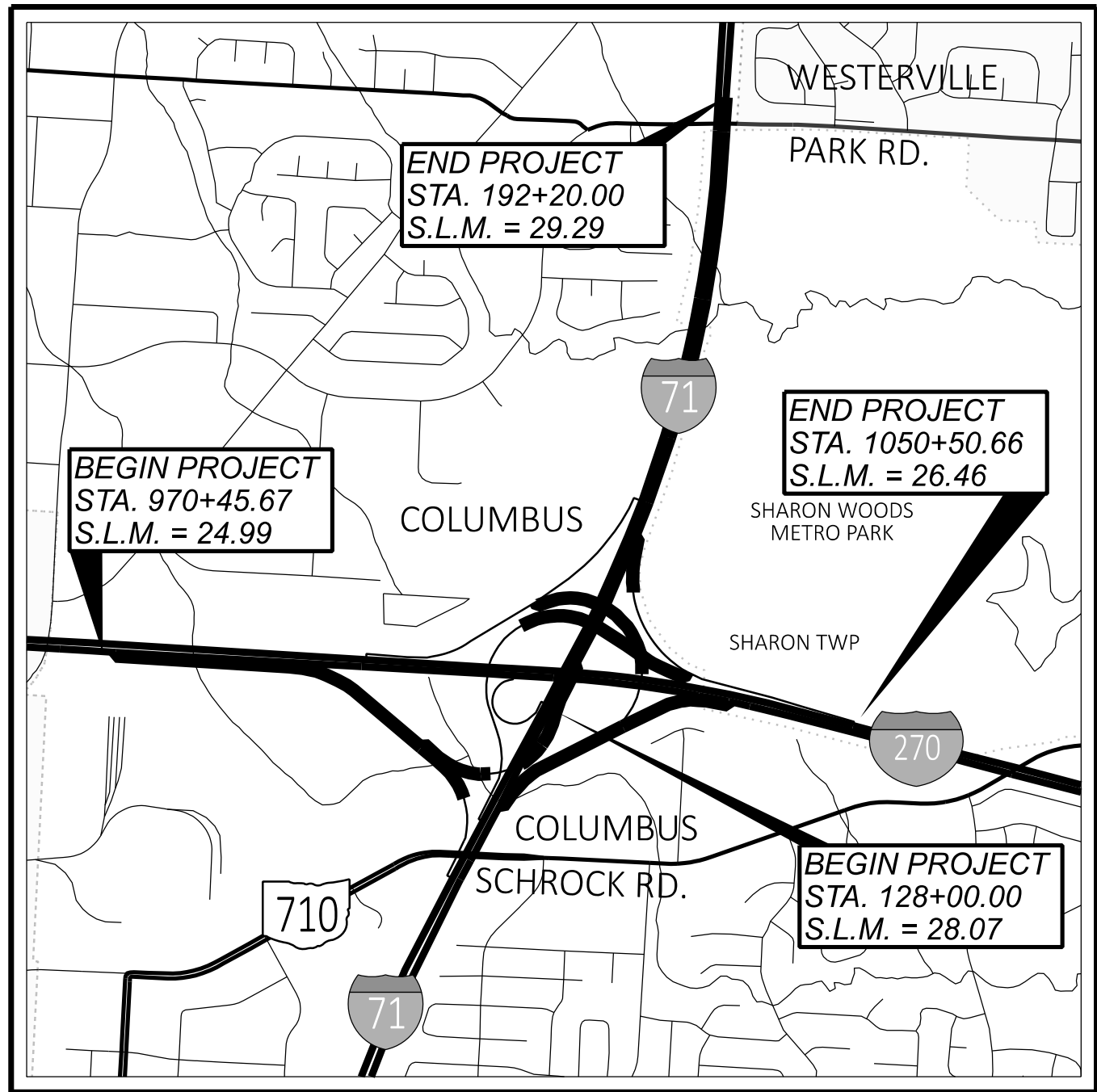




LOCATION MAP

LATITUDE: 40°06'38" LONGITUDE: 82°58'39"



PORTION TO BE IMPROVED	=====
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	=====
STATE ROUTES	=====
COUNTY & TOWNSHIP ROADS	=====
OTHER ROADS	=====

DESIGN DESIGNATION**

	<u>IR-270</u>	<u>IR-71</u>
CURRENT ADT (2023)	179,980	162,190
DESIGN YEAR ADT (2043)	210,980	193,790
DESIGN HOURLY VOLUME (2043)	20,790	15,800
DIRECTIONAL DISTRIBUTION	50%	52%
TRUCKS (24 HOUR B&C)	20%	20%
DESIGN SPEED	70 MPH	70 MPH
LEGAL SPEED	65 MPH	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION:		
[01] INTERSTATE (URBAN)		
NHS PROJECT	YES	

DESIGN EXCEPTIONS

LOCATION	DESIGN FEATURE	APPROVAL DATE	SHEET NUMBERS
71 NB	SHOULDER WIDTH	8/26/2024	P.012, P.257
RAMP K	HORIZONTAL CURVE RADIUS	8/28/2024	P.003
RAMP P	SHOULDER WIDTH	11/18/2022	P.019, P.274, P.275
RAMP P	HORIZONTAL STOPPING SIGHT DISTANCE	9/4/2024	P.004
RAMP O	HORIZONTAL STOPPING SIGHT DISTANCE	8/30/2024	P.003
RAMP K	HORIZONTAL STOPPING SIGHT DISTANCE	8/30/2024	P.003
RAMP Q	HORIZONTAL STOPPING SIGHT DISTANCE	9/11/2024	P.003, P.004
RAMP O	HORIZONTAL CURVE RADIUS	9/10/2024	P.003

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig


Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
TRANSYSTEMS
1100 SUPERIOR AVE. E., STE 1000
CLEVELAND, OHIO 44114

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

FRA-71/270-28.27/25.99A

CITY OF COLUMBUS
SHARON TOWNSHIP
FRANKLIN COUNTY

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GEOTECHNICAL PROFILE - ROADWAY	P.742 - P.791

**FOR RAMP DESIGN DESIGNATIONS, SEE SHEET P.002

STANDARD CONSTRUCTION DRAWINGS												SUPPLEMENTAL SPECIFICATIONS			
BP-2.1	1/21/22	F-1.1	7/19/13	RM-4.5	7/21/17	HL-30.22	1/15/21	MT-98.20	4/19/19	TC-22.20	1/17/14	800-2023	7/19/24	863	7/21/23
BP-2.2	1/15/21	F-3.3	7/19/13	RM-4.6	7/19/13	HL-50.21	7/15/22	MT-98.21	7/21/23	TC-41.10	7/19/13	804	7/19/24	878	1/21/22
BP-3.1	1/19/24			RM-4.8	7/19/24	HL-60.11	7/21/17	MT-98.28	1/17/20	TC-41.20	10/18/13	807	1/21/22	896	7/21/17
BP-5.1	7/15/22	I-3D	7/19/24			HL-60.12	7/21/23	MT-98.29	1/17/20	TC-42.10	10/18/13	809	7/19/24	904	7/15/22
BP-8.1	7/19/24	I-3E	7/19/24	AS-1-15	1/20/23	HL-60.21	7/20/18	MT-98.30	7/16/21	TC-42.20	10/18/13	813	7/21/23	909	7/19/24
BP-9.1	1/18/19			AS-2-15	7/21/23	HL-60.31	7/19/24	MT-99.60	7/19/24	TC-51.11	1/15/16	821	4/20/12	913	4/16/21
		MGS-1.1	7/16/21	GSD-1-19	7/19/24			MT-100.00	1/19/24	TC-51.12	1/15/16	832	7/19/24	921	7/19/24
CB-3A	7/19/24	MGS-2.1	1/19/18	PCB-91	7/17/20	ITS-10.11	7/19/24	MT-101.60	4/21/23	TC-52.10	10/18/13	836	1/19/24	996	7/21/23
CB-4	7/19/24	MGS-3.1	1/19/18	SBR-1-20	7/19/24	ITS-14.11	7/19/24	MT-101.70	7/19/24	TC-52.20	1/15/21	839	7/16/21		
CB-5	7/19/24	MGS-3.2	1/18/13	SICD-2-14	1/15/21	ITS-50.12	7/19/24	MT-101.75	7/21/23	TC-61.10	4/21/23	840	7/19/24		
CB-6	7/19/24	MGS-4.2	7/19/13					MT-102.10	7/21/23	TC-61.30	7/19/24	850	7/21/23		
		MGS-4.3	1/18/13	HL-10.11	7/21/23	MT-95.30	7/19/19	MT-102.20	4/19/19	TC-64.10	7/21/23				
DM-1.1	7/17/20			HL-10.13	1/20/23	MT-95.32	4/19/19			TC-65.10	1/17/14				
DM-1.2	7/16/21	MH-3	7/19/24	HL-10.31	7/15/22	MT-95.40	7/21/23	TC-12.31	4/15/22	TC-65.11	1/19/24				
DM-4.1	7/17/20			HL-20.11	7/21/23	MT-95.45	7/21/23	TC-15.116	1/19/24	TC-72.20	7/21/23				
DM-4.3	1/15/16	RM-4.2	4/17/20	HL-20.21	1/15/21	MT-95.73	7/19/24	TC-21.11	7/16/21						
DM-4.4	1/15/16	RM-4.3	1/21/22	HL-30.11	7/21/23	MT-98.10	1/17/20	TC-21.21	1/20/23						
		RM-4.4	7/19/24	HL-30.21	4/17/20	MT-98.11	1/17/20	TC-21.50	1/17/25						

FEDERAL PROJECT NUMBER

E200 (211)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THIS PROJECT WILL IMPROVE CAPACITY AND REHABILITATE FACILITIES IN NEED OF REPAIR OR REPLACEMENT IN THE IR-270 AND IR-071 INTERCHANGE ON THE NORTH SIDE OF COLUMBUS. THERE WILL BE THE ADDITION OF CAPACITY TO THE IR-270 EASTBOUND TO IR-071 NORTHBOUND MOVEMENT. TWO RAMP BRIDGES WILL BE REPLACED, ONE BRIDGE WILL HAVE THE SUPERSTRUCTURE AND ABUTMENTS REPLACED, AND ONE BRIDGE WILL BE RESTRIPEDED.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	34.53 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	2.00 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	36.53 ACRES
FIRM MAP OF FRANKLIN COUNTY, OHIO 39049C0176K, 6/17/2008	
FLOOD ZONE X - OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN.	

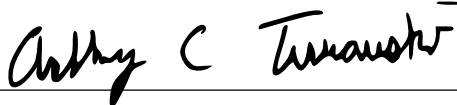
LIMITED ACCESS

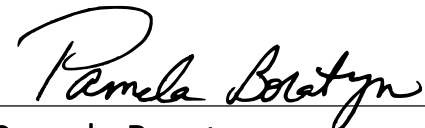
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2023 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS P.031-P.033, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

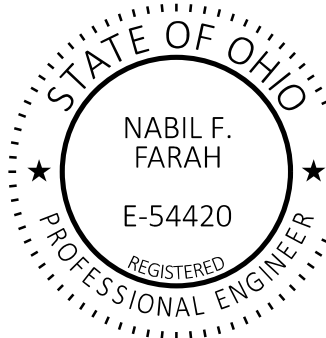

Anthony C. Turowski, P.E.
District 06 Deputy Director


Pamela Boratyn
Director, Department of Transportation

4050-E

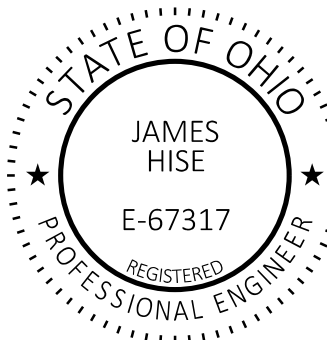
ENGINEER'S SEAL

ROADWAY, STRUCTURES, LIGHTING, TRAFFIC CONTROL



ENGINEER'S SEAL

MAINTENANCE OF TRAFFIC, TRAFFIC SURVEILLANCE



ENGINEER'S SEAL

PROJECT SITE PLAN BMP DESIGN



DESIGN AGENCY

TRANSYSTEMS

1100 SUPERIOR AVE. E. STE 1000
CLEVELAND, OHIO 44114

DESIGNER

RJG

REVIEWER

MSW 09/06/24

PROJECT ID

105435

SHEET

P.001

TOTAL

791

EXISTING LEGEND

- (A) 1½" ASPHALT CONCRETE (SC)
(C) 1¾"± ASPHALT CONCRETE (IC)
(G) AGGREGATE BASE, VARIABLE THICKNESS
(J) 9"± REINFORCED CONCRETE PAVEMENT

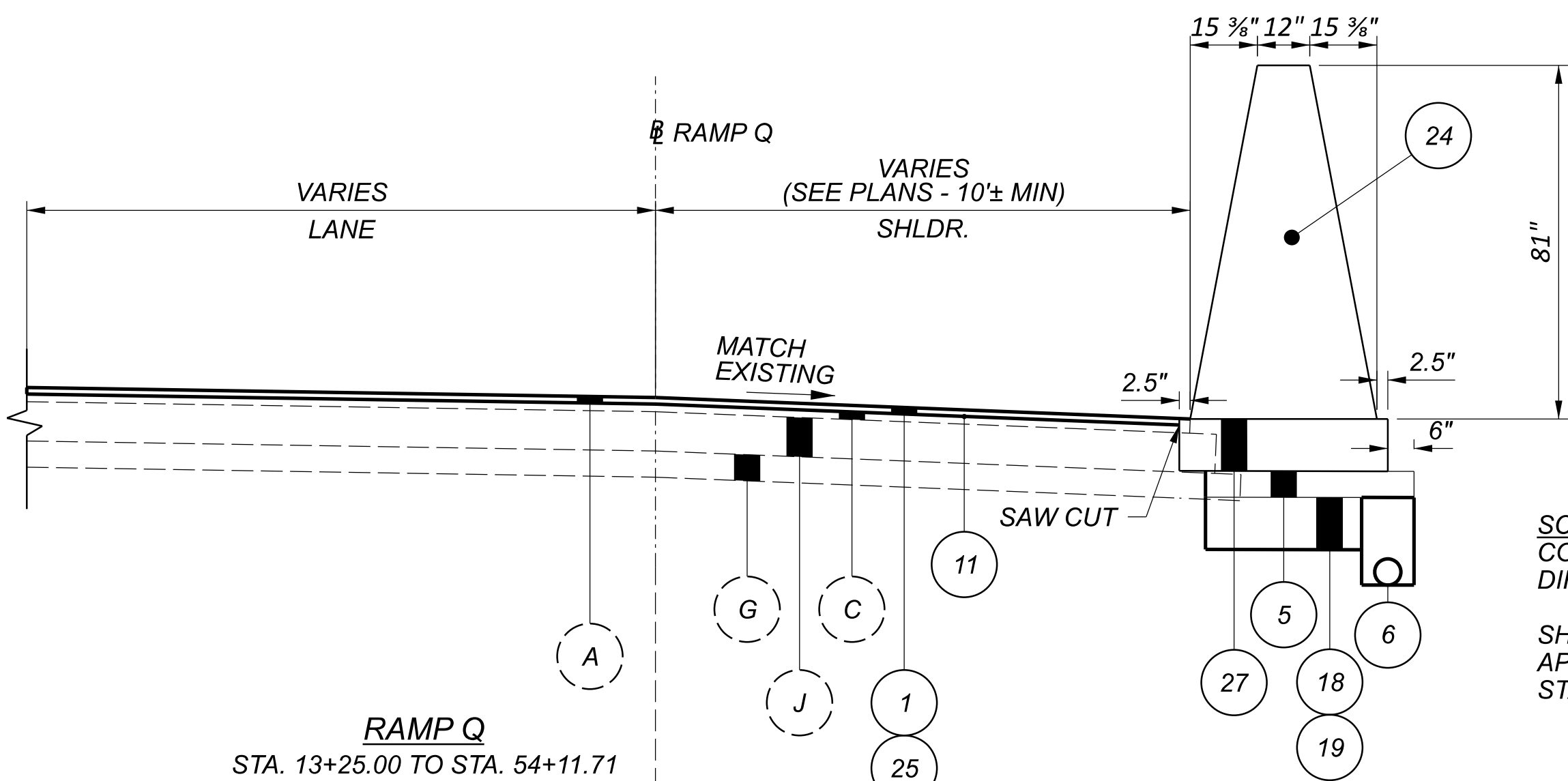
PROPOSED LEGEND

- (1) ITEM 442 - 1½" ASPHALT CONCRETE (SC), 12.5MM, TYPE A (446)
(2) ITEM 442 - 1¾" ASPHALT CONCRETE (IC), 19MM, TYPE A (446)
(3) ITEM 302 - 15½" ASPHALT CONCRETE BASE, PG64-22M (PLACE IN 2 LIFTS)
(4) ITEM 302 - 12¾" ASPHALT CONCRETE BASE, PG64-22M (PLACE IN 2 LIFTS)
(5) ITEM 304 - 6" AGGREGATE BASE
(6) ITEM 605 - 6" BASE PIPE UNDERDRAINS
(7) ITEM 204 - 12" CEMENT STABILIZED SUBGRADE
(8) ITEM 606 - GUARDRAIL, TYPE MGS
(9) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D
(10) ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=17")
(11) ITEM 407 - NON-TRACKING TACK COAT
(12) ITEM 204 - PROOF ROLLING
(13) ITEM 204 - SUBGRADE COMPACTION
(14) ITEM 659 - SEEDING AND MULCHING
(15) ITEM 609 - CURB, TYPE 4-C
(16) 42" SINGLE SLOPE CONCRETE BRIDGE RAILING
(17) RETAINING WALL
(18) ITEM 204 - EXCAVATION OF SUBGRADE, 12"
(19) ITEM 204 - GRANULAR MATERIAL, TYPE B
(20) ITEM 204 - GEOTEXTILE FABRIC
(21) MSE RETAINING WALL
(22) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1
(23) ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
(24) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, 81"
(25) ITEM 254 - 1½" PAVEMENT PLANING, ASPHALT CONCRETE
(26) ITEM 452 - 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
(27) ITEM 452 - 12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P

Δ 4.00% OR RATE OF SUPERELEVATION,
WHICHEVER IS GREATER

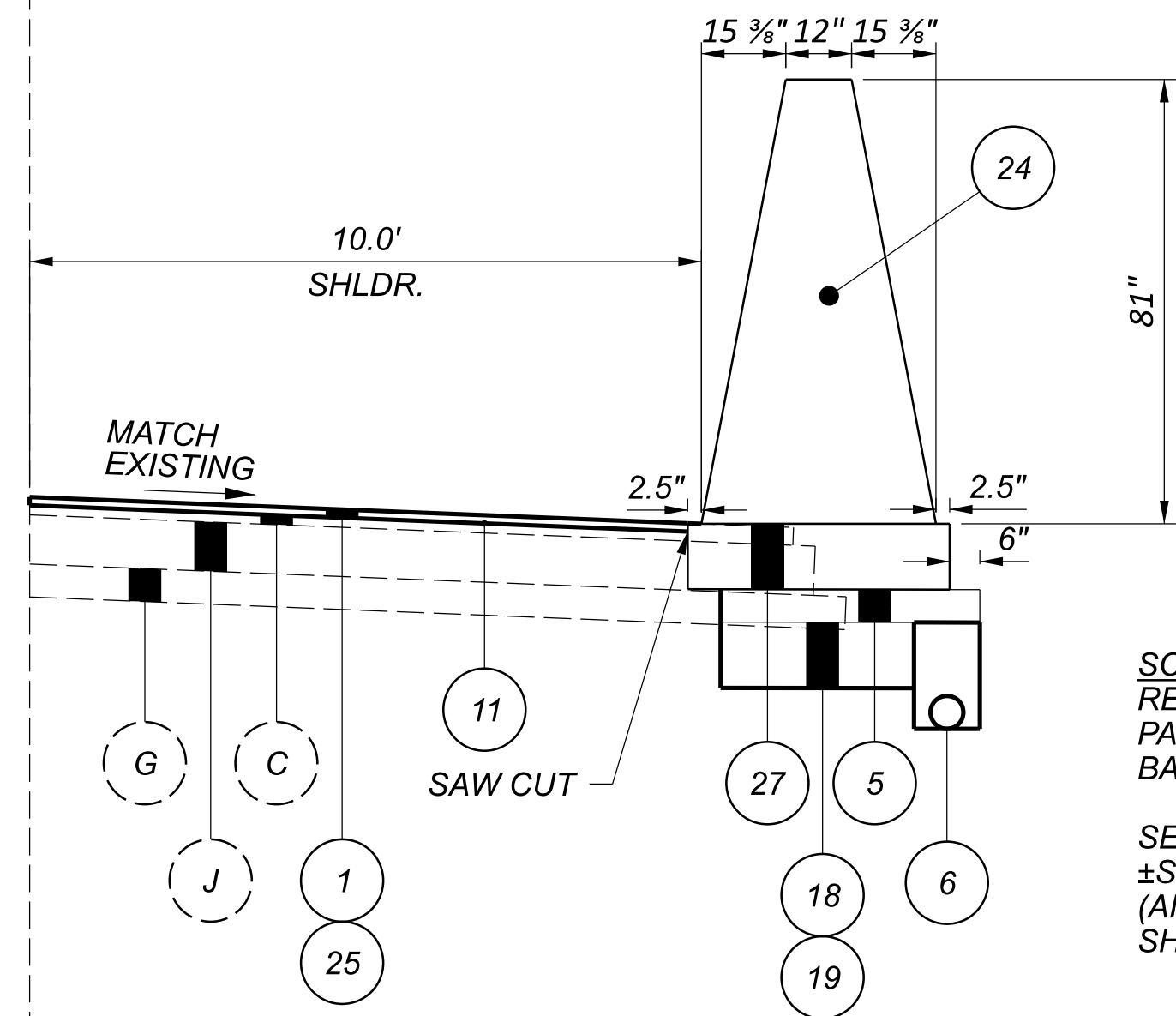
Σ 7% MAX BREAK

NOTES:
JOINTS BETWEEN EXISTING AND PROPOSED
CONCRETE SHALL FOLLOW THE TIED CONCRETE
PAVEMENT WIDENING DETAILS SHOWN IN BP-8.1
AND UTILIZE THE TYPE D JOINT SHOWN IN BP-2.1.



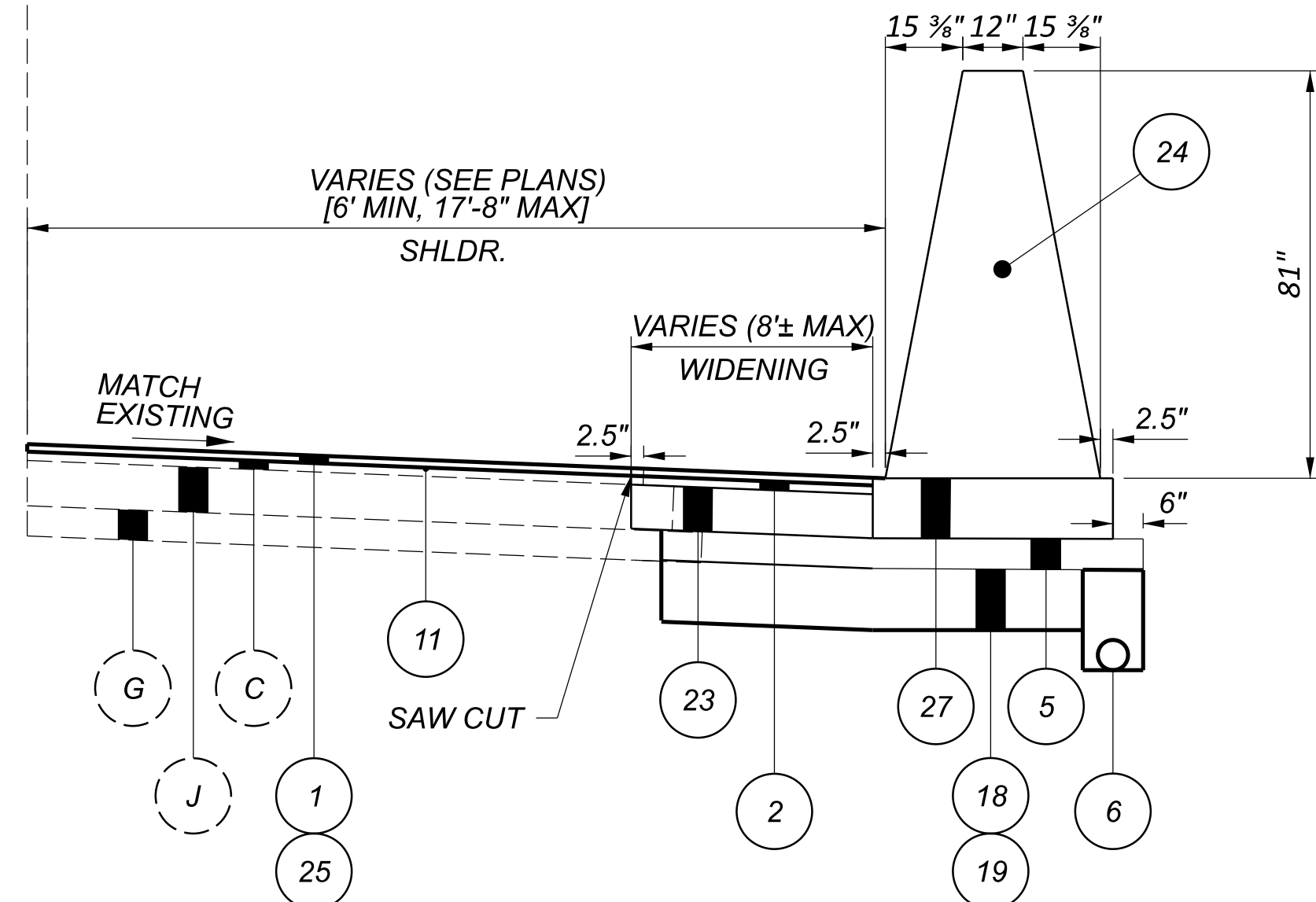
SCENARIO 1
CONSTRUCT PROPOSED BARRIER
DIRECTLY AGAINST EXISTING SHOULDER

SHOULDER DETAIL ALSO
APPLIES TO IR-270 (EB):
STA. 1044+62.37 TO STA. 1050+51.00



SCENARIO 2
REDUCE EXISTING SHOULDER WIDTH BY REMOVING
PAVEMENT AND THEN CONSTRUCTING PROPOSED
BARRIER DIRECTLY AGAINST NEW EDGE

SECTION APPLIES:
±STA. 15+51.15 TO ±STA. 18+21.85
(AND AS NEEDED TO ACHIEVE PROPOSED
SHOULDER DIMENSIONS)



SCENARIO 3
WIDEN SHOULDER IN AREAS SHOWN IN
PLANS AND CONSTRUCT THE PROPOSED
BARRIER NEXT TO NEW CONCRETE
SHOULDER

SECTION APPLIES:
±STA. 18+21.85 TO ±STA. 26+12.94
±STA. 30+80.88 TO ±STA. 41+65.00
(AND AS NEEDED TO ACHIEVE PROPOSED
SHOULDER DIMENSIONS)

CONSTRUCTION NOTIFICATION

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE CLOSURES, AND ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO LOCAL OFFICIALS RESPONSIBLE FOR PUBLIC NOTIFICATION. THAT OFFICIAL WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF THE ABOVE MENTIONED ITEMS, VIA THE APPROPRIATE MEDIA SOURCES.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E [MASH 2016]

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING’S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER’S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH REBOUNDABLE RETROREFLECTIVE SHEETING, PER CMS 730.191.

REFER TO THE MANUFACTURER’S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO AND TIED TO EXISTING CONCRETE, THE CONTRACTION JOINT SPACING REQUIRED IN STANDARD CONSTRUCTION DRAWING BP-2.2 WILL BE WAIVED. CONSTRUCT CONTRACTION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL CONTRACTION JOINTS IN THE EXISTING CONCRETE PAVEMENT. INSTALL EXPANSION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL EXPANSION JOINTS IN THE EXISTING CONCRETE PAVEMENT.

STORM WATER PERMITS

AN NOI WILL BE SUBMITTED BY ODOT TO THE OHIO EPA PRIOR TO PLAN FILE. IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 832, A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WILL BE DEVELOPED BY THE CONTRACTOR AND THE NPDES PERMIT WILL BE FINALIZED/ACQUIRED BY THE CONTRACTOR PRIOR TO STARTING ANY EARTH DISTURBING CONSTRUCTION ACTIVITIES.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05.

CATCH BASIN, ADJUSTED TO GRADE, AS PER PLAN

ADJUST CATCH BASIN TO GRADE AND REPLACE EXIST. CB-7 GRATE WITH CB-6 GRATE.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGES WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT AT THE BRIDGES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO THE OEPA ELECTRONICALLY OR VIA US MAIL TO:

OHIO EPA
DAPC-ASBESTOS
P.O. BOX 1049
COLUMBUS, OHIO 43216-1049

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED.

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM.

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS AND CARRIED TO THE GENERAL SUMMARY.

ITEM 611, CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN

THIS WORK SHALL CONSIST OF ADJUSTING THE EXISTING CATCH BASIN TO GRADE AND REPLACING THE FRAME AND GRATE TO A CB-6 PER SCD CB-6.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 1 UNDERLAYMENT 10 SQ. YD
ITEM 611, 6" CONDUIT, TYPE F 200 FT
ITEM 611, PRECAST REINFORCED CONCRETE OUTLET 5 EACH
ITEM 605, 6" UNCLASSIFIED PIPE UNDERDRAINS 200 FT

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

PROVIDE CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. FURNISH A STUB MEETING THE REQUIREMENTS OF 707 WITH A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THOROUGHLY CLEAN AND REGALVANIZE OR OTHERWISE SUITABLY REPAIR THE FIELD WELDED JOINT, IF USED. MEET WELDING REQUIREMENTS OF 513.21.

PROVIDE A MASONRY COLLAR PER STANDARD CONSTRUCTION DRAWING DM-1.1, TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS USED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, IS INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

NOISE BARRIER REMOVAL

THIS WORK SHALL CONSIST OF THE REMOVAL OF THE ABSORPTIVE NOISE BARRIER PANELS, POSTS, HARDWARE, AND A PORTION OF THE DRILLED SHAFT FOUNDATIONS LOCATED ALONG NORTHBOUND IR-71, FROM STATION 168+74.15 TO 177+28.51, AS SHOWN IN THE PLANS. THE BARRIER IS APPROXIMATELY 864' LONG AND HAS AN AVERAGE HEIGHT OF 11'.

DRILLED SHAFTS SHALL BE REMOVED TO A DEPTH 1' BELOW FINAL GRADE (EXISTING OR PROPOSED). WHERE THE SHAFTS ARE WITHIN THE LIMITS OF THE PROPOSED ROADWAY, REMOVE TO A DEPTH 1' BELOW THE PROPOSED SUBBASE AND TO A SUFFICIENT DEPTH TO INSTALL ALL PROPOSED STORM SEWER. ANY VOIDS CREATED IN THE REMOVAL PROCESS THAT ARE NOT OTHERWISE BEING FILLED WITH PROPOSED EMBANKMENT OR PAVEMENT MATERIALS, SHALL BE BACKFILLED PER CMS 202.02.

PAYMENT FOR ALL LABOR, REMOVAL, DISPOSAL, BACKFILL MATERIAL, AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE ITEMS LISTED BELOW.

ITEM 202, REMOVAL MISC.:	
NOISE BARRIER POST AND FOUNDATION REMOVAL	47 EACH
ITEM 202, REMOVAL MISC.:	
NOISE BARRIER PANEL REMOVAL AND DISPOSAL	13,545 SF

DESIGN AGENCY

TRANSYSTMS
1100 SUPERIOR AVE. E. STE 1000
CLEVELAND, OHIO 44114

DESIGNER

RJG

REVIEWER

MSW 09/06/24

PROJECT ID

105435

SHEET

P.022

TOTAL

791

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.021	P.022	P.023	P.240	P.247	P.248	P.249	P.250	P.251			01/IMS/21	02/IMS/10	03/IMS/13						
LS											LS			201	11000	LS		ROADWAY	
			2								2			202	20010	2	EACH	CLEARING AND GRUBBING	
			61,954								61,954			202	23000	61,954	SY	HEADWALL REMOVED	
			1,663								1,663			202	30700	1,663	FT	PAVEMENT REMOVED	
			267								267			202	32000	267	FT	CONCRETE BARRIER REMOVED	
			144								144			202	35100	144	FT	CURB REMOVED	
																		PIPE REMOVED, 24" DIAMETER AND UNDER	
			11								11			202	35200	11	FT	PIPE REMOVED, OVER 24" DIAMETER	
			8,759								8,759			202	38000	8,759	FT	GUARDRAIL REMOVED	
			23								23			202	42010	23	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
			16								16			202	42040	16	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
			23								23			202	47000	23	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
		1,400	3								3			202	58100	3	EACH	CATCH BASIN REMOVED	
			402								1,400			SPECIAL	20270110	1,400	FT	PIPE CLEANOUT, 24" AND UNDER	P.023
			47								402			202	75000	402	FT	FENCE REMOVED	
			299								47			202	98100	47	EACH	REMOVAL MISC.: NOISE BARRIER POST AND FOUNDATION REMOVAL	P.022
			13,545								299			202	98200	299	FT	REMOVAL MISC.: TRENCH DRAIN	P.023
											13,545			202	98400	13,545	SF	REMOVAL MISC.: NOISE BARRIER PANEL REMOVAL AND DISPOSAL	P.022
		34,729									34,729			203	10000	34,729	CY	EXCAVATION	
		43,399									43,399			203	20000	43,399	CY	EMBANKMENT	
								803			803			204	10000	803	SY	SUBGRADE COMPACTION	
								9,725			9,725			204	13000	9,725	CY	EXCAVATION OF SUBGRADE	
								9,725			9,725			204	30010	9,725	CY	GRANULAR MATERIAL, TYPE B	
								41			41			204	45000	41	HOUR	PROOF ROLLING	
								29,174			29,174			204	50000	29,174	SY	GEOTEXTILE FABRIC	
								1,940			1,940			206	10500	1,940	TON	CEMENT	
								74,993			74,993			206	11000	74,993	SY	CURING COAT	
								74,993			74,993			206	15010	74,993	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
								LS			LS			206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
			7,576								7,576			606	15050	7,576	FT	GUARDRAIL, TYPE MGS	
			15								15			606	26150	15	EACH	ANCHOR ASSEMBLY, MGS TYPE E [MASH 2016]	
			14								14			606	26550	14	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			16								16			606	35002	16	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			15								15			606	35102	15	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
			415								415			607	23000	415	FT	FENCE, TYPE CLT	
			815								815			609	24510	815	FT	CURB, TYPE 4-C	
			307								307			622	10100	307	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
			113								113			622	10101	113	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN	P.023
			2,824								2,824			622	10160	2,824	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
			4,595								4,595			622	10180	4,595	FT	CONCRETE BARRIER, SINGLE SLOPE, 81"	
			2								2			622	10200	2	EACH	BARRIER TRANSITION	
			1								1			622	24850	1	EACH	CONCRETE BARRIER END SECTION, TYPE B1	
			14								14			622	25000	14	EACH	CONCRETE BARRIER END SECTION, TYPE D	
			12								12			622	25006	12	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	
			15								15			622	25050	15	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
			38								38			622	25080	38	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, 81"	
			1								1			622	90200	1	EACH	BARRIER, MISC.:CONCRETE BARRIER END SECTION, 81" TO 57" TRANSITION	P.023
			2								2			622	90200	2	EACH	BARRIER, MISC.:CONCRETE BARRIER END SECTION, 81" TO 42" TRANSITION	P.023
																		EROSION CONTROL	
	10				145	18	10	12			32			601	21050	32	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
											163			601	21060	163	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
					3	6					9			601	32204	9	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	
9.07											9.07			654	11000	9.07	TON	COMMERCIAL FERTILIZER	
2											2			659	00100	2	EACH	SOIL ANALYSIS TEST	
7,216											7,216			659	00300	7,216	CY	TOPSOIL	
65,012											65,012			659	10000	65,012	SY	SEEDING AND MULCHING	
3,251											3,251			659	14000	3,251	SY	REPAIR SEEDING AND MULCHING	
3,251											3,251			659	15000	3,251	SY	INTER-SEEDING	
13.43											13.43			659	31000	13.43	ACRE	LIME	

GENERAL SUMMARY

DESIGN AGENCY
TRANSYSTMS
1100 SUPERIOR AVE. E. STE 1000
CLEVELAND, OHIO 44114

DESIGNER
RJG

REVIEWER

MSW 09/06/24

PROJECT ID

105435

SHEET

P.232

TOTAL

791

ESTIMATED QUANTITES SHEET NO.	204	204	204	204	204	206	206	206	206	254	302	302	304	407	442	442	452	452	452		
	SUBGRADE COMPACTION	EXCAVATION OF SUBGRADE	GRANULAR MATERIAL, TYPE B	PROOF ROLLING	GEOTEXTILE FABRIC	CEMENT	CURING COAT	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEEP)	ASPHALT CONCRETE BASE, PG64-22, (449)	ASPHALT CONCRETE BASE, PG64-22, (449)	AGGREGATE BASE	NON-TRACKING TACK COAT	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P.	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		
	SY	CY	CY	HOUR	SY	TON	SY	SY	LS	SY	CY	CY	CY	GAL	CY	CY	SY	SY	SY		
P.252		8,810.3	8,810.3	27.4	26,431.0	1,350.1	52,179.4	52,179.4			15,271.4	4,026.6	8,950.6	9,288.6	2,122.5	2,508.5		397.9			
P.253	537.4			7.5		373.3	14,425.8	14,425.8			4,877.0		2,475.2	2,406.1	556.3	649.8					
P.254	265.5	914.3	914.3	5.7	2,742.8	217.0	8,388.2	8,388.2			2,844.2		1,906.0	1,508.1	345.3	411.8	623.8		1,752.1		
P.255										217,155.6				19,544.0	9,048.1						
TOTALS CARRIED TO GENERAL SUMMARY	803	9,725	9,725	41	29,174	1,940	74,993	74,993	LS	217,156	27,020		13,332	32,747	12,072	3,570	624	398	1,752		

MODEL: Pavement Sheet 1 PAPER SIZE: 34x22 (in.) DATE: 4/3/2025 TIME: 3:40:08 PM USER: mswlht
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FRA-71/270-28.27/25.99A

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PAV'T AREA	STATION RANGE		SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	CADD GENERATED AREA	204	204	204	204	204	206	206	206	302	302	304	407	442	442	452	452	
							SUBGRADE COMPACTION	EXCAVATION OF SUBGRADE	GRANULAR MATERIAL, TYPE B	PROOF ROLLING	GEOTEXTILE FABRIC	CEMENT	CURING COAT	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	ASPHALT CONCRETE BASE, PG64-22, (449)	ASPHALT CONCRETE BASE, PG64-22, (449)	AGGREGATE BASE	NON-TRACKING TACK COAT	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P.	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
	FROM	TO		FT	FT	SF	SY	CY	CY	HOUR	SY	TON	SY	SY	CY	CY	CY	GAL	CY	CY	SY	SY	
	IR-270																						
FULL DEPTH ASPHALT	957+65.00	958+85.00	RT	120.00	10.00	1,200.0				0.067		3.45	133.33	133.33	47.22		22.22	24.00	5.56	6.48			
	IR-71																						
FULL DEPTH ASPHALT	128+00.00	129+00.98	RT	100.98	10.81	1,091.3				0.061		3.14	121.26	121.26	42.94		20.21	21.83	5.05	5.89			
+ASPH. EDGE COURSE	128+00.00	129+00.97	RT	100.98								0.44	16.83	16.83	2.32		2.49						
FULL DEPTH ASPHALT	129+00.98	134+25.77	RT	524.79	41.00	21,516.6				1.195		61.86	2,390.74	2,390.74	846.72		398.46	430.33	99.61	116.22			
+ASPH. EDGE COURSE	129+00.97	130+81.68	RT	181.81						0.015		0.78	30.30	30.30	4.17		4.49						
+CURB & GUARDRAIL EDGE COURSE	130+81.68	130+99.81	RT	18.15						0.002		0.08	3.03	3.03			0.50						
+BARRIER EDGE COURSE	130+99.81	133+14.92	RT	215.15						0.042		2.16	83.67	83.67	29.63		13.94	9.32		2.52			
+ASPH. EDGE COURSE	133+14.92	134+25.77	RT	110.89						0.009		0.48	18.48	18.48	2.55		2.74						
FULL DEPTH ASPHALT	134+25.77	145+30.10	RT	1,104.33	26.56	29,331.1				1.630		84.33	3,259.01	3,259.01	1,154.23		543.17	586.62	135.79	158.42			
+ASPH. EDGE COURSE	134+25.77	136+68.84	RT	244.56						0.020		1.05	40.76	40.76	5.61		6.04						
+CURB & GUARDRAIL EDGE COURSE	136+68.84	136+86.67	RT	18.17						0.002		0.08	3.03	3.03			0.50						
+BARRIER EDGE COURSE	136+86.67	137+08.71	RT	21.98						0.004		0.22	8.55	8.55	3.03		1.42	0.95		0.26			
+ASPH. EDGE COURSE WITH MSE	137+08.71	138+43.75	RT	141.95						0.288		1.43	55.20	55.20			9.20						
+BARRIER EDGE COURSE	138+43.75	138+65.23	RT	21.62						0.004		0.22	8.41	8.41	2.98		1.40	0.94		0.25			
+ASPH. EDGE COURSE WITH MSE	138+65.23	139+87.38	RT	123.00						0.249		1.24	47.83	47.83			7.97						
+BARRIER EDGE COURSE	139+87.38	139+93.31	RT	5.98						0.001		0.06	2.33	2.33	0.82		0.39	0.26		0.07			
+CURB & GUARDRAIL EDGE COURSE	139+93.31	140+11.19	RT	18.00						0.002		0.08	3.00	3.00			0.50						
+ASPH. EDGE COURSE	140+11.19	145+30.10	RT	522.18						0.044		2.25	87.03	87.03	11.99		12.89						
FULL DEPTH ASPHALT	136+50.00	140+50.00	LT/RT	400.00	26.00	10,399.2				0.578		29.90	1,155.46	1,155.46	409.23		192.58	207.98	48.14	56.17			
FULL DEPTH ASPHALT	145+30.10	192+20	RT	4,489.29	49.65	222,883.8		8,254.96	8,254.96	12.382	24,764.9	640.79	24,764.9	24,764.87	8,770.89		4,127.48	4,457.68	1,031.87	1,203.85			
+ASPH. EDGE COURSE	145+30.10	154+32.00	RT	903.66				50.20	50.20	0.075	150.61				20.74		22.31						
+CURB & GUARDRAIL EDGE COURSE	154+32.00	154+50.00	RT	18.15				1.01	1.01	0.002	3.02						0.50						
+BARRIER EDGE COURSE	154+50.00	167+80.00	RT	1,330.00				172.41	172.41	0.259	517.22				183.18		86.20	57.63		15.56			
+81" BARRIER EDGE COURSE	167+80.00	176+80.00	RT	900.00				159.03	159.03	0.239	477.08						78.82					397.9	
+BARRIER EDGE COURSE	176+80.00	186+02.00	RT	929.48				120.49	120.49	0.181	361.46				128.02		60.24	40.28		10.88			
+ASPH. EDGE COURSE	186+02.00	187+71.21	RT	182.91				10.16	10.16	0.015	30.49				4.20		4.52						
+CURB & GUARDRAIL EDGE COURSE	187+71.21	187+89.17	RT	18.15				1.01	1.01	0.002	3.02						0.50						
+BARRIER EDGE COURSE	187+89.17	190+20.00	RT	231.04				29.95	29.95	0.045	89.85				31.82		14.98	10.01		2.70			
+ASPH. EDGE COURSE	190+20.00	192+20.00	RT	200.01				11.11	11.11	0.017	33.33				4.59		4.94						
	RAMP M																						
FULL DEPTH ASPHALT	70+45.69	89+58.28	RT	1,912.51	43.53	83,251.3				4.625		239.35	9,250.14	9,250.14		3,982.70	1,541.69	1,665.03	385.42	449.66			
+ASPH. EDGE COURSE	70+45.69	89+58.28	RT	1,912.51						0.159		8.25	318.75	318.75		43.90	47.22						
FULL DEPTH ASPHALT	76+10.47	77+30.13	CTR	119.66	10.03	1,200.0				0.067		3.45	133.33	133.33	47.22		22.22	24.00	5.56	6.48			
FULL DEPTH ASPHALT	89+58.28	96+44.97	LT/RT	686.69	56.87	39,052.5				2.170		112.28	4,339.16	4,339.16	1,536.79		723.19	781.05	180.80	210.93			
+ASPH. EDGE COURSE	89+58.28	96+44.97	RT	680.69						0.057		2.94	113.45	113.45	15.63		16.81						
+ASPH. EDGE COURSE	89+59.03	96+44.97	LT	713.47						0.059		3.08	118.91	118.91	16.38		17.62						
FULL DEPTH ASPHALT	96+44.97	105+93.25	RT	948.28	38.48	36,491.7				2.027		104.91	4,054.63	4,054.63	1,436.02		675.77	729.83	168.94	197.10			
+ASPH. EDGE COURSE	96+44.97	105+93.25	RT	947.93						0.079		4.09	157.99	157.99	21.76		23.41						
FULL DEPTH ASPHALT	105+93.25	109+50.00	LT/RT	356.75	33.76	12,043.6				0.669		34.63	1,338.18	1,338.18	473.94		223.03	240.87	55.76	65.05			
+ASPH. EDGE COURSE	105+93.25	109+50.00	RT	355.88						0.030		1.53	59.31	59.31	8.17		8.79						
+ASPH. EDGE COURSE	105+93.25	109+50.00	LT	374.40						0.031		1.61	62.40	62.40	8.59		9.24						
SUBTOTAL CARRIED TO SHEET P.251								8,810.3	8,810.3	27.4	26,431.0	1,350.1	52,179.4	52,179.4	15,271.4	4,026.6	8,950.6	9,288.6	2,122.5	2,508.5		397.9	

PAVEMENT ESTIMATED QUANTITIES

TRANSYSTEMS
1100 SUPERIOR AVE., E., STE 1000
CLEVELAND, OHIO 44114

RJG

MSW 09/06/24

105435

52 | 79

FRA-71/270-28.27/25.99A

MODEL: Pavement Sheet 2 PAPER SIZE: 34x22 (in.) DATE: 4/3/2025 TIME: 3:40:08 PM USER: mswlht
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PAV'T AREA	STATION RANGE		SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	CADD GENERATED AREA	204	204	204	204	206	206	206	302	302	304	407	442	442	452		
							SUBGRADE COMPACTION	EXCAVATION OF SUBGRADE	GRANULAR MATERIAL, TYPE B	PROOF ROLLING	GEOTEXTILE FABRIC	CEMENT	CURING COAT	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	ASPHALT CONCRETE BASE, PG64-22, (449)	ASPHALT CONCRETE BASE, PG64-22, (449)	AGGREGATE BASE	NON-TRACKING TACK COAT	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P.	
	SY	CY					CY	HOUR	SY	TON	SY	SY	CY	CY	CY	GAL	CY	CY	SY			
	RAMP P																					
FULL DEPTH ASPHALT	996+51.20	1006+00.00	LT	948.80	34.00	32,259.4				1.792	92.75	3,584.38	3,584.38	1,269.47		597.40	645.19	149.35	174.24			
+ASPH. EDGE COURSE	996+51.20	1006+00.00	LT	948.80						0.079	4.09	158.13	158.13	21.78		23.43						
FULL DEPTH ASPHALT	1006+00.00	1011+47.00	LT/RT	547.00	38.71	21,172.7				1.176	60.87	2,352.52	2,352.52	833.19		392.09	423.45	98.02	114.36			
+ASPH. EDGE COURSE	1006+00.00	1011+17.37	RT	522.09						0.044	2.25	87.02	87.02	11.98		12.89						
+CURB & GUARDRAIL EDGE COURSE	1011+17.37	1011+47.00	RT	27.06						0.002	0.12	4.51	4.51			0.75						
+ASPH. EDGE COURSE	1006+00.00	1011+16.90	LT	502.00						0.042	2.16	83.67	83.67	11.52		12.40						
+CURB & GUARDRAIL EDGE COURSE	1011+16.90	1011+47.00	LT	42.63						0.004	0.18	7.10	7.10			1.18						
FULL DEPTH ASPHALT	1018+16.00	1023+44.45	LT/RT	528.45	35.35	18,678.5				1.038	53.70	2,075.39	2,075.39	735.03		345.90	373.57	86.47	100.89			
+CURB & GUARDRAIL EDGE COURSE	1018+16.00	1018+95.99	RT	80.94						0.007	0.35	13.49	13.49			2.25						
+ASPH. EDGE COURSE	1018+95.99	1023+39.15	RT	445.71						0.037	1.92	74.29	74.29	10.23		11.01						
+CURB & GUARDRAIL EDGE COURSE	1018+93.86	1019+10.57	LT	15.99						0.001	0.07	2.66	2.66			0.44						
+ASPH. EDGE COURSE	1019+10.57	1023+44.45	LT	427.27						0.036	1.84	71.21	71.21	9.81		10.55						
	RAMP K																					
FULL DEPTH ASPHALT	14+73.00	19+61.65	LT/RT	488.65	26.21	12,809.5				0.712	36.83	1,423.27	1,423.27	504.08		237.21	256.19	59.30	69.19			
+ASPH. EDGE COURSE	14+73.00	19+45.00	RT	467.27						0.039	2.02	77.88	77.88	10.73		11.54						
+CURB & GUARDRAIL EDGE COURSE	19+45.00	19+60.63	RT	15.42						0.001	0.07	2.57	2.57			0.43						
+ASPH. EDGE COURSE	14+73.00	19+14.33	LT	442.78						0.037	1.91	73.80	73.80	10.16		10.93						
+CURB & GUARDRAIL EDGE COURSE	19+14.33	19+29.71	LT	15.47						0.001	0.07	2.58	2.58			0.43						
APPROACH SLAB	19+39.64	19+72.33	RT	35.62	23.60	840.6	93.40			0.047						15.57						
APPROACH SLAB	19+39.64	19+72.33	LT	35.24	10.70	377.2	41.91			0.021						6.99						
APPROACH SLAB	21+56.13	21+89.23	RT	37.98	22.47	853.3	94.81			0.047						15.80						
APPROACH SLAB	21+56.13	21+89.23	LT	37.22	10.23	380.8	42.31			0.021						7.05						
FULL DEPTH ASPHALT	21+89.23	25+33.20	LT/RT	343.97	31.51	10,838.7				0.602	31.16	1,204.30	1,204.30	426.52		200.72	216.77	50.18	58.54			
+ASPH. EDGE COURSE	21+89.23	25+12.27	RT	301.02						0.025	1.30	50.17	50.17	6.91		7.43						
+CURB & GUARDRAIL EDGE COURSE	25+12.27	25+28.58	RT	16.14						0.001	0.07	2.69	2.69			0.45						
+ASPH. EDGE COURSE	21+89.23	25+17.49	LT	334.35						0.028	1.44	55.73	55.73	7.68		8.26						
+CURB & GUARDRAIL EDGE COURSE	25+17.49	25+33.20	LT	16.14						0.001	0.07	2.69	2.69			0.45						
APPROACH SLAB	25+29.97	25+61.99	RT	34.23	23.93	819.2	91.03			0.046						15.17						
APPROACH SLAB	25+29.97	25+61.99	LT	34.13	10.87	371.1	41.23			0.021						6.87						
APPROACH SLAB	27+45.81	27+77.83	RT	35.40	23.20	821.3	91.26			0.046						15.21						
APPROACH SLAB	27+45.81	27+77.83	LT	35.30	10.57	373.2	41.46			0.021						6.91						
FULL DEPTH ASPHALT	27+74.55	36+34.51	LT/RT	859.96	28.37	24,400.9				1.356	70.15	2,711.21	2,711.21	960.22		451.87	488.02	112.97	131.80			
+BARRIER EDGE COURSE	27+74.55	28+07.69	RT	34.02						0.007	0.34	13.23	13.23	4.69		2.20	1.47		0.40			
+ASPH. EDGE COURSE	28+07.69	36+34.51	RT	853.18						0.071	3.68	142.20	142.20	19.58		21.07						
+BARRIER EDGE COURSE	27+79.25	28+13.64	LT	34.00						0.007	0.34	13.22	13.22	4.68		2.20	1.47		0.40			
+ASPH. EDGE COURSE	28+13.64	36+34.51	LT	815.60						0.068	3.52	135.93	135.93	18.72		20.14						
SUBTOTAL CARRIED TO SHEET P.251							537.4			7.5	373.3	14,425.8	14,425.8	4,877.0		2,475.2	2,406.1	556.3	649.8			

PAVEMENT ESTIMATED QUANTITIES

DESIGN AGENCY

TRANSYSTEMS
1100 SUPERIOR AVE., E., STE 1000
CLEVELAND, OHIO 44114

DESIGNER

RJG

REVIEWER

MSW 09/06/24

PROJECT ID

105435

SHEET	TOTAL
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D 253 | 79

PAV'T AREA	STATION RANGE		SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	CADD GENERATED AREA	204	204	204	204	204	206	206	206	302	302	304	407	442	442	452	452	452
							SUBGRADE COMPACTION	EXCAVATION OF SUBGRADE	GRANULAR MATERIAL, TYPE B	PROOF ROLLING	GEOTEXTILE FABRIC	CEMENT	CURING COAT	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	ASPHALT CONCRETE BASE, PG64-22. (449)	ASPHALT CONCRETE BASE, PG64-22. (449)	AGGREGATE BASE	NON-TRACKING TACK COAT	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P.	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
	FROM	TO		FT	FT	SF	SY	CY	CY	HOUR	SY	TON	SY	SY	CY	CY	CY	GAL	CY	CY	SY	SY	SY
	RAMP O																						
FULL DEPTH ASPHALT	19+00.00	25+75.21	LT/RT	675.21	34.70	23,430.4				1.302		67.36	2,603.38	2,603.38	922.03		433.90	468.61	108.47	126.55			
+ASPH. EDGE COURSE	19+00.00	19+73.87	RT	76.75						0.006		0.33	12.79	12.79	1.76		1.90						
+CURB & GUARDRAIL EDGE COURSE	19+73.87	19+91.33	RT	18.16						0.002		0.08	3.03	3.03			0.50						
+BARRIER EDGE COURSE	19+91.33	20+65.00	RT	76.57						0.015		0.77	29.78	29.78	10.55		4.96	3.32		0.90			
+ASPH. EDGE COURSE	20+65.00	25+24.19	RT	474.75						0.040		2.05	79.12	79.12	10.90		11.72						
+CURB & GUARDRAIL EDGE COURSE	25+24.19	25+41.96	RT	18.15						0.002		0.08	3.03	3.03			0.50						
+BARRIER EDGE COURSE	25+41.96	25+75.21	RT	34.02						0.007		0.34	13.23	13.23	4.69		2.20	1.47		0.40			
+ASPH. EDGE COURSE	18+99.88	20+22.08	LT	120.10						0.010		0.52	20.02	20.02	2.76		2.97						
+CURB & GUARDRAIL EDGE COURSE	20+22.08	20+40.49	LT	18.13						0.002		0.08	3.02	3.02			0.50						
+BARRIER EDGE COURSE	20+40.49	22+11.57	LT	168.23						0.033		1.69	65.42	65.42	23.17		10.90	7.29		1.97			
+ASPH. EDGE COURSE	22+11.57	25+16.80	LT	301.12						0.025		1.30	50.19	50.19	6.91		7.44						
+CURB & GUARDRAIL EDGE COURSE	25+16.80	25+35.11	LT	18.14						0.002		0.08	3.02	3.02			0.50						
+BARRIER EDGE COURSE	25+35.11	25+69.47	LT	33.99						0.007		0.34	13.22	13.22	4.68		2.20	1.47		0.40			
APPROACH SLAB	25+71.21	26+03.24	RT	37.08	22.15	821.4	91.27			0.046							15.21						
APPROACH SLAB	25+71.21	26+03.24	LT	38.03	9.82	373.3	41.48			0.021							6.91						
APPROACH SLAB	27+84.75	28+16.78	RT	38.87	21.14	821.5	91.28			0.046							15.21						
APPROACH SLAB	27+84.75	28+16.78	LT	35.31	10.57	373.3	41.48			0.021							6.91						
FULL DEPTH ASPHALT	28+12.56	36+89.62	LT/RT	877.06	35.65	31,270.1				1.737		89.90	3,474.45	3,474.45	1,230.54		579.08	625.40	144.77	168.90			
+BARRIER EDGE COURSE	28+12.56	28+45.80	RT	33.99						0.007		0.34	13.22	13.22	4.68		2.20	1.47		0.40			
+ASPH. EDGE COURSE	28+45.80	36+89.62	RT	877.61						0.073		3.78	146.27	146.27	20.15		21.67						
+BARRIER EDGE COURSE	28+18.59	28+52.90	LT	33.99						0.007		0.34	13.22	13.22	4.68		2.20	1.47		0.40			
+ASPH. EDGE COURSE	28+52.90	36+89.62	LT	829.15						0.069		3.58	138.19	138.19	19.03		20.47						
	RAMP N																						
FULL DEPTH ASPHALT	141+75.00	145+28.67	LT/RT	353.67	40.33	14,263.5				0.792		41.01	1,584.83	1,584.83	561.29		264.14	285.27	66.03	77.04			
+ASPH. EDGE COURSE	141+75.00	145+28.67	RT	348.90						0.029		1.50	58.15	58.15	8.01		8.61						
+ASPH. EDGE COURSE	141+75.00	145+28.67	LT	364.04						0.030		1.57	60.67	60.67	8.36		8.99						
	RAMP Q																						
FULL DEPTH ASHPALT	17+28.11	18+07.57	RT	79.46	8.72	692.8		25.66	25.66	0.038	76.97						12.83	13.86	3.21	3.74	76.97		
FULL DEPTH ASHPALT	18+30.73	25+98.04	RT	767.31	3.39	2,599.8		96.29	96.29	0.144	288.86						48.14	52.00	12.04	14.04	288.86		
FULL DEPTH ASHPALT	25+85.09	26+79.97	RT	94.88	8.63	818.7		30.32	30.32	0.045	90.96						15.16	16.37	3.79	4.42	90.96		
FULL DEPTH ASHPALT	30+97.13	41+47.69	RT	1,050.56	1.43	1,503.3		55.68	55.68	0.084	167.03						27.84	30.07	6.96	8.12	167.03		
+CURB & GUARDRAIL EDGE COURSE	13+06.87	13+25.00	RT	18.15				1.01	1.01	0.002	3.02						0.34						
+81" BARRIER EDGE COURSE	13+25.00	16+70.00	RT	345.00				54.57	54.57	0.082	163.72						28.62						152.53
+81" BARRIER EDGE COURSE	16+90.00	17+44.00	RT	54.00				8.54	8.54	0.013	25.63						4.48						23.88
+81" BARRIER EDGE COURSE	17+32.00	20+19.39	RT	287.39				45.46	45.46	0.068	136.38						23.84						127.06
+81" BARRIER EDGE COURSE	20+39.75	21+00.54	RT	60.79				9.62	9.62	0.014	28.85						5.04			1.33			26.88
+81" BARRIER EDGE COURSE	21+20.92	21+55.31	RT	34.39				5.44	5.44	0.008	16.32						2.85			0.75			15.20
+81" BARRIER EDGE COURSE	21+75.69	26+01.00	RT	425.31				67.28	67.28	0.101	201.83						35.28						188.04
+81" BARRIER EDGE COURSE	25+87.97	27+00.00	RT	112.03				17.72	17.72	0.027	53.16						9.29			2.46			49.53
+81" BARRIER EDGE COURSE	27+20.00	32+90.15	RT	570.15				90.19	90.19	0.135	270.56						47.29						252.08
+81" BARRIER EDGE COURSE	33+10.14	34+40.00	RT	129.86				20.54	20.54	0.031	61.62						10.77						57.41
+81" BARRIER EDGE COURSE	34+60.00	35+90.00	RT	130.00				20.56	20.56	0.031	61.69						10.78						57.48
+81" BARRIER EDGE COURSE	36+10.00	49+90.00	RT	1,380.00				218.29	218.29	0.327	654.86						114.47						610.14
+81" BARRIER EDGE COURSE	50+10.00	53+90.00	RT	380.00				60.11	60.11	0.090	180.32						31.52						168.01
+81" BARRIER EDGE COURSE	54+10.00	57+90.00	RT	380.00				60.11	60.11	0.090	180.32						31.52						168.01
+81" BARRIER EDGE COURSE	58+10.00	59+65.00	RT	155.00				24.52	24.52	0.037	73.55						12.86						68.53
+81" BARRIER EDGE COURSE	59+85.00	60+00.00	RT	15.00				2.37	2.37	0.004	7.12						1.24						6.63
-CONCRETE BASE DEDUCTIONS	13+25.00	60+00.00	RT	496.00	3.98																		-219.30
SUBTOTAL CARRIED TO SHEET P.251							265.5	914.3	914.3	5.7	2,742.8	217.0	8,388.2	8,388.2	2,844.2		1,906.0	1,508.1	345.3	411.8	623.8		1,752.1

PAVEMENT ESTIMATED QUANTITIES

DESIGN AGENCY

TRANSYS/STMS
1100 SUPERIOR AVE. E. STE 1000
CLEVELAND, OHIO 44114

DESIGNER

RJG

REVIEWER

MSW 09/06/24

PROJECT ID

105435

SHEET

P.254

TOTAL

791