THREE CONSTRUCTION (SPRING OF 2003)

RECONSTRUCT THE EASTBOUND, EAST SIDE, APPROACH SLAB FOR CHESTNUT RIDGE ROAD MAINLINE BRIDGE, MP 152.00.
RECONSTRUCT THE WESTBOUND, WEST SIDE, APPROACH SLAB FOR THE GATE RAMP MAINLINE BRIDGE, AT MP 152.18.

PHASE THREE MAINTENANCE OF TRAFFIC (SPRING OF 2003)

REDUCE THE MAINLINE THREE LANES TO TWO LANES, CLOSING THE RIGHT LANE. SHIFT THE TWO LANES ONTO THE MEDIAN SHOULDER AND LEFT LANE.

QUANTITY SUBSUMMARY

LOCATION			ITEM NUMBERS																			
			614			SP 622A		SP 622B	SP 626A	SP 641							SP 641A	SP 641B	802	642
PHASE	STATION TO STATION	DIRECTION	TEMPORARY IMPACT ATTENUATOR, AS PER PLAN	TEMPORARY EDGE LINE, CLASS 1, 642 PAINT		CONCRETE BARRIER DELINEATOR	TEMPORARY CONCRETE BARRIER (FURNISHED BY COMMISSION)	DELINEATOR	CONSTRUCTION ZONE MARKER-ONE WAY WHITE	4" TEMPORARY WHITE EDGE LINE	4" TEMPORARY YELLOW EDGE LINE	4" TEMPORARY DOTTED LINE	6" TEMPORARY LANE LINE	8" TEMPORARY WHITE EDGE LINE	8" TEMPORARY YELLOW EDGE LINE	8" TEMPORARY CHANNELIZING LINE	TEMPORARY REMOVAL OF EXISTING PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING, GRINDING	BARRIER REFLECTOR, TYPE A	EDGE LINE, TYPE 1, AS PER PLAN (YELLOW)
			EACH	MILE		EACH	MILE	EACH	EACH	MILE	MILE	LIN.FT.	MILE	MILE	MILE	MILE	MILE	MILE	EACH	MILE
	YEAR 2001 CONSTRUCTION																			
1	MP 153.53 TO MP 155.90	EB		2.37																
1	MP 153.53 TO MP 156.03	WB		2.50																
	YEAR 2002 CONSTRUCTION																			
2	MP 151.45 TO MP 151.60	EB												0.15	0.15	0.15	0.10	0.10		
2	MP 151.60 TO MP 151.77	EB	1	0.17		42	0.08		18		0.17		0.17				0.17	0.17		
2	MP 151.77 TO MP 155.80	EB		3.69		2128	3.99	89	426			1800	3.53				4.44	4.03	81	
2	MP 155.80 TO MP 155.93	EB												0.13	0.13	0.13	0.10	0.10		
2	MP 151.62 TO MP 151.75	WB												0.13	0.13	0.13	0.10	0.10		
2	MP 151.75 TO MP 151.77	WB		0.02							0.02		0.02				0.02	0.02		
2	MP 151.77 TO MP 155.78	WB		3.75		2117	3.97	89	423			1490	3.51				4.29	4.01	95	
2	MP 155.78 TO MP 155.93	WB	1	0.15		26	0.05		16		0.15		0.15				0.15	0.15		
2	MP 155.93 TO MP 156.03	WB												0.15	0.15	0.15	0.10	0.10		
2	CONSTRUCTION ACCESS AREA MP 153.54	EB	1			2									0.35	0.50				
2	CONSTRUCTION ACCESS AREA MP 153.54	WB	1			2									0.35	0.50				
	YEAR 2003 CONSTRUCTION																			
3	MP 151.25 TO MP 151.50	EB												0.25	0.25	0.25	0.20	0.20		0.20
3	MP 151.50 TO MP 151.97	EB	1			30	0.06	99		0.41	0.47		0.47				0.47	0.47		0.47
3	MP 151.97 TO MP 152.02	EB				27	0.05	11			0.05		0.05					0.05		0.05
3	MP 152.02 TO MP 152.21	EB												0.19	0.19	0.19	0.19	0.19		0.19
3	MP 151.97 TO MP 152.15	WB												0.18	0.18	0.18	0.18	0.18		0.18
3	MP 152.15 TO MP 152.21	WB				30	0.06	13			0.06		0.06					0.06		0.06
3	MP 152.21 TO MP 152.80	WB	1			30	0.05	125		0.53	0.59		0.59				0.59	0.59		0.59
3	MP 152.80 TO MP 153.05	WB												0.25	0.25	0.25	0.20	0.20		0.20
	TOTAL		4	12.65		4434	8.09	426	883	0.94	1.51	3290	8.55	1.43	2.13	2.43	11.30	10.72	176	1.94

FOR INFORMATION ONLY
MAXIMUM QUANTITY OF TEMPORARY CONCRETE BARRIER NEEDED DURING ANY PHASE. QUANTITY FOR OTHER PHASES VARY. ITEM BID AS LUMP SUM.

MAXIMUM QUANTITY OF TEMPORARY IMPACT ATTENUATOR, AS PER PLAN, NEEDED DURING ANY PHASE. QUANTITY FOR OTHER PHASES VARY.

NO.	REVISION	BY	DATE

OHIO TURNPIKE COMMISSION

MAINTENANCE OF TRAFFIC SEQUENCE AND QUANTITY SUBSUMMARY

URS
Akron Cleveland Columbus
564 White Pond Drive
Akron, Ohio 44320-1100
(330) 836-9111

DATE:	JUNE 2001	SCALE:	N.T.S.
CONTRACT:	77-01-01	SHEET	9 OF 43

DESIGNED BY: EWK | CHECKED BY: EWK
DATE: MAY 2000 | DATE: MAY 2000
DRAWN BY: JJS | REVISED BY:
DATE: MAY 2000 | DATE:
CAD FILE NAME: K:/7026100/02PROJ/MOT/QUICK/QUAN

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OHIO TURNPIKE COMMISSION

THE JAMES W. SHOCKNESSY OHIO TURNPIKE

CONTRACT 77–01–01 PART A
THIRD LANE CONSTRUCTION
M.P. 151.77 TO M.P. 155.78

STATION 1016+47.48 TO STATION 1100+02.01 BACK LORAIN COUNTY
STATION 0+00.00 AHEAD TO STATION 132+00.00 CUYAHOGA COUNTY

FIBER OPTIC CABLE AS-BUILT DRAWINGS

LCI COMMUNICATIONS CORP. ----- SHEET 1, 2, 20 – 34 & 181 – 187

OHIO TURNPIKE COMMISSION STANDARD DRAWINGS

AS–1	6–11–98	CB–5	6–25–97	CBR–2	11–11–97	GR–1	12-10-99	TCR–2	4–28–98	TCR–15	2-25-00
AS–2	12–26–97	CBM–1	6–11–98	CBR–3	6–11–98	GR–2	6–11–98	TCR–9	2-23-00	UD–1	1–1–97
AS–3	6–11–98	CBM–2	5-29-01	DJ–1	11–11–97	JB–1	1–1–97	TCR–10	1–12–98	XOV–3	1–1–97
AS–4	6–11–98	CBM–3	6–11–98	DJ–2	11–11–97	MCC–1	1–1–97	TCR–11PM	1–12–98		
AS–5	11–11–97	CBM–4	6–11–98	DJ–5	11–11–97	MCC–2	1–1–97	TCR–11PS	1–12–98		
CB–1	04-27-01	CBM–5	11–11–97	DR–1	1–1–97	RPM–1	2-25-00	TCR–12	2-4-00		
CB–3	11–11–97	CBM–6	6–11–98	EPA–1	4–21–97	TC–1	9–11–98	TCR–13	1–1–97		
CB–4	6–25–97	CBR–1	6–25–97	F–1	4–18–97	TCR–1	4–28–98	TCR–14	6-4-01		

OHIO DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS

BP–2.1	7-28-00	HL–20.11M	3-31-95	RM–4.4M	10–21–97	MT–105.10M	4-25-94	TC–41.20	1-19-01
BP–3.1	7-28-00	HL–30.11M	3-31-95	DM–4.2M	6-30-95	MT–105.11M	4-25-94	TC–41.40	3-31-94
BP–5.1	7-28-00	HL–30.22M	3-31-95	DM–4.3M	4-29-99	TC–12.30	1-19-01	TC–41.50	1-19-01
		HL–50.21M	8-31-94			TC–7.65	1-19-01	TC–42.10	1-19-01
GR–1.1M	10-21-97	HL–60.11M	5-1-95	MH–1.1M	10-21-97	TC–15.115	1-19-01	TC–42.20	4-20-01
GR–1.2M	1-3-96			MH–1.2M	9-6-95	TC–21.10	1-19-01	TC–51.11	4-20-01
GR–1.3M	11-30-94	HW–2.2M	7-12-95			TC–21.20	1-19-01	TC–51.12	4-20-01
GR–2.1M	4-14-98			MT–95.40M	4-25-94	TC–21.40M	2-1-94	TC–52.10	4-20-01
GR–3.1M	10-21-97	I–2.1M	4-1-80	MT–95.41M	4-25-94	TC–22.20	1-19-01	TC–52.20	4-20-01
GR–3.2M	10-21-97			MT–96.11M	1-30-95	TC–31.21	4-20-01	TC–65.10M	11-1-95
				MT–96.20	1-30-95			TC–65.11M	11-1-95
GR–4.2M	10-21-97	DM–1.1M	10-21-97	MT–96.21M	1-30-95	TC–32.10M	3-31-94	TC–72.20	1-19-01
GR–5.3	11-30-94	RM–4.2M	10-21-97	MT–96.25	4-20-01	TC–32.11M	3-31-94		
RM–4.5	10-21-97	RM–4.3M	10-21-97	MT–97.10M	4-25-94	TC–41.10	1-19-01	PCB–91	7-6-99
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								FB–1–82	5-10-82

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OHIO TURNPIKE DIVISION SUPERINTENDENT
(419) 862-2922
(ROADWAY LIGHTING CABLE)

SCALES

PLAN 0 50

PROFILE HORIZONTAL 0 50 VERTICAL 0 5

STATE OF OHIO
WILLIAM D. ANKNEY
31667
REGISTERED
PROFESSIONAL ENGINEER

PLANS PREPARED BY
W.E. QUICKSALL & ASSOCIATES
CONSULTING ENGINEERS
NEW PHILADELPHIA, OHIO

DESIGN CONTRACT NO. 71–97–19

SURVEY CONTROL PLAN

PROPOSED MONUMENT SUMMARY

			COORDINATES	
Monument	Station	Offset	Northing	Easting
1	1018+51.04	5.00' Rt.	624331.2157	2107148.8159
2	1020+51.04	5.00' Rt.	624330.6998	2107348.7253
3	1030+00.00	5.00' Rt.	624238.9515	2108291.3220
4	1040+00.00	5.00' Rt.	623975.5722	2109253.7955
5	1050+00.00	5.00' Rt.	623549.0625	2110155.9116
6	1063+33.72	5.00' Rt.	622750.2161	2111218.9718
7	1070+00.00	5.00' Rt.	622298.8732	2111709.0918
8	1076+00.00	5.00' Rt.	621892.4283	2112150.4562
9	1084+43.16	5.00' Rt.	621592.2305	2112476.4454
10	1086+93.16	5.00' Rt.	621424.3647	2112661.8667
11	1100+00.00	5.00' Rt.	620703.3277	2113748.7663
12	10+00.00	5.00' Rt.	620359.3632	2114689.1240
13	20+00.00	5.00' Rt.	620213.1571	2115677.6601
14	28+44.80	5.00' Rt.	620247.7628	2116521.5676
15	30+94.80	5.00' Rt.	620283.6458	2116769.1003
16	40+50.00	5.00' Rt.	620428.6989	2117713.2236
17	50+00.00	5.00' Rt.	620572.9623	2118652.2061

NOTE: See Plan And Profile Sheets For Pay Quantities.

EXISTING MONUMENT SUMMARY

			COORDINATES	
Monument	Station	Offset	Northing	Easting
1	992+49.69	℄	624327.790	2104544.950
2	1045+99.82	0.05' Lt.	623743.039	2109806.142
3	1052+99.78	0.05' Rt.	623395.454	2110413.206
4	1063+34.05	℄	622753.669	2111222.603
5	1084+44.19	℄	621595.205	2112480.596
6	4+00.05	0.30' Rt.	620546.686	2114119.197
7	7+68.00	0.34' Rt.	620426.269	2114466.824
8	20+00.15	0.17' Rt.	620217.976	2115678.029
9	30+93.68	0.04' Lt.	620288.458	2116767.233
10	32+00.31	0.03' Lt.	620304.637	2116872.627
11	42+00.30	0.07' Rt.	620456.394	2117861.036
12	51+00.30	0.03' Rt.	620593.106	2118750.585

NOTE: Station & Offsets of Existing Monuments From Re-Established Baseline.

NOTES

Existing Monuments To Be Destroyed

Coordinate Values Are In Ohio State Plane System, Based On NAD 83.
Scale Factor = 0.99992086

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

OHIO TURNPIKE 3rd LANE CONSTRUCTION
SURVEY CONTROL PLAN

URS — Akron, Cleveland, Columbus — 564 White Pond Drive, Akron, Ohio 44320-1100 — (330) 836-9111

DESIGNED: PDH	CHECKED: JJS	DATE: 11-97
DRAWN: JJS	IN CHARGE: PDH	SCALE: 1" =500'

CONTRACT 77-01-01 SHEET A2 OF A340

DESIGNED BY: JJS	CHECKED BY:		
DATE: 10/97	DATE:		
DRAWN BY: JJS	REVISED BY:		
DATE: 10/97	DATE:		
CAD FILE NAME: 7026100\960ESGN\9A1010\SURVEY01			

SURVEY CONTROL PLAN

PROPOSED MONUMENT SUMMARY

Monument	Station	Offset	COORDINATES Northing	COORDINATES Easting
18	60+18.01	5.00' Rt.	620727.5531	2119658.4076
19	62+18.01	5.00' Rt.	620756.9548	2119856.1592
20	70+00.00	5.00' Rt.	620820.1729	2120634.5989
21	80+00.00	5.00' Rt.	620771.7133	2121631.8144
22	86+81.63	5.00' Rt.	620655.9555	2122302.7566
23	88+81.63	5.00' Rt.	620610.3547	2122497.4120
24	100+00.00	5.00' Rt.	620349.9911	2123585.0533
25	111+76.15	5.00' Rt.	620076.1758	2124728.8879
26	114+76.15	5.00' Rt.	620002.5755	2125019.4957
27	126+94.80	5.00' Rt.	619493.2427	2126119.1624
28	129+94.80	5.00' Rt.	619319.1907	2126363.2440

NOTE: See Plan And Profile Sheets For Pay Quantities.

EXISTING MONUMENT SUMMARY

Monument	Station	Offset	COORDINATES Northing	COORDINATES Easting
13	60+18.92	0.04' Lt.	620732.673	2119658.543
14	72+99.54	0.00' Lt.	620825.886	2120933.994
15	74+99.61	0.05' Rt.	620819.047	2121133.941
16	88+82.40	℄	620615.038	2122499.325
17	100+99.85	0.09' Lt.	620331.701	2123683.341
18	111+75.89	℄	620081.099	2124729.799
19	120+99.70	0.01' Rt.	619790.379	2125604.680
20	129+95.27	℄	619322.945	2126366.580
21	140+99.77	0.03' Lt.	618669.984	2127257.410
22	151+99.69	0.02' Rt.	618019.682	2128144.497
23	153+99.60	0.04' Rt.	617901.480	2128305.717
24	162+82.50	℄	617379.542	2129017.824

NOTE: Station & Offsets of Existing Monuments From Re-Established Baseline.

NOTES

Existing Monuments To Be Destroyed

Coordinate Values Are In Ohio State Plane System, Based On NAD 83.
Scale Factor = 0.99992086

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

OHIO TURNPIKE 3rd LANE CONSTRUCTION
SURVEY CONTROL PLAN

URS — Akron Cleveland Columbus
564 White Pond Drive
Akron, Ohio 44320-1100
(330) 836-9111

DESIGNED: PDH	CHECKED: JJS	DATE: 10-97	
DRAWN: JJS	IN CHARGE: PDH	SCALE: 1"=500'	

CONTRACT 77-01-01 SHEET A3 OF A340

DESIGNED BY: JJS CHECKED BY:
DATE: 10/97 DATE:
DRAWN BY: JJS REVISED BY:
DATE: 10/97 DATE:
CAD FILE NAME: 7026100\90SCSCN\9A1010\3PRVEY02

RE-ESTABLISHED BASELINE CURVE DATA

P.I. Sta. 1041+98.10
Δ = 42°49'37" Rt.
Δ_c = 40°49'37" Rt.
R = 5729.58'
D_c = 1°00'00"
L_c = 4082.68'
T_s = 2347.06'
L_s = 200.00'
θ_s = 1°00'00"
E_s = 425.15'
e_{max} = MATCH EXIST. RATE (NDC = 0.036 Ft./Ft.)

RE-ESTABLISHED BASELINE CURVE DATA

P.I. Sta. 9+28.67
Δ = 51°22'33" Lt.
Δ_c = 48°27'33" Lt.
R = 4911.07'
D_c = 1°10'00"
L_c = 4153.65'
T_s = 2487.52'
L_s = 250.00'
θ_s = 1°27'30"
E_s = 539.19'
e_{max} = MATCH EXIST. RATE (NDC = 0.041 Ft./Ft.)

NOTE:
BAGLEY RD. & STEARNS RD. INTERSECTION STATIONS WERE OBTAINED FROM OTC PLANS LABELED "BAGLEY ROAD OVER THE OHIO TURNPIKE" DATED 5/21/98 AND "STEARNS ROAD BRIDGE" DATED 3/13/53. ALL OTHER INTERSECTION STATIONS WERE SCALED FROM THE ORIGINAL OTC CONSTRUCTION PLAN DRAWINGS.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

SCHEMATIC PLAN

STA. 1016+47.48 TO STA. 10+00

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: SAH	CHECKED: WCR	DATE: 6-2-99
DRAWN: JAM	IN CHARGE: WDA	SCALE: 1"=200'

CONTRACT 77-01-01 SHEET A4 OF A340

RE-ESTABLISHED
BASELINE
CURVE DATA

P.I. Sta. = 9+28.67
Δ = 51°22'33" Lt.
Δ_c = 48°27'33" Lt.
R = 4911.07'
D_c = 1°10'00"
L_c = 4153.65'
T_s = 2487.52'
L_s = 250.00'
θ_s = 1°27'30"
E_s = 539.19'
e_{max} = MATCH EXIST. RATE
(NDC = 0.041 Ft./Ft.)

RE-ESTABLISHED
BASELINE
CURVE DATA

P.I. Sta. = 74+66.78
Δ = 22°11'49" Rt.
Δ_c = 20°31'49" Rt.
R = 6875.49'
D_c = 00°50'00"
L_c = 2463.62'
T_s = 1448.77'
L_s = 200.00'
θ_s = 00°50'00"
E_s = 131.28'
e_{max} = MATCH EXIST. RATE
(NDC = 0.031 Ft./Ft.)

BASELINE
CURVE DATA

P.I. Sta. = 120+95.83
Δ = 22°46'47" Rt.
Δ_c = 18°16'47" Rt.
R = 3819.72'
D_c = 1°30'00"
L_c = 1218.64'
T_s = 919.68'
L_s = 300.00'
θ_s = 2°15'00"
E_s = 77.74'
e_{max} = MATCH EXIST. RATE
(NDC = 0.052 Ft./Ft.)

NOTE:
BAGLEY RD. & STEARNS RD. INTERSECTION STATIONS WERE OBTAINED FROM OTC PLANS LABELED "BAGLEY ROAD OVER THE OHIO TURNPIKE" DATED 5/21/98 AND "STEARNS ROAD BRIDGE" DATED 3/13/53. ALL OTHER INTERSECTION STATIONS WERE SCALED FROM THE ORIGINAL OTC CONSTRUCTION PLAN DRAWINGS.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

SCHEMATIC PLAN

STA. 10+00 TO STA. 132+00

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: SAH	CHECKED: WCR	DATE: 6-2-99
DRAWN: JAM	IN CHARGE: WDA	SCALE: 1"=200'

CONTRACT 77-01-01 SHEET A5 OF A340

NORMAL SECTION

TYPE B-50 AS PER PLAN BARRIER LOCATIONS

STA. 1016+47.48 TO STA. 1016+81.48	=	34.00 LIN. FT.
STA. 1065+03.29 TO STA. 1076+00.00 BACK Ø	=	1096.71 LIN. FT.
STA. 1080+00.00 AHEAD TO STA. 1082+47.18 Ø	=	247.18 LIN. FT.
STA. 32+90.78 TO STA. 58+18.01	=	2527.23 LIN. FT.
STA. 92+00.00 TO STA. 110+00.00	=	1800.00 LIN. FT.
TOTAL	=	5705.12 LIN. FT.

NORMAL SECTION

TYPE C-50 AS PER PLAN BARRIER LOCATIONS

STA. 90+81.63 TO STA. 92+00.00	=	118.37 LIN. FT.
STA. 110+00.00 TO STA. 110+40.50	=	40.50 LIN. FT.
STA. 131+30.45 TO STA. 132+00.00	=	69.55 LIN. FT.
TOTAL	=	228.42 LIN. FT.

* SEE PAVEMENT ELEVATION TABLES

** THE UNDERDRAIN FOR TYPE B-50 BARRIER MAY BE RIGHT OR LEFT. SEE PLAN AND PROFILE SHEETS FOR SPECIFIC LOCATIONS.

⊗ OR AS SHOWN ON THE UNDERDRAIN SUBSUMMARY SHEETS. USE ITEM SP 605 – 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP WHERE THE DEPTH OF THE UNDERDRAIN VARIES WITHIN A SINGLE CONTINUOUS LONGITUDINAL RUN. FOR SPECIFIC LOCATIONS, SEE SHEETS A49 TO A52.

Ø STA. 1076+00.00 BACK = STA. 1080+00.00 AHEAD
STA. 1100+02.01 BACK = STA. 0+00.00 AHEAD

LEGEND

(1) ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 64-22

(1A) ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 70-22 (FR)

(2) ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22

(2A) ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)

(2B) ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22

(2C) ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)

(3) ITEM SP 302 – 10" BITUMINOUS AGGREGATE BASE, PG 64-22, (TWO LIFTS)

(4) ITEM SP 304 – AGGREGATE BASE, (DIMENSION AS SHOWN)

(5) ITEM SP 408 – PRIME COAT (APPLICATION RATE OF 0.4 GAL./S.Y.)

(6) ITEM SP 407 – TACK COAT (APPLICATION RATE OF 0.1 GAL./S.Y.)

(7) ITEM SP 407 – INTERMEDIATE TACK COAT – (APPLICATION RATE 0.06 GAL./S.Y.)

(8) ITEM 203 – SUBGRADE COMPACTION

(9) ITEM 203 – PROOF ROLLING (SEE GENERAL NOTE SHEET NO. A11)

(10) ITEM SP 605 – 6" SHALLOW PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP

(11) ITEM 622 – CONCRETE BARRIER, TYPE B-50, AS PER PLAN

(12) ITEM 622 – CONCRETE BARRIER, TYPE C-50, AS PER PLAN

(13) ITEM SP 622C – MEDIAN WALL

(14) ITEM SP 606 – GUARDRAIL REBUILT, TYPE 5

(15) NOT USED

(16) ITEM SP 625 – CONDUIT, 4" WITH 3 CELL INNERDUCT, 713.07 (W.B.)
ITEM SP 625 – CONDUIT, 4" WITH 4 CELL INNERDUCT, 713.07 (E.B.)

(17) ITEM 254 – PAVEMENT PLANING, BITUMINOUS (THICKNESS AS SHOWN)

(18) ITEM SP 617 – RECONDITIONING SHOULDERS (TO BE USED WITHOUT GUARDRAIL)

(19) ITEM SP 627 – STONE SHOULDER PROTECTION (TO BE USED WITH GUARDRAIL)

(20) ITEM SP 611 – CLASS 'C' CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12")

(21) NOT USED

(22) ITEM SP 404A – JOINT SEALER

EXISTING LEGEND

(A) EXISTING 6"± ASPHALT CONCRETE

(B) EXISTING 10" CONCRETE BASE

(C) EXISTING 6" AGGREGATE BASE

(D) EXISTING VARIABLE DEPTH ASPHALT PAVED SHOULDER
7" AVG. – ASPHALT CONCRETE
10" AVG. – AGGREGATE BASE

(E) EXISTING CONCRETE APPROACH SLAB

(W-E) FOR PAVEMENT ELEVATION TABLES, SEE SHEETS A74 TO A89.

SEE PLAN AND PROFILE SHEETS FOR GUARDRAIL LOCATIONS. SEE SHEET A10A FOR SHOULDER RECONSTRUCTION AT EXISTING GUARDRAIL LOCATIONS. SEE SHEET A10A FOR SHOULDER TREATMENT

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

MAINLINE NORMAL TYPICAL SECTIONS

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: WCR | CHECKED: BL | DATE: 5-18-99
DRAWN: FDH | IN CHARGE: WDA | SCALE: 1"=5'

CONTRACT 77-01-01 SHEET A6 OF A340

SUPERELEVATED SECTION RIGHT

TYPE B-50 AS PER PLAN BARRIER LOCATIONS

STA. 1016+81.48 TO STA. 1019+00.00	=	218.52 LIN. FT.
STA. 1064+98.80 TO STA. 1065+03.29	=	4.49 LIN. FT.
STA. 58+18.01 TO STA. 59+00.00	=	81.99 LIN. FT.
TOTAL	=	305.00 LIN. FT.

SUPERELEVATED SECTION LEFT

TYPE B-50 AS PER PLAN BARRIER LOCATIONS

STA. 1082+47.18 TO STA. 1085+00.00	=	252.82 LIN. FT.
STA. 32+00.00 TO STA. 32+90.78	=	90.78 LIN. FT.
TOTAL	=	343.60 LIN. FT.

* SEE PAVEMENT ELEVATION TABLES

** THE UNDERDRAIN FOR TYPE B-50 BARRIER MAY BE RIGHT OR LEFT. SEE PLAN AND PROFILE SHEETS FOR SPECIFIC LOCATIONS.

⊗ OR AS SHOWN ON THE UNDERDRAIN SUBSUMMARY SHEETS. USE ITEM SP 605 – 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP WHERE THE DEPTH OF THE UNDERDRAIN VARIES WITHIN A SINGLE CONTINUOUS LONGITUDINAL RUN. FOR SPECIFIC LOCATIONS, SEE SHEETS A49 TO A52.

LEGEND

(1) ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 64-22

(1A) ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 70-22 (FR)

(2) ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22

(2A) ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)

(2B) ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22

(2C) ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)

(3) ITEM SP 302 – 10" BITUMINOUS AGGREGATE BASE, PG 64-22, (TWO LIFTS)

(4) ITEM SP 304 – AGGREGATE BASE, (DIMENSION AS SHOWN)

(5) ITEM SP 408 – PRIME COAT (APPLICATION RATE OF 0.4 GAL./S.Y.)

(6) ITEM SP 407 – TACK COAT (APPLICATION RATE OF 0.1 GAL./S.Y.)

(7) ITEM SP 407 – INTERMEDIATE TACK COAT – (APPLICATION RATE 0.06 GAL./S.Y.)

(8) ITEM 203 – SUBGRADE COMPACTION

(9) ITEM 203 – PROOF ROLLING (SEE GENERAL NOTE SHEET NO. A11)

(10) ITEM SP 605 – 6" SHALLOW PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP

(11) ITEM 622 – CONCRETE BARRIER, TYPE B-50, AS PER PLAN

(12) ITEM 622 – CONCRETE BARRIER, TYPE C-50, AS PER PLAN

(13) ITEM SP 622C – MEDIAN WALL

(14) ITEM SP 606 – GUARDRAIL REBUILT, TYPE 5

(15) NOT USED

(16) ITEM SP 625 – CONDUIT, 4" WITH 3 CELL INNERDUCT, 713.07 (W.B.)

ITEM SP 625 – CONDUIT, 4" WITH 4 CELL INNERDUCT, 713.07 (E.B.)

(17) ITEM 254 – PAVEMENT PLANING, BITUMINOUS (THICKNESS AS SHOWN)

(18) ITEM SP 617 – RECONDITIONING SHOULDERS (TO BE USED WITHOUT GUARDRAIL)

(19) ITEM SP 627 – STONE SHOULDER PROTECTION (TO BE USED WITH GUARDRAIL)

(20) ITEM SP 611 – CLASS 'C' CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12")

(21) NOT USED

(22) ITEM SP 404A – JOINT SEALER

EXISTING LEGEND

(A) EXISTING 6"± ASPHALT CONCRETE

(B) EXISTING 10" CONCRETE BASE

(C) EXISTING 6" AGGREGATE BASE

(D) EXISTING VARIABLE DEPTH ASPHALT PAVED SHOULDER
7" AVG. – ASPHALT CONCRETE
10" AVG. – AGGREGATE BASE

(E) EXISTING CONCRETE APPROACH SLAB

(W-E) FOR PAVEMENT ELEVATION TABLES, SEE SHEETS A74 TO A89.

SEE PLAN AND PROFILE SHEETS FOR GUARDRAIL LOCATIONS. SEE SHEET A10A FOR SHOULDER RECONSTRUCTION AT EXISTING GUARDRAIL LOCATIONS. SEE SHEET A10A FOR SHOULDER TREATMENT

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

MAINLINE SUPERELEVATION

TYPICAL SECTIONS

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: WCR | CHECKED: BL | DATE: 5-18-99

DRAWN: FDH | IN CHARGE: WDA | SCALE: 1"=5'

CONTRACT 77-01-01 SHEET A7 OF A340

SUPERELEVATED SECTION RIGHT

TYPE C-50 AS PER PLAN BARRIER LOCATIONS

STA. 1019+00.00 TO STA. 1027+89.43	=	889.43 LIN. FT.
STA. 1029+47.27 TO STA. 1037+14.27	=	767.00 LIN. FT.
STA. 1038+69.53 TO STA. 1042+62.23	=	392.70 LIN. FT.
STA. 1044+79.59 TO STA. 1058+06.36	=	1326.77 LIN. FT.
STA. 1061+93.72 TO STA. 1064+98.80	=	305.08 LIN. FT.
STA. 59+00.00 TO STA. 62+33.33	=	333.33 LIN. FT.
STA. 88+43.18 TO STA. 90+81.63	=	238.45 LIN. FT.
STA. 110+40.50 TO STA. 112+97.36	=	256.86 LIN. FT.
STA. 129+50.00 TO STA. 131+30.45	=	180.45 LIN. FT.
TOTAL	=	4690.07 LIN. FT.

NOTE:
FOR APPROACH SLAB TYPICAL SECTIONS, SEE SHEET NO. A10 .

SUPERELEVATED SECTION LEFT

TYPE C-50 AS PER PLAN BARRIER LOCATIONS

STA. 1085+00.00 TO STA. 1095+00.00	=	1000.00 LIN. FT.
STA. 13+50.00 TO STA. 15+00.00	=	150.00 LIN. FT.
STA. 28+00.00 TO STA. 32+00.00	=	400.00 LIN. FT.
TOTAL	=	1550.00 LIN. FT.

LEGEND

1. ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 64-22
1A. ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 70-22 (FR)
2. ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22
2A. ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)
2B. ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22
2C. ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)
3. ITEM SP 302 – 10" BITUMINOUS AGGREGATE BASE, PG 64-22, (TWO LIFTS)
4. ITEM SP 304 – AGGREGATE BASE, (DIMENSION AS SHOWN)
5. ITEM SP 408 – PRIME COAT (APPLICATION RATE OF 0.4 GAL./S.Y.)
6. ITEM SP 407 – TACK COAT (APPLICATION RATE OF 0.1 GAL./S.Y.)
7. ITEM SP 407 – INTERMEDIATE TACK COAT – (APPLICATION RATE 0.06 GAL./S.Y.)
8. ITEM 203 – SUBGRADE COMPACTION
9. ITEM 203 – PROOF ROLLING (SEE GENERAL NOTE SHEET NO. A11)
10. ITEM SP 605 – 6" SHALLOW PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP
11. ITEM 622 – CONCRETE BARRIER, TYPE B-50, AS PER PLAN
12. ITEM 622 – CONCRETE BARRIER, TYPE C-50, AS PER PLAN
13. ITEM SP 622C – MEDIAN WALL
14. ITEM SP 606 – GUARDRAIL REBUILT, TYPE 5
15. NOT USED
16. ITEM SP 625 – CONDUIT, 4" WITH 3 CELL INNERDUCT, 713.07 (W.B.)
    ITEM SP 625 – CONDUIT, 4" WITH 4 CELL INNERDUCT, 713.07 (E.B.)
17. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (THICKNESS AS SHOWN)
18. ITEM SP 617 – RECONDITIONING SHOULDERS (TO BE USED WITHOUT GUARDRAIL)
19. ITEM SP 627 – STONE SHOULDER PROTECTION (TO BE USED WITH GUARDRAIL)
20. ITEM SP 611 – CLASS 'C' CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12")
21. NOT USED
22. ITEM SP 404A – JOINT SEALER

EXISTING LEGEND

A. EXISTING 6"± ASPHALT CONCRETE
B. EXISTING 10" CONCRETE BASE
C. EXISTING 6" AGGREGATE BASE
D. EXISTING VARIABLE DEPTH ASPHALT PAVED SHOULDER
   7" AVG. – ASPHALT CONCRETE
   10" AVG. – AGGREGATE BASE
E. EXISTING CONCRETE APPROACH SLAB

W-E. FOR PAVEMENT ELEVATION TABLES, SEE SHEETS A74 TO A89 .

SEE PLAN AND PROFILE SHEETS FOR GUARDRAIL LOCATIONS. SEE SHEET A10A FOR SHOULDER RECONSTRUCTION AT EXISTING GUARDRAIL LOCATIONS. SEE SHEET A10A FOR SHOULDER TREATMENT

* SEE PAVEMENT ELEVATION TABLES

⊗ OR AS SHOWN ON THE UNDERDRAIN SUBSUMMARY SHEETS. USE ITEM SP 605 – 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP WHERE THE DEPTH OF THE UNDERDRAIN VARIES WITHIN A SINGLE CONTINUOUS LONGITUDINAL RUN. FOR SPECIFIC LOCATIONS, SEE SHEETS A49 TO A52 .

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

MAINLINE SUPERELEVATION
TYPICAL SECTION

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: WCR	CHECKED: BL	DATE: 5-18-99
DRAWN: FDH	IN CHARGE: WDA	SCALE: 1"=5'

CONTRACT 77-01-01 SHEET A8 OF A340

SUPERELEVATED SECTION RIGHT

WALL LOCATIONS

STA. 62+33.33 TO STA. 88+43.18	=	2609.85 LIN. FT.
STA. 112+97.36 TO STA. 129+50.00	=	1652.64 LIN. FT.
TOTAL	=	4262.49 LIN. FT.

SUPERELEVATED SECTION LEFT

WALL LOCATIONS

STA. 1095+00.00 TO STA. 1100+02.01 BACK Ø	=	502.01 LIN. FT.
STA. 0+00.00 AHEAD TO STA. 13+50.00 Ø	=	1350.00 LIN. FT.
STA. 15+00.00 TO STA. 28+00.00	=	1300.00 LIN. FT.
TOTAL	=	3152.01 LIN. FT.

Ø STA. 1100+02.01 BACK = STA. 0+00.00 AHEAD

* SEE PAVEMENT ELEVATION TABLES

⊗ OR AS SHOWN ON THE UNDERDRAIN SUBSUMMARY SHEETS. USE ITEM SP 605 – 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP WHERE THE DEPTH OF THE UNDERDRAIN VARIES WITHIN A SINGLE CONTINUOUS LONGITUDINAL RUN. FOR SPECIFIC LOCATIONS, SEE SHEETS A49 TO A52.

LEGEND

1. ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 64–22
1A. ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 70–22 (FR)
2. ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64–22
2A. ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70–22 (FR)
2B. ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64–22
2C. ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70–22 (FR)
3. ITEM SP 302 – 10" BITUMINOUS AGGREGATE BASE, PG 64–22, (TWO LIFTS)
4. ITEM SP 304 – AGGREGATE BASE, (DIMENSION AS SHOWN)
5. ITEM SP 408 – PRIME COAT (APPLICATION RATE OF 0.4 GAL./S.Y.)
6. ITEM SP 407 – TACK COAT (APPLICATION RATE OF 0.1 GAL./S.Y.)
7. ITEM SP 407 – INTERMEDIATE TACK COAT – (APPLICATION RATE 0.06 GAL./S.Y.)
8. ITEM 203 – SUBGRADE COMPACTION
9. ITEM 203 – PROOF ROLLING (SEE GENERAL NOTE SHEET NO. A11)
10. ITEM SP 605 – 6" SHALLOW PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP
11. ITEM 622 – CONCRETE BARRIER, TYPE B–50, AS PER PLAN
12. ITEM 622 – CONCRETE BARRIER, TYPE C–50, AS PER PLAN
13. ITEM SP 622C – MEDIAN WALL
14. ITEM SP 606 – GUARDRAIL REBUILT, TYPE 5
15. NOT USED
16. ITEM SP 625 – CONDUIT, 4" WITH 3 CELL INNERDUCT, 713.07 (W.B.)
    ITEM SP 625 – CONDUIT, 4" WITH 4 CELL INNERDUCT, 713.07 (E.B.)
17. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (THICKNESS AS SHOWN)
18. ITEM SP 617 – RECONDITIONING SHOULDERS (TO BE USED WITHOUT GUARDRAIL)
19. ITEM SP 627 – STONE SHOULDER PROTECTION (TO BE USED WITH GUARDRAIL)
20. ITEM SP 611 – CLASS 'C' CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12")
21. NOT USED
22. ITEM SP 404A – JOINT SEALER

EXISTING LEGEND

A. EXISTING 6"± ASPHALT CONCRETE
B. EXISTING 10" CONCRETE BASE
C. EXISTING 6" AGGREGATE BASE
D. EXISTING VARIABLE DEPTH ASPHALT PAVED SHOULDER 7" AVG. – ASPHALT CONCRETE 10" AVG. – AGGREGATE BASE
E. EXISTING CONCRETE APPROACH SLAB

W–E. FOR PAVEMENT ELEVATION TABLES, SEE SHEETS A74 TO A89.

SEE PLAN AND PROFILE SHEETS FOR GUARDRAIL LOCATIONS.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

MAINLINE SUPERELEVATION TYPICAL SECTIONS

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: WCR	CHECKED: BL	DATE: 4–8–99
DRAWN: FDH	IN CHARGE: WDA	SCALE: 1"=5'

CONTRACT 77-01-01 SHEET A9 OF A340

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APPROACH SLAB SECTION

WESTBOUND LANES			
STA. 1027+89.43 TO STA. 1028+04.97	=	15.54	LIN. FT.
STA. 1029+30.90 TO STA. 1029+47.27	=	16.37	LIN. FT.
STA. 1037+14.27 TO STA. 1037+29.27	=	15.00	LIN. FT.
STA. 1038+54.53 TO STA. 1038+69.53	=	15.00	LIN. FT.
STA. 1042+62.23 TO STA. 1042+75.09	=	12.86	LIN. FT.
STA. 1044+67.85 TO STA. 1044+79.59	=	11.74	LIN. FT.
STA. 1058+06.36 TO STA. 1058+28.21	=	21.85	LIN. FT.
STA. 1061+73.12 TO STA. 1061+93.72	=	20.60	LIN. FT.
TOTAL	=	128.96	LIN. FT.

EASTBOUND LANES			
STA. 1027+89.43 TO STA. 1028+03.71	=	14.28	LIN. FT.
STA. 1029+31.46 TO STA. 1029+47.27	=	15.81	LIN. FT.
STA. 1037+14.27 TO STA. 1037+29.27	=	15.00	LIN. FT.
STA. 1038+54.53 TO STA. 1038+69.53	=	15.00	LIN. FT.
STA. 1042+62.23 TO STA. 1042+78.61	=	16.38	LIN. FT.
STA. 1044+64.47 TO STA. 1044+79.59	=	15.12	LIN. FT.
STA. 1058+06.36 TO STA. 1058+28.21	=	21.85	LIN. FT.
STA. 1061+73.12 TO STA. 1061+93.72	=	20.60	LIN. FT.
TOTAL	=	134.04	LIN. FT.

NORMAL SECTION AT MAINTENANCE CROSSOVER

STA. 1064+60 TO STA. 1066+40
STA. 92+60 TO STA. 94+40

DETAIL A

THIRD LANE CONSTRUCTION
ADJACENT TO EXISTING PAVEMENT

NOTES:

1. CONSTRUCTION RELATIVE TO THE EXISTING EDGE OF PAVEMENT
2. MILL EXISTING ASPHALT 3" MINIMUM. IF LESS THAN 1" OF EXISTING ASPHALT REMAINS, MILL TO THE EXISTING CONCRETE PAVEMENT SURFACE.
3. AN INTERMEDIATE TACK SHALL BE APPLIED BETWEEN ALL LIFTS AND COURSES OF SP402 AND SP404.

LEGEND

1. ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 64-22
1A. ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 70-22 (FR)
2. ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22
2A. ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)
2B. ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22
2C. ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)
3. ITEM SP 302 – 10" BITUMINOUS AGGREGATE BASE, PG 64-22, (TWO LIFTS)
4. ITEM SP 304 – AGGREGATE BASE, (DIMENSION AS SHOWN)
5. ITEM SP 408 – PRIME COAT (APPLICATION RATE OF 0.4 GAL./S.Y.)
6. ITEM SP 407 – TACK COAT (APPLICATION RATE OF 0.1 GAL./S.Y.)
7. ITEM SP 407 – INTERMEDIATE TACK COAT – (APPLICATION RATE 0.06 GAL./S.Y.)
8. ITEM 203 – SUBGRADE COMPACTION
9. ITEM 203 – PROOF ROLLING (SEE GENERAL NOTE SHEET NO. A11)
10. ITEM SP 605 – 6" SHALLOW PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP
11. ITEM 622 – CONCRETE BARRIER, TYPE B-50, AS PER PLAN
12. ITEM 622 – CONCRETE BARRIER, TYPE C-50, AS PER PLAN
13. ITEM SP 622C – MEDIAN WALL
14. ITEM SP 606 – GUARDRAIL REBUILT, TYPE 5
15. NOT USED
16. ITEM SP 625 – CONDUIT, 4" WITH 3 CELL INNERDUCT, 713.07 (W.B.)
    ITEM SP 625 – CONDUIT, 4" WITH 4 CELL INNERDUCT, 713.07 (E.B.)
17. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (THICKNESS AS SHOWN)
18. ITEM SP 617 – RECONDITIONING SHOULDERS (TO BE USED WITHOUT GUARDRAIL)
19. ITEM SP 627 – STONE SHOULDER PROTECTION (TO BE USED WITH GUARDRAIL)
20. ITEM SP 611 – CLASS 'C' CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12")
21. NOT USED
22. ITEM SP 404A – JOINT SEALER

EXISTING LEGEND

A. EXISTING 6"± ASPHALT CONCRETE
B. EXISTING 10" CONCRETE BASE
C. EXISTING 6" AGGREGATE BASE
D. EXISTING VARIABLE DEPTH ASPHALT PAVED SHOULDER
   7" AVG. – ASPHALT CONCRETE
   10" AVG. – AGGREGATE BASE
E. EXISTING CONCRETE APPROACH SLAB
⊙ SEE BRIDGE DECK ELEVATIONS, SLAB THICKNESS, AND APPROACH PROFILES NOTE, IN STRUCTURE GENERAL NOTES, SHEET G2/G6
W-E FOR PAVEMENT ELEVATION TABLES, SEE SHEETS A74 TO A89.

SEE PLAN AND PROFILE SHEETS FOR GUARDRAIL LOCATIONS.

⊗ OR AS SHOWN ON THE UNDERDRAIN SUBSUMMARY SHEETS. USE ITEM SP 605 – 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP WHERE THE DEPTH OF THE UNDERDRAIN VARIES WITHIN A SINGLE CONTINUOUS LONGITUDINAL RUN. FOR SPECIFIC LOCATIONS, SEE SHEETS A49 TO A52.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

APPROACH SLAB TYPICALS

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: WCR	CHECKED: BL	DATE: 4-8-99
DRAWN: FDH	IN CHARGE: WDA	SCALE: 1"=5'

CONTRACT 77-01-01 SHEET A10 OF A340

FULL DEPTH OUTSIDE SHOULDER REPLACEMENT
HIGH SIDE OF SUPERELEVATION

IN LOCATIONS AS DIRECTED BY THE ENGINEER

FULL DEPTH OUTSIDE SHOULDER REPLACEMENT
NORMAL SECTION

IN LOCATIONS DIRECTED BY THE ENGINEER

FULL DEPTH OUTSIDE SHOULDER REPLACEMENT
LOW SIDE OF SUPERELEVATION

IN LOCATIONS AS DIRECTED BY THE ENGINEER

SNAP REMOVAL AND REPLACEMENT

STA. 1002+22 TO STA. 13+38 RT. (EB)
STA. 1010+14 TO STA. 13+38 LT. (WB)

MILL EXISTING SHOULDER AND RESURFACE
WITH ASPHALT AT EXISTING
CONCRETE BARRIER LOCATIONS

OUTSIDE SHOULDER
PLANING AND RESURFACING

STA. 13+38 TO STA. 145+20 LT. (WB)
STA. 13+38 TO STA. 138+34 RT (EB)

DETAIL B

OUTSIDE SHOULDER DETAIL

LEGEND

1. ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 64-22
1A. ITEM SP 404 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG 70-22 (FR)
2. ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22
2A. ITEM SP 402 – 1 3/4" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)
2B. ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 64-22
2C. ITEM SP 402 – 2" ASPHALT CONCRETE BASE COURSE, OR RECYCLED ASPHALT CONCRETE BASE COURSE, PG 70-22 (FR)
3. ITEM SP 302 – 10" BITUMINOUS AGGREGATE BASE, PG 64-22, (TWO LIFTS)
4. ITEM SP 304 – AGGREGATE BASE, (DIMENSION AS SHOWN)
5. ITEM SP 408 – PRIME COAT (APPLICATION RATE OF 0.4 GAL./S.Y.)
6. ITEM SP 407 – TACK COAT (APPLICATION RATE OF 0.1 GAL./S.Y.)
7. ITEM SP 407 – INTERMEDIATE TACK COAT – (APPLICATION RATE 0.06 GAL./S.Y.)
8. ITEM 203 – SUBGRADE COMPACTION
9. ITEM 203 – PROOF ROLLING (SEE GENERAL NOTE SHEET NO. A11)
10. ITEM SP 605 – 6" SHALLOW PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP
11. ITEM 622 – CONCRETE BARRIER, TYPE B-50, AS PER PLAN
12. ITEM 622 – CONCRETE BARRIER, TYPE C-50, AS PER PLAN
13. ITEM SP 622C – MEDIAN WALL
14. ITEM SP 606 – GUARDRAIL REBUILT, TYPE 5
15. NOT USED
16. ITEM SP 625 – CONDUIT, 4" WITH 3 CELL INNERDUCT, 713.07 (W.B.)
    ITEM SP 625 – CONDUIT, 4" WITH 4 CELL INNERDUCT, 713.07 (E.B.)
17. ITEM 254 – PAVEMENT PLANING, BITUMINOUS (THICKNESS AS SHOWN)
18. ITEM SP 617 – RECONDITIONING SHOULDERS (TO BE USED WITHOUT GUARDRAIL)
19. ITEM SP 627 – STONE SHOULDER PROTECTION (TO BE USED WITH GUARDRAIL)
20. ITEM SP 611 – CLASS 'C' CONCRETE, APPROACH SLAB, USING TYPE ? CEMENT (T=12")
21. NOT USED
22. ITEM SP 404A – JOINT SEALER

EXISTING LEGEND

- (A) EXISTING 6"± ASPHALT CONCRETE
- (B) EXISTING 10" CONCRETE BASE
- (C) EXISTING 6" AGGREGATE BASE
- (D) EXISTING VARIABLE DEPTH ASPHALT PAVED SHOULDER 7" AVG. – ASPHALT CONCRETE 10" AVG. – AGGREGATE BASE
- (E) EXISTING CONCRETE APPROACH SLAB
- (W-E) FOR PAVEMENT ELEVATION TABLES, SEE SHEETS A74 TO A89.
- ◐ SEE PLAN AND PROFILE SHEETS FOR GUARDRAIL LOCATIONS.

* SEE PAVEMENT ELEVATION TABLES

? OR AS SHOWN ON THE UNDERDRAIN SUBSUMMARY SHEETS. USE ITEM SP 605 – 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.15, WITH FABRIC WRAP WHERE THE DEPTH OF THE UNDERDRAIN VARIES WITHIN A SINGLE CONTINUOUS, LONGITUDINAL RUN. FOR SPECIFIC LOCATIONS, SEE SHEETS A49 TO A52.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

MAINLINE
SHOULDER DETAILS

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: WCR	CHECKED: BL	DATE: 5-18-99
DRAWN: FDH	IN CHARGE: WDA	SCALE: 1"=5'

CONTRACT 77-01-01 SHEET A10A OF A340

J:\TPIKE\70xxx00\97PROJEC\71-97-19\9746-01\MODIFIED\A-010AR.DWG User:mss05236 Jun 04, 2001 - 10:57am

NOTE:
THE EXISTING SHOULDERS ON BOTH OUTSIDE LANES OF THE TURNPIKE FROM STA. 1019+30 TO STA. 13+25 ARE NOT SCHEDULED TO BE RESURFACED IN THIS CONTRACT.

NOTE: THE CONTRACTOR SHALL CONTACT QWEST/LCI 24 HOURS PRIOR TO STARTING WORK ON THE CULVERT OUTLET.

RE-ESTABLISHED BASELINE CURVE DATA

P.I. Sta. 1041+98.10
Δ = 42°49'37" Rt.
Δ_c = 40°49'37" Rt.
R = 5729.58'
D_c = 1°00'00"
L_c = 4082.68'
T_s = 2347.06'
L_s = 200.00'
θ_s = 1°00'00"
E_s = 425.15'
e_{max} = MATCH EXIST. RATE (NDC = 0.036 Ft./Ft.)

FOR BARRIER DETAIL AT STRUCTURE, SEE SHEET NO. A211
FOR TYPICAL SECTIONS SEE SHEETS A6 TO A10
FOR PAVEMENT ELEVATION TABLE, SEE SHEETS A74 TO A89
FOR MULTI-CELL INNERDUCT QUANTITIES, SEE SHEET A45
FOR CROSS SECTIONS, SEE SHEETS A111 TO A189
FOR EXISTING UNDERDRAIN, SEE GENERAL NOTES SHEET A13
FOR UNDERDRAIN QUANTITIES, SEE SHEETS A49 TO A52
FOR TRAFFIC CONTROL PLANS, SEE SHEETS A214 TO A236
FOR QUANTITY SUB-SUMMARIES, SEE SHEETS A34 TO A52
FOR MONUMENT ASSEMBLY QUANTITIES, SEE SHEET A45
FOR S-1 CULVERT DETAILS, SEE SHEET A197

EXISTING FENO MONUMENT SUMMARY

NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
19	1041+97.32	94.12' LT.	623995.711	2109475.059	800.81
20	1045+99.81	0.05' RT.	623743.041	2109806.141	802.14
21	1048+97.95	73.07' LT.	623667.818	2110105.619	809.07

QUANTITIES LEGEND

- AS- APPROACH SLAB
- B- CONCRETE BARRIER
- CL- DITCH CLEANOUT
- D- DRAINAGE
- G- GUARDRAIL
- J- JUNCTION BOX
- M- MONUMENT BOX
- S- CULVERT
- UD- UNDERDRAIN
- X- REMOVAL ITEM

SYMBOLS LEGEND

- EXISTING SIGNS
- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL
- EXISTING FENO MONUMENT

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

PLAN AND PROFILE
STA. 1039+00 TO STA. 1051+00

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: SAH | CHECKED: WCR | DATE: 1-21-99
DRAWN: JAM | IN CHARGE: WDA | SCALE: 1"=50'

CONTRACT 77-01-01 SHEET A57 OF A340

EXISTING FENO MONUMENT SUMMARY

NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
19	1042+00	96.13' LT.	623995.71	2109475.06	800.81
20	1046+00	0.05' RT.	623743.04	2109806.14	802.14

RE-ESTABLISHED SURVEY BASELINE CURVE DATA

P.I. Sta. 1041+98.10
Δ = 42°49'37" Rt.
Δ_c = 40°49'37" Rt.
R = 5729.58'
D_c = 1°00'00"
L_c = 4082.68'
T_s = 2347.06'
L_s = 200.00'
θ_s = 1°00'00"
E_s = 425.15'
e_{max} = MATCH EXIST. RATE (NDC = 0.036 Ft./Ft.)

PLAN

NOTES

1. Survey is based on the Re-established Baseline. See Survey Control Plan, Sheet A2 & A3.
2. Earthwork Limits shown are approximate. Actual slopes shall conform to Plan Cross Sections.
3. For Reference Line Geometrics, See Sheet 3/24
4. The Location of the Splice between the Proposed Guardrail and the Existing will be determined in the Field.
5. See Roadway Plans for Sidewalk Removal and Replacement at Proposed Median Piers.
6. Existing Scuppers and Downspouts (3 total) on the Westbound Structure shall be removed to the groundline and capped.
7. The contractor shall notify the Amherst Maintenance Post of the Ohio Turnpike Commission 14 days before work begins which requires relocation of the Existing Electrical Junction Box & Conduit.
8. Approximate top of non-weathered sandstone in borings B-05-10, B-05-11, & B-05-12 is given in Elevation View. See Sheets G4/G6 & G5/G6 for Drilled Shaft Notes & Details.

LEGEND

- Denotes Soil Boring Location
- * Match Existing
- ** These Existing Profile Elevations are at the Existing Median-Side Edge-of-Pavement. All other Existing Profile Elevations are at the Deck Cut-line.
- Unaffected by Proposed Work
- Denotes Benchmark Locations
- Location of Existing Minimum Vertical Clearance
- Location of Proposed Minimum Vertical Clearance
- W.B. Preferred Minimum Vertical Clearance = 15'-0"
- W.B. Existing Minimum Vertical Clearance = 16'-7 1/2"±
- W.B. Proposed Minimum Vertical Clearance = 15'-9 5/8"±
- E.B. Required Minimum Vertical Clearance = 14'-6"
- E.B. Existing Minimum Vertical Clearance = 14'-11 7/8"±
- E.B. Proposed Minimum Vertical Clearance = 14'-11 7/8"±

ELEVATION

EXISTING STRUCTURE

TYPE: SIDE-BY-SIDE 4-SPAN, MIDDLE SPANS CONTINUOUS, NON-COMPOSITE REINFORCED CONCRETE DECKS ON A7 STEEL BEAMS EXCEPT A36 FOR FIRST EXTERIOR BEAM ON EACH BRIDGE.
SPANS: 32.10'-44.61'-52.87'-36.30' C/C BRGS. (W.B.)
28.59'-44.61'-52.87'-32.91' C/C BRGS. (E.B.)
(MEASURED ALONG CENTERLINE CONSTRUCTION)
ROADWAY: VARIES 57'-11"± TO 49'-8"± (W.B.)
VARIES 48'-3"± TO 44'-8"± (E.B.)
TOE/TOE OF PARAPETS
SKEW: 17°-23'-34"± L.F. (FROM NORMAL TO REFERENCE LINE)
WEARING SURFACE: MONOLITHIC CONCRETE
LOADING: HS 20-44 CASE I AND THE ALTERNATE MILITARY LOADING (DECK SLAB); CF 2000 (BEAMS)
APPROACH SLABS: 15'-0" NORMAL TO ABUTMENT
ALIGNMENT: CURVED RIGHT R= 5729.578'
SUPERELEVATION: 0.0156±
BUILT: 1954 (WIDENED 1984)
SFN: 4729900 (W.B.); 4729897 (E.B.)

PROPOSED STRUCTURE

Latitude: N 41°-22'-40" Longitude: W 81°-59'-10"

PROPOSED WORK: CONSTRUCT A MEDIAN WIDENING OF THE EXISTING REINFORCED CONCRETE ABUTMENTS ON PILES. CONSTRUCT NEW PIERS IN MEDIAN ON DRILLED SHAFTS. ERECT NEW A36 STEEL BEAMS. WIDEN THE EXISTING CONCRETE DECK AND CONSTRUCT CONCRETE MEDIAN BARRIERS.
TYPE: SIDE-BY-SIDE 4-SPAN, MIDDLE SPANS CONTINUOUS, MEDIAN WIDENED, REINFORCED CONCRETE DECKS, NON-COMPOSITE WITH A36 AND A7 STEEL BEAMS, SUPPORTED ON WIDENED REINFORCED CONCRETE ABUTMENTS, AND ON NEW AND EXISTING PIERS.
SPANS: 32.10'-44.61'-52.87'-36.30' C/C BRGS. (W.B.)
28.59'-44.61'-52.87'-32.91' C/C BRGS. (E.B.)
(MEASURED ALONG CENTERLINE CONSTRUCTION)
ROADWAY: VARIES 80'-5"± TO 72'-2"± (W.B.)
VARIES 70'-9"± TO 67'-2"± (E.B.)
TOE/TOE OF PARAPETS
SKEW: 17°-23'-34" L.F. (FROM NORMAL TO REFERENCE LINE)
WEARING SURFACE: 1/2" MONOLITHIC CONCRETE
LOADING: HS20-44 CASE I AND THE ALTERNATE MILITARY LOADING
APPROACH SLABS: 15'-0" NORMAL TO ABUTMENT
ALIGNMENT: CURVED RIGHT R=5729.578'
SUPERELEVATION: 0.0156±

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

GENERAL PLAN

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: ZRD	CHECKED: TRS	DATE: 10/8/99
DRAWN: FDH	IN CHARGE: WDA	SCALE: N.T.S.

1/24

CONTRACT 77-01-01 SHEET A292 OF A340

ESTIMATED QUANTITIES

CALC. BY: ZRD DATE: 1-99
CHKD. BY: JRS DATE: 1-99

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTS	PIERS	SUPER	GEN'L.	SEE SHEET NO.
SP 202	LUMP SUM		PORTIONS OF STRUCTURE REMOVED				LUMP	G3/G6
								2/24
503	183	CU. YD.	UNCLASSIFIED EXCAVATION	183				
503	28	CU. YD.	ABUTMENT BACKFILL, AS PER 503.10	28				G1/G6
503	LUMP SUM		COFFERDAMS, CRIBS AND SHEETING				LUMP	
505	LUMP SUM		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
506	LUMP SUM		STATIC LOAD TEST, AS PER PLAN *				LUMP	G3/G6
506	1	EACH	SUBSEQUENT STATIC LOAD TEST, AS PER PLAN *				1	G3/G6
507	1022	LIN. FT.	STEEL PILES HP10X42	1022				
SP 509	90,523	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60	24,949		65,274	300	G2/G6
510	144	EACH	DOWEL HOLES, USING SP 853 GROUT ANCHORING	114	24	6		
SP 511	157	CU. YD.	CLASS C CONCRETE, ABUTMENTS	157				
SP 511	103	CU. YD.	CLASS C CONCRETE, PIER CAPS AND COLUMNS		103			
SP 511A	242	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE DECK SLABS,			236	6	2/24
			USING SHRINKAGE COMPENSATING CEMENT					
SP 511A	44	CU. YD.	CLASS S CONCRETE, ABUTMENT SLABS,	44				
			USING SHRINKAGE COMPENSATING CEMENT					
SP 511A	58	CU. YD.	CLASS S CONCRETE, BARRIERS AND PARAPETS,	11		47		
			USING TYPE I CEMENT					
SP 512	19	SQ. YD.	MEMBRANE WATERPROOFING (SHEET TYPE 2)	19				
513	180,200	POUND	STRUCTURAL STEEL, AISC CATEGORY I			180,200		
513	540	EACH	WELDED STUD SHEAR CONNECTOR			540		
SP 514B	LUMP SUM		SURFACE PREPARATION OF EXISTING STEEL,			LUMP		
			SYSTEM UUU					
SP 514B	LUMP SUM		FIELD PAINTING OF EXISTING STEEL, PRIME COAT,			LUMP		
			SYSTEM UUU					
SP 514B	LUMP SUM		FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT,			LUMP		
			SYSTEM UUU					
SP 514B	LUMP SUM		FIELD PAINTING OF EXISTING STEEL, FINISH COAT,			LUMP		
			SYSTEM UUU					
SP 514B	LUMP SUM		FIELD CLEANING AND TOUCH-UP OF SHOP PRIMER AND			LUMP		
			CONNECTIONS WITH ORGANIC ZINC AND FIELD CLEANING					
			AND PAINTING OF SLIP/CREEP CRITICAL SURFACES					
			WITH INORGANIC ZINC					
SP 514B	LUMP SUM		FIELD PAINTING OF NEW STEEL, INTERMEDIATE COAT,			LUMP		
			SYSTEM IZEU					
SP 514B	LUMP SUM		FIELD PAINTING OF NEW STEEL, FINISH COAT,			LUMP		
			SYSTEM IZEU					
SP 514B	200	SQ. FT.	SPOT WASHING TO REMOVE CHLORIDES *			200		
516	134	EACH	1/8" PREFORMED BEARING PADS		134			
516	24	EACH	LAMINATED ELASTOMERIC BEARING, COMPLETE,		24			19/24
			AS PER PLAN					
516	18	EACH	BEARING DEVICES, FIXED	12	6			
SP 516A	20	LIN. FT.	CRACK REPAIR USING EPOXY INJECTION *		20			
SP 516B	890	LIN. FT.	SEALING OF CONSTRUCTION JOINTS	215		675		
518	92	CU. YD.	POROUS BACKFILL WITH FILTER FABRIC	92				
518	194	LIN. FT.	6" PERFORATED CORRUGATED PLASTIC PIPE,	194				G2/G6
			AS PER PLAN					
518	115	LIN. FT.	6" NON-PERFORATED CORRUGATED PLASTIC PIPE,	115				G2/G6
			INCLUDING SPECIALS, AS PER PLAN					
SP 514B	5	LIN. FT.	CAULKING			5		

ESTIMATED QUANTITIES

CALC. BY: ZRD DATE: 1-99
CHKD. BY: JRS DATE: 1-99

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTS	PIERS	SUPER	GEN'L.	SEE SHEET NO.
SP 519	710	SQ. FT.	PATCHING CONCRETE STRUCTURES		690		20 *	G2/G6
523	3	HOUR	DYNAMIC LOAD TEST *				3	
SP 523	2	EACH	RESET BEARING ASSEMBLY	2				2/24
SP 524A	67	EACH	REPLACE EXPANSION BEARING DEVICE		67			
SP 525A	LUMP SUM		WORKER PROTECTION				LUMP	
SP 525A	20	EACH	PROTECTIVE CLOTHING/EQUIPMENT SET				20	
SP 525A	LUMP SUM		ESTABLISH REGULATED AREAS				LUMP	
SP 525A	LUMP SUM		PAINT WASTE/HAZARDOUS WASTE CLASSIFICATION,				LUMP	
			HANDLING, AND DISPOSAL					
SP 525A	LUMP SUM		CONTAINMENT SYSTEM				LUMP	
SP 527	LUMP SUM		FALSEWORK, TEMPORARY BRACING AND PROTECTIVE				LUMP	
			STRUCTURES					
SP 533A	208	LIN. FT.	4-INCH ELASTOMERIC COMPRESSION SEAL IN			208		
			STRUCTURAL STEEL JOINT					
SP 533C	421	LIN. FT.	REPLACEMENT OF 4-INCH ELASTOMERIC COMPRESSION			421		
			SEAL IN STRUCTURAL STEEL JOINT					
SP 536	1061	SQ. YD.	CONCRETE WEATHERPROOFING, DECK, ABUTMENT SLABS,	252		809		G1/G6
			AND APPROACH SLABS					
SP 536	478	SQ. YD.	CONCRETE WEATHERPROOFING, BARRIERS AND PARAPETS	73		405		G1/G6
SP 536	568	SQ. YD.	CONCRETE WEATHERPROOFING, SUBSTRUCTURE	118	445		5	G1/G6
								2/24
601	376	SQ. YD.	CRUSHED AGGREGATE SLOPE PROTECTION	376				
SP 825	18,301	POUND	GALVANIZED REINFORCING STEEL, GRADE 60		18,301			
SPECIAL	8	EACH	RECONSTRUCT CONCRETE BEARING SEAT*		8			G2/G6
SPECIAL	42	LIN. FT.	DRILLED SHAFT, 36" DIAMETER, INTO BEDROCK		42			
SPECIAL	521	LIN. FT.	DRILLED SHAFT, 42" DIAMETER, ABOVE BEDROCK		521			
SPECIAL	60	LIN. FT.	PROOF TESTING DRILLED SHAFT		60			

NOTES

(1) ITEM SP 202 CONSISTS OF THE FOLLOWING APPROXIMATE REINFORCED CONCRETE REMOVAL QUANTITIES:

ABUTMENT PARAPETS	6.1	CU. YD.
ABUTMENT SLAB	2.6	CU. YD.
ABUTMENTS	1.3	CU. YD.
APPROACH SLABS	0.2	CU. YD.
DECK PARAPETS	35.5	CU. YD.
DECK SLAB	30.7	CU. YD.
PIER CAPS	0.4	CU. YD.
FOC, CONDUIT & APPURTENANCES	230	LIN. FT.

THESE QUANTITIES ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ESTIMATE HIS OWN REMOVAL QUANTITIES IN DETERMINING HIS BID PRICE FOR THE ITEM SP 202.

(2) AS A CONTINGENCY, 6 CU. YD. OF CONCRETE HAS BEEN INCLUDED IN THE ESTIMATED QUANTITY FOR SUPERSTRUCTURE DECK SLAB CONCRETE, IN THE GENERAL COLUMN, TO BE USED AS DIRECTED BY THE ENGINEER FOR ADDITIONAL CONCRETE REQUIRED IN THE HAUNCHES DUE TO PROFILE ADJUSTMENT.

(3) AS A CONTINGENCY, 5 SQ. YD. OF CONCRETE WEATHERPROOFING, SUBSTRUCTURE HAS BEEN INCLUDED TO SEAL ANY GENERAL CONCRETE PATCHED AREAS TO BE USED AS DIRECTED BY THE ENGINEER.

(4) THE EXISTING WESTBOUND EXTERIOR BEAM BEARINGS AT ABUTMENTS (2 LOCATIONS TOTAL) SHALL BE RESET PER SP 523. SEE SHEET 19/24.

* DENOTES ITEMS TO BE USED AS DIRECTED BY THE ENGINEER.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

ESTIMATED QUANTITIES

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: CHECKED: DATE: 10/8/99
DRAWN: FDH IN CHARGE: WDA SCALE: N.T.S.

2/24 CONTRACT 77-01-01 SHEET A293 OF A340

STRUCTURAL LAYOUT AND PILING PLAN

DETAIL A

DETAIL B

ESTIMATED PILE LENGTHS

Rear Abutment Upper Level (E.B.) ------ 33 Feet
Rear Abutment Upper Level (W.B.) ------ 33 Feet
Rear Abutment Lower Level (E.B.) ------ 27 Feet
Rear Abutment Lower Level (W.B.) ------ 27 Feet
Forward Abutment Lower Level (E.B.) ---- 34 Feet
Forward Abutment Lower Level (W.B.) ---- 34 Feet
Forward Abutment Upper Level (E.B.) ---- 36 Feet
Forward Abutment Upper Level (W.B.) ---- 36 Feet

PILE CUT-OFF ELEVATION

PILE NO.	PILE SIZE	ELEVATION	PILE NO.	PILE SIZE	ELEVATION
1	HP10x42	799.90	17	HP10x42	795.10
2	HP10x42	799.90	18	HP10x42	795.10
3	HP10x42	799.90	19	HP10x42	795.10
4	HP10x42	799.90	20	HP10x42	795.10
5	HP10x42	799.90	21	HP10x42	795.10
6	HP10x42	799.90	22	HP10x42	795.50
7	HP10x42	793.12	23	HP10x42	795.50
8	HP10x42	793.12	24	HP10x42	795.50
9	HP10x42	793.12	25	HP10x42	795.50
10	HP10x42	793.12	26	HP10x42	795.50
11	HP10x42	793.12	27	HP10x42	802.10
12	HP10x42	793.62	28	HP10x42	802.10
13	HP10x42	793.62	29	HP10x42	802.10
14	HP10x42	793.62	30	HP10x42	802.10
15	HP10x42	793.62	31	HP10x42	802.10
16	HP10x42	793.62	32	HP10x42	802.10

LEGEND

- Indicates Proposed Pile Battered @ 1:4, and direction of Batter
- Indicates Proposed Vertical Pile
- Indicates Existing Pile
- Indicates Proposed Drilled Shaft

NOTES

1. All Abutment Piles are HP10x42
2. See sheet G1/G6 for Pile Notes
3. For Drilled Shaft notes and details, See sheets G4/G6 & G5/G6.
4. For Drilled Shaft inspection record, See sheet G6/G6.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

STRUCTURAL LAYOUT AND PILING PLAN

OHIO TURNPIKE OVER LORAIN ROAD (152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: ZRD | CHECKED: JRB | DATE: 10/8/99
DRAWN: JAM | IN CHARGE: WDAI | SCALE: N.T.S.

3/24 CONTRACT 77-01-01 SHEET A294 OF A340

PLAN

ELEVATION

ELEVATIONS														
LOCATION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
REAR ABUTMENT	792.12±	792.62±	799.43±	799.75	799.71	799.44	798.78	798.95	799.12	799.14±	802.38	802.16	801.51	801.98

LEGEND

Indicates areas to be removed per Item SP 202 – Portions Of Structure Removed. Repair per SP 519.

Indicates Pile battered @ 1:4

NOTES

(1) For Sections A-A, B-B, & C-C, See Sheet 5/24

(2) For Sections D-D, E-E, F-F, G-G, & X-X, See Sheet 8/24

(3) Porous Backfill with Filter Fabric, 2 Feet Thick shall extend up from the bottom of the abutment to the bottom of the abutment slabs and approach slabs, and laterally as shown on the plans.

(4) Reinforcing Splice Lengths shall be: 2'-0" for #5 bars (Minimum)

(5) Reinforcing Steel: New Reinforcing may require field cutting or bending to be properly fitted. Payment shall be included in Item SP 509.

(6) Surface Under Bearings for Abutment Seat: Special care shall be taken to finish the concrete under the Bearings to a flat level surface. The concrete surface shall be steel trowel finished without brushing and the flatness of the finished surface shall not vary from a straight edge laid on the surface in any direction within the limits of the bearing footprint by more than 1/16 inch. Surfaces which fail to conform to the required flatness shall be ground until acceptable.

(7) For Structural Layout and Piling Plan, See Sheet 3/24

(8) Bridge Seat Reinforcing: Reinforcing Steel in the vicinity of the Bridge Seat shall be accurately placed to avoid interference with the drilling of Bearing Anchor Holes or the pre-setting of Bearing Anchors.

(9) Bearing Anchors: At the option of the contractor, Bearing Anchors (or formed holes), located and supported by templates, may be cast in place.

(10) Bearing Anchor Bolts (or Rods): shall be galvanized according to 711.02 and Grouted using SP 853 Grout Anchoring.

(11) * Move only these sets of 2-EA502 or 2-EA503 3" in the direction indicated after initial placement by Typical Spacing Between Piles.

(12) For the Existing Curtain Wall removal, concrete and rebar must be removed 1" minimum below the adjacent concrete surface and patched flush. Payment for this is incidental to Item SP 202.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

REAR ABUTMENT PLAN & ELEVATION

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: ZZD | CHECKED: JZS | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WOA | SCALE: N.T.S.

4/24 CONTRACT 77-01-01 SHEET A295 OF A340

SECTION A-A

SECTION B-B
(ALL DIMENSIONS ARE MEASURED
PERPENDICULAR TO ℄ ABUTMENT BEARINGS)

SECTION C-C
(ALL DIMENSIONS ARE MEASURED
PERPENDICULAR TO ℄ ABUTMENT BEARINGS)

Indicates Area included with Item 503 Abutment Backfill, As Per 503.10
Indicates Area included with Item 503 Unclassified Excavation
Indicates Area included with Item 518 Porous Backfill With Filter Fabric

SECTION Y-Y

ABUTMENT EXCAVATION DIAGRAM

NOTES

1. Reinforcing Splice Lengths shall be:
   2'-0" for #5 bars (Minimum)
   2'-4" for #6 bars (Minimum)
2. For Plan & Section Locations,
   See Sheet 4/24

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

REAR ABUTMENT DETAILS

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: ZRD	CHECKED: JRS	DATE: 10/8/99
DRAWN: FDH	IN CHARGE: WDA	SCALE: N.T.S.

5/24 CONTRACT 77-01-01 SHEET A296 OF A340

PLAN

ELEVATION

ELEVATIONS														
LOCATION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
FORWARD ABUTMENT	794.50±	794.10±	801.00±	801.03	800.88	800.73	801.17	801.49	801.56	801.27±	803.90	803.48	803.92	804.24

LEGEND

Indicates areas to be removed per Item SP 202 – Portions Of Structure Removed. Repair per SP 519.

Indicates Pile battered @ 1:4

NOTES

1. For Sections H-H, I-I, & J-J, See Sheet 7/24
2. For Sections D-D, E-E, F-F, G-G, & X-X, See Sheet 8/24
3. Porous Backfill with Filter Fabric, 2 Feet Thick shall extend up from the bottom of the abutment to the bottom of the abutment slabs and approach slabs, and laterally as shown on the plans.
4. Reinforcing Splice Lengths shall be: 2'-0" for #5 bars (Minimum)
5. Reinforcing Steel: New Reinforcing may require field cutting or bending to be properly fitted. Payment shall be included in Item SP 509.
6. Surface Under Bearings for Abutment Seat: Special care shall be taken to finish the concrete under the Bearings to a flat level surface. The concrete surface shall be steel trowel finished without brushing and the flatness of the finished surface shall not vary from a straight edge laid on the surface in any direction within the limits of the bearing footprint by more than 1/16 inch. Surfaces which fail to conform to the required flatness shall be ground until acceptable.
7. For Structural Layout and Piling Plan, See Sheet 3/24
8. Bridge Seat Reinforcing: Reinforcing Steel in the vicinity of the Bridge Seat shall be accurately placed to avoid interference with the drilling of Bearing Anchor Holes or the pre-setting of Bearing Anchors.
9. Bearing Anchors: At the option of the contractor, Bearing Anchors (or formed holes), located and supported by templates, may be cast in place.
10. Bearing Anchor Bolts (or Rods): shall be galvanized according to 711.02 and Grouted using SP 853 Grout Anchoring.
11. * Move only these sets of 2-EA502 or 2-EA503 3" in the direction indicated after initial placement by Typical Spacing Between Piles.
12. For the Existing Curtain Wall removal, concrete and rebar must be removed 1" minimum below the adjacent concrete surface and patched flush. Payment for this is incidental to Item SP 202.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

FORWARD ABUTMENT PLAN & ELEVATION

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: ZKD | CHECKED: JRS | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WOA | SCALE: N.T.S.

6/24 CONTRACT 77-01-01 SHEET A297 OF A340

SECTION H-H

SECTION I-I

(ALL DIMENSIONS ARE MEASURED PERPENDICULAR TO ℄ ABUTMENT BEARINGS)

SECTION J-J

(ALL DIMENSIONS ARE MEASURED PERPENDICULAR TO ℄ ABUTMENT BEARINGS)

NOTES

1. Reinforcing Splice Lengths shall be:
   2'-0" for #5 bars (Minimum)
   2'-4" for #6 bars (Minimum)
2. For Plan & Section Locations, See Sheet 6/24

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

FORWARD ABUTMENT DETAILS

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: ZRD | CHECKED: JRS | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WDA | SCALE: N.T.S.

CONTRACT 77-01-01 SHEET A298 OF A340

7/24

NOTE:
All Horizontal Bars in Barrier are EAS502

SECTION D-D

SECTION X-X
NOT TO SCALE

SECTION E-E
(Barrier Dimensions are Symmetrical about ℄ Re-established Survey Baseline)

FIXED ANCHOR BOLT DETAIL
(AT ABUTMENTS)

SECTION F-F

SECTION G-G

GROOVE & SEAL DETAIL

NOTES

1. Groove & Seal with 705.04, as shown on ODOT Standard Drawing BP-2.1, at the top of the Barriers. Cost to be included with Item SP 511A Class S Concrete, Barriers and Parapets, using Type I Cement. See Detail this sheet.
2. Reinforcing Splice Lengths shall be:
   2'-0" for #5 bars (Minimum)
   2'-4" for #6 bars (Minimum)
3. For Plan & Section Locations, See Sheets 4/24 & 6/24

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

ABUTMENT DETAILS

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: ZRD | CHECKED: JRS | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WDA | SCALE: N.T.S.

8/24 CONTRACT 77-01-01 SHEET A299 OF A340

SECTION A-A

NOTES

(1) For Section D-D, See Sheet 8/24

(2) Longitudinal Construction Joint shall be treated in accordance with Item SP 516B – Sealing of Construction Joint.

(3) Longitudinal or Transverse Construction Joints shall not be permitted in the Abutment Slab, except as shown in the plans.

(4) For dimensions tying Centerline Re-established Survey Baseline to Reference Line, see sheet 3/24.

(5) For additional Abutment Slab removal areas, see sheet 21/24.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

REAR AND FORWARD ABUTMENT SLAB DETAILS

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: ZLD | CHECKED: JZS | DATE: 10/8/99

DRAWN: FDH | IN CHARGE: WDA | SCALE: N.T.S.

CONTRACT 77-01-01 SHEET A300 OF A340

9/24

PLAN

ELEVATION

(LOOKING OUTWARD FROM ROADWAY SIDE OF PARAPET)

SECTION A-A

SECTION B-B

All parapet horizontal bars are EW501 unless noted otherwise.

SECTION C-C

SECTION D-D

(THRU TRANSITION AREA)

SECTION E-E

BEGIN/END OF PARAPET TRANSITION

LEGEND

Areas to be removed per Item SP 202 – Portions of Structure Removed

Areas to be removed per Item SP 202 – Portions of Structure Removed, using special care so as to avoid damage to Existing Expansion Joint Armor and Anchors.

("X") Denotes Existing Reinforcing Steel Spacing

NOTES

1. Existing Reinforcing Steel to be cleaned, Epoxy Coating Repaired, and Reused. Cost of this is incidental to Item SP 202 – Portions of Structure Removed.
2. Reinforcing Steel shall be per Item SP 509– Epoxy Coated Reinforcing Steel, Grade 60.
3. Dowel Holes shall be per Item 510 – Dowel Holes, using SP 853 Grout Anchoring.
4. Concrete shall be per Item SP 511A Class S Concrete, Barriers & Parapets, using Type I Cement.
5. 1" Preformed Expansion Joint Filler topped with 1" minimum depth 705.04 Joint Sealer, to be included with Item SP 511A Class S Concrete, Barriers & Parapets, using Type I Cement for payment.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

PARAPET MODIFICATION DETAILS

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: ZZD | CHECKED: JZS | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WOAI | SCALE: N.T.S.

10/24

CONTRACT 77-01-01 SHEET A301 OF A340

TYPICAL WB PIER PLAN

TYPICAL EB PIER PLAN

SECTION A-A

TYPICAL WB PIER ELEVATION

TYPICAL EB PIER ELEVATION

NOTES

1. Surface Under Bearings for Pier Seat: Special care shall be taken to finish the concrete under the Bearings to a flat level surface. The concrete surface shall be steel trowel finished without brushing and the flatness of the finished surface shall not vary from a straight edge laid on the surface in any direction within the limits of the bearing footprint by more than 1/16 inch. Surfaces which fail to conform to the required flatness shall be ground until acceptable.
2. Bridge Seat Reinforcing: Reinforcing Steel in the vicinity of the Bridge Seat shall be accurately placed to avoid interference with the drilling of Bearing Anchor Holes or the pre-setting of Bearing Anchors.
3. Bearing Anchors: At the option of the contractor, Bearing Anchors (or formed holes), located and supported by templates, may be cast in place.
4. For Structural Layout and Piling Plan, See Sheet 3/24
5. Bearing Anchor Bolts (or Rods): shall be galvanized according to 711.02 and Grouted using SP 853 Grout Anchoring.
6. E.B. and W.B. Pier dimensions, bar spacings, and bar marks are the same unless noted otherwise. All Column dimensions, bar spacings, and bar marks are typical for all columns.
7. For Pier 1 & Pier 3, Elevations D thru J are along ℄ Rear Brgs. and Elevations K thru R are along ℄ Fwd. Brgs. For Pier 2, Elevations D thru J are along ℄ Pier.
8. Extend Spiral up to bottom horizontal reinforcing in cap. At this end, and at bottom of Drilled Shaft, provide 1 1/2 extra turns.
9. For Drilled Shaft notes and details, See sheets G4/G6 & G5/G6.

See Pier Plan and Elevation for stirrup and longitudinal bar sizes and spacings.

FIXED ANCHOR BOLT DETAIL
(PIER 2 ONLY)

ELEVATIONS

LOCATION	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S
Pier 1	781.33	796.45	795.83	799.67	799.50	799.33	799.95	800.25	800.28	799.68	799.51	799.35	799.96	800.26	800.29	781.95
Pier 2	781.62	796.71	796.12	799.95	799.79	799.62	800.21	800.52	800.56	N/A	N/A	N/A	N/A	N/A	N/A	782.21
Pier 3	782.47	797.50	796.97	800.78	800.62	800.47	801.00	801.31	801.35	800.79	800.64	800.48	801.01	801.32	801.36	783.00

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

PIER DETAILS

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: RD	CHECKED: JRS	DATE: 10/8/99
DRAWN: JAM	IN CHARGE: WDAI	SCALE: N.T.S.

11/24

CONTRACT 77-01-01 SHEET A302 OF A340

WESTBOUND PIER

EASTBOUND PIER

PIER 1
(LOOKING EAST)

EASTBOUND PIER

WESTBOUND PIER

PIER 1
(LOOKING WEST)

DETAIL A●

● RELATIVE ELEVATIONS SHOWN SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. CONTRACTOR SHALL CALCULATE THE PROPOSED BEARING SEAT ELEVATION BASED ON THE EXISTING SEAT ELEVATION AND THE DIFFERENCE BETWEEN THE EXISTING AND PROPOSED BEARING HEIGHTS. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM SP 623.

* Top of Existing Pier Caps have been assigned a dummy elevation of 0.00.

Indicates areas to be removed per Item SP 202 – Portions of Structure Removed

ITEM SP 519 – PATCHING CONCRETE STRUCTURES: PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN SEPTEMBER, 1998.

ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

– DENOTES APPROXIMATE AREAS REQUIRING PATCHING

Note: All Patched Areas shall be sealed per SP 536 Concrete Weatherproofing, Substructure.

ITEM	QUANTITY	UNIT	DESCRIPTION
SP 519	344	SQ. FT.	PATCHING CONCRETE STRUCTURES

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

PIER SURFACE REPAIR

OHIO TURNPIKE OVER LORAIN ROAD (MP 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: JRS | CHECKED: ZRD | DATE: 10/8/99
DRAWN: SAH | IN CHARGE: WDA | SCALE: N.T.S.

12/24

CONTRACT 77-01-01 SHEET A303 OF A340

PIER 2
(LOOKING EAST)

PIER 2
(LOOKING WEST)

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
SP 519	26	SQ. FT.	PATCHING CONCRETE STRUCTURES

ITEM SP 519 – PATCHING CONCRETE STRUCTURES: PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN SEPTEMBER, 1998.

ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

▨ – DENOTES APPROXIMATE AREAS REQUIRING PATCHING

Note: All Patched Areas shall be sealed per SP 536 Concrete Weatherproofing, Substructure.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

PIER SURFACE REPAIR

OHIO TURNPIKE OVER LORAIN ROAD (MP 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: JRS | CHECKED: ZED | DATE: 10/8/99
DRAWN: SAH | IN CHARGE: WDA | SCALE: N.T.S.

13/24 CONTRACT 77-01-01 SHEET A304 OF A340

WESTBOUND PIER

EASTBOUND PIER

PIER 3
(LOOKING EAST)

EASTBOUND PIER

WESTBOUND PIER

PIER 3
(LOOKING WEST)

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
SP 519	320	SQ. FT.	PATCHING CONCRETE STRUCTURES

ITEM SP 519 – PATCHING CONCRETE STRUCTURES: PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN SEPTEMBER, 1998.

ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

▨ – DENOTES APPROXIMATE AREAS REQUIRING PATCHING

Note: All Patched Areas shall be sealed per SP 536 Concrete Weatherproofing, Substructure.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

PIER SURFACE REPAIR

OHIO TURNPIKE OVER LORAIN ROAD (MP 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: JRS	CHECKED: ZRD	DATE: 10/8/99
DRAWN: SAH	IN CHARGE: WDA	SCALE: N.T.S.

CONTRACT 77-01-01 SHEET A305 OF A340

PROPOSED TRANSVERSE SECTION

TYPICAL
SHEAR CONNECTOR DETAIL

See Sheet 17/24 for Shear Connector locations.

DECK REMOVAL SECTION

NOTES

1. Drip Groove: shall terminate 2'-0" from the face of the abutments.
2. Beam Spacings shown are perpendicular to existing median fascia beam lines.
3. Materials shown are new unless noted otherwise.
4. Longitudinal Construction Joints and Median Barrier Gutterlines shall be treated in accordance with Item SP 516B – Sealing of Construction Joint.
5. Longitudinal or Transverse Construction Joints shall not be permitted in the Deck Slab, except as shown in the plans.
6. For Slab Plan, See Sheet 20/24.
7. For Steel Notes, See Sheet 16/24.
8. For additional notes, see "Bridge Deck Elevations, Slab Thickness, and Approach Profiles" note in Structure General Notes.
9. The Deck Cut-line shall be established by survey to establish a curve concentric to the Re-established Survey Baseline at the offsets shown on the plans. The curve shall be marked at intervals not exceeding 25' along the Cut-line The Theoretical Dimension from the toe of the curb to the Cut-line is 1'-6" Eastbound and 1'-1" Westbound. However, the Gutterline may not be constructed concentric with the Re-established Survey Baseline and should not be relied on in staking the Cut-line
10. The Existing Joint Armor shall be sawcut and ground as required for proper fit (burning is not permitted). Include for payment with Item SP 202 – Portions of Structure Removed.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

TRANSVERSE SECTION

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: JRS	CHECKED: RED	DATE: 10/8/99
DRAWN: FDH	IN CHARGE: WDA	SCALE: N.T.S.

15/24 CONTRACT 77-01-01 SHEET A306 OF A340

STRUCTURAL STEEL FRAMING PLAN

STRUCTURAL STEEL NOTES

1. Where a Shape or Plate is Designated (CVN) the material shall meet specified minimum Notch Toughness Requirements as specified in 711.01 of CMS.
2. Welded Attachments for supports of Concrete Deck Finishing Machine or any other purpose is prohibited. Only those welds shown on the plans for attachment of Bearings and Stiffeners shall be permitted.
3. Diaphragms located between Beams 8 & 9 and between Beams 14 & 15 : The Connection Bolts shall be hand tightened for the pouring of the Deck. Complete tightening after the Deck has cured.
4. Welded Stud Shear Connectors shall conform to AASHTO M-169 and Item 513.
5. Structural Expansion Joints shall be a continuous 4" Compression Seal. All Structural Steel Associated with the Structural Expansion Joints shall be included with Item SP 533A, 4" Elastomeric Compression Seal in Structural Steel Joint. For Additional Details, See Sheet 21/24. See OTC St'd Dwgs. DJ-1, DJ-2, and DJ-5.
6. High Strength Bolts shall be 1" Diameter, Galvanized and shall conform to ASTM A325, SP 513, SP 514B & SP 711, unless noted otherwise.
7. Splice Plate: All Splice Plates used in the Beam Splices shall be Designated CVN.
8. All New Structural Steel shall be ASTM A36, Yield Strength 36,000 p.s.i. All New Structural Steel shall be shop painted. See Structure General Notes for additional information.
9. Replace Existing Bearings at Piers 1 and 3 with elastomeric bearings.
10. Repair the Exterior Bearings at the Rear and Forward Abutments of the Westbound bridge per SP 523.
11. Trimming of Beam Ends shall conform to SP 529.
12. For F-100 & F-150 Bearing Details, See St'd. Dwg. FB-1-82.
13. For Splice Details, See St'd. Dwg. BS-1-93.
14. For Typical Intermediate, Pier & End Diaphragm Details, See Sheet 17/24
15. For Shear Connector Detail, See Sheet 15/24
16. For Transverse Section, See Sheet 15/24
17. For Elastomeric Bearings, See Sheet 19/24
18. For Camber Diagram, See Sheet 18/24
19. For Structural Layout and Piling Plan, See Sheet 3/24
20. Pier 1 and Pier 3 Bearings are Elastomeric Bearings.
21. Total Number of Existing Beams: W.B. = 9 in Spans 1 thru 3; 8 in Span 4 E.B. = 8

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

FRAMING PLAN

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: JRS	CHECKED: FRD	DATE: 10/8/99
DRAWN: FDH	IN CHARGE: WDA	SCALE: N.T.S.

16/24 CONTRACT 77-01-01 SHEET A307 OF A340

PLAN
SHEAR CONNECTOR SPACING & FLANGE CLIPPING
AT PIER 1 & PIER 3

PLAN
SHEAR CONNECTOR SPACING
AT ABUTMENTS

PLAN

SECTION B-B (INTERMEDIATE & PIER 2 DIAPHRAGM)

SECTION A-A (END, PIER 1 & PIER 3 DIAPHRAGM)

NOTES

1. High Strength Bolts shall be 1" Diameter, Galvanized, and shall conform to ASTM A325, SP513, ~~SP514 or SP514A or~~ SP514B, and SP711. All holes for bolts shall be 1 1/16" diameter.
2. The holes in connection plates, attached to the existing stringers, for the connection of the intermediate and end diaphragms, shall be field drilled per 513.14 of the ODOT C.M.S.
3. For Structural Steel Notes, See Sheet 16/24.

TYPICAL
WELD DETAIL
(Provide Field Welds To Existing Beams)

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

STEEL CONNECTION DETAILS

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: JRS | CHECKED: RCD | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WOAI | SCALE: N.T.S.

17/24 CONTRACT 77-01-01 SHEET A308 OF A340

FINISH PAVEMENT ELEVATIONS

SIDE	LOCATION	SPAN #1 ABUTMENT BEARING	SPAN #1 1/4	SPAN #1 1/2	SPAN #1 3/4	SPAN #1 PIER~REAR BEARING	SPAN #2 PIER~FWD. BEARING	SPAN #2 1/4	SPAN #2 1/2	SPAN #2 SPLICE	SPAN #2 PIER BEARING	SPAN #3 1/4	SPAN #3 1/2	SPAN #3 3/4	SPAN #3 PIER~REAR BEARING	SPAN #4 PIER~FWD. BEARING	SPAN #4 1/4	SPAN #4 1/2	SPAN #4 3/4	SPAN #4 ABUTMENT BEARING
WESTBOUND	LONG. CONSTR. JOINT	803.55	803.65	803.75	803.85	803.94	803.95	804.08	804.20	804.35	804.49	804.62	804.75	804.90	805.04	805.05	805.14	805.23	805.33	805.43
WESTBOUND	BEAMLINE #14	803.38	803.48	803.58	803.68	803.78	803.79	803.92	804.04	804.18	804.32	804.46	804.60	804.75	804.89	804.90	805.00	805.09	805.19	805.29
WESTBOUND	BEAMLINE #13	803.21	803.31	803.41	803.51	803.61	803.62	803.75	803.88	804.02	804.15	804.30	804.45	804.59	804.74	804.75	804.85	804.95	805.04	805.14
WESTBOUND	BEAMLINE #12	803.04	803.14	803.24	803.34	803.44	803.45	803.59	803.72	803.86	803.99	804.14	804.29	804.44	804.59	804.60	804.70	804.80	804.89	804.99
WESTBOUND	TOE OF BARRIER	803.02	803.13	803.23	803.33	803.43	803.44	803.58	803.72	803.85	803.98	804.14	804.29	804.43	804.58	804.59	804.69	804.78	804.88	804.97
EASTBOUND	TOE OF BARRIER	803.67	803.76	803.85	803.93	804.01	804.03	804.16	804.28	804.41	804.53	804.67	804.81	804.95	805.08	805.09	805.17	805.25	805.33	805.41
EASTBOUND	BEAMLINE #11	803.70	803.79	803.88	803.97	804.05	804.06	804.20	804.33	804.46	804.58	804.72	804.85	804.99	805.12	805.13	805.21	805.28	805.36	805.43
EASTBOUND	BEAMLINE #10	803.97	804.07	804.17	804.26	804.35	804.36	804.50	804.64	804.77	804.89	805.02	805.16	805.29	805.43	805.44	805.52	805.60	805.67	805.75
EASTBOUND	ELEVATION 'C'	804.01	804.10	804.20	804.29	804.38	804.39	804.53	804.66	804.80	804.91	805.04	805.18	805.32	805.45	805.46	805.55	805.63	805.71	805.80
EASTBOUND	ELEVATION 'B'	804.06	804.16	804.26	804.35	804.44	804.45	804.59	804.73	804.86	804.97	805.10	805.24	805.38	805.52	805.53	805.61	805.70	805.78	805.86
EASTBOUND	ELEVATION 'A'	804.04	804.14	804.25	804.34	804.43	804.44	804.58	804.72	804.85	804.96	805.09	805.23	805.37	805.51	805.52	805.60	805.69	805.77	805.85
EASTBOUND	BEAMLINE #9	804.01	804.11	804.21	804.30	804.39	804.40	804.54	804.67	804.81	804.92	805.05	805.19	805.33	805.47	805.48	805.56	805.65	805.74	805.82
EASTBOUND	LONG. CONSTR. JOINT	803.84	803.95	804.05	804.15	804.24	804.25	804.39	804.53	804.67	804.78	804.91	805.05	805.19	805.33	805.34	805.42	805.51	805.59	805.67

DEFLECTION AND CAMBER

LOCATION	BEAM LINE	SPAN 1 ℄ Brg.	SPAN 1 1/4 Pt.	SPAN 1 1/2 Pt.	SPAN 1 3/4 Pt.	SPAN 1 ℄ Brg.	SPAN 2 ℄ Brg.	SPAN 2 1/4 Pt.	SPAN 2 1/2 Pt.	SPAN 2 Spl.	SPAN 2 ℄ Brg.	SPAN 3 1/4 Pt.	SPAN 3 1/2 Pt.	SPAN 3 3/4 Pt.	SPAN 3 ℄ Brg.	SPAN 4 ℄ Brg.	SPAN 4 1/4 Pt.	SPAN 4 1/2 Pt.	SPAN 4 3/4 Pt.	SPAN 4 ℄ Brg.
Dimension "X"	14						0	1/16	1/8	1/4	5/16	1/4	1/8	1/16	0					
	13						0	1/16	1/8	3/16	1/4	3/16	1/8	1/16	0					
	12						0	1/16	1/8	1/8	3/16	1/8	1/8	1/16	0					
	11						0	1/16	3/16	1/4	3/8	1/4	3/16	1/16	0					
	10						0	1/8	1/4	3/8	7/16	3/8	1/4	1/8	0					
	9						0	1/8	3/16	5/16	3/8	5/16	3/16	1/8	0					
Deflection Due To Weight Of Steel	14 thru 12	0	0	0	0	0	0	0	0	0	0	0	1/16	1/16	0	0	0	1/16	0	0
	11 thru 9	0	0	0	0	0	0	0	0	0	0	0	1/16	1/16	0	0	0	0	0	0
Deflection Due To Remaining Dead Load	14 thru 12	0	1/16	1/8	1/16	0	0	1/8	1/8	0	0	3/16	5/16	1/4	0	0	1/8	1/8	1/8	0
	11 thru 9	0	1/16	1/16	1/16	0	0	1/8	1/8	0	0	3/16	5/16	1/4	0	0	1/16	1/8	1/16	0
Adjustment Required For Vertical Curve Plus Surface Geometry	14	0	1/16	1/16	1/16	0	0	−1/16	−1/8	−1/16	0	1/16	−1/16	0	0	0	0	0	−1/16	0
	13	0	1/16	1/16	1/16	0	0	0	0	0	0	1/16	0	0	0	0	0	0	0	0
	12	0	1/16	1/16	1/16	0	0	1/16	1/16	1/16	0	1/16	1/16	1/16	0	0	1/16	1/16	1/16	0
	11	0	1/16	1/16	1/16	0	0	1/16	1/8	1/16	0	1/16	1/8	1/16	0	0	1/16	1/16	1/16	0
	10	0	1/16	1/8	1/16	0	0	1/8	3/16	3/16	0	0	1/16	1/16	0	0	0	1/16	1/16	0
	9	0	1/16	1/8	1/8	0	0	1/8	3/16	1/4	0	−1/16	−1/16	0	0	0	0	0	0	0
Required Shop Camber	14	0	1/8	3/16	1/8	0	0	1/16	0	−1/16	0	1/4	5/16	5/16	0	0	1/8	3/16	1/16	0
	13	0	1/8	3/16	1/8	0	0	1/8	1/8	0	0	1/4	3/8	5/16	0	0	1/8	3/16	1/8	0
	12	0	1/8	3/16	1/8	0	0	3/16	3/16	1/16	0	1/4	7/16	3/8	0	0	3/16	1/4	3/16	0
	11	0	1/8	1/8	1/8	0	0	3/16	1/4	1/16	0	1/4	1/2	3/8	0	0	1/8	3/16	1/8	0
	10	0	1/8	3/16	1/8	0	0	1/4	5/16	3/16	0	3/16	7/16	3/8	0	0	1/16	3/16	1/8	0
	9	0	1/8	3/16	3/16	0	0	1/4	5/16	1/4	0	1/8	5/16	5/16	0	0	1/16	1/8	1/16	0

FINISH PAVEMENT ELEVATION AND BEAMLINE IDENTIFICATION DIAGRAM
(All Dimensions Shown Are Radial)

DEFLECTION AND CAMBER DIAGRAM

NOTES

1. A NEGATIVE VALUE FOR DIMENSION "X" INDICATES THAT THE CHORD BETWEEN ADJACENT BEARINGS IS LOCATED BELOW THE BASELINE.
2. A NEGATIVE VALUE FOR ADJUSTMENT INDICATES THAT THE ADJUSTMENT IS LOCATED BELOW THE CHORD BETWEEN ADJACENT BEARINGS.
3. A NEGATIVE VALUE FOR CAMBER INDICATES THAT THE DIMENSION IS LOCATED BELOW THE CHORD BETWEEN ADJACENT BEARINGS.
4. FINISH PAVEMENT ELEVATIONS: THE ELEVATIONS SHOWN ARE FINISHED PAVEMENT ELEVATIONS. PROPER ALLOWANCE SHALL BE MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

FINISH PAVEMENT ELEVATIONS AND CAMBER TABLES

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: ZRD | CHECKED: JRS | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WDAI | SCALE: N.T.S.

18/24 CONTRACT 77-01-01 SHEET A309 OF A340

SECTION A–A

LAMINATED ELASTOMERIC EXPANSION BEARING

ELEVATION

SIDE RETAINER DETAIL

NOTES

1. ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND, ARTICLES 18.2.5 THROUGH 18.2.8 OF SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION OF THE AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES", SIXTEENTH EDITION, 1996. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS CORRESPONDING TO DESIGN METHOD "A". THE LAMINATED ELASTOMERIC BEARING MANUFACTURER SHALL PROOF LOAD EACH LAMINATED ELASTOMERIC BEARING WITH A COMPRESSIVE LOAD EQUAL TO 1.5 TIMES THE MAXIMUM DESIGN LOAD AS PER ARTICLE 18.2.7.6, SHORT DURATION COMPRESSION TESTS ON BEARINGS, DIVISION II, CONSTRUCTION OF THE AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES", SIXTEENTH EDITION, 1996. THE TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS. ACCEPTANCE OF THE BEARING SHALL BE ACCORDING TO ARTICLE 18.2.7.6 AND 711.23 OF THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE MANUFACTURER SHALL FURNISH CERTIFIED TEST DATA. THE MANUFACTURER SHALL SUPPLY A SAMPLE BEARING OF EACH DESIGN, AS SHOWN ON THE PLANS, FOR DESTRUCTIVE TESTING AND APPROVAL PURPOSES. SAMPLE BEARINGS WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE ITEM.
2. WELDING SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
3. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60° F (±) 10° F, THE BEAMS OR GIRDERS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F (±) 10° F.
4. THE STEEL LOAD PLATE SHALL BE ASTM A572 GRADE 50 STEEL AND SHALL BE PAINTED IN ACCORDANCE WITH ~~SP 514, SP 514A, OR~~ SP 514B.
5. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
6. TOTAL DESIGN LOAD FOR BEARINGS EQUALS THE SUM OF THE DEAD LOADS AND LIVE LOADS TABULATED IN THE BEARING TABLE.
7. ELASTOMER SHALL BE 50 DUROMETER HARDNESS.
8. BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. SAMPLE BEARINGS SHALL NOT BE MEASURED FOR PAYMENT.
9. USE SIDE RETAINER ANGLES ON MEDIAN SIDE OF PROPOSED MEDIAN STRINGERS WHEN CALLED FOR IN TABLE. USE SIDE RETAINER ANGLES ON EXTERIOR SIDE OF EXISTING EXTERIOR STRINGERS WHEN CALLED FOR IN TABLE.
10. SHIMS FOR REPLACEMENT BEARINGS:
1/8 INCH THICK PREFORMED BEARING PAD SHIMS, PLAN AREA 8 1/4 INCHES BY 8 1/4 INCHES SHALL BE PLACED UNDER THE ELASTOMERIC BEARING PADS WHERE REQUIRED FOR PROPER BEARING. THE AMOUNT SUPPLIED IS SUFFICIENT FOR 2 SHIMS PER BEARING. PAYMENT WILL BE MADE AT THE CONTRACT BID PRICE FOR ITEM 516 – 1/8 INCH PREFORMED BEARING PADS. ANY UNUSED SHIMS SHALL BECOME THE PROPERTY OF THE OHIO TURNPIKE COMMISSION.
11. SEE THE GENERAL NOTE TITLED "ITEM SPECIAL – RECONSTRUCT CONCRETE BEARING SEAT."
12. BEARING ANCHOR RODS: AT THE OPTION OF THE CONTRACTOR, THE BEARING ANCHOR RODS (OR FORMED HOLES), LOCATED AND SUPPORTED BY TEMPLATES, MAY BE CAST–IN–PLACE. IF ANCHOR RODS ARE NOT CAST–IN–PLACE THEY SHALL BE GROUTED IN ACCORDANCE WITH SP 853.
13. ANCHOR RODS SHALL BE GALVANIZED AS PER O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATION 711.02.
14. EXISTING BEAM REPLACEMENT BEARINGS SHALL BE INSTALLED SQUARE WITH BEAM CENTERLINE. BEARING PLACEMENT ANGLES FOR EXISTING BEAM REPLACEMENT BEARINGS, WHERE GIVEN, ARE FOR INFORMATIONAL PURPOSES ONLY.

DETAIL "A"

STEEL LOAD PLATE

BEARING ORIENTATION PLAN

PROPOSED BEAM BEARINGS

BEARING LOCATION	BEARING TYPE	NO. REQ'D.	DEAD LOAD KIPS	LIVE LOAD KIPS	TOTAL LOAD (DL+LL) KIPS	Le	We	Tpi	NO. OF Tpi's	Tpe (2 EA.)	NUMBER OF INTERNAL LAMINATES (14 GAGE)	Te	STEEL LOAD PLATE Wt	Lt	t1	t2	Tt	FILLET WELD SIZE	SIDE RETAINER	BEARING PLACEMENT ANGLE
REAR ABUTMENT	F–100	PER ODOT ST'D. DWG. FB–1–82																	NO	17°–23'–34"
PIER #1	EXP.	12	21.7	38.1	59.8	7 3/4"	7 3/4"	0.184"	8	0.131"	9	2 3/8"	13"	8 3/4"	1 1/2"	1 1/2"	3 7/8"	5/16"	YES, SEE NOTE 9	17°–23'–34"
PIER #2	F–150	PER ODOT ST'D. DWG. FB–1–82																	NO	17°–23'–34"
PIER #3	EXP.	12	29.1	39.4	68.5	8 1/4"	8 1/4"	0.196"	8	0.140"	9	2 1/2"	13"	9 1/4"	1 1/2"	1 1/2"	4"	5/16"	YES, SEE NOTE 9	17°–23'–34"
FWD. ABUTMENT	F–100	PER ODOT ST'D. DWG. FB–1–82																	NO	17°–23'–34"

EXISTING BEAM REPLACEMENT BEARINGS

BEARING LOCATION	BEARING TYPE	NO. REQ'D.	SPECIAL PROVISION	Le	We	Tpi	NO. OF Tpi's	Tpe (2 EA.)	NUMBER OF INTERNAL LAMINATES (14 GAGE)	Te	STEEL LOAD PLATE Wt	Lt	t1	t2	Tt	FILLET WELD SIZE	SIDE RETAINER	BEARING PLACEMENT ANGLE
PIER NO. 1:																		
EXIST. EXT. BEAMS	EXP.	4	524A	7 3/4"	7 3/4"	0.184"	8	0.131"	9	2 3/8"	13"	8 3/4"	1 1/2"	1 1/2"	3 7/8"	5/16"	YES, SEE NOTE 9	SEE NOTE 14
ALL OTHER BEAMS	EXP.	30	524A	7 3/4"	7 3/4"	0.184"	8	0.131"	9	2 3/8"	13"	8 3/4"	2 7/8"	2 7/8"	5 1/4"	5/16"	NO	
PIER NO. 3:																		
EXIST. EXT. BEAMS	EXP.	4	524A	8 1/4"	8 1/4"	0.196"	8	0.140"	9	2 1/2"	13"	9 1/4"	1 1/2"	1 1/2"	4"	5/16"	YES, SEE NOTE 9	SEE NOTE 14
ALL OTHER BEAMS	EXP.	29	524A	8 1/4"	8 1/4"	0.196"	8	0.140"	9	2 1/2"	13"	9 1/4"	2 3/4"	2 3/4"	5 1/4"	5/16"	NO	

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

LAMINATED ELASTOMERIC BEARINGS

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: RBD | CHECKED: JRS | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WOA | SCALE: N.T.S.

19/24 CONTRACT 77–01–01 SHEET A310 OF A340

NOTES

1. Longitudinal or Transverse Construction Joints shall not be permitted in the Deck Slab, except as noted in the plans.
2. Transverse Reinforcing Steel shall be field bent as required. Any damage to the Epoxy Coating shall be repaired per SP 509.10. Payment shall be included with Item SP509 – Epoxy Coated Reinforcing Steel, Grade 60.
3. The cost of the Sawcutting and Caulking shall be included with SP511A.
4. Reinforcing Splice Lengths shall be:
   2'–0" for #4 bars
   2'–7" for #5 bars
5. For Transverse Section, See Sheet 15/24.
6. For Detail C and Detail D, See Sheet 21/24.
7. For Section A–A, See OTC St'd Dwgs. DJ–1 & DJ–5.
8. The Slab Plan end span and overall o/o dimensions are along the Longitudinal Construction Joints and will vary based on joint openings at time of placement. The following joint openings were assumed for the given dimensions:

Eastbound Rear Abutment:	1 5/8"
Westbound Rear Abutment:	1 5/8"
Eastbound Pier 1:	2 1/4"
Westbound Pier 1:	1 3/4"
Eastbound Pier 3:	2"
Westbound Pier 3:	1 3/4"
Eastbound Fwd. Abutment:	1 5/8"
Westbound Fwd. Abutment:	1 1/2"

9. ES408 bars to alternate with #6 top bars at the median deck edge only.
10. Item SP527 Falsework, Temporary Bracing and Protective Structures: Protective Structures for catching falling material from the placing of the deck formwork and the concrete pouring operation shall be erected immediately after the steel beams are placed.

SLAB PLAN

STAGGER SYSTEM OF ES407 BARS OVER PIER 2

BARRIER SAW CUT JOINT DETAIL

EASTBOUND PARAPET ELEVATION

WESTBOUND PARAPET ELEVATION

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

SLAB PLAN

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: JRS | CHECKED: ZED | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WDA | SCALE: N.T.S.

20/24 CONTRACT 77-01-01 SHEET A311 OF A340

PLAN ~ REMOVALS AND REPLACEMENT AT EXISTING WESTBOUND SCUPPERS, TYPICAL AT 3 SCUPPER REMOVAL LOCATIONS

SECTION B-B

DETAIL D

DETAIL C

VIEW Z-Z
VIEW Z1-Z1 (OPPOSITE HAND)

NOTES

1. New Angles shall be carefully aligned with the existing plates prior to the welding. The alignment shall be maintained during the welding. The Throat of the Joint shall be cleaned after welding to insure proper seating of the Elastomeric Seal.
2. WELDED CONNECTIONS: All field splices shall have a complete penetration butt weld. Welds in contact with seal shall be ground flush. Welds shall conform to standard AWS and AASHTO specifications for highway bridges.
3. The placement depth of the Proposed 1/2" x 1/2" Bars shall match the location of the existing bars.
4. For Section A–A, See OTC St'd Dwgs. DJ–1 & DJ–5. Also, See Note (3).
5. For location of Detail C and Detail D, See Sheet 20/24.
6. The Joint Openings for the proposed joints shall match those of the existing joints.
7. For additional details and notes not shown, see OTC St'd Dwgs. DJ–1, DJ–2, and DJ–5.
8. For Abutment Slab Details, See Sheet 9/24.
9. ////// indicates removal areas.

SECTION C-C
(THRU EXISTING JOINT AT ABUTMENTS)

SECTION D-D
(THRU EXISTING JOINT AT PIER 1 & PIER 3)

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

SUPERSTRUCTURE DETAILS

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: JES	CHECKED: ZED	DATE: 10/8/99
DRAWN: FDH	IN CHARGE: WDA	SCALE: N.T.S.

CONTRACT 77-01-01 SHEET A312 OF A340

21/24

ABUTMENTS

MARK	TYPE	A	B	C	D	E	NUMBER REAR	NUMBER FORWARD	TOTAL	LENGTH	WEIGHT
EA901	ST						8	8	16	16'-6"	898
EA902	ST						8	8	16	15'-9"	857
EA801	ST						12		12	24'-0"	769
EA802	ST						4		4	22'-10"	244
EA803	ST							12	12	23'-10"	764
EA804	ST							4	4	22'-5"	239
EA701	ST						16		16	24'-0"	785
EA702	ST							16	16	23'-10"	779
EA601	ST						36	36	72	3'-6"	379
EA602	2	4'-0"	1'-0"				64	64	128	4'-10"	929
EA603	6	3'-9" to 6'-8"	1'-2"	Total Length Varies By 10"			2 Series of 8	2 Series of 8	4 Series of 8	8'-4" to 14'-2"	541
EA604	6	3'-3" to 5'-6"	1'-2"	Total Length Varies By 7 3/4"(-)			2 Series of 8		2 Series of 8	7'-4" to 11'-10"	230
EA605	6	3'-2" to 5'-2"	1'-2"	Total Length Varies By 6 7/8"(-)				2 Series of 8	2 Series of 8	7'-2" to 11'-2"	220
EA501	ST						35		35	24'-0"	876
EA502	6	4'-6"	3'-5"				40	38	78	12'-2"	990
EA503	6	4'-0"	3'-5"				38	38	76	11'-2"	885
EA504	6	4'-6"	3'-7"				4	4	8	12'-4"	103
EA505	6	4'-0"	3'-7"				4	4	8	11'-4"	95
EA506	ST							35	35	23'-10"	870
EA507	ST						3	3	6	22'-6"	141
EA508	6	4'-5"	8"				46	46	92	9'-3"	888
EA509	2	3'-5"	10 1/2"				81	80	161	4'-2"	700
EA510	6	2'-7 1/2"	2'-8"				36	34	70	7'-8"	560
EA511	6	2'-7 1/2"	2'-10"				4	4	8	7'-10"	65
EA512	6	2'-5"	2'-8"				34	34	68	7'-3"	514
EA513	6	2'-5"	2'-10"				4	2	6	7'-5"	46
EA514	6	2'-2"	2'-10"				2	2	4	6'-11"	29
EA515	NOT USED										
EA516	12	11'-11"	7"				24	24	48	13'-1"	655
EA517	4	5'-11" to 12'-2"	7"	Total Length Varies By 2'-1"			4 Series of 4		4 Series of 4	6'-6" to 12'-9"	161
EA518	4	9'-5"	7"				4		4	10'-0"	42
EA519	4	6'-9"	7"				4		4	7'-4"	31
EA520	4	8'-5"	7"					4	4	9'-0"	38
EA521	4	5'-7"	7"					4	4	6'-2"	26
EA522	4	6'-4" to 10'-6"	7"	Total Length Varies By 2'-1"				4 Series of 3	4 Series of 3	6'-11" to 11'-1"	113
EA401	7	1'-9"	3'-3"	4 1/2"			20	20	40	10'-6"	281
EA402	7	1'-9"	2'-6"	4 1/2"			12	12	24	9'-0"	144

ABUTMENT SLABS

MARK	TYPE	A	B	C	D	E	NUMBER REAR	NUMBER FORWARD	TOTAL	LENGTH	WEIGHT
EAS701	ST						72	72	144	10'-10"	3189
EAS601	9	SEE DETAIL					22	22	44	5'-5"	358
EAS602	10	7"	6"	8 1/2"	11"	10"	22	22	44	3'-0"	198
EAS603	2	1'-6"	1'-0"				22	22	44	2'-4"	154
EAS501	6	2'-9"	5"				22	22	44	5'-8"	260
EAS502	ST						24	24	48	10'-8"	534
EAS503	ST						42	42	84	25'-2"	2205
EAS504	ST						20	20	40	10'-0"	417
EAS505	ST						2	2	4	24'-0"	100
EAS401	ST						72	72	144	10'-10"	1042

ABUTMENT WINGWALLS (PARAPETS)

MARK	TYPE	A	B	C	D	E	NUMBER REAR	NUMBER FORWARD	TOTAL	LENGTH	WEIGHT
EW601	ST						12	12	24	2'-5"	87
EW602	ST						11	6	17	1'-6"	38
EW603	5	8"	8"	8 1/2"	10"	10 3/8"	7	6	13	2'-4"	46
EW604	ST						4		4	1'-4"	8
EW605	6	3'-4"	1'-2"				1		1	7'-6"	11
EW606	ST						2	2	4	4'-6"	27
EW607	ST						4	4	8	3'-3"	39
EW608	6	3'-11"	1'-2"					1	1	8'-8"	13
EW609	ST							4	4	2'-0"	12
EW610	ST							4	4	1'-9"	11
EW501	ST						6	6	12	13'-8"	171
EW502	18	SEE DETAIL					2	2	4	13'-8"	57
EW503	4	2'-5"	7"				12	12	24	3'-0"	75
EW504	ST						2		2	2'-2"	5
EW505	ST							2	2	2'-6"	5
							(ABUTMENTS – EPOXY COATED BARS) TOTAL				24,949

NOTES

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE, A700 IS A NO. 7 AND A1014 IS A NO. 10 SIZE. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

REINFORCING STEEL MARKS BEGINNING WITH 'E' SHALL BE EPOXY COATED BARS. EPOXY COATED BARS SHALL BE PER SP 509.

ST ~ DENOTES STRAIGHT BARS

EPOXY COATED REINFORCING STEEL SUPPORT

IN ACCORDANCE WITH THE REQUIREMENTS OF SP 509 AND SECTION 509.09 OF THE SPECIFICATIONS THE TOP AND BOTTOM MATS OF ALL LONGITUDINAL AND TRANSVERSE EPOXY COATED REINFORCING STEEL SHALL BE SUPPORTED BY APPROVED EPOXY COATED DEVICES WITH SPACING NOT EXCEEDING THREE (3) FOOT CENTERS IN EACH DIRECTION. BROKEN CONCRETE, BRICKS, ETC. SHALL NOT BE USED FOR SUPPORT OF REINFORCING STEEL.

REINFORCING STEEL SAMPLES

REFER TO OTC GENERAL CONDITIONS G-6.02 AND CMS SECTION 700, 709.01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING FOR EACH BRIDGE. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL SPLICED IN ACCORDANCE WITH 509.08.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

REINFORCING BAR SCHEDULE

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES

NEW PHILADELPHIA, OHIO

DESIGNED: ZED | CHECKED: JZS | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WOAI | SCALE: N.T.S.

22/24

CONTRACT 77-01-01 SHEET A313 OF A340

PIERS

MARK	TYPE	A	B	C	D	E	NUMBER WESTBOUND	NUMBER EASTBOUND	TOTAL	LENGTH	WEIGHT
GP1001	ST						48	48	96	17'-3"	7126
GP701	6	2'-6"	19'-2"				18	18	36	23'-10"	1754
GP702	11	13'-5"	6"	2'-10 1/2"	2'-11"		18	18	36	19'-3"	1416
GP501	6	2'-7"	2'-8"				126	126	252	7'-7"	1993
GP502	ST						30	30	60	19'-2"	1199
GP503	6	2'-0"	2'-8"				36	36	72	6'-5"	482
GP504	20	2'-6"	4 1/2"				6	6	12	14'-8"	4331
								(PIERS - GALVANIZED BARS)	TOTAL		18,301

PIER DRILLED SHAFTS ✱

MARK	TYPE	A	B	C	D	E	NUMBER WESTBOUND	NUMBER EASTBOUND	TOTAL	LENGTH	WEIGHT
GDS1001	ST						48	48	96	40'-0"	16,524
GDS1002	ST						16	16	32	27'-0"	3718
GDS1003	ST						16	16	32	20'-0"	2754
GDS1004	ST						16	16	32	10'-0"	1377
GDS501	20	2'-6"	4 1/2"				6	6	12	30'-0"	8709
GDS502	21	2'-6"	4 1/2"				2	2	4	28'-0"	2664
GDS503	21	2'-6"	4 1/2"				2	2	4	20'-0"	1903
GDS504	21	2'-6"	4 1/2"				2	2	4	10'-0"	952
							(PIER DRILLED SHAFTS - GALVANIZED BARS)		TOTAL ✱		38,601

SUPERSTRUCTURE

MARK	TYPE	A	B	C	D	E	NUMBER WESTBOUND	NUMBER EASTBOUND	TOTAL	LENGTH	WEIGHT
ES601	ST							6	6	2'-8"	24
ES602	ST				Total Length Varies By 1'-11 7/8"(+)			3 Series of 10	3 Series of 10	4'-7" to 22'-6"	610
ES603	ST							224	224	25'-4"	8523
ES604	ST				Total Length Varies By 2'-0"		1 Series of 12	3 Series of 12	4 Series of 12	2'-1" to 24'-1"	943
ES605	ST				Total Length Varies By 1'-11 7/8"(+)		1 Series of 11		1 Series of 11	3'-7" to 23'-6"	224
ES606	ST						236		236	24'-11"	8832
ES607	ST				Total Length Varies By 1'-11 7/8"(+)		1 Series of 11		1 Series of 11	2'-0" to 21'-11"	198
ES608	ST				Total Length Varies By 2'-0"		1 Series of 11		1 Series of 11	2'-5" to 22'-5"	205
ES609	ST				Total Length Varies By 2'-0"		1 Series of 11		1 Series of 11	3'-3" to 23'-3"	219
ES610	ST				Total Length Varies By 2'-0 1/8"(-)		1 Series of 11		1 Series of 11	1'-8" to 21'-9"	193
ES611	3	1'-3"	24'-5"	1'-4"	5"		6		6	25'-9"	232
ES612	3	1'-4 1/2"	24'-9"	1'-6"	5 1/2"			6	6	26'-3"	237
ES613	3	1'-4 1/2"	24'-2"	1'-5"	5"		6		6	25'-7"	231
ES614	3	1'-3 1/2"	24'-8"	1'-4"	4 1/2"			6	6	26'-0"	234
ES615	9	SEE DETAIL					170	162	332	5'-5"	2701
ES616	10	7"	6"	8 1/2"	9 1/4"	10"	170	162	332	2'-10"	1413
ES617	ST						6		6	5'-0"	45
ES618	2	1'-6"	7 1/2"				170	162	332	2'-0"	997
ES501	ST							6	6	2'-8"	17
ES502	ST				Total Length Varies By 1'-11 7/8"(+)			3 Series of 10	3 Series of 10	4'-7" to 22'-6"	424
ES503	ST							224	224	25'-4"	5919
ES504	ST				Total Length Varies By 2'-0"		1 Series of 12	3 Series of 12	4 Series of 12	2'-1" to 24'-1"	655

NOTES

✱ PIER DRILLED SHAFT REINFORCING STEEL IS TO BE INCLUDED WITH THE DRILLED SHAFTS FOR PAYMENT.

CONCRETE SPACERS
(PIER COLUMN) OR OTHER APPROVED NONCORROSIVE SPACING DEVICES, EQUAL IN QUALITY AND DURABILITY TO THE COLUMN CONCRETE, SHALL BE USED NEAR THE BOTTOM AND AT INTERVALS NOT EXCEEDING 10' TO ENSURE A MINIMUM 3" CLEAR SPACE BETWEEN THE OUTSIDE OF THE REINFORCING CAGE AND THE COLUMN DESIGN DIMENSION.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE, A700 IS A NO. 7 AND A1014 IS A NO. 10 SIZE. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

REINFORCING STEEL MARKS BEGINNING WITH 'E' SHALL BE EPOXY COATED BARS, AND SHALL BE PER SP 509. REINFORCING STEEL MARKS BEGINNING WITH 'G' SHALL BE GALVANIZED BARS, AND SHALL BE PER SP 825. UNCOATED REINFORCING STEEL SHALL BE PER ODOT CMS 509.

ST ~ DENOTES STRAIGHT BARS

EPOXY COATED REINFORCING STEEL SUPPORT
IN ACCORDANCE WITH THE REQUIREMENTS OF SP 509 AND SECTION 509.09 OF THE SPECIFICATIONS THE TOP AND BOTTOM MATS OF ALL LONGITUDINAL AND TRANSVERSE EPOXY COATED REINFORCING STEEL SHALL BE SUPPORTED BY APPROVED EPOXY COATED DEVICES WITH SPACING NOT EXCEEDING THREE (3) FOOT CENTERS IN EACH DIRECTION. BROKEN CONCRETE, BRICKS, ETC. SHALL NOT BE USED FOR SUPPORT OF REINFORCING STEEL.

REINFORCING STEEL SAMPLES
REFER TO OTC GENERAL CONDITIONS G-6.02 AND CMS SECTION 700, 709.01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING FOR EACH BRIDGE. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL SPLICED IN ACCORDANCE WITH 509.08.

SPIRAL REINFORCING BARS
THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE PIER COLUMN SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE DRILLED SHAFT TO THE BOTTOM LAYER OF REINFORCING IN THE PIER CAP. SPIRAL REINFORCING BARS MAY HAVE DEFORMATIONS AND SHALL IN OTHER RESPECTS CONFORM TO ITEM SP 825. 1-1/2 TURNS OF CLOSED COILS SHALL BE PROVIDED AT THE TOP 0" EACH SPIRAL UNIT.

SPIRAL PITCH SPACERS
THREE STEEL HOT-DIPPED GALVANIZED ANGLE SPACERS, WEIGHING APPROXIMATELY 0.80 LB. PER LINEAR FOOT OF SPIRAL, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE TOTAL NUMBER OF POUNDS OF THESE SPACERS, BASED ON 2.40 LB. PER LINEAR FOOT OF SPIRAL, WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED SPIRAL WEIGHT.

SEE SHEET G5/G5 FOR ADDITIONAL DRILLED SHAFT REINFORCING STEEL NOTES.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

REINFORCING BAR SCHEDULE

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: JRS | CHECKED: ZAD | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WDA | SCALE: N.T.S.

23/24

CONTRACT 77-01-01 SHEET A314 OF A340

SUPERSTRUCTURE (CONT'D)

MARK	TYPE	A	B	C	D	E	NUMBER WESTBOUND	NUMBER EASTBOUND	TOTAL	LENGTH	WEIGHT
ES505	ST			Total Length Varies By 1'-11 7/8"(+)			1 Series of 11		1 Series of 11	3'-7" to 23'-6"	155
ES506	ST						236		236	24'-11"	6133
ES507	ST			Total Length Varies By 1'-11 7/8"(+)			1 Series of 11		1 Series of 11	2'-0" to 21'-11"	137
ES508	ST			Total Length Varies By 2'-0"			1 Series of 11		1 Series of 11	2'-5" to 22'-5"	142
ES509	ST			Total Length Varies By 2'-0"			1 Series of 11		1 Series of 11	3'-3" to 23'-3"	152
ES510	ST			Total Length Varies By 2'-0 1/8"(-)			1 Series of 11		1 Series of 11	1'-8" to 21'-9"	134
ES511	ST							39	39	29'-10"	1214
ES512	ST						114	117	231	30'-0"	7228
ES513	ST						38	39	77	15'-9"	1265
ES514	ST							39	39	34'-2"	1390
ES515	ST						38		38	33'-4"	1321
ES516	ST						38		38	37'-7"	1490
ES517	6	2'-9"	5"				170	162	332	5'-8"	1962
ES518	ST						18		18	5'-2"	97
ES401	4	15'-11"	6"					60	60	16'-5"	658
ES402	4	22'-0"	6"				58	60	118	22'-6"	1774
ES403	ST						58	60	118	30'-0"	2365
ES404	4	18'-1"	6"					60	60	18'-7"	745
ES405	4	17'-8"	6"				58		58	18'-2"	704
ES406	4	19'-10"	6"				58		58	20'-4"	788
ES407	ST						30	31	61	21'-0"	856
ES408	ST						267	257	524	4'-3"	1488
							(SUPERSTRUCTURE - EPOXY COATED BARS) TOTAL				65,274

(ABUTMENTS - EPOXY COATED BARS) TOTAL	24,949
(PIERS - GALVANIZED BARS) TOTAL	18,301
(SUPERSTRUCTURE - EPOXY COATED BARS) TOTAL	65,274

NOTES

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE, A700 IS A NO. 7 AND A1014 IS A NO. 10 SIZE. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

REINFORCING STEEL MARKS BEGINNING WITH 'E' SHALL BE EPOXY COATED BARS. EPOXY COATED BARS SHALL BE PER SP 509.

ST ~ DENOTES STRAIGHT BARS

EPOXY COATED REINFORCING STEEL SUPPORT
IN ACCORDANCE WITH THE REQUIREMENTS OF SP 509 AND SECTION 509.09 OF THE SPECIFICATIONS THE TOP AND BOTTOM MATS OF ALL LONGITUDINAL AND TRANSVERSE EPOXY COATED REINFORCING STEEL SHALL BE SUPPORTED BY APPROVED EPOXY COATED DEVICES WITH SPACING NOT EXCEEDING THREE (3) FOOT CENTERS IN EACH DIRECTION. BROKEN CONCRETE, BRICKS, ETC. SHALL NOT BE USED FOR SUPPORT OF REINFORCING STEEL.

REINFORCING STEEL SAMPLES
REFER TO OTC GENERAL CONDITIONS G-6.02 AND CMS SECTION 700, 709.01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING FOR EACH BRIDGE. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL SPLICED IN ACCORDANCE WITH 509.08.

NO.	REVISIONS	BY	DATE

OHIO TURNPIKE COMMISSION

REINFORCING BAR SCHEDULE

OHIO TURNPIKE OVER LORAIN ROAD (M.P. 152.3)

W.E. QUICKSALL & ASSOCIATES
NEW PHILADELPHIA, OHIO

DESIGNED: JES | CHECKED: ZZD | DATE: 10/8/99
DRAWN: FDH | IN CHARGE: WDA | SCALE: N.T.S.

24/24 CONTRACT 77-01-01 SHEET A315 OF A340

PLAN

APPROACH SLAB FOR SKEWED BRIDGE

NOTES

1. THIS DRAWING PROVIDES DESIGN AND GENERAL CONSTRUCTION DETAILS. THE PROJECT PLANS WILL SHOW SKEW, ESTIMATED QUANTITY (SQ. YDS), AND SPECIAL NOTES AND DETAILS, WHERE NECESSARY FOR CONDITIONS OTHER THAN THOSE INDICATED HEREON. THE APPROACH SLAB SHALL BE ADAPTED TO FIT THE ENDS OF THE BRIDGE AND THE APPROACH PAVEMENT.
2. CONCRETE: CLASS C AS PER 611.02. REINFORCING STEEL: ASTM A615, A616 OR A617 – GRADE 60 MIN YIELD STRENGTH 60,000 P.S.I. AND SHALL BE EPOXY COATED.
3. LONGITUDINAL CONSTRUCTION JOINTS REQUIRED FOR STAGE CONSTRUCTION SHALL BE AS PER 511.09 .
4. CROWN SHALL CONFORM TO THAT OF THE BRIDGE DECK. IF THE RATE OF CROWN OF THE BRIDGE DECK DIFFERS FROM THAT OF THE APPROACH ASPHALT PAVEMENT, A SMOOTH TRANSITION SHALL BE PROVIDED ON THE APPROACH ASPHALT PAVEMENT AT A TRANSITION RATE OF 1 TO 200.
5. TRANSVERSE JOINT DETAILS AT THE APPROACH PAVEMENT END OF THE APPROACH SLAB SHALL BE AS DETAILED ON OTC STANDARD DRAWING AS-2.
6. BASE MATERIAL SHALL BE ITEM SP 310-SUBBASE, TYPE I, GRADING A OR ITEM SP 304-AGGREGATE BASE DEPENDING ON MATERIAL SPECIFIED FOR THE MAINLINE PAVEMENT.
7. GROOVE AND SEAL WITH 705.04 AS PER ODOT STD. DWG. BP-2.1
8. TYPE A WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE GROOVE INTO WHICH THE JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.
9. THE JOINT BETWEEN THE EXISTING AND THE NEW APPROACH SLABS SHALL BE AS SHOWN IN SECTION 'D-D'.
10. 1" PREFORMED EXPANSION JOINT FILLER SHALL BE PER 705.03
11. THE TWO 4" DIAMETER PVC CONDUITS WITH MULTI-CELL INNERDUCT SHALL COMPLY WITH SP 625.
12. FOR SECTIONS 'A-A', 'B-B', 'C-C' AND 'D-D' ADDITIONAL INFORMATION SEE OTC STANDARD DRAWING AS-2.
13. THE FOLLOWING ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SP 611, CLASS 'C' CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12"):

    : ALL JOINTS
    : GROOVE AND JOINT SEAL
    : TYPE 'A' WATERPROOFING
    : 1" PREFORMED EXPANSION JOINT FILLER
    : MEDIAN BARRIERS
    : REINFORCING STEEL

DESIGNED BY:	CHECKED BY: D.S.B.
DATE: 1/11/.	DATE: 1/24/97
DRAWN BY: A.L.H.	REVISED BY: T.K.J.
DATE: 1/20/97	DATE: 11/11/97
CAD FILE NAME: 7026100/AS-1	

OHIO TURNPIKE COMMISSION

REINFORCED CONCRETE APPROACH SLAB – MEDIAN WIDENING

DATE: JUNE 11,1998 SCALE: N.T.S.

O.T.C. STANDARD DRAWING AS-1

NOTE: ALL REINFORCING BARS SHALL BE EPOXY COATED.

SECTION A–A

SECTION C–C
COMPOSITE PAVEMENT

SECTION C–C
FLEXIBLE PAVEMENT

SECTION D–D
(FOR APPROACH SLAB WITHOUT INTEGRAL CONCRETE CURB)

SECTION D–D
(FOR APPROACH SLAB WITH INTEGRAL CONCRETE CURB)

SECTION B–B
REINFORCING AND DIMENSIONS SYMMETRICAL ABOUT CENTERLINE

BAR BENDING DIAGRAMS

NOTES:

A FOR LOCATIONS OF SECTIONS 'A–A', 'B–B', 'C–C', AND 'D–D' AND ADDITIONAL NOTES, SEE OTC STANDARD DRAWING AS-1

B THE REMOVAL SHALL BE PER 202.05 OF THE ODOT CMS BUT THE COST OF THE REMOVAL SHALL BE INCIDENTAL TO THE COST OF ITEM SP 611

DESIGNED BY: RER	CHECKED BY: D.S.B.
DATE: 1/11/97	DATE: 1/24/97
DRAWN BY: A.L.H.	REVISED BY: T.K.I.
DATE: 1/20/97	DATE: 11/11/97
CAD FILE NAME: 7026100/AS-2	

OHIO TURNPIKE COMMISSION

REINFORCED CONCRETE APPROACH SLAB SECTIONS AND DETAILS – MEDIAN WIDENING

DATE: DECEMBER 26, 1997 | SCALE: N.T.S.

O.T.C. STANDARD DRAWING AS-2

PLAN
(WITHOUT CURB)

APPROACH SLAB FOR SKEWED BRIDGE
(WITHOUT CURB)

NOTES

1. GENERAL
THIS DRAWING PROVIDES DESIGN AND GENERAL CONSTRUCTION DETAILS. THE PROJECT PLANS WILL SHOW SKEW, CURBS (IF ANY), ESTIMATED QUANTITY (SQ. YDS). AND SPECIAL NOTES AND DETAILS, WHERE NECESSARY FOR CONDITIONS OTHER THAN THOSE INDICATED HEREON. THE APPROACH SLAB SHALL BE ADAPTED TO FIT THE ENDS OF THE BRIDGE AND THE APPROACH PAVEMENT.

2. DESIGN DATA
CONCRETE CLASS C USING TYPE I CEMENT
REINFORCING STEEL: A.S.T.M. A615, A616 OR A617 – GRADE 60, MIN. YIELD STRENGTH 60,000 P.S.I. AND SHALL BE EPOXY COATED

3. PREFORMED EXPANSION JOINT FILLER AND SEALER AT THE CORNERS AND SIDES OF THE APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YARD FOR THE APPROACH SLAB.

4. GROOVE AND JOINT SEAL SHOWN AT THE BRIDGE LIMIT END OF THE APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YARD FOR THE APPROACH SLAB.

5. TYPE A WATERPROOFING SHOWN AT THE ABUTMENT SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ. YARD FOR THE APPROACH SLAB.

6. LONGITUDINAL CONSTRUCTION JOINTS REQUIRED FOR STAGE CONSTRUCTION SHALL BE AS PER 511.09.

7. CURBS. BRIDGES WITH SIDEWALKS; FOR BRIDGES CONSTRUCTED WITH RAISED SIDEWALKS, DEFLECTOR PARAPETS OR OTHER TYPES OF CONSTRUCTION WHICH RETAIN ROADWAY SURFACE DRAINAGE, THE APPROACH SLABS SHALL EITHER INCLUDE INTEGRAL CURBS OR BE CONSTRUCTED IN CONJUCTION WITH BRIDGE CURBS. CURB HEIGHT SHALL BE TRANSITIONED UNIFORMLY BETWEEN BRIDGE CURB HEIGHT AND APPROACH CURB HEIGHT IN LENGTH AS FOLLOWS: WHERE WINGWALL EXTENDS BEYOND END OF APPROACH SLAB, USE A MINIMUM LENGTH OF 10 FT. BEYOND END OF WINGWALL. WHERE THE APPROACH SLAB EXTENDS BEYOND THE END OF WINGWALL, TRANSITION IN THIS LENGTH, HOWEVER, THE TRANSITION LENGTH SHALL NOT BE LESS THAN 10 FT AND THE TRANSITION SHALL EXTEND BEYOND THE END OF THE APPROACH SLAB IF NECESSARY. CURB PLACEMENT SHALL BE IN ACCORDANCE WITH O.D.O.T. STANDARD DRAWING BR-1.

8. APPROACH SLAB WIDTH SHALL EXTEND FROM GUTTER LINE TO GUTTER LINE AND BE 6" WIDER FOR EACH CURB BEYOND THE END OF THE PARAPETS.

9. CROWN SHALL CONFORM TO THAT OF THE APPROACH PAVEMENT AND BRIDGE DECK. IF THE RATE OF CROWN OF THE BRIDGE DECK DIFFERS FROM THAT OF THE APPROACH PAVEMENT, A SMOOTH TRANSITION SHALL BE PROVIDED WITHIN THE LIMITS OF THE APPROACH SLAB.

10. TRANSVERSE JOINT DETAILS AT THE APPROACH PAVEMENT END OF THE APPROACH SLAB ARE USED IN CONJUNCTION WITH CONCRETE PAVEMENT OR CONCRETE BASE COURSE. PAYMENT FOR THE TRANSVERSE JOINT, INCLUDING DOWEL BARS, SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQ. YD. FOR THE APPROACH SLAB.

11. ITEM SP 310 SUBBASE TYPE I GRADING "A" SHALL BE PROVIDED UNDER ALL APPROACH SLABS UNLESS OTHERWISE SHOWN ON THE PLANS.

12. GROOVE AND SEAL WITH 705.04 AS PER O.D.O.T. STD. DWG. BP-2.1.

13. TYPE A WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE GROOVE INTO WHICH THE JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.

PART PLAN VIEW
(WITH CURB)

SECTION B-B

SECTION A-A

DESIGNED BY: RER	CHECKED BY: J.F.P.
DATE: FEB. 1997	DATE: FEB. 1997
DRAWN BY: A.L.H.	REVISED BY: T.K.I.
DATE: FEB. 1997	DATE: 6/26/98
CAD FILE NAME: 7026100/AS-3	

OHIO TURNPIKE COMMISSION

REINFORCED CONCRETE APPROACH SLAB – CELLULAR ABUTMENTS

DATE: JUNE 11, 1998 | SCALE: N.T.S.

O.T.C. STANDARD DRAWING AS-3

PLAN

(SHOWING NON-SKEWED BRIDGE)

PLAN

(SHOWING SKEWED BRIDGE)

NOTES

1. THIS DRAWING PROVIDES DESIGN AND GENERAL CONSTRUCTION DETAILS. THE PROJECT PLANS WILL SHOW SKEW, ESTIMATED QUANTITY (SQ. YDS), AND SPECIAL NOTES AND DETAILS, WHERE NECESSARY FOR CONDITIONS OTHER THAN THOSE INDICATED HEREON. THE APPROACH SLAB SHALL BE ADAPTED TO FIT THE ENDS OF THE BRIDGE AND THE APPROACH PAVEMENT.
2. CONCRETE: CLASS C AS PER 611.02. REINFORCING STEEL: ASTM A615, A616 OR A617 – GRADE 60 MIN YIELD STRENGTH 60,000 P.S.I. AND SHALL BE EPOXY COATED.
3. LONGITUDINAL CONSTRUCTION JOINTS REQUIRED FOR STAGE CONSTRUCTION SHALL BE AS PER 511.09 AND SHALL BE TREATED IN ACCORDANCE WITH SP 516B.
4. CROWN SHALL CONFORM TO THAT OF THE BRIDGE DECK. IF THE RATE OF CROWN OF THE BRIDGE DECK DIFFERS FROM THAT OF THE APPROACH ASPHALT PAVEMENT, A SMOOTH TRANSITION SHALL BE PROVIDED ON THE APPROACH ASPHALT PAVEMENT AT A TRANSITION RATE OF 1 TO 200.
5. TRANSVERSE JOINT DETAILS AT THE APPROACH PAVEMENT END OF THE APPROACH SLAB SHALL BE AS DETAILED ON OTC STANDARD DRAWING AS-2.
6. BASE MATERIAL SHALL BE ITEM SP 310-SUBBASE, TYPE I, GRADING A OR ITEM SP 304-AGGREGATE BASE DEPENDING ON MATERIAL SPECIFIED FOR THE MAINLINE PAVEMENT.
7. GROOVE AND SEAL WITH 705.04 AS PER ODOT STD. DWG. BP-2.1
8. TYPE A WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE GROOVE INTO WHICH THE JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.
9. THE INTEGRAL CONCRETE CURB SHALL BE PROVIDED ON THE NEW APPROACH AS SHOWN IN SECTION 'D-D'.
10. 1" PREFORMED EXPANSION JOINT FILLER SHALL BE PER 705.03
11. THE TWO 4" DIAMETER PVC CONDUITS WITH MULTI-CELL INNERDUCT SHALL COMPLY WITH SP 625.
12. FOR SECTIONS 'A-A', 'B-B', 'C-C' AND 'D-D' ADDITIONAL INFORMATION SEE OTC STANDARD DRAWING AS-5.
13. THE FOLLOWING ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SP 611, CLASS 'C' CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12"):

    : ALL JOINTS
    : GROOVE AND JOINT SEAL
    : TYPE 'A' WATERPROOFING
    : 1" PERFORMED EXPANSION JOINT FILLER
    : MEDIAN BARRIERS
    : REINFORCING STEEL

DESIGNED BY:		CD BY: J.F.P.	
DATE: 3/14/97		DATE: 3/21/96	
DRAWN BY: F.F.F.		REVISED BY: T.K.I.	
DATE: 3/17/97		DATE: 11/11/97	
CAD FILE NAME: 7026100/AS-4			

OHIO TURNPIKE COMMISSION

REINFORCED CONCRETE APPROACH SLAB – FULL WIDTH REPLACEMENT

DATE: JUNE 11, 1998 | SCALE: N.T.S.

O.T.C. STANDARD DRAWING AS-4

NOTE: ALL REINFORCING BARS SHALL BE EPOXY COATED.

SECTION A-A

(SEE NOTE 2)

SECTION C-C
COMPOSITE PAVEMENT

SECTION C-C
FLEXIBLE PAVEMENT

SECTION D-D

SECTION B-B

REINFORCING AND DIMENSIONS SYMMETRICAL ABOUT CENTERLINE

BAR BENDING DIAGRAMS

NOTES:

1. FOR LOCATIONS OF SECTIONS 'A-A', 'B-B', 'C-C', AND 'D-D' AND ADDITIONAL NOTES, SEE OTC STANDARD DRAWING AS-4.
2. THE POROUS BACKFILL AND THE DRAIN PIPES ARE PROVIDED IN THE NEW WIDENED SECTION ONLY. SEE ABUTMENT DETAILS FOR ADDITIONAL INFORMATION.
3. DRILL 1 3/4" DIA. HOLE INTO EXISTING CONCRETE. PARTIALLY FILL WITH NONSHRINKING GROUT BEFORE INSERTING DOWEL PER O.D.O.T. CMS 510.02, COST TO BE INCIDENTAL TO THE COST OF THE NEW APPROACH SLAB.

DESIGNED BY: BKL	CHECKED BY: J.F.P.
DATE: 3/14/97	DATE: 3/21/97
DRAWN BY: F.F.F.	REVISED BY: T.K.I.
DATE: 3/17/97	DATE: 11/11/97
CAD FILE NAME: 7026100/AS-5	

OHIO TURNPIKE COMMISSION

REINFORCED CONCRETE APPROACH SLAB SECTIONS AND DETAILS - FULL WIDTH REPLACEMENT

DATE: NOVEMBER 11, 1997 | SCALE: N.T.S.

O.T.C. STANDARD DRAWING AS-5

PLAN – SKEW ANGLE < 10°
(STRIP SEAL SHOWN, COMPRESSION SEAL SIMILAR)

PLAN – SKEW ANGLE 10° TO 45°
(STRIP SEAL SHOWN, COMPRESSION SEAL SIMILAR)

PLAN – SKEW ANGLE > 45° (STRIP SEAL ONLY)

NOTE: WHEN SKEW ANGLE IS GREATER THAN 45°, FURNISH JOINT ASSEMBLIES IN TWO SECTIONS AND PROVIDE A FIELD SPLICE AT THE CENTERLINE OF ROADWAY.

GENERAL NOTES

1. INSTALLATION OF SEAL: DURING INSTALLATION OF SUPPORT/ARMOR FOR THE SUPERSTRUCTURE SIDE OF THE JOINT SEAL, THE SEATING OF BEAMS ON BEARINGS SHALL BE CAREFULLY OBSERVED TO ASSURE THAT POSITIVE BEARING IS MAINTAINED. PROPER VERICAL FIT OF THE SUPPORT/ARMOR ON THE BEAMS SHALL BE ACHIEVED BY POSITIONING OF THE SUPPORT ANGLES RATHER THAN BY CLAMPING FORCE.
2. ELASTOMERIC COMPRESSION SEALS SHALL BE USED AT FIXED JOINTS ONLY, AND AT SKEWS LESS THAN 45°.
3. STUD ANCHORS SHALL BE LOW CARBON STEEL ASTM A-108.
4. THE MINIMUM LENGTH OF RETAINER SHALL BE 6'-0" BETWEEN JOINTS UNLESS OTHERWISE SHOWN.
5. JOINTS IN EXTRUSIONS SHALL HAVE WATERTIGHT, PARTIAL PENETRATION BUTT WELDS COMPLETELY AROUND THE OUTER PERIPHERY OF THE ABUTTING SURFACES. WELDS WHICH WILL BE IN CONTACT WITH THE SEAL AND/OR ANCHOR PLATES SHALL BE GROUND SMOOTH.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
7. ELASTOMERIC COMPRESSION SEALS SHALL BE WATSON-BOWMAN ACME WJ-200, D.S. BROWN C-V 2000, ERIE METAL SPECIALTIES BR200 OR APPROVED EQUAL.
8. CONTINUOUS STRIP SEALS SHALL BE AS MANUFACTURED BY WATSON-BOWMAN ACME, D.S. BROWN OR APPROVED EQUAL, AND SHALL BE THE SIZE AS SPECIFIED. SEE STRIP SEAL SELECTION TABLE.
9. DETAILS AT DIAPHRAGMS SHOWN, DETAILS AT BEAMS OR GIRDERS SIMILAR.
10. TRANSVERSE JOINTS IN COMPRESSION SEAL ARMOR AND VERTICAL LEGS OF EXTRUSIONS SHALL HAVE COMPLETE PENETRATION BUTT WELDS. WELDS WHICH WILL BE IN CONTACT WITH SEALS SHALL BE GROUND FLUSH.
11. ARMOR STEEL COATING: FINISHED STEEL ASSEMBLY SHALL BE METALIZED, SEE SPECIAL PROVISIONS.

NOTE

FOR SECTIONS B-B & D-D AND DETAIL A, SEE OTC STANDARD DRAWING DJ-2.

TABLE A

STRIP SEAL SIZE	STRIP SEAL JOINT OPENING						
	TEMPERATURE °F						
	30	40	50	60	70	80	90
3"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 5/8"	1 1/2"
4"	2 5/8"	2 1/2"	2 1/2"	2 3/8"	2 1/4"	2 1/8"	2"
5"	2 7/8"	2 3/4"	2 3/4"	2 5/8"	2 5/8"	2 1/2"	2 3/8"

SECTION A-A (COMPRESSION SEAL)

SECTION A-A (STRIP SEAL)
WATSON-BOWMAN ACME TYPE M, OR D.S. BROWN TYPE SSCM EXTRUSIONS SHOWN.

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY: KMH	REVISED BY: T.K.I.
DATE: 9/95	DATE: 11/11/97
CAD FILE NAME: K:\OTC3L STD\DJ-1	

OHIO TURNPIKE COMMISSION

DECK JOINT DETAILS
CELLULAR ABUTMENTS

DATE: NOVEMBER 11, 1997 | SCALE: N.T.S.

O.T.C. STANDARD DRAWING DJ-1

SECTION B-B (STRIP SEAL)

* SEE TABLE B FOR VALUE

SECTION B-B (COMPRESSION SEAL)

DETAIL A

NOTE: FOR JOINT DETAILS IN SIDEWALK SEE OTC STANDARD DRAWING DJ-3

NOTES

1. THE SPLIT EXTRUSION SHOWN IS A NORMAL EXTRUSION WHICH HAS BEEN MODIFIED. AT JOINT UPTURNS, ESPECIALLY ON SKEWED BRIDGE DECKS, THE USE OF SPLIT EXTRUSIONS MAY BE NECESSARY TO ENSURE GOOD SEAL INSTALLATION. ON SHOP DRAWINGS, WHERE THE SPLIT EXTRUSION IS NOT USED, THE SEAL MANUFACTURER OR HIS AGENT WARRANTS TO THE CHIEF ENGINEER THAT THE FURNISHED CONFIGURATION WILL PROVIDE FOR READY INSTALLATION AND REPLACEMENT OF THE SEAL.

2. SECTION F-F & G-G – THE BENT STEEL PLATES SHALL BE A-36 STEEL, GALVANIZED IN ACCORDANCE WITH ITEM 711.02.

   SHOP DRAWINGS SHALL BE SUBMITTED PER CMS 501.05.

   BASIS OF PAYMENT: THE UNIT PRICE SHALL INCLUDE ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS TO FURNISH AND INSTALL THE BENT PLATES. PAYMENT WILL BE MADE AT THE UNIT PRICE BID PER POUND FOR ITEM 513, PARAPET PLATES, AS PER PLAN.

TABLE B

	SKEW ANGLE	
	<10°	10° – 45°
d	3/4" MIN	3/4"
x	6 15/16"	7 1/2"
h	10"	10"

STRIP SEAL SELECTION TABLE

SEAL MOVEMENT RATING (SIZE)	MANUFACTURER & DESIGNATION *	
	THE D.S. BROWN COMPANY	WATSON-BOWMAN & ACME CORP.
3"	300L	SE-300
4"	400L	SE-400
5"	500L	SE-500

* OR APPROVED EQUAL

SECTION C-C

SECTION D-D

SECTION E-E

DETAIL – ALIGNMENT BRACKET

(•) TEMPORARY WELD TO BE REMOVED AND GROUND SMOOTH IN FIELD. LOOSEN TEMPORARY JOINT ARMOR AFTER INITIAL SET OF CONCRETE, PREFERABLY NOT LATER THAN TWO HOURS AFTER CONCLUSION OF CONCRETE PLACEMENT.

DETAIL – ALIGNMENT BRACKET

SECTION F-F

PLAN – SKEWS > 45°

SECTION G-G

* DIMENSION SET EQUAL TO STRIP SEAL JOINT OPENING AT TIME OF INSTALLATION

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY: KMH	REVISED BY: T.K.I.
DATE: 9/95	DATE: 11/11/97
CAD FILE NAME:K:\OTC3L.STD\DJ-2	

OHIO TURNPIKE COMMISSION

DECK JOINT DETAILS

DATE: NOVEMBER 11, 1997 | SCALE: N.T.S.

O.T.C. STANDARD DRAWING DJ-2

PLAN – SKEW ANGLE < 10°
(STRIP SEAL SHOWN, COMPRESSION SEAL SIMILAR)

PLAN – SKEW ANGLE 10° TO 45°
(STRIP SEAL SHOWN, COMPRESSION SEAL SIMILAR)

PLAN – SKEW ANGLE > 45° (STRIP SEAL ONLY)

NOTE: WHEN SKEW ANGLE IS GREATER THAN 45°, FURNISH JOINT ASSEMBLIES IN TWO SECTIONS AND PROVIDE A FIELD SPLICE AT THE CENTERLINE OF ROADWAY.

SECTION A–A (STRIP SEAL)

WATSON–BOWMAN ACME TYPE M,
D.S. BROWN TYPE SSCM EXTRUSIONS SHOWN.

TABLE A

STRIP SEAL SIZE	STRIP SEAL JOINT OPENING						
	TEMPERATURE °F						
	30	40	50	60	70	80	90
3"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 5/8"	1 1/2"
4"	2 5/8"	2 1/2"	2 1/2"	2 3/8"	2 1/4"	2 1/8"	2"
5"	2 7/8"	2 3/4"	2 3/4"	2 5/8"	2 5/8"	2 1/2"	2 3/8"

GENERAL NOTES

1. INSTALLATION OF SEAL: DURING INSTALLATION OF SUPPORT/ARMOR FOR THE JOINT SEAL, THE SEATING OF BEAMS ON BEARINGS SHALL BE CAREFULLY OBSERVED TO ASSURE THAT POSITIVE BEARING IS MAINTAINED. PROPER VERTICAL FIT OF THE SUPPORT/ARMOR ON THE BEAMS SHALL BE ACHIEVED BY POSITIONING OF THE SUPPORT ANGLES RATHER THAN BY CLAMPING FORCE.
2. ELASTOMERIC COMPRESSION SEALS SHALL BE USED AT FIXED JOINTS ONLY, AND AT SKEWS LESS THAN 45°.
3. STUD ANCHORS SHALL BE LOW CARBON STEEL ASTM A–108.
4. THE MINIMUM LENGTH OF RETAINER SHALL BE 6'–0" BETWEEN JOINTS UNLESS OTHERWISE SHOWN.
5. JOINTS IN EXTRUSIONS SHALL HAVE WATERTIGHT, PARTIAL PENETRATION BUTT WELDS COMPLETELY AROUND THE OUTER PERIPHERY OF THE ABUTTING SURFACES. WELDS WHICH WILL BE IN CONTACT WITH THE SEAL AND/OR ANCHOR PLATES SHALL BE GROUND SMOOTH.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
7. ELASTOMERIC COMPRESSION SEALS SHALL BE WATSON–BOWMAN ACME WJ–200, D.S. BROWN C–V 2000, ERIE METAL SPECIALTIES BR200 OR APPROVED EQUAL.
8. CONTINUOUS STRIP SEALS SHALL BE AS MANUFACTURED BY WATSON–BOWMAN ACME, D.S. BROWN OR APPROVED EQUAL, AND SHALL BE THE SIZE AS SPECIFIED. SEE STRIP SEAL SELECTION TABLE.
9. DETAILS AT DIAPHRAGMS SHOWN, DETAILS AT BEAMS OR GIRDERS SIMILAR.
10. TRANSVERSE JOINTS IN COMPRESSION SEAL ARMOR AND VERTICAL LEGS OF EXTRUSIONS SHALL HAVE COMPLETE PENETRATION BUTT WELDS. WELDS WHICH WILL BE IN CONTACT WITH SEALS SHALL BE GROUND FLUSH.
11. STEEL ARMOR COATING: FINISHED STEEL ASSEMBLY SHALL BE METALIZED, SEE SPECIAL PROVISIONS.

NOTE

FOR SECTIONS B–B & D–D AND DETAIL A, SEE OTC STANDARD DRAWING DJ–2.

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY: ALH	REVISED BY: T.K.I.
DATE: 10/16/96	DATE: 11/11/97
CAD FILE NAME: K:\OTC3L.STD\DJ-5	

OHIO TURNPIKE COMMISSION

DECK JOINT DETAILS AT PIERS

DATE: NOVEMBER 11, 1997 | SCALE: N.T.S.

O.T.C. STANDARD DRAWING DJ–5

STRUCTURAL STEEL BOLSTER

SEE TABLE BELOW FOR ADDITIONAL DIMENSIONS.

STRUCTURAL STEEL ROCKER

SEE TABLE BELOW FOR ADDITIONAL DIMENSIONS

BOLSTER NO.	ROCKER NO.	DIMENSIONS (MILLIMETERS)													WEIGHT EACH (Kg)		MAXIMUM LOAD (kN)
		A	B	C	D	F	G	H	K	L	M	R	T	Y	BOLSTER	ROCKER	
	R-340	64	203	64	44	13	178	244	229	457	406	140	38	30		93	340
B-450	R-450	64	254	64	51	13	191	270	229	483	432	165	38	30	102	114	450
B-575	R-575	76	279	76	51	13	203	308	267	508	457	191	38	37	134	143	575
B-675	R-675	76	305	76	57	13	216	340	292	559	483	216	44	37	164	182	675
B-775	R-775	76	356	89	64	13	229	384	305	584	508	241	51	37	207	230	775
B-900	R-900	76	406	89	70	16	229	416	305	610	533	267	57	37	245	275	900
B-1000	R-1000	76	432	89	70	16	229	429	330	635	559	279	57	37	268	302	1000
B-1100	R-1100	89	457	89	70	19	254	448	330	660	584	292	64	43	316	352	1100
B-1225	R-1225	89	483	89	83	19	305	467	356	686	610	305	70	43	363	429	1225
B-1325	R-1325	89	508	89	83	19	305	486	356	711	635	318	76	43	406	477	1325
B-1550	R-1550	102	559	102	89	19	356	537	381	762	686	343	89	48	610	509	1550

WEIGHTS GIVEN ARE FOR ONE ROCKER OR BOLSTER COMPLETE (INCLUDING SHEET LEAD, ANCHOR BOLTS AND WASHERS).

LEGEND

Kg - KILOGRAM
kN - KILONEWTONS

TOP BEARING DETAIL

DOWEL DETAIL

DESIGN SPECIFICATIONS: THIS STANDARD DRAWING CONFORMS TO THE REQUIREMENTS OF "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES" OF THE STATE OHIO, DEPARTMENT OF HIGHWAYS, DATED OCTOBER 1, 1951, TOGETHER WITH REVISIONS THEREOF DATED JULY 15, 1952, APRIL 1, 1954 AND FEBRUARY 1, 1955.

LIMITATION: THIS ROCKER AND BOLSTER DESIGN SHALL NOT BE USED WHERE THE ANTICIPATED MOVEMENT IN ONE DIRECTION IS IN EXCESS OF 50 mm.

ROADWAY GRADE: IF THE ROADWAY GRADE EXCEEDS 2 % THE UPPER LOAD PLATE OF THE BEARING SHALL BE BEVELED TO MATCH THE GRADE, DIMENSION "C" SHALL BE MAINTAINED AT THE CENTER OF THE PLATE.

BOLSTER AND ROCKER CAPACITIES SHOWN ON THIS STANDARD DRAWING ARE BASED ON ACTUAL DEAD LOAD, LIVE LOAD AND IMPACT.

DESIGN AGENCY
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
10-25-94
DATE
ENGINEER OF BRIDGES

REVIEWED LMW
CHECKED JAM
DESIGNED JFF
DRAWN JFF
REVISIONS

STANDARD
ROCKERS AND BOLSTERS FOR STEEL BEAM AND GIRDER BRIDGES
METRIC

RB-1-55M

1/1

BEAM SPLICE DETAILS

BEAM	FLANGE PLATES TYPE	FLANGE PLATES OUTSIDE 2 REQ'D	FLANGE PLATES INSIDE 4 REQ'D	FLANGE BOLTS NUM.	FLANGE BOLTS N SPA.	FLANGE BOLTS PITCH	FLANGE BOLTS A	FLANGE BOLTS B	FLANGE BOLTS C	WEB SPLICE TYPE	WEB SPLICE WEB PLATES 2 REQ'D	WEB SPLICE WEB BOLTS No.	WEIGHT OF SPLICE MAT'RL lbs. *
W40X268	B	17½x⅜x4'-2"	7x⅜x4'-2"	64	7	3½	2 5/16	3	7⅛	B	33¼x⅜x20	60	960
W40X249	B	15½x⅜x4'-2"	6x⅜x4'-2"	64	7	3½	2 5/16	2	7⅛	B	33¼x⅜x20	60	890
W40X244	B	17½x7/16x4'-2"	7x⅜x4'-2"	64	7	3½	2 5/16	3	7⅛	B	33¼x7/16x20	60	910
W40X221	B	17½x½x3'-2"	7x½x3'-2"	48	5	3½	2 5/16	3	7⅛	B	33¼x⅜x20	60	720
W40X215	B	15½x⅜x4'-2"	6x⅜x4'-2"	64	7	3½	2 5/16	2	7⅛	B	33¼x½x20	60	820
W40X199	B	15½x½x3'-2"	6x½x3'-2"	48	5	3½	2 5/16	2	7⅛	B	33¼x½x20	60	650
W40X192	B	17½x⅜x3'-2"	7x⅜x3'-2"	48	5	3½	2 5/16	3	7⅛	B	33¼x⅜x20	60	630
W40X183	A	11½x⅜x2'-8"	4x⅜x2'-8"	40	4	3½	2 5/16	-	7⅛	B	33¼x½x20	60	560
W40X167	A	11½x½x2'-2"	4x½x2'-2"	32	3	3½	2 5/16	-	7⅛	B	33¼x½x20	60	470
W40X149	A	11½x7/16x2'-2"	4x7/16x2'-2"	32	3	3½	2 3/8	-	7	B	33¼x½x20	60	460
W36X300	B	16x¾x6'-3½"	6½x¾x6'-3½"	80	9	3¼	2 5/16	2½	7	C	31x9/16x26	80	1510
W36X280	B	16x11/16x5'-½"	6½x11/16x5'-½"	64	7	3¼	2 5/16	2½	7	B	31x11/16x20	60	1120
W36X260	B	16x⅝x5'-½"	6½x⅝x5'-½"	64	7	3¼	2¼	2½	7	B	31x11/16x20	60	1060
W36X245	B	16x9/16x5'-½"	6½x9/16x5'-½"	64	7	3¼	2 5/16	2½	6⅞	B	31x⅝x20	60	970
W36X230	B	16x9/16x5'-½"	6½x9/16x5'-½"	64	7	3¼	2 5/16	2½	6⅞	B	31x⅝x20	60	940
W36X210	A	12x⅝x3'-0"	4½x⅝x3'-0"	40	4	3½	2 5/16	-	7	B	31x11/16x20	60	670
W36X194	A	12x9/16x3'-0"	4½x9/16x3'-0"	40	4	3½	2⅞	-	6⅞	B	31x⅝x20	60	620
W36X182	A	12x9/16x3'-0"	4½x9/16x3'-0"	40	4	3½	2⅝	-	6⅞	B	31x⅝x20	60	600
W36X170	A	12x½x2'-5"	4½x½x2'-5"	32	3	3½	2 5/16	-	6⅞	B	31x9/16x20	60	510
W36X160	A	12x½x2'-5"	4½x½x2'-5"	32	3	3½	2⅝	-	6¾	B	31x9/16x20	60	500
W36X150	A	11¾x7/16x2'-5"	4½x7/16x2'-5"	32	3	3½	2⅝	-	6¾	A	31x½x14	40	380
W36X135	A	11¾x7/16x1'-10"	4½x7/16x1'-10"	24	2	3½	2⅝	-	6¾	A	31x7/16x14	40	310
W33X263	B	15½x11/16x4'-9"	6½x11/16x4'-9"	64	7	3½	2¼	2½	6⅜	C	28x9/16x26	72	1150
W33X241	B	15½x⅝x4'-9"	6½x⅝x4'-9"	64	7	3½	2¼	2½	6⅜	C	28x9/16x26	72	1090
W33X221	B	15½x9/16x4'-9"	6½x9/16x4'-9"	64	7	3½	2 1/16	2½	6⅜	B	28x11/16x20	54	890
W33X201	B	15½x½x3'-7"	6½x½x3'-7"	48	5	3½	2¼	2½	6¼	B	28x⅝x20	54	680
W33X169	A	11x9/16x3'-0"	4½x9/16x3'-0"	40	4	3½	2⅜	-	6¾	B	28x⅝x20	54	570
W33X152	A	11x½x2'-5"	4½x½x2'-5"	32	3	3½	2 7/16	-	6¾	B	28x9/16x20	54	460
W33X141	A	11x7/16x2'-5"	4½x7/16x2'-5"	32	3	3½	2 1/16	-	6⅝	B	28x9/16x20	54	460
W33X130	A	11x7/16x1'-10"	4½x7/16x1'-10"	24	2	3½	2 1/16	-	6⅝	A	28x½x14	36	300
W33X118	A	11x⅜x1'-10"	4½x⅜x1'-10"	24	2	3½	2 1/16	-	6⅝	A	28x7/16x14	36	280
W30X211	B	15x9/16x5'-½"	6x9/16x5'-½"	64	7	3½	2 7/16	2	6½	B	25x¾x20	48	910
W30X191	A	15x½x3'-7"	6x½x3'-7"	48	5	3½	3 1/16	-	8⅛	B	25x11/16x20	48	670
W30X173	A	14¾x½x3'-0"	6x½x3'-0"	40	4	3½	3 1/16	-	8⅛	B	25x⅝x20	48	570
W30X148	A	10x9/16x2'-5"	4x9/16x2'-5"	32	3	3½	2¼	-	6	B	25x⅝x20	48	460
W30X132	A	10x½x2'-5"	4x½x2'-5"	32	3	3½	2 3/16	-	6⅛	B	25x9/16x20	48	420
W30X124	A	10x7/16x1'-10"	4x7/16x1'-10"	24	2	3½	2¼	-	6	B	25x9/16x20	48	370
W30X116	A	10x7/16x1'-10"	4x7/16x1'-10"	24	2	3½	2¼	-	6	A	25x½x14	32	280
W30X108	A	10x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2¼	-	6	A	25x7/16x14	32	260
W30X99	A	10x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2¼	-	6	A	25x7/16x14	32	260
W30X90	A	10x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2 3/16	-	6	A	25x7/16x14	32	260
W27X194	A	14x9/16x3'-7"	5½x9/16x3'-7"	48	5	3½	3¼	-	7½	C	22x11/16x26	56	770
W27X178	A	14x½x3'-7"	5½x½x3'-7"	48	5	3½	3¼	-	7⅝	B	22x¾x20	42	630
W27X161	A	14x½x3'-0"	5½x½x3'-0"	40	4	3½	3¼	-	7½	B	22x11/16x20	42	540
W27X146	A	13¾x7/16x3'-0"	5½x7/16x3'-0"	40	4	3½	3¼	-	7½	B	22x⅝x20	42	500
W27X129	A	10x½x2'-5"	4x½x2'-5"	32	3	3½	2 1/16	-	5⅞	B	22x⅝x20	42	410
W27X114	A	10x7/16x1'-10"	4x7/16x1'-10"	24	2	3½	2⅛	-	5⅞	B	22x9/16x20	42	330
W27X102	A	10x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2 1/16	-	5⅞	A	22x½x14	28	250
W27X94	A	9¾x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2 1/16	-	5⅞	A	22x7/16x14	28	240
W27X84	A	9¾x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2 1/16	-	5⅞	A	22x7/16x14	28	240
W24X162	A	12½x9/16x3'-0"	5x9/16x3'-0"	40	4	3½	2 5/16	-	7⅛	C	19x⅞x26	48	620
W24X146	A	12½x½x3'-0"	5x½x3'-0"	40	4	3½	2⅞	-	7⅛	B	19x¾x20	36	490

PARTIAL SECTION
(AT ℄ OF BEAM SPLICE)

* TABULATED WEIGHTS ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THEY INCLUDE AN ALLOWANCE FOR WEIGHT OF BOLTS AND WASHERS.

BEAM SPLICE DETAIL
WEB SPLICE - TYPE A

BEAM SPLICE DETAIL
WEB SPLICE - TYPE B

BEAM SPLICE DETAIL
WEB SPLICE - TYPE C

VIEW A-A
FLANGE SPLICE - TYPE A

VIEW A-A
FLANGE SPLICE - TYPE B

VIEW A-A
SPLICE DETAIL FOR BEAMS HAVING DIFFERENT FLANGE WIDTHS

NOTE: ALL SHAPES AND PLATES SHALL BE DESIGNATED (CVN), AND SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF CMS.

NOTE: ALL FASTENERS ARE 1" DIAMETER HIGH STRENGTH BOLTS, ASTM A-325

DESIGN AGENCY
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
ENGINEER OF BRIDGES
DATE 12-19-94

REVIEWED
CHECKED SAM
DESIGNED GEA
DRAWN SAM
REVISIONS

BS-1-93

STANDARD
BOLTED BEAM SPLICE
FOR STEEL BEAM BRIDGES
(FOR 36 KSI STEEL)

BEAM SPLICE DETAILS

BEAM	FLANGE PLATES TYPE	FLANGE PLATES OUTSIDE 2 REQ'D	FLANGE PLATES INSIDE 4 REQ'D	FLANGE BOLTS NUM.	FLANGE BOLTS N SPA.	FLANGE BOLTS PITCH	FLANGE BOLTS A	FLANGE BOLTS B	FLANGE BOLTS C	WEB SPLICE TYPE	WEB SPLICE WEB PLATES 2 REQ'D	WEB SPLICE WEB BOLTS No.	WEIGHT OF SPLICE MAT'RL lbs. ≠
W40X268	B	17½x⅝x5'-11"	7x⅝x5'-11"	80	9	3½	2 5/16	3	7⅛	C	33x11/16x28¼	72	1390
W40X249	B	15½x⅝x4'-9"	6x⅝x4'-9"	64	7	3½	2 5/16	2	7⅛	C	33x11/16x28¼	72	1130
W40X244	B	17½x9/16x4'-9"	7x9/16x4'-9"	64	7	3½	2 5/16	3	7⅛	C	33x11/16x28¼	72	1150
W40X221	B	17½x½x4'-9"	7x½x4'-9"	64	7	3½	2 5/16	3	7⅛	C	33x11/16x28¼	72	1080
W40X215	B	15½x9/16x4'-9"	6x9/16x4'-9"	64	7	3½	2 5/16	2	7⅛	C	33x⅝x28¼	72	1040
W40X199	B	15½x½x3'-7"	6x½x3'-7"	48	5	3½	2 5/16	2	7⅛	C	33x⅝x28¼	72	850
W40X192	B	17½x⅜x3'-7"	7x⅜x3'-7"	48	5	3½	2 5/16	3	7⅛	C	33x11/16x28¼	72	840
W40X183	A	11½x⅝x3'-0"	4x⅝x3'-0"	40	4	3½	2 5/16	-	7⅛	B	33x9/16x21½	54	620
W40X167	A	11½x½x3'-0"	4x½x3'-0"	40	4	3½	2 5/16	-	7⅛	B	33x9/16x21½	54	570
W40X149	A	11½x7/16x2'-5"	4x7/16x2'-5"	32	3	3½	2⅜	-	7	B	33x9/16x21½	54	500
W36X300	B	16x¾x6'-3½"	6½x¾x6'-3½"	80	9	3¾	2 5/16	2½	7	C	31x7/8x28¼	72	1600
W36X280	B	16x¾x6'-3½"	6½x¾x6'-3½"	80	9	3¾	2 5/16	2½	7	C	31x11/16x28¼	72	1480
W36X260	B	16x⅝x6'-3½"	6½x⅝x6'-3½"	80	9	3¾	2¼	2½	7	C	31x¾x28¼	72	1380
W36X256	A	12x13/16x4'-2"	4½x13/16x4'-2"	56	6	3½	2 3/16	-	7⅛	C	31x7/8x28¼	72	1090
W36X245	B	16x⅝x5'-½"	6½x⅝x5'-½"	64	7	3¾	2 5/16	2½	6⅞	C	31x¾x28¼	72	1170
W36X232	A	12x11/16x4'-2"	4½x11/16x4'-2"	56	6	3½	2 3/16	-	7	C	31x15/16x28¼	72	1010
W36X230	B	16x⅝x5'-½"	6½x⅝x5'-½"	64	7	3¾	2 5/16	2½	6⅞	C	31x7/16x28¼	72	1100
W36X210	A	12x⅝x3'-7"	4½x⅝x3'-7"	48	5	3½	2 5/16	-	7	C	31x13/16x28¼	72	910
W36X194	A	12x⅝x3'-0"	4½x⅝x3'-0"	40	4	3½	2⅝	-	6⅞	C	31x¾x28¼	72	720
W36X182	A	12x9/16x3'-0"	4½x9/16x3'-0"	40	4	3½	2⅝	-	6⅞	C	31x9/16x28¼	72	740
W36X170	A	12x½x3'-0"	4½x½x3'-0"	40	4	3½	2 5/16	-	6⅞	B	31x9/16x21½	54	570
W36X160	A	12x½x2'-5"	4½x½x2'-5"	32	3	3½	2⅝	-	6¾	B	31x9/16x21½	54	510
W36X150	A	11⅞x½x2'-5"	4½x½x2'-5"	32	3	3½	2⅝	-	6¾	B	31x9/16x21½	54	510
W36X135	A	11⅞x7/16x2'-5"	4½x7/16x2'-5"	32	3	3½	2⅝	-	6¾	B	31x½x21½	54	460
W33X263	B	15½x11/16x5'-11"	6½x11/16x5'-11"	80	9	3½	2 3/16	2½	6⅝	C	29⅞x13/16x28¼	64	1350
W33X241	B	15½x⅝x4'-9"	6½x⅝x4'-9"	64	7	3½	2¼	2½	6⅝	C	29⅞x⅝x28¼	64	1100
W33X221	B	15½x9/16x4'-9"	6½x9/16x4'-9"	64	7	3½	2 3/16	2½	6⅝	C	29⅞x11/16x28¼	64	1010
W33X201	B	15½x½x4'-9"	6½x½x4'-9"	64	7	3½	2¼	2½	6¼	C	29⅞x11/16x28¼	64	980
W33X169	A	11x9/16x3'-0"	4½x9/16x3'-0"	40	4	3½	2⅜	-	6¾	B	29⅞x9/16x21½	48	570
W33X152	A	11x½x2'-5"	4½x½x2'-5"	32	3	3½	2 1/16	-	6¾	B	29⅞x½x21½	48	470
W33X141	A	11x½x2'-5"	4½x½x2'-5"	32	3	3½	2 1/16	-	6⅞	B	29⅞x½x21½	48	460
W33X130	A	11x7/16x2'-5"	4½x7/16x2'-5"	32	3	3½	2 1/16	-	6⅝	B	29⅞x½x21½	48	440
W33X118	A	11x⅜x1'-10"	4½x⅜x1'-10"	24	2	3½	2 1/16	-	6⅝	B	29⅞x½x21½	48	380
W30X211	B	15x9/16x4'-9"	6x9/16x4'-9"	64	7	3½	2 3/16	2	6¼	C	26½x11/16x28¼	56	990
W30X191	B	15x½x3'-7"	6x½x3'-7"	48	5	3½	2 3/16	2	6⅛	C	26½x11/16x28¼	56	780
W30X173	B	14⅞x½x3'-7"	6x½x3'-7"	48	5	3½	2 1/16	2	6⅛	C	26½x⅝x28¼	56	730
W30X148	A	10x9/16x2'-5"	4x9/16x2'-5"	32	3	3½	2¼	-	6	B	26½x9/16x21½	42	450
W30X132	A	10x½x2'-5"	4x½x2'-5"	32	3	3½	2 3/16	-	6⅛	B	26½x½x21½	42	420
W30X124	A	10x7/16x2'-5"	4x7/16x2'-5"	32	3	3½	2¼	-	6	B	26½x½x21½	42	410
W30X116	A	10x7/16x1'-10"	4x7/16x1'-10"	24	2	3½	2¼	-	6	B	26½x½x21½	42	360
W30X108	A	10x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2¼	-	6	B	26½x½x21½	42	350
W30X99	A	10x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2¼	-	6	B	26½x7/16x21½	42	330
W30X90	A	10x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2 1/16	-	6	A	26½x⅜x14¾	28	250
W27X194	A	14x9/16x4'-2"	5½x9/16x4'-2"	56	6	3½	3¼	-	7½	C	24x¾x28¼	48	850
W27X178	A	14x9/16x3'-7"	5½x9/16x3'-7"	48	5	3½	3¼	-	7⅝	C	24x11/16x28¼	48	730
W27X161	A	14x½x3'-0"	5½x½x3'-0"	40	4	3½	3¼	-	7½	C	24x⅝x28¼	48	630
W27X146	A	13⅞x7/16x3'-0"	5½x7/16x3'-0"	40	4	3½	3¼	-	7½	B	24x½x21½	36	490
W27X129	A	10x½x2'-5"	4x½x2'-5"	32	3	3½	2 1/16	-	5⅞	B	24x½x21½	36	400
W27X114	A	10x½x1'-10"	4x½x1'-10"	24	2	3½	2⅛	-	5⅞	B	24x½x21½	36	340
W27X102	A	10x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2 1/16	-	5⅞	B	24x7/16x21½	36	310
W27X94	A	9⅞x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2 1/16	-	5⅞	B	24x7/16x21½	36	300
W27X84	A	9⅞x⅜x1'-10"	4x⅜x1'-10"	24	2	3½	2 1/16	-	5⅞	A	24x⅜x14¾	24	230
W24X162	A	12½x9/16x3'-7"	5x9/16x3'-7"	48	5	3½	2 3/16	-	7⅛	C	20⅞x¾x28¼	48	690
W24X146	A	12½x½x3'-0"	5x½x3'-0"	40	4	3½	2⅞	-	7⅛	B	20⅞x⅝x21½	36	510

≠ TABULATED WEIGHTS ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THEY INCLUDE AN ALLOWANCE FOR WEIGHT OF BOLTS AND WASHERS.

PARTIAL SECTION
(AT ℄ OF BEAM SPLICE)

BEAM SPLICE DETAIL
WEB SPLICE - TYPE A

BEAM SPLICE DETAIL
WEB SPLICE - TYPE B

BEAM SPLICE DETAIL
WEB SPLICE - TYPE C

VIEW A-A
FLANGE SPLICE - TYPE A

VIEW A-A
FLANGE SPLICE - TYPE B

VIEW A-A
SPLICE DETAIL FOR BEAMS HAVING DIFFERENT FLANGE WIDTHS

NOTE: ALL SHAPES AND PLATES SHALL BE DESIGNATED (CVN). AND SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF CMS.

NOTE: ALL FASTENERS ARE 1⅛" DIAMETER HIGH STRENGTH BOLTS. ASTM A-325

DESIGN AGENCY
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
ENGINEER OF BRIDGES
DATE

REVISIONS
DESIGNED GLA
DRAWN SAM
CHECKED SAM
REVIEWED
BS-1-93

STANDARD
BOLTED BEAM SPLICE
FOR STEEL BEAM BRIDGES
(FOR 50 KSI STEEL)

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