Item 422 – Asphalt Concrete, Misc.: Pressure Relief Joint Repair (Type A or C)

This item consists of the removal and replacement of existing asphalt concrete within existing Pressure Relief Joints, Type A or Type C, as directed by the Engineer. Perform this work prior to the planning operation. The depth of the repair shall extend from the top of the existing asphalt surface to the top of the existing sleeper slab (Type A) or the bottom of the existing concrete pavement (Type C). Estimated widths and depths are shown on Sheet 37. Exact locations and existing widths shall be determined by exploratory removal under Item 251 – Partial Depth Pavement Repair (442), As Per Plan C.

Use replacement materials and reconstruct the pressure relief joint in conformance with the notes and details of Standard Drawing BP-2.3 (Type A) or BP-2.4 (Type C).

The following estimated quantities have been carried to the General Summary:

Item 442 – Asphalt Concrete, Misc.:
Pressure Relief Joint Repair, Type A..... **244 Ft**
Item 442 – Asphalt Concrete, Misc.:
Pressure Relief Joint Repair, Type C..... **57 Ft**

Item 519 – Patching Concrete Bridge Deck – Type A

This item is provided to perform spot repairs on existing bridge approach slabs within the project limits in accordance with PN 512. Repair all existing asphalt concrete patches and existing spalls with concrete. In addition, repair any additional unsound areas as determined by the Engineer. The following estimated quantities are provided for use as directed by the engineer:

519, Patching Concrete Bridge Deck – Type A..... **28 Sq Yd**

Location	Item 519
	Patching Concrete Bridge Deck – Type A (Sq Yd)
CUY-271-0720 L/R	12.4
CUY-271-0885 L/R	1.2
CUY-271-0916 L/R	8.5
CUY-271-0926 L/R	5.9
Total Carried to General Summary	28

Traffic Control

Pavement Markings

Auxiliary markings shall be located and installed as per Standard Drawing TC-71.10

Permanent Pavement Markings on Bridges

Proposed pavement markings on bridges shall be placed on top of existing markings.

Raised Pavement Markers

Install raised pavement markers for lane lines at a spacing of eighty feet (80') center-to-center.

Item 621 – Raised Pavement Marker Removed

This item shall include the removal and disposal of existing RPMs.

The following estimated quantity has been carried to the General Summary:

Item 621 – Raised Pavement Marker Removed..... **1,350 Each**

Detection Maintenance

If vehicle detection becomes unexpectedly disabled, requires modification, or is scheduled to be temporarily removed during the construction project, the Contractor shall immediately notify the Project Engineer and District Traffic Engineer.

If the loss of vehicle detection is known prior to the start of construction, it shall be discussed at the preconstruction meeting. At such time, the District Traffic Engineer shall advise the Project Engineer and Contractor on the appropriate action to rectify any loss of vehicle detection. This may include placing the traffic signal on minimum or maximum recall, modifying the minimum green times, and removing the malfunctioning detection from service. Where nonintrusive detection (i.e. video, radar) already exists, the Contractor shall insure that detection is operating and maintained by reconfiguring the detection units accordingly during all construction phases. This is to avoid the signal from maxing out the effected signal phase and creating unnecessary delays.

Locations where non-intrusive detection is proposed and the existing vehicle detection is to be abandoned, the non-intrusive vehicle detection shall be installed, configured and made fully functional prior to the existing detection being disabled. The Contractor shall continue to maintain and modify the detection until final acceptance of the traffic signal. This is to ensure vehicle detection remains fully functional throughout construction.

Item 632 – Detector Loop, As Per Plan

All stop line inductance detector loops shown in the plans shall be the powerhead configuration shown on TC-82.10. The width shall be as specified on TC-82.10 and the length shall match the existing detector loop length, with a maximum length of 35'. The stop line detector loops shall not be wired to any other loops and shall have their own detector channel. The location of these loops shall be such that the powerhead is located at the stop line, not past it.

All dilemma zone inductance detector loops called for in the plans shall be the Angular Design Detection (A.D.D.) loop as shown on TC-82.10. Dimensions shall be as specified on TC-82.10.

System loops shall be as depicted in the plans.

All stop line detection shall be tested for a bicycle target and all dilemma detection zones shall be tested for a motorcycle target.

Install detector loops in the surface course within 72 hours of its placement.

When replacing the loop detectors, the loop detector wire shall be replaced to the pull box or pole, whichever is applicable, under Item 632 and TC-82.10. The new cable splice kits shall be included in this pay item.

The Contractor shall contact the Project Engineer and Bill Gerber, (216) 312-0084, District 12 Traffic Engineer, seven (7) days prior to planing through an intersection to adjust signal operation as needed.

The District 12 Traffic Engineer shall concur with the location of the replacement loops.

The following estimated quantity has been carried to the General Summary for use as described above:

632, Detector Loop, As Per Plan..... **9 Each**

Detector Loop Locations

Reference No.	Permitted Ramp Closures, Lane Reductions Location	632
		6'X20' Loops Size (Each)
L-1	Ramp G1 (Richmond Rd.) All Lanes	3
L-2	Ramp F4 (Chagrin Blvd.) All Lanes	3
L-3	Ramp F3 (Chagrin Blvd.) All Lanes	3
Total Carried to General Summary		9

DESIGN AGENCY
DESIGNER JDA
REVIEWER EJK 05/24/23
PROJECT ID 105744
SHEET 11 TOTAL 38

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Item 614 – Work Zone Pavement Markings

The following estimated quantities have been carried to the General Summary to be used as directed by the Engineer for work zone pavement markings per the requirements of CMS 614.04 and 614.11. Place temporary markings at the same locations as the proposed permanent pavement markings.

Work zone temporary marking widths shall be as given in CMS 614 or 641.

After the planing is completed. use the following temporary markings:

Item 614 – Work Zone Lane Line, Class I, 6”, 642 Paint..... **19.02 Mile**
Item 614 – Work Zone Edge Line, Class I, 6”, 642 Paint..... **20.47 Mile**
Item 614 – Work Zone Channelizing Line, Class I, 12”, 642 Paint .... **21,138 Ft**
Item 614 – Work Zone Dotted Line, Class I, 6”, 642 Paint ..... **13,201 Ft**
Item 614 – Work Zone Crosswalk Line, Class I, 12”, 642 Paint..... **1,256 Ft**
Item 614 – Work Zone Stop Line, Class I, 642 Paint..... **265 Ft**
Item 614 – Work Zone Transverse/Diagonal Line, Class I, 642 Paint.... **312 Ft**
Item 614 – Work Zone Arrow, Class I, 642 Paint..... **44 Each**

After the surface course is placed, use the following temporary markings:

Item 614 – Work Zone Lane Line, Class III, 6”, 642 Paint..... **19.02 Mile**
Item 614 – Work Zone Edge Line, Class III, 6”, 642 Paint..... **20.47 Mile**
Item 614 – Work Zone Channelizing Line, Class III, 12”, 642 Paint .. **21,138 Ft**
Item 614 – Work Zone Dotted Line, Class III, 6”, 642 Paint..... **13,201 Ft**
Item 614 – Work Zone Crosswalk Line, Class I, 12”, 642 Paint..... **1,256 Ft**
Item 614 – Work Zone Stop Line, Class III, 642 Paint..... **265 Ft**
Item 614 – Work Zone Transverse/Diagonal Line, Class III, 642 Paint... **312 Ft**
Item 614 – Work Zone Arrow, Class III, 642 Paint..... **44 Each**

Permanent Pavement Markings

After placing the surface course, the Contractor may place permanent pavement marking instead of placing work zone pavement markings, which shall be non-performed at these locations.

Item 614 – Portable Changeable Message Signs, As Per Plan

The Contractor shall furnish, install, maintain and remove, when no longer needed, a changeable message sign. The sign shall be of a type shown on a list of approved PCMS units available on the Office of Materials Management web page. The list contains Class A and B units with minimum legibility distances of 800 feet and 650 feet, respectively.

Each sign shall be trailer-mounted and equipped with a functional dimming mechanism, to dim the sign during darkness, and a tamper and vandal proof enclosure. Each sign shall be provided with appropriate training and operation instructions to enable on-site personnel to operate and troubleshoot the unit. The sign shall also be capable of being powered by an electrical service drop from a local utility company. The PCMS shall be delineated in accordance with CMS 614.03.

Placement, operation, maintenance and all activation of the signs by the Contractor shall be as directed by the Engineer. The PCMS shall be located in a highly visible position yet protected from traffic. The Contractor shall, at the direction of the Engineer, relocate the PCMS to improve visibility or accommodate changed conditions. When not in use, the PCMS shall be turned off. Additionally, when not in use for extended periods of time, the PCMS shall be turned away from all traffic.

The Engineer shall be provided access to each sign unit and shall be provided with appropriate training and operation instructions to enable ODOT personnel to operate and troubleshoot the unit, and to revise sign messages, if necessary.

All messages to be displayed on the sign will be provided by the Engineer. A list of all required pre-programmed messages will be given to the Contractor at the project preconstruction conference. The sign shall have the capability to store up to 99 messages. Message memory or pre-programmed displays shall not be lost as a result of power failures to the on-board computer. The sign legend shall be capable of being changed in the field. Three-line presentation formats with up to six message phases shall be supported. PCMS format shall permit the complete message for each phase to be read at least twice.

The PCMS shall contain an accurate clock and programming logic which will allow the sign to be activated, deactivated or messages changed automatically at different times of the day for different days of the week.

The PCMS shall have a Web-Based Communication System that will allow the message board to be changed or programmed remotely. This system shall be password protected and may be operated from a computer or have an application that can be operated from a cell phone, android or I-phone. The Web Based Communication System shall be able show the location of each message board on a map. The PCMS unit shall be maintained in good working order by the Contractor in accordance with the provisions of CMS 614.07. The Contractor shall, prior to activating the unit, make arrangements, with an authorized service agent for the PCMS, to assure prompt service in the event of failure. Any failure shall not result in the sign being out of service for more than 12 hours, including weekends. Failure to comply may result in an order to stop work and open all traffic lanes and/or in the Department taking appropriate action to safely control traffic. The entire cost to control traffic, accrued by the Department due to the Contractor’s noncompliance, will be deducted from moneys due, or to become due the Contractor on his contract.

The Contractor shall be responsible for 24-hour-per-day operation and maintenance of these signs on the project for the duration of the phases when the plan requires their use.

Payment for the above described item shall be at the contract unit price. Payment shall include all labor, materials, equipment, fuels, lubricating oils, software, hardware and incidentals to perform the above described work.

The estimated quantity provides for nine PCMS units at 3 months each.

Item 614 – Portable Changeable Message Sign,
As Per Plan ..... **27 SNMT**

Portable Changeable Message Signs for Lane Closure(s)

The Contractor shall place a PCMS 0.5 to 2 miles in advance of any lane closures or as directed by the Engineer. The PCMS shall read: ROAD WORK AHEAD/RIGHT (LEFT) (2) LANE(S) CLOSED. If traffic becomes congested and there is stopped traffic, the message board shall be changed to: STOPPED TRAFFIC AHEAD/PREPARE TO STOP. The WTS shall be responsible for monitoring traffic during lane closures and changing the message signs as necessary. The message shall be changed when there is no lane closure (e.g. ROAD WORK AHEAD/NIGHTLY LANE CLOSURES), or per the Engineer.

Item 614 – Law Enforcement Officer with Patrol Car for Assistance

Use of Law Enforcement Officers (LEOs) by contractors other than the uses specified below will not be permitted at project cost. LEOs should not be used where the OMUTCD intends that flaggers be used.

In addition to the requirements of CMS 614 and the latest edition of the OMUTCD, a uniformed LEO with an official patrol car (car with top-mounted emergency flashing lights and complete markings of the appropriate law enforcement agency) shall be provided for the following traffic control tasks:

- During the entire advance preparation and closure sequence where complete blockage of traffic is required.
- During a traffic signal installation when impacting the normal function of the signal or the flow of traffic or when traffic needs to be directed through an energized traffic signal contrary to the signal display (e.g., directing motorists through a red light).

In addition to the requirement of CMS 614 and the OMUTCD, a uniformed LEO with an official patrol car (car with top-mounted emergency flashing lights and complete markings of the appropriate law enforcement agency) may be provided for the following traffic control tasks as approved by the Engineer:

- For lane closures: during initial set-up periods, tear down periods, substantial shifts of a closure point or when new lane closure arrangements are initiated for long-term lane closures/shifts (for the first and last day of major changes in traffic control setup).
  - For operations without positive protection occurring within 10 feet of an open traveled lane that meet all of the following criteria:
    - On a multi-lane divided interstate, other freeway or expressway; and
    - An authorized speed limit of 45 mph or greater that is in effect at the time of the operation; and,
    - AADT of 50,000 (or AADT of 30,000 with 25% or higher percent trucks)

“Without positive protection” means use of drums, cones, shadow vehicle, etc, without protection from portable barrier or other rigid barrier along the work area. This phrase does not apply to cases where positive protection is required. Mobile operations are regarded as “without positive protection”. For work zones using a combination of barrier and temporary traffic control devices (cones, drums, etc), the designation shall be based upon the type of devices used in the area that workers are located.

If multiple active localized qualifying work areas occur without positive protection, per mainline traffic direction, provide a uniformed LEO and official patrol car in advance of:

- The first active work area that drivers will encounter; or
- The active work area laterally closest to the open traveled lane; or
- Other location as approved by the Engineer.

In general, LEOs should be positioned in advance of and on the same side as the lane restriction (or at the point of road closure), and to manually control traffic movements through signalized intersections in work zones.

LEOs should not forgo their traffic control responsibilities to apprehend motorists for routine traffic violations. However, if a motorist’s actions are considered to be reckless, then pursuit of the motorist is appropriate.

The LEOs work at the direction of the Contractor. The Contractor is responsible for securing the services of the LEOs with the appropriate agencies and communicating the intentions of the plans with respect to duties of the LEOs. The Engineer shall have final control over the LEOs’ duties and placement, and will resolve any issues that may arise between the two parties.

DESIGN AGENCY
DESIGNER JDA
REVIEWER EJK 05/24/23
PROJECT ID 105744
SHEET 14 TOTAL 38

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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7-11	12-16	19	20	21	22	23	24						01/NFP/PV						
																		ROADWAY	
520														209	60201	520	STA	LINEAR GRADING, AS PER PLAN	8
																		EROSION CONTROL	
														832	30000	1,000	EACH	EROSION CONTROL	
																		DRAINAGE	
22														611	98631	22	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	9
2														611	98634	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
11														611	99655	11	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	9
1														611	99660	1	EACH	MANHOLE RECONSTRUCTED TO GRADE	
5,000														SPECIAL	61199820	5,000	LB	MISCELLANEOUS METAL	9
																		PAVEMENT	
3,658.2														251	01021	3,658.2	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN A	10
422														251	01021	422	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN B	10
28														251	01021	28	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN C	
		300,358	26,898											254	01001	327,256	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 1.5"	10
		25,533	2,288											407	20000	27,821	GAL	NON-TRACKING TACK COAT	
		9,138	1,295											442	00100	10,433	CY	ANTI-SEGREGATION EQUIPMENT	
			1,136											442	10000	1,136	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
		12,548												442	10301	12,548	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	10
244														SPECIAL	45130000	244	FT	PRESSURE RELIEF JOINT, TYPE A	
57														SPECIAL	45132000	57	FT	PRESSURE RELIEF JOINT, TYPE C	
162														617	10101	162	CY	COMPACTED AGGREGATE, AS PER PLAN	10
14.89														618	40601	14.89	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	10
				17.87	16.51	2.15	1.28							850	10010	37.81	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
				1.84	1.58	0.11	0.04							850	10030	3.57	MILE	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
				0.73	0.74									850	20010	1.47	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
				462		1,897								850	20130	2,359	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)	
			8,852											872	10000	8,852	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)	
	24													896	00012	24	SNMT	PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS II	
	6													896	00021	6	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	14
																		TRAFFIC CONTROL	
237														620	00500	237	EACH	DELINEATOR, POST GROUND MOUNTED	
	9													620	11000	9	EACH	DELINEATOR, BRACKET MOUNTED	
166														620	31200	166	EACH	REMOVAL OF DELINEATOR	
				944	779	239	65							621	00100	2,027	EACH	RPM	
1,350														621	54000	1,350	EACH	RAISED PAVEMENT MARKER REMOVED	
						207	58							646	10400	265	FT	STOP LINE	
						1,033	223							646	10510	1,256	FT	CROSSWALK LINE, 12"	
					217	95								646	10600	312	FT	TRANSVERSE/DIAGONAL LINE	
				432	154									646	10620	586	FT	CHEVRON MARKING	
						38	6							646	20300	44	EACH	LANE ARROW	
						1								646	20320	1	EACH	WRONG WAY ARROW	
				4										646	20350	4	EACH	LANE REDUCTION ARROW	
				7.3	7.59	4.23	1.36							807	12010	20.48	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"	
				10.13	8.34	0.43	0.15							807	12110	19.05	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	
				10,137	8,335	2,453	213							807	12310	21,138	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
				6,191	7,010									807	12410	13,201	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"	
																		TRAFFIC SIGNALS	
9														632	26501	9	EACH	DETECTOR LOOP, AS PER PLAN	11
																		STRUCTURE REPAIR (CUY-271-0720L&R)	
28														519	12200	28	SY	PATCHING CONCRETE BRIDGE DECK - TYPE A	

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General Summary

DESIGN AGENCY

DESIGNER
JDA

REVIEWER
EJK 05/24/23

PROJECT ID
105744

SHEET 17 | TOTAL 38

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7-11	12-16	19	20	21	22	23	24						01/NFP/PV						
																		MAINTENANCE OF TRAFFIC	
	300													614	11110	300	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	18													614	12484	18	EACH	WORK ZONE INCREASED PENALTIES SIGN	
	100													614	13001	100	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN	13
	27													614	18601	27	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	14
	19.02													614	20110	19.02	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	
	19.02													614	20560	19.02	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
	20.47													614	22110	20.47	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
	20.47													614	22360	20.47	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
	21,138													614	23210	21,138	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	
	21,138													614	23690	21,138	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
	13,201													614	24202	13,201	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	
	13,201													614	24612	13,201	FT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	
	312													614	25200	312	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
	312													614	25620	312	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT	
	265													614	26200	265	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
	265													614	26610	265	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
	1,256													614	27050	1,256	FT	WORK ZONE CROSSWALK LINE, CLASS I, 12", 642 PAINT	
	1,256													614	27250	1,256	FT	WORK ZONE CROSSWALK LINE, CLASS III, 12", 642 PAINT	
	44													614	30200	44	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
	44													614	30650	44	EACH	WORK ZONE ARROW, CLASS III, 642 PAINT	
	300													630	97800	300	SF	SIGNING, MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	16
	45													808	18700	45	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																		INCIDENTALS	
														108	30000	LS		CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS	
														614	11000	LS		MAINTAINING TRAFFIC	
6														619	16011	6	MNTH	FIELD OFFICE, TYPE B, AS PER PLAN	7
LS														623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	7
														624	10000	LS		MOBILIZATION	

General Summary

CUY-271-06.13

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DESIGN AGENCY

DESIGNER JDA

REVIEWER EJK 05/24/23

PROJECT ID 105744

SHEET 18 TOTAL 38

STATION TO STATION		LENGTH	BEGIN WIDTH	ENDING WIDTH	AVERAGE WIDTH	AREA	254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 1.5"	407 NON-TRACKING TACK COAT	442 ANTI-SEGREGATION EQUIPMENT	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	872 VOID REDUCING ASPHALT MEMBRANE (VRAM)
		FT.	FT.	FT.	FT.	SQ. YD.	SY	GAL	CY	CY	CY	FT
Ramp G-1												
57+65.35	60+00.00	234.65			CADD	1010.00	1010	86	55	43		235
60+00.00	62+00.00	200.00	25	25	25.00	556.00	556	47	23	24		200
62+00.00	62+87.00	87.00	25	29	27.00	261.00	261	22	11	11		87
Ramp G-2												
0+54.87	3+65.30	310.43			CADD	870.00	870	74	36	37		311
3+65.30	13+28.79	963.49	25.0	25.0	25.00	2676.00	2676	227	112	112		964
Ramp F-1												
2+00.67	3+00.67	100.00	26.0	22.0	24.00	267.00	267	23	11	12		100
3+00.67	12+22.39	921.72	22.0	22.0	22.00	2253.00	2253	192	94	94		922
Ramp F-2												
2+46.38	3+46.38	100.00	24.0	22.0	23.00	256.00	256	22	11	11		100
3+46.38	8+21.80	475.42	22.0	22.0	22.00	1162.00	1162	99	48	49		476
Sta. 8+21.80 (BK) = Sta. 52+61.22 (AH)												
52+61.22	53+38.63	77.41	22.0	25.0	23.50	202.00	202	17	8	9		78
53+38.63	58+28.70	490.07	25	25	25.00	1361.00	1361	116	57	57		491
Ramp F-3												
4+53.07	5+53.07	100.00	31.0	22.0	26.50	294.00	294	25	12	13		100
5+53.07	7+20.00	166.93	22.0	22.0	22.00	408.00	408	35	17	17		167
7+20.00	15+20.00	800.00	22.0	42.0	32.00	2844.00	2844	242	119	119		800
15+20.00	16+45.35	125.35	42.0	42.0	42.00	585.00	585	50	24	25		126
16+45.35	17+31.45	86.10			CADD	460.00	460	39	24	20		87
Ramp F-4												
11+85.81	17+57.50	571.69	35.0	35.0	35.00	2223.00	2223	189	93	93		572
Sta. 17+57.50 (BK) = Sta. 9+64.08 (AH)												
9+64.08	11+25.00	160.92	35.0	35.0	35.00	626.00	626	53	26	27		161
11+25.00	13+07.74	182.74	35.0	39.6	37.30	757.00	757	64	32	32		183
13+07.74	13+37.74	30.00	39.6	35.3	37.45	125.00	125	11	5	6		30
13+37.74	16+05.00	267.26	35.3	42.0	38.65	1148.00	1148	98	48	48		268
16+05.00	17+57.40	152.40	42.0	42.0	42.00	711.00	711	60	30	30		153
17+57.40	18+37.94	80.54			CADD	448.00	448	38	15	19		81
TOTALS, LEFT COLUMN							21503	1829	911	908		6692

STATION TO STATION		LENGTH	BEGIN WIDTH	ENDING WIDTH	AVERAGE WIDTH	AREA	254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 1.5"	407 NON-TRACKING TACK COAT	442 ANTI-SEGREGATION EQUIPMENT	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	872 VOID REDUCING ASPHALT MEMBRANE (VRAM)
		FT.	FT.	FT.	FT.	SQ. YD.	SY	GAL	CY	CY	CY	FT
Ramp F-5												
2+12.20	3+12.20	100.00	21.00	19.00	20.00	222.00	222	19	18	10		100
3+12.20	12+01.06	888.86	22	22	22.00	2173.00	2173	185	158	91		889
12+01.06	12+85.24	84.18	22	24	23.00	215.00	215	18	15	9		85
Ramp F-6												
1+63.35	2+63.35	100.00	24.0	22.0	23.00	256.00	256	22	18	11		100
2+63.35	9+67.78	704.43	22.0	22.0	22.00	1722.00	1722	146	126	72		705
Sta. 9+67.78 (BK) = Sta. 37+38.97 (AH)												
37+38.97	37+58.22	19.25	22.0	22.0	22.00	47.00	47	4	3	2		20
37+58.22	38+38.22	80.00	22	27	24.50	218.00	218	19	14	10		80
38+38.22	40+18.78	180.56	27	27	27.00	542.00	542	46	32	23		181
TOTALS, RIGHT COLUMN							5395	459	384	228		2160
TOTALS, LEFT COLUMN							21503	1829	911	908		6692
TOTALS CARRIED TO GENERAL SUMMARY							26898	2288	1295	1136		8852

Pavement Subsummary

DESIGN AGENCY

DESIGNER JDA

REVIEWER EJK 05/24/23

PROJECT ID 105744

SHEET 20 TOTAL 38

CUY-271-06.13

Pavement Marking Subsummary

SHEET NO.	PLAN SPLIT NO.	STATION FROM	STATION TO	LENGTH	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"	646 CHEVRON MARKING	646 TRANSVERSE/DIAGONAL LINE	646 STOP LINE	646 LANE ARROW	646 CROSSWALK LINE, 12"	646 WRONG WAY ARROW	646 LANE REDUCTION ARROW	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)	621 RPM (WHITE)	621 RPM (YELLOW/RED)	621 RPM (WHITE/RED)
				FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	FT	EACH	EACH	FT	FT	FT	FT	EACH	EACH	EACH
		IR-271 Southbound Mainline																					
	1	340+05.14	341+57.27	152.13	152	152	153										457				2		
	1	341+57.27	345+60.79	403.52	404	404	1211	808		154							2019	808			16		21
	1	345+60.79	362+81.50	1720.71	1721	1721	5163										8605				65		
	1	362+81.50	364+65.66	184.16	184	184	553	369									921	369			7		10
	1	364+65.66	366+17.37	151.71	152	152	456	152									760	152			6		4
	1	366+17.37	371+46.09	528.72	529	529	1587		529								3174				20		
	1	371+46.09	380+00.00	853.91	854	854	2562										4270				33		
	1	380+00.00	389+42.12	942.12	942	942	1885	1885									3769	1885			24		48
	1	389+42.12	397+27.23	785.11	785	785	1571										3141				20		
	1	397+27.23	399+85.04	257.81	258	258	516												1032		7		
	1	399+85.04	411+44.67	1159.63	1160	1160	2320										4640				29		
	1	411+44.67	414+86.14	341.47	341	341	683	683			118						1365	683			9		18
	1	414+86.14	417+04.38	218.24	218	218	437	219									873	219			6		6
	1	417+04.38	432+78.42	1574.04	1574	1574	3149		1575								7872				40		
	1	432+78.42	43874.44	596.02	596	596	1193	1193									2385	1193			15		30
	1	438+74.44	443+04.71	430.27	430	430	861	861	431								2152	861			11		22
	1	443+04.71	448+83.81	579.10	579	579	1159		580								2897				15		
	1	448+83.81	454+16.14	532.33	532	532	1065	1065									2129	1065			14		27
	1	454+16.14	462+45.31	829.17	829	829	1659										3317				21		
	1	462+45.31	465+23.45	278.14	278	278	557	557			99						1113	557			7		14
	1	465+23.45	485+13.33	1989.88	1990	1990	3980		1990								9950				50		
	1	485+13.33	487+25.85	212.52	213	213	426		213										1065		6		
	1	487+25.85	491+02.05	376.20	376	376	753		377								1882				10		
	1	491+02.05	501+10.57	1008.52	1009	1009	2018										4036				26		
	1	501+10.57	502+92.53	181.96	182	182	364		182										910		5		
	1	502+92.53	506+36.46	343.93	344	344	688		344								1720				9		
	1	506+36.46	508+15.47	179.01	179	179	359		180										897		5		
	1	508+15.47	514+24.31	608.84	609	609	1218		609								3045				16		
	1	514+24.31	515+74.55	150.24	150	150	301	301									601	301			4		8
	1	515+74.55	518+15.61	241.06	241		483	242									724	242			7		7
	1	518+15.61	541+50.00	2334.39	2334	2334	4669										9337				59		
SUBTOTALS					20145	19904	43999	8335	7010	154	217						87154	8335	3904		564		215
TOTALS CARRIED TO GENERAL SUMMARY					7.59 MI		8.34 MI	8335	7010	154	217						16.51 MI	1.58 MI	0.74 MI		779		

DESIGN AGENCY

DESIGNER JDA

REVIEWER EJK 05/24/23

PROJECT ID 105744

SHEET 22 TOTAL 38

CUY-271-06.13

SHEET NO.	PLAN SPLIT NO.	STATION FROM	STATION TO	LENGTH	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"	646 CHEVRON MARKING	646 TRANSVERSE/DIAGONAL LINE	646 STOP LINE	646 LANE ARROW	646 CROSSWALK LINE, 12"	646 WRONG WAY ARROW	646 LANE REDUCTION ARROW	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)	621 RPM (WHITE)	621 RPM (YELLOW/RED)	621 RPM (WHITE/RED)
				FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	FT	EACH	EACH	FT	FT	FT	FT	EACH	EACH	EACH
		Ramp G-1																						
	1	56+83.93	57+76.60	92.67	93	185		93			95	50	1	191			278	93				3	
	1	57+76.60	57+99.00	22.40	22	22		23					1				44	23				1	
	1	57+99.00	62+03.66	404.66	405	405									1		810					6	
		Ramp G-2																						
	1	1+29.40	1+64.62	35.22	35	35								250			70					1	
		Sta. 1+64.62 (BK) = Sta. 1+95.97 (AH)																						
	1	1+64.62	13+28.79	1164.17	1164	1164											2328					15	
		Ramp N-EW (No Work)																						
	1	86+64.49	94+65.97	801.48	801	801	802												2404		11	11	
	1	94+65.97	96+01.57	135.60	136	136	272												544		4	2	
	1	96+01.57	101+53.43	551.86	552	552		1104				60	15	130					1104	1104		7	28
		Ramp EW-S (No Work)																						
	1	9+71.81	17+51.30	779.49	779	779								75					1558			10	
		Ramp E-N (No Work)																						
	1	84+30.35	95+90.30	1159.95	1160	1160								55					2320			15	
		Ramp S-WE (No Work)																						
	1	98+90.20	102+86.30	396.10	396	396		793				40	15	100					792	793		5	20
	1	102+86.30	105+00.00	213.70	214	214	214												642		3	3	
	1	105+00.00	111+50.44	650.44	650	650													1300			9	
		Ramp S-WE (No Work)																						
	1	97+11.75	109+81.04	1269.29	1269	1269								55					2538			16	
		Ramp F-1																						
	1	2+00.00	12+22.39	1022.39	1022	1022								45			2044					13	
		Ramp F-2																						
	1	2+46.00	8+21.80	575.80	576	576											1152					8	
		Sta. 8+21.80 (BK) = Sta. 52+61.22 (AH)																						
	1	52+61.22	58+28.31	567.09	567	567											1134					8	
		Ramp F-3																						
	1	4+52.16	1039.86	587.70	588	588											1176					8	
	1	10+39.86	1507.44	467.58	468	468	936										1872				12	6	
	1	15+07.44	1727.36	219.92	220	220		440				57	6	132			440	440				3	11
SUBTOTALS					**11117**	**11209**	**2224**	**2453**			**95**	**207**	**38**	**1033**	**1**		**11348**	**556**	**13202**	**1897**	**30**	**150**	**59**
TOTALS CARRIED TO GENERAL SUMMARY					**4.23 MI**		**0.43 MI**	**2453**			**95**	**207**	**38**	**1033**	**1**		**2.15 MI**	**0.11 MI**	**2.51 MI**	**1897**	**239**		

Pavement Marking Subsummary

DESIGN AGENCY

DESIGNER JDA

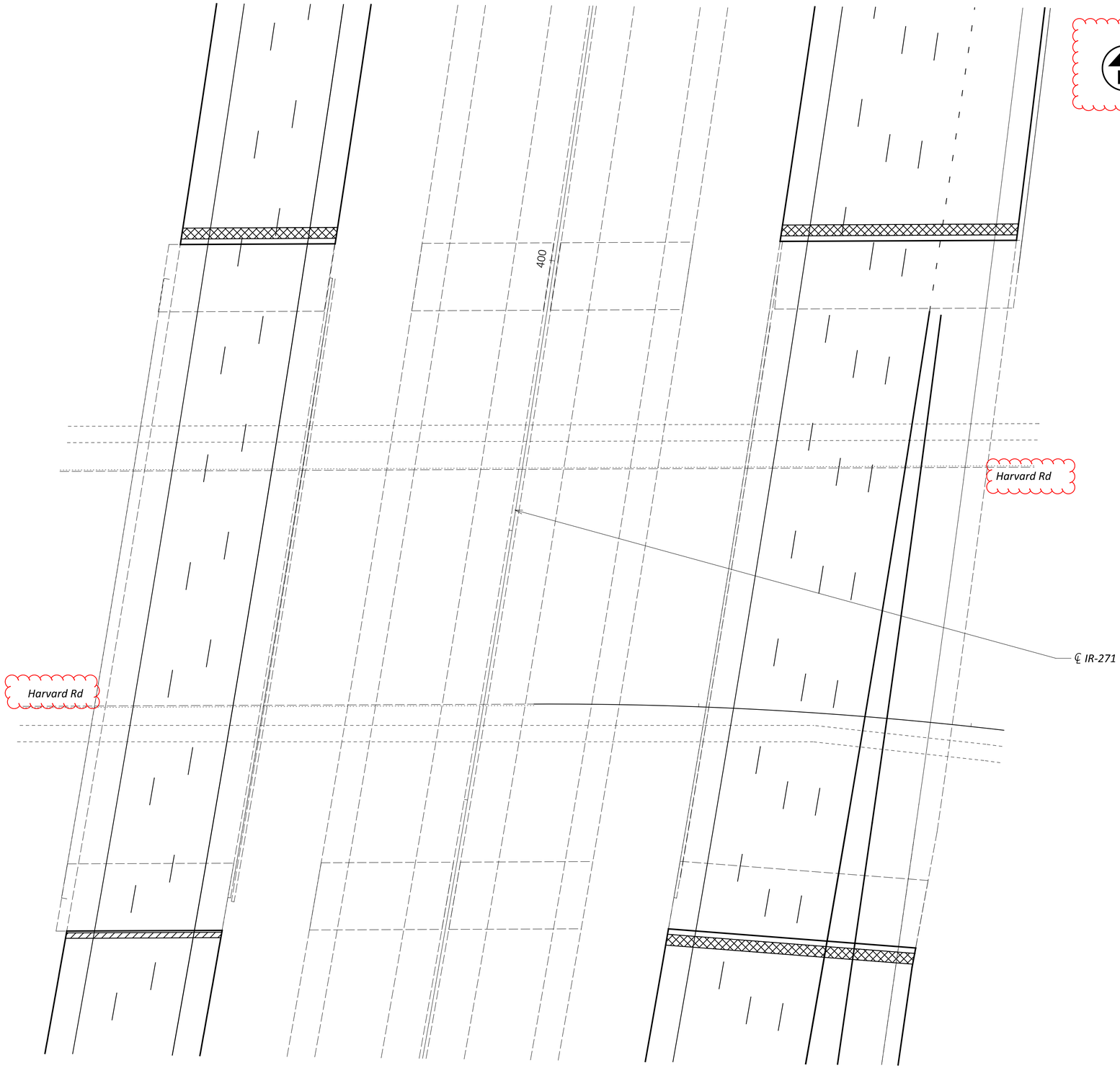
REVIEWER EJK 05/24/23

PROJECT ID 105744

SHEET 23 TOTAL 38

CUY-271-06.13

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 9/19/2023 TIME: 11:46:48 AM USER: jalbrig1
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 12\Cuyahoga\105744\400-Engineering\Roadway\Sheets\105744_GS005.dgn



*Item Special - Pressure Relief Joint, Type A **

*Item Special - Pressure Relief Joint, Type C**

** Approxiamte location to be determined by Engineer.*

HORIZONTAL SCALE IN FEET
0 20 40 80

Bridge Details - CUY-271-0720L&R
Pressure Relief Joint Repair Deck Patching

DESIGN AGENCY

DESIGNER JDA

REVIEWER EJK 05-24-23

PROJECT ID 105744

SHEET 38 TOTAL 38

CUY-271-06.13

MODEL: Sheet - Copy-1 PAPERSIZE: 34x22 (in.) DATE: 9/19/2023 TIME: 2:23:52 PM USER: jalbrig1
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