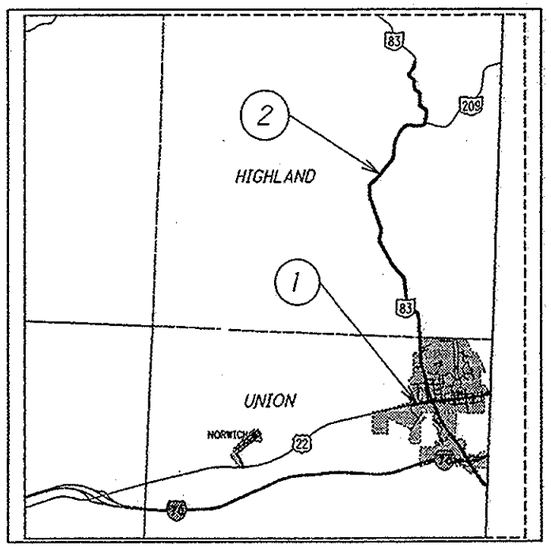


LOCATION MAP

LATITUDE: 40° 01' 17" LONGITUDE: 81° 45' 06"

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MUS-22-26.62
MUS-83-0.00

HIGHLAND AND UNION TOWNSHIPS

MUSKINGUM COUNTY

PROJECT DESCRIPTION:

ASPHALT CONCRETE RESURFACING AND RELATED WORK ON U.S. 22 AND S.R. 83 IN MUSKINGUM COUNTY.

Project Earth Disturbed Area =
N/A (Maintenance Project)
Estimated Contractor Earth Disturbed Area =
N/A (Maintenance Project)
Notice of Intent Earth Disturbed Area =
N/A (Maintenance Project)

LOCATION	COUNTY	ROUTE	BEGIN SLM	END SLM	LENGTH MILES	CITY/VILLAGE
1	MUS	22	26.62	27.73	1.11	NEW CONCORD
2	MUS	83	0.00	7.16	7.16	NEW CONCORD

INDEX OF SHEETS:

PORTION TO BE IMPROVED .....

DESIGN DESIGNATION	LOCATION 1 U.S. 22	LOCATION 2 S.R. 83
Functional Classification	RMC	RMC
Opening Year ADT (2013)	8000	2200
Design Year ADT (2025)	8100	2200
Design Hourly Volume (2025)	810	220
Directional Distribution	53%	53%
Trucks (24 Hour B&C)	9%	7%
Design Speed	55mph	55mph
Legal Speed	35mph	55mph

RMC = RURAL MAJOR COLLECTOR

2010 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 APPROVE 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 PANS AND ESTIMATES.

DESIGN EXCEPTIONS: NONE

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 PROTECTIVE SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 5 PLANNING & ENGINEERING

ENGINEER'S SEAL

STATE OF OHIO
DOUGLAS N. MORGAN
E-63839
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Douglas N Morgan
DATE: 10-12-2012

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	4-20-12	MT-97.10	7-20-12	800	10-19-12
BP-4.1	7-16-04	MT-97.12	7-20-12	817	4-20-12
		MT-99.20	7-20-12	823	7-20-12
GR-1.1	7-20-12	MT-101.90	10-21-11	832	5-5-09
GR-2.1	7-20-12	MT-105.10	7-20-12		
GR-4.1	7-20-12				
GR-4.2	7-20-12	TC-65.10	4-20-12		
		TC-65.11	4-20-12	SPECIAL PROVISIONS	
MT-95.31	7-20-12	TC-71.10	1-21-11		
MT-95.32	7-20-12	TC-73.10	4-20-12		
		TC-82.10	1-21-11		

APPROVED _____
DATE 10/12/12 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 10-22-12 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E080(429)
PID NO. 83110
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
MUS-22-26.62
MUS-83-0.00
1/32

MUS - US-22-26.62;MUS-83-0.00
130014 PID - 83110
Dist 5 1/10/2013

Contract Proposal Available @www.contracts.dot.state.oh.us / home

M022_MTS_001.dgn 9-26-

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.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

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 CONSTRUCTION ENGINEER 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 CONSTRUCTION ENGINEER
P.O. BOX 306
JACKSONSTOWN, OH 43030
PHONE: (740) 323-4400 EXT. 5241

PAVEMENT MARKING

STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, ETC., SHOWN IN THE PLANS ARE TAKEN FROM EXISTING MARKINGS. THE CONTRACTOR SHALL DOCUMENT ALL OF THE EXISTING PAVEMENT MARKING LOCATIONS THAT WILL BE REMOVED/OBLITERATED DURING THIS PROJECT. THE CONTRACTOR SHALL PLACE NEW PAVEMENT MARKINGS AT THE LOCATION OF THE EXISTING MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DOCUMENTATION OF PAVEMENT MARKING SHALL BE SUPPLIED TO THE ENGINEER BEFORE COMMENCEMENT OF ANY OPERATION WHICH WILL REMOVE/OBLITERATE MARKINGS. THE METHOD OF DOCUMENTATION SHALL BE APPROVED BY THE ENGINEER IN ORDER TO PROVIDE AN ACCEPTABLE TOLERANCE BETWEEN THE EXISTING AND PROPOSED PAVMENT MARKINGS.

ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05, OR AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE SUB-SUMMARY FOR THE PURPOSE DESCRIBED ABOVE:

ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
LOCATION 2 – 14 MILE

ITEM 209 LINEAR GRADING

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.

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. ALL EQUIPMENT, LABOR, OR INCIDENTALS REQUIRED TO COMPLETE THIS ITEM SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 209 LINEAR GRADING.

THIS WORK MAY BE INTERMITTENT AND SPREAD THROUGHOUT THE PROJECT LIMITS, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL ONLY BE PAID FOR INTERSECTIONS AND GAPS IF THEY ARE WITHIN THE LIMITS OF A SECTION MARKED BY THE ENGINEER FOR GRADING.

ALL LINEAR GRADING WORK SHALL BE DONE BEFORE PLACING THE ASPHALT SURFACE COURSE

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE PURPOSES.

ITEM 209 LINEAR GRADING LOCATION 2 – 14 MILE

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

DEPTH OF PLANING SHALL BE 3.0" ON U.S. 22 FULL WIDTH OF PAVEMENT, INCLUDING PAVED SHOULDERS. DEPTH OF PLANING SHALL BE 1.5" ON S.R. 83 FULL WIDTH OF PAVEMENT, INCLUDING PAVED SHOULDERS, FOR THE LENGTH OF THE PROJECT EXCEPT BETWEEN SLM 0.34 AND SLM 0.60 WHERE THE PLANING DEPTH SHALL BE 2.25". THE ROADWAY SHALL BE PLANED SUCH THAT POSITIVE DRAINAGE IS CREATED FROM THE CENTER LINE TO THE EDGE OF PAVEMENT IN TANGENT SECTIONS AND SHALL FOLLOW EXISTING SUPERELEVATIONS WHERE APPLICABLE. ALL REQUIREMENTS OF ITEM 254 SHALL APPLY.

5,000 TONS OF GRINDINGS (RACP) SHALL BE DELIVERED TO THE OHIO DEPARTMENT OF TRANSPORTION – MUSKINGUM COUNTY GARAGE 3399 EAST PIKE, ZANESVILLE, OHIO 43701. HAULING OF THE RACP SHALL BE PAID FOR UNDER THE FOLLOWING ITEM:

ITEM 690 SPECIAL MISC.: HAULING RACP – 5,000 TONS
LOCATION 1 – 1,500 TONS
LOCATION 2 – 3,500 TONS

ITEM 407 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.

ITEM 407 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.

ITEM 408 PRIME COAT, AS PER PLAN

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER SECTION 702) AT A RATE OF 0.40 GALLON PER SQUARE YARD TO THE COMPLETED AGGREGATE SHOULDER (ITEM 617) AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

THE FOLLOWING QUANTITY OF PRIME COAT, AS PER PLAN HAS BEEN CARRIED TO THE GENERAL SUMMARY AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT TO PERFORM THE ABOVE MENTIONED WORK.

ITEM 408 PRIME COAT, AS PER PLAN
LOCATION 2 –16,535 SQ.YD. X 0.40 GAL./SQ YD = 6,614 GAL

ITEM 253 PAVEMENT REPAIR

AN ESTIMATED QUANTITY FOR PAVEMENT REPAIR HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER. REPAIRS SHALL TAKE PLACE PRIOR TO THE PLANING OPERATION. THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF PAVEMENT WHICH HAVE COMPLETELY FAILED (PUMPING OF SUB-BASE MATERIAL) AND NOT TO CORRECT SURFACE IRREGULARITIES. DEPTH OF EXCAVATION SHALL BE 7". THE MINIMUM WIDTH SHALL BE 4 FT. AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH 407 TACK COAT. REPLACEMENT MATERIAL WILL BE 7" OF ITEM 301 ASPHALT CONCRETE BASE, PG64-22 (PLACED AND COMPACTED IN TWO LIFTS).

REPAIR QUANTITIES MAY BE USED ON THE MAINLINE PAVEMENT OR ON PAVED SHOULDERS. ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, TOOLS, TRAFFIC CONTROL AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE PAID FOR UNDER ITEM 253 PAVEMENT REPAIR, AS PER PLAN.

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

ITEM 253 PAVEMENT REPAIR
LOCATION 2 – 500 CU.YD.

ITEM 516 2" DEEP JOINT SEALER, AS PER PLAN

THE CONTRACTOR SHALL PLACE A 1" X 2.0" DEEP BEAD OF JOINT SEALER (AS PER 705.04) AT THE LOCATIONS SHOWN IN PLANS. THE CONTRACTOR SHALL SAW CUT A CHANNEL FOR THE JOINT SEALER. THE COST FOR SAW CUTTING THE CHANNEL FOR THE JOINT SEALER SHALL BE INCLUDED FOR PAYMENT WITH ITEM 516, 2" DEEP JOINT SEALER, AS PER PLAN.

ITEM 617 COMPACTED AGGREGATE, 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 PERMITTED, THE CONTRACTOR MAY USE RECYCLED ASPHALT CONCRETE PAVEMENT (RACP MEETING REQUIREMENTS OF 617.02) IN LIEU OF CRUSHED LIMESTONE.

ITEM 621 RAISED PAVEMENT MARKER REMOVED

RPM REMOVAL SHALL NOT OCCUR SOONER THAN 10 DAYS PRIOR TO RESURFACING OF THE ROADWAY. ALL RPM'S REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

CALCULATED LME CHECKED DNM

GENERAL NOTES

MUS-22-26.62
MUS-83-0.00

ITEM 407, TACK COAT, TRACKLESS TACK, INTERMEDIATE AND SURFACE COURSES

DESCRIPTION: *THIS WORK CONSISTS OF PREPARING AND TREATING A PAVED SURFACE WITH A TRACKLESS TACK ASPHALT EMULSION.*

ALTERNATE PRODUCTS TO BE USED MUST BE ON FILE WITH THE NEW PRODUCT ENGINEER AT THE TIME OF THE ADVERSTISEMENT DATE OF THE PROJECT PLANS. PLEASE CONTACT BRAD YOUNG, ODOT NEW PRODUCT ENGINEER, 614-351-2882.

THIS WORK IS CONSIDERED AN EXPERIMENTAL CONSTRUCTION FEATURE FOR EVALUATION OF PRODUCTS THAT ARE ON FILE WITH THE NEW PRODUCT ENGINEER.

MEET ALL REQUIREMENTS OF ODOT 407 TACK COAT IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRED BY THE CONTRACT, EXCEPT AS NOTED BELOW.

A MANUFACTURER'S REPRESENTATIVE MUST BE AT THE PROJECT SITE DURING THE FIRST TWO DAYS OF APPLICATION OF TRACKLESS TACK.

MATERIAL: *IF USING BLACKLIDGE TRACKLESS TACK THE MATERIAL WILL CONFORM TO THE FOLLOWING TYPICAL PHYSICAL PROPERTIES:*

PARAMETER	TEST METHOD	MIN.	MAX.
SAYBOLT FUROL VISCOSITY, SFS @ 25°C	AASHTO T59	15	100
STORAGE STABILITY, 24 HRS, %	AASHTO T59	--	1
STORAGE STABILITY, 5 DAYS, %	AASHTO T59	--	5
RESIDUE BY DISTILLATION, %	AASHTO T59	50	--
OIL DISTILLATE, %	AASHTO T59	--	1
SIEVE TEST, %	AASHTO T59	--	0.30
TEST ON RESIDUE			
PENETRATION, @ 25°C,	AASHTO T49	--	20
SOFTENING POINT RANGE DEG C	AASHTO T53	65	--
SOLUBILITY, %	AASHTO T44	97.5	--
ORIGINAL BINDER DSR@82°C G*/SIN δ,10 RAD/SEC	AASHTO T315	1.00	--

FOR TRACKLESS TACK OTHER THAN BLACKLIDGE TRACKLESS TACK, THE MATERIAL WILL CONFORM TO THE PHYSICAL PROPERTIES SUPPLIED BY THE NEW PRODUCT ENGINEER FOR THE TESTS LISTED BELOW:

PARAMETER	TEST METHOD
SAYBOLT FUROL VISCOSITY, SFS @ 25°C	AASHTO T59
STORAGE STABILITY, 24 HRS, %	AASHTO T59
STORAGE STABILITY, 5 DAYS, %	AASHTO T59
RESIDUE BY DISTILLATION, %	AASHTO T59
OIL DISTILLATE, %	AASHTO T59
SIEVE TEST, %	AASHTO T59
TEST ON RESIDUE	
PENETRATION, @ 25°C,	AASHTO T49
SOFTENING POINT RANGE DEG C	AASHTO T53
SOLUBILITY, %	AASHTO T44
ORIGINAL BINDER DSR@82°C G*/SIN δ,10 RAD/SEC	AASHTO T315

NOTE: TRACKLESS TACK SHOULD NOT CONTAIN FILLER SUCH AS CLAY, ETC.

ITEM 407, TACK COAT, TRACKLESS TACK, INTERMEDIATE AND SURFACE COURSES (con't.)

ACCEPTANCE AND SAMPLING OF MATERIALS: *FOR ALL TRACKLESS TACK SUPPLY CERTIFIED TEST DATA FROM AN INDEPENDENT LABORATORY TO THE ENGINEER AND TO THE DISTRICT LABORATORY SHOWING THE TRACKLESS TACK SUPPLIED WAS TESTED FOR AND MEETS THE PROPERTIES SUPPLIED BY THE NEW PRODUCT ENGINEER.*

DURING CONSTRUCTION, ODOT PERSONNEL WILL SAMPLE AND SUPPLY TO THE DISTRICT TEST LAB A MINIMUM OF 2 QUARTS OF TRACKLESS TACK SAMPLED FROM THE DISTRIBUTOR ON THE FIRST DAY OF APPLICATION. CLEARLY MARK ON THE SAMPLES THE MANUFACTURER'S NAME, PROJECT NUMBER, AND THE WORDS "TRACKLESS TACK".

ADDITIONAL SAMPLING OF BLACKLIDGE TRACKLESS TACK WILL FOLLOW THE REQUIREMENTS OF ITEM 407. FOR ALTERNATE TRACKLESS TACK MATERIAL, 2 QUARTS OF MATERIAL WILL BE SAMPLED EACH DAY THE MATERIAL IS USED.

EQUIPMENT: *SEE MANUFACTURER'S REPRESENTATIVE FOR CORRECT DISTRIBUTOR SETTINGS. THOROUGHLY CLEAN ALL EQUIPMENT IF PREVIOUSLY USED MATERIAL CHARGE IS DIFFERENT THAN THE PROPOSED MATERIAL.*

APPLICATION OF ASPHALT MATERIAL: *UNIFORMLY APPLY THE TRACKLESS TACK WITH A DISTRIBUTOR. IF TRACKLESS TACK IS STORED FOR AN EXTENDED PERIOD OF TIME, PRIOR TO APPLICATION, AGITATE OR GENTLY CIRCULATE THE MATERIAL.*

ENSURE ALL NOZZLES AND SPRAY PATTERNS ARE IDENTICAL TO ONE ANOTHER ALONG THE DISTRIBUTOR SPRAY BAR. PLACE THE ANGLE OF THE NOZZLE AT A 15 TO 30 DEGREE ANGLE TO THE SPRAY BAR AXIS TO MAXIMIZE OVERLAP OR AS RECOMMENDED BY THE NOZZLE MANUFACTURER. CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR REQUIRED SPRAY NOZZLE SIZE AND DISTRIBUTOR AND NOZZLE SETTINGS.

APPLY AT A RATE OF 0.04 TO 0.1 GALLONS PER SQUARE YARD. DO NOT DILUTE TRACLESS TACK. RECOMMENDED APPLICATION TEMPERATURE IS 160°F TO 180° F. DO NOT EXCEED 180°F. THE ENGINEER AND MANUFACTURER'S REPRESENTATIVE WILL APPROVE THE QUANTITY, RATE OF APPLICATION, TEMPERATURE, DISTRIBUTOR SETTINGS, AND AREAS TO BE TREATED BEFORE APPLICATION OF THE TRACKLESS TACK COAT. THE ENGINEER WILL DETERMINE THE ACTUAL APPLICATION IN GALLONS PER SQUARE YARD BY A CHECK ON THE PROJECT.

PERFORMANCE OF TRACKLESS TACK: *FOR ANY TRACKLESS TACK USED SUPPLY DATA FOR SHEAR AND TENSILE BOND STRENGTH ACCORDING TO METHODS DESCRIBED IN VIRGINIA TRANSPORTATION RESEARCH COUNCIL REPORT VTRC 09-R21. RANDOMLY TAKE 6-4 INCH DIAMETER CORES FROM THE PROJECT AND PERFORM 3 SHEAR AND 3 TENSILE BOND STRENGTH TESTS. BE SURE CORES TAKEN INCLUDE BOTH AN ASPHALT LAYER ABOVE AND ASPHALT LAYER BELOW THE TRACKLESS TACK LAYER.*

DETERMINE THE TIME TO SET FOR THE MATERIAL TO BECOME TRACKLESS. THE ENGINEER WILL REPORT ANY ISSUES WITH EXCESSIVE TIME TO SET, OR AFTER SET ISSUES WITH STICKINESS, OR PICKUP OF THE TACK TO THE DET AND NEW PRODUCT ENGINEER, BRAD YOUNG 614-351-2882.

IF THE CERTIFIED TEST DATA FAILS TO MEET THE LAB TESTING CRITERIA, OR FIELD SAMPLES FAIL TO MEET THE LAB TEST CRITERIA, OR THE TRACKLESS TACK FAILS TO PERFORM SATISFACTORILY IN THE FIELD, AS NOTED ABOVE, THE CONTRACTOR WILL BE REQUIRED TO REPLACE AND SUPPLY BLACKLIDGE TRACKLESS TACK FOR THE REMAINDER OF THE PROJECT AT NO COST TO THE DEPARTMENT.
ANY FAILING EXPERIMENTAL TRACKLESS TACK PRODUCT WILL BE REMOVED FROM THE NEW PRODUCT ENGINEER'S LIST.

ITEM 407, TACK COAT, TRACKLESS TACK, INTERMEDIATE AND SURFACE COURSES (con't.)

IN THE EVENT THE PRODUCT FAILS TO PERFORM TO THE SATISFACTION OF THE DEPARTMENT, THE MANUFACTURER MAY PERFORM THE FOLLOWING ITEMS IN ORDER TO BE CONSIDERED FOR FUTURE EXPERIMENTAL CONSTRUCTION FEATURE PROJECTS:

1. SUBMIT IN WRITING TO THE DEPARTMENT THE REASON(S) WHY PRODUCT FAILED TO PERFORM AND DETAIL CHANGES THAT WILL BE MADE TO ELIMINATE THE CAUSE(S) OF FAILURE, AND

2. PROPOSE CHANGES TO THE PRODUCT'S SPECIFICATIONS, AND

3. SUBMIT SAMPLES OF THE REDEVELOPED PRODUCT TO THE LABORATORY FOR TESTING TO THE NEW SPECIFICATIONS, AND

4. DEMONSTRATE TO THE DEPARTMENT SUCCESSFUL USE OF THE MATERIAL ON AT LEAST ONE NON-ODOT PROJECT.

WHEN THE ABOVE ITEMS ARE COMPLETED TO THE DEPARTMENT'S SATISFACTION, THE REDEVELOPED AND FIELD TESTED PRODUCT MAY BE PUT BACK ON FILE WITH THE NEW PRODUCT ENGINEER AND EVALUATED ON FUTURE ODOT PROJECTS USING THE EXPERIMENTAL CONSTRUCTION FEATURE PROCESS.

RESIDENTIAL 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 TYPICALLY EXTEND 4' INTO THE DRIVEWAY (MEASURED FROM THE EDGE OF PAVEMENT OR PAVED SHOULDER IF PRESENT). THERE ARE 5 TYPES OF DRIVES: CONCRETE, ASPHALT, GRAVEL, GRAVEL WITH ASPHALT APRON AND FIELD/OIL WELL DRIVES. FIELD DRIVES AND OIL WELL DRIVES SHALL NOT BE PAVED. GRAVEL DRIVES SHALL BE PAVED BACK 4' INTO THE DRIVE-WAY UNLESS OTHERWISE DIRECTED BY THE ENGINEER. CONCRETE AND ASPHALT DRIVES SHALL HAVE BUTT JOINTS OR AS SHORT AN ASPHALT TAPER AS POSSIBLE (PREFERRED 4') AS DIRECTED BY THE ENGINEER SO AS TO PROVIDE A SMOOTH TRANSITION. GRAVEL DRIVES WITH ASPHALT APRONS SHALL ALSO HAVE BUTT JOINTS OR AS SHORT AN ASPHALT TAPER AS POSSIBLE (PREFERRED 4') BUT ONLY IF THE EXISTING ASPHALT APRON IS IN AN ACCEPTABLE CONDITION TO BE PAVED OVER AS DIRECTED BY THE ENGINEER. IF THE ASPHALT APRON CANNOT BE PAVED OVER (FOR EXAMPLE, BROKEN INTO SMALL PIECES) AS DETERMINED BY THE ENGINEER, IT SHALL BE REMOVED BEFORE BEING PAVED BACK 4' INTO THE DRIVEWAY. ALL GRADING, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE DRIVES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW.

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

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 2 - 50 CU.YD.

ITEM 202 WEARING COURSE REMOVED
LOCATION 2 – 1430 SQ.YD.

CALCULATED LME CHECKED DNM

GENERAL NOTES

MUS-22-26.62
MUS-83-0.00

M022_MGN_002.DGN 6-14-12

SAFETY EDGE PLAN NOTE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CAMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANS TECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE TROXLER SAFETSLOPE OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TransTech Systems, Inc.
1594 State Street
Schenectady, NY 12304
1-800-724-6306
www.transtechsys.com

Advant-Edge Paving Equipment, LLC.
P.O. Box 9163
Niskayuna, NY 12309-0163
518-280-6090
www.advantaedgepaving.com

Carlson Safety Edge End Gate
18425 50th Avenue East
Tacoma, WA 98446
253-875-8000

Troxler Electronics Laboratories, Inc.
3008 E. Cornwallis Rd.
Research Triangle Park, NC 27709
1-877-TROXLER
www.troxlerlabs.com

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TUENOUTRS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES (200 TO 300 mm) AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE SUB-SUMMARY TO PROVIDE EXTRA ASPHALT FOR CONSTRUCTION OF THE SAFETY EDGE:

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 2 – 72 CU. YD.

DROPOFFS IN WORK ZONES

DROPOFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE PLANS SHALL BE TREATED AS SHOWN ON STANDARD DRAWING MT-101.90. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

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-4.1. 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 THE ITEMS LISTED BELOW.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE PURPOSES.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
LOCATION 2 - 36 CU. YD.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 2 - 26 CU. YD.

ITEM 202 WEARING COURSE REMOVED
LOCATION 2 – 740 SQ. YD.

ITEM 614 MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON SR 83 BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWING MT-97.12. TRAFFIC SHALL BE MAINTAINED ON US 22 AS PER STANDARD DRAWINGS MT-95.31 AND MT-95.32.

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

AT NO TIME SHALL TRAFFIC BE MAINTAINED ON THE PLANED SURFACE, AT LEAST ONE COURSE OF ASPHALT CONCRETE SHALL BE IN PLACE BEFORE OPENING TO TRAFFIC.

ONLY ITEM 614 WORK ZONE CENTER LINE, CLASS II HAS BEEN ITEMIZED IN THE PLAN. ALL OTHER WORK ZONE PAVEMENT MARKINGS NECESSARY SHALL BE INCLUDED IN THE LUMP SUM BID FOR MAINTAINING TRAFFIC.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT, IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

BUTT JOINT

A BUTT JOINT WILL BE REQUIRED AT LOCATIONS SPECIFIED BELOW AND AT THE EXTRA AREAS WITH WEARING COURSE REMOVED.

BUTT JOINTS SHALL BE AS PER STANDARD CONSTRUCTION DRAWING BP-3.1 UNLESS OTHERWISE SHOWN IN THE PLANS.

MINIMUM LENGTH FOR ASPHALT WEDGE AT BUTT JOINTS SHALL BE 10'.

LOCATION	ROUTE	DESCRIPTION	S.L.M.	ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CU. YD.
1	U.S. 22	BEGIN WORK	0.00	3.3
1	U.S. 22	END WORK	27.73	2.7
1	**U.S. 22**	**TOTAL**		**6.0**
2	S.R. 83	BEGIN WORK	0.00	0.8
2	S.R. 83	BRIDGE: MUS-83-0138	1.38	1.2
2	S.R. 83	END WORK	7.16	0.8
2	**S.R. 83**	**TOTAL**		**2.8**

THE GRINDING FOR BUTT JOINTS SHALL BE INCLUDED WITH ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

ITEM 614, WORK ZONE MARKING SIGN

IN ACCORDANCE WITH CMS SECTION 614.04, THE QUANTITIES OF WORK ZONE MARKING SIGN HAVE BEEN CARRIED TO THE **GENERAL SUMMARY** TO BE USED AS DIRECTED BY THE ENGINEER.

W8-H12a (NO EDGE LINES): LOCATION 1 - 2 EACH, LOCATION 2- 8 EACH
R4-1 (DO NOT PASS): LOCATION 2- 21 EACH
R4-2 (PASS WITH CARE): LOCATION 2 -6 EACH

ITEM 614, WORK ZONE MARKING SIGN

LOCATION 1 - 2 EACH
LOCATION 2 - 35 EACH

IN ADDITION, THE CONTRACTOR SHALL ERECT A "GROOVED PAVEMENT" SIGN 250 FEET IN ADVANCE OF ANY SECTION OF ROADWAY WHERE TRAFFIC MUST TRAVEL ON A PLANED SURFACE. ENSURE THESE SIGNS ARE IN PLACE BEFORE OPENING THE ROADWAY TO TRAFFIC. ERECT THESE SIGNS AT INTERSECTIONS OF THROUGH ROUTES TO WARN TRAFFIC OF THIS SURFACE CONDITION. "GROOVED PAVEMENT" SIGNS SHALL BE INCLUDED FOR PAYMENT WITH THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AS PER CMS SECTION 614.055.

CALCULATED LME CHECKED DNM

GENERAL NOTES

MUS-22-26.62
MUS-83-0.00

M022_MGN_003.DGN 6-28-12

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, TWO CHANGEABLE MESSAGE SIGNS, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGNS SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN LICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (cont'd)

DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC.

THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

A TOTAL OF 2 PCMS SHALL BE REQUIRED FOR THIS PROJECT.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO GENERAL SUMMARY:

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
LOCATION 1 - 120 DAY

ITEM 604 CATCH BASIN/ MANHOLE/ INLET ADJUSTED TO GRADE
ITEM 638 VALVE BOX ADJUSTED TO GRADE

THESE ITEMS SHALL BE USED TO ADJUST CATCH BASINS, MANHOLES, INLETS AND WATER VALVE BOXES LOCATED THROUGHOUT THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED SHALL BE INCLUDED FOR PAYMENT WITH THE ITEMS LISTED BELOW.

ANY GAS VALVE BOXES AND TELEPHONE COMPANY MANHOLES ON THIS PROJECT SHALL BE ADJUSTED TO GRADE BY THE RESPECTIVE OWNERS.

LOCATION 1:

ITEM 604 – CATCH BASIN ADJUSTED TO GRADE – 2 EACH

ITEM 604 –INLET ADJUSTED TO GRADE – 15 EACH

ITEM 604 – MANHOLE ADJUSTED TO GRADE – 19 EACH

ITEM 638 – VALVE BOX ADJUSTED TO GRADE – 4 EACH

ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING TOPSOIL ADJACENT TO CURB RAMPS, SIDEWALKS, CURB, AND THROUGHOUT THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE REQUIRED TO SEED AND MULCH THE TOPSOIL AS PER 659 OF THE 2010 CMS.

PAYMENT FOR ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN, SHALL BE AT THE CONTRACT UNIT PRICE PER CUBIC YARD OF TOPSOIL FURNISHED AND PLACED, INCLUDING ALL OF THE LABOR, MATERIALS AND EQUIPMENT NEEDED TO COMPLETE THE WORK.

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

ITEM 653 TOPSOIL FURNISHED AND PLACED, AS PER PLAN

LOCATION 1 – 5 CU.YD.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS. SEEDING AND MULCHING WILL BE REQUIRED AT LOCATIONS WHERE TOPSOIL HAS BEEN PLACED OR WHERE THE EXISTING GROUND WAS DISTURBED DURING THE CONSTRUCTION OF THE PROPOSED CURB RAMPS.

ITEM 659, SEEDING AND MULCHING 60 SQ. YD.
LOCATION 1 – 60 SQ. YD.

ITEM 659, REPAIR SEEDING AND MULCHING 3 SQ. YD.
(5% OF THE PERMANENT SEEDING AREA) 0.05 x 60 = 3.0
LOCATION 1 – 3 SQ. YD.

ITEM 659, INTER-SEEDING 3 SQ. YD.
(5% OF THE PERMANENT SEEDING AREA) 0.05 x 60 = 3.0
LOCATION 1 – 3 SQ. YD.

ITEM 659, COMMERCIAL FERTILIZER 0.02 TON
(ONE TON PER 7,410 SQ. YD. OF THE PERMANENT SEEDED AREA)
2 x (60 ÷ 7,410) = 0.02
LOCATION 1 – 0.02 TON

ITEM 659, LIME 0.01 ACRE
(PERMANENT SEEDED AREA)
60 SQ. YD. x 9 SQ. FT./SQ.YD. ÷ 43,560 SQ. FT./ACRE = 0.01 ACRE
LOCATION 1 – 0.01 ACRE

ITEM 659, WATER 1 M. GAL.
(0.0027 M. GAL. PER SQ. YD. OF THE PERMANENT SEEDED AREA)
3 x (60 x 0.0027) = 0.5
LOCATION 1 – 1 M GAL.

ITEM 632 DETECTOR LOOP, AS PER PLAN

ALL STOP LINE INDUCTANCE DETECTOR LOOPS SHALL BE THE POWER HEAD CONFIGURATION SHOWN ON TC-82.10. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE AS CURRENTLY CALLED FOR IN THE PLANS. THE STOP LINE DETECTOR LOOPS SHALL NOT BE WIRED TO ANY OTHER LOOPS AND SHALL HAVE ITS OWN DETECTOR CHANNEL.

ALL DILEMMA ZONE INDUCTANCE DETECTOR LOOPS CALLED FOR IN THE PLANS SHALL BE THE ANGULAR DESIGN DETECTION (ADD) LOOP AS SHOWN ON TC-82.10. DIMENSIONS SHALL BE AS SPECIFIED ON TC-82.10.

SYSTEM LOOPS SHALL BE AS DEPICTED IN THE PLANS.

ALL STOP LINE DETECTION SHALL BE TESTED FOR A BICYCLE TARGET AND ALL DILEMMA DETECTION ZONES SHALL BE TESTED FOR A MOTORCYCLE TARGET.

ALL DETECTOR LOOPS SHALL BE CUT INTO THE PLANED SURFACE OR THE PROPOSED INTERMEDIATE COURSE AT A DEPTH OF 4" FROM THE PROPOSED SURFACE ELEVATION. IF THE CONTRACTOR SO CHOOSES, THEY MAY CUT THE DETECTOR LOOPS INTO THE EXISTING ASPHALT BEFORE PLANING BUT SHALL MAKE SURE THE MATERIAL USED TO FILL THE SAW CUT IS LEFT FAR ENOUGH BELOW THE SURFACE COURSE THAT IT WILL NOT BE DISTURBED DURING THE PLANING OPERATION. THE CONTRACTOR SHALL TEST ALL LEAD-IN CABLES PRIOR TO MAKING THE FINAL SPLICE. PLACEMENT SHALL BE AS PER SPECIFICATION 632.10. FINAL LOCATIONS, SIZE AND ORIENTATION SHALL BE PROVIDED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING. ALL MATERIALS, LABOR, TOOLS, EQUIPMENT, TRAFFIC CONTROL AND INCIDENTALS NECESSARY TO PERFORM THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 632, DETECTOR LOOP, AS PER PLAN.

LOCATION 1 – 22 EACH

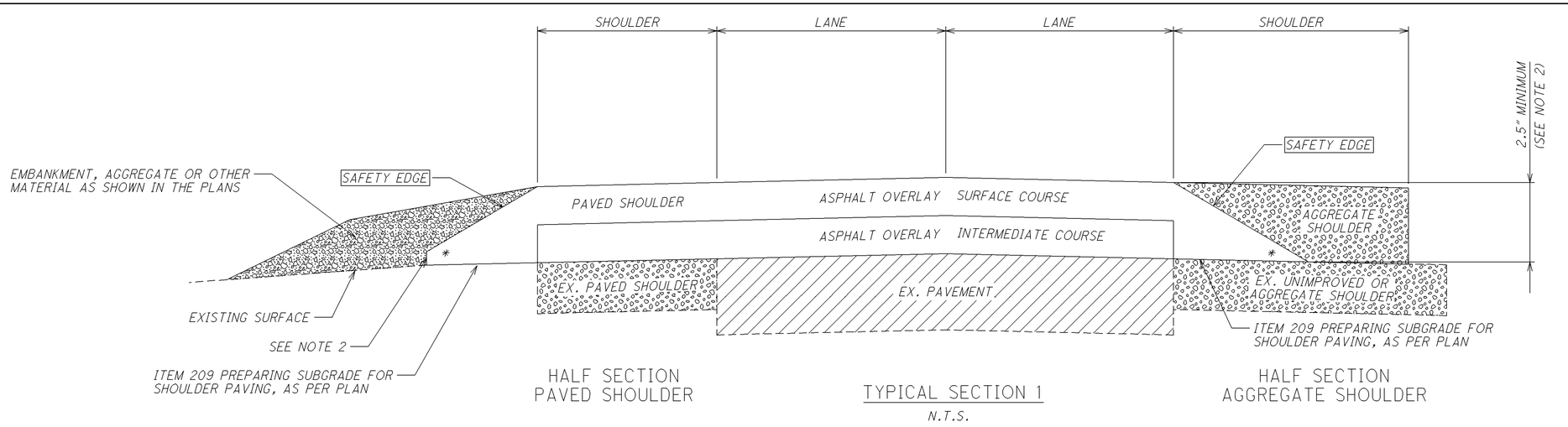
5 POWERHEAD, 12 DELIMNA, 5 SYSTEM

CALCULATED LME CHECKED DNM

GENERAL NOTES

MUS-22-26.62
MUS-83-0.00

M022_MGN_002.DGN 6-14-12

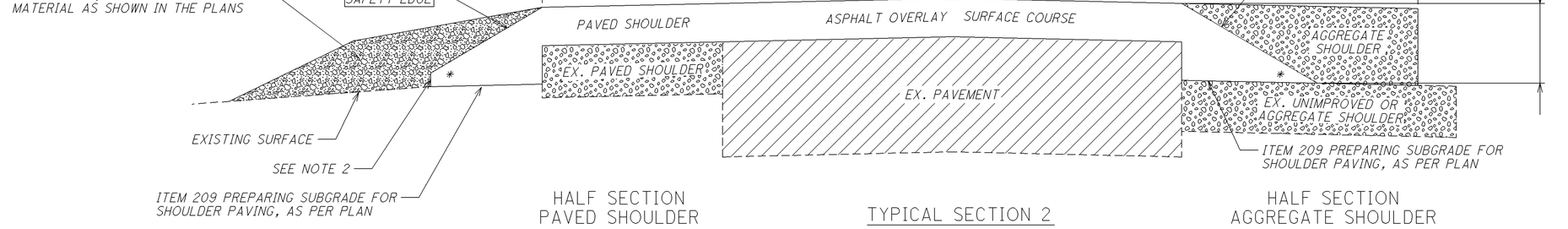


HALF SECTION
PAVED SHOULDER

TYPICAL SECTION 1

N.T.S.

HALF SECTION
AGGREGATE SHOULDER

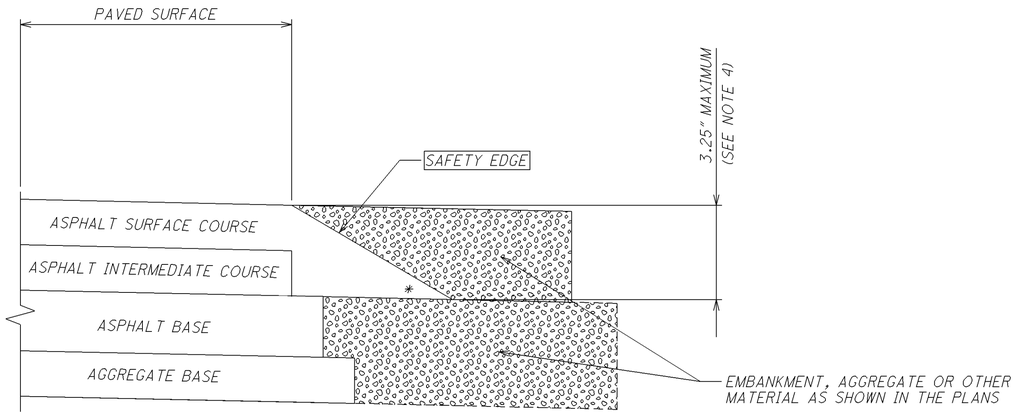


HALF SECTION
PAVED SHOULDER

TYPICAL SECTION 2

N.T.S.

HALF SECTION
AGGREGATE SHOULDER



HALF SECTION
NEW CONSTRUCTION

TYPICAL SECTION 3

N.T.S.

NOTES:

1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).

2.) CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.5" (63MM) WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6" (150MM). CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6" (150 MM).

3.) BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.

4.) FOR NEW PAVEMENT CONSTRUCT THE SAFETY EDGE THE FULL THICKNESS OF THE SURFACE AND INTERMEDIATE COURSES, NOT TO EXCEED 3.25" (82 MM).

* 40° MAX

CALCULATED

CHECKED

SAFETY EDGE DETAIL

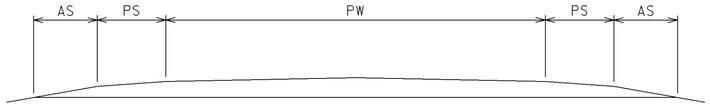
MUS-22-26.62
MUS-83-0.00

M083_SED_001.DGN Dated 6/20/2012

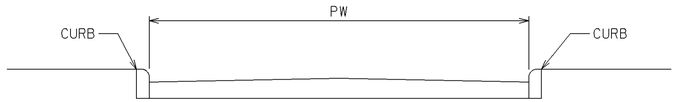
NOTE:
THE PAVEMENT WIDTHS SHOWN IN THE "PAVEMENT DATA" TABLE BELOW ARE THE WIDTHS WHICH HAVE BEEN DETERMINED TO HAVE SUFFICIENT ROADWAY BASE FOR PAVING. IF ACTUAL ROADWAY WIDTHS DIFFER, THE ROADWAY SHALL BE PAVED ONLY THE WIDTH SHOWN IN THE AFOREMENTIONED TABLE. IF THE EXISTING ROADWAY IS WIDER THAN THAT WHICH IS SHOWN IN THE TABLE, PAVING SHALL BE CENTERED ABOUT THE FULL WIDTH OF THE ROADWAY AND ANY EXCESS EXISTING PAVEMENT ON THE EDGES SHALL BE COVERED WITH ITEM 617 COMPACTED AGGREGATE. PAVING IN CURBED ROADWAY SECTIONS SHALL BE FROM CURB TO CURB.

PW = PAVEMENT WIDTH
PS = PAVED SHOULDER
AS = AGGREGATE SHOULDER

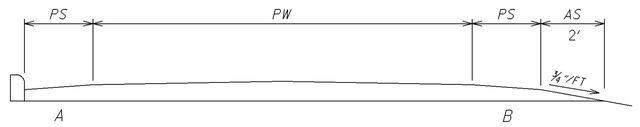
TYPICAL 1



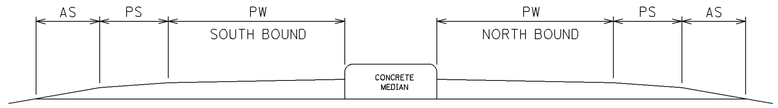
TYPICAL 2



TYPICAL 3



TYPICAL 4



SEE SHEET 7 FOR STRAIGHT LINE DIAGRAM DATA

PAVEMENT DATA

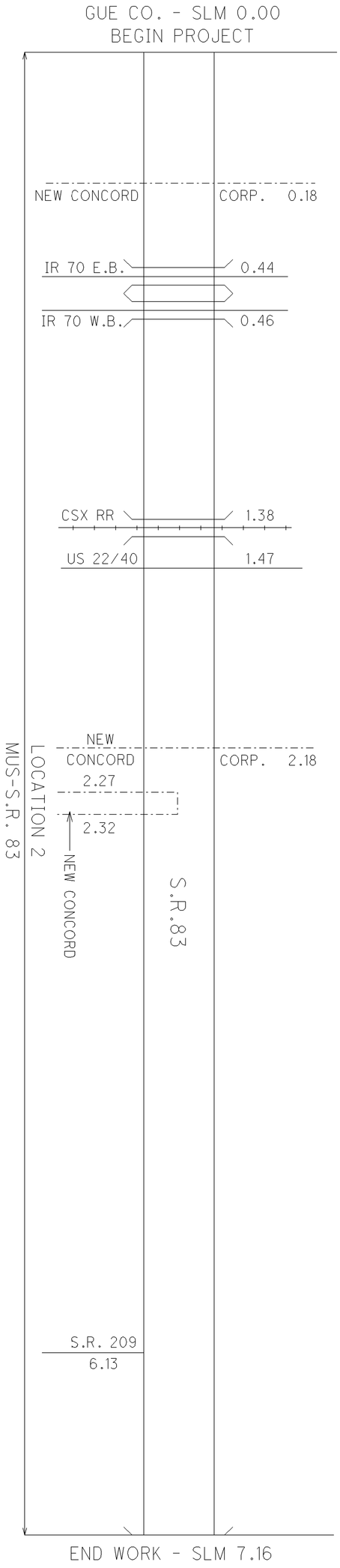
LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		PAVEMENT WIDTH (FEET)	TYPICAL	EXISTING PAVEMENT TYPE	PAVEMENT AREA	254	407				448 ASPHALT CONCRETE					614
					MILES	LIN. FT.					PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.075 GAL./S.Y.	TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.05 GAL./S.Y.	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	THICKNESS	INTERMEDIATE COURSE, TYPE 1, PG 64-22	INTERMEDIATE COURSE, TYPE 2, PG 64-22	THICKNESS	SURFACE COURSE, TYPE 1, PG 70-22M	WORK ZONE CENTER LINE, CLASS II
										SQ. YD.	SQ. YD.	GAL.	GAL.	GAL.	GAL.	INCHES	CU. YD.	CU. YD.	INCHES	CU. YD.	MILE
1	MUS	U.S. 22	26.62	26.72	0.10	528.0	52.0	3	448	3,050.7	3,050.7	228.9	152.6			1.75		148.3	1.25	106.0	0.20
1	MUS	U.S. 22	26.72	26.92	0.20	1,056.0	52.0	2	448	6,101.3	6,101.3	457.6	305.1			1.75		296.6	1.25	211.9	0.40
1	MUS	U.S. 22	26.92	27.73	0.81	4,276.8	50.0	2	448	23,760.0	23,760.0	1,782.0	1,188.0			1.75		1,155.0	1.25	825.0	1.62
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)											**32,912.0**	**2,468.5**	**1,645.7**					**1,599.9**		**1,142.9**	**2.22**
2	MUS	S.R. 83	0.00	0.30	0.30	1,584.0	20.0	1	448	3,520.0	3,520.0	264.0	176.0			1.00	97.8		1.25	122.3	0.60
2	MUS	S.R. 83	0.30	0.34	0.04	211.2	34.0 AVG	1	448	797.9	797.9	59.9	39.9			1.00	22.2		1.25	27.8	0.08
2	MUS	S.R. 83 N.B.	0.34	0.55	0.21	1,108.8	24.0	4	448	2,956.8	2,956.8	221.8	147.9			1.00	82.2		1.25	102.7	0.42
2	MUS	S.R. 83 N.B.	0.55	0.60	0.05	264.0	18.0 AVG	4	448	528.0	528.0	39.6	26.4			1.00	14.7		1.25	18.4	0.10
2	MUS	S.R. 83 S.B.	0.34	0.41	0.07	369.6	18.0 AVG	4	448	739.2	739.2	55.5	37.0			1.00	20.6		1.25	25.7	0.14
2	MUS	S.R. 83 S.B.	0.41	0.60	0.19	1,003.2	24.0	4	448	2,675.2	2,675.2	200.7	133.8			1.00	74.4		1.25	92.9	0.38
2	MUS	S.R. 83	0.60	0.63	0.03	158.4	36.0 AVG	1	448	633.6	633.6	47.6	31.7			1.00	17.6		1.25	22.0	0.06
2	MUS	S.R. 83	0.63	1.45	0.82	4,329.6	24.0	1	448	11,545.6	11,545.6	866.0	577.3			1.00	320.8		1.25	400.9	1.64
SLM 1.45-SLM 1.48 INCLUDED WITH US 22 AND EXTRA AREAS																					
2	MUS	S.R. 83	1.48	2.18	0.70	3,696.0	18.0	1	448	7,392.0	7,392.0	554.4	369.6			1.00	205.4		1.25	256.7	1.40
2	MUS	S.R. 83	2.18	2.40	0.22	1,161.6	20.0	1	448	2,581.3	2,581.3	193.6	129.1			1.00	71.8		1.25	89.7	0.44
2	MUS	S.R. 83	2.40	7.16	4.76	25,132.8	20.0	1	448	55,850.7	55,850.7			4,188.9	2,792.6	1.00	1,551.5		1.25	1,939.3	9.52
DEDUCT FOR BRIDGES (FROM SHEET 11)										(1,176.0)	(1,176.0)	(88.2)	(58.8)			1.00	(32.6)		1.25	(40.8)	(0.08)
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)											**88,044.3**	**2,414.9**	**1,609.9**	**4,188.9**	**2,792.6**		**2,446.4**			**3,057.6**	**14.70**

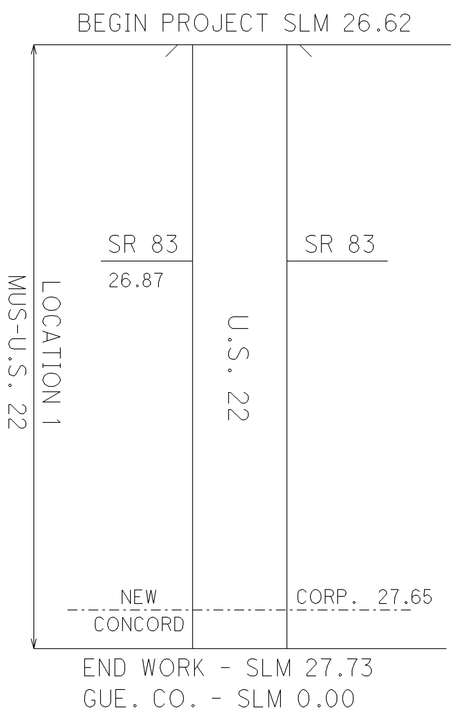
CALCULATED LME CHECKED DNM

ASPHALT CONCRETE DATA

MUS-22-26.62
MUS-83-0.00

M022_MAC_001.DGN 6-28-12





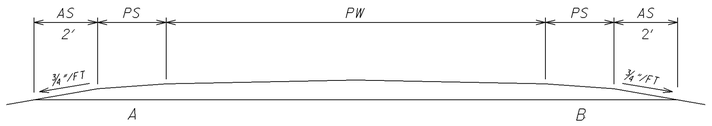
STRAIGHT LINE DIAGRAMS

PW = PAVEMENT WIDTH
PS = PAVED SHOULDER
AS = AGGREGATE SHOULDER

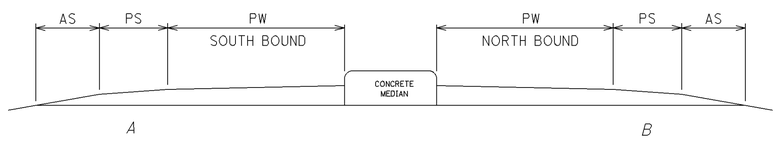
CALCULATED LME
CHECKED DNM

PAVED SHOULDER DATA

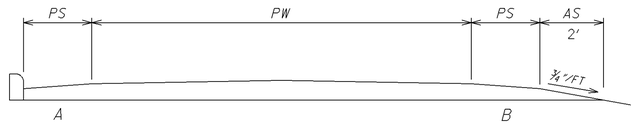
TYPICAL 1



TYPICAL 2



TYPICAL 3

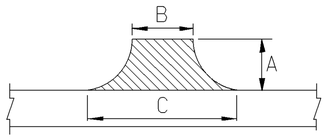


SHOULDER DATA

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		TYPICAL	PROPOSED WIDTH (FT.)		SHOULDER AREA	254	407				448 ASPHALT CONCRETE					617	
					MILES	LIN. FT.		A	B		PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.075 GAL./S.Y.	TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.05 GAL./S.Y.	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	THICKNESS	INTERMEDIATE COURSE, TYPE 1, PG 64-22	INTERMEDIATE COURSE, TYPE 2, PG 64-22	THICKNESS	SURFACE COURSE, TYPE 1, PG 70-22M	THICKNESS	COMPACTED AGGREGATE, AS PER PLAN (2' WIDTH)
										SQ. YD.	SQ. YD.			GAL.	GAL.	INCHES	CU. YD.	CU. YD.	INCHES	CU. YD.	INCHES	CU. YD.
1	MUS	U.S. 22	26.62	26.72	0.10	528.0	3	5	5	586.7	586.7	44.0	29.3			1.75		28.5	1.25	20.4	2.00	6.5
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)											**586.7**	**44.0**	**29.3**					**28.5**		**20.4**		**6.5**
2	MUS	S.R. 83	0.00	0.34	0.34	1795.2	1	2	2	797.9	797.9	59.8	39.9			1.00	22.2		1.25	27.7	2.00	44.3
2	MUS	S.R. 83	0.34	1.45	1.11	5860.8	4	4	4	5,209.6	5,209.6	390.7	260.5			1.00	144.7		1.25	180.9	2.00	144.7
SLM 1.45- SLM 1.48 SKIP US 22 INTERSECTION																						
2	MUS	S.R. 83	1.48	2.40	0.92	4857.6	1	2	2	2,158.9	2,158.9	161.9	107.9			1.00	60.0		1.25	75.0	2.00	119.9
2	MUS	S.R. 83	2.40	7.16	4.76	25132.8	1	2	2	11,170.1	11,170.1			837.8	558.5	1.00	310.3		1.25	387.9	2.00	620.6
	DEDUCT FOR BRIDGES (FROM SHEET 11)									(196.0)	(196.0)	(14.7)	(9.8)			1.00	(5.4)		1.25	(6.8)	2.00	(10.9)
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)											**19,140.5**	**597.7**	**398.5**	**837.8**	**558.5**		**531.8**			**664.7**		**918.6**

M022_MPS_001.DGN 10-3-2012

MUS-22-26.62
MUS-83-0.00



$$AREA = \left[A \frac{(B + C)}{2} \right] / 9$$

EXTRA AREAS

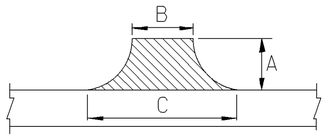
LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS DETAIL DIMENSION A	INTERSECTIONS DETAIL DIMENSION B	INTERSECTIONS DETAIL DIMENSION C	AREA	202 WEARING COURSE REMOVED	407 TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.075 GAL./S.Y.	407 TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.05 GAL./S.Y.	448 ASPHALT CONCRETE THICKNESS	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22	448 ASPHALT CONCRETE THICKNESS	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22
					FT.	FT.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	IN.	CU. YD.	IN.	CU. YD.
1	MUS	U.S. 22	LT	SHADYSIDE DR.	25	18	39	79.2	79.2	6.0	4.0	1.75	3.9	1.25	2.8
1	MUS	U.S. 22	LT	GARFIELD AVE.	16	20	45	57.8	57.8	4.4	2.9	1.75	2.9	1.25	2.1
1	MUS	U.S. 22	LT	SR. 83	40	26	75	224.5	224.5	16.9	11.3	1.75	11.0	1.25	7.8
1	MUS	U.S. 22	RT	SR. 83	55	32	107	424.8	424.8	31.9	21.3	1.75	20.7	1.25	14.8
1	MUS	U.S. 22	LT	ALLEY	19	18	39	60.2	60.2	4.6	3.1	1.75	3.0	1.25	2.1
1	MUS	U.S. 22	LT	ALLEY	16	15	27	37.4	37.4	2.9	1.9	1.75	1.9	1.25	1.3
1	MUS	U.S. 22	RT	MILL ST.	17	12	26	35.9	35.9	2.7	1.8	1.75	1.8	1.25	1.3
1	MUS	U.S. 22	LT	COMIN ST.	23	28	50	99.7	99.7	7.5	5.0	1.75	4.9	1.25	3.5
1	MUS	U.S. 22	LT	STORMONT AVE.	25	28	52	111.2	111.2	8.4	5.6	1.75	5.5	1.25	3.9
1	MUS	U.S. 22	RT	MAPLE AVE.	18	15	24	39.0	39.0	3.0	2.0	1.75	1.9	1.25	1.4
1	MUS	U.S. 22	LT	ALLEY	16	12	24	32.0	32.0	2.4	1.6	1.75	1.6	1.25	1.2
1	MUS	U.S. 22	RT	ALLEY	17	15	27	39.7	39.7	3.0	2.0	1.75	2.0	1.25	1.4
1	MUS	U.S. 22	LT	EXIT FROM COLLEGE	20	15	48	70.0	70.0	5.3	3.5	1.75	3.5	1.25	2.5
1	MUS	U.S. 22	RT	DEPOT ST.	17	20	30	47.3	47.3	3.6	2.4	1.75	2.3	1.25	1.7
1	MUS	U.S. 22	LT	ENTRANCE TO COLLEGE	18	16	37	53.0	53.0	4.0	2.7	1.75	2.6	1.25	1.9
1	MUS	U.S. 22	LT	LAYTON DR.	21	20	35	64.2	64.2	4.9	3.3	1.75	3.2	1.25	2.3
1	MUS	U.S. 22	RT	LAYTON DR.	18	22	41	63.0	63.0	4.8	3.2	1.75	3.1	1.25	2.2
1	MUS	U.S. 22	LT	ALLEY	20	18	24	46.7	46.7	3.6	2.4	1.75	2.3	1.25	1.7
1	MUS	U.S. 22	RT	ALLEY	17	16	25	38.8	38.8	3.0	2.0	1.75	1.9	1.25	1.4
1	MUS	U.S. 22	LT	LIBERTY ST.	21	20	38	67.7	67.7	5.1	3.4	1.75	3.3	1.25	2.4
1	MUS	U.S. 22	RT	LIBERTY ST.	20	20	45	72.3	72.3	5.5	3.7	1.75	3.6	1.25	2.6
1	MUS	U.S. 22	LT	CHESTNUT ST.	20	14	26	44.5	44.5	3.4	2.3	1.75	2.2	1.25	1.6
1	MUS	U.S. 22	RT	CHESTNUT ST.	16	15	25	35.6	35.6	2.7	1.8	1.75	1.8	1.25	1.3
1	MUS	U.S. 22	LT	FRANKLIN ST.	18	16	29	45.0	45.0	3.4	2.3	1.75	2.2	1.25	1.6
1	MUS	U.S. 22	RT	FRANKLIN ST.	16	20	40	53.4	53.4	4.1	2.7	1.75	2.6	1.25	1.9
1	MUS	U.S. 22	LT	ALLEY	17	14	26	37.8	37.8	2.9	1.9	1.75	1.9	1.25	1.4
1	MUS	U.S. 22	RT	ALLEY	15	16	26	35.0	35.0	2.7	1.8	1.75	1.8	1.25	1.3
1	MUS	U.S. 22	RT	DELAWARE ST.	18	27	45	72.0	72.0	5.4	3.6	1.75	3.5	1.25	2.5
1	MUS	U.S. 22	RT	EASTLAND DR.	15	13	30	35.9	35.9	2.7	1.8	1.75	1.8	1.25	1.3
1	MUS	U.S. 22	LT	SNOOTS LN.	90	37		185.0	185.0	13.9	9.3	1.75	9.0	1.25	6.5
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)									**2,308.6**	**174.7**	**116.6**		**113.7**		**81.7**

CALCULATED LME CHECKED DNM

EXTRA AREA DATA

MUS-22-26.62
MUS-83-0.00

M022_MEA_001.DGN 6-14-12



$$AREA = \left[A \frac{(B + C)}{2} \right] / 9$$

EXTRA AREAS

LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS DETAIL DIMENSION A	B	C	AREA	202 WEARING COURSE REMOVED	407 TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.075 GAL./S.Y.	407 TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.05 GAL./S.Y.	448 ASPHALT CONCRETE THICKNESS	448 INTERMEDIATE COURSE, TYPE 1, PG 64-22	448 THICKNESS	448 SURFACE COURSE, TYPE 1, PG 64-22
					FT.	FT.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	IN.	CU. YD.	IN.	CU. YD.
2	MUS	S.R. 83	LT	NEPTUNE LANE	35	17	75	178.9	178.9	13.5	9.0	1.00	5.0	1.25	6.3
2	MUS	S.R. 83	LT	SUNFLOWER DR.	45	23	90	282.5	282.5	21.2	14.2	1.00	7.9	1.25	9.9
2	MUS	S.R. 83 N.B.		LEFT TURN LANE / MEDIAN OPENING				312.0	312.0	23.4	15.6	1.00	8.7	1.25	10.9
2	MUS	S.R. 83 S.B.		LEFT TURN LANE / MEDIAN OPENING				296.0	296.0	22.2	14.8	1.00	8.3	1.25	10.3
2	MUS	S.R. 83	RT	LIBERTY DR.	40	25	86	246.7	246.7	18.6	12.4	1.00	6.9	1.25	8.6
2	MUS	S.R. 83	LT	MAPLE LANE	36	21	55	152.0	152.0	11.4	7.6	1.00	4.3	1.25	5.3
2	MUS	S.R. 83	LT	WEDGEWOOD	40	25	50	166.7	166.7	12.6	8.4	1.00	4.7	1.25	5.8
2	MUS	S.R. 83	LT	GARFIELD AVE.	30	18	45	105.0	105.0	7.9	5.3	1.00	3.0	1.25	3.7
2	MUS	S.R. 83	RT	THOMPSON AVE.	15	19	47	55.0	55.0	4.2	2.8	1.00	1.6	1.25	2.0
2	MUS	S.R. 83	LT	WESTVIEW DR.	25	24	70	130.6	130.6	9.8	6.6	1.00	3.7	1.25	4.6
2	MUS	S.R. 83	RT	WESTVIEW DR.	15	13	36	40.9	40.9	3.1	2.1	1.00	1.2	1.25	1.5
2	MUS	S.R. 83	RT	MONTGOMERY BLVD.	25	20	63	115.3	115.3	8.7	5.8	1.00	3.3	1.25	4.1
2	MUS	S.R. 83	LT	LONGVIEW LANE	20	16	34	55.6	55.6	4.2	2.8	1.00	1.6	1.25	2.0
2	MUS	S.R. 83	RT	McCALLS LANE	25	16	46	86.2	86.2	6.5	4.4	1.00	2.4	1.25	3.0
2	MUS	S.R. 83	RT	HILLCREST	20	16	55	78.9	78.9	6.0	4.0	1.00	2.2	1.25	2.8
2	MUS	S.R. 83	RT	JOHN GLENN DR.	45	20	75	237.5	237.5	17.9	11.9	1.00	6.6	1.25	8.3
2	MUS	S.R. 83	RT	JAY LAYMAN DR.	20	16	34	55.6	55.6	4.2	2.8	1.00	1.6	1.25	2.0
2	MUS	S.R. 83	RT	RIDGEVIEW DR.	25	20	46	91.7	91.7	6.9	4.6	1.00	2.6	1.25	3.2
2	MUS	S.R. 83	LT	BLACKSTONE LANE	30	18	66	140.0	140.0	10.5	7.0	1.00	3.9	1.25	4.9
2	MUS	S.R. 83	LT	NORFIELD RD. (C.R. 64)	45	20	78	245.0	245.0	18.4	12.3	1.00	6.9	1.25	8.6
2	MUS	S.R. 83	LT	NORFIELD RD. (C.R. 64)	85	20	100	566.7	566.7	42.6	28.4	1.00	15.8	1.25	19.7
2	MUS	S.R. 83	RT	AVON LANE	15	12	36	40.0	40.0	3.0	2.0	1.00	1.2	1.25	1.4
2	MUS	S.R. 83	RT	L. BLOOMFIELD RD.	60	19	100	396.7	396.7	29.8	19.9	1.00	11.1	1.25	13.8
2	MUS	S.R. 83	RT	SR 209	65	21	100	437.0	437.0	32.8	21.9	1.00	12.2	1.25	15.2
2	MUS	S.R. 83	LT	WINDY RIDGE RD.	40	19	68	193.4	193.4	14.6	9.7	1.00	5.4	1.25	6.8
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)									**4,705.9**	**354.0**	**236.3**		**132.1**		**164.7**

CALCULATED LME
CHECKED DNM

EXTRA AREA DATA

MUS-22-26.62
MUS-83-0.00

M022_MEA_002.DGN 6-14-12

CALCULATED LME CHECKED DNM

BRIDGE DECK TREATMENT DATA

BRIDGE TREATMENT

LOCATION 2

DETAIL (1) MUS-83-0138: BUTT JOINT 75' FROM BRIDGE DECK IN PREPARATION FOR UP COMING BRIDGE PROJECT.

DETAIL (2) MUS-83-0716: BUTT JOINT AT SOUTH APPROACH SLAB, END PROJECT

DEDUCTIONS = PAVEMENT/SHOULDER WIDTHS X (BRIDGE LENGTH + APPROACH SLABS)

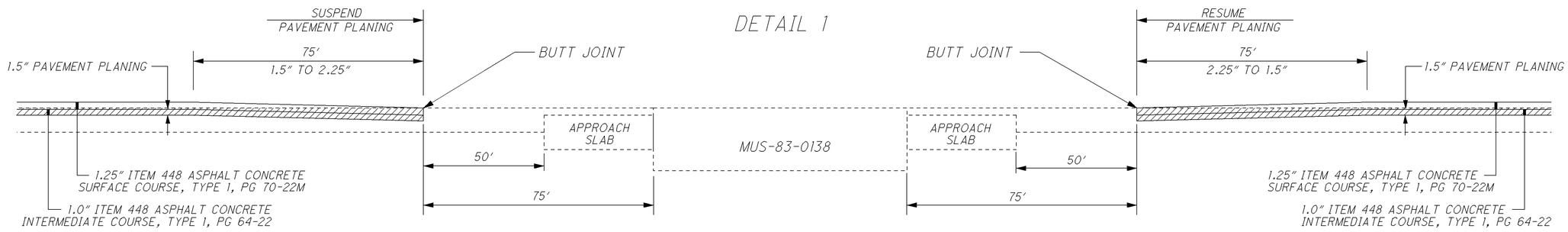
BRIDGE DATA												516
LOCATION	COUNTY, ROUTE, BRIDGE NO.	LENGTH (BRIDGE LIMITS)	WIDTH	AREA	APPROACH SLAB LENGTH	APPROACH SLAB WIDTH	APPROACH SLAB AREA (INCLUDES BOTH APPROACH SLABS)	DETAILS (SHEET 12)	MAINLINE DEDUCTIONS (CARRIED TO SHEET 6)	SHOULDER DEDUCTIONS (CARRIED TO SHEET 8)		2" DEEP JOINT SEALER, AS PER PLAN
		LIN. FT.	LIN. FT.	SQ. YD.	LIN. FT.	LIN. FT.	SQ. YD.		SQ.YD.	SQ.YD.		FEET
2	MUS-83-0044	OVERHEAD - MILL AND FILL ROADWAY										
2	MUS-83-0046	OVERHEAD - MILL AND FILL ROADWAY										
2	MUS-83-0138	291	30	970.0	25.0	30.0	166.7	1	1,176.0	196.0		
2	MUS-83-0716	BUTT JOINT AT SOUTH APPROACH SLAB - END PROJECT						2				24.0
SUB-TOTALS		291			25.0				1,176.0	196.0		
	LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)											**24.0**

MUS-22-26.62
MUS-83-0.00

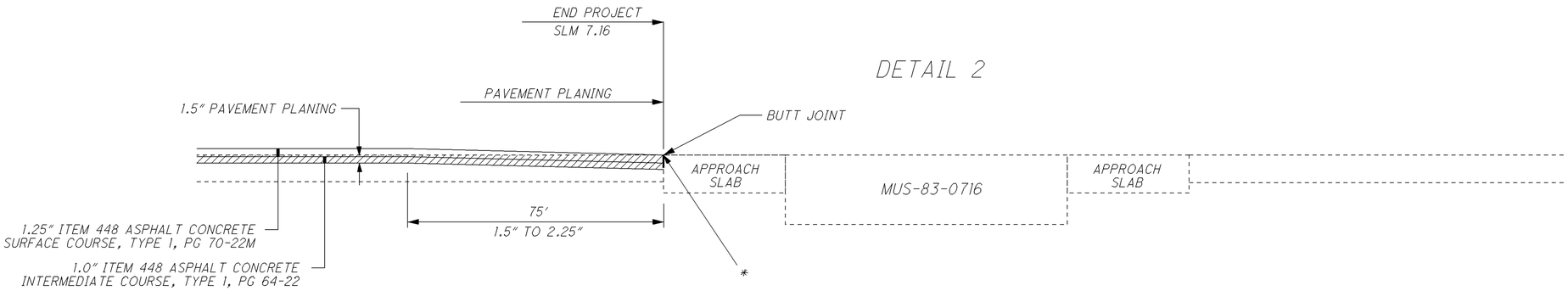
M022_MBT_001.dgn 9-27-12

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

DETAILS NOT TO SCALE



SKIP BRIDGE IN PREPARATION FOR FUTURE BRIDGE PROJECT



* 2.0" DEEP JOINT SEALER, AS PER PLAN

BUTT JOINT AT SOUTH APPROACH SLAB, END PROJECT

CALCULATED LME CHECKED DNM

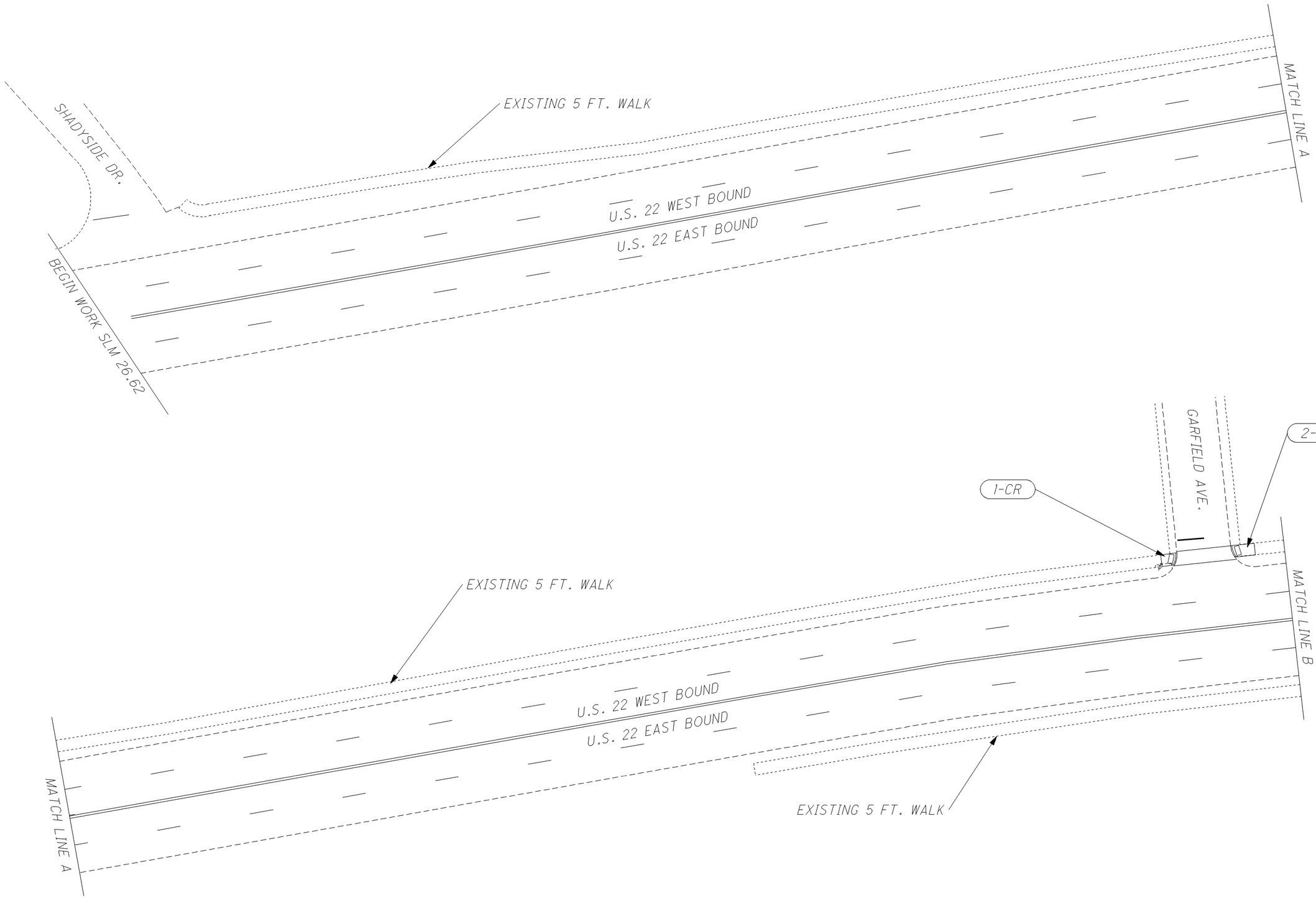
BRIDGE DECK TREATMENT DATA

BRIDGE

MUS-22-26.62
MUS-83-0.00

M022_MBT_002.dgn 9-27-12

NOT TO SCALE



SEE SHEET 22 FOR CURB RAMP QUANTITES

HORIZONTAL SCALE IN FEET
0

CALCULATED LME
CHECKED DNM

CURB RAMP PLAN SHEET
U.S. 22 NEW CONCORD

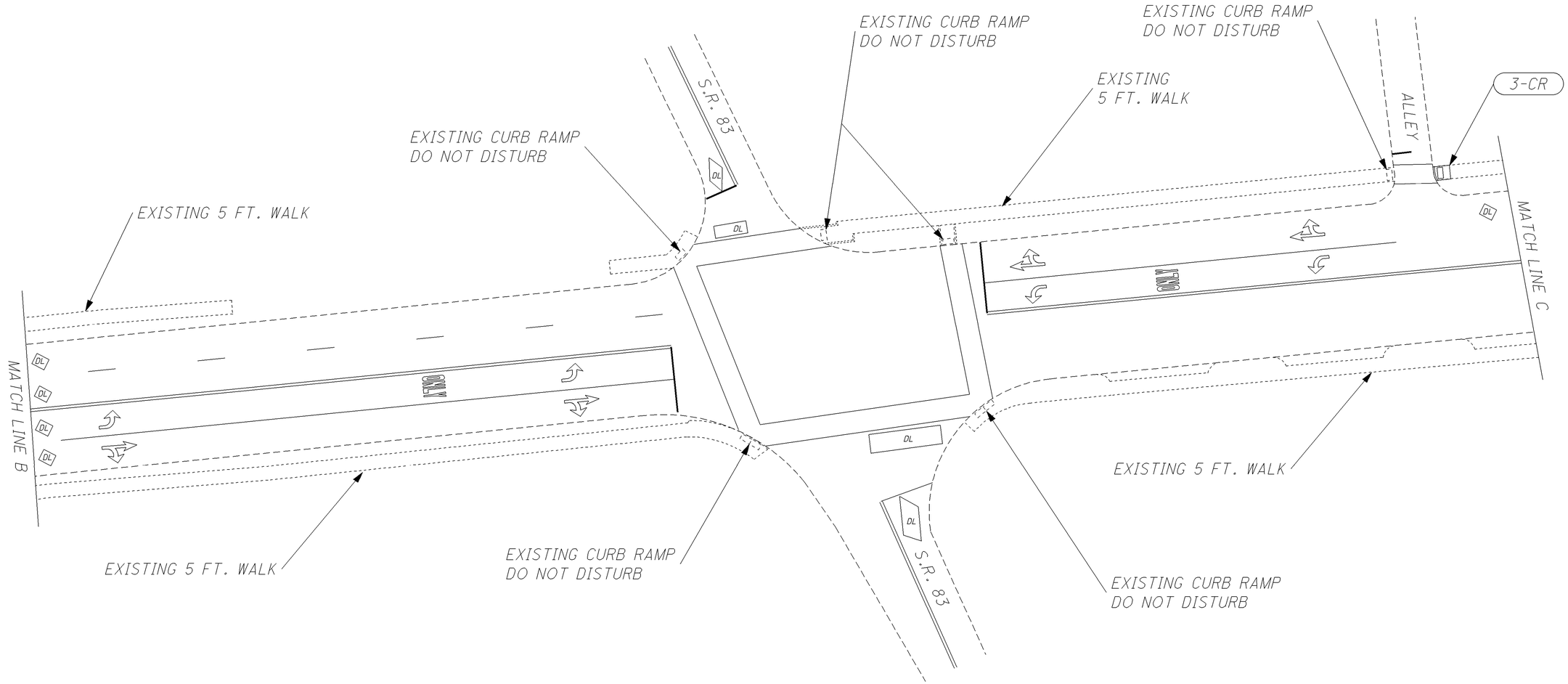
MUS-22-26.62
MUS-83-0.00

13
32

P:\MUS\83110\Design\Roadway\Plan_Sheets\General\M022_CRD_001.dgn 10/11/2012 9:35:14 AM dmorgan

NOT TO SCALE

DL = EXIST. DETECTOR LOOP



SEE SHEET 22 FOR CURB RAMP QUANTITES

HORIZONTAL SCALE IN FEET
0

CALCULATED LME
CHECKED DNM

CURB RAMP PLAN SHEET
U.S. 22 NEW CONCORD

MUS-22-26.62
MUS-83-0.00

NOT TO SCALE

DL = EXIST. DETECTOR LOOP

SEE SHEET 22 FOR CURB RAMP QUANTITES

HORIZONTAL SCALE IN FEET

CALCULATED LME
CHECKED DNM

CURB RAMP PLAN SHEET
U.S. 22 NEW CONCORD

MUS-22-26.62
MUS-83-0.00

15
32

P:\MUS\83110\Design\Roadway\Plan_Sheets\General\M022_CRD_001.dgn 10/11/2012 9:35:57 AM dmorgan

NOT TO SCALE

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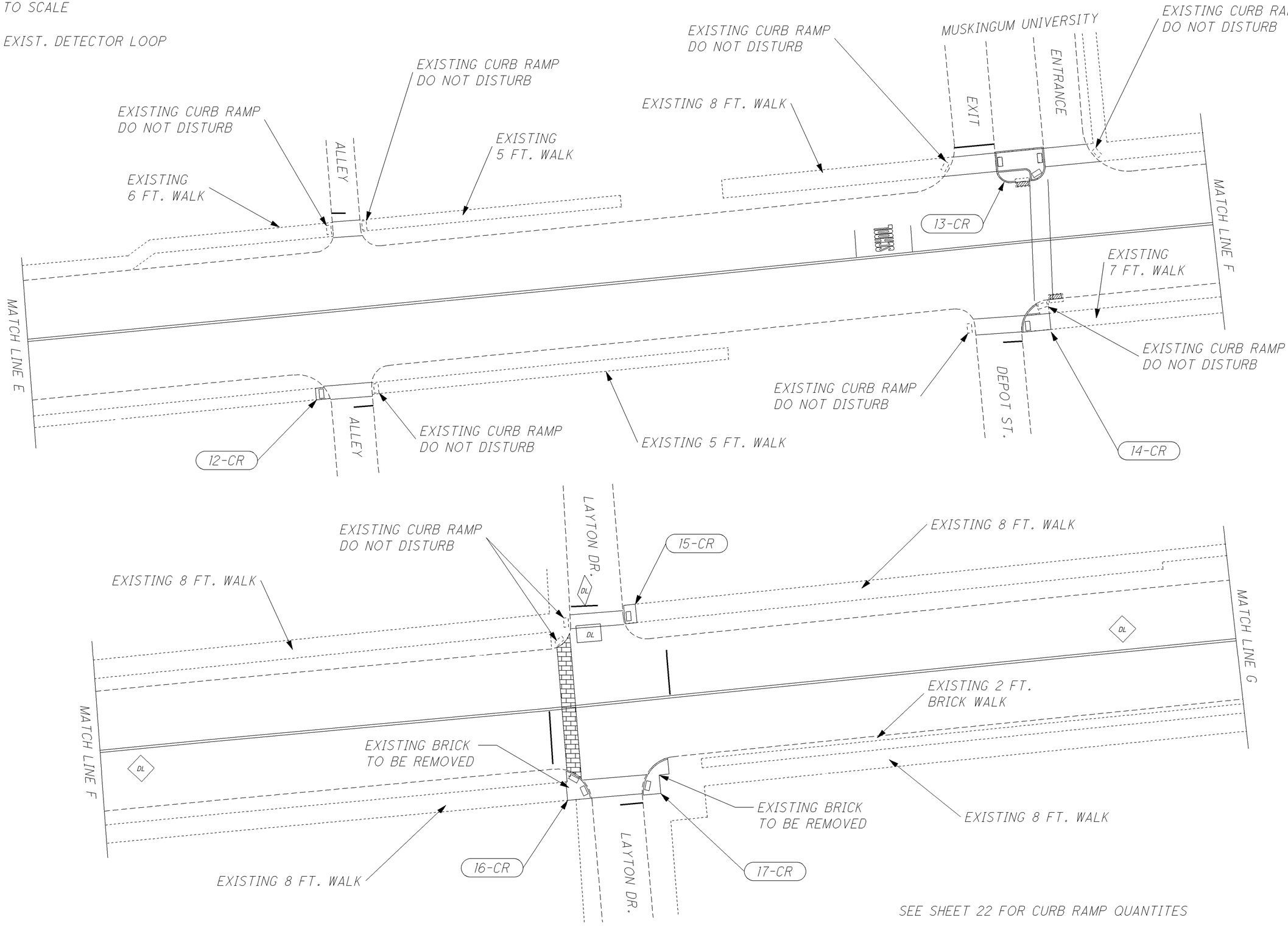


SEE SHEET 22 FOR CURB RAMP QUANTITES

HORIZONTAL SCALE IN FEET
0

CALCULATED LME
CHECKED DNM

CURB RAMP PLAN SHEET
U.S. 22 NEW CONCORD

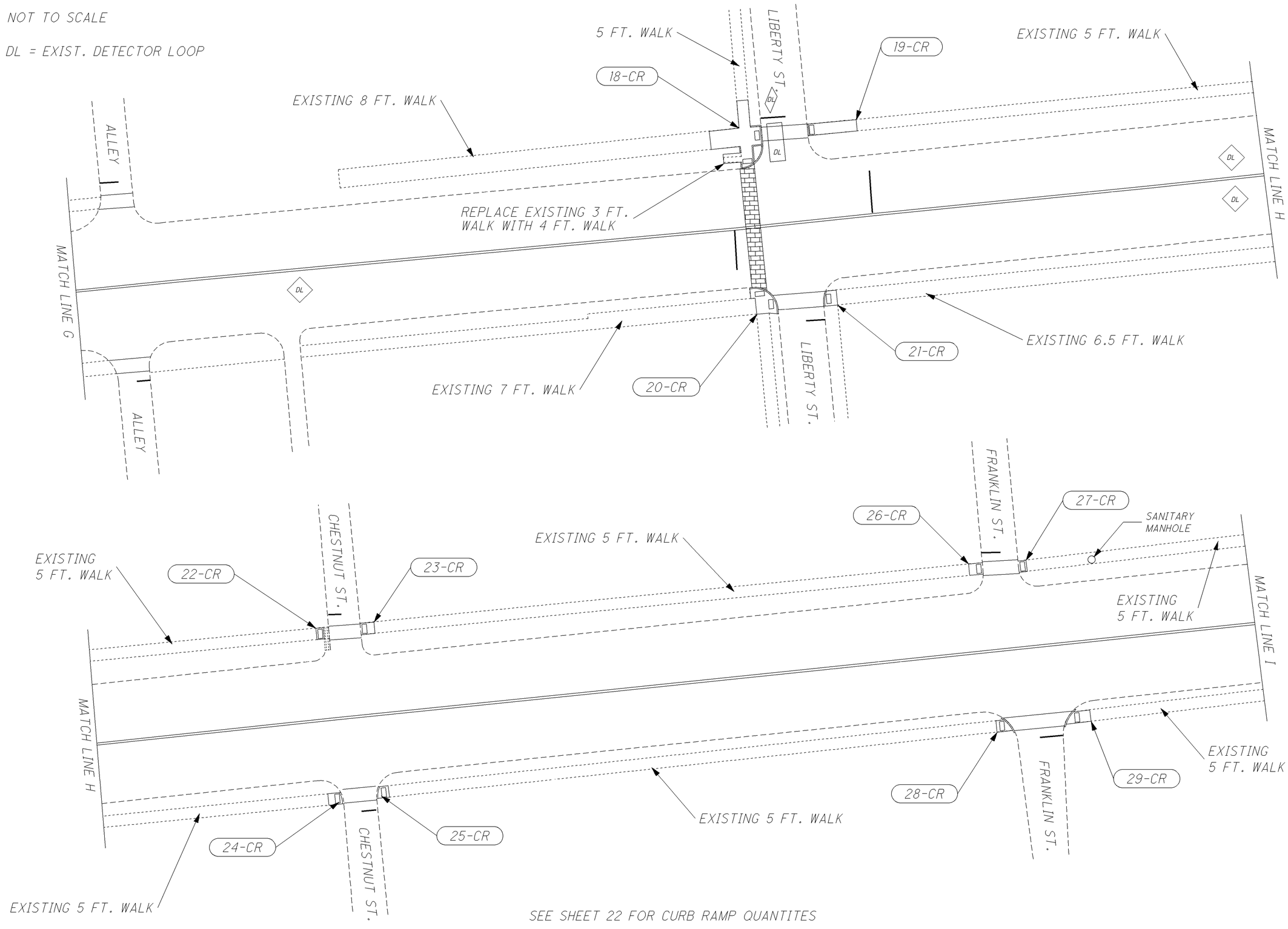
MUS-22-26.62
MUS-83-0.00

16
32

P:\MUS\83110\Design\Roadway\Plan_Sheets\General\M022_CRD_001.dgn 10/11/2012 3:44:50 PM dmorgan

NOT TO SCALE

DL = EXIST. DETECTOR LOOP



SEE SHEET 22 FOR CURB RAMP QUANTITES

HORIZONTAL SCALE IN FEET

0

CALCULATED LME

CHECKED DNM

CURB RAMP PLAN SHEET
U.S. 22 NEW CONCORD

MUS-22-26.62
MUS-83-0.00

17
32

NOT TO SCALE

EXISTING 5 FT. WALK

EXISTING 5 FT. WALK

ALLEY

MATCH LINE J

EXISTING
5 FT. WALK

31-CR

30-CR

DELEWARE ST

MATCH LINE I

EXISTING 5 FT. WALK

ALLEY

EXISTING 5 FT. WALK

SNOOTS LN.

END WORK SLM 27.73

MATCH LINE J

EASTLAND DR.

SEE SHEET 22 FOR CURB RAMP QUANTITES

HORIZONTAL SCALE IN FEET

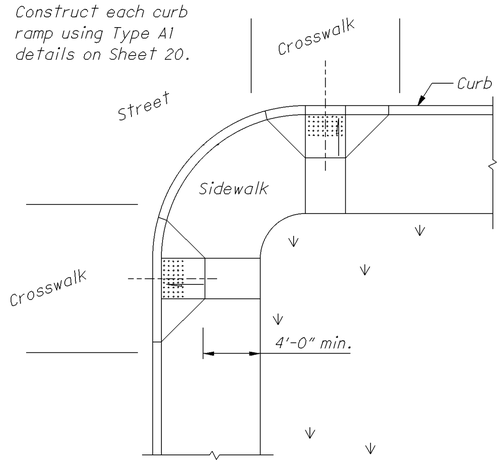
0

CALCULATED LME

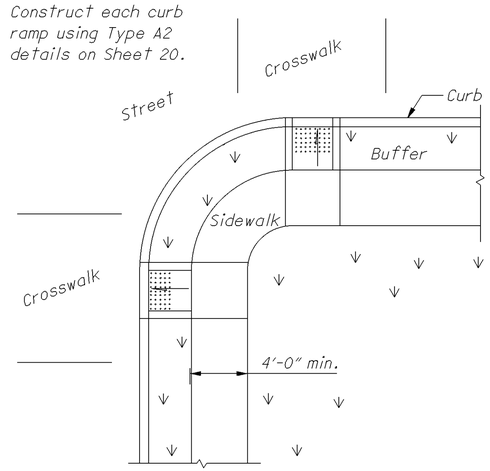
CHECKED DNM

CURB RAMP PLAN SHEET
U.S. 22 NEW CONCORD

MUS-22-26.62
MUS-83-0.00

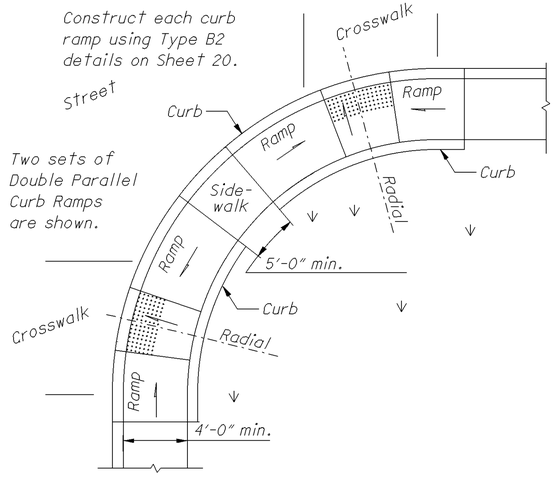


Use curb ramps with flared sides at locations with wide sidewalks.



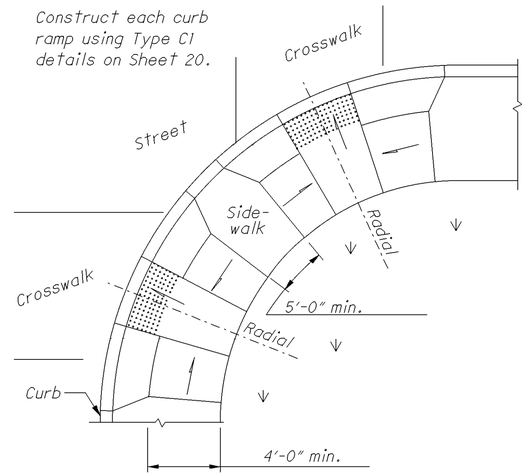
Use curb ramps with returned curbs where buffer is wide enough to accommodate ramp slope.

PERPENDICULAR CURB RAMPS



Place on streets having wide turning radius and where sidewalks are narrow.

PARALLEL CURB RAMPS



Curb ramp placement where streets have wide turning radius, and sufficient sidewalks width.

COMBINATION CURB RAMPS

NOTES

GENERAL: This drawing shows curb ramp types details and placement examples for curb ramp construction, including the installation of detectable warnings.

Curb ramp types are shown on Sheet 20 and include Perpendicular, Parallel, and Combined types as specified to be constructed in the locations shown in the project plans.

The contractor may adjust the placement of curb ramps if existing field conditions warrant with the approval of the Engineer.

Excavate, form, place, finish, and cure according to 608.03.A, 608.03.B, 608.03.C, and 608.03.E.

DETECTABLE WARNINGS: Install Detectable Warnings on each curb ramp with approved materials, as shown on Sheet 21. Install these proprietary products as per manufacturer's written instructions.

DRAINAGE: Contractor is to ensure the base of each constructed curb ramp allows for proper drainage, without exceeding allowable cross slope or ramp slopes. Vertical change in level exceeding ⅛" between the 1) pavement and gutter, and 2) gutter and ramp, are not allowed.

JOINTS: Provide expansion joints in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. Provide a ½" Item 705.03 expansion joint filler around the edge of ramps built in existing concrete walks. Lines shown on this drawing indicate the ramp edges and slope changes, and do not necessarily indicate joint lines.

METHOD OF MEASUREMENT: The Department will measure Curb Ramps by the number of each completed curb ramp. The Department will measure Detectable Warnings in existing curb ramps and at grade crossings by the number of square feet completed.

Concrete Walk and Curb, Item 608 and 609, will be measured through out the curb ramp area and paid for under their respective Items.

METHOD OF PAYMENT: New Curb Ramps constructed in new or existing Walk are paid for under Item 690 Special Misc.: Curb Ramp, Type __ (A1, A2, B1, B2, B3, C1, C2, or D) each, and includes the cost of any additional materials and installation (including detectable warnings), grading, forming and finishing.

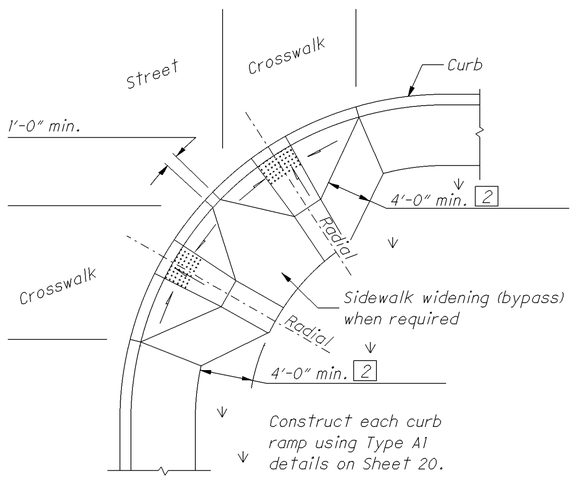
Detectable Warnings constructed in existing curb ramps or for at-grade crossing locations are paid for under Item 690-Special Misc.: Detectable Warning (Sq. Ft.) and is full compensation for excavation, backfill, base course material, reinforcing steel, expansion joint materials, and any incidentals required to complete the installation as specified. The work to cast the tiles in place will also require removal of existing pavement or sidewalk (Item 202) to the nearest joint, or if no joint exists, a minimum of 4 feet.

Removal of existing curb, pavement, walk (or existing curb ramps) are paid under Item 202.

LEGEND

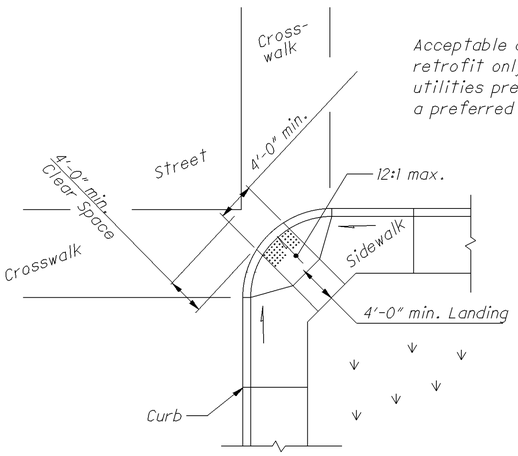
[2] May be reduced to 3'-4" in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.

Acceptable design on corners with wide turning radius where user is able to maneuver within crosswalk limits so as not to encroach into adjacent traveled lanes.



PERPENDICULAR RAMPS

Acceptable design for retrofit only where utilities prevent using a preferred layout.



Use this design only for existing walks, and when site constraints prohibit other designs. The diagonal Type D ramp may be constructed as either a Perpendicular, Parallel or Combination curb ramp type. Avoid using where curb radii are less than 20'-0".

DIAGONAL RAMP (Type D)

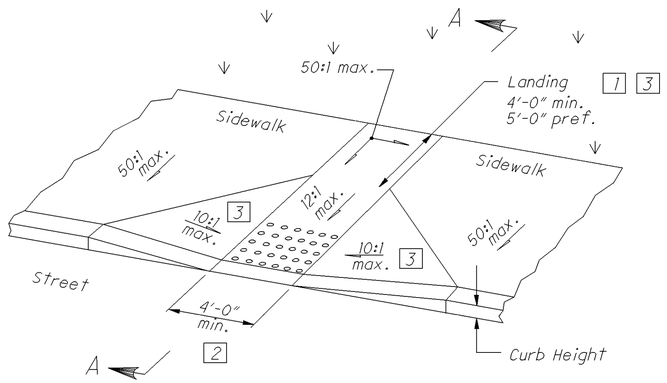
ACCEPTABLE CONSTRUCTION PLACEMENT

CALCULATED JLS CHECKED DNM

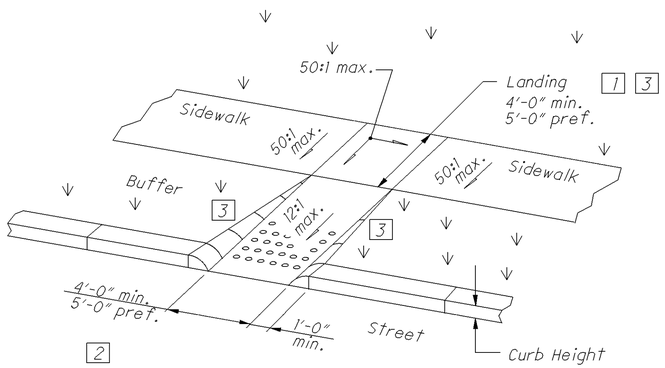
CURB RAMP AND DETECTABLE WARNING DETAILS

MUS-22-26.62
MUS-83-0.00

86719_CRD_001.DGN 5/08/12

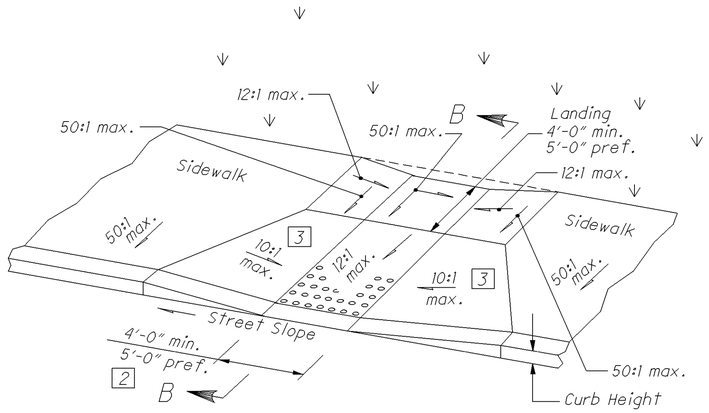


Type A1 (Perpendicular with flared sides)

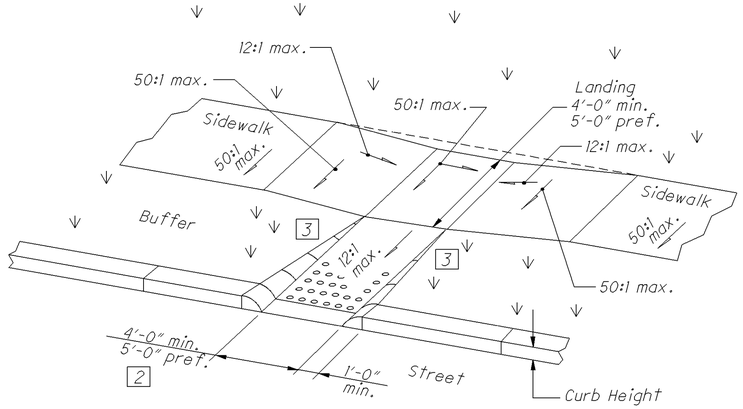


Type A2 (Perpendicular with returned curb)

PERPENDICULAR CURB RAMP DETAILS

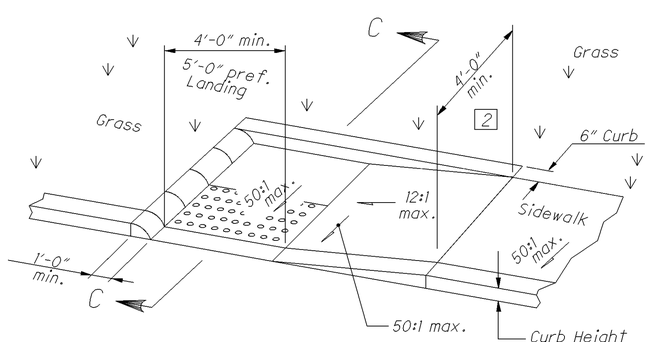


Type C1 (Combined with flared sides)

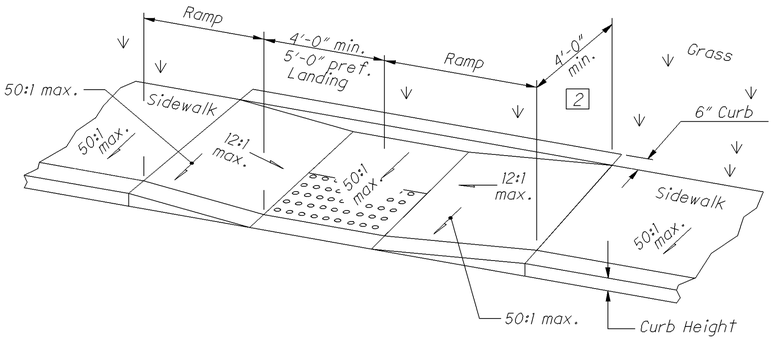


Type C2 (Combined with returned curb)

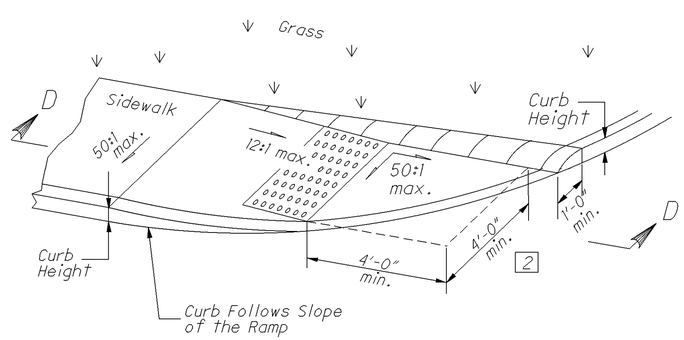
COMBINED CURB RAMP DETAILS



Type B1 (Single sided Parallel)



Type B2 (Double sided Parallel)



Type B3 (Single sided Parallel)

PARALLEL CURB RAMP DETAILS

NOTES

The running slope of the ramp is preferred to be 12:1 or flatter. In existing sidewalks, where the maximum ramp slope is not feasible due to site constraints (e.g. utility poles or vaults, right-of-way limits) it may be reduced as follows:

A) 10:1 for a max. rise of 6",
B) 8:1 for a max. rise of 3",
C) 6:1 over a max. run of 2'-0" for historic areas where a flatter slope is not feasible.

To prevent chasing the grade indefinately, the transition from exisiting sidewalk to the curb ramp area is not required to exceed 15 feet in length.

While ramps may be skewed to the crosswalk, the entire lower landing area must fall within the cross walk that the ramp serves and cannot be located in the traveled lane of opposing traffic.

The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transitions shall be 20:1 ot flatter.

The bottom edge of the ramp shall change planes perpendicular to the landing.

The edge of the curb shall be flush with the edge of the adjacent pavement and gutter and surface slopes that meet grade breaks shall also be flush.

Ramp landings shall be 4' min. x 4' min. with a 50:1 or flatter cross slope and running slope, unless otherwise shown.

LEGEND

1 Dimension may be reduced to 3'-0" in existing sidewalks if the landing is unconstrained along the back edge.

2 May be reduced to 3'-4" in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.

3 Where landing width (D) has been reduced to 3'-0" the flared sides shall have a maximum slope of 12:1.

Flared sides are not required where the edges of a curb ramp are protected by landscaping or other barriers to travel by wheelchair users or pedestrians across the edge of the curb ramp. However, if the flared sides are used in these areas, they may be of any slope.

See Sheet 21 for Sections.

CALCULATED JLS CHECKED DNM

DETECTABLE WARNING DETAILS

CURB RAMP AND DE

MUS-22-26.62
MUS-83-0.00

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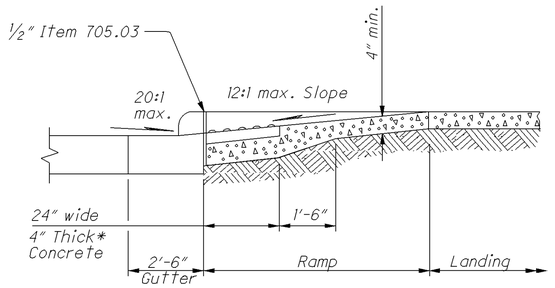
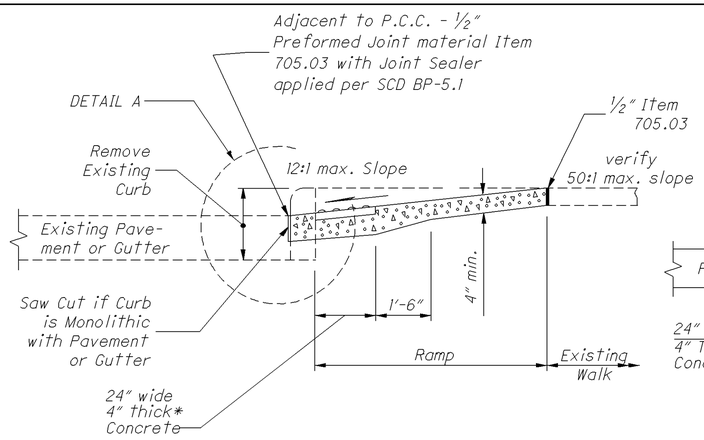
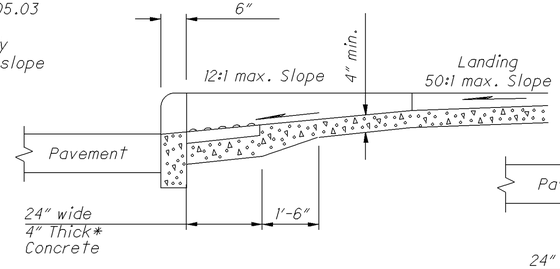


New gutter shown.

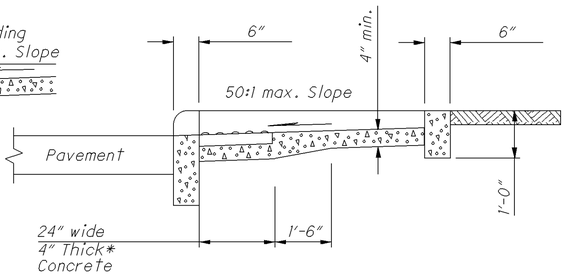
SECTION A-A
NORMAL DETAIL
See Sheet 20.



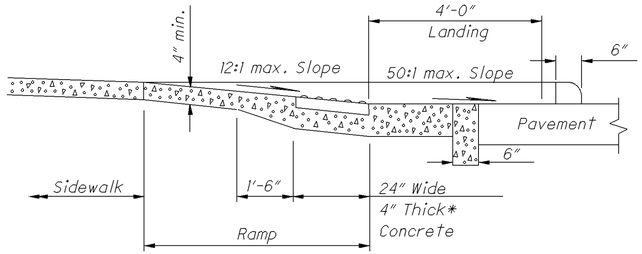
SECTION A-A
EXISTING WALK DETAIL
See Sheet 20.



SECTION B-B
See Sheet 20.

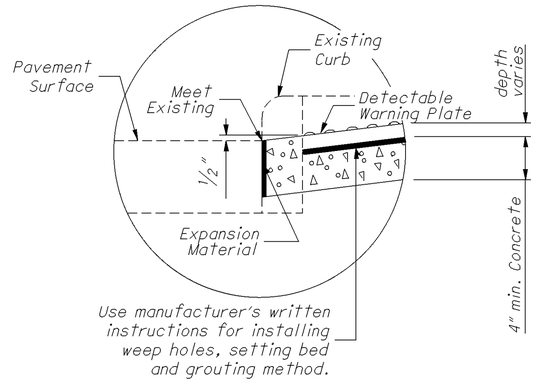


SECTION C-C
See Sheet 20.

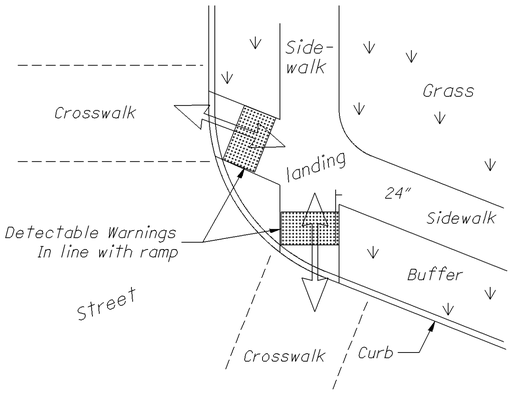


SECTION D-D
See Sheet 20.

*Where possible, pour ramp area integral with the curb, otherwise use 6" thick walk.



DETAIL A



DETECTABLE WARNING ALIGNMENT

DETECTABLE WARNINGS NOTES

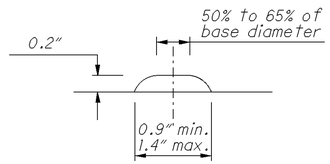
GENERAL: Detectable Warnings are a distinctive surface pattern of truncated domes which are detectable by cane or underfoot to alert people with vision impairments of their approach to streets and hazardous drop-offs.

PLACEMENT: Detectable warnings are to be installed at any location where pedestrians might cross paths with vehicular traffic lanes, such as the base of curb ramps or at blended curbs. A 24" strip of domes is to be installed for the full width of the ramp or walk. Typical street corner placement locations are shown on Sheet 19.

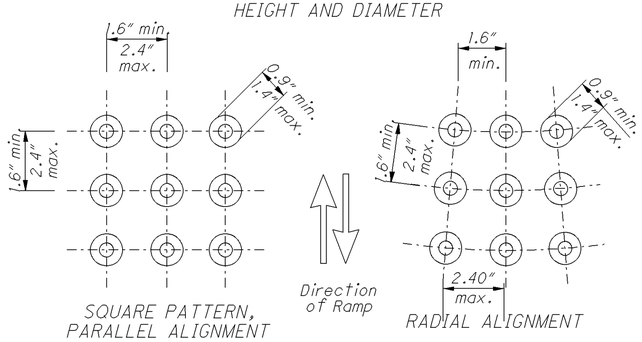
The depth of concrete underneath detectable warning products shall be a minimum of 4". See DETAIL A.

ALIGNMENT: Truncated domes should be aligned with the primary direction of the ramp as shown on the DETECTABLE WARNING ALIGNMENT Detail. Normally the detectable warnings should be flush with the back of the curb, but in skewed conditions at least one corner of the 24" strip should be adjacent to the back of curb. For non-standard layouts, detectable warning materials may have to be mitered and placed segmentally.

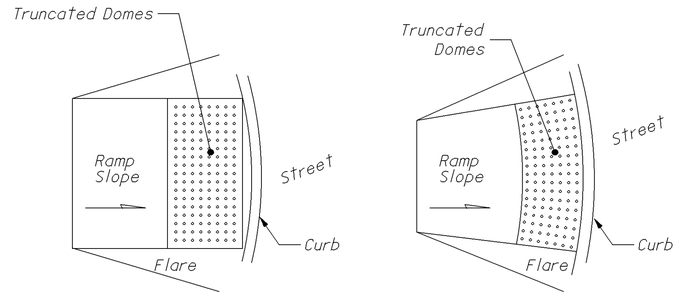
PRODUCTS & COLORS: Color of the detectable warnings should contrast with surrounding concrete walk and ramp. Black is not an acceptable color. Approved products and guidance on color may be found on the Office of Roadway Engineering Service's Detectable Warnings Approved List. Install products as per manufacturer's printed instructions.



HEIGHT AND DIAMETER



TRUNCATED DOMES DETAILS



DOME ALIGNMENT ON RADIUSED CURB

CALCULATED JLS
CHECKED DNM

CURB RAMP AND DETECTABLE WARNING DETAILS

MUS-22-26.62
MUS-83-0.00

83110_CRD_003.DGN 5/08/12

REFERENCE NO.	SHEET NO.	LOCATION	SIDE	202			608			690			609	COMMENTS
				PAVEMENT REMOVED, ASPHALT	WALK REMOVED	CURB REMOVED	4" CONCRETE WALK, (CURB RAMP AREA)	4" CONCRETE WALK, (EXTRA WALK AREA)	DETECTABLE WARNING	SPECIAL-MISC.: CURB RAMPS, TYPE A1	SPECIAL-MISC.: CURB RAMPS, TYPE A2	SPECIAL-MISC.: CURB RAMPS, TYPE D	CURB, TYPE 6	
			CL./LT./RT.	SQ. YD.	SQ. FT.	FT.	SQ. FT.	SQ. FT.	SQ. FT.	EACH	EACH	EACH	FT.	
		U.S. 22 - NEW CONCORD												
1-CR	13	GARFIELD AVE.	LT		29.0	6	21.0		8				6	REMOVE AND REPLACE FIRST TWO WALK PANELS
2-CR	13	GARFIELD AVE.	LT		42.0	6	9.0	25.0	8				6	REMOVE AND REPLACE FIRST TWO WALK PANELS
3-CR	14	ALLEY	LT		30.0	6	22.0		8				6	
4-CR	15	MILL ST.	RT		52.0		19.0	25.0	8					REMOVE/REPLACE FIRST TWO WALK PANELS, NO CURB
5-CR	15	MILL ST.	RT		62.0		29.0	25.0	8					REMOVE/REPLACE FIRST TWO WALK PANELS, NO CURB
6-CR	15	COMIN ST.	LT	2.8			17.0		8					REMVOVE EX. PAVEMENT, NO CURB
7-CR	15	COMIN ST.	LT		38.0	5	10.0	20.0	8				5	REMOVE AND REPLACE FIRST TWO WALK PANELS
8-CR	15	STORMONT AVE.	LT		180.0	25	164.0		2 @ 8 =16				31	EXISTING WALK IS BRICK
9-CR	15	STORMONT AVE.	LT		38.0		30.0		8					DO NOT REMOVE EXISTING CURB
10-CR	15	MAPLE AVE.	RT		30.0		22.0		8					NO EXISTING CURB
11-CR	15	MAPLE AVE.	RT		20.0		12.0		8					DO NOT REMOVE EXISTING CURB
12-CR	16	ALLEY	RT		24.0		16.0		8					DO NOT REMOVE EXISTING CURB
13-CR	16	ON U.S. 22 @ MUSKINGUM UNIVERSITY	LT		269.0		240.0				3		76	
14-CR	16	DEPOT ST.	RT		81.0	15	38.0	43.0			1		19	DO NOT DISTURB EXISTING CURB RAMP ADJACENT TO US 22
15-CR	16	LAYTON DR.	LT		40.0		32.0		8					DO NOT DISTURB EXISTING CURB
16-CR	16	LAYTON DR.	RT		86.0		89.0		2 @ 8 =16					DO NOT DISTURB EXISTING CURB
17-CR	16	LAYTON DR.	RT		96.0	9	47.0	41.0	8				9	REMOVE EXISTING CURB RAMP ADJACENT TO US 22
18-CR	17	LIBERTY ST.	LT		322.0	24	77.0	253.0			2		48	REDUCE THE EX. SLOPE ON THE WALK ADJACENT TO US 22 BY LOWERING THE LANDING WHERE THE 8 FT. AND 5 FT. WALKS INTERSECT.
19-CR	17	LIBERTY ST.	LT		105.0	5	22.0	75.0	8				5	REMOVE AND REPLACE FIRST FOUR WALK PANELS
20-CR	17	LIBERTY ST.	RT		92.0	20	76.0		2 @ 8 =16				20	
21-CR	17	LIBERTY ST.	RT		33.0	7	25.0		8				7	
22-CR	17	CHESTNUT ST.	LT		16.0		8.0		8					DO NOT DISTURB THE EX. DRAINAGE STRUCTURE
23-CR	17	CHESTNUT ST.	LT		30.0		22.0		8					NO EXISTING CURB
24-CR	17	CHESTNUT ST.	RT		29.0		21.0		8					DO NOT DISTURB EXISTING CURB
25-CR	17	CHESTNUT ST.	RT		24.0		16.0		8					DO NOT DISTURB EXISTING CURB
26-CR	17	FRANKLIN ST.	LT		30.0		22.0		8					NO EXISTING CURB
27-CR	17	FRANKLIN ST.	LT		18.0		10.0		8					NO EXISTING CURB
28-CR	17	FRANKLIN ST.	RT		30.0	7	22.0		8				7	
29-CR	17	FRANKLIN ST.	RT		45.0	7	37.0	25.0	8				7	REMOVE AND REPLACE FIRST TWO WALK PANELS
30-CR	18	DELEWARE ST.	RT		38.0		30.0		8					NO EXISTING CURB
31-CR	18	DELEWARE ST.	RT		25.0		17.0		8					NO EXISTING CURB
SUB-TOTALS							1,222.0	532.0						
TOTALS (CARRIED TO LOCATION 1 SUB-SUMMARY)				2.8	1,954.0	142	1,754.0		248		6		252	

CALCULATED LME
CHECKED DNM

CURB RAMP SUB-SUMMARY

MUS-22-26.62
MUS-83-0.00

M022_CRS_001.DGN 6-29-12

LOCATIONS (S.L.M.)	SIDE	202	606					626	659				REMARKS (ADDED DIMENSIONS DO NOT INCLUDE ANCHOR ASSEMBLY GUARDRAIL)
		GUARDRAIL REMOVED	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5, USING 9' POST	ANCHOR ASSEMBLY, TYPE A, AS PER PLAN	ANCHOR ASSEMBLY, TYPE T	SPECIAL - RESHAPING BERM	BARRIER REFLECTOR	SEEDING AND MULCHING	COMMERCIAL FERTILIZER	LIME	WATER	
	LT./RT.	FT.	FT.	FT.	EACH	EACH	FT.	EACH	SQ. YD.	TON	ACRE	M. GAL.	
LOCATION 2 - S.R. 83													
0.54	RT.	925.0	700.0	300.0		1	1000	12					INCLUDES I.R. 70 W.B. OFF RAMP TO S.R. 83, ADD 75' AND WRAP AT FIELD DRIVE ON RAMP. END AT LIBERTY DRIVE RADIUS.
0.54	LT	325.0	275.0		2		325	3					EXISTING CONCRETE FOUNDATIONS FOR TYPE "A" ANCHOR ASSEMBLIES SHALL BE REUSED
TOTALS (CARRIED TO SUB-SUMMARY)		1250.0	975.0	300.0	2	1	1325	15					
GSM FUNDS - S.R. 83													
SLM 6.65 TO SLM 6.80	RT.	862.5	862.5		2		913	18					EXISTING CONCRETE FOUNDATIONS FOR TYPE "A" ANCHOR ASSEMBLIES SHALL BE REUSED
TOTALS (CARRIED TO GENERAL SUMMARY)		862.5	862.5		2		913	18					

NOTES:

ITEM 606 ANCHOR ASSEMBLY, TYPE A, AS PER PLAN

THE EXISTING CONCRETE ANCHOR FOUNDATION SHALL BE RE-USED.
ALL OTHER SPECIFICATIONS SHALL APPLY.

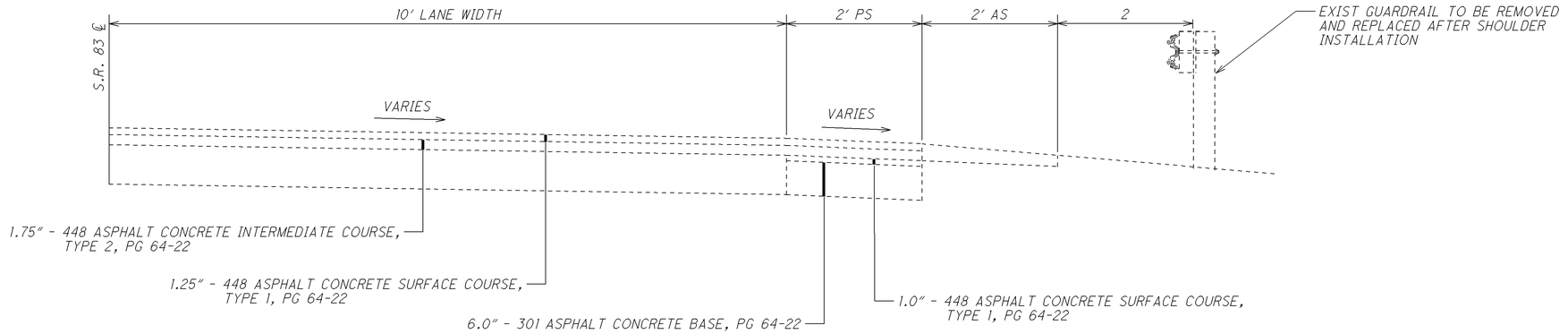
CALCULATED LME
CHECKED DNM

GUARDRAIL SUB-SUMMARY

MUS-22-26.62
MUS-83-0.00

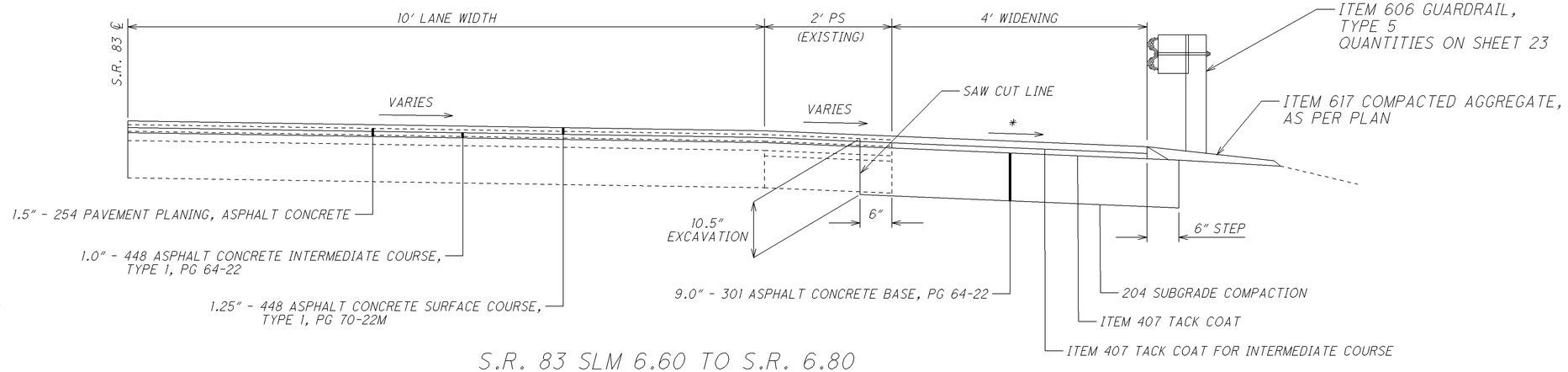
M022_MGR_001.DGN DATED 10/10/2012

PS = PAVED SHOULDER
AS = AGGREGATE SHOULDER



S.R. 83 SLM 6.60 TO S.R. 6.80
EXISTING TYPICAL SECTION

* EXISTING SHOULDER SLOPE



S.R. 83 SLM 6.60 TO S.R. 6.80
PROPOSED TYPICAL SECTION

QUANTITIES

ITEM 203 EXCAVATION
1056' X 5' / 9 X 10.5"/36 = 171.1 CU.YD.

ITEM 204 SUBGRADE COMPACTION
1056' X 5' / 9 = 586.7 SQ.YD.

ITEM 253 PAVEMENT REPAIR
20 CU.YD.

ITEM 301 ASPHALT CONCRETE BASE, PG 64-22
1056' X 5' / 9 X 9"/36 = 146.7 CU.YD.

ITEM 407 TACK COAT
1056' X 4.5' / 9 X 0.075 GAL/SQ.YD. = 40 GAL

ITEM 407 TACK COAT FOR INTERMEDIATE COURSE
1056' X 4.5' / 9 X 0.05 GAL/SQ.YD. = 27 GAL

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
1056' X 4.5' / 9 X 1.25"/36 = 18.3 CU.YD.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
1056' X 4.5' / 9 X 1.0"/36 = 14.7 CU.YD.

ITEM 617 COMPACTED AGGREGATE
1056' X 2' / 9 X 2.25"/36 = 14.7 CU.YD.

QUANTITIES CARRIED TO GENERAL SUMMARY GSM FUNDS

PAVED SHOULDER INSTALLATION

PAVED SHOULDER WIDENING SHALL BE AS PER THE TYPICALS ON THIS PAGE AND THIS NOTE. SHOULDER WIDENING SHALL BEGIN AT THE DRIVEWAY LOCATED AT SLM 6.60 AND SHALL TERMINATE AT SLM 6.80, ALL WIDENING SHALL BE ON THE RIGHT SIDE (NORTH BOUND) OF THE ROADWAY.

THE SAW CUT LINE FOR SHOULDER INSTALLATION SHALL BE A MINIMUM OF 6" INTO EXISTING PAVED SHOULDER AND SHALL BE FULL DEPTH. THE EXISTING SHOULDER SHALL BE EXCAVATED TO THE DEPTH SHOWN ABOVE AND THE SUBGRADE SHALL BE COMPACTED AS PER SECTION 204.03. THE FACE OF THE TRENCH SHALL BE COATED WITH ITEM 407 TACK COAT BEFORE PLACING 9" OF ITEM 301 ASPHALT CONCRETE BASE, PG 64-22 (PLACED AND COMPACTED IN 2 LIFTS). THE 1.0" ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22 AND THE 1.25" 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M SHALL BE PLACED WITH THE MAINLINE PAVEMENT.

ITEM 253 PAVEMENT REPAIR SHALL BE AS PER NOTE ON SHEET 2

CALCULATED LME
CHECKED DNM

PAVEMENT WIDENING DETAILS & QUANTITIES

MUS-22-26.62
MUS-83-0.00

M022_MPL_001.DGN DATED 10-10-12

ITEM 817 EDGE LINE

LOCATION	COUNTY	ROUTE	S.L.M. FROM	S.L.M. TO	TOTAL LENGTH (MILES)	INFORMATION ONLY: WHITE EDGE LINE QUANTITIES TOTAL MILES	WHITE EDGE LINE QUANTITIES HIGHWAY MILES	WHITE EDGE LINE QUANTITIES RAMP MILES	YELLOW EDGE LINE QUANTITIES TOTAL MILES	YELLOW EDGE LINE QUANTITIES HIGHWAY MILES	YELLOW EDGE LINE QUANTITIES RAMP MILES	TOTAL EDGE LINE MILES	REMARKS
1	MUS	U.S. 22	26.62	26.92	0.30	0.60	0.60					0.60	
LOCATION 1 TOTALS												**0.60**	
2	MUS	S.R. 83	0.00	0.34	0.34	0.68	0.68					0.68	
2	MUS	S.R. 83	0.34	0.60	0.26	0.52	0.52		0.52	0.52		1.04	4-LANE DIVIDED AT I.R. 70
2	MUS	S.R. 83	0.60	7.16	6.56	13.12	13.12					13.12	
LOCATION 2 TOTALS												**13.12**	

ITEM 817 LANE LINE

LOCATION	COUNTY	ROUTE	S.L.M. FROM	S.L.M. TO	ITEM 817 LANE LINE QUANTITIES: TOTAL LANE LINE	DASHED	SOLID	REMARKS
					MILE	MILE	MILE	
1	MUS	U.S. 22 E.B.	26.62	26.84	0.22	0.22		4-LANE UNDIVIDED
1	MUS	U.S. 22 W.B.	26.62	26.86	0.24	0.24		4-LANE UNDIVIDED
LOCATION 1 TOTALS					**0.46**			
2	MUS	S.R. 83 N.B.	0.34	0.52	0.18	0.18		4-LANE DIVIDED AT I.R. 70
2	MUS	S.R. 83 S.B.	0.40	0.60	0.20	0.20		4-LANE DIVIDED AT I.R. 70
LOCATION 2 TOTALS					**0.38**			

ITEM 817 CENTER LINE

LOCATION	COUNTY	ROUTE	S.L.M. FROM	S.L.M. TO	TOTAL LENGTH (MILES)	INFORMATION ONLY: CENTER LINE QUANTITIES TOTAL MILES	CENTER LINE QUANTITIES EQUIVALENT SOLID LINE		TOTAL CENTER LINE MILES	REMARKS
1	MUS	U.S. 22	26.62	27.73	1.11	1.11	2.060		1.11	
LOCATION 1 TOTALS									**1.11**	
2	MUS	S.R. 83	0.00	0.34	0.34	0.34	0.680		0.34	
2	MUS	S.R. 83	0.60	7.16	6.56	6.56	12.708		6.56	
LOCATION 2 TOTALS									**6.56**	

CALCULATED LME
CHECKED DNM

PAVEMENT MARKING DATA (LONG LINE)

MUS-22-26.62
MUS-83-0.00

M022_PMS_001.DGN 6-13-12

644 THERMOPLASTIC AUXILARY MARKING

LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	SLM	TRANSEVERSE/ DIANGONAL LINES (24")		STOP LINE (24")	12" CROSSWALK LINE	WORD ON PAVEMENT ONLY		SCHOOL SYMBOL MARKING		LANE ARROWS				8" CHANNELIZING LINE	RAILROAD SYMBOL MARKING	REMARKS
														COMBINATION		TURN				
						WHITE	YELLOW			72"	96"	72"	96"	LT./TH.	RT./TH.	LT.	RT.			
						FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ. FT.	EACH	
1	MUS	U.S. 22	SHADYSIDE DR.	LT				16												PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	GARFIELD AVE.	LT				10	52											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22 (E.B.)					26	104	1					2	2		225		PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	SR. 83	LT				14	92											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	SR. 83	RT				32	152											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22 (W.B.)					24	108	1					2	2		185		PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ALLEY	LT				7	30											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ALLEY	LT				7	35											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22 (E.B.)									1								PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	MILL ST.	RT				7	28											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	COMIN ST.	LT				15	78											PLACE AS DIRECTED, TRANSVERSE CROSSWALK
1	MUS	U.S. 22	ON U.S. 22 (E.B.)					24	114											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	STORMONT AVE.	LT				15	60											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22 (W.B.)					26												PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	MAPLE AVE.	RT				9	36											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ALLEY	LT				6	28											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ALLEY	RT				9	36											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22 (W.B.)									1								PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	EXIT FROM COLLEGE	LT				18	36											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	DEPOT ST.	RT				10	44											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22	CL					104											
1	MUS	U.S. 22	ENTRANCE TO COLLEGE	LT					36											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22 (E.B.)					25	106											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	LAYTON DR.	LT				9	36											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	LAYTON DR.	RT				10	42											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22 (W.B.)					24												PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ALLEY	LT				9	36											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ALLEY	RT				8	30											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22 (E.B.)					25	108											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	LIBERTY ST.	LT				9	36											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	LIBERTY ST.	RT				10	40											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ON U.S. 22 (W.B.)					25												PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	CHESTNUT ST.	LT				6	28											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	CHESTNUT ST.	RT				6	28											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	FRANKLIN ST.	LT				6	30											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	FRANKLIN ST.	RT				10	42											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ALLEY	LT				7	28											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	ALLEY	RT				8	32											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	DELAWARE ST.	RT				12	48											PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	EASTLAND DR.	RT				6												PLACE AT EXISTING LOCATION OR AS DIRECTED
1	MUS	U.S. 22	SNOOTS LN.	LT				10												PLACE AT EXISTING LOCATION OR AS DIRECTED
			ON U.S. 22				145													PLACE AT EXISTING LOCATION OR AS DIRECTED
							145								4	4				
LOCATION 1 TOTALS						145		500	1,843	2		2		8				410		

CALCULATED LME
CHECKED DNM

PAVEMENT MARKING DATA (AUXILARY MARKING DATA)

MUS-22-26.62
MUS-83-0.00

M022_PMS_002.DGN 6-14-12

644 THERMOPLASTIC AUXILARY MARKING

LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	TRANSEVERSE/ DIANGONAL LINES (24")		STOP LINE (24")	12" CROSSWALK LINE	WORD ON PAVEMENT ONLY		SCHOOL SYMBOL MARKING		LANE ARROWS TURN		8" CHANNELIZING LINE	RAILROAD SYMBOL MARKING	REMARKS
					WHITE	YELLOW			72"	96"	72"	96"	LT.	RT.			
					FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	SQ. FT.	EACH	
2	MUS	S.R. 83	NEPTUNE LANE	LT			20										PLACE 16' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	SUNFLOWER DR.	LT			12										PLACE 16' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83 N.B.	LEFT TURN LANE TO IR 70 W.B.	CL						1			1		50		PLACE AS DIRECTED
2	MUS	S.R. 83 S.B.	LEFT TURN LANE TO IR 70 E.B.	CL						1			1		60		PLACE AS DIRECTED
2	MUS	S.R. 83	LIBERTY DR.	RT			35										PLACE 19' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	MAPLE LANE	LT			16										PLACE 16' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	WEDGEWOOD	LT			16										PLACE 16' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	GARFIELD AVE.	LT			14										PLACE 16' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	THOMPSON AVE.	RT													PLACE AS DIRECTED
2	MUS	S.R. 83	WESTVIEW DR.	LT			20										PLACE 17' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	WESTVIEW DR.	RT			9										PLACE 17' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	MONTGOMERY BLVD.	RT			26										PLACE 19' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	LONGVIEW LANE	LT			8										PLACE 16' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	McCALLS LANE	RT			16										PLACE 16' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	HILLCREST	RT			20										PLACE 17' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	AT SLM 2.45									1					PLACE AS DIRECTED
2	MUS	S.R. 83	JOHN GLENN DR.	RT			20										PLACE 17' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	JAY LAYMAN DR.	RT			10										PLACE 14' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	AT SLM 2.75									1					PLACE AS DIRECTED
2	MUS	S.R. 83	RIDGEVIEW DR.	RT			19										PLACE 17' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	BLACKSTONE LANE	LT			21										PLACE 18' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	NORFIELD RD. (C.R. 64)	LT			18										PLACE 20' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	NORFIELD RD. (C.R. 64)	LT			25										PLACE 20' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	AVON LANE	RT			12										PLACE 20' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	L. BLOOMFIELD RD.	RT			24										PLACE 20' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	SR 209	RT			22										PLACE 21' FROM S.R. 83 CENTER LINE
2	MUS	S.R. 83	WINDY RIDGE RD.	LT			19										PLACE 18' FROM S.R. 83 CENTER LINE
LOCATION 2 TOTALS							**402**			**2**		**2**	**2**		**110**		

CALCULATED LME CHECKED DNM

PAVEMENT MARKING DATA (AUXILARY MARKING DATA)

MUS-22-26.62
MUS-83-0.00

M022_PMS_003.DGN 6-14-12

DETAIL	SEE STD. DWG. TC-65.11
1	TAPERED ACCELERATION LANE
2	DECELERATION LANE
3	MULTILANE DIVIDED/ CONTROLLED ACCESS

DETAIL	SEE STD. DWG. TC-65.11
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	SEE STD. DWG. TC-65.11
10	APPROACH W/LT. TURN LANE
11	HORIZONTAL CURVE 40'
12	HORIZONTAL CURVE ALT.
GAP	CENTERLINE AT 80' TYP.

ITEM 621 RPM SUB-SUMMARY

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		DETAIL	621 RAISED PAVEMENT MARKER REMOVED	621 RPM	PRISMATIC RETRO-REFLECTOR COLORS INFORMATION ONLY					REMARKS
										ONE-WAY		TWO-WAY			
					MILES	LIN.FT.		EACH	EACH	WHITE	YELLOW	YELLOW / YELLOW	WHITE / RED	YELLOW / RED	
1	MUS	U.S. 22	26.62	26.86	0.24	1,267	REM	48				16	32		REMOVE ONLY, DO NOT REPLACE
LOCATION 1 TOTALS								48							
2	MUS	S.R. 83	0.00	0.02	0.02	106	GAP	1	1			1			
2	MUS	S.R. 83	0.02	0.08	0.06	317	11	8	8			8			PC 0.02 PT 0.08 L=317' DEG 9
2	MUS	S.R. 83	0.08	0.34	0.26	1,373	GAP	17	17			17			
2	MUS	S.R. 83	0.34	0.63	0.29	1,531	REM	21	21				21		4 LANE DIVIDED WITH 2 TURN LANES
2	MUS	S.R. 83	0.63	1.28	0.65	3,432	GAP	43	43			43			SUSPEND AT BEGIN 35 MPH LIMIT
2	MUS	S.R. 83	2.13	2.58	0.45	2,376	GAP	30	30			30			RESUME AT NEW CONCORD CORP.
2	MUS	S.R. 83	2.58	2.84	0.26	1,373	12	45	45			45			PC 2.67 PT 2.75 L=422' DEG 14
2	MUS	S.R. 83	2.84	3.02	0.18	950	12	34	34			34			PC 2.85 PT 2.93 L=422' DEG 12
2	MUS	S.R. 83	3.02	3.20	0.18	950	GAP	12	12			12			
2	MUS	S.R. 83	3.20	3.41	0.21	1,109	12	32	32			32			PC 3.29 PT 3.32 L=158' DEG 18
2	MUS	S.R. 83	3.41	3.54	0.13	686	GAP	9	9			9			
2	MUS	S.R. 83	3.54	3.57	0.03	158	11	4	4			4			PC 3.54 PT 3.57 L=158' DEG 9
2	MUS	S.R. 83	3.57	3.83	0.26	1,373	GAP	17	17			17			
2	MUS	S.R. 83	3.83	4.07	0.24	1,267	12	40	40			40			PC 3.92 PT 3.98 L=317' DEG 15
2	MUS	S.R. 83	4.07	4.22	0.15	792	12	26	26			26			PC 4.08 PT 4.13 L=264' DEG 13
2	MUS	S.R. 83	4.22	4.59	0.37	1,954	GAP	24	24			24			
2	MUS	S.R. 83	4.59	4.63	0.04	211	11	5	5			5			PC 4.59 PT 4.63 L=211' DEG 9
2	MUS	S.R. 83	4.63	4.67	0.04	211	GAP	3	3			3			
2	MUS	S.R. 83	4.67	4.92	0.25	1,320	12	43	43			43			PC 4.76 PT 4.83 L=370' DEG 12
2	MUS	S.R. 83	4.92	5.25	0.33	1,742	GAP	22	22			22			
2	MUS	S.R. 83	5.25	5.31	0.06	317	11	8	8			8			PC 5.25 PT 5.31 L=317' DEG 9
2	MUS	S.R. 83	5.31	5.55	0.24	1,267	GAP	16	16			16			
2	MUS	S.R. 83	5.55	5.59	0.04	211	11	5	5			5			PC 5.55 PT 5.59 L=211' DEG 9
2	MUS	S.R. 83	5.59	5.69	0.10	528	GAP	7	7			7			
2	MUS	S.R. 83	5.69	5.92	0.23	1,214	12	37	37			37			PC 5.78 PT 5.83 L=264' DEG 16
2	MUS	S.R. 83	5.92	6.01	0.09	475	GAP	6	6			6			
2	MUS	S.R. 83	6.01	6.05	0.04	211	11	5	5			5			PC 6.01 PT 6.05 L=211' DEG 9
2	MUS	S.R. 83	6.05	6.20	0.15	792	12	26	26			26			PC 6.07 PT 6.11 L=211' DEG 28
2	MUS	S.R. 83	6.20	6.36	0.16	845	12	27	27			27			PC 6.30 PT 6.35 L=264' DEG 25
2	MUS	S.R. 83	6.36	6.53	0.17	898	12	33	33			33			PC 6.36 PT 6.44 L=422' DEG 12
2	MUS	S.R. 83	6.53	6.61	0.08	422	12	17	17			17			PC 6.56 PT 6.61 L=264' DEG 26
2	MUS	S.R. 83	6.61	6.68	0.07	370	12	15	15			15			PC 6.64 PT 6.68 L=211' DEG 26
2	MUS	S.R. 83	6.68	6.76	0.08	422	12	15	15			15			PC 6.73 PT 6.76 L=158' DEG 22
2	MUS	S.R. 83	6.76	6.82	0.06	317	12	13	13			13			PC 6.78 PT 6.82 L=211' DEG 31
2	MUS	S.R. 83	6.82	7.00	0.18	950	12	33	33			33			PC 6.88 PT 6.95 L=370' DEG 21
2	MUS	S.R. 83	7.00	7.06	0.06	317	11	8	8			8			PC 7.00 PT 7.06 L=317' DEG 9
2	MUS	S.R. 83	7.06	7.16	0.10	528	GAP	7	7			7			
SUB-TOTALS										0	0	693	21		
LOCATION 2 TOTALS								714	714						

CALCULATED LME CHECKED DNM

RAISED PAVEMENT MARKER DATA

MUS-22-26.62
MUS-83-0.00

M022_TRM_001.DGN 6-13-12

LOCATION 1 SHEET TOTALS										ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
Sht. 2	Sht. 4	Sht. 4A	Sht. 6	Sht. 8	Sht. 9	Sht. 22	Sht. 25	Sht. 26	Sht. 28					
						3				202	23010	3	SQ YD	PAVEMENT REMOVED, ASPHALT
					2,309					202	23500	2,309	SQ YD	WEARING COURSE REMOVED
						1,954				202	30000	1,954	SQ FT	WALK REMOVED
						142				202	32000	142	FT	CURB REMOVED
			32,912	587						254	01000	33,499	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
			2,469	44	175					407	20000	2,688	GALLON	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE
			1,646	30	117					407	20100	1,793	GALLON	TACK COAT, TRACKLESS TACK, SURFACE COURSE
			1,600	29	114					448	46050	1,743	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
			1,143	21						448	46904	1,164	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
					82					448	47020	82	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
		2								604	09000	2	EACH	CATCH BASIN ADJUSTED TO GRADE
		15								604	20600	15	EACH	INLET ADJUSTED TO GRADE
		19								604	34500	19	EACH	MANHOLE ADJUSTED TO GRADE
						1,754				608	10000	1,754	SQ FT	4" CONCRETE WALK
						248				608	53020	248	SQ FT	DETECTABLE WARNING
						252				609	26000	252	FT	CURB, TYPE 6
	2									614	12460	2	EACH	WORK ZONE MARKING SIGN
	6									614	13000	6	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
		120								614	18401	120	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
			2.22							614	21400	2.22	MILE	WORK ZONE CENTER LINE, CLASS II
				7						617	10101	7	CU YD	COMPACTED AGGREGATE, AS PER PLAN
									48	621	54000	48	EACH	RAISED PAVEMENT MARKER REMOVED
		22								632	26501	22	EACH	DETECTOR LOOP, AS PER PLAN
		4								638	10800	4	EACH	VALVE BOX ADJUSTED TO GRADE
								410		644	00400	410	FT	CHANNELIZING LINE, 8"
								500		644	00500	500	FT	STOP LINE
								1,843		644	00600	1,843	FT	CROSSWALK LINE
								145		644	00700	145	FT	TRANSVERSE/DIAGONAL LINE
								2		644	01100	2	EACH	SCHOOL SYMBOL MARKING, 72"
								8		644	01300	8	EACH	LANE ARROW
								2		644	01400	2	EACH	WORD ON PAVEMENT, 72"
		5								653	10001	5	CU YD	TOPSOIL FURNISHED AND PLACED, AS PER PLAN
		60								659	00500	60	SQ YD	SEEDING AND MULCHING, CLASS 1
		3								659	14000	3	SQ YD	REPAIR SEEDING AND MULCHING
		3								659	15000	3	SQ YD	INTER-SEEDING
		0.02								659	20000	0.02	TON	COMMERCIAL FERTILIZER
		0.01								659	31000	0.01	ACRE	LIME
		1								659	35000	1	M GAL	WATER
						6				690	98000	6	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A2
1,500										690	98800	1,500	TON	SPECIAL - MISC.: HAULING RACP
							0.60			817	00100	0.60	MILE	EDGE LINE, 4"
							0.46			817	00200	0.46	MILE	LANE LINE, 4"
							1.11			817	00300	1.11	MILE	CENTER LINE

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LOCATION 1 SUB-SUMMARY

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LOCATION 2 SHEET TOTALS											ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
Sht. 2	Sht. 3	Sht. 4	Sht. 6	Sht. 8	Sht. 10	Sht. 11	Sht. 23	Sht. 25	Sht. 27	Sht. 28					
	1,430	740			4,706						202	23500	6,876	SQ YD	WEARING COURSE REMOVED
							1,250.0				202	38000	1,250.0	FT	GUARDRAIL REMOVED
14											209	60500	14	MILE	LINEAR GRADING
14											209	72051	14	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
500											253	02000	500	CU YD	PAVEMENT REPAIR
			88,045	19,141							254	01000	107,186	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
			4,189	838							407	10000	5,027	GALLON	TACK COAT
			2,793	559							407	14000	3,352	GALLON	TACK COAT FOR INTERMEDIATE COURSE
			2,415	598	354						407	20000	3,367	GALLON	TACK COAT, TRACKLESS TACK. INTERMEDIATE COURSE
			1,610	399	237						407	20100	2,246	GALLON	TACK COAT, TRACKLESS TACK. SURFACE COURSE
6,614											408	10001	6,614	GALLON	PRIME COAT, AS PER PLAN
		36	2,447	532	133						448	46020	3,148	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22
	50	98	3,058	665							448	46904	3,871	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
					165						448	47020	165	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
						24					516	31011	24	FT	2" DEEP JOINT SEALER, AS PER PLAN
							975.0				606	13000	975.0	FT	GUARDRAIL, TYPE 5
							300.0				606	13030	300.0	FT	GUARDRAIL, TYPE 5, USING 9 FOOT POSTS
							2				606	25001	2	EACH	ANCHOR ASSEMBLY, TYPE A, AS PER PLAN
							1				606	26500	1	EACH	ANCHOR ASSEMBLY, TYPE T
							1,325				606	50000	1,325	FT	SPECIAL - RESHAPING BERM
		35									614	12460	35	EACH	WORK ZONE MARKING SIGN
		3									614	13000	3	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			14.70								614	21400	14.70	MILE	WORK ZONE CENTER LINE, CLASS II
				919							617	10101	919	CU YD	COMPACTED AGGREGATE, AS PER PLAN
										714	621	00100	714	EACH	RPM
										714	621	54000	714	EACH	RAISED PAVEMENT MARKER REMOVED
							15				626	00100	15	EACH	BARRIER REFLECTOR
									110		644	00400	110	FT	CHANNELIZING LINE, 8"
									402		644	00500	402	FT	STOP LINE
									2		644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"
									2		644	01300	2	EACH	LANE ARROW
									2		644	01410	2	EACH	WORD ON PAVEMENT, 96"
3,500											690	98800	3,500	TON	SPECIAL - MISC.: HAULING RACP
								13.12			817	00100	13.12	MILE	EDGE LINE, 4"
								0.38			817	00200	0.38	MILE	LANE LINE, 4"
								6.56			817	00300	6.56	MILE	CENTER LINE

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LOCATION 2 SUB-SUMMARY

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LOCATION FUNDING SPLITS				TOTALS		ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION	SEE SHEET
LOCATION 1 01/STR/PV/	LOCATION 2 01/STR/PV/	GSM		01/STR/PV/	GSM						
		Sht. 23	Sht. 24								
3				3		202	23010	3	SQ YD	PAVEMENT REMOVED, ASPHALT	
2,309	6,876			9,185		202	23500	9,185	SQ YD	WEARING COURSE REMOVED	
1,954				1,954		202	30000	1,954	SQ FT	WALK REMOVED	
142				142		202	32000	142	FT	CURB REMOVED	
	1,250.0	862.5		1,250.0	862.5	202	38000	2,112.5	FT	GUARDRAIL REMOVED	
			172		172	203	10000	172	CU YD	EXCAVATION	
			587		587	204	10000	587	SQ YD	SUBGRADE COMPACTION	
	14			14		209	60500	14	MILE	LINEAR GRADING	
	14			14		209	72051	14	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	2
	500		20	500	20	253	02000	520	CU YD	PAVEMENT REPAIR	
33,499	107,186			140,685		254	01000	140,685	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
			147		147	301	46000	147	CU YD	ASPHALT CONCRETE BASE, PG64-22	
	5,027		40	5,027	40	407	10000	5,067	GALLON	TACK COAT	
	3,352		27	3,352	27	407	14000	3,379	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
2,688	3,367			6,055		407	20000	6,055	GALLON	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE	
1,793	2,246			4,039		407	20100	4,039	GALLON	TACK COAT, TRACKLESS TACK, SURFACE COURSE	
	6,614			6,614		408	10001	6,614	GALLON	PRIME COAT, AS PER PLAN	2
	3,148		15	3,148	15	448	46020	3,163	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
1,743				1,743		448	46050	1,743	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
1,164	3,871		19	5,035	19	448	46904	5,054	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
82	165			247		448	47020	247	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
	24			24		516	31011	24	FT	2" DEEP JOINT SEALER, AS PER PLAN	2
2				2		604	09000	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
15				15		604	20600	15	EACH	INLET ADJUSTED TO GRADE	
19				19		604	34500	19	EACH	MANHOLE ADJUSTED TO GRADE	
	975.0	862.5		975.0	862.5	606	13000	1,837.5	FT	GUARDRAIL, TYPE 5	
	300.0			300.0		606	13030	300.0	FT	GUARDRAIL, TYPE 5, USING 9 FOOT POSTS	
	2	2		2	2	606	25001	4	EACH	ANCHOR ASSEMBLY, TYPE A, AS PER PLAN	23
	1			1		606	26500	1	EACH	ANCHOR ASSEMBLY, TYPE T	
	1,325	913		1,325	913	606	50000	2,238	FT	SPECIAL - RESHAPING BERM	
1,754				1,754		608	10000	1,754	SQ FT	4" CONCRETE WALK	
248				248		608	53020	248	SQ FT	DETECTABLE WARNING	
252				252		609	26000	252	FT	CURB, TYPE 6	
2	35			37		614	12460	37	EACH	WORK ZONE MARKING SIGN	
6	3			9		614	13000	9	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
120				120		614	18401	120	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	4A
2.22	14.70			17		614	21400	17	MILE	WORK ZONE CENTER LINE, CLASS II	

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GENERAL SUMMARY

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LOCATION FUNDING SPLITS				TOTALS		ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION	SEE SHEET
LOCATION 1 01/STR/PV/	LOCATION 2 01/STR/PV/	GSM		01/STR/PV/	GSM						
		Sht. 23	Sht. 24								
7	919		15	926	15	617	10101	941	CU YD	COMPACTED AGGREGATE, AS PER PLAN	2
	714			714		621	00100	714	EACH	RPM	
48	714			762		621	54000	762	EACH	RAISED PAVEMENT MARKER REMOVED	
	15	18		15	18	626	00100	33	EACH	BARRIER REFLECTOR	
22				22		632	26501	22	EACH	DETECTOR LOOP, AS PER PLAN	4A
4				4		638	10800	4	EACH	VALVE BOX ADJUSTED TO GRADE	
410	110			520		644	00400	520	FT	CHANNELIZING LINE, 8"	
500	402			902		644	00500	902	FT	STOP LINE	
1,843				1,843		644	00600	1,843	FT	CROSSWALK LINE	
145				145		644	00700	145	FT	TRANSVERSE/DIAGONAL LINE	
2				2		644	01100	2	EACH	SCHOOL SYMBOL MARKING, 72"	
	2			2		644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"	
8	2			10		644	01300	10	EACH	LANE ARROW	
2				2		644	01400	2	EACH	WORD ON PAVEMENT, 72"	
	2			2		644	01410	2	EACH	WORD ON PAVEMENT, 96"	
5				5		653	10001	5	CU YD	TOPSOIL FURNISHED AND PLACED, AS PER PLAN	4A
60				60		659	00500	60	SQ YD	SEEDING AND MULCHING, CLASS 1	
3				3		659	14000	3	SQ YD	REPAIR SEEDING AND MULCHING	
3				3		659	15000	3	SQ YD	INTER-SEEDING	
0.02				0.02		659	20000	0.02	TON	COMMERCIAL FERTILIZER	
0.01				0.01		659	31000	0.01	ACRE	LIME	
1				1		659	35000	1	M GAL	WATER	
6				6		690	98000	6	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A2	
1,500	3,500			5,000		690	98800	5,000	TON	SPECIAL - MISC.: HAULING RACP	
0.60	13.12			13.72		817	00100	13.72	MILE	EDGE LINE, 4"	
0.46	0.38			0.84		817	00200	0.84	MILE	LANE LINE, 4"	
1.11	6.56			7.67		817	00300	7.67	MILE	CENTER LINE	
						103	05000	LUMP		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
						614	11000	LUMP		MAINTAINING TRAFFIC	
						619	16000	2	MONTH	FIELD OFFICE, TYPE A	
						624	10000	LUMP		MOBILIZATION	
						823	10000	LUMP		CONSTRUCTION LAYOUT STAKES	

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