

TYPICAL SECTION 1

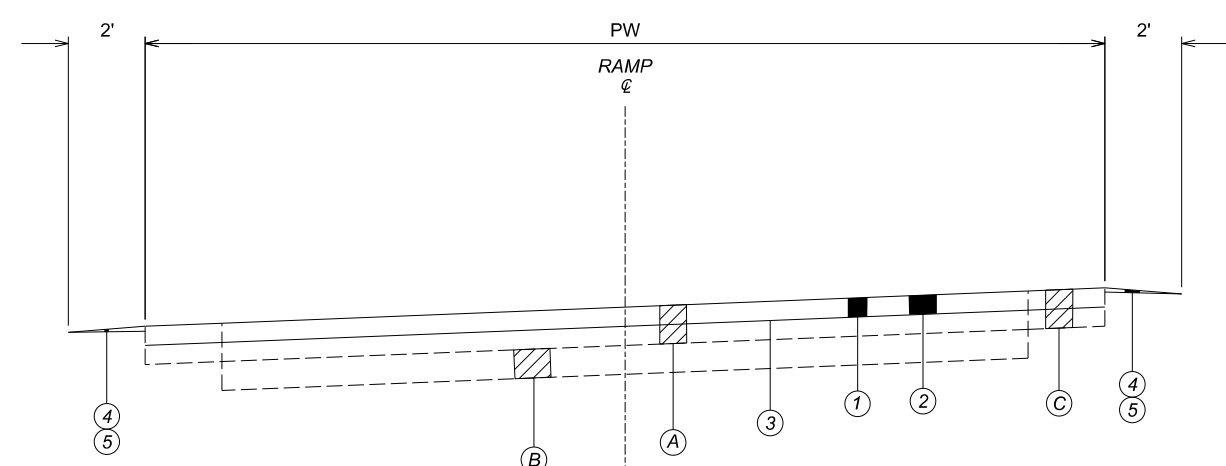
COUNTY	ROUTE	SLM		PW1 (FEET)	PW2 (FEET)	LENGTH (MILES)
		FROM	TO			
SUM	480	0	4.34	39	39	4.34
SUM	480	4.34	4.72	25	25	0.38
SUM	480	4.72	8.67	39	39	3.95
CUY	480	29.69	29.89	39	39	0.2

LEGEND

- (A) EXISTING ASPHALT PAVEMENT (T=7")
- (B) EXISTING REINFORCED CONCRETE BASE (T=9")
- (C) EXISTING ASPHALT SHOULDER
- (D) ESISTING CURB
- (E) EXISTING CURB AND GUTTER
- (F) EXISTING BRICK BASE
- (1) ITEM 254, PAVEMENT PLANING (T=1 1/2")
- (2) ITEM 442, ASPHALT CONCRETE SUFACE COURSE, 12.5MM, TYPE A, AS PER PLAN, (447), (T=1 1/2")
- (3) ITEM 407, NON TRACKING TACK COAT @ 0.09 GAL/SY
- (4) ITEM 408, PRIME COAT, AS PER PLAN @ 0.4 GAL/SY
- (5) ITEM 617, COMPACTED AGGREGATE, AS PER PLAN (T=2")
- (6) ITEM 442, ASPHALT CONCRETE SUFACE COURSE, 12.5MM, TYPE A, AS PER PLAN, (448), (T=1 1/2")

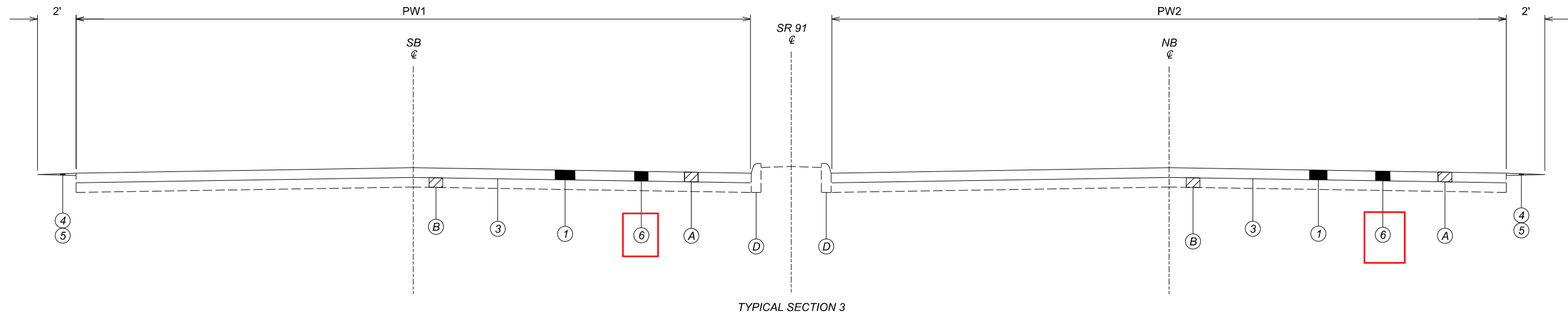
added thickness

added item



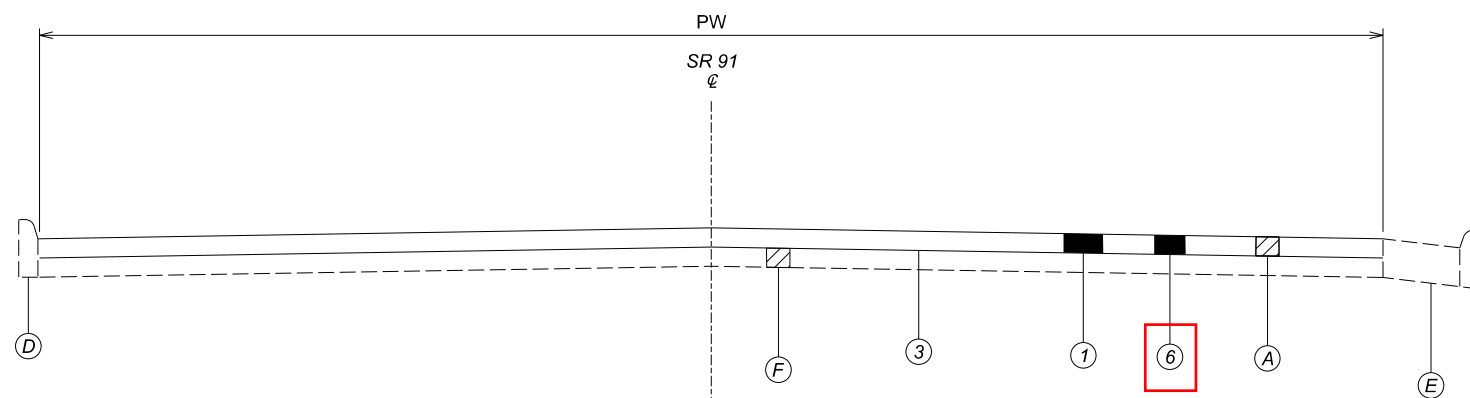
TYPICAL SECTION 2

RAMP	INTERCHANGE		PW (FEET)	LENGTH (FEET)
	FROM	TO		
A	82	480 WB	25	1400
B	480 WB	82	27	1000
C	82	480 EB	25	1500
D	480 EB	82	27	1300
E	480 WB	91	22	1100
F	91	480 EB	22	780
G	480 EB	91	23	790
H	91	480 WB	22	900



TYPICAL SECTION 3

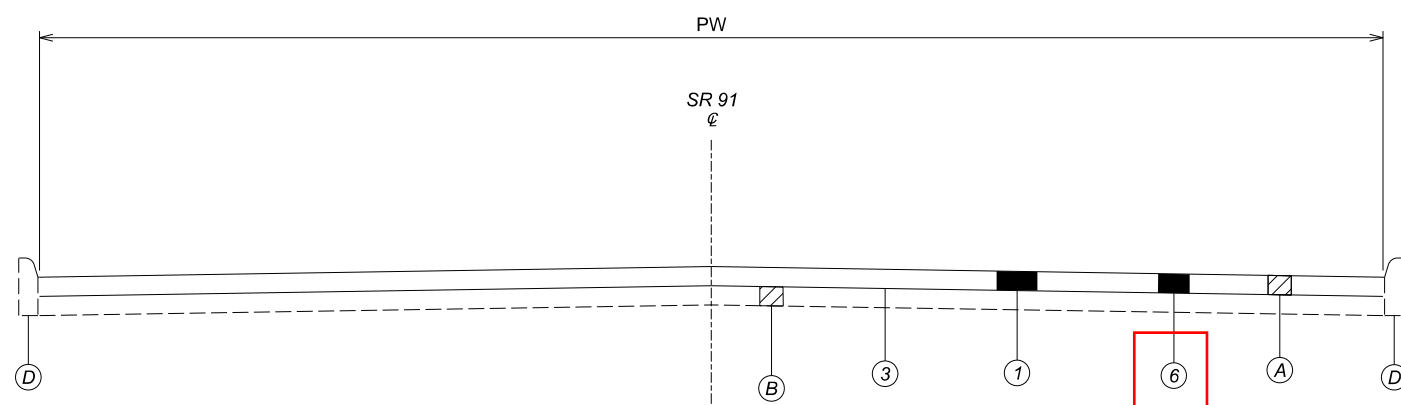
ROUTE	SLM		PW1 (FEET)	PW2 (FEET)	LENGTH (MILES)
	FROM	TO			
91	19.13	19.14	30	50	0.01
91	19.14	19.28	40	40	0.14



TYPICAL SECTION 4

ROUTE	SLM		PW (FEET)	LENGTH (MILES)
	FROM	TO		
91	19.28	19.33	75	0.05

changed item



TYPICAL SECTION 5

ROUTE	SLM		PW (FEET)	LENGTH (MILES)
	FROM	TO		
91	19.07	19.13	70	0.06



**UTILITIES**

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER, OR ADJACENT TO, THE WORK AREA.

**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 DETAILS**

THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING. FOR ANY LOCATIONS THAT PAVEMENT MARKING DETAILS HAVE NOT BEEN MADE AVAILABLE TO THE CONTRACTOR, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO PUT BACK NEW PAVEMENT MARKINGS IN THE ORIGINAL LOCATIONS.

**ITEM SPECIAL - VERTICAL CLEARANCE**

AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LICENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURES:

- SUM-480-1.37 (SFN:7710208)
- SUM-480-2.42 (SFN:7710291)
- SUM-480-4.11 (SFN:7706960)
- SUM-480-6.72 (SFN:7710410)
- SUM-480-8.14 (SFN:7710569)
- SUM-480-4.81L (SFN: 7710356)
- SUM-480-4.81R (SFN: 7710380)

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

SPECIAL - VERTICAL CLEARANCE, 7 EACH

**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
SUM 480	0.00 TO 8.67	12'
CUY 480	29.69 TO 30.00	12'
RAMPS	480	16'
SUM 91	19.07 TO 19.33	12'

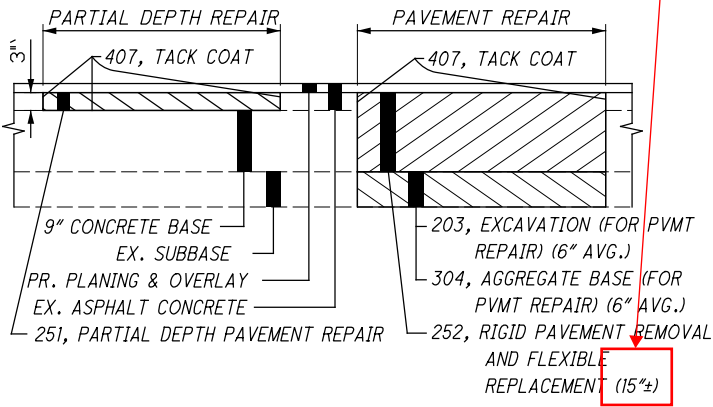
**PROFILE AND ALIGNMENT**

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. PAVEMENT REPAIRS WILL BE MARKED IN THE FIELD BY THE PROJECT ENGINEER ACCORDING TO CMS 251.02. MINIMUM WIDTH IS 2'. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 4 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 251, PARTIAL DEPTH PAVEMENT REPAIR (441), 4000 SQ. YD. (IR 480)
- 251, PARTIAL DEPTH PAVEMENT REPAIR (441), 650 SQ. YD. (SR 91)



adjusted thickness

adjusted note

**ITEM 252 - RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT**

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 15\"/>

- 252, RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT, 1500 SQ YD
- 255, FULL DEPTH PAVEMENT SAWING, 7000 FT

**ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR)**

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 203, EXCAVATION (FOR PAVEMENT REPAIR) 250 CU YD

**ITEM 304 - AGGREGATE BASE (FOR PAVEMENT REPAIR)**

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 304, AGGREGATE BASE (FOR PAVEMENT REPAIR) 250 CU 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

- ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, TYPE A (447), AS PER PLAN
- ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, TYPE A (448), AS PER PLAN

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

**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

**LINEAR GRADING**

AREAS WHERE THE SHOULDER IS HIGHER THAN THE EDGE OF PAVEMENT WILL BE GRADED TO PROVIDE POSITIVE DRAINAGE. THIS WORK WILL ONLY BE PERFORMED IN AREAS NECESSARY AND WILL NOT BE PERFORMED ON THE ENTIRE PROJECT. AREAS FOR THE WORK WILL BE MARKED BY THE PROJECT ENGINEER. UNDER NO CIRCUMSTANCES WILL THIS WORK BE PERFORMED CONCURRENTLY WITH ANY OTHER OPERATION.

GRADING WILL BE ACCOMPLISHED BY THE REMOVAL OF MATERIAL TO PROVIDE A 0.08 POSITIVE SLOPE. THE GRADED AREAS WILL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT EROSION UNTIL SEEDING AND MULCHING IS PERFORMED. ALL EXCESS MATERIAL WILL BE REMOVED FROM THE BERMS AND WILL BE DISPOSED OF OFF THE PROJECT BY THE CONTRACTOR.

SEEDING AND MUCHING, FERTILIZER AND LIME WILL BE PERFORMED WITHIN A PERIOD NOT TO EXCEED 10 DAYS AFTER THE LINEAR GRADING.

THE QUANTITY OF ITEM 209 IS NOT PERMITTED TO BE INCREASED. REDUCTIONS IN QUANTITIES ARE PERMITTED AS DETERMINED BY THE PROJECT ENGINEER.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR THE PERTINENT BID ITEM. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

- 209, LINEAR GRADING, 809 STA.
- 659, SEEDING AND MULCHING, 22473 SQ YD
- 659, COMMERCIAL FERTILIZER, 3.03 TON
- 659, LIME, 4.64 ACRES
- 659, WATER, 121.35 M. GAL.

DESIGN AGENCY



DESIGNER

RMK

REVIEWER

MAC 07/16/21

PROJECT ID

110698

SHEET TOTAL

P.4 29

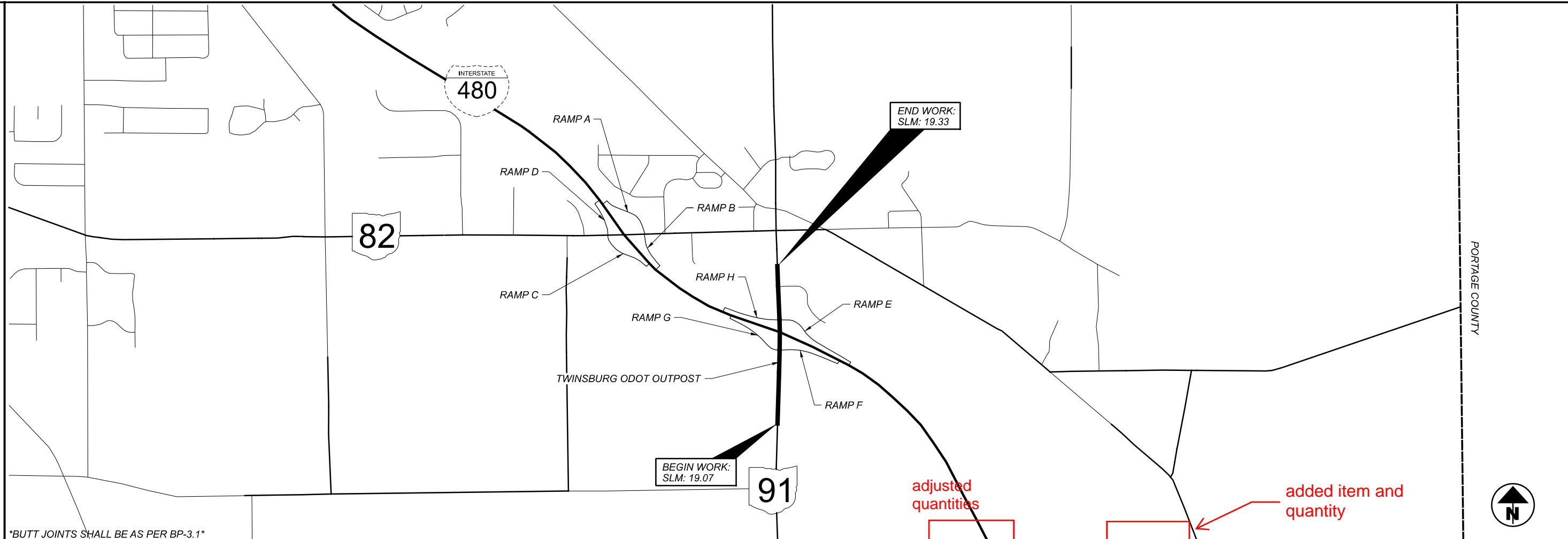
SHEET NUM.										PART.				ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
4	5	8	13	14	15	16	17	18	23	01/IMS/PV	02/NHS/PV/TWIN	03/IMS/BR	04/NHS/OT/TWIN	(X)	EXT	TOTAL				
<b>ROADWAY</b>																				
250										250					203	10000	250	CY	EXCAVATION	
	809									809					209	60200	809	STA	LINEAR GRADING	
		2,120								2,120					622	41100	2,120	FT	PORTABLE BARRIER, UNANCHORED	
7										5	2				SPECIAL	69098000	7	EACH	VERTICAL CLEARANCE	
<b>EROSION CONTROL</b>																				
	22,473									22,473					659	10000	22,473	SY	SEEDING AND MULCHING	
	3.03									3.03					659	20000	3.03	TON	COMMERCIAL FERTILIZER	
	4.64									4.64					659	31000	4.64	ACRE	LIME	
	121.35									121.35					659	35000	121.35	MGAL	WATER	
										3,000					832	30000	3,000	EACH	EROSION CONTROL	
<b>DRAINAGE</b>																				
	3										3				611	98630	3	EACH	CATCH BASIN ADJUSTED TO GRADE	
	2												2		611	98634	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
	2										2				611	99655	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	
	2												2		611	99660	2	EACH	MANHOLE RECONSTRUCTED TO GRADE	
<b>PAVEMENT</b>																				
4,650										4,000			650		251	01000	4,650	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)	
1,500										1,500					252	01000	1,500	SY	FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT	
7,000										7,000					252	01500	7,000	FT	FULL DEPTH PAVEMENT SAWING	
	1,910		376,770	17,828	48,382					432,874	12,015				254	01000	444,890	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1 1/2")	
250										250					304	20000	250	CY	AGGREGATE BASE	
	195									195					407	13900	195	GAL	TACK COAT, 702.13	
			33,910	1,605	4,355					38,787	1,082				407	20000	39,870	GAL	NON-TRACKING TACK COAT	
			15,714		1,492					17,206					408	10001	17,206	GAL	PRIME COAT, AS PER PLAN	
	185									185					409	30000	185	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS	
			9,821	499	667					10,488	499				442	00100	10,987	CY	ANTI-SEGREGATION EQUIPMENT	
	120		15,699	82	2,016					17,917					442	10301	17,917	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN, PG70-22M, (T=1 1/2")	
				661						161	501				442	20001	661	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN, PG70-22M, (T=1 1/2")	
			2,183		208					2,390					617	10101	2,391	CY	COMPACTED AGGREGATE, AS PER PLAN	
			33.48		0.48					33.96					618	40600	33.96	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
<b>TRAFFIC CONTROL</b>																				
						1,074				1,074					621	00100	1,074	EACH	RPM	
						860				860					621	54000	860	EACH	RAISED PAVEMENT MARKER REMOVED	
							38.1			38.1					642	00104	38.1	MILE	EDGE LINE, 6", TYPE 1	
							17.68			17.68					642	00204	17.68	MILE	LANE LINE, 6", TYPE 1	
							5,678			5,678					642	00404	5,678	FT	CHANNELIZING LINE, 12", TYPE 1	
							5,656			5,656					642	01510	5,656	FT	DOTTED LINE, 6", TYPE 1	
								0.41			0.27	0.14			646	10010	0.41	MILE	EDGE LINE, 6"	
								0.52			0.52				646	10110	0.52	MILE	LANE LINE, 6"	
								0.33			0.26	0.08			646	10200	0.33	MILE	CENTER LINE	
								680			680				646	10300	680	FT	CHANNELIZING LINE, 8"	
							132	151		132	151				646	10400	283	FT	STOP LINE	
								705			705				646	10600	705	FT	TRANSVERSE/DIAGONAL LINE	
							11	11		11	11				646	20300	22	EACH	LANE ARROW	
							8			8					646	20320	8	EACH	WRONG WAY ARROW	
<b>STRUCTURE REPAIRS</b>																				
																			FOR SUM-480-0137 ESTIMATED QUANTITIES	
																			23	
																			FOR SUM-480-0205L ESTIMATED QUANTITIES	
																			23	
																			FOR SUM-480-0208R ESTIMATED QUANTITIES	
																			23	
																			FOR SUM-480-0481L ESTIMATED QUANTITIES	
																			23	
																			FOR SUM-480-0481R ESTIMATED QUANTITIES	
																			23	
																			FOR SUM-480-0672 ESTIMATED QUANTITIES	
																			23	
																			FOR SUM-480-0814 ESTIMATED QUANTITIES	
																			23	
																			FOR SUM-82-0727 ESTIMATED QUANTITIES	
																			23	

adjusted quantity

added item and quantity

GENERAL SUMMARY

DESIGN AGENCY	
DESIGNER	RMK
REVIEWER	MAC 07/16/21
PROJECT ID	110698
SHEET	P.11
TOTAL	29



\*BUTT JOINTS SHALL BE AS PER BP-3.1\*

SLM RANGE	TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	254		407		408		442		442		617		442																				
							PAVEMENT PLANING ASPHALT CONCRETE (T=1 1/2')	NON-TRACKING TACK COAT @0.09 GAL/SY	PRIME COAT, AS PER PLAN @ 0.4 GAL/SY	ANTI-SEGREGATION EQUIPMENT	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN, PG70-22M, (T=1 1/2')	COMPACTED AGGREGATE, AS PER PLAN (T = 2')	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN, PG70-22M, (T=1 1/2')																										
FT	FT	SY	SY	SY	SY	SY	GAL	GAL	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY																				
<b>SR 91</b>																																							
19.07	TO	19.13	5	NB/SB	316.80	78.00	2745.60	2745.60	247.10			88.00																											
19.13		19.14	3	NB	52.80	50.00	293.33	293.33	26.40			11.73																											
19.14		19.28	3	NB	739.20	40.00	3285.33	3285.33	295.68			164.27																											
19.13		19.14	3	SB	52.80	30.00	176.00	176.00	15.84			11.73																											
19.14		19.28	3	SB	739.20	40.00	3285.33	3285.33	295.68			164.27																											
19.28		19.33	4	NB/SB	264.00	76.00	2229.33	2229.33	200.64			58.67																											
<b>TURNAROUNDS</b>																																							
IR 480		SLM 0.88					478.00	478.00	43.02					19.92																									
IR 480		SLM 2.87					570.00	570.00	51.30					23.75																									
IR 480		SLM 5.56					456.00	456.00	41.04					19.00																									
IR 480		SLM 7.33					461.00	461.00	41.49					19.21																									
<b>INTERSECTIONS</b>																																							
SR 91 INT		480 EB ON/OFF			56.00		146.00	146.00	13.14																														
SR 91 INT		480 WB ON/OFF			60.00		102.00	102.00	9.18																														
<b>TWINSBURG ODOT OUTPOST</b>																																							
SR 91		SLM 19.10			50		3600.00	3600.00	324.00																														
SUBTOTALS							0.00	17827.93	1604.51	0.00	0.00	498.67	0.00	81.88	0.00	0.00	660.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
TOTALS CARRIED TO GENERAL SUMMARY							0	17828	1605	0	0	499	0	82	0	0	661	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

adjusted quantities

added item and quantity

PAVEMENT CALCULATIONS

DESIGN AGENCY



DESIGNER

RMK

REVIEWER

MAJ 07/01/21

PROJECT ID

110698

SHEET TOTAL

P.14 29