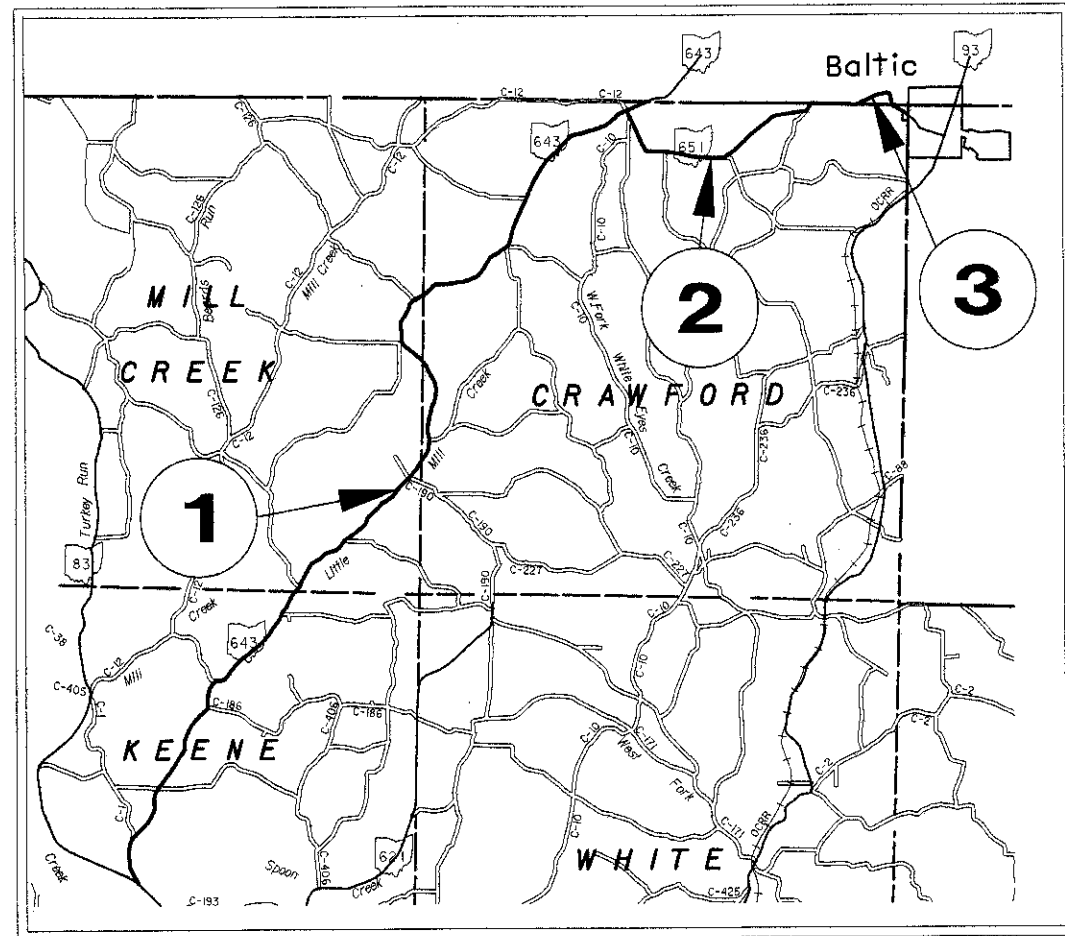


COS-643/651-0.00/0.00
990507
DIST. 05
06-09-99
PID # 19926

LOCATION MAP

STATE OF OHIO
OHIO DEPARTMENT OF TRANSPORTATION

**COS-643-0.00/
COS-651-0.00/
HOL-651-0.00**



PORTION TO BE IMPROVED

815000 YD 22 40



PROJECT DESCRIPTION:
2-LANE ASPHALT CONCRETE RESURFACING AND RELATED WORK

LOCATION	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH MILES	CITY	VILLAGE
				BEGIN	END			
1	COS	SR 643	(0.00-2.46)	0.00	10.87	10.87		
2	COS	SR 651	(0.00-2.84)	0.00	3.04	3.04		
3	HOL	SR 651	(0.00)	0.00	0.50	0.50		

INDEX OF SHEETS:

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BRIDGE DECK TREATMENT	11-12
RPM LOCATION SUB-SUMMARY	13-16
EDGE/CENTER LINE SUB-SUMMARY	17
PAVEMENT MARKING SUB-SUMMARY	18
PAVEMENT MARKING TYPICAL DETAIL	19
GENERAL SUMMARY	20

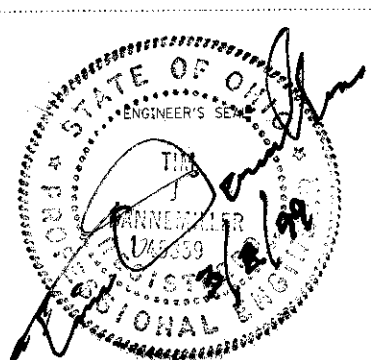
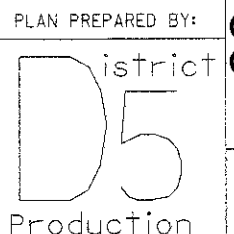
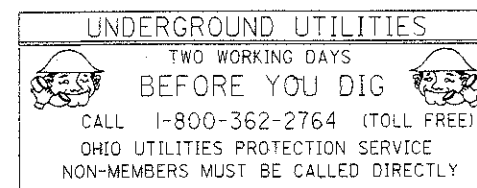
1997 SPECIFICATIONS

THE STANDARD 1997 SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND THE PROPOSAL SHALL GOVERN THESE IMPROVEMENTS.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THESE IMPROVEMENTS WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS INDICATED IN THE PROPOSAL.

APPROVED Michael D. Gopalan
DATE 3/8/99 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor
DATE 3-11-99 DIRECTOR, DEPARTMENT OF TRANSPORTATION



STANDARD DRAWINGS		STANDARD DRAWINGS		STANDARD DRAWINGS	
BP-3.1	2-21-92	TC-65.11	7-7-95		
BP-4.1	2-21-92	TC-65.12	7-7-95		
MT-97.10	4-29-88	TC-71.10	9-10-91		
MT-97.11	10-4-89				
MT-99.20	4-29-88				
TC-65.10	7-7-95				

06510001.MTS 03-02-99

FEDERAL PROJECT NO. NON-FEDERAL
PID NO. 19926
CONSTRUCTION PROJECT NO.
TITLE SHEET
COS-643-0.00
COS-651-0.00
HOL-651-0.00
20

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT SHOULD NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA. BELOW IS A LIST OF UTILITIES LOCATED WITHIN THE WORK AREA AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT OWNERS AND VERIFY LOCATIONS OF ANY POSSIBLE UTILITIES THAT MAY BE AFFECTED.

NOTIFICATION OF ROAD CLOSURE OR RESTRICTION

IN ORDER FOR ODOT TO PROPERLY PERMIT OVERSIZE LOADS, PREPARE PROPER SIGNING WHEN REQUIRED AND FURTHER TO NOTIFY THE GENERAL MOTORING PUBLIC, THE CONTRACTOR SHALL NOTIFY (IN WRITING) THE DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR WITH COPIES FOR THE DISTRICT 5 ROADWAY SERVICES MANAGER AND PROJECT ENGINEER NOT LESS THAN 21 DAYS BEFORE SUCH CLOSURE OR LANE RESTRICTIONS.

SEND NOTIFICATION TO:

DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR
P.O. BOX 306
JACKSONTOWN, OH. 43030
PHONE: (614) 323-4400 EXT. 5241

FEATHERING

FEATHERING OF THE ASPHALT CONCRETE WHERE REQUIRED SHALL BE ACCORDING TO DRAWING BP-3.1, 2-21-92.

PAVEMENT MARKING

STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, TURN ARROWS, ETC., SHOWN ON THE PLAN ARE TAKEN FROM EXISTING MARKINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PLACE NEW PAVEMENT MARKINGS AS NEAR AS POSSIBLE TO THE EXISTING LOCATIONS UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

ITEM 617, COMPACTED AGGREGATE, TYPE A, AS PER PLAN

ALL AGGREGATE SHALL BE 100% CRUSHED LIMESTONE. ALL QUALITY REQUIREMENTS EXCEPT SHALE SHALL BE WAIVED. OTHER GRADATION REQUIREMENTS SHALL BE AS SPECIFIED EXCEPT THE PLASTICITY INDEX SHALL BE WAIVED. IF SO DESIRED, THE CONTRACTOR MAY USE RECYCLED ASPHALT CONCRETE PAVEMENT (RACP MEETING REQUIREMENTS OF 617.03) IN LIEU OF CRUSHED LIMESTONE.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL HAVE A UNIFORM THICKNESS OF 3".

TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT FOR INTERMEDIATE COURSE SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.05 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

GENERAL NOTES

COS-643-0.00
COS-651-0.00
HOL-651-0.00

ITEM 614 WORK ZONE MARKING SIGNS

A QUANTITY OF WORK ZONE MARKING SIGNS HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

WORK ZONE MARKING SIGNS	LOCATION 1	LOCATION 2
OW-167 (NO EDGE LINES)	22	3
R-33 (DO NOT PASS)	40	12
R-34 (PASS WITH CARE)	16	2
OW-128 (BEGIN ROAD CONSTRUCTION AHEAD)	21	6
OC-8 (END ROAD CONSTRUCTION)	21	6
TOTAL	120	29

SHOULDER RESTORATION

IN ORDER TO PROVIDE POSITIVE DRAINAGE FROM THE ROADWAY SURFACE TO THE SHOULDER BREAK, THE EXISTING ROADWAY SHOULDERS SHALL BE GRADED AND SHAPED USING A GRADER OF ADEQUATE SIZE TO PERFORM THE WORK TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE GRADING AND SHAPING WORK, INCLUDING LABOR AND INCIDENTALS, SHALL BE THE UNIT PRICE BID FOR ITEM SPECIAL - GRADER RENTAL, AND SHALL BE PAID FOR THE ACTUAL NUMBER OF GRADER HOURS WORKED.

ALL EXCESS MATERIAL REMAINING AROUND GUARDRAIL AND OTHER AREAS AFTER THE GRADER WORK IS COMPLETED AND NOT DISPOSED OF ON THE SITE, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. PAYMENT FOR ALL OF THE ABOVE REMOVAL WORK SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - LOADER RENTAL, AND SHALL BE FOR THE ACTUAL NUMBER OF LOADER HOURS WORKED. ANY OTHER EQUIPMENT, LABOR OR INCIDENTALS REQUIRED TO COMPLETE THIS ITEM SHALL BE INCLUDED THEREIN FOR PAYMENT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE PURPOSES.

ITEM SPECIAL	LOCATION 1	LOCATION 2	LOCATION 3
GRADER RENTAL (HOURS)	33	9	2
LOADER RENTAL (HOURS)	16	4	1

RAISED PAVEMENT MARKER REMOVED FOR STORAGE, AS PER PLAN

REMOVAL OF RAISED PAVEMENT MARKERS SHALL CONFORM WITH SECTION NO. 202.071 IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS MANUAL EXCEPT FOR THE FOLLOWING:
ONCE PAVEMENT MARKERS HAVE BEEN REMOVED THE OPENING THAT REMAINS IN THE ROADWAY SHALL BE CLEANED FREE OF ALL DEBRIS, TACKED AND FILLED WITH ASPHALT CONCRETE BY THE END OF THE SAME CONSTRUCTION DAY. AFTER PAVEMENT MARKERS HAVE BEEN REMOVED BY THE CONTRACTOR, HE WILL THEN BE RESPONSIBLE TO TAKE THE REMOVED MARKERS TO A STATE GARAGE THAT WILL BE DESIGNATED BY THE ENGINEER. THE PROJECT ENGINEER SHALL GIVE THE DISTRICT MAINTENANCE ENGINEER 24 HOUR NOTICE PRIOR TO DELIVERY AND THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY TRANSFER DOCUMENTATION WITH ALL DELIVERIES. PAYMENT FOR ALL WORK DESCRIBED ABOVE SHALL BE PAID FOR UNDER ITEM 202 RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN.

ITEM 202 - RAISED PAVEMENT MARKER REMOVED FOR STORAGE, AS PER PLAN
LOCATION 1 - 1495 ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY
LOCATION 2 - 319 ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY
LOCATION 3 - 66 ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM 253 - PAVEMENT REPAIR, AS PER PLAN

AN ESTIMATED QUANTITY FOR PAVEMENT REPAIR HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER WHERE THE EXISTING PAVEMENT HAS DETERIORATED. FINAL LOCATIONS OF PAVEMENT REPAIR SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. DEPTH OF EXCAVATION SHALL BE APPROXIMATELY 6". AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH ITEM 407 TACK COAT. REPLACEMENT MATERIAL WILL BE 6" OF ITEM 301 BITUMINOUS AGGREGATE BASE, PG 64-22 (PLACED AND COMPACTED IN 2-3" LIFTS.). ALL EXCAVATION NEEDED TO ACHIEVE THE PROPER SLOPES FOR DRAINAGE ON BERMS AND ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE PAID FOR UNDER ITEM 253 PAVEMENT REPAIR, AS PER PLAN. AFTER ALL PAVEMENT REPAIR HAS BEEN ACCOMPLISHED, THE ENTIRE SURFACE WILL BE OVERLAID WITH 1.75" OF ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 AND 1.25" OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22.

THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE DESCRIBED PURPOSE.

ITEM 253 PAVEMENT REPAIR, AS PER PLAN 2250 SQ.YD. LOCATION 1
750 SQ.YD. LOCATION 2

C6510001.MCN 3-07-99

GENERAL NOTES

COS-643-0.00
COS-651-0.00
HOL-651-0.00

CALCULATED
RUC
CHECKED
TJD

EXTRA ASPHALT FOR SPOT LEVELING

A CONTINGENCY QUANTITY OF 448 INTERMEDIATE COURSE HAS BEEN INCLUDED IN THE PLAN TO BE USED AT THE DIRECTION OF THE ENGINEER FOR SPOT LEVELING WHERE THE PAVEMENT IS LOW, DETERIORATED, RUTTED AND/OR IN SLIP REPAIR AREAS. THIS OPERATION SHALL BE PERFORMED BEFORE PLACEMENT OF FINAL INTERMEDIATE COURSE AS A SEPARATE OPERATION.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG 64-22

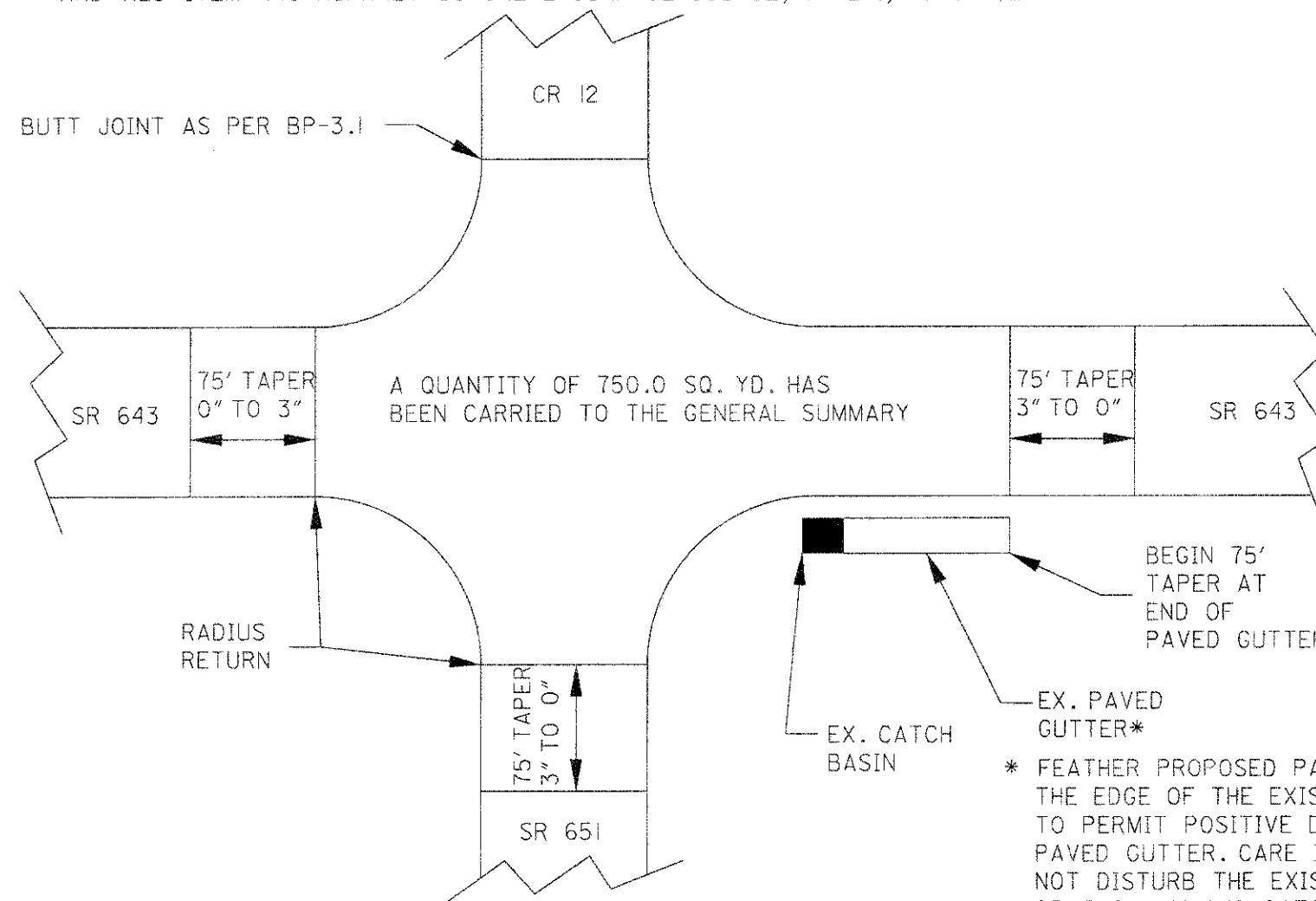
LOCATION 1 - 190 CU. YD.

ITEM 407 TACK COAT

LOCATION 1 - 15 GAL.

ITEM 254 PAVEMENT PLANING, BITUMINOUS, AS PER PLAN

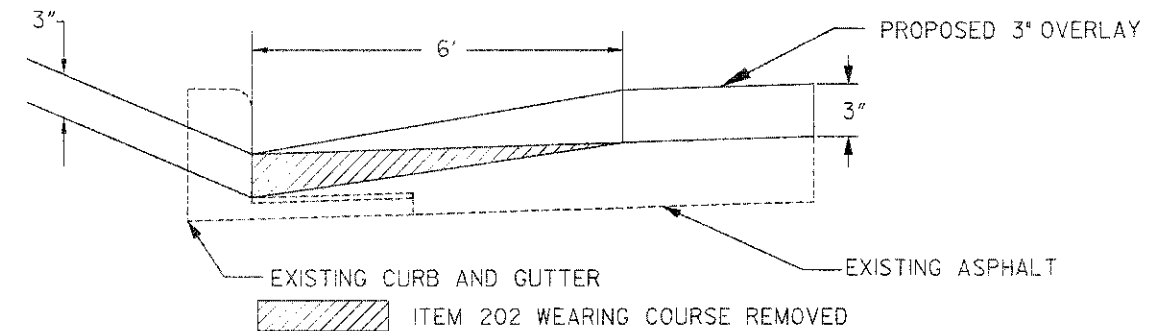
PLANING SHALL BE AS SHOWN IN THE DETAIL BELOW. WHERE THE PLANING BEGINS AND ENDS ON SR 643 THERE WILL BE A 75' TAPER, ON SR 651, THE TAPER WILL START AT THE RADIUS RETURN AND EXTEND 75' AWAY FROM SR. 643, TAPERING 3" TO 0" WITHIN THAT 75'. CR 12 WILL HAVE A BUTT JOINT 25' BACK FROM THE INTERSECTION WITH SR 643 AFTER PLANING, THE ROADWAY SHALL BE RESURFACED WITH 1.75" ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22 AND 1.25" ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22.



ITEM 202 WEARING COURSE REMOVED, AS PER PLAN

AREAS OF CURB AND GUTTER WILL REQUIRE ITEM 202 WEARING COURSE REMOVED, AS PER PLAN, AS SHOWN IN THE DETAIL BELOW. IN ADDITION, ASPHALT FEATHERING AS PER STD DWG BP-3.1(2-21-92) SHALL BE PERFORMED IN THESE AREAS. THE QUANTITY LISTED BELOW HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 202 - WEARING COURSE REMOVED, AS PER PLAN 176 SQ. YDS.
(APPROXIMATE LOCATION SLM 2.30 TO SLM 2.35, RIGHT SIDE ONLY)



THIS ITEM SHALL ALSO BE USED TO REMOVE ALL GRADER PATCHES THROUGHOUT THE LIMITS OF THE PROJECT, AS DIRECTED BY THE ENGINEER. IT ALSO SHALL BE USED AT LOCATIONS SPECIFIED BY THE ENGINEER TO RESTORE THE CROWN TO THE ROADWAY. AN ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PURPOSES DESCRIBED ABOVE.

LOCATION 1 9000 S. Y.
LOCATION 2 2467 S. Y.

* FEATHER PROPOSED PAVEMENT TO MEET THE EDGE OF THE EXISTING PAVED GUTTER TO PERMIT POSITIVE DRAINAGE INTO THE PAVED GUTTER. CARE IS TO BE TAKEN AS TO NOT DISTURB THE EXISTING PAVED GUTTER OR THE EXISTING CATCH BASIN.

RESIDENCE AND COMMERCIAL DRIVES

AN ESTIMATED QUANTITY OF ITEM 448 ASPHALT CONCRETE HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER TO PAVE APPROACH AREAS TO EXISTING DRIVEWAYS. PAVING SHALL EXTEND 10 FEET INTO THE DRIVEWAY, MEASURED FROM THE EDGE OF THE PAVEMENT, OR PAVED BERM. FIELD DRIVES AND OIL WELL DRIVES WILL NOT BE PAVED.

ANY GRADING OF EXISTING DRIVES, TACK OR PRIME COAT, ALL MATERIAL, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE WORK ON DRIVES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE ASPHALT ITEM SHOWN BELOW.

PAVING OF THE MAINLINE SHALL BE COMPLETED BEFORE THE WORK DESCRIBED ABOVE SHALL BEGIN ON DRIVES.

THE QUANTITIES SHOWN BELOW HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PURPOSE DESCRIBED ABOVE.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)
LOCATION 1 - 73 CU.YD. LOCATION 2 - 31 CU.YD.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22 (DRIVEWAYS)
LOCATION 1 - 51 CU.YD. LOCATION 2 - 22 CU.YD.

MAIL BOX TURN OUTS

A QUANTITY OF ASPHALT CONCRETE HAS BEEN PROVIDED IN THE PLAN TO COVER MAIL BOX TURN OUTS. TURN OUTS SHALL BE PAVED AS SHOWN IN THE DETAIL IN DRAWING BP-4J, 2-21-92.

ANY EXTRA GRADING OF THE SHOULDERS, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT TOOLS AND INCIDENTALS NECESSARY TO COMPLETE MAIL BOX TURN OUTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22 AND ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22

QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22

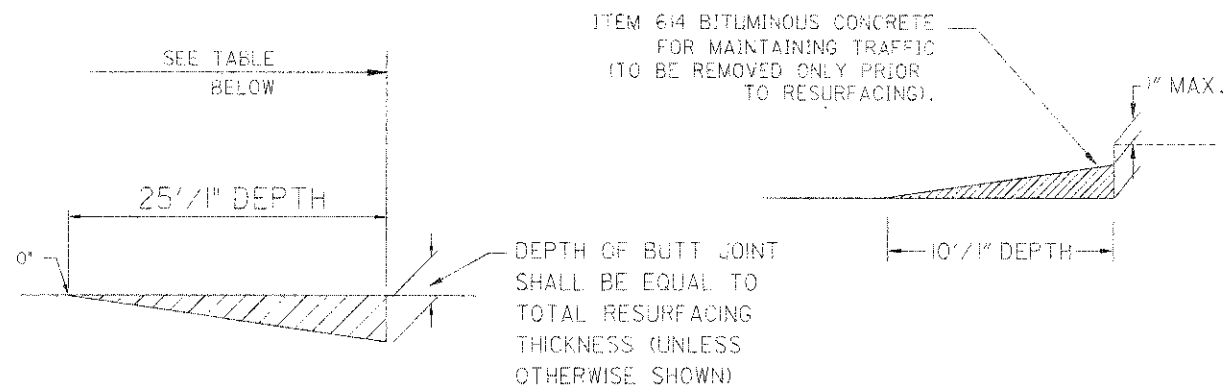
LOCATION 1 - 52 CU.YD. LOCATION 2 - 20 CU.YD

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22

LOCATION 1 - 73 CU.YD. LOCATION 2 - 27 CU.YD

BUTT JOINT

A BUTT JOINT WILL BE REQUIRED AT LOCATIONS SPECIFIED BELOW AND AT EXTRA AREAS WITH WEARING COURSE REMOVED. AFTER THE JOINT IS CONSTRUCTED, THE DROP OFF CREATED SHALL BE MINIMIZED BY TEMPORARILY FILLING THE VOID TO WITHIN AT LEAST 1" OF THE EXISTING ROADWAY SURFACE (SEE DETAIL BELOW). PLACEMENT AND REMOVAL OF TEMPORARY WEDGE SHALL BE INCLUDED FOR PAYMENT IN THE UNIT BID PRICE FOR THE APPROPRIATE ASPHALT REMOVAL ITEM (PAVEMENT PLANING OR WEARING REMOVED).



LOCATION	ROUTE	LOCATION	SLM	202 WEARING COURSE REMOVED	TACK COAT @ 0.075 GAL./S.Y.	ITEM 614 BITUMINOUS CONCRETE
				SQ. YD.	GAL.	CU. YD.
1	SR 643	SR 83	0.00	SEE SHEET 10	4	3.1
1	SR 643	SR 83	0.00	SEE SHEET 10	4	3.1
1	SR 643	COUNTY LINE	10.87		3	2.5
TOTAL LOCATION 1				466	11	8.7
2	SR 651	END WORK	3.40	150	12	1.1
TOTAL LOCATION 2				150	12	1.1

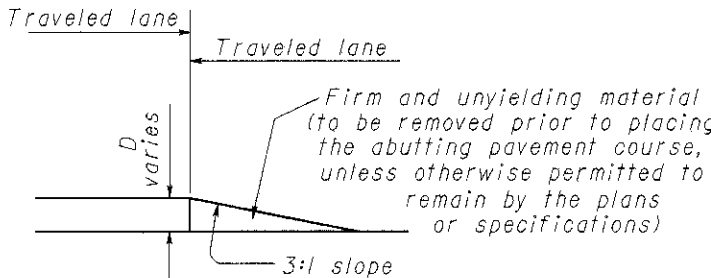
TOTAL CARRIED TO GENERAL SUMMARY

GENERAL NOTES

1. It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.
2. While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
3. In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
4. The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
5. Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing MC-9.2 and Item 622.
6. When drums are specified for a dropoff condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
7. When OW-151 (Low Shoulder) signs or OW-171 (Uneven Lanes) and OWP-171 signs are required, they shall be placed 750' in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the dropoff condition extends more than one-half mile, additional signs should be erected at intervals of one mile or less.
8. For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
9. Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10', drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5" and approval is granted by the Project Engineer.
10. Pavement Repairs (or similar work):
- a. Lengths greater than 60 feet - utilize appropriate treatment from Condition I.
 - b. Lengths of 60 feet or less - repairs shall be effected in accordance with 255.08. Drums may be used as a separator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT
(MILLING OR RESURFACING)

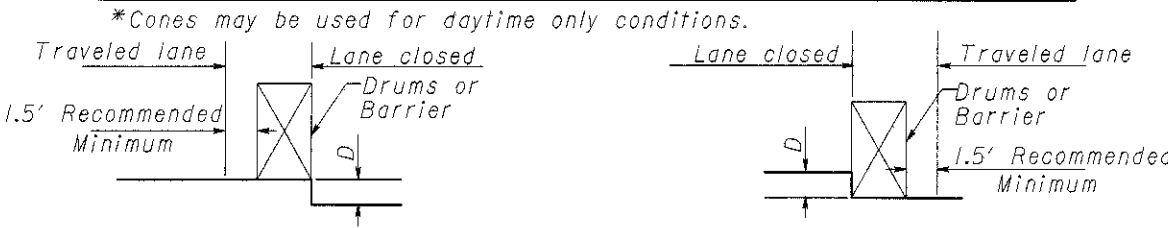
1. This treatment may be used when permitted for Condition I only.
2. OW-171 and OWP-171 signs required.



CONDITION I
DROPOFFS BETWEEN TRAVELED LANES

1. These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D (In.)	Treatment
≤1 1/2	Erect OW-171 and OWP-171 signs.
>1 1/2-3	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
>3-5	Lane closure utilizing drums as shown below.
>5	Lane closure utilizing portable concrete barrier as shown below.

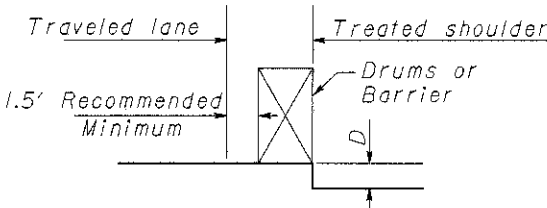


CONDITION II
DROPOFFS WITHIN GRADED SHOULDER AREA

1. The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
2. The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials, or concrete). For the purposes herein, its maximum width shall be considered to be twelve (12) feet.

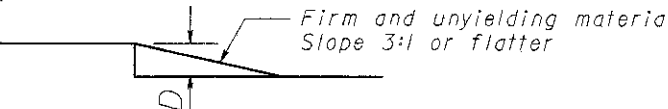
D (In.)	Treatment
≤1 1/2	1) If edgelines are present, no treatment necessary OR 2) Erect OW-171 and OWP-171 signs.
>1 1/2-5	1) If min. lane width requirements can be met, maintain lanes utilizing drums as shown below OR 2) If min. lane width requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
>5-12 Daylight only	If min. lane width requirements can be met, maintain lanes utilizing drums as shown below.
>5-24	1) If min. lane width requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If min. lane width requirements cannot be met, close adjacent lane utilizing drums.
>24	Lane closure utilizing portable concrete barrier as shown below.

*Minimum lane widths shall be 10' unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

1. This treatment may not be used within a bituminous shoulder where a hot longitudinal joint per 401.15 is required.
2. OW-151 signs required.



COS-643-0.00
COS-651-0.00
HOL-651-0.00

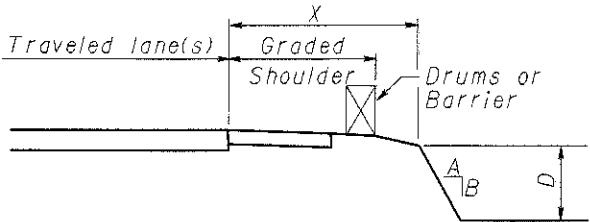
CONDITION III

DROPOFFS BEYOND GRADED SHOULDER OR BACK OF CURB

1. See Note 2 under Condition II.
2. Use Chart A or B below, as applicable.

CHART A

- USE FOR:
- 1. Uncurbed Facilities.
 - 2. Curbed Facilities, where:
 - a. Curbs are less than 6" in height.
 - b. Curbs are 6" or greater in height and the legal speed is greater than 40 mph.

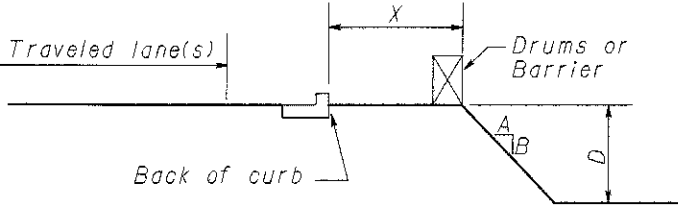


X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-4	Any	Any	(a)	(a)
4-30	Any	3:1 or Flatter	None	None
4-12	<3	Steeper than 3:1	None	None
4-12	>3-≤12	Steeper than 3:1	Drums	Drums
4-12	>12	Steeper than 3:1	Drums	Barrier
>12-20	<12	Steeper than 3:1	None	None
>12-20	>12-≤24	Steeper than 3:1	Drums	Drums
>12-20	>24	Steeper than 3:1	Drums	Barrier
>20-30	<24	Steeper than 3:1	None	Drums
>20-30	>24	Steeper than 3:1	Drums	Barrier
>30	Any	Any	None	None

(a) Use treatment specified under Condition II.

CHART B

- USE FOR: Curbed facilities, where the curb is 6" or greater in height and the legal speed is 40 mph or less.



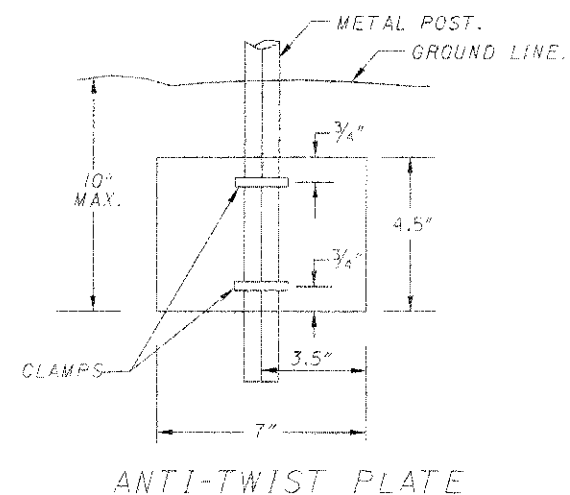
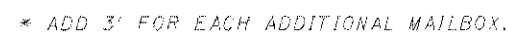
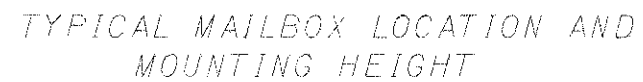
X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-10	<12	Any	None	Drums
0-10	>12	Any	Drums	Drums
>10	Any	Any	None	None

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN

DROPOFFS IN
WORK ZONES

DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED

PLAN NO. 12



LOCATION 2					
SPECIAL	MAILBOX	SUPPORT	SYSTEM	SINGLE	16 EACH
SPECIAL	MAILBOX	SUPPORT	SYSTEM	DOUBLE	2 EACH

RPM General Notes

Materials Supplied by The Department

All materials are to be Contractor furnished, except that the Department shall supply RPM materials in the quantities shown herein to the Contractor. Pay items for the Department supplied materials shall be indicated as "Installation Only". The quantity and type of Department supplied materials are shown on sheets 12, 13, 14 and 15 of this plan.

The Contractor shall pick up the department supplied RPM materials at the direction of the Project Engineer. For some projects having quantities of less than 20 RPMs, the contractor may pick up RPM materials at the District Offices. Quantities over 20 RPMs will be picked up at the Recycler's Warehouse or as arranged with the District. The Contractor shall pick up Department supplied RPM materials at the specified location(s) for transport to the work site or to the Contractor's storage facility. The Recycled Raised Pavement Marker (RPM) Authorization Form is to be signed by the District Construction Engineer prior to pick up of the RPMs. The Contractor shall notify the District and / or the parties listed on the authorization form in writing at least five (5) calendar days prior to pick up of the department supplied materials. The contractor shall store the RPMs without damage or contamination with foreign matter. A deduction in the amount of the actual cost to the Department shall be made for materials damaged by the Contractor or for castings received by the Contractor which were not installed and were not returned to the Department.

Return of Non-performed Raised Pavement Marker Materials Supplied by the Department

Raised Pavement Marker Materials Supplied by the Department, that are non-performed shall be carefully repacked or packed in the boxes in the same style and quantity as originally received from the Department. Casting styles shall not be mixed within any one container. The Contractor shall clearly mark on the outside of each container, the color of the prismatic retro-reflector, the style of casting. Boxes shall be placed on skids or pallets in the same style (Low Profile or Conventional, reflectorised or non reflectorised) and no more than 420 RPMs (or 21 Boxes) on one skid.

Only use the boxes supplied by the Raised Pavement Marker Recycler. Boxes must be marked with the recycler's part or catalog number and the project number. The recycler's catalog or part numbers may be obtained from the Office of Traffic Engineering in Columbus, Ohio or from the recycler. Boxes not marked with the proper recycler's catalog or part numbers, and the department's project number will not be accepted at the recycler's warehouse. Non Performed Materials will be returned to the location as specified by the District Construction Engineer within 30 Days of the completion of the project.

The above work including all labor, equipment and material needed to perform the work, shall be considered incidental to the respective pay item.

If the department has to repackage the RPMs correctly, the Contractor will be assessed the actual cost for repackaging the Materials by the Department's Forces.

Loading of Materials Supplied by the Department at the Recycler's Warehouse

Trucks shall have a loading height of 48 inches and be able to back up flush to the loading dock.

Trucks shall not have any obstructions or protrusions that prevent the loading by a standard forklift or lift truck.

Semi trucks or 20 foot commercial trucks are the most appropriate trucks for loads in excess of 4 pallets (one pallet = 21 boxes = 2000 LBS).

Stake body trucks are appropriate to load less than 4 pallets, provided the truck is rated for the load and the load can be safely secured for transport by chaining or strapping down as needed.

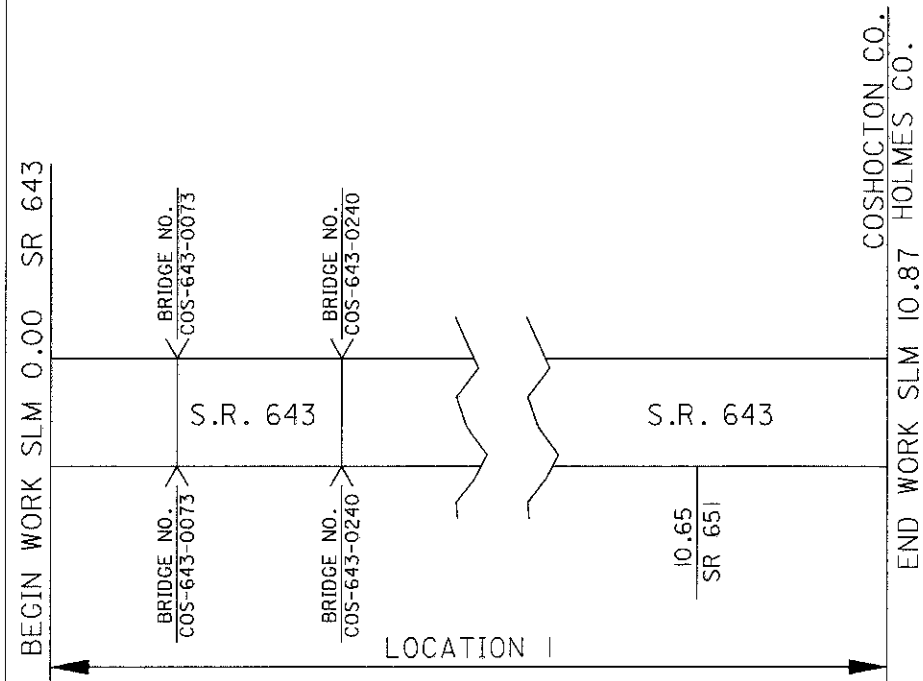
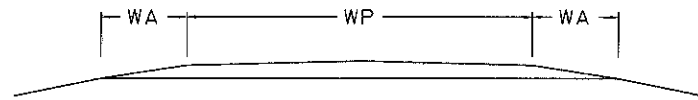
Pickup trucks are appropriate for loads of approximately one pallet, provided the pickup truck is rated for the load and the load can be safely secured for transport.

Dump trucks, tilt bed trucks, and non commercial moving vans will not be loaded by the recyclers warehouse.

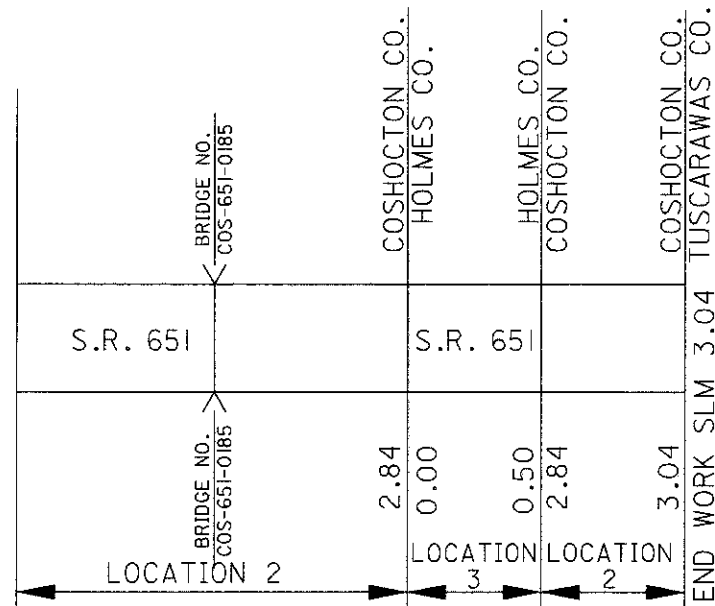
The warehouse supervisor will refuse to load any truck that is unsafe to load or unsuitable for the load being placed on the truck.

ASPHALT CONCRETE

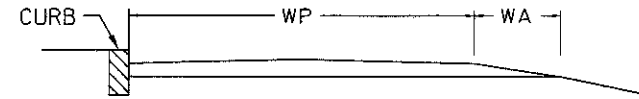
TYPICAL I



BEGIN WORK SLM 0.00 SR 651



TYPICAL 3



BRIDGES
COS-643-0073
COS-643-0240
COS-651-0185

(1) BRIDGE LENGTH X PAVEMENT WIDTH				(2) FIELD MEASURED				PAVEMENT DATA								# TACK COAT @ 0.25 GAL/SQ.YD.								
LOCATION	ROUTE	CO.	LOG POINT TO LOG POINT	LENGTH		WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA	PROPOSED PAVEMENT							614		617					
				MILES	LIN. FT.					407		448 ASPHALT CONCRETE					TEMPORARY CENTER LINE, CLASS II	COMPACTED AGGREGATE TYPE A, AS PER PLAN (3" THICK X 2' WIDE)						
										TACK COAT @ 0.075 gal./s.y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 gal./s.y.	THICK	INTERMEDIATE COURSE, TYPE 2, PG 64-22	THICK	SURFACE COURSE, TYPE 1, PG 64-22									
									SQ. YDS.	GALS.	GALS.	INCHES	CU.YDS.	INCHES	CU.YDS.		MILE	CU. YD.						
1	643	COS	0.00-10.87	10.87	57393.6	19(2)	1/3	ASPHALT	121165	9087.4	6058.3	1.75	5889.9	1.25	4207.1		21.74	2125.7						
EXTRA TACK COAT FOR LONGITUDINAL JOINT										# 399														
BRIDGE DEDUCTIONS (1) FROM SHEET 12										(31.0)	(34.0)		(32.8)		(14.3)			(6.4)						
TOTALS LOCATION 1										9455.4	6024.3		5857.0		4192.8		21.74	2119.3						
2	651	COS	0.00-2.84	2.84	14995.2	18	1	ASPHALT	29990.4	2249.3	1499.5	1.75	1457.9	1.25	1041.3		5.68	555.4						
2	651	COS	2.84-3.04	0.20	1056.0	18	1	ASPHALT	2112.0	158.4	105.6	1.75	102.7	1.25	73.3		0.40	39.1						
EXTRA TACK COAT FOR LONGITUDINAL JOINT										#112														
BRIDGE DEDUCTIONS (1) FROM SHEET 11										(3.0)	(2.0)		(1.8)		(1.3)			(0.7)						
TOTALS LOCATION 2										2519.7	1603.1		1558.8		1113.3		6.08	593.8						
3	651	HOL	0.00-0.50	0.50	2640.0	18	1	ASPHALT	5280.0	396.0	264.0	1.75	256.7	1.25	183.3		1.00	97.8						
EXTRA TACK COAT FOR LONGITUDINAL JOINT										#19														
TOTALS LOCATION 3										415.0	264.0		256.7		183.3		1.00	97.8						

ASPHALT CONCRETE

COS-651-0.00
HOL-651-0.00

9	20
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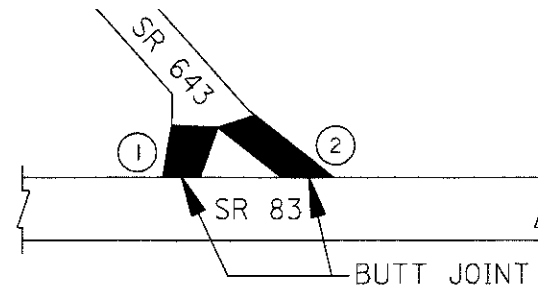


Diagram illustrating a geological cross-section. A fault line, labeled CR 1, separates two blocks. The block on the left is labeled 3, and the block on the right is labeled 4. Below these blocks is a layer labeled SR 643.

EXTRA AREAS & DEDUCTIONS

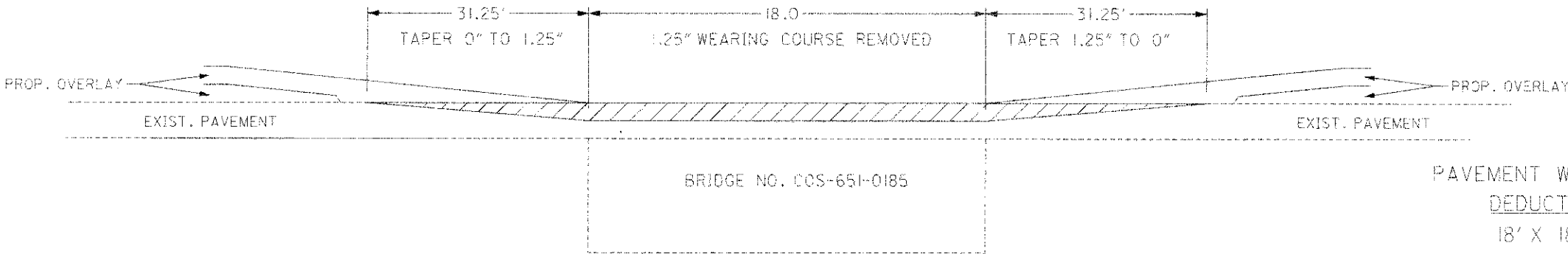
COS-643-0.00
COS-651-0.00
HOL-651-0.00

C6510001.MEA 03-02-99

DETAIL ①

NOTE: ALL PLANING AND PAVEMENT TAPERS
SHALL BE AT A RATE OF 25'/1"

PLAN NO.



202 WEARING COURSE REMOVED:
[(62.5 X 18) + (18.0 X 27.0)] = 179.0 SQ.YD.

PAVEMENT WIDTH X BRIDGE LENGTH
DEDUCTIONS FOR BRIDGES
18' X 18' ÷ 9 = 36 SQ.YD.

ITEM 407 TACK COAT
36 S.Y. X 0.075 GAL/S.Y. = 3 GAL.
ITEM 407 TACK COAT FOR INTERM.
36 S.Y. X 0.05 GAL/S.Y. = 2 GAL.
ITEM 448 INTERMEDIATE COURSE.
36 S.Y. X 0.049 YD. = 1.8 CU.YD.
ITEM 448 SURFACE COURSE.
36 S.Y. X 0.035 YD. = 1.3 CU.YD.

COS-651-0183: REMOVE AND REPLACE 1.25" ASPHALT

QUANTITIES CARRIED TO SHEET 11

QUANTITIES CARRIED TO SHEET 9

BRIDGE DECK DATA

LOCATION	COUNTY, ROUTE, BRIDGE NO.	LENGTH (BRIDGE LIMITS)	WIDTH	BRIDGE DECK AREA	202	BRIDGE DECK REPAIR			407		448 ASPHALT CONCRETE				SPECIAL			
					WEARING COURSE REMOVED DEPTH VAR."	☐ SS-845 LATEX MODIFIED CONCRETE ☐ SS-850 DENSE CONCRETE			TACK COAT	TACK COAT FOR INTERMEDIATE COURSE	THICK	INTERMEDIATE COURSE, TYPE 2, PG 64-22	THICK	SURFACE COURSE, TYPE 1, PG 64-22	254	STEEL DRIP STRIP	DECK WATERPROOFING	
															GRINDING PORTLAND CEMENT CONCRETE PAVEMENT		MEMBRANE WATERPROOFING SHEET TYPE 3	MEMBRANE WATERPROOFING
						-----" THICK OVERLAY	VARIABLE THICKNESS OVERLAY	FULL-DEPTH REPAIR										
LIN.FT.	LIN.FT.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	GAL.	GAL.	INCH	CU.YDS.	INCH	CU.YDS.	SQ.YD.	SQ.FT.	SQ.YDS.	SQ.YDS.		
2	COS-651-0185	18.0	27.0	54.0	179.0	SEE DETAIL ① SHEET 11			4.1			1.25	1.9					
TOTAL CARRIED TO GENERAL SUMMARY (LOCATION 2)					179.0													
1	COS-643-0073	19.0	30.0	63.3	131.9	SEE DETAIL ③ SHEET 12												
1	COS-643-0240	114.0	32.0	405.3	131.9	SEE DETAIL ② SHEET 12												
TOTAL CARRIED TO GENERAL SUMMARY (LOCATION 1)					263.8													
									4.1				1.9					

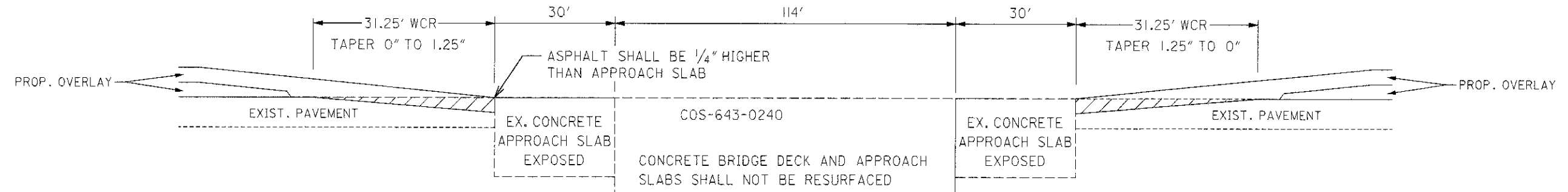
C6510001.MBT 3-7-99

BRIDGE DECK TREATMENT

COS-643-0.00
COS-651-0.00
HOL-651-0.00

DETAIL ② BUTT JOINT @ APPROACH SLABS

NOTE: ALL PLANING AND PAVEMENT TAPERS
SHALL BE AT A RATE OF 25'/1"



202 WEARING COURSE REMOVED:
COS-643-0240:
 $(62.5' \times 19') / 9 = 131.9 \text{ SQ.YD.}$

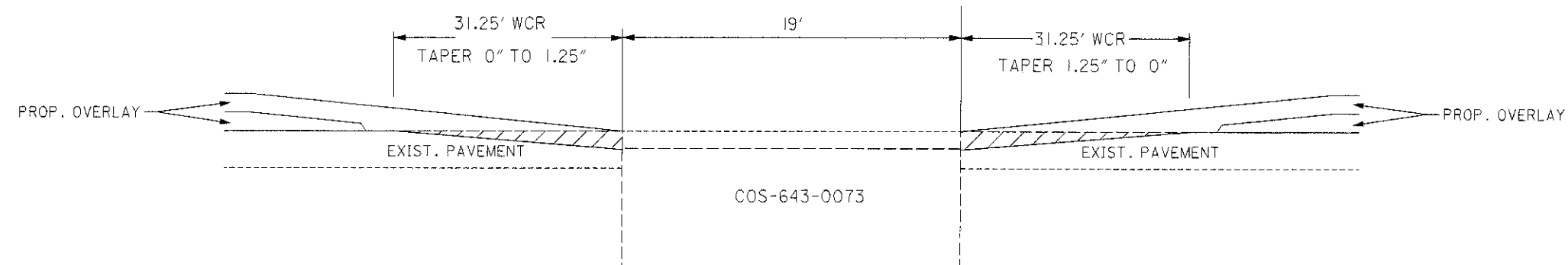
QUANTITY CARRIED TO SHEET 11

DEDUCTIONS FOR BRIDGES
COS-643-0240:
 $(174' \times 19') / 9 (0.035) = 12.9 \text{ CU.YD. (SURFACE COURSE)}$
 $(236.5 \times 19) / 9 (0.049) = 24.5 \text{ CU.YD. (INTERMEDIATE COURSE)}$
 $(174 \times 19) / 9 (0.075) = 28.0 \text{ GALS (TACK COAT)}$
 $(236.5 \times 19) / 9 (0.05) = 25 \text{ GALS (TACK FOR INTERMEDIATE)}$

DEDUCTIONS CARRIED TO SHEET 9

DETAIL ③ BUTT JOINT @ BRIDGE/NO APPROACH SLABS

NOTE: ALL PLANING AND PAVEMENT TAPERS
SHALL BE AT A RATE OF 25'/1"



202 WEARING COURSE REMOVED:
COS-643-0073:
 $(62.5' \times 19') / 9 = 131.9 \text{ SQ.YD.}$

DEDUCTIONS FOR BRIDGES
COS-643-0073:
 $(19' \times 19') / 9 (0.035) = 1.4 \text{ CU.YD. (SURFACE COURSE)}$
 $(81.5' \times 19') / 9 (0.049) = 8.4 \text{ CU.YD. (INTERMEDIATE COURSE)}$
 $(19 \times 19) / 9 (0.075) = 3.0 \text{ GALS (TACK COAT)}$
 $(81.5 \times 19) / 9 (0.05) = 9 \text{ GALS (TACK FOR INTERMEDIATE)}$

DEDUCTIONS CARRIED TO SHEET 9

QUANTITY CARRIED TO SHEET 11

C6510004.MBT

BRIDGE DECK DETAILS

COS-643-0.00
COS-651-0.00
HOL-651-0.00

12
20

CALC. BY SAB
DATE 02-02-99
CHKD. BY
DATE

LOCATION SUB-SUMMARY

DETAIL	
1	TAPERED ACCELERATION LANE
2	DECELERATION LANE
3	MULTILANE DIVIDED/ CONTROLLED ACCESS

DETAIL	
4	4 LANE DIVIDED TO 2 LANE TRANSITION
5	4 LANE UNDIVIDED TO 2 LANE TRANSITION
6	ONE LANE BRIDGE
7	STOP APPROACH
8	THRU APPROACH
9	TWO WAY LEFT TURN LANE

DETAIL	
10	APPROACH W/LT. TURN LANE
11	HORIZONTAL CURVE 40' (NOTE 2)
12	HORIZONTAL CURVE ALT. (NOTE 3)
GAP	CENTERLINE AT 80' TYP.

LOCATION NUMBER	LOCATION				DETAIL	RPM	ITEM QUANTITIES			PRISMATIC RETRO-REFLECTOR	PRISMATIC RETRO-REFLECTOR COLORS					REMARKS
	COUNTY	ROUTE	S.L.M. MILES				INSTALLATION ONLY				ONE-WAY		TWO-WAY			
							RPM	RPM CASTING	PRISMATIC RETRO-REFLECTOR		WHITE	YELLOW	YELLOW/ YELLOW	WHITE/ RED		
I	COS	643	0.00	0.16	7		27				16		11			STOP AT SR 83
I	COS	643	0.16	0.32	GAP		11						11			
I	COS	643	0.32	0.46	12		21						21			PC 0.41 PT 0.43 L= 106' DEG 17
I	COS	643	0.46	0.57	12		17						17			PC 0.46 PT 0.41 L= 106' DEG 23
I	COS	643	0.57	0.64	GAP		5						5			
I	COS	643	0.64	0.84	12		29						29			PC 0.73 PT 0.75 L= 106' DEG 19
I	COS	643	0.84	0.97	12		21						21			PC 0.87 PT 0.90 L= 158' DEG 16
I	COS	643	0.97	1.07	12		17						17			PC 0.97 PT 1.00 L= 158' DEG 16
I	COS	643	1.07	1.19	12		20						20			PC 1.07 PT 1.10 L= 158' DEG 13
I	COS	643	1.19	2.15	GAP		63						63			
I	COS	643	2.15	2.37	12		37						37			PC 2.24 PT 2.30 L= 317' DEG 13
I	COS	643	2.37	2.40	12		6						6			PC 2.37 PT 2.39 L= 106' DEG 19
I	COS	643	2.40	2.45	12		9						9			PC 2.40 PT 2.42 L= 106' DEG 57
I	COS	643	2.45	2.57	12		20						20			PC 2.45 PT 2.48 L= 158' DEG 25
I	COS	643	2.57	2.64	GAP		5						5			
I	COS	643	2.64	2.85	12		32						32			PC 2.73 PT 2.76 L= 158' DEG 11
I	COS	643	2.85	3.36	GAP		34						34			
I	COS	643	3.36	3.51	12		24						24			PC 3.45 PT 3.48 L= 158' DEG 13
I	COS	643	3.51	3.62	12		17						17			PC 3.51 PT 3.53 L= 106' DEG 19
I	COS	643	3.62	3.87	GAP		17						17			
I	COS	643	3.87	4.11	12		40						40			PC 3.96 PT 4.02 L= 317' DEG 10
I	COS	643	4.11	4.17	12		12						12			PC 4.14 PT 4.17 L= 158' DEG 9
I	COS	643	4.17	4.27	12		19						19			PC 4.17 PT 4.21 L= 211' DEG 13
I	COS	643	4.27	4.40	12		27						27			PC 4.27 PT 4.34 L= 370' DEG 12
I	COS	643	4.40	4.45	12		9						9			PC 4.40 PT 4.42 L= 106' DEG 14
I	COS	643	4.45	4.57	12		20						20			PC 4.45 PT 4.48 L= 158' DEG 15
TOTALS CARRIED TO SHEET 16							559				16		543			

C6510001.TRM 03-02-99

CALC. BY SAB
DATE 02-02-99
CHKD. BY
DATE

LOCATION SUB-SUMMARY

DETAIL	
1	TAPERED ACCELERATION LANE
2	DECELERATION LANE
3	MULTILANE DIVIDED/ CONTROLLED ACCESS

DETAIL	
4	4 LANE DIVIDED TO 2 LANE TRANSITION
5	4 LANE UNDIVIDED TO 2 LANE TRANSITION
6	ONE LANE BRIDGE
7	STOP APPROACH
8	THRU APPROACH
9	TWO WAY LEFT TURN LANE

DETAIL	
10	APPROACH W/LT. TURN LANE
11	HORIZONTAL CURVE 40' (NOTE 2)
12	HORIZONTAL CURVE ALT. (NOTE 3)
GAP	CENTERLINE AT 80' TYP.

LOCATION NUMBER	LOCATION				D E T A I L	RPM	ITEM QUANTITIES			PRISMATIC RETRO- REFLECTOR	PRISMATIC RETRO-REFLECTOR COLORS					REMARKS
	COUNTY	ROUTE	S.L.M. MILES				INSTALLATION ONLY				ONE-WAY		TWO-WAY			
							RPM	RPM CASTING	PRISMATIC RETRO- REFLECTOR							
			WHITE	YELLOW							YELLOW/ YELLOW	WHITE/ RED	YELLOW/ RED			
I	COS	643	4.57	4.76	I2		31						31			PC 4.67 PT 4.72 L= 264' DEG 16
I	COS	643	4.76	4.89	I2		23						23			PC 4.76 PT 4.80 L= 211' DEG 17
I	COS	643	4.89	5.63	GA		49						49			
I	COS	643	5.63	5.77	I2		20						20			PC 5.72 PT 5.75 L= 158' DEG 13
I	COS	643	5.77	5.94	I2		33						33			PC 5.77 PT 5.85 L= 422' DEG 8
I	COS	643	5.94	6.11	GAP		11						11			
I	COS	643	6.11	6.25	I2		21						21			PC 6.20 PT 6.22 L= 106' DEG 14
I	COS	643	6.25	6.35	I2		17						17			PC 6.25 PT 6.28 L= 158' DEG 13
I	COS	643	6.35	6.41	11		3						3			PC 6.35 PT 6.41 L= 106' DEG 6
I	COS	643	6.41	6.48	GAP		5						5			
I	COS	643	6.48	6.68	11		3						3			PC 6.57 PT 6.59 L= 106' DEG 9
I	COS	643	6.68	6.89	GAP		14						14			
I	COS	643	6.89	7.10	I2		32						32			PC 6.98 PT 7.01 L= 158' DEG 28
I	COS	643	7.10	7.30	I2		31						31			PC 7.18 PT 7.21 L= 158' DEG 25
I	COS	643	7.30	7.33	GAP		2						2			
I	COS	643	7.33	7.55	I2		35						35			PC 7.42 PT 7.46 L= 211' DEG 14
I	COS	643	7.55	7.60	GAP		3						3			
I	COS	643	7.60	7.85	I2		43						43			PC 7.69 PT 7.76 L= 370' DEG 14
I	COS	643	7.85	8.04	GAP		25						25			
I	COS	643	8.04	8.10	11		11						11			PC 8.04 PT 8.10 L= 422' DEG 6
I	COS	643	8.10	8.17	GAP		5						5			
I	COS	643	8.17	8.37	I2		29						29			
I	COS	643	8.37	8.50	I2		23						23			PC 8.26 PT 8.28 L= 106' DEG 19
I	COS	643	8.50	8.61	I2		21						21			PC 8.42 PT 8.46 L= 211' DEG 21
I	COS	643	8.61	8.77	I2		28						28			PC 8.50 PT 8.52 L= 106' DEG 14
I	COS	643	8.77	9.74	GAP		64						64			PC 8.63 PT 8.68 L= 264' DEG 15
	TOTALS CARRIED TO SHEET 16						582						582			

C6510002.TRM 03-07-99

CHKD. BY _____
DATE _____

LOCATION SUB-SUMMARY

DETAIL	
1	TAPERED ACCELERATION LANE
2	DECELERATION LANE
3	MULTILANE DIVIDED/ CONTROLLED ACCESS

DETAIL	
4	4 LANE DIVIDED TO 2 LANE TRANSITION
5	4 LANE UNDIVIDED TO 2 LANE TRANSITION
6	ONE LANE BRIDGE
7	STOP APPROACH
8	THRU APPROACH
9	TWO WAY LEFT TURN LANE

DETAIL	
10	APPROACH W/LT. TURN LANE
11	HORIZONTAL CURVE 40' (NOTE 2)
12	HORIZONTAL CURVE ALT. (NOTE 3)
GAP	CENTERLINE AT 80' TYP.

[illegible]

REC	CHECKED
	130

RPM LOCATION SUB-SUMMARY

COS-643-0.00
COS-651-0.00
HOL-651-0.00

$$\frac{15}{20}$$

C6510003.TRM 03-02-99

CALC. BY SAB
DATE 02-02-99

CHKD. BY _____
DATE _____

LOCATION SUB-SUMMARY

DETAIL	
1	TAPERED ACCELERATION LANE
2	DECELERATION LANE
3	MULTILANE DIVIDED/ CONTROLLED ACCESS

DETAIL	
4	4 LANE DIVIDED TO 2 LANE TRANSITION
5	4 LANE UNDIVIDED TO 2 LANE TRANSITION
6	ONE LANE BRIDGE
7	STOP APPROACH
8	THRU APPROACH
9	TWO WAY LEFT TURN LANE

DETAIL	
10	APPROACH W/LT. TURN LANE
11	HORIZONTAL CURVE 40' (NOTE 2)
12	HORIZONTAL CURVE ALT. (NOTE 3)
GAP	CENTERLINE AT 80' TYP.

LOCATION NUMBER	LOCATION				D E T A I L	RPM	ITEM QUANTITIES			PRISMATIC RETRO- REFLECTOR	PRISMATIC RETRO-REFLECTOR COLORS					REMARKS
	COUNTY	ROUTE	S.L.M. MILES				INSTALLATION ONLY				ONE-WAY		TWO-WAY			
			FROM	TO			RPM	RPM CASTING	PRISMATIC RETRO- REFLECTOR		WHITE	YELLOW	YELLOW/ YELLOW	WHITE/ RED	YELLOW/ RED	
2	COS	651	0.00	0.16	7		27				16		11			STOP AT SR 643
2	COS	651	0.16	0.37	GAP		14						14			
2	COS	651	0.37	0.57	12		29						29			PC 0.46 PT 0.48 L= 106' DEG 51
2	COS	651	0.57	1.08	GAP		34						34			
2	COS	651	1.08	1.28	12		29						29			PC 1.17 PT 1.19 L= 106' DEG 14
2	COS	651	1.28	1.44	12		24						24			PC 1.33 PT 1.35 L= 106' DEG 55
2	COS	651	1.44	1.56	GAP		8						8			
2	COS	651	1.56	1.75	12		29						29			PC 1.64 PT 1.66 L= 106' DEG 14
2	COS	651	1.75	1.88	GAP		9						9			
2	COS	651	1.88	2.08	12		29						29			PC 1.97 PT 1.99 L= 106' DEG 28
2	COS	651	2.08	2.17	GAP		6						6			
2	COS	651	2.17	2.31	12		23						23			PC 2.26 PT 2.29 L= 158' DEG 25
2	COS	651	2.31	2.34	12		6						6			PC 2.31 PT 2.33 L= 106' DEG 28
2	COS	651	2.34	2.47	12		23						23			PC 2.34 PT 2.38 L= 211' DEG 38
2	COS	651	2.47	2.74	GAP		18						18			
2	COS	651	2.74	2.93	12		27						27			PC 2.83 PT 2.84 L= 53' DEG 40
2	COS	651	2.93	3.04	GAP		7						7			
TOTALS LOCATION 2							342*				16		326			
3	COS	651	0.00	0.50	GAP		33						33			
TOTALS LOCATION 3							33*						33			
TOTALS FROM SHEET 13 (LOCATION 1)							559				16		543			
TOTALS FROM SHEET 14 (LOCATION 1)							582						582			
TOTALS FROM SHEET 15 (LOCATION 1)							133				32		101			
TOTALS FOR LOCATION 1							1274*				48		1226			
* TOTALS CARRIED TO GENERAL SUMMARY																

RPM LOCATION SUB-SUMMARY

COS-643-0.00
COS-651-0.00
HOL-651-0.00

QUANTITIES INCLUDE CL AROUND OUTSIDE OF PAINTED ISLAND

CENTER LINE SUB-SUMMARY

LOCATION	CO.	ROUTE	S.L.M.		CENTER LINES QUANTITIES		PARTICIPATION TYPE				TOTAL CENTER LINE MILES	REMARKS
			FROM	TO	TOTAL MILES	EQUIVALENT SOLID LINE	IRG	FG	RSG	NON FED STATE		
1	COS	SR 643	0.000	10.870	10.87	21.024					10.87	
		TOTAL LOCATION 1			10.87	21.024					10.87	
2	COS	SR 651	0.000	3.040	3.04	5.840					3.04	
		TOTAL LOCATION 2			3.04	5.840					3.04	
3	HOL	SR 651	0.000	0.500	0.50	1.000					0.50	
		TOTAL LOCATION 2			0.50	1.000					0.50	

EDGE LINE SUB-SUMMARY

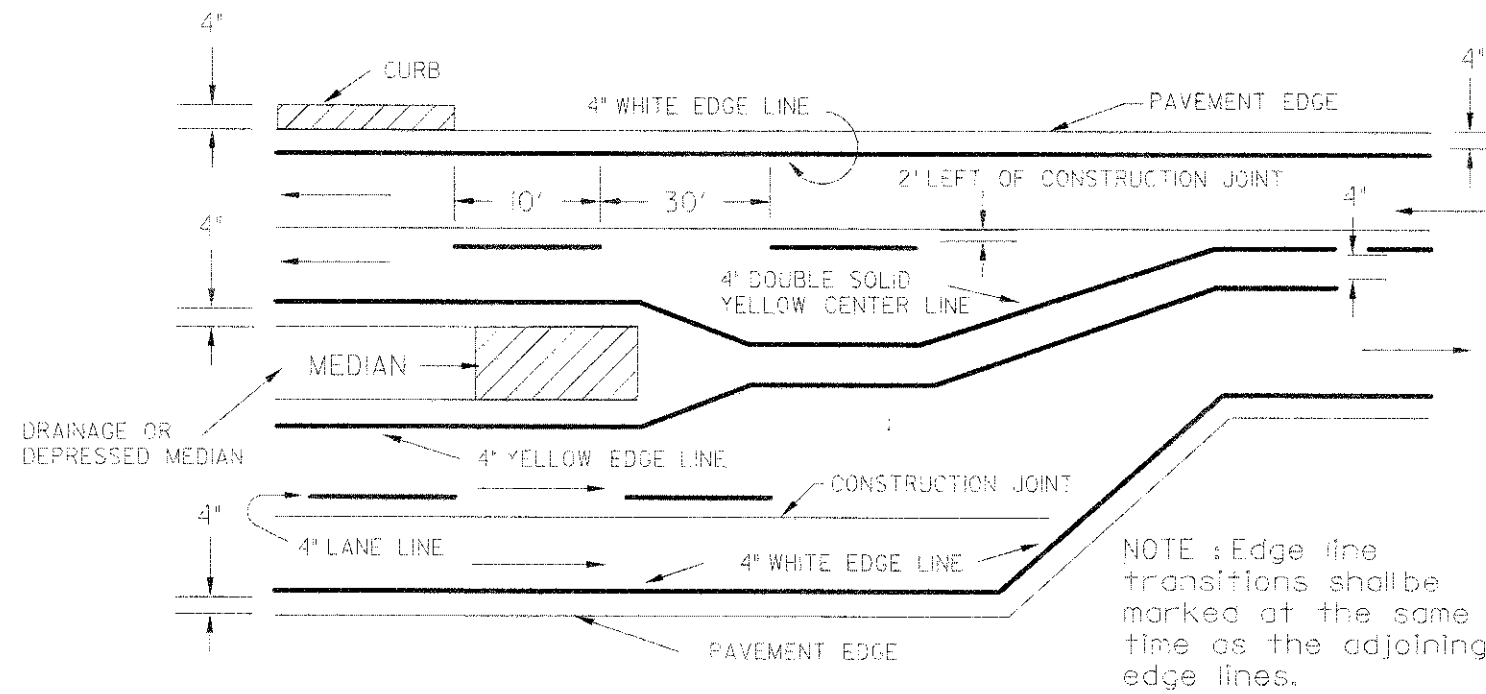
LOCATION	CO.	ROUTE	S.L.M.		WHITE EDGE LINE QU.			YELLOW EDGE LINE QU.			PARTICIPATION TYPE				EDGE LINE TOTAL MILES	REMARKS
			FROM	TO	TOTAL MILES	HIGHWAY	RAMP	TOTAL MILES	HIGHWAY	RAMP	IRG	FG	RSG	NON FED STATE		
1	COS	SR 643	0.00	10.87	21.74	21.74									21.74	
		TOTAL LOCATION 1			21.74	21.74									21.74	
2	COS	SR 651	0.00	3.04	6.08	6.08									6.08	
		TOTAL LOCATION 2			6.08	6.08									6.08	
3	HOL	SR 651	0.00	0.50	1.00	1.00									1.00	
		TOTAL LOCATION 2			1.00	1.00									1.00	

PAVEMENT MARKING

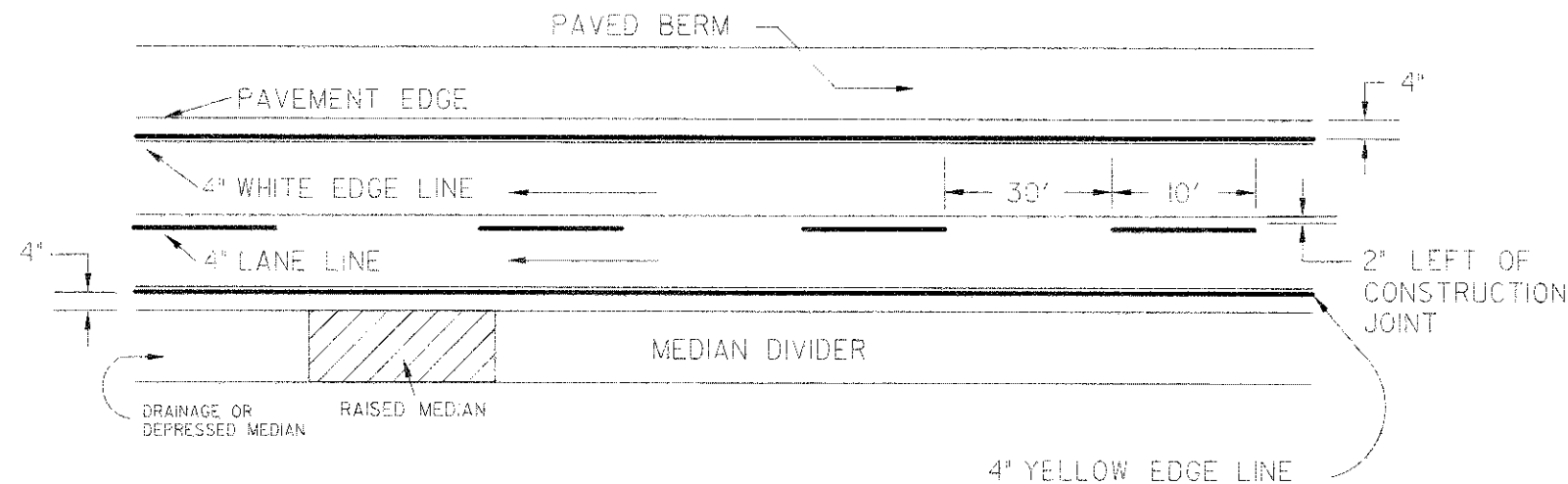
CO ₂	643	-	0.00
CO ₂	651	-	0.00
HCl	651	-	0.00

[illegible]

MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



FREEWAY & EXPRESSWAY MAINLINE MARKINGS



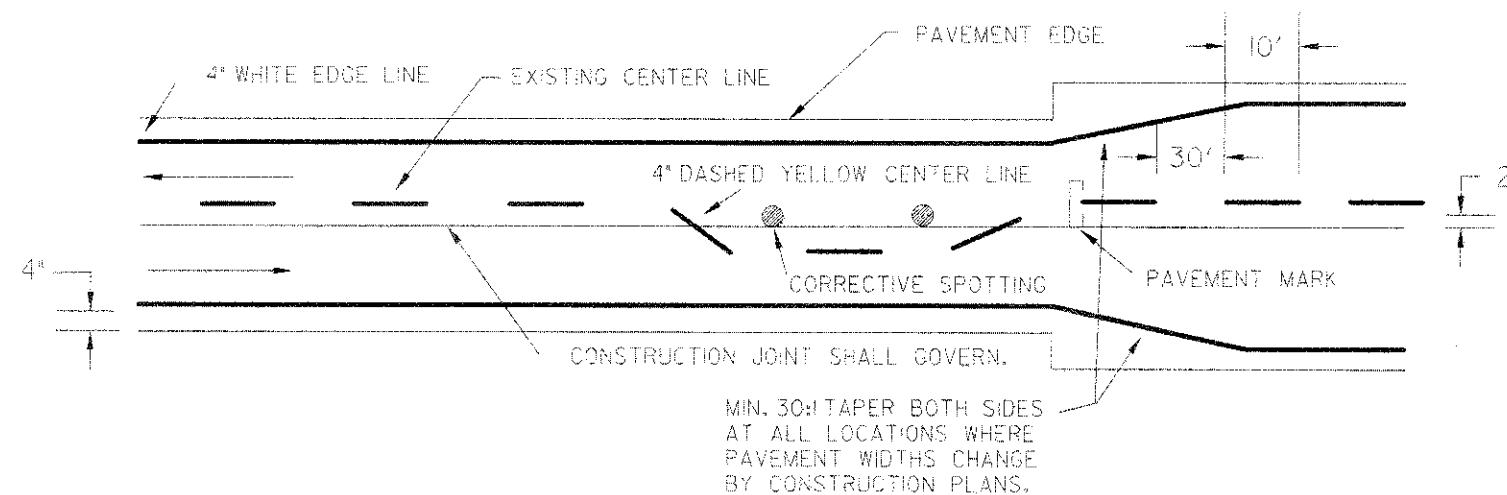
NOTES:

1. The distance from the pavement edge to the nearside edge of the edgeline may be increased with the approval of the engineer in order to maintain uniform lane width.

2. See TC-72.20 for entrance and exit ramp markings.

3. The cycle length for dashed lines shall be 40 feet plus or minus 6 inches. The minimum length of dash shall be sufficiently long to maintain a 3:1 ratio between length of gap and length of dash.

TWO LANE MARKINGS



Ohio Department of Transportation

Pavement Marking
Typical Details

DATE
11-80
3-86
9-91

PAVEMENT MARKING TYPICALS

COS-643-0.00
COS-651-0.00
HOL-651-0.00

19
20

03-07-99

C6510001.PMT

