

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

SUM-MCRO-FY2017

BOSTON TOWNSHIP
CITY OF MACEDONIA
NORTHFIELD CENTER TOWNSHIP
NORTHFIELD TOWNSHIP
VILLAGE OF NORTHFIELD
VILLAGE OF SILVER LAKE

SUMMIT COUNTY

PROJECT DESCRIPTION

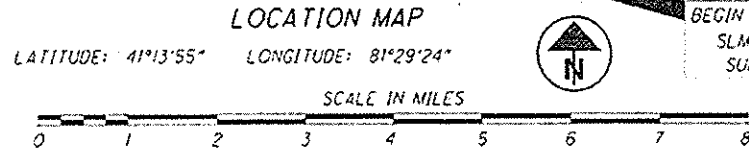
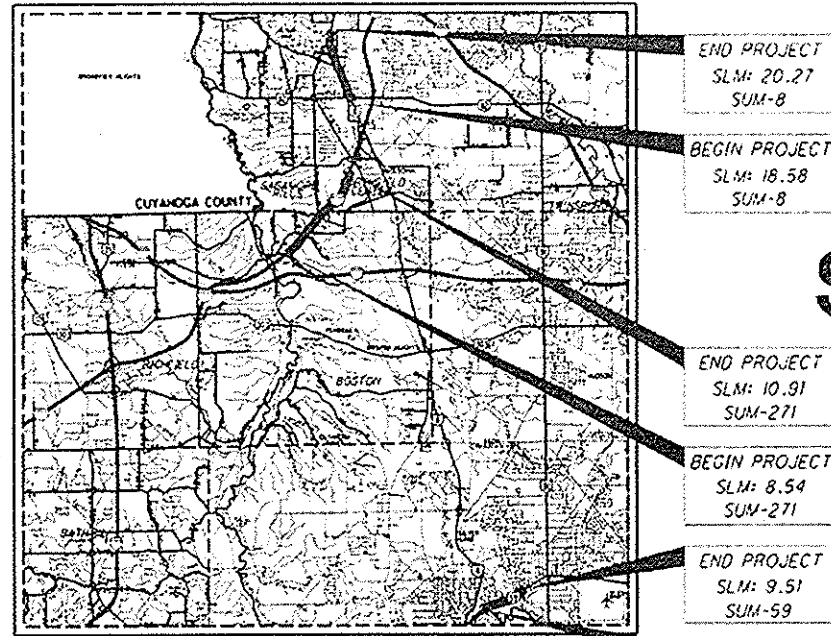
SINGLE AND MULTIPLE COURSE MICROSURFACING OF VARIOUS SECTIONS (5.15 MILES) OF IR 271, SR 8 & SR 59 IN SUMMIT COUNTY.

PROJECT EDA: N/A (MAINTENANCE PROJECT)
ESTIMATED CONTRACTOR EDA: N/A (MAINTENANCE PROJECT)
NOTICE OF INTENT EDA: N/A (MAINTENANCE PROJECT)

2016 SPECIFICATIONS

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

I HEREBY APPROVED THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.



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

DESIGN DESIGNATION:

DESIGN FUNCTIONAL CLASSIFICATION:

- RURAL INTERSTATE SUM-271 (8.54-9.67)
- URBAN INTERSTATE SUM-271 (9.67-10.91)
- URBAN MINOR ARTERIAL SUM-8 (18.58-20.27)
- URBAN PRINCIPAL ARTERIAL SUM-59 (8.42-9.51)

NHS PROJECT YES SUM-271 (8.54-10.91)
NO SUM-8 (18.58-20.27)
YES SUM-59 (8.42-9.51)

DESIGN EXCEPTIONS

NONE

INDEX OF SHEETS:

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UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:
ODOT DISTRICT 4, PLANNING & ENGINEERING
2088 S. ARLINGTON RD.
AKRON, OH 44306

ENGINEERS SEAL:
REBECCA M. BISESI
REGISTERED PROFESSIONAL ENGINEER
E-68469

SIGNED: *Rebecca M. Bisese*
DATE: 8-10-16

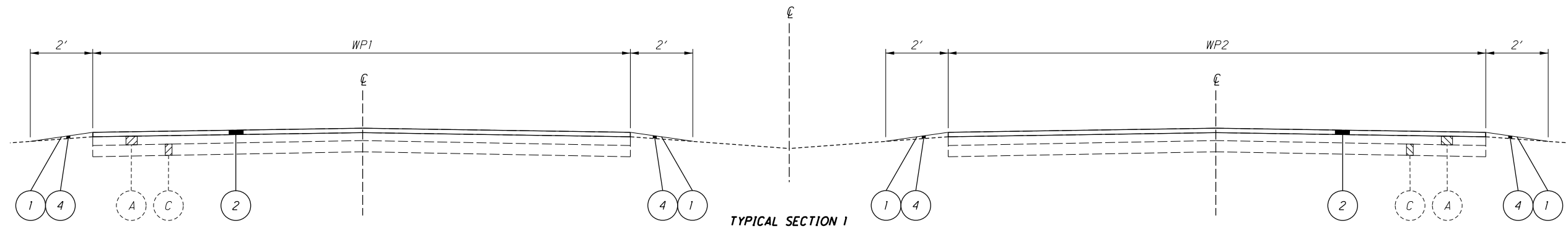
STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-4.1	7/19/13	TC-41.20	10/18/13	800-2016 7/15/16	
BP-9.1	7/19/13	TC-52.10	10/18/13	808 1/29/16	
		TC-52.20	7/15/16	821 4/20/12	
DM-4.3	1/15/16	TC-64.10	7/17/15	832 1/17/14	
DM-4.4	1/15/16	TC-65.10	1/17/14		
		TC-65.11	7/15/16	921 4/20/12	
MT-95.30	7/15/16	TC-71.10	7/15/16		
MT-95.31	7/18/14	TC-72.20	7/15/16		
MT-95.32	7/18/14				
MT-98.20	7/19/13				
MT-101.90	7/17/15				
MT-104.10	10/16/15				
MT-105.10	7/19/13				

APPROVED: *[Signature]*
DATE: 8-10-16 DISTRICT DEPUTY DIRECTOR

APPROVED: *[Signature]*
DATE: 8-31-16 DIRECTOR, DEPARTMENT OF TRANSPORTATION

SUM - MCRO FY2017
160589 PID - 100293
Dist 4 11/17/2016
Contract Proposal Available @ www.
Contracts.dot.state.oh.us/home

FEDERAL PROJECT NO. E160(371)
PID NO. 100293
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
SUM-MCRO-FY2017

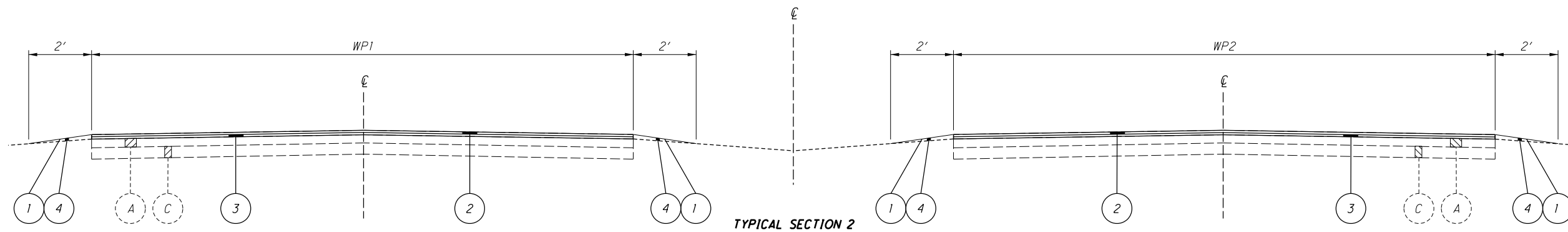


SECTION 1 APPLIES IR 271 SB:				
ROUTE	SLM		WP1 (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 271	8.54	10.91	40	2.37

SECTION 1 APPLIES IR 271 NB:				
ROUTE	SLM		WP2 (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 271	8.54	10.91	40	2.37

LEGEND

- ① 408, PRIME COAT @ 0.40 GAL/SY, AS PER PLAN
- ② 421, MICROSURFACING, SURFACE COURSE
- ③ 421, MICROSURFACING, LEVELING COURSE
- ④ 617, COMPACTED AGGREGATE, AS PER PLAN, (T=2") (WHERE NECESSARY)
- Ⓐ EXISTING ASPHALT CONCRETE SURFACE
- Ⓑ EXISTING BRICK AND ASPHALT BASE
- Ⓒ EXISTING CONCRETE AND ASPHALT BASE
- Ⓓ EXISTING CURB
- Ⓔ EXISTING MEDIAN



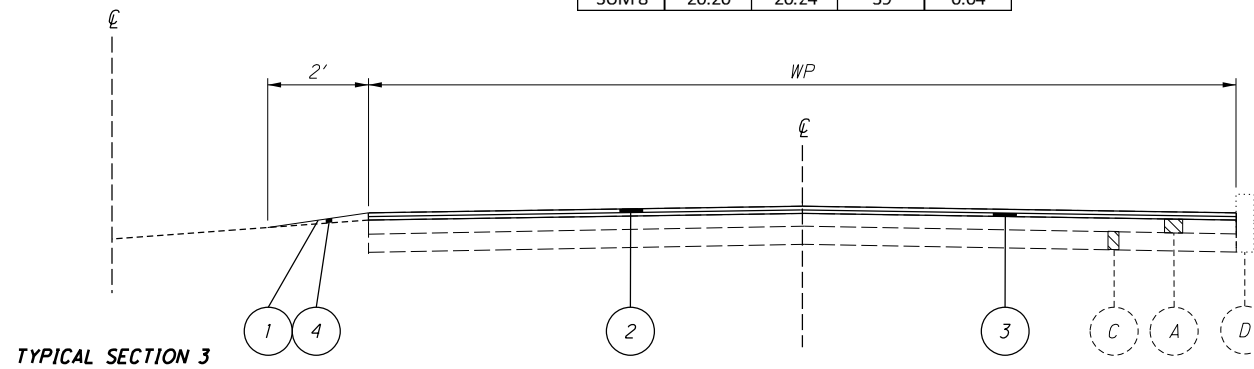
SECTION 2 APPLIES SR 8 SB:

ROUTE	SLM		WP1 (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 8	18.58	18.62	32	0.04
SUM 8	18.74	18.79	56	0.05
SUM 8	18.79	19.04	32	0.25
SUM 8	19.04	19.22	32	0.18
SUM 8	19.22	19.39	32	0.17
SUM 8	19.42	19.45	42	0.03
SUM 8	19.45	19.47	42	0.02
SUM 8	19.47	19.51	37	0.04
SUM 8	19.51	20.08	32	0.57
SUM 8	20.10	20.16	54	0.06
SUM 8	20.16	20.18	43	0.02
SUM 8	20.18	20.24	32	0.06

NOTE: INCLUDED IN INTERSECTIONS
 SLM 19.39-19.42
 SLM 20.08-20.10

SECTION 2 APPLIES SR 8 NB:

ROUTE	SLM		WP2 (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 8	18.58	18.62	58	0.04
SUM 8	18.74	19.04	31	0.30
SUM 8	19.04	19.22	31	0.18
SUM 8	19.22	19.29	31	0.07
SUM 8	19.29	19.34	37	0.05
SUM 8	19.34	19.39	42	0.05
SUM 8	19.42	19.45	32	0.03
SUM 8	19.45	20.00	32	0.55
SUM 8	20.00	20.04	43	0.04
SUM 8	20.04	20.08	54	0.04
SUM 8	20.12	20.20	32	0.08
SUM 8	20.20	20.24	39	0.04

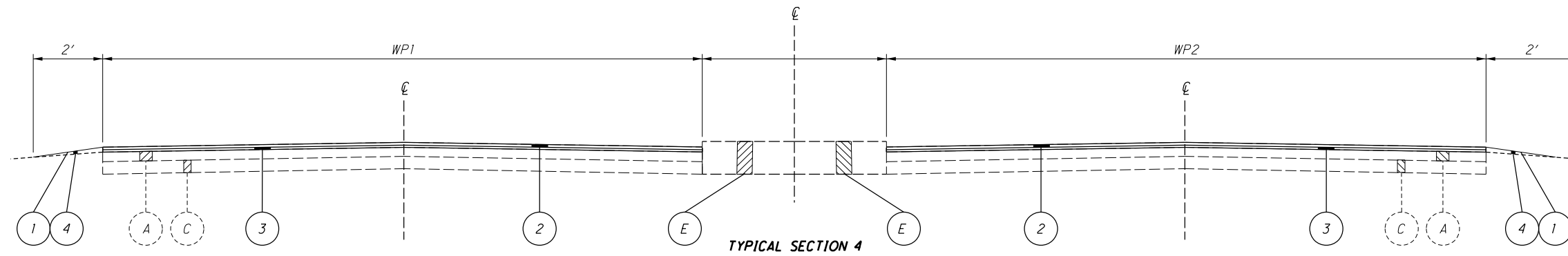


SECTION 3 APPLIES SR 8 NB:

ROUTE	SLM		WP (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 8	20.10	20.12	32	0.02

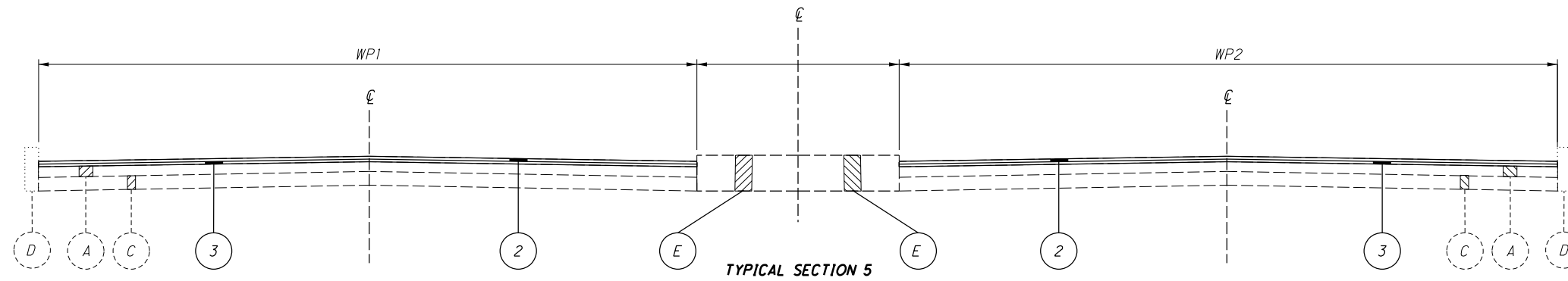
LEGEND

SEE SHEET 2 FOR LEGEND



SECTION 4 APPLIES SR 8 SB:				
ROUTE	SLM		WP1 (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 8	18.62	18.66	37	0.04
SUM 8	18.71	18.74	66	0.03

SECTION 4 APPLIES SR 8 NB:				
ROUTE	SLM		WP2 (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 8	18.62	18.64	67	0.02
SUM 8	18.70	18.74	34	0.04



SECTION 5 APPLIES SR 8 SB:				
ROUTE	SLM		WP1 (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 8	18.66	18.67	40	0.01
SUM 8	18.69	18.71	70	0.02

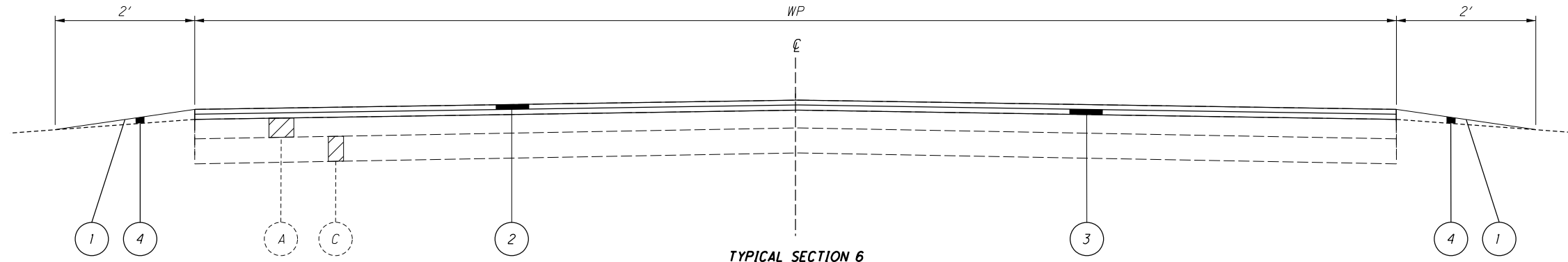
*NOTE: INCLUDED IN INTERSECTIONS
SLM 18.67-18.69*

SECTION 5 APPLIES SR 8 NB:				
ROUTE	SLM		WP2 (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 8	18.64	18.67	70	0.03
SUM 8	18.69	18.70	52	0.01

LEGEND

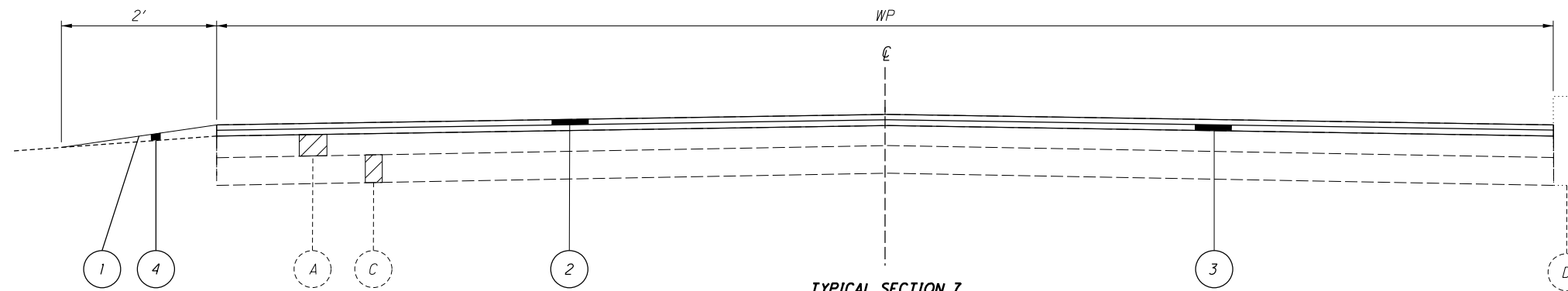
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TYPICAL SECTION 6

SECTION 6 APPLIES SR 8:				
ROUTE	SLM		WP (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 8	20.24	20.25	86	0.01

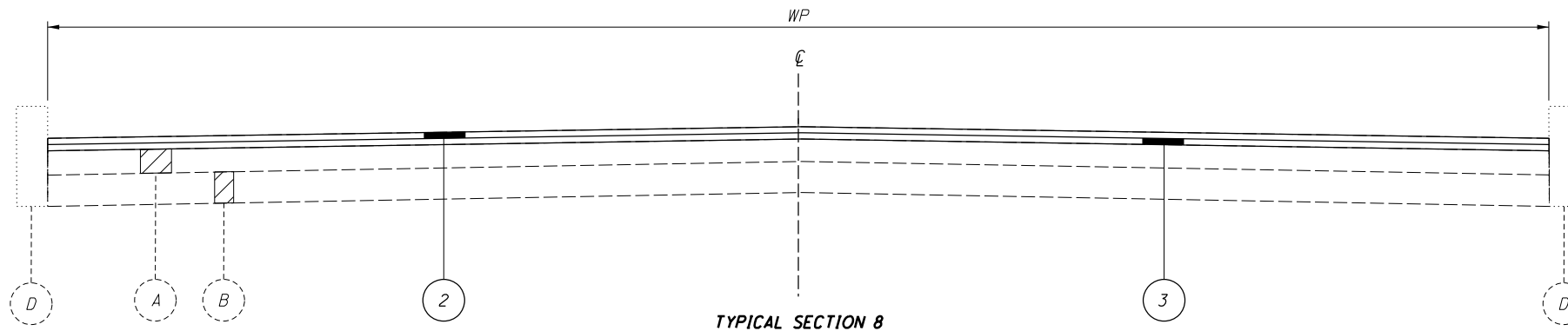


TYPICAL SECTION 7

SECTION 7 APPLIES SR 8:				
ROUTE	SLM		WP (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 8	20.25	20.27	83	0.02

LEGEND

SEE SHEET 2 FOR LEGEND



TYPICAL SECTION 8

SECTION 8 APPLIES SR 59:				
ROUTE	SLM		WP (FEET)	LENGTH (MILES)
	FROM	TO		
SUM 59	8.42	9.51	40	1.09

LEGEND

SEE SHEET 2 FOR LEGEND

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEAD-QUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)
 OGPUPS 1-800-925-0988
 ODOT 330-786-3145 KEN GREENE

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THE PLANS, BUT CAN BE OBTAINED FROM THE OWNERS OF THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.

WORK LIMITS

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

PAVEMENT MARKING LANE WIDTHS

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS [AT LEAST 3 DAYS PRIOR TO PERFORMING THE WORK CONTACT THE TRAFFIC OFFICE AT 330-786-3147 TO CONFIRM THE WIDTHS]:

ROUTE	S.L.M. TO	S.L.M.	LANE WIDTH
IR 271	8.54	10.91	12'
SR 8	18.58	20.27	12'
SR 59	8.42	9.51	10'

PAVEMENT MARKING DETAILS

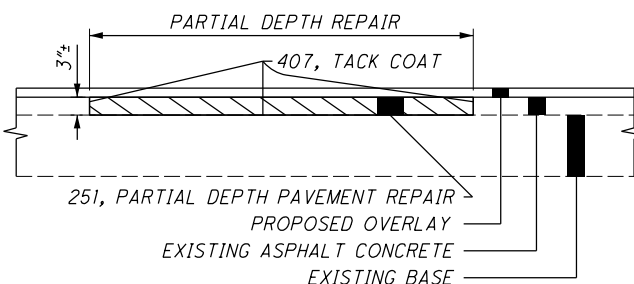
THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 441 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED BEFORE MAINLINE PAVING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAYMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:
 251, PARTIAL DEPTH PAVEMENT REPAIR (441), 600 SQ. YD.



ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

COMMUNITY NOTIFICATION

THE CONTRACTOR WILL ADVISE THE ODOT PROJECT ENGINEER A MINIMUM OF TWENTY-ONE (21) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST ALSO PROVIDE NOTIFICATION TO THE ODOT PROJECT ENGINEER A MINIMUM OF TWENTY-ONE (21) DAYS PRIOR TO ANY LANE RESTRICTIONS OR CLOSURES. THE ODOT PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE ODOT DISTRICT PUBLIC INFORMATION OFFICER FOR USE TO NOTIFY EMERGENCY SERVICES AND THE PUBLIC A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF PROJECT CONSTRUCTION. INCLUDED IN THIS NOTIFICATION WILL BE THE PROPOSED LANE RESTRICTIONS, ROAD CLOSURES, AND DETOURS REQUIRED BY THE PROJECT.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

ITEM 618 - RUMBLE STRIPS

THE RUMBLE STRIPS CAN BE MICROSURFACED AS LONG AS THEY ARE IN THE CONDITION THEY WERE IN BEFORE MICROSURFACING UPON COMPLETION OF THE WORK. OTHERWISE THE CONTRACTOR SHALL PLACE RUMBLE STRIPS AT THE BELOW LOCATION:

SUM 271: SLM 8.54-10.91

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED IN ACCORDANCE WITH THE ENGINEER.
 ITEM 618, RUMBLE STRIPS, 9.48 MILES

ITEM 646 - REMOVAL OF PAVEMENT MARKING

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED IN ACCORDANCE WITH THE ENGINEER.

IR-271
 ITEM 646, EDGE LINE, 9.48 MILES
 ITEM 646, LANE LINE, 4.74 MILES

SR-8
 ITEM 646, CENTER LINE, 0.03 MILES
 ITEM 646, CHANNELIZING LINE, 4,974 FEET
 ITEM 646, CROSSWALK LINES, 140 FEET
 ITEM 646, EDGE LINE, 6.70 MILES
 ITEM 646, LANE ARROWS, 47 EACH
 ITEM 646, LANE LINE, 3.38 MILES
 ITEM 646, TRANSVERSE DIAGONAL LINES, 313 FEET
 ITEM 646, STOP LINE, 314 FEET

TOTALS

ITEM 646, REMOVAL OF PAVEMENT MARKING, 5,741 FEET
 ITEM 646, REMOVAL OF PAVEMENT MARKING, 24.33 MILE
 ITEM 646, REMOVAL OF PAVEMENT MARKING, 47 EACH

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CALCULATED
 CMR
 CHECKED
 RMB

GENERAL NOTES

SUM - MCRO - FY 2017

MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE ELEVEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED.
2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.
3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.
4. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS TWO (1) MILE.
5. ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.
6. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.
7. A QUANTITY OF 10 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.
8. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.
9. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLAN. THIS QUANTITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: W8-H13 [NO EDGE LINES]. THESE QUANTITIES SHALL BE AS PER 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

PHASE I - OVERLAY SURFACE - SUM 271:
614, WORK ZONE LANE LINE, CLASS III, 642 PAINT 4.74 MILE
614, WORK ZONE MARKING SIGN, 10 EACH

PHASE I - OVERLAY SURFACE - SUM 8:
614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT, 0.03 MILE
614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT, 4,974 FT
614, WORK ZONE LANE LINE, CLASS III, 642 PAINT 3.38 MILE
614, WORK ZONE STOP LINE, CLASS III, 642 PAINT 314 FEET
614, WORK ZONE MARKING SIGN, 10 EACH

PHASE I - OVERLAY SURFACE - SUM 59:
614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT, 1.09 MILE
614, WORK ZONE LANE LINE, CLASS III, 642 PAINT 2.18 MILE
614, WORK ZONE STOP LINE, CLASS III, 642 PAINT 60 FEET
614, WORK ZONE MARKING SIGN, 5 EACH

TO BE USED AS DIRECTED BY THE ENGINEER
614, WORK ZONE EDGE LINE, CLASS III, 642 PAINT, 16.18 MILE

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

LANE CLOSURES

DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. THE PERMITTED LANE CLOSURE CHART USED FOR THIS PROJECT SHALL BE THE MOST CURRENT CHART AVAILABLE ON THE DATE THIS PROJECT SELLS.

THE CHART CAN BE FOUND AT:
<http://plcm.dot.state.oh.us>

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIREMENTS IN THE CHART, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN THE AMOUNT OF \$2,500 PER HOUR OR PORTION THEREOF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

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 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).

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). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/ DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

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 ENGINEER. 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.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 150 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$3,000 FOR EACH HOUR THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

WINTER TRAFFIC LIMITATIONS

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 1. NOVEMBER 14 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND DISINCENTIVES OF 1,000 SHALL BE ASSESSED FOR EACH CALENDAR DAY THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. THE CONTRACTOR MAY CLOSE LANES PRIOR TO APRIL 1 WITH WRITTEN APPROVAL FROM THE DISTRICT CONSTRUCTION ENGINEER.

ITEM 614, WORK ZONE SPEED LIMIT SIGN, AS PER PLAN

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF =55 MPH, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ. THE PRIMARY SIGNING STRATEGY USES DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLIES. THE SECONDARY STRATEGY USES TEMPORARY FLATSHEET SPEED LIMIT SIGNS (R2-1) FOR WHEN THERE ARE NO DSL SIGN ASSEMBLIES ON THE APPROVED LIST, OR DSL SIGN ASSEMBLIES ARE NOT AVAILABLE.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, SUPPLEMENTAL SPECIFICATION (SS) 808, AND TRAFFIC SCD MT-104.10. WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS SHALL BE IN ACCORDANCE WITH THIS NOTE AND SCD MT-104.10. ADDITIONALLY PAYMENT MAY BE REMOVED, OR A DISINCENTIVE APPLIED, FOR WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS THE SAME AS DESCRIBED IN THE MOST RECENT PUBLICATION OF SS 808 IN REGARDS TO WZSZS USING DSL SIGN ASSEMBLIES (SEE SS 808.06 PARAGRAPHS 4 THROUGH 7, INCLUDING TABLE 1).

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMTUCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FORM BELOW IS TO BE FILLED OUT BY THE CONTRACTOR AND SUBMITTED TO THE PROJECT ENGINEER BEGINNING SEVEN [7] CALENDAR DAYS AFTER THE INITIAL INSTALLATION OF THE FIRST TEMPORARY FLATSHEET SPEED LIMIT SIGN OR DSL ASSEMBLY, AND WEEKLY [EVERY SEVEN CALENDAR DAYS] THEREAFTER UNTIL ALL SPEED LIMIT CHANGES HAVE BEEN SUBMITTED. THE PROJECT ENGINEER WILL FORWARD A COPY OF THE FORM TO THE DWZTM AND DSZC. THE PROJECT ENGINEER WILL NOTIFY THE DSZC WHEN THE TEMPORARY FLATSHEET SPEED LIMIT SIGN OR DSL ASSEMBLY HAVE BEEN REMOVED AT THE END OF THE PROJECT SO THE SPEED LIMIT REVISION CAN BE WITHDRAWN.

THE FOLLOWING HAS BEEN APPROVED TO BE USED ON THIS PROJECT:

WZSZ REVISION NUMBER	WORK BEING COMPLETED	COUNTY & ROUTE	SLM	
			FROM	TO
WZ 26002	MICROSURFACING	SUM-8 NB	8.16	11.01
		SUM-8 SB	8.44	11.29

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY 40 SIGN MNTH

ASSUMING 20 DSL SIGN ASSEMBLY(IES) FOR 2 MONTHS

**Ohio Department of Transportation
Work Zone Speed Zone (WZSZ) Tracking Report**

District:	Project Number:	Project ID (PID):	WZ Speed Limit Revision No:	WZ-
Location (County, Route & Section):			Original Posted Speed Limit (MPH):	
Contractor:		Project Engineer/County Mgr:		
Reporting From Date:	Reporting To Date:	Type of Signs Used (Choose One): DSL Sign Assemblies or Temp. Flatsheet SL Signs		

Warranting Condition	Workers Present? Y/N	Location of Each Posted Speed Limit Sign			Begin (Install)		Work Zone Speed Limit Posted (MPH)	Work Zone Speed Limit Beacon Status* (On/Off; N/A)	End (Remove)		Person Reporting (Printed Name and Signature)
		Route	Log Point/ Mile Marker	Direction of Traffic	DATE (MM/DD/YY)	TIME (Example: 10:55 PM)			DATE (MM/DD/YY)	TIME (Example: 5:20 AM)	

*Only applicable when DSL Sign Assemblies are used. When temporary flatsheet speed limit signs are used enter "N/A".
DWZTM = District Work Zone Traffic Manager; DSZC = District Speed Zoning Coordinator
This report is to be filled out by the Contractor (or County Mgr. or designee, for operations/maintenance work) and submitted to the Project Engineer (or DWZTM and DSZC for operations/maintenance work) beginning 7 calendar days after initial installation of the first temporary flatsheet speed limit sign or DSL Sign Assembly, and weekly (every 7 calendar days) thereafter until all speed limit changes have been submitted. The Project Engineer forwards a copy of the form to the DWZTM and DSZC.

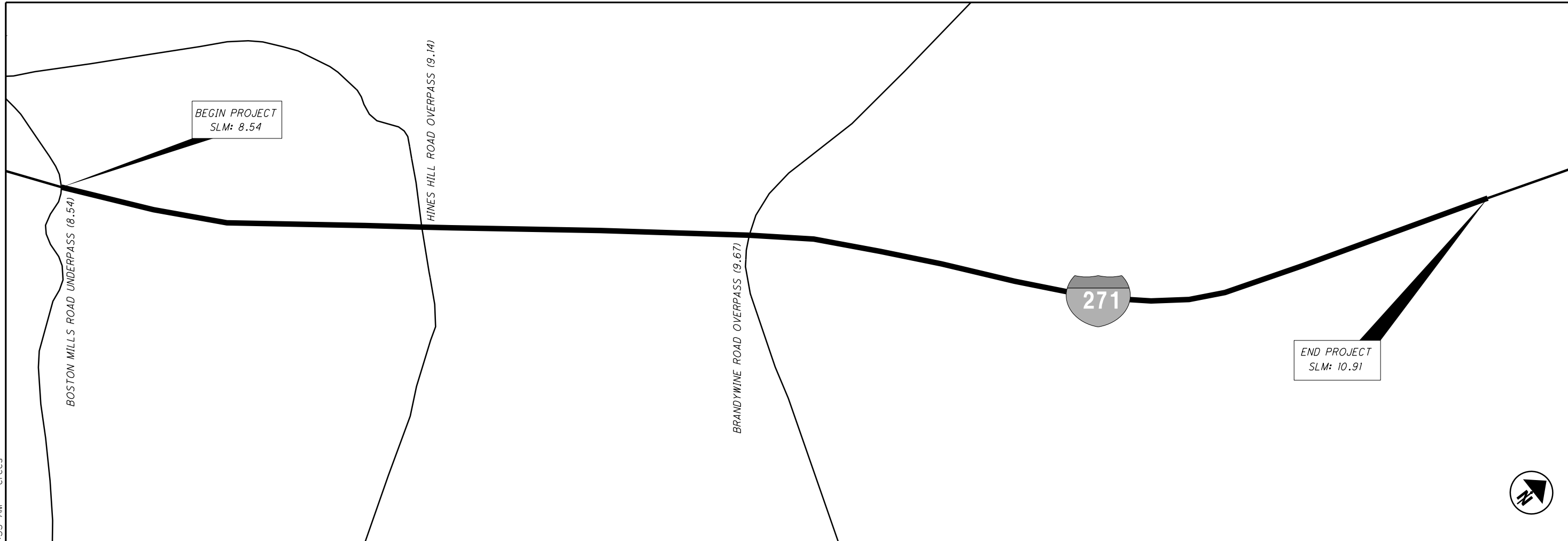
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SHEET NUM.										PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7	8	9	11	12	13	14	15	16	01/IMS/PV	02/NHS/PV	03/S>2/PV	04/S>2/PV/MACE							
EROSION CONTROL																			
									1,000				832	30000	1,000	EACH	EROSION CONTROL		
PAVEMENT																			
600									500	50	30	20	251	01000	600	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)		
			4,450	1,418	1,460				4,450		1,803	1,075	408	10001	7,328	GAL	PRIME COAT, AS PER PLAN @ 0.40 GAL/SY	7	
			111,232	37,148	34,555	25,579			111,232	25,579	43,508	28,195	421	10010	208,514	SY	MICROSURFACING, SURFACE COURSE		
				37,148	34,555	25,579				25,579	43,508	28,195	421	10020	97,282	SY	MICROSURFACING, LEVELING COURSE		
			618	197	203				618		251	149	617	10101	1,018	CY	COMPACTED AGGREGATE, AS PER PLAN (T=2")	7	
9.48									9.48							MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)		
TRAFFIC CONTROL																			
							623		210		228	185	621	00100	623	EACH	RPM		
							498		168		182	148	621	54000	498	EACH	RAISED PAVEMENT MARKER REMOVED		
								6.7			3.94	2.76	646	10000	6.7	MILE	EDGE LINE, 4"		
								9.48	9.48				646	10010	9.48	MILE	EDGE LINE, 6"		
								5.56		2.18	2	1.38	646	10100	5.56	MILE	LANE LINE, 4"		
								4.74	4.74				646	10110	4.74	MILE	LANE LINE, 6"		
								1.12		1.09	0.03		646	10200	1.12	MILE	CENTER LINE		
								4,974			1,674	3,300	646	10300	4,974	FT	CHANNELIZING LINE, 8"		
								374		60	136	178	646	10400	374	FT	STOP LINE		
								328		188	140		646	10500	328	FT	CROSSWALK LINE		
								313			113	200	646	10600	313	FT	TRANSVERSE/DIAGONAL LINE		
								47			18	29	646	20300	47	EACH	LANE ARROW		
47											18	29	646	50000	47	EACH	REMOVAL OF PAVEMENT MARKING		
5,741											2,063	3,678	646	50100	5,741	FT	REMOVAL OF PAVEMENT MARKING		
24.33									14.22		5.97	4.14	646	50300	24.33	MILE	REMOVAL OF PAVEMENT MARKING		
MAINTENANCE OF TRAFFIC																			
	50								50				614	11110	50	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
	25								10	5	6	4	614	12460	25	EACH	WORK ZONE MARKING SIGN		
	20								20				614	13000	20	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC		
		40									40		614	18700	40	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY		
	10.3								4.74	2.18	2	1.38	614	20550	10.3	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT		
	1.12									1.09	0.03		614	21550	1.12	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT		
	16.18								9.48		3.94	2.76	614	22350	16.18	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT		
	4,974										1,674	3,300	614	23680	4,974	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT		
	374									60	136	178	614	26610	374	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT		
INCIDENTALS																			
									LS				614	11000	LS		MAINTAINING TRAFFIC		
									LS				623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
									LS				624	10000	LS		MOBILIZATION		

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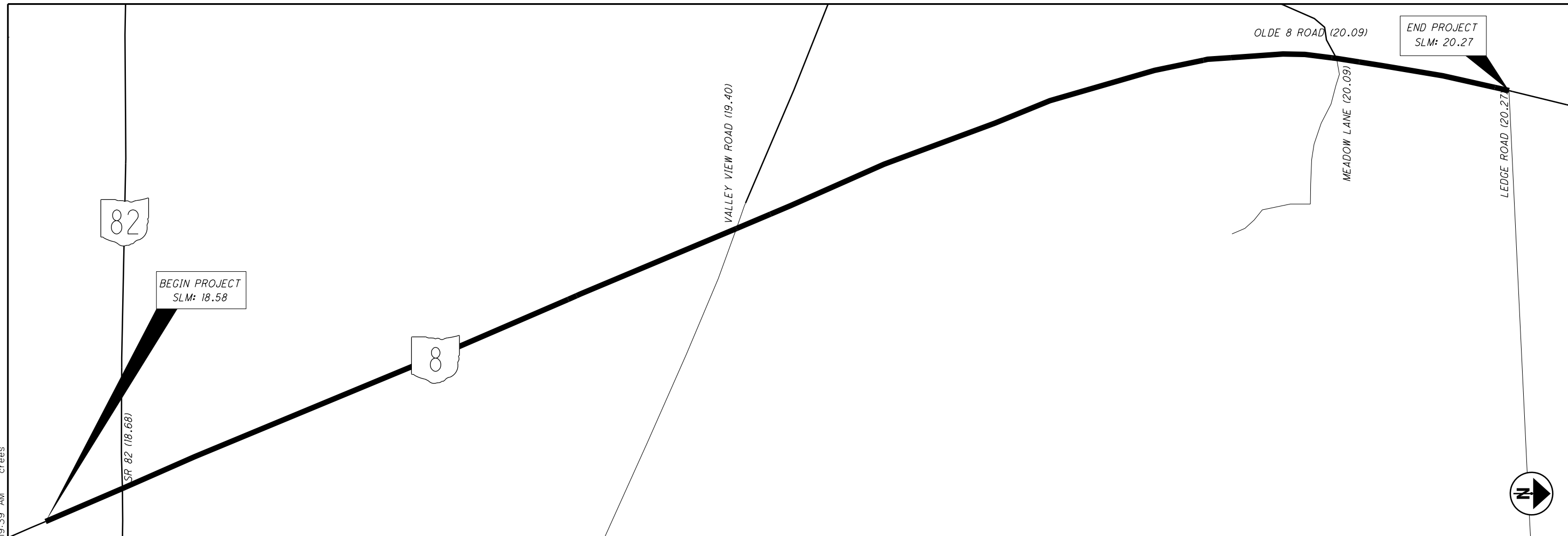
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SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	SURFACE AREA (A) A=DxW/9 SY	CADD GENERATED AREA SY	408 PRIME COAT, AS PER PLAN @ 0.40 GAL/SY GAL	421 MICROSURFACING, SURFACE COURSE SY	421 MICROSURFACING, LEVELING COURSE SY	617 COMPACTED AGGREGATE, AS PER PLAN (T=2") CY											
IR 271																							
8.54	TO	10.91	1	NB	12513.60	40.00	55616.00		2224.64	55616.00		308.98											
8.54	TO	10.91	1	SB	12513.60	40.00	55616.00		2224.64	55616.00		308.98											
SUBTOTALS									0.00	4449.28	0.00	111232.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
TOTALS CARRIED TO GENERAL SUMMARY									0	4450	0	111232	0	0	0	0	0	0	0	0	0	0	0

SUM - MCRO - FY 2017	PAVEMENT CALCULATIONS (SUM - 271)						
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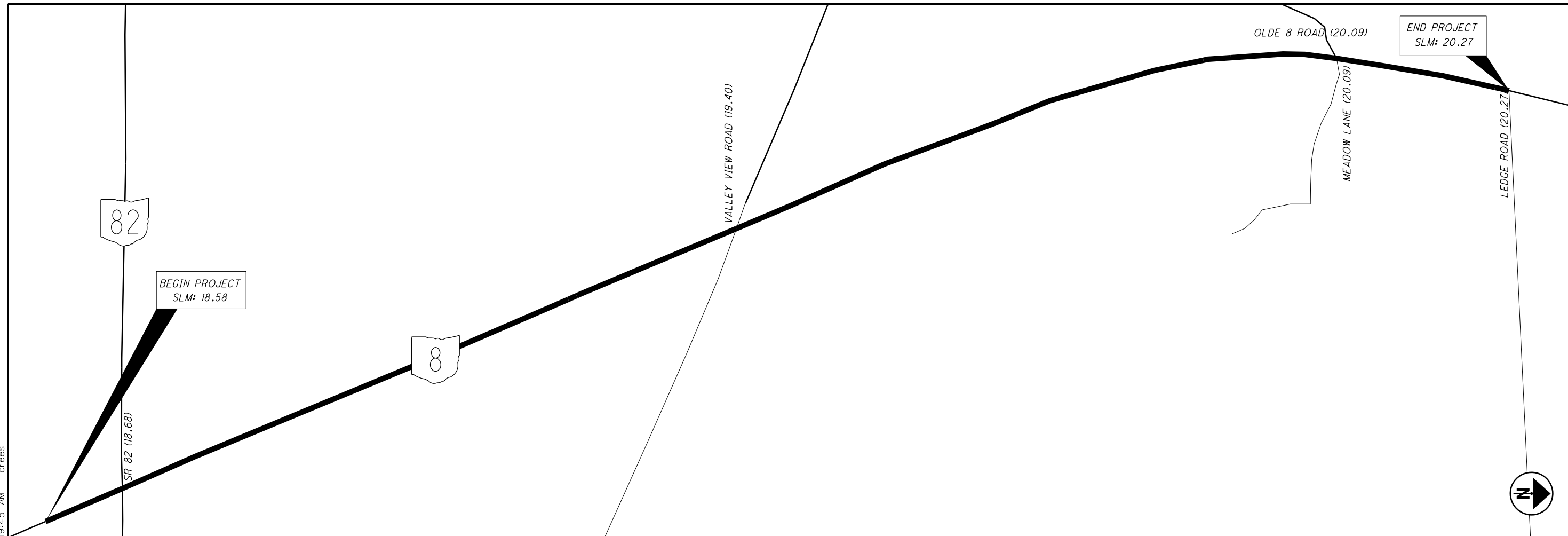
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SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	SURFACE AREA (A) A=DxW/9 SY	CADD GENERATED AREA SY	PRIME COAT, AS PER PLAN @ 0.40 GAL/SY GAL	MICROSURFACING, SURFACE COURSE SY	MICROSURFACING, LEVELING COURSE SY	COMPACTED AGGREGATE, AS PER PLAN (T=2") CY												
SR 8																								
18.58	TO	18.62	2	NB	211.20	58.00	1361.07		37.55	1361.07	1361.07	5.21												
18.62	TO	18.64	4	NB	105.60	67.00	786.13		9.39	786.13	786.13	1.30												
18.64	TO	18.67	5	NB	158.40	70.00	1232.00			1232.00	1232.00													
18.69	TO	18.70	5	NB	52.80	52.00	305.07			305.07	305.07													
18.70	TO	18.74	4	NB	211.20	34.00	797.87		18.77	797.87	797.87	2.61												
18.74	TO	19.04	2	NB	1584.00	31.00	5456.00		281.60	5456.00	5456.00	39.11												
19.04	TO	19.22	2	NB	950.40	31.00	3273.60		168.96	3273.60	3273.60	23.47												
19.22	TO	19.29	2	NB	369.60	31.00	1273.07		65.71	1273.07	1273.07	9.13												
19.29	TO	19.34	2	NB	264.00	37.00	1085.33		46.93	1085.33	1085.33	6.52												
19.34	TO	19.39	2	NB	264.00	42.00	1232.00		46.93	1232.00	1232.00	6.52												
19.42	TO	19.45	2	NB	158.40	32.00	563.20		28.16	563.20	563.20	3.91												
19.45	TO	20.00	2	NB	2904.00	32.00	10325.33		516.27	10325.33	10325.33	71.70												
20.00	TO	20.04	2	NB	211.20	43.00	1009.07		37.55	1009.07	1009.07	5.21												
20.04	TO	20.08	2	NB	211.20	54.00	1267.20		37.55	1267.20	1267.20	5.21												
20.10	TO	20.12	3	NB	105.60	42.00	492.80		9.39	492.80	492.80	1.30												
20.12	TO	20.20	2	NB	422.40	32.00	1501.87		75.09	1501.87	1501.87	10.43												
20.20	TO	20.24	2	NB	211.20	39.00	915.20		37.55	915.20	915.20	5.21												
INTERSECTIONS								4270.93		4270.93	4270.93													
SUBTOTALS								0.00	1417.39	0.00	37147.73	0.00	37147.73	0.00	196.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTALS CARRIED TO GENERAL SUMMARY								0	1418	0	37148	0	37148	0	197	0	0	0	0	0	0	0	0	0

PAVEMENT CALCULATIONS (SUM-8)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">CALCULATED</td> <td style="width: 50%; text-align: center;">CMR</td> </tr> <tr> <td style="width: 50%; text-align: center;">CHECKED</td> <td style="width: 50%; text-align: center;">RMB</td> </tr> </table>	CALCULATED	CMR	CHECKED	RMB
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SUM - MCRO - FY 2017	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">12</td> <td style="width: 50%; text-align: center;">16</td> </tr> </table>	12	16		
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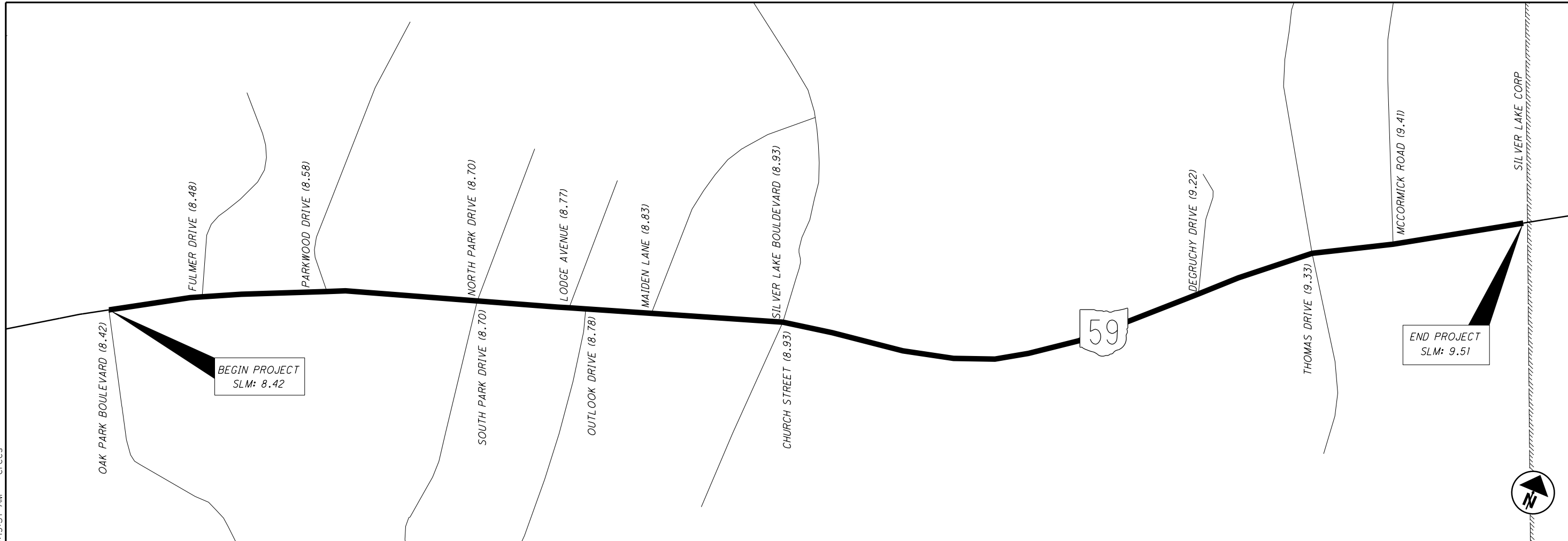
SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	SURFACE AREA (A) A=DxW/9 SY	CADD GENERATED AREA SY	PRIME COAT, AS PER PLAN @ 0.40 GAL/SY GAL	MICROSURFACING, SURFACE COURSE SY	MICROSURFACING, LEVELING COURSE SY	COMPACTED AGGREGATE, AS PER PLAN (T=2") CY										
SR 8																						
18.58	TO	18.62	2	SB	211.20	32.00	750.93		37.55	750.93	750.93	5.21										
18.62	TO	18.66	4	SB	211.20	37.00	868.27		18.77	868.27	868.27	2.61										
18.66	TO	18.67	5	SB	52.80	40.00	234.67			234.67	234.67											
18.69	TO	18.71	5	SB	105.60	70.00	821.33			821.33	821.33											
18.71	TO	18.74	4	SB	158.40	66.00	1161.60		14.08	1161.60	1161.60	1.96										
18.74	TO	18.79	2	SB	264.00	56.00	1642.67		46.93	1642.67	1642.67	6.52										
18.79	TO	19.04	2	SB	1320.00	32.00	4693.33		234.67	4693.33	4693.33	32.59										
19.04	TO	19.22	2	SB	950.40	32.00	3379.20		168.96	3379.20	3379.20	23.47										
19.22	TO	19.39	2	SB	897.60	32.00	3191.47		159.57	3191.47	3191.47	22.16										
19.42	TO	19.45	2	SB	158.40	42.00	739.20		28.16	739.20	739.20	3.91										
19.45	TO	19.47	2	SB	105.60	42.00	492.80		18.77	492.80	492.80	2.61										
19.47	TO	19.51	2	SB	211.20	37.00	868.27		37.55	868.27	868.27	5.21										
19.51	TO	20.08	2	SB	3009.60	32.00	10700.80		535.04	10700.80	10700.80	74.31										
20.10	TO	20.16	2	SB	316.80	54.00	1900.80		56.32	1900.80	1900.80	7.82										
20.16	TO	20.18	2	SB	105.60	43.00	504.53		18.77	504.53	504.53	2.61										
20.18	TO	20.24	2	SB	316.80	32.00	1126.40		56.32	1126.40	1126.40	7.82										
20.24	TO	20.25	6		52.80	86.00	504.53		9.39	504.53	504.53	1.30										
20.25	TO	20.27	7		105.60	83.00	973.87		18.77	973.87	973.87	2.61										
SUBTOTALS									0.00	1459.63	0.00	34554.67	0.00	34554.67	0.00	202.73	0.00	0.00	0.00	0.00	0.00	
TOTALS CARRIED TO GENERAL SUMMARY									0	1460	0	34555	0	34555	0	203	0	0	0	0	0	0

P A V E M E N T C A L C U L A T I O N S (S U M - 8)

S U M - M C R O - F Y 2 0 1 7

CALCULATED	CMR
CHECKED	RMB

13
16



SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	SURFACE AREA (A) A=DxW/9 SY	CADD GENERATED AREA SY	PRIME COAT, AS PER PLAN @ 0.40 GAL/SY GAL	MICROSURFACING, SURFACE COURSE SY	MICROSURFACING, LEVELING COURSE SY	COMPACTED AGGREGATE, AS PER PLAN (T=2") CY											
SR 59			8																				
8.42	TO	9.51			5755.20	40.00	25578.67			25578.67	25578.67												
SUBTOTALS									0.00	0.00	0.00	25578.67	0.00	25578.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
TOTALS CARRIED TO GENERAL SUMMARY									0	0	0	25579	0	25579	0	0	0	0	0	0	0	0	0

CALCULATED	CALCULATED	CMR
	CHECKED	RMB
	PAVEMENT CALCULATIONS (SUM-59)	
SUM - MCRO - FY 2017		14
		16

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COUNTY	ROUTE	LOCATION						621	621	621	621		621	REMARKS
		RPM, LOW PROFILE, YELLOW/YELLOW	RPM, LOW PROFILE WHITE/RED					RPM, LOW PROFILE, WHITE	RPM, LOW PROFILE YELLOW/RED	RAISED PAVEMENT MARKER REMOVED				
		FROM	TO					EACH	EACH	EACH	EACH			EACH
SUM	271	8.54	10.91							210			168	IR 271 FROM BOSTON MILLS UNDERPASS TO 0.26 MILES SOUTH OF OLDE 8 ROAD
SUM	8	18.58	18.79						69	23			74	INTERSECTION SR 8 & SR 82
SUM	8	18.79	19.04						33	4			30	SR 8 FROM SR 82 TO LEAVING MACEDONIA CORP LIMITS
SUM	8	19.04	19.22						24				19	SR 8 FROM LEAVING MACEDONIA CORP LIMITS TO ENTERING MACEDONIA CORP LIMITS
SUM	8	19.22	19.29						9	4			10	SR 8 FROM ENTERING MACEDONIA CORP LIMITS TO VALLEY VIEW ROAD
SUM	8	19.29	19.45						28	15			34	INTERSECTION SR 8 & VALLEY VIEW ROAD
SUM	8	19.45	19.51						12	8			16	INTERSECTION SR 8 & VALLEY VIEW ROAD
SUM	8	19.51	20.00						65	11			61	SR 8 FROM VALLEY VIEW ROAD TO MEADOW LANE
SUM	8	20.00	20.18						44	29			58	INTERSECTION SR 8 & MEADOW LANE
SUM	8	20.18	20.27						22	13			28	INTERSECTION SR 8 & LEDGE ROAD
SUBTOTALS				0	0	0	0	0	306	317	0	0	498	
TOTALS CARRIED TO GENERAL SUMMARY				0	0	0	0			623		0	498	

CALCULATED	CHECKED	RMB
CMR		
RAISED PAVEMENT MARKERS		
SUM - MCRO - FY 2017		
15		
16		

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GENERAL SPEC: 640
MATERIAL TYPE: 646

CALCULATED
CMR
CHECKED
RMB

PAVEMENT MARKING QUANTITIES

SUM - MCRO - FY 2017

16
16

EDGE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	WHITE EDGE LINE			YELLOW EDGE LINE			COMMENTS
						TOTAL	HIGHWAY	RAMP	TOTAL	HIGHWAY	RAMP	
SUM	271	8.54	BOSTON MILLS UNDERPASS	10.91	0.26 MILES SOUTH OF OLDE 8 ROAD	4.74	4.74		4.74	4.74		(6" EDGE LINE)
SUM	8	19.04	LEAVING MACEDONIA CORP LIMITS	19.22	ENTERING MACEDONIA CORP LIMITS	0.36	0.36		0.36	0.36		(4" EDGE LINE)
SUM	8	19.45	LEAVING MACEDONIA CORP LIMITS	20.27	LEAVING NORTHFIELD CORP LIMITS	1.64	1.64		1.58	1.58		(4" EDGE LINE)
SUM	8	18.58	0.10 MILES SOUTH OF SR 82	19.04	LEAVING MACEDONIA CORP LIMITS	0.92	0.92		0.92	0.92		(4" EDGE LINE) URBAN PAVING 80/20 ITEMS IN THE CITY OF MACEDONIA
SUM	8	19.22	ENTERING MACEDONIA CORP LIMITS	19.45	LEAVING MACEDONIA CORP LIMITS	0.46	0.46		0.46	0.46		(4" EDGE LINE) URBAN PAVING 80/20 ITEMS IN THE CITY OF MACEDONIA
TOTAL						8.12	8.12	0	8.06	8.06		

LANE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	4"		6"		COMMENTS
							DASHED	SOLID	DASHED	SOLID	
SUM	271	8.54	BOSTON MILLS UNDERPASS	10.91	0.26 MILES SOUTH OF OLDE 8 ROAD	2.37		4.74			
SUM	8	19.04	LEAVING MACEDONIA CORP LIMITS	19.22	ENTERING MACEDONIA CORP LIMITS	0.18	0.36				
SUM	8	19.45	LEAVING MACEDONIA CORP LIMITS	20.27	LEAVING NORTHFIELD CORP LIMITS	0.82	1.64				
SUM	8	18.58	0.10 MILES SOUTH OF SR 82	19.04	LEAVING MACEDONIA CORP LIMITS	0.46	0.92				URBAN PAVING 80/20 ITEMS IN THE CITY OF MACEDONIA
SUM	8	19.22	ENTERING MACEDONIA CORP LIMITS	19.45	LEAVING MACEDONIA CORP LIMITS	0.23	0.46				URBAN PAVING 80/20 ITEMS IN THE CITY OF MACEDONIA
SUM	59	8.42	ENTERING SILVER LAKE CORP LIMITS	9.51	LEAVING SILVER LAKE CORP LIMITS	1.09	2.18				
TOTAL						5.15	5.56	4.74			

CENTER LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE	COMMENTS
SUM	8	18.58	0.10 MILES SOUTH OF SR 82	20.27	LEAVING NORTHFIELD CORP LIMITS	0.03	0.10	
SUM	59	8.42	ENTERING SILVER LAKE CORP LIMITS	9.51	LEAVING SILVER LAKE CORP LIMITS	1.09	1.94	
TOTAL						1.12	2.04	

AUXILIARY

CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE		STOP LINE	CROSS WALK LINES	TRANSVERSE DIAGONAL LINES		ISLAND MARKING	SYMBOL MARKINGS			LANE ARROWS				WORD ON PVMT ONLY		DOTTED LINES		COMMENTS
			8"	12"			WHITE	YELLOW		R x R	SCHOOL		TURN LEFT	TURN RIGHT	THRU	COMB.	72"	96"	4"	6"	
			FT	FT							FT	FT									
SUM	SR 8 @ SR 82	18.670	2470		106		170					22	1							URBAN PAVING 80/20 ITEMS IN THE CITY OF MACEDONIA	
SUM	SR 8 @ VALLEY VIEW ROAD	19.395	830		72		30					6								URBAN PAVING 80/20 ITEMS IN THE CITY OF MACEDONIA	
SUM	SR 8 @ OLDE 8	20.074	1154		84							6	6								
SUM	SR 8 @ LEDGE ROAD	20.270	520		52	140	113					4	2								
SUM	SR 59 @ OAK PARK BLVD	8.420			20																
SUM	SR 59 @ CHURCH STREET	8.930			40	108															
SUM	SR 59 @ THOMAS STREET	9.330				80															
TOTAL			4974		374	328	313					38	9								