

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

FAI-158-2.48
LIC-158-0.00

VILLAGE OF BALTIMORE
VILLAGE OF KIRKERSVILLE

GREENFIELD, LIBERTY, ETNA
AND HARRISON TOWNSHIPS

FAIRFIELD AND LICKING COUNTY

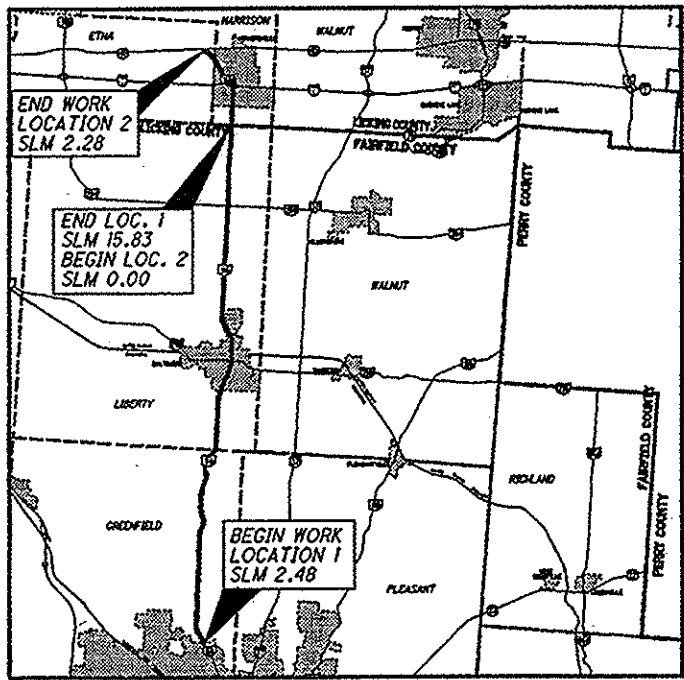
PROJECT DESCRIPTION:

ASPHALT CONCRETE RESURFACING AND RELATED
WORK ON S.R. 158 IN FAIRFIELD AND LICKING
COUNTIES.

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	FAI	158	2.48	15.83	13.35	BALTIMORE
2	LIC	158	0.00	2.28	*1.69	KIRKERSVILLE

*SUSPEND WORK SLM 0.56, RESUME WORK SLM 1.15 - DEDUCT 0.59 MILE



LOCATION MAP

LATITUDE: 39° 51' 09" LONGITUDE: 82° 36' 03"

PORTION TO BE IMPROVED

DESIGN DESIGNATION	LOCATION 1	LOCATION 2
	S.R. 158	S.R. 158
Functional Classification	RMC	RMC
Opening Year ADT (2013)	7,000	15,000
Design Year ADT (2025)	8,500	19,000
Design Hourly Volume (2025)	760	2,300
Directional Distribution	53%	53%
Trucks (24 Hour B&C)	2%	11%
Design Speed	55mph	55mph
Legal Speed	55mph	55mph

RMC = RURAL MAJOR COLLECTOR

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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

SIGNED: *Douglas N. Morgan*
DATE: 2-6-2013

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	4-20-12	TC-65.10	4-20-12	800	1-18-13
BP-4.1	7-16-04	TC-65.11	4-20-12	817	4-20-12
		TC-71.10	10-19-12	823	7-20-12
		TC-73.10	4-20-12	832	5-5-09
MT-97.10	7-20-12	TC-82.10	1-18-13		
MT-97.12	7-20-12				
MT-99.20	7-20-12				
MT-101.90	10-19-12				
MT-105.10	7-20-12				
				SPECIAL PROVISIONS	

APPROVED: *[Signature]*
DATE: 2/6/13 DISTRICT DEPUTY DIRECTOR

APPROVED: *[Signature]*
DATE: 2-15-13 DIRECTOR, DEPARTMENT OF
TRANSPORTATION

FAI - SR-158-2.48; LIC-158-0.00
130293 PID - 25191 Contract Proposal Available @ www.
Dist 5 5/9/2013 contracts.dot.state.oh.us/home

FEDERAL PROJECT NO.
E081(106)

PID NO.
25191

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NORFOLK SOUTHERN
CORPORATION

FAI-158-2.48
LIC-158-0.00

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

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF TWENTY ONE (21) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4510 OR EMAIL AT D05.PIO@DOT.STATE.OH.US

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4525 OR EMAIL AT BRIAN.BOSCH@DOT.STATE.OH.US

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.STATE.OH.US

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

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.

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

DEPTH OF PLANING ON S.R. 158 VARIES BETWEEN 1.5" AND 3.0" AND SHALL BE AS SHOWN ON THE ASPHALT CONCRETE DATA SHEET. PLANING SHALL BE FULL WIDTH OF PAVEMENT, INCLUDING PAVED SHOULDERS. 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.

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 QUANTITIES OF PRIME COAT, AS PER PLAN HAVE BEEN CARRIED TO THE SUB-SUMMARIES AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT TO PERFORM THE ABOVE MENTIONED WORK.

ITEM 408 PRIME COAT, AS PER PLAN
LOCATION 1 - 30,179 SQ.YD. X 0.40 GAL./SQ YD = 12,072 GAL
LOCATION 2 - 4,506 SQ.YD. X 0.40 GAL./SQ YD = 1,803 GAL

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.

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.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES FOR THE ABOVE DESCRIBED PURPOSE.

ITEM 253 PAVEMENT REPAIR
LOCATION 1 - 250 CU.YD.
LOCATION 2 - 40 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 614, WORK ZONE MARKING SIGN

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

W8-H12a (NO EDGE LINES): LOCATION 1 - 13 EACH, LOCATION 2 - 2 EACH
R4-1 (DO NOT PASS): LOCATION 1- 47 EACH, LOCATION 2 - 5 EACH
R4-2 (PASS WITH CARE): LOCATION 1 -41 EACH, LOCATION 2 - 2 EACH

ITEM 614, WORK ZONE MARKING SIGN

LOCATION 1 - 101 EACH
LOCATION 2 - 9 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

FAI-158-2.48
LIC-158-0.00

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 ADVERTISEMENT 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 δ10 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 δ10 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 TRACKLESS 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 1 - 128 CU.YD.
LOCATION 2 - 2 CU.YD.

ITEM 202 WEARING COURSE REMOVED
LOCATION 1 - 2,620 SQ.YD.
LOCATION 2 - 40 SQ.YD.

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 COMPACTED 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 QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES TO PROVIDE EXTRA ASPHALT FOR CONSTRUCTION OF THE SAFETY EDGE:

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 1 – 190 CU.YD.
LOCATION 2 – 29 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 SUB-SUMMARIES FOR THE ABOVE PURPOSES.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22
LOCATION 1 - 85 CU.YD.
LOCATION 2 - 2 CU.YD.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 1 - 61 CU.YD.
LOCATION 2 - 2 CU.YD.

ITEM 202 WEARING COURSE REMOVED
LOCATION 1 – 1740 SQ.YD.
LOCATION 2 – 40 SQ.YD.

ITEM 614 MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON SR 158 BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWING MT-97.12.

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.

DUE TO ROAD CLOSURE, THE PAVING CONTRACTOR SHALL NOT WORK SOUTH OF COONPATH DR (SLM 4.30) UNTIL ROCKFALL PROJECT (PID #87344) IS COMPLETED. THE ESTIMATED COMPLETION DATE FOR ROCKFALL PROJECT IS 8-30-2013.

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.

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	S.R. 158	BEGIN WORK	2.48	1.3
1	S.R. 158	BRIDGE: FAI-158-0887	8.87	2.6
1	S.R. 158	RR CROSSING	10.10	2.6
1	S.R. 158	TOTAL		6.5
2	S.R. 158	SUPEND WORK	0.56	1.1
2	S.R. 158	RESUME WORK	1.15	1.3
2	S.R. 158	END WORK	2.28	1.3
2	S.R. 158	TOTAL		3.7

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

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 – 6 EACH

ITEM 604 – INLET ADJUSTED TO GRADE – 2 EACH

ITEM 604 – MANHOLE ADJUSTED TO GRADE – 9 EACH

ITEM 638 – VALVE BOX ADJUSTED TO GRADE – 15 EACH

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 CLICKING 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 SUB-SUMMARY:

**ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
LOCATION 1 - 100 DAY
LOCATION 2 - 20 DAY**

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 QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES FOR THE ABOVE PURPOSES.

**ITEM 209 LINEAR GRADING
LOCATION 1 - 26.0 MILE
LOCATION 2 - 3.4 MILE**

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

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE ODOT INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE, (CONT'D)

• DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

IN ADDITION TO THE REQUIREMENT OF CMS 614 AND THE ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

• FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

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

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

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

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES.

**ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
LOCATION 1 - 160 HOURS
LOCATION 2 - 16 HOURS**

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1 AS PER PLAN
ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 AS PER PLAN

THE INTERMEDIATE AND SURFACE COURSE, ON ONE LANE, CHOSEN BY THE CONTRACTOR, BETWEEN MILE 7.5 AND MILE 8.5, WILL BE PRODUCED AND PLACED USING THE WARM MIX ASPHALT PROCESS. IN LIEU OF THE REQUIREMENTS OF 402.09, THE MIXTURES WILL BE PRODUCED USING LEADCAP ADDITIVE. PRIOR TO PRODUCTION OF THE MIX, LEADCAP MATERIAL WILL BE INTRODUCED INTO THE BITUMEN TANK, 1.5% BY WEIGHT OF THE ASPHALT BINDER, AND LEFT UNDER CIRCULATION FOR A PERIOD OF 3 HOURS TO OBTAIN A HOMOGENEOUS BLEND.

LEADCAP WILL BE FURNISHED IN 50 LB. BAGS AND DELIVERED TO THE SITE, FREE OF CHARGE, BY COOK CHEMICAL COMPANY, INC. THE CONTRACTOR WILL COOPERATE WITH COOK CHEMICAL COMPANY BY NOTIFYING THE COOK CHEMICAL COMPANY REPRESENTATIVE LISTED BELOW TWO WEEKS PRIOR TO THE PLACEMENT OF THE INTERMEDIATE COURSE WITHIN THE TEST SECTION. THE REPRESENTATIVE OF COOK CHEMICAL COMPANY LISTED BELOW OR A REPRESENTATIVE DESIGNATED BY COOK CHEMICAL COMPANY WILL BE ON SITE DURING PRODUCTION AND PLACEMENT OF THE WARM MIX ASPHALT.

MICHAEL COOK
LEADCAP PRODUCT MANAGER
940 CALLE NEGOCIO, SUITE 160
SAN CLEMENTE, CA 92673
800-419-2665
mcook@cookchem.com

MIXTURE BY THE WARM MIX ASPHALT (WMA) PROCESS PER 402.09, WILL NOT BE ALLOWED ON THE REMAINDER OF THE PROJECT.

THE FOLLOWING QUANTITIES ARE CARRIED TO THE SUB-SUMMARY FOR THE PURPOSE DESCRIBED ABOVE:

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1 AS PER PLAN
MAINLINE - 5280' X 12' / 9 = 7,040 SQ.YD. X 1.25"/36 = 244.4 CU.YD.
SHOULDERS - 5280' X 2' / 9 = 1,174 SQ.YD. X 1.25"/36 = 40.8 CU.YD.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 AS PER PLAN
MAINLINE - 5280' X 12' / 9 = 7,040 SQ.YD. X 1.75"/36 = 342.2 CU.YD.
SHOULDERS - 5280' X 2' / 9 = 1,174 SQ.YD. X 1.75"/36 = 57.1 CU.YD.

COOPERATION BETWEEN CONTRACTORS

THE STATE OF OHIO HAS CONTRACTED TWO (3) PROJECTS, LIC-158-0.56 PID #84700, FAI-158-3.75 PID #87344 AND FAI-158-9.04 (BALTIMORE SRTS) PID #90875, WHICH MAY BE CONSTRUCTED CONCURRENTLY WITH THIS PROJECT. IT IS IMPARATIVE THAT THE CONTRACTORS COOPERATE FULLY WITH EACH OTHER AS OUTLINED IN SECTION 105.08 OF THE CMS MANUAL.

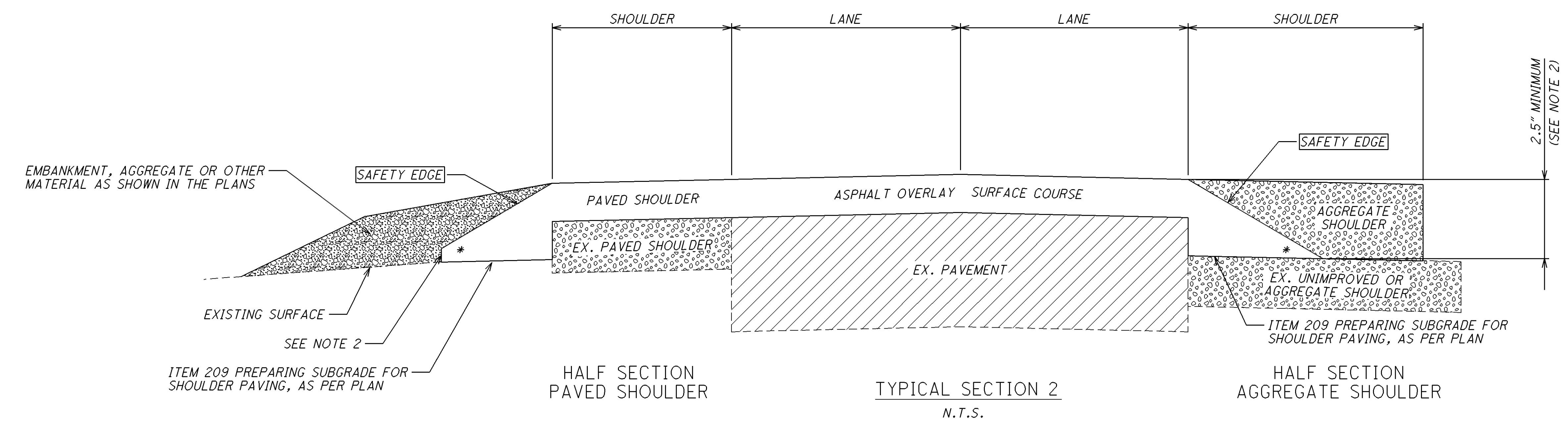
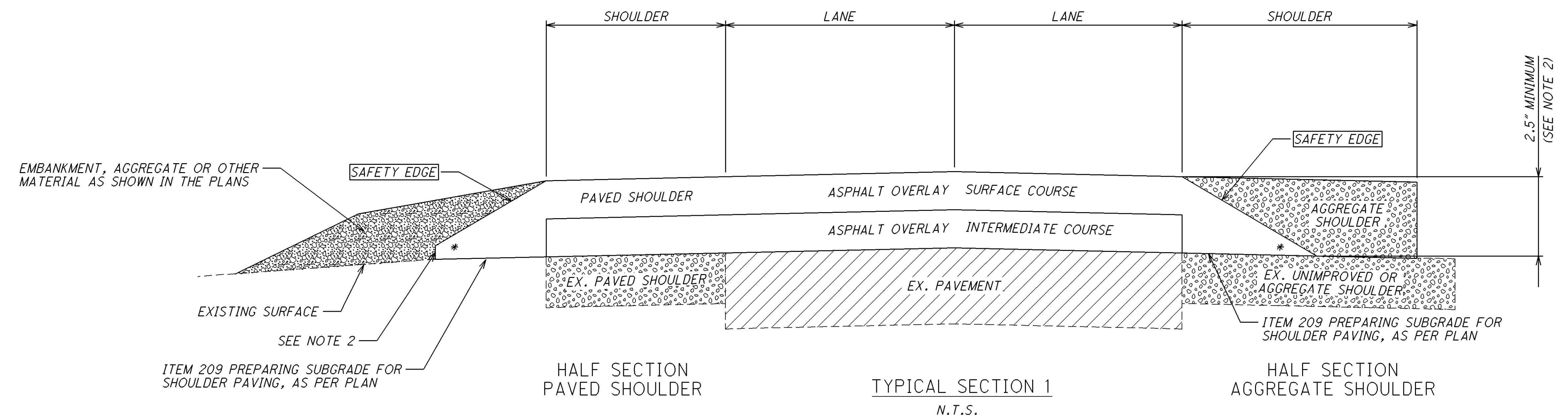
DUE TO ROAD CLOSURE, THE PAVING CONTRACTOR SHALL NOT WORK SOUTH OF COONPATH DR (SLM 4.30) UNTIL ROCKFALL PROJECT (PID #87344) IS COMPLETED. THE ESTIMATED COMPLETION DATE FOR ROCKFALL PROJECT IS 8-30-2013.

CALCULATED
LME
CHECKED
DNM

GENERAL NOTES

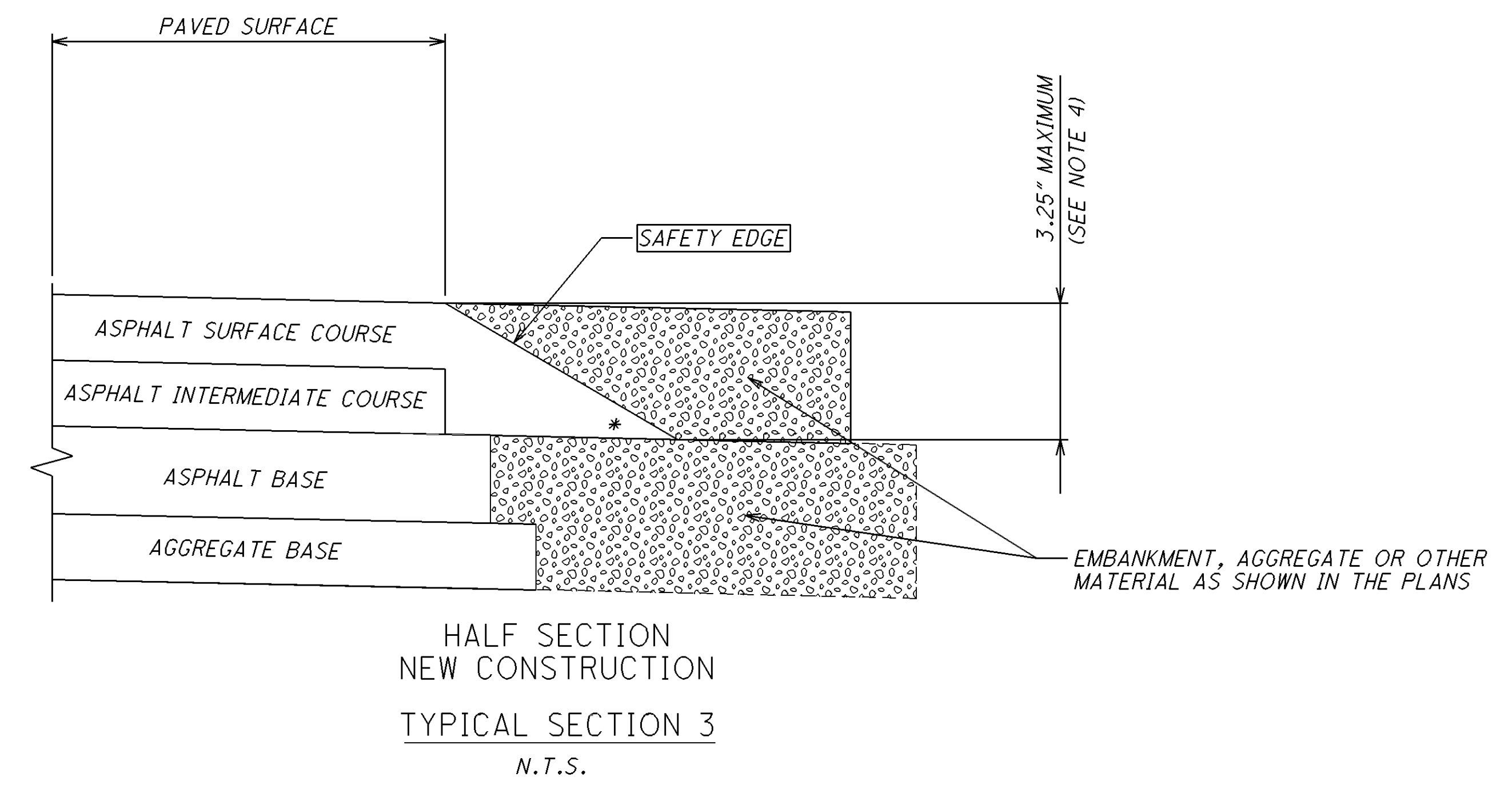
FAI-158-2.48
LIC-158-0.00

6
31



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



SEE SHEET 9 FOR STRAIGHT LINE DIAGRAM AND TYPICALS

NOTES:

- ONLY PLACE SURFACE COURSE, NO PLANING, FROM SLM 3.75 TO SLM 3.88. ADDITIONAL WORK AT THIS LOCATION COMPLETED BY SEPARATE PROJECT.
- ONLY PLACE SURFACE COURSE, NO PLANING, FROM SLM 9.19 TO SLM 9.34. THIS SECTION WAS RECENTLY WIDENED FOR TURN LANE AT SCHOOL DRIVE.

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		
											DEPTH OF PAVEMENT PLANING	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 2, PG 64-22	THICKNESS SURFACE COURSE, TYPE 1, PG 70-22M	WORK ZONE CENTER LINE, CLASS II				
					SQ. YD.	INCHES														SQ. YD.	GAL.	GAL.	GAL.
1	FAI	S.R. 158	2.48	3.75	1.27	6,705.6	24.0	1	448	17,881.6	1.50	17,881.6			1,341.1	894.1	1.75	869.2	1.25	620.9	2.54		
1	FAI	S.R. 158	3.75	3.88	0.13	686.4	24.0	1	448	1,830.4					91.5				1.25	63.6	0.13		
1	FAI	S.R. 158	3.88	9.19	5.31	28,036.8	24.0	1	448	74,764.8	1.50	74,764.8			5,607.4	3,738.2	1.75	3,634.4	1.25	2,596.0	10.62		
1	FAI	S.R. 158	9.19	9.34	WIDENING FOR TURN LANE AT SCHOOL DRIVE					733.0				36.7						1.25	25.5		
1	FAI	S.R. 158	9.19	9.69	0.50	2,640.0	24.0	1	448	7,040.0	1.50	7,040.0	528.0	352.0			1.75	342.2	1.25	244.5	1.00		
1	FAI	S.R. 158	9.69	9.81	0.12	633.6	42.0 AVG	2	448	2,956.8	3.00	2,956.8	221.8	147.8			1.75	143.7	1.25	102.7	0.24		
1	FAI	S.R. 158	9.81	9.87	0.06	316.8	45.0	2	448	1,584.0	3.00	1,584.0	118.8	79.2			1.75	77.0	1.25	55.0	0.12		
1	FAI	S.R. 158	9.87	9.93	0.06	316.8	40.0 AVG	2	448	1,408.0	3.00	1,408.0	105.6	70.4			1.75	68.5	1.25	48.9	0.12		
1	FAI	S.R. 158	9.93	9.95	0.02	105.6	35.0	2	448	410.7	3.00	410.7	30.9	20.5			1.75	20.0	1.25	14.3	0.04		
1	FAI	S.R. 158	9.95	9.97	0.02	105.6	29.0 AVG	2	448	340.3	3.00	340.3	25.6	17.0			1.75	16.6	1.25	11.9	0.04		
1	FAI	S.R. 158	9.97	10.00	0.03	158.4	24.0	2	448	422.4	3.00	422.4	31.7	21.1			1.75	20.6	1.25	14.7	0.06		
1	FAI	S.R. 158	10.00	10.09	0.09	475.2	24.0	1	448	1,267.2	3.00	1,267.2	95.1	63.4			1.75	61.6	1.25	44.0	0.18		
1	FAI	S.R. 158	10.09	10.16	0.07	369.6	24.0	3	448	985.6	3.00	985.6	74.0	49.3			1.75	48.0	1.25	34.3	0.14		
1	FAI	S.R. 158	10.16	10.23	0.07	369.6	24.0	1	448	985.6	1.50	985.6	74.0	49.3			1.75	48.0	1.25	34.3	0.14		
1	FAI	S.R. 158	10.23	10.30	0.07	369.6	22.0 AVG	1	448	903.5	1.50	903.5	67.8	45.2			1.75	44.0	1.25	31.4	0.14		
1	FAI	S.R. 158	10.30	15.83	5.53	29,198.4	20.0	1	448	64,885.3	1.50	64,885.3			4,866.4	3,244.3	1.75	3,154.2	1.25	2,253.0	11.06		
BRIDGE DEDUCTIONS										(656.5)		(656.5)			(49.2)	(32.8)	1.75	(31.9)	1.25	(22.8)	(0.04)		
DEDUCTIONS FOR WARM MIX PLACEMENT																			(342.2)		(244.4)		
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)														175,179.3	1,373.3	951.9	11,765.7	7,935.3		8,173.9		5,927.8	26.53
2	LIC	S.R. 158	0.00	0.56	0.56	2,956.8	20.0	1	448	6,570.7	1.50	6,570.7			492.8	328.5	1.75	319.5	1.25	228.2	1.12		
2	LIC	S.R. 158	1.15	2.28	1.13	5,966.4	24.0	1	448	15,910.4	1.50	15,910.4			1,193.3	795.5	1.75	773.5	1.25	552.5	2.26		
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)														22,481.1			1,686.1	1,124.0		1,093.0		780.7	3.38

F158_MAC_001.DGN 1-24-13

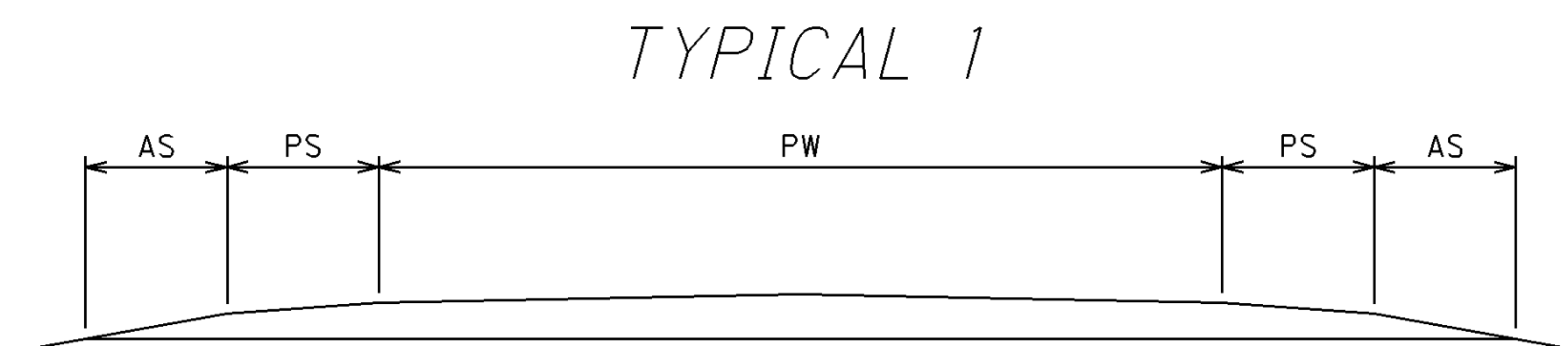
CALCULATED
LME
CHECKED
DNM

ASPHALT CONCRETE DATA

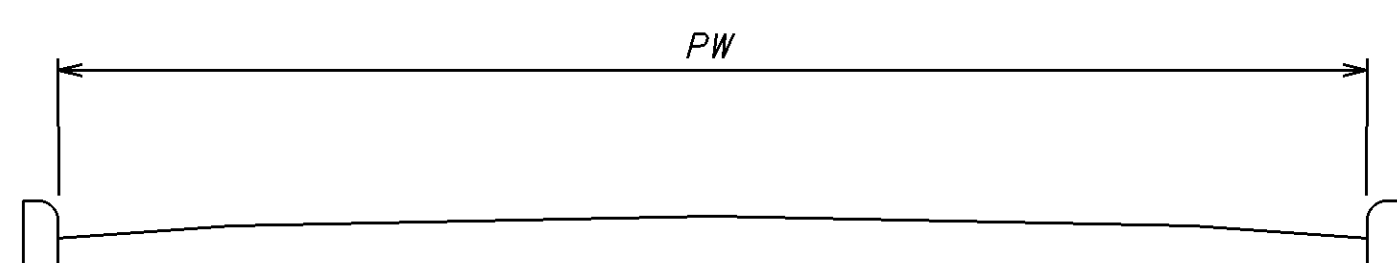
**FAI-158-2.48
LIC-158-0.00**

NOTE:

THE PAVEMENT WIDTHS SHOWN IN THE "PAVEMENT DATA" TABLE ON SHEET 8 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.

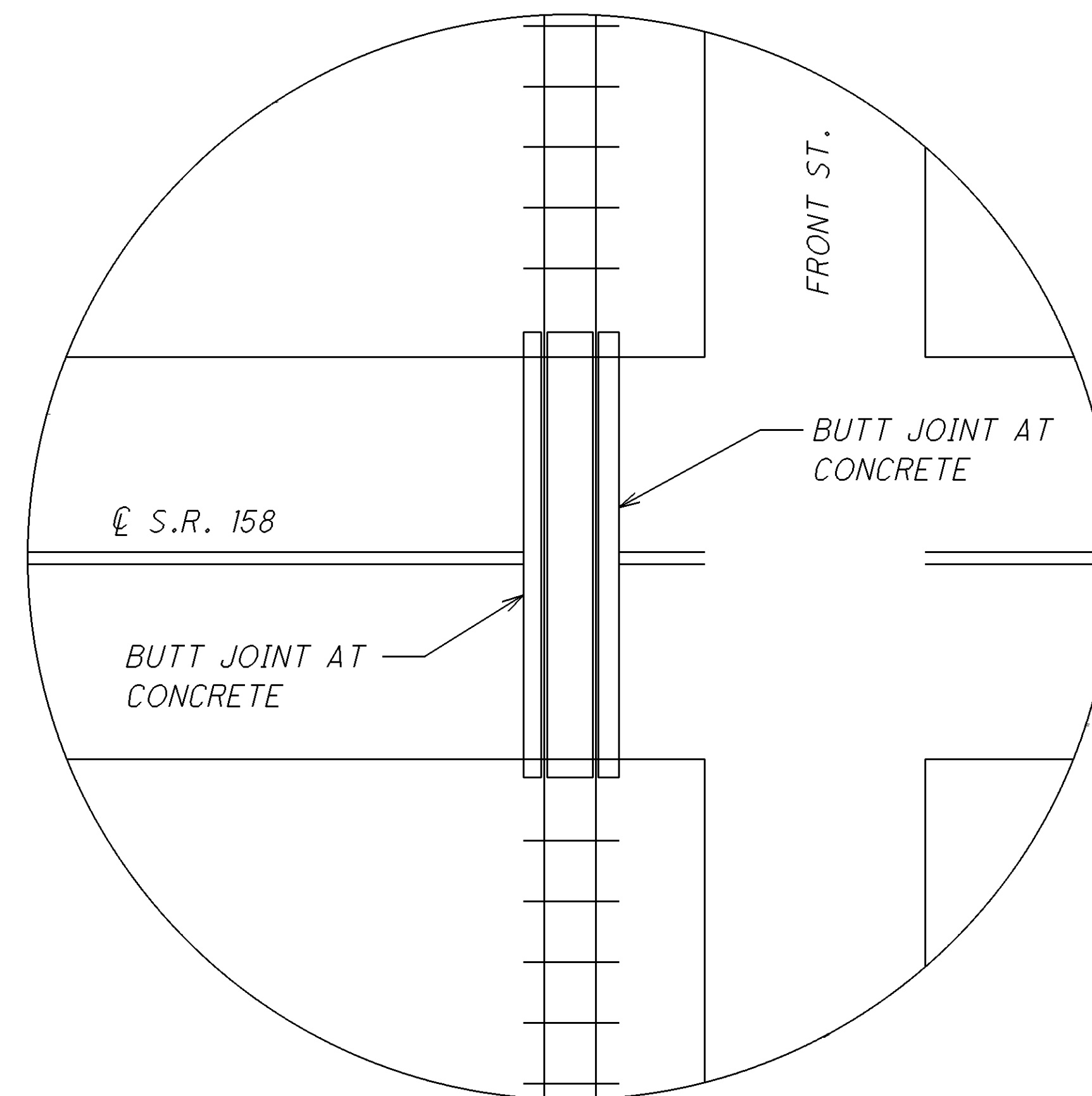
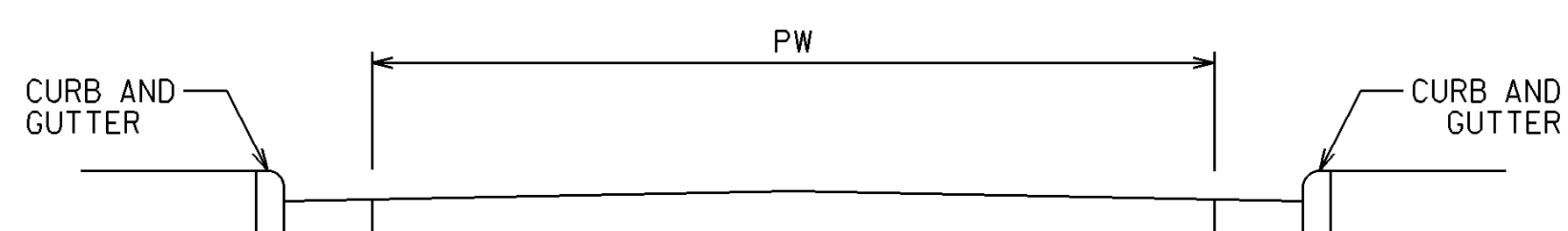


TYPICAL 2



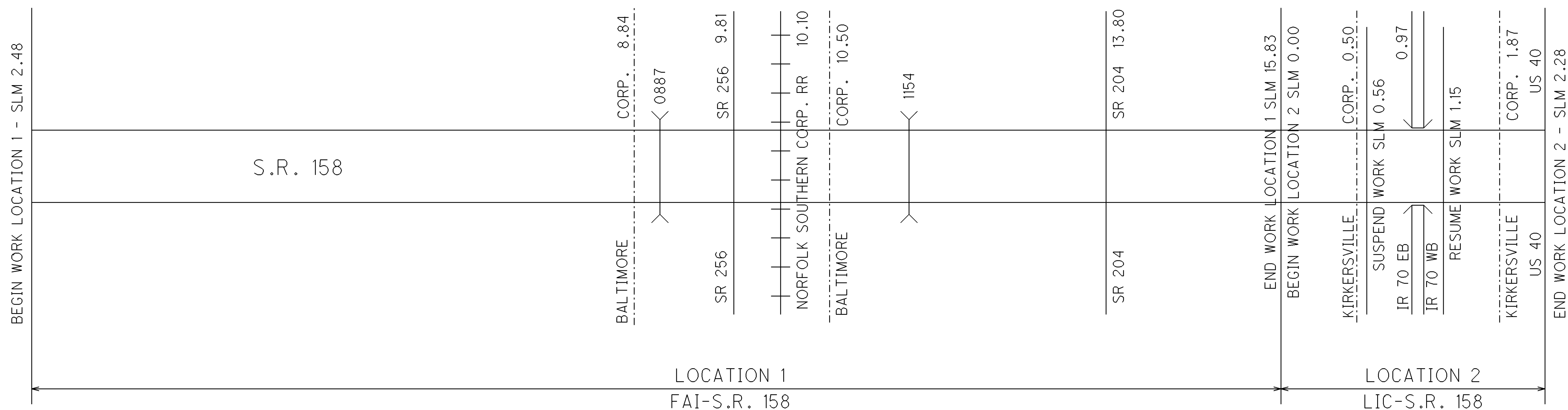
PW = PAVEMENT WIDTH
PS = PAVED SHOULDER
AS = AGGREGATE SHOULDER

TYPICAL 3



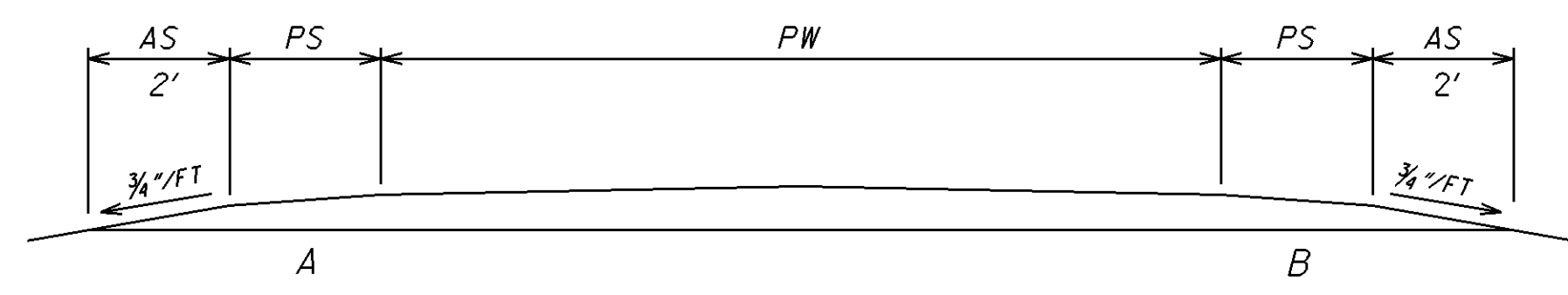
NORFOLK SOUTHERN CORP.
RR CROSSING
AARDOT - 513395S

STRAIGHT LINE DIAGRAMS



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

TYPICAL 1



SHOULDER DATA

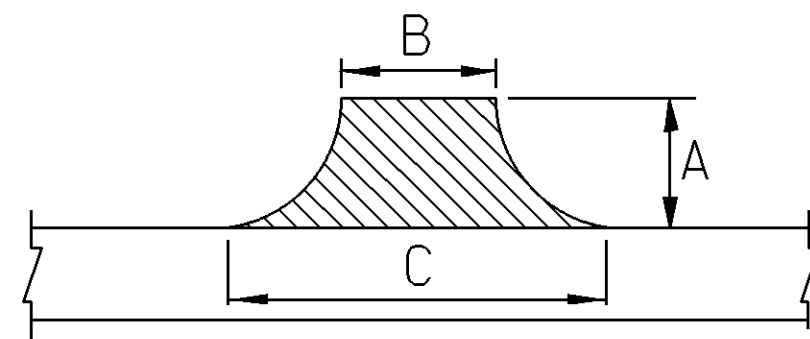
LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		TYPICAL	PROPOSED WIDTH (FT.)		SHOULDER AREA SQ. YD.	209		254		407		448 ASPHALT CONCRETE				617		618		
					MILES	LIN. FT.		A	B		PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	DEPTH OF PAVEMENT PLANING	PAVEMENT PLANING, ASPHALT CONCRETE	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.	INCHES	INTERMEDIATE COURSE, TYPE 2, PG 64-22	INCHES	SURFACE COURSE, TYPE 1, PG 70-22M	INCHES	COMPACTED AGGREGATE, AS PER PLAN (2' WIDTH)	EDGE LINE, RUMBLE STRIPES (ASPHALT CONCRETE)	
																									CU. YD.
1	FAI	S.R. 158	2.48	2.60	0.12	633.6	1	2	2	281.6	0.2	1.50	281.6			21.1	14.1	1.75	13.7	1.25	9.8	2.00	15.6		
1	FAI	S.R. 158	2.60	3.75	1.15	6072.0	1	2	2	2,698.7	2.3	1.50	2,698.7			202.4	134.9	1.75	131.2	1.25	93.7	2.00	149.9	2.3	
1	FAI	S.R. 158	3.75	3.88	0.13	686.4	1	4	4	610.1	0.3								1.25	21.2	2.00	16.9	0.26		
1	FAI	S.R. 158	3.88	8.72	4.84	25555.2	1	2	2	11,357.9	9.7	1.50	11,357.9			851.8	567.9	1.75	552.1	1.25	394.4	2.00	631.0	9.68	
1	FAI	S.R. 158	8.72	9.19	0.47	2481.6	1	2	2	1,102.9	0.9	1.50	1,102.9			82.7	55.1	1.75	53.6	1.25	38.3	2.00	61.3		
1	FAI	S.R. 158	9.19	9.34	0.15	792.0	1	2		176.0	0.3	1.50	176.0	13.2	8.8			1.75	8.6	1.25	6.1	2.00	19.6		
1	FAI	S.R. 158	9.19	9.34	0.15	792.0	1		5	440.0	0.3				22.0					1.25	15.3	1.50	14.7		
1	FAI	S.R. 158	9.34	9.69	0.35	1848.0	1	2	2	821.3	0.7	1.50	821.3	61.6	41.1			1.75	39.9	1.25	28.5	2.00	45.6		
1	FAI	S.R. 158	10.16	15.83	5.67	29937.6	1	2	2	13,305.6	11.3	1.50	13,305.6			997.9	665.3	1.75	646.8	1.25	462.0	2.00	739.2		
BRIDGE DEDUCTIONS										(115.1)			(115.1)			(8.6)	(5.8)	1.75	(5.6)	1.25	(4.0)	2.00	(6.4)		
DEDUCTIONS FOR WARM MIX PLACEMENT																				(57.1)		(40.8)			
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)											26.0		29,628.9	74.8	71.9	2,147.3	1,462.0		1,383.2		1,024.5		1,687.4	12.24	
2	LIC	S.R. 158	0.00	0.56	0.56	2956.8	1	2	2	1,314.1	1.1	1.50	1,314.1			98.6	65.7	1.75	63.9	1.25	45.6	2.00	73.0		
2	LIC	S.R. 158	1.15	2.28	1.13	5966.4	1	2	2	2,651.7	2.3	1.50	2,651.7			198.9	132.6	1.75	128.9	1.25	92.1	2.00	147.3	2.26	
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)											3.4		3,965.8			297.5	198.3		192.8		137.7		220.3	2.26	

F:158_MPS_001.DGN 1-24-13

PAVED SHOULDER DATA

FAI-158-2.48
 LIC-158-0.00

CALCULATED
 LME
 CHECKED
 DNM



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

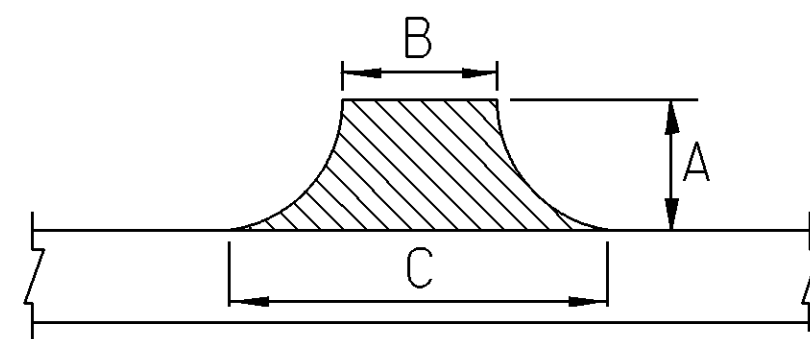
EXTRA AREAS

LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS			AREA SQ. YD.	202 WEARING COURSE REMOVED SQ. YD.	407		448 ASPHALT CONCRETE			
					DETAIL DIMENSION					TACK COAT @ 0.075 GAL./S.Y.	TACK COAT, TRACKLESS TACK FOR SURFACE COURSE @ 0.075 GAL./S.Y. GAL.	THICKNESS IN.	SURFACE COURSE, TYPE 1, PG 64-22 CU. YD.		
					A	B	C								
					FT.	FT.	FT.							IN.	CU. YD.
1	FAI	S.R. 158	RT	ORCHARD DR.	20	18	48	73.4	73.4	5.6			1.25	2.6	
1	FAI	S.R. 158	RT	TWP. RD. 250	40	24	95	264.5	264.5	19.9			1.25	9.2	
1	FAI	S.R. 158	LT	TWP. RD. 250	30	17	70	145.0	145.0	10.9			1.25	5.1	
1	FAI	S.R. 158	RT	SCHADEL DR. NW	30	19	68	145.0	145.0	10.9			1.25	5.1	
1	FAI	S.R. 158	RT	VALLEY VIEW DR. NW	20	25	53	86.7	86.7	6.6			1.25	3.1	
1	FAI	S.R. 158	RT	COONPATH RD. NW	25	24	70	130.6	130.6	9.8			1.25	4.6	
1	FAI	S.R. 158	LT	COONPATH RD. NW	35	21	78	192.5	192.5	14.5			1.25	6.7	
1	FAI	S.R. 158	RT	GINDER RD. NW	25	20	65	118.1	118.1	8.9			1.25	4.2	
1	FAI	S.R. 158	LT	GINDER RD. NW	25	20	58	108.4	108.4	8.2			1.25	3.8	
1	FAI	S.R. 158	RT	CARROL EAST RD. NW	30	21	80	168.4	168.4	12.7			1.25	5.9	
1	FAI	S.R. 158	LT	CARROL EAST RD. NW	40	22	94	257.8	257.8	19.4			1.25	9.0	
1	FAI	S.R. 158	RT	PLEASANTVILLE RD.	50	20	120	388.9	388.9	29.2			1.25	13.6	
1	FAI	S.R. 158	LT	PLEASANTVILLE RD.	50	24	115	386.2	386.2	29.0			1.25	13.5	
1	FAI	S.R. 158	RT	LEONARD RD. NW	35	19	84	200.3	200.3	15.1			1.25	7.0	
1	FAI	S.R. 158	LT	LEONARD RD. NW	50	21	100	336.2	336.2	25.3			1.25	11.7	
				BALTIMORE CORP.											
1	FAI	S.R. 158	LT	CREEKVIEW DR.	23	37	92	164.9	164.9		12.4		1.25	5.8	
1	FAI	S.R. 158	RT	SCHOOL DR.	15	26	54	66.7	66.7		5.1		1.25	2.4	
1	FAI	S.R. 158	RT	SCHOOL DR.	15	26	58	70.0	70.0		5.3		1.25	2.5	
1	FAI	S.R. 158	LT	KELLNER AVE.	16	18	50	60.5	60.5		4.6		1.25	2.2	
1	FAI	S.R. 158	RT	TREMONT DR.	40	29	88	260.0	260.0		19.5		1.25	9.1	
1	FAI	S.R. 158	LT	FAIRVIEW DR.	20	33	60	103.4	103.4		7.8		1.25	3.6	
1	FAI	S.R. 158	RT	DORCHESTER DR.	30	28	82	183.4	183.4		13.8		1.25	6.4	
1	FAI	S.R. 158	LT	EXTRA AREA @ DORCHESTER	120	9		120.0	120.0		9.0		1.25	4.2	
1	FAI	S.R. 158	LT	ELMWOOD AVE.	25	30	46	105.6	105.6		8.0		1.25	3.7	
1	FAI	S.R. 158	RT	ELMWOOD AVE.	40	32	100	293.4	293.4		22.1		1.25	10.2	
1	FAI	S.R. 158	RT	JEFFERSON ST.	20	23	57	88.9	88.9		6.7		1.25	3.1	
1	FAI	S.R. 158	LT	JEFFERSON ST.	25	17	46	87.5	87.5		6.6		1.25	3.1	
1	FAI	S.R. 158	RT	JOHNSON ST.	20	21	50	78.9	78.9		6.0		1.25	2.8	
LOCATION 1 TOTALS (CARRIED TO NEXT SHEET)									4,685.2	226.0	126.9				164.2

CALCULATED
LME
CHECKED
DNM

EXTRA AREA DATA

FAI-158 - 2.48
LIC-158 - 0.00



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

EXTRA AREAS

LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS			AREA SQ. YD.	202	407		448 ASPHALT CONCRETE			
					DETAIL DIMENSION				WEARING COURSE REMOVED SQ. YD.	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT, TRACKLESS TACK FOR SURFACE COURSE @ 0.075 GAL./S.Y. GAL.	BASE IN.	INTERMEDIATE COURSE, TYPE 1, PG 64-22 CU. YD.	BASE IN.	SURFACE COURSE, TYPE 1, PG 64-22 CU. YD.
					A	B	C								
					FT.	FT.	FT.								
LOCATION 1 TOTALS (FROM PREVIOUS SHEET)								4685.2	226	126.9				164.2	
1	FAI	S.R. 158	LT	JOHNSON ST.	15	27	41	56.7		4.3			1.25	2.0	
1	FAI	S.R. 158	RT	E. MONROE ST.	15	22	34	46.7		3.6			1.25	1.7	
1	FAI	S.R. 158	LT	W. MONROE ST.	12	31	38	46.0		3.5			1.25	1.6	
1	FAI	S.R. 158	LT	MULBERRY ST.	10	30	43	40.6		3.1			1.25	1.5	
1	FAI	S.R. 158	RT	MULBERRY ST.	10	30	32	34.5		2.6			1.25	1.2	
1	FAI	S.R. 158	LT	CLIFF ST.	10	23	30	29.5		2.3			1.25	1.1	
1	FAI	S.R. 158	RT	CLIFF ST.	15	30	33	52.5		4.0			1.25	1.9	
1	FAI	S.R. 158	LT	WATER ST.	25	32	120	211.2		15.9			1.25	7.4	
1	FAI	S.R. 158	RT	FRONT ST.	10	15	26	22.8		1.8			1.25	0.8	
1	FAI	S.R. 158	LT	FRONT ST.	25	17	39	77.8		5.9			1.25	2.8	
1	FAI	S.R. 158	RT	ALLEY	20	11	26	41.2		3.1			1.25	1.5	
1	FAI	S.R. 158	LT	ALLEY	20	13	30	47.8		3.6			1.25	1.7	
1	FAI	S.R. 158	RT	ROME ST.	20	25	55	88.9		6.7			1.25	3.1	
1	FAI	S.R. 158	LT	ROME ST.	30	21	70	151.7		11.4			1.25	5.3	
1	FAI	S.R. 158	RT	HUNTWORK ST.	20	18	56	82.3		6.2			1.25	2.9	
1	FAI	S.R. 158	LT	HUNTWORK ST.	30	20	70	150.0		11.3			1.25	5.3	
1	FAI	S.R. 158	RT	NORTH ST.	20	20	58	86.7		6.6			1.25	3.1	
1	FAI	S.R. 158	LT	NORTH ST.	18	15	38	53.0		4.0			1.25	1.9	
				LEAVE BALTIMORE CORP.											
1	FAI	S.R. 158	LT	ROLEY RD.	20	20	59	87.8		6.6			1.25	3.1	
1	FAI	S.R. 158	RT	BICKEL CHURCH RD.	19	22	52	78.2		5.9			1.25	2.8	
1	FAI	S.R. 158	LT	BICKEL CHURCH RD.	19	22	52	78.2		5.9			1.25	2.8	
1	FAI	S.R. 158	RT	STEMEN RD.	20	27	70	107.8		8.1			1.25	3.8	
1	FAI	S.R. 158	LT	STEMEN RD.	25	18	66	116.7		8.8			1.25	4.1	
1	FAI	S.R. 158	RT	SR 204	23	27	76	131.7		9.9			1.25	4.6	
1	FAI	S.R. 158	LT	SR 204	21	25	70	110.9		8.4			1.25	3.9	
1	FAI	S.R. 158	RT	BLACKLICK RD.	21	21	61	95.7		7.2			1.25	3.4	
1	FAI	S.R. 158	LT	BLACKLICK RD.	28	23	67	140.0		10.5			1.25	4.9	
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)								6,952.1	297.3	226.8				244.4	
2	LIC	S.R. 158	RT	PALMER RD.	23	22	53	95.9		7.2			1.25	3.4	
2	LIC	S.R. 158	LT	PALMER RD.	16	19	52	63.2		4.8			1.25	2.2	
2	LIC	S.R. 158		@ RESUME WORK SR 158	35	55	125	350.0		26.3			1.25	12.2	
2	LIC	S.R. 158		END WORK @ US 40	41	35	110	330.3		24.8			1.25	11.5	
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)								839.4	63.1					29.3	

F158_MEA_002.DGN 1-24-13

CALCULATED
LME
CHECKED
DNM

EXTRA AREA DATA

**FAI-158-2.48
LIC-158-0.00**

BRIDGE TREATMENT

LOCATION 1

- FAI-158-0874: BOX CULVERT-SAME AS ROADWAY
 DETAIL ① FAI-158-0887: BUTT JOINT AT APPROACH SLABS
 FAI-158-0996: BOX CULVERT-SAME AS ROADWAY
 DETAIL ② FAI-158-1154: MILL 1.25", PLACE SURFACE COURSE ONLY
 FAI-158-1334: BOX CULVERT-SAME AS ROADWAY
 FAI-158-1527: BOX CULVERT-SAME AS ROADWAY

LOCATION 2

- LIC-158-0097: BRIDGE OVER I.R. 70 - SKIP
 LIC-158-0164: OVERPASS-SAME AS ROADWAY
 LIC-158-0208: BOX CULVERT-SAME AS ROADWAY
 LIC-158-0220: BOX CULVERT-SAME AS ROADWAY

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

BRIDGE DATA																				
NO	COUNTY, ROUTE, BRIDGE NO.	LENGTH (BRIDGE LIMITS)		WIDTH	AREA	APPROACH SLAB LENGTH	APPROACH SLAB WIDTH	APPROACH SLAB AREA (INCLUDES BOTH APPROACH SLABS)	DETAILS (SHEET 14)	MAINLINE DEDUCTIONS (CARRIED TO SHEET 8)	SHOULDER DEDUCTIONS (CARRIED TO SHEET 10)	202		407		448			516	
		LIN. FT.	LIN. FT.									SQ. YD.	LIN. FT.	LIN. FT.	SQ. YD.	WEARING COURSE REMOVED	TACK COAT @ 0.075 GAL/SQ.YD.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/SQ.YD.	THICKNESS	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64
1	FAI-158-0887	132.6	36.0	530.4	25.0	36.0	200.0	1	486.9	81.2										56.0
1	FAI-158-1154	36.3	32.0	129.1	20.0	32.0	142.2	2	169.6	33.9	129.1	20.3	7.1	1.75	6.9	1.25	9.4			
BRIDGE DEDUCTIONS										656.5	115.1									
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)												129.1	20.3	7.1		6.9		9.4		56.0

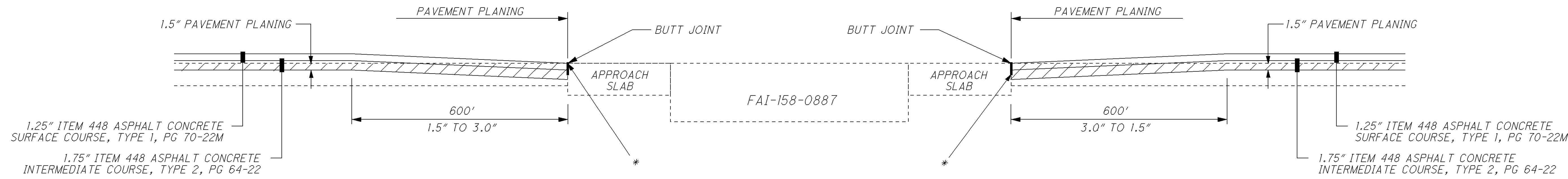
ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

ITEM 202 WEARING COURSE REMOVED

CALCULATED
LME
CHECKED
DNM

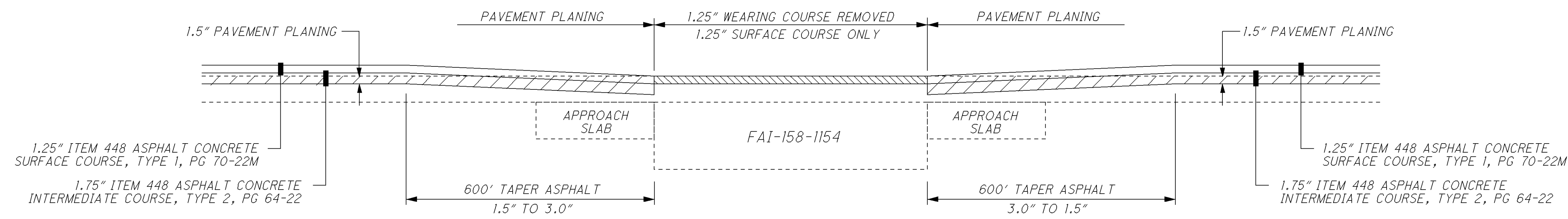
DETAIL 1

* 2.0" DEEP JOINT SEALER,
AS PER PLAN



BUTT JOINT AT APPROACH SLABS

DETAIL 2



REMOVE AND REPLACE 1.25" ASPHALT CONCRETE

F158_MBT_002.dgn 1-24-13

BRIDGE DECK TREATMENT DATA

FAI-158-2.48
LIC-158-0.00

CURB RAMP CALCULATIONS

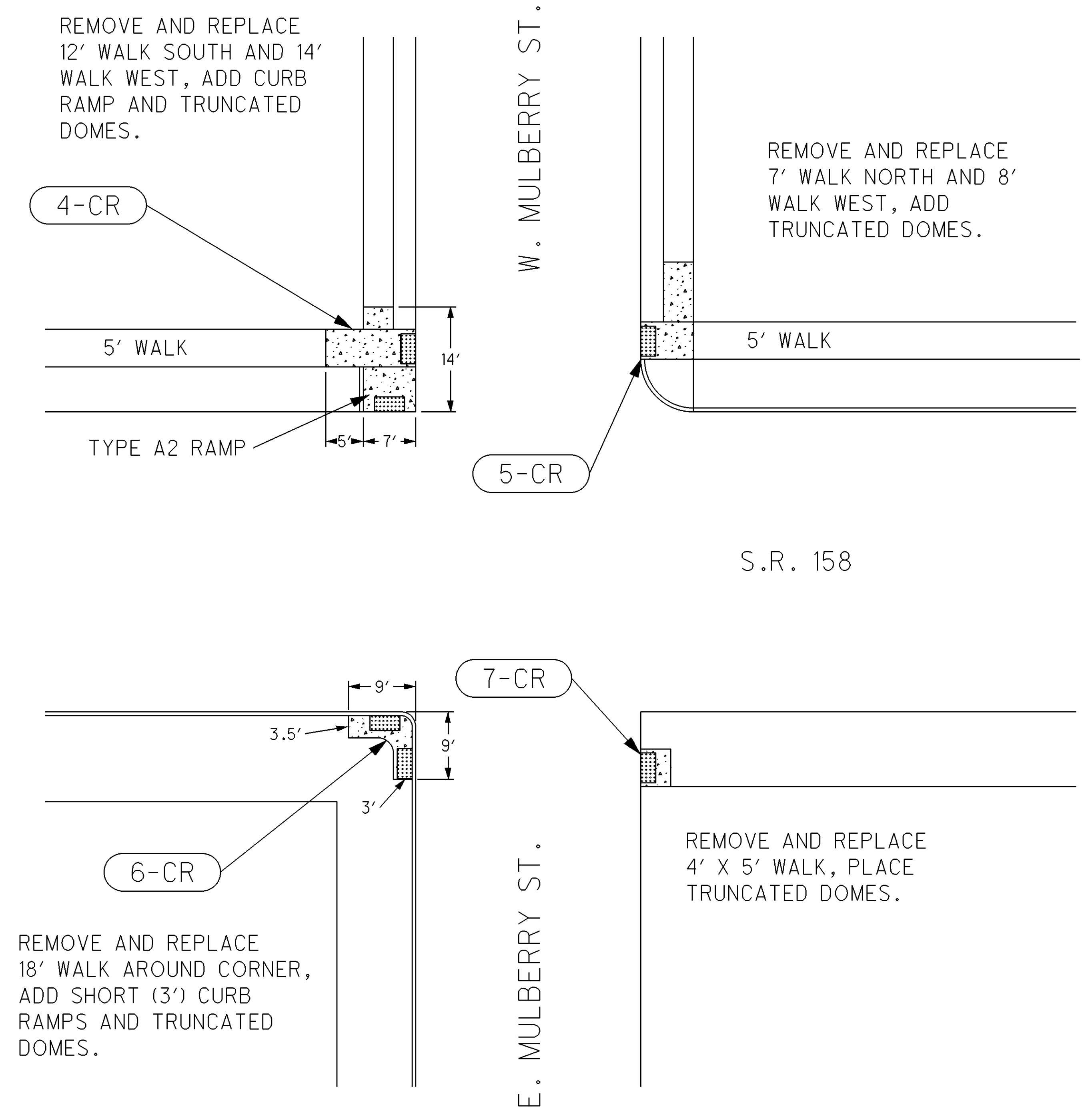
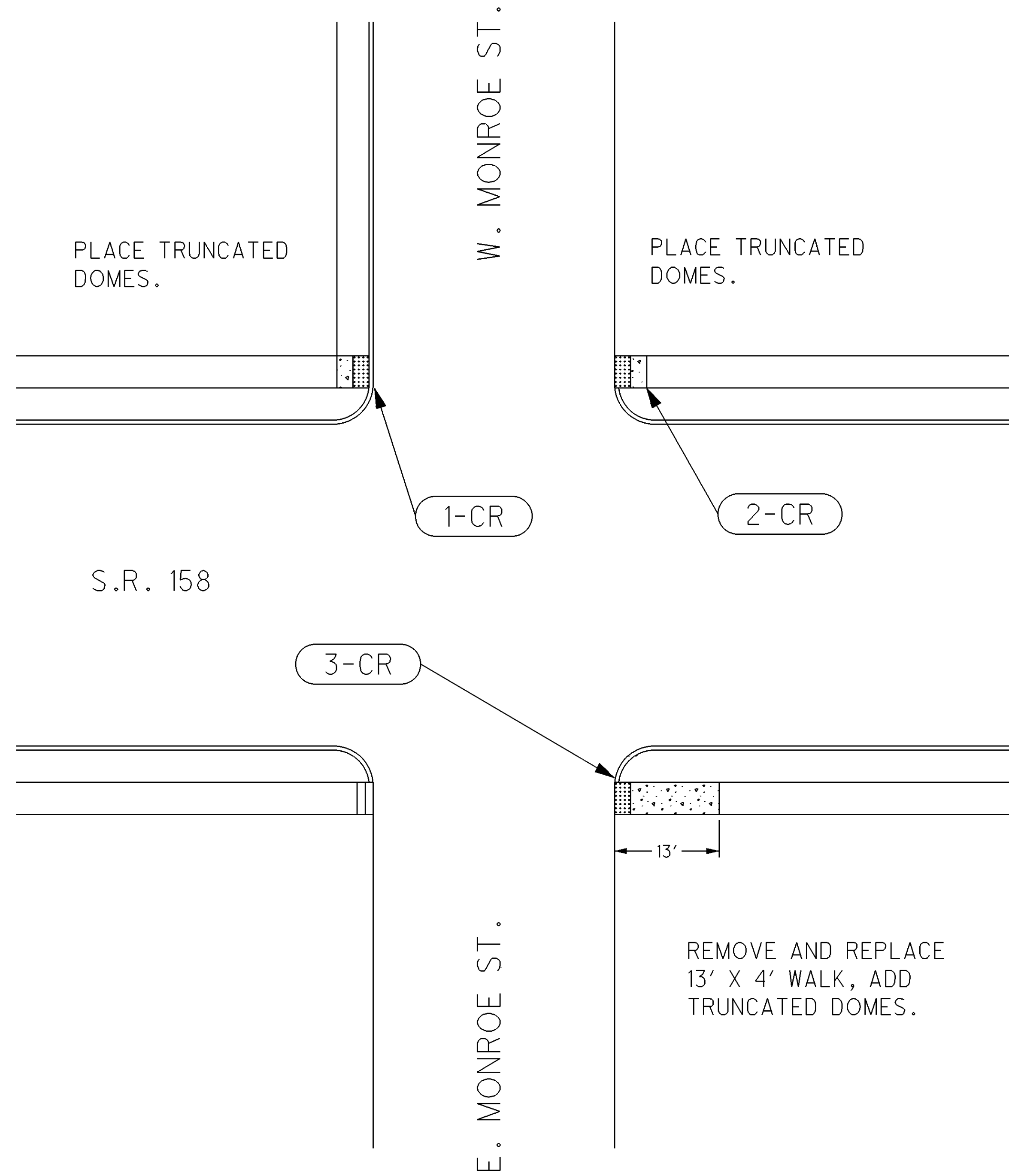
REFERENCE NO.	SHEET NO.	LOCATION	SIDE	202			608		690 SPECIAL-MISC.:			609	COMMENTS	
				CURB AND GUTTER REMOVED	WALK REMOVED	CURB REMOVED	4" CONCRETE WALK, (CURB RAMP AREA)	4" CONCRETE WALK, (EXTRA WALK AREA)	DETECTABLE WARNING	CURB RAMPS,				CURB, TYPE 6
										TYPE A1	TYPE A2	TYPE B1		
CL./LT./RT.	SQ. YD.	SQ. FT.	FT.	SQ. FT.	SQ. FT.	SQ. FT.	EACH	EACH	EACH	FT.				
		S.R. 158 - BALTIMORE												
1-CR	16	W. MONROE ST.	LT		16.0			8.0	8				ADD TRUNCATED DOMES	
2-CR	16	W. MONROE ST.	LT		16.0			8.0	8				ADD TRUNCATED DOMES	
3-CR	16	E. MONROE ST.	RT		52.0			44.0	8				REMOVE AND REPLACE 13' WALK, ADD TRUNCATED DOMES	
4-CR	16	W. MULBERRY ST.	LT		114.0		42.0	64.0	8		1	12		
5-CR	16	W. MULBERRY ST.	LT		67.0			59.0	8					
6-CR	16	E. MULBERRY ST.	RT		48.0	18	39.0	9.0		2		18	CURB RAMPS LENGTHS APPROXIMATELY 3'	
7-CR	16	E. MULBERRY ST.	RT		20.0			12.0	8					
8-CR	17	CLIFF ST.	LT		16.0			8.0	8				ADD TRUNCATED DOMES	
9-CR	17	CLIFF ST.	RT		119.0		111.0		8			41		
10-CR	17	CLIFF ST.	RT		22.0		40.0	40.0				1	40	
11-CR	17	FRONT ST.	LT		24.0		24.0				1	12		
12-CR	18	ALLEY	LT		52.0		24.0	28.0			1	12		
13-CR	18	W. ROME ST.	LT		40.0			56.0	8					
14-CR	18	E. ROME ST.	RT		28.0			20.0	8					
15-CR	19	HUNTWORK ST.	LT		44.0			36.0	8					
16-CR	19	HUNTWORK ST.	LT					36.0	8					
17-CR	19	HUNTWORK ST.	RT					8.0	8				ADD 4' WALK AND TRUNCATED DOMES	
SUB-TOTALS							280.0	436.0						
TOTALS (CARRIED TO LOCATION 1 SUB-SUMMARY)					678.0	18	716.0	104	2	3	1	135		

CALCULATED
LME
CHECKED
DNM

CURB RAMP SUB-SUMMARY

FAI-158-2.48
LIC-158-0.00

SEE SHEET 15 FOR CURB RAMP/WALK QUANTITIES



P:\FAI\25191\Design\Roadway\Plan_Sheets\General\F158_CRD_001.dgn 06-FEB-2013 2:58PM dmorgan

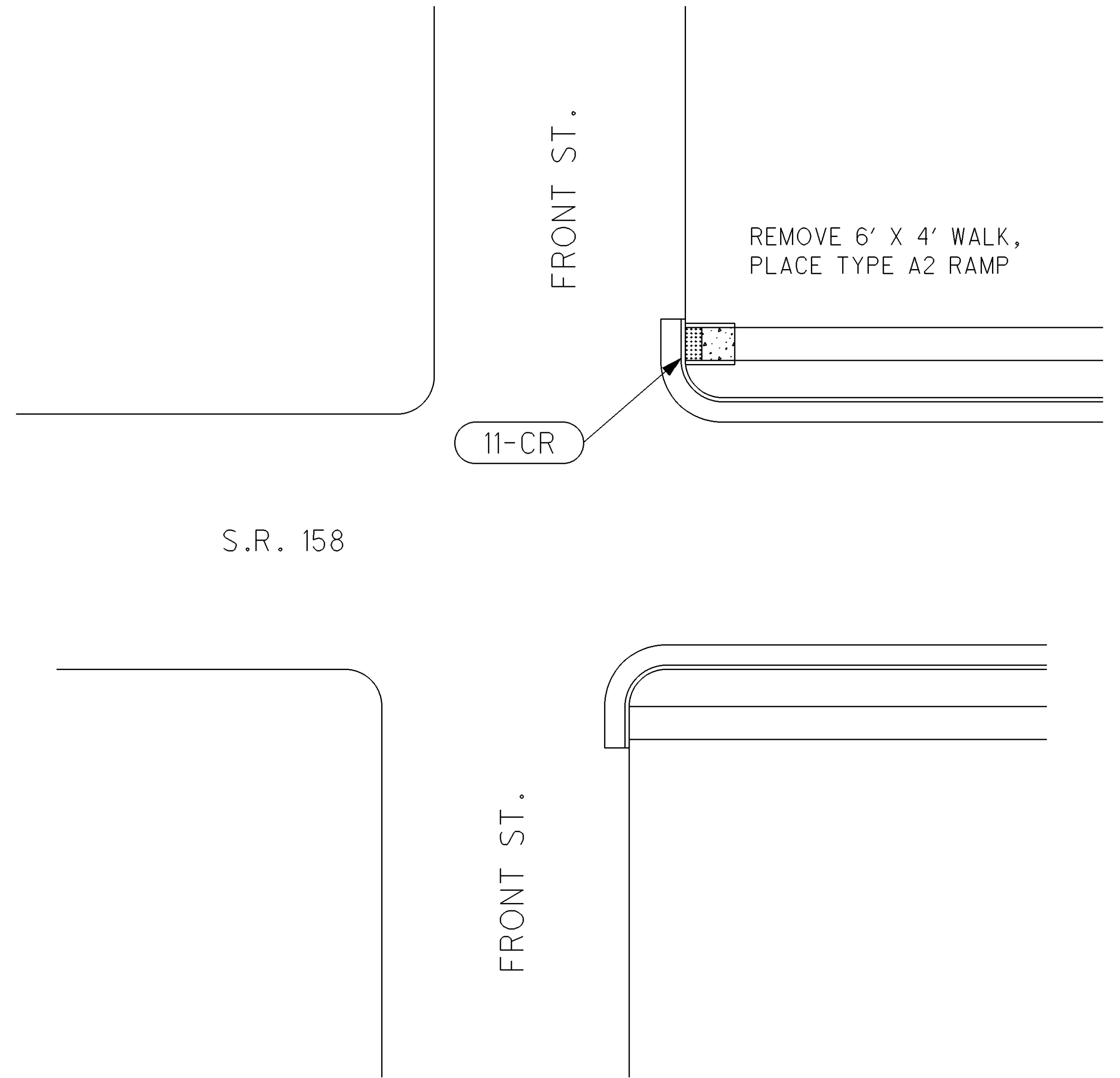
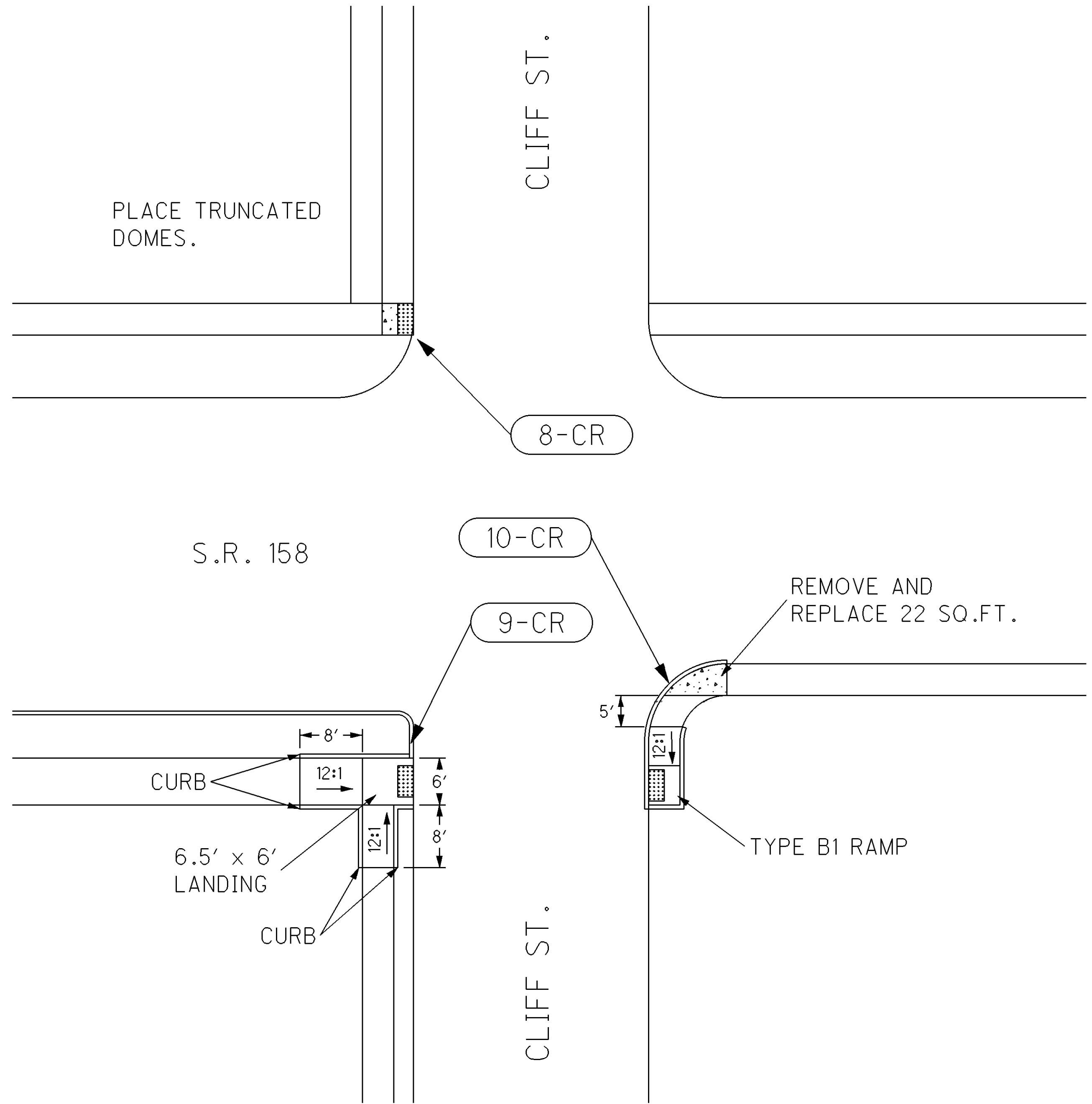
0
CALCULATED
LIVE
CHECKED
DNM

DRAWING
NOT TO SCALE

CURB RAMP PLAN SHEET
S.R. 158 BALTIMORE

FAI-158-2.48
LIC-158-0.00

SEE SHEET 15 FOR CURB RAMP/WALK QUANTITIES



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CALCULATED
LIME
CHECKED
DNM

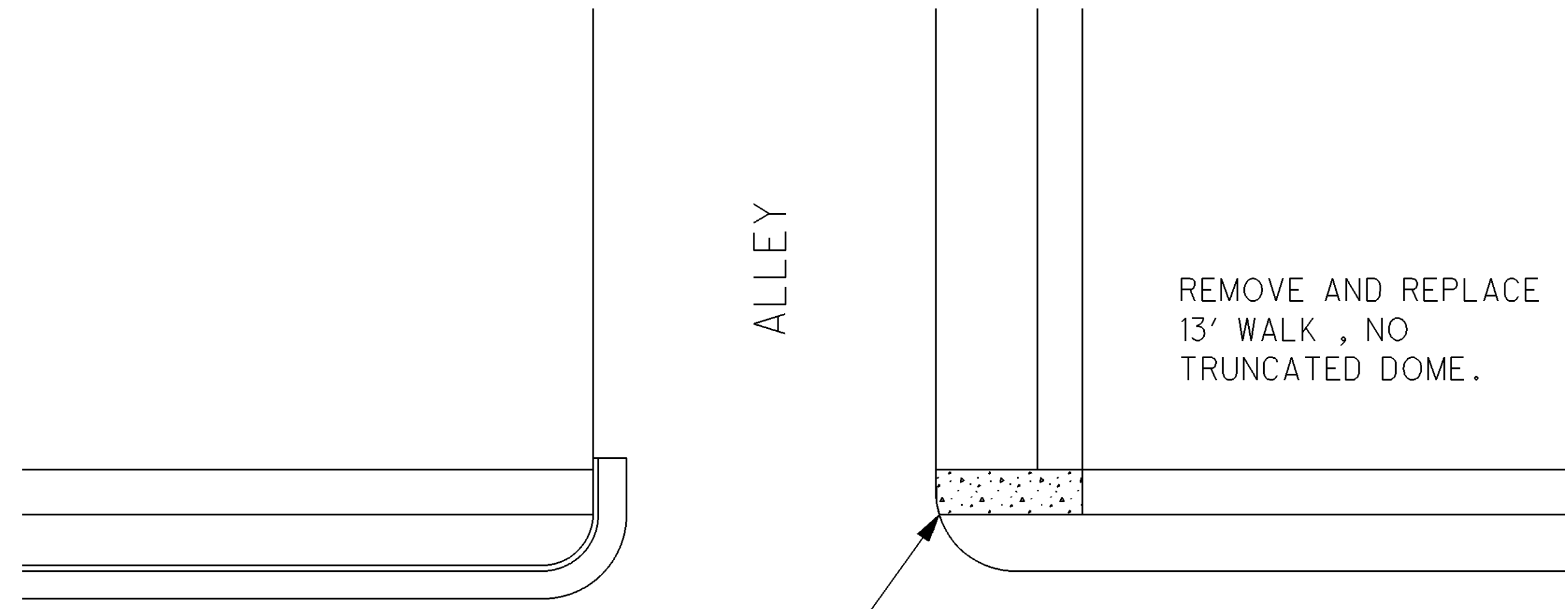
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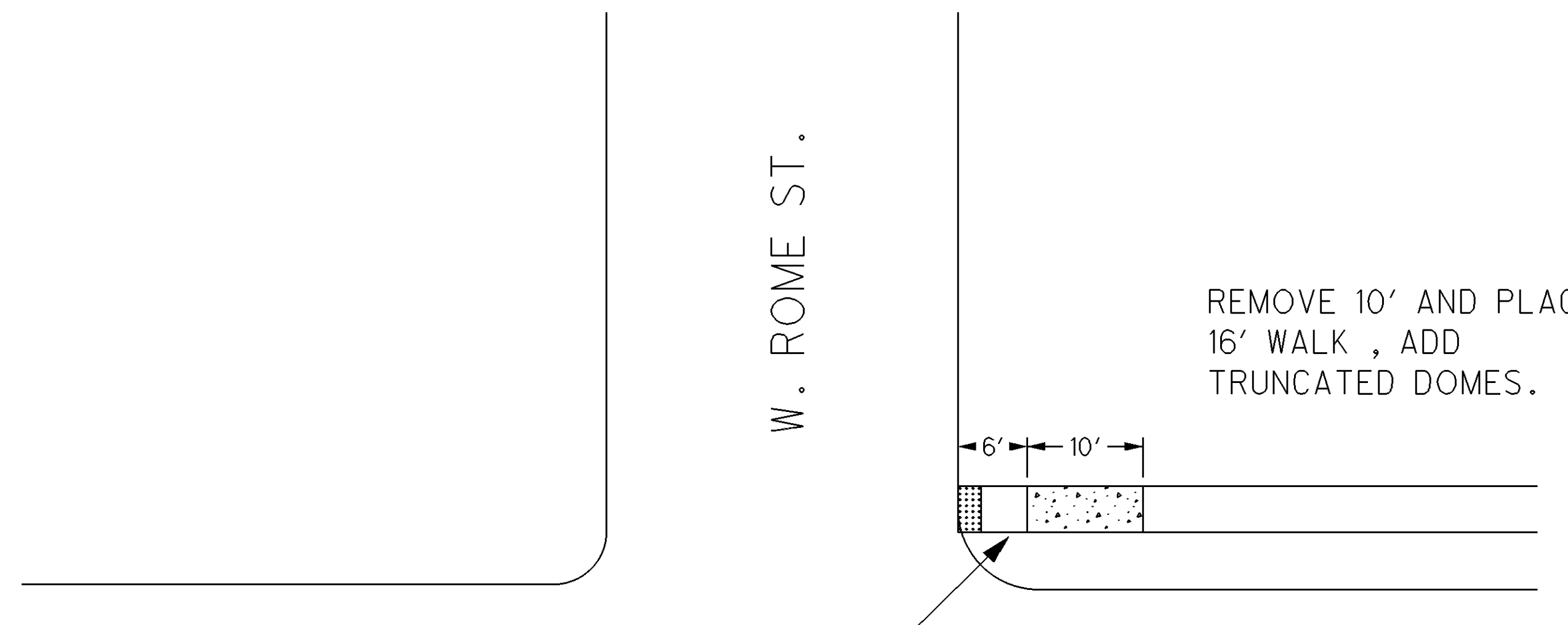
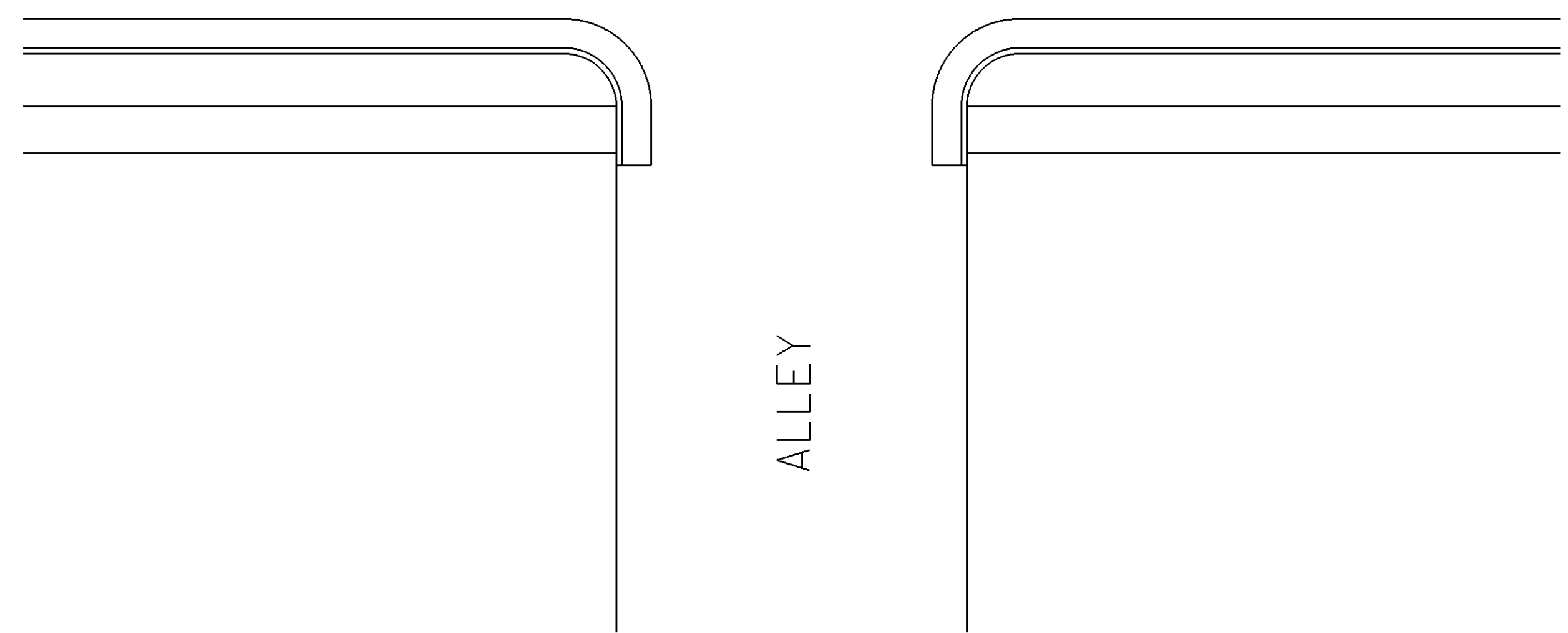
CURB RAMP PLAN SHEET
S.R. 158 BALTIMORE

FAI-158-2.48
LIC-158-0.00

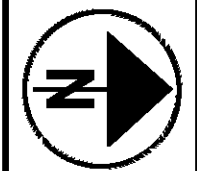
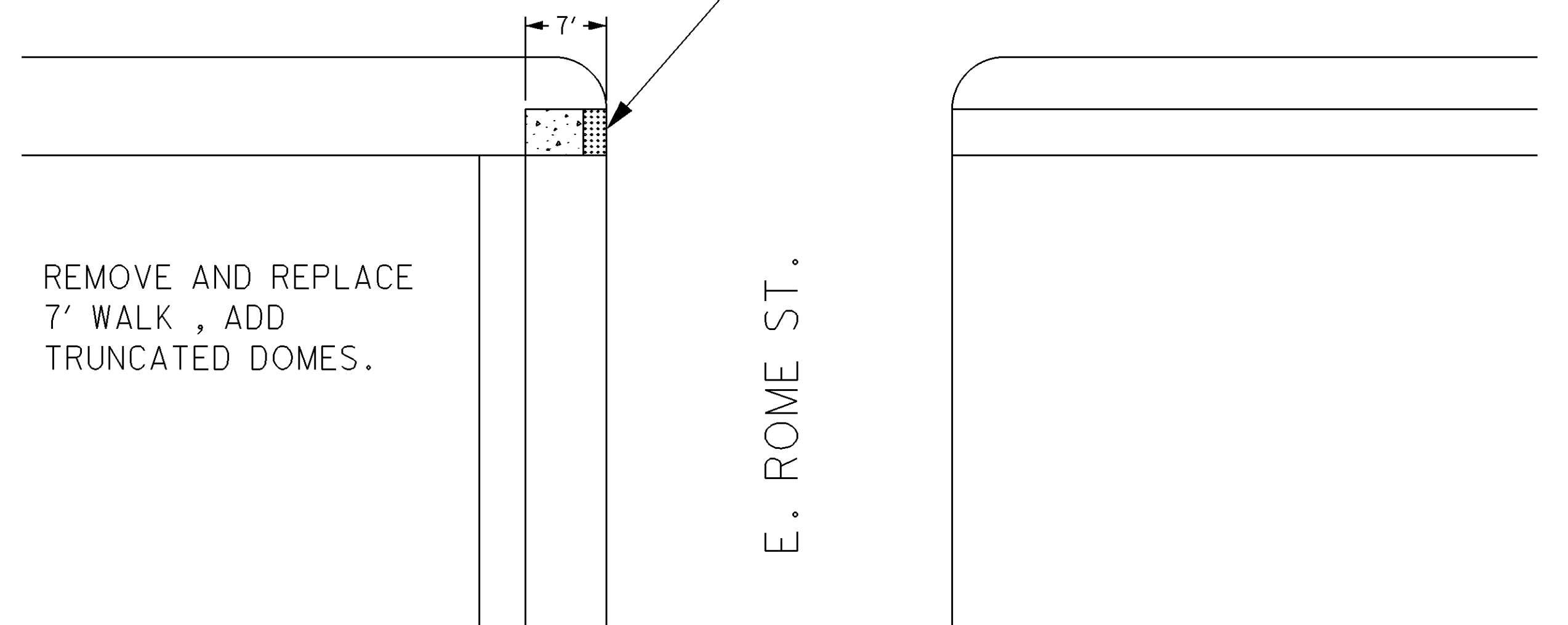
SEE SHEET 15 FOR CURB RAMP/WALK QUANTITIES



S.R. 158



S.R. 158



DRAWING
NOT TO SCALE

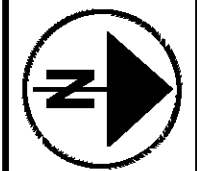
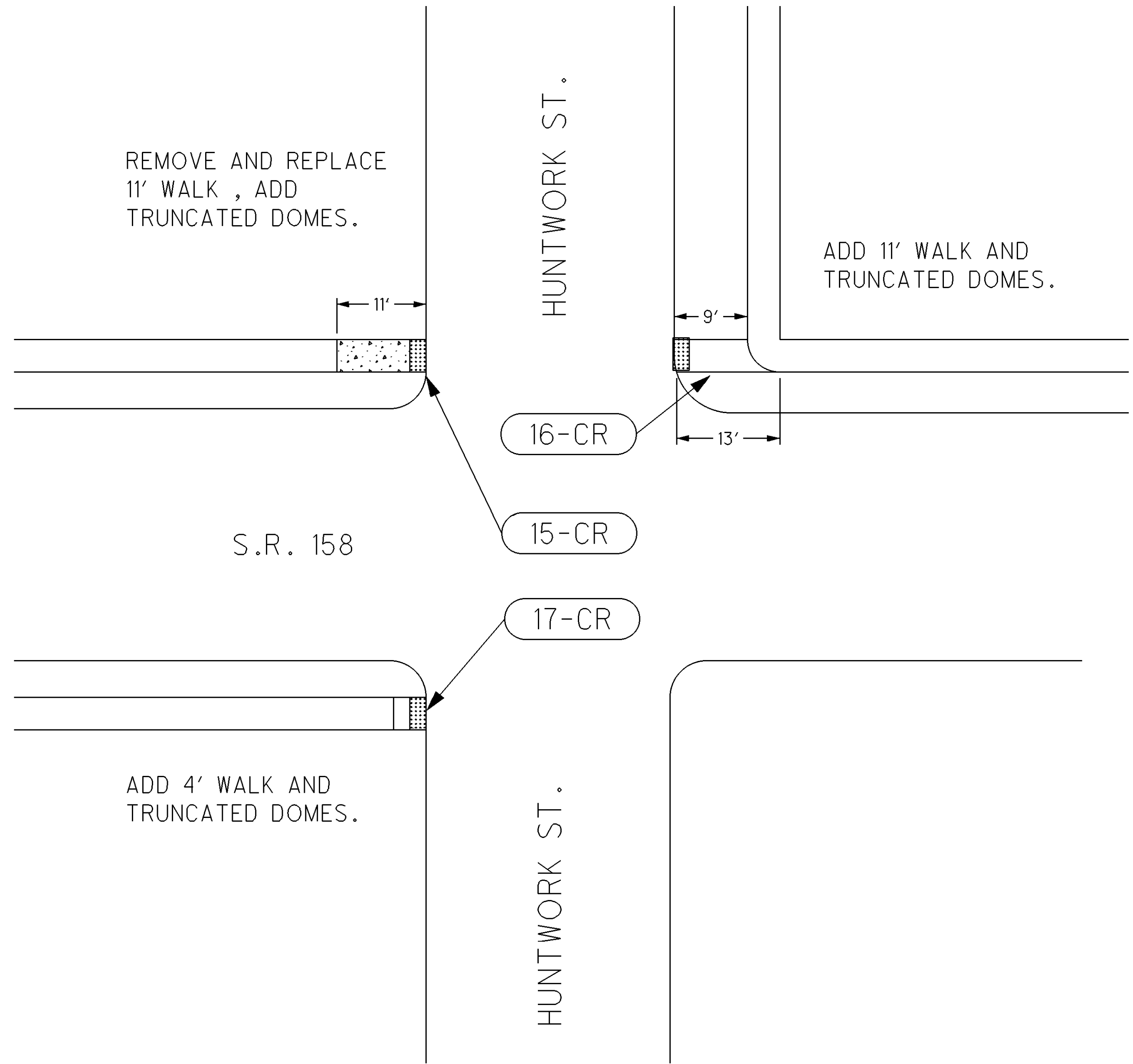
CALCULATED
LIVE
CHECKED
DNM

CURB RAMP PLAN SHEET
S.R. 158 BALTIMORE

FAI-158-2.48
LIC-158-0.00

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SEE SHEET 15 FOR CURB RAMP/WALK QUANTITIES



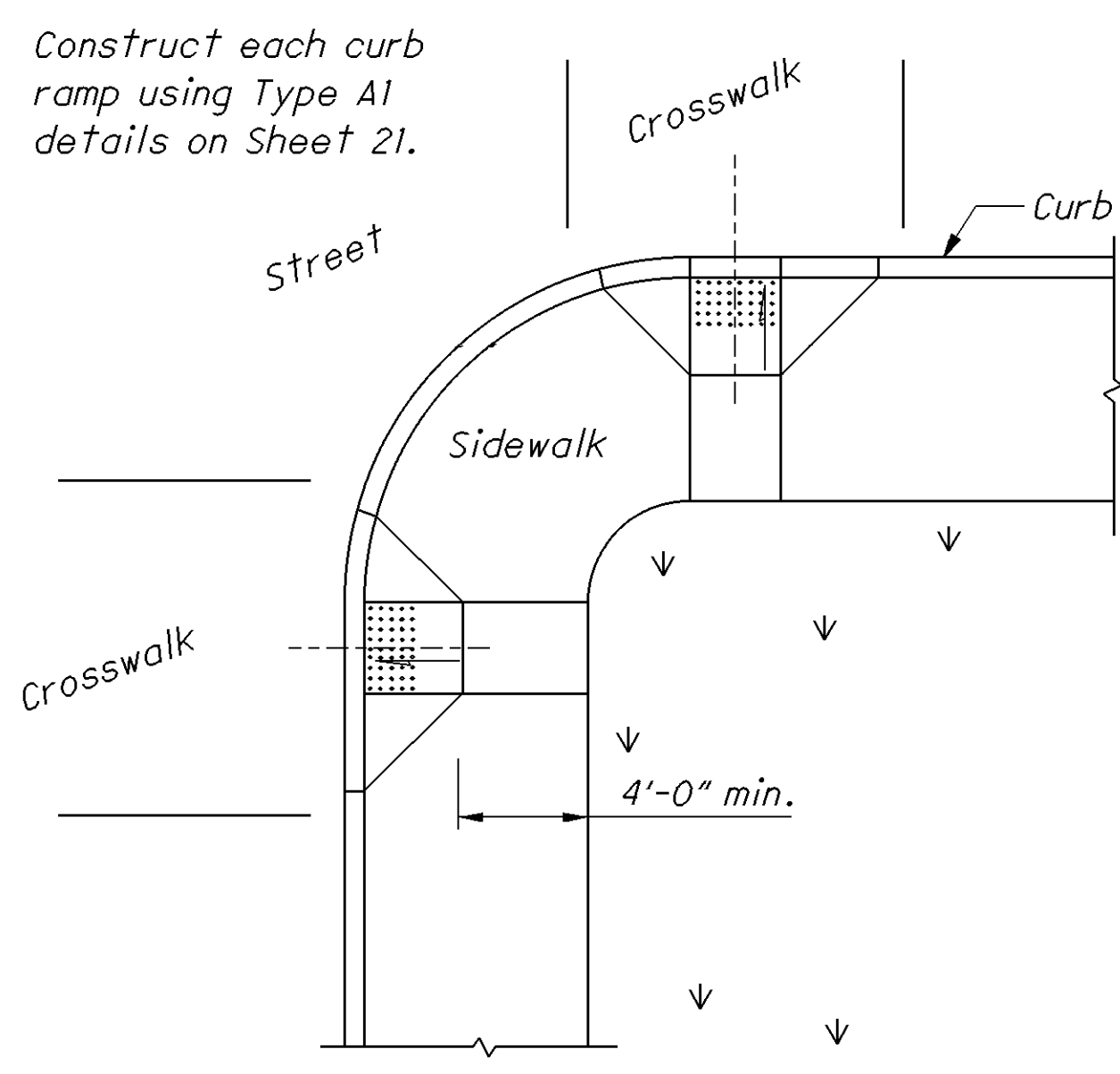
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DRAWING
NOT TO SCALE

CALCULATED
LME
CHECKED
DNM

CURB RAMP PLAN SHEET
S.R. 158 BALTIMORE

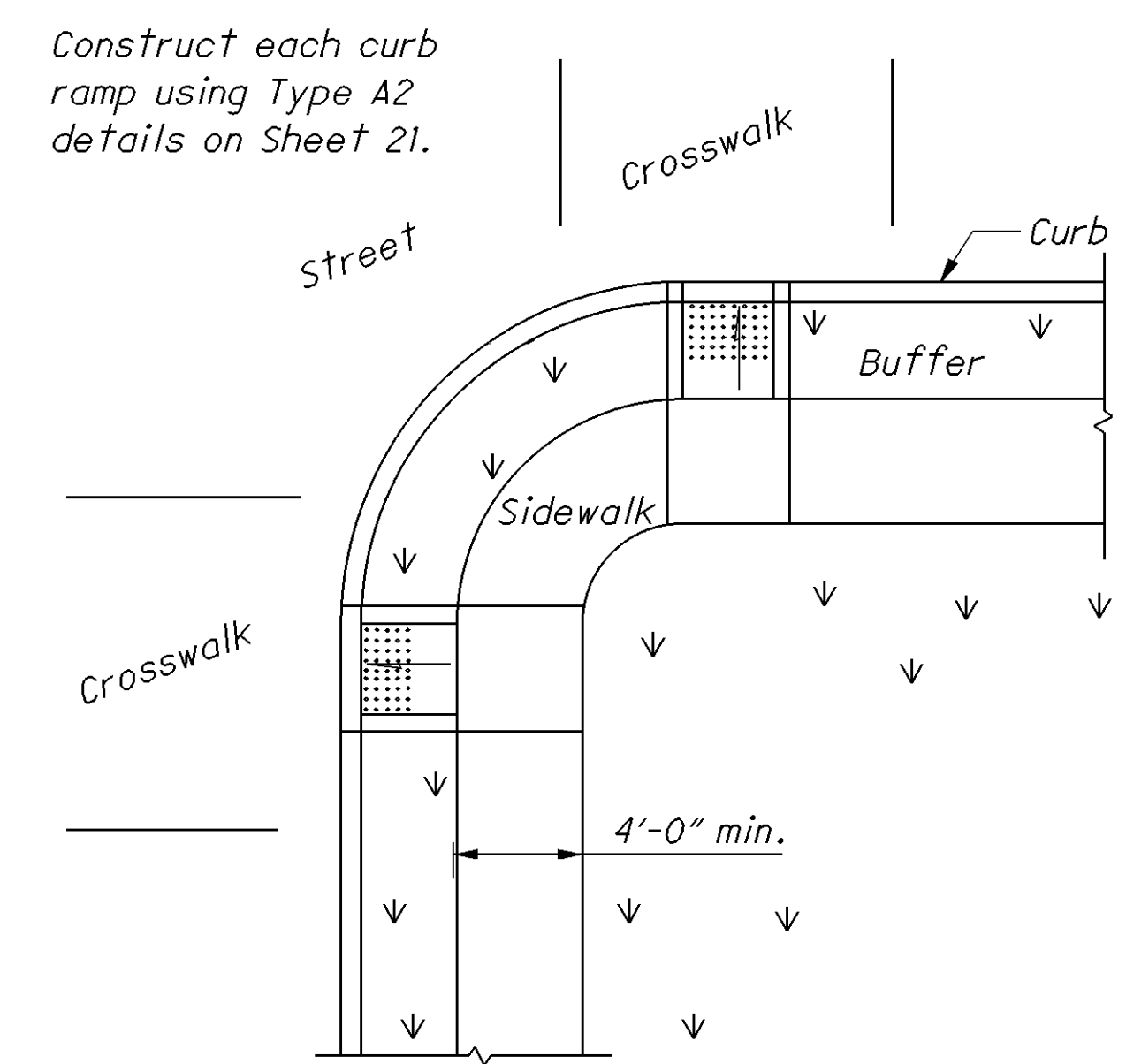
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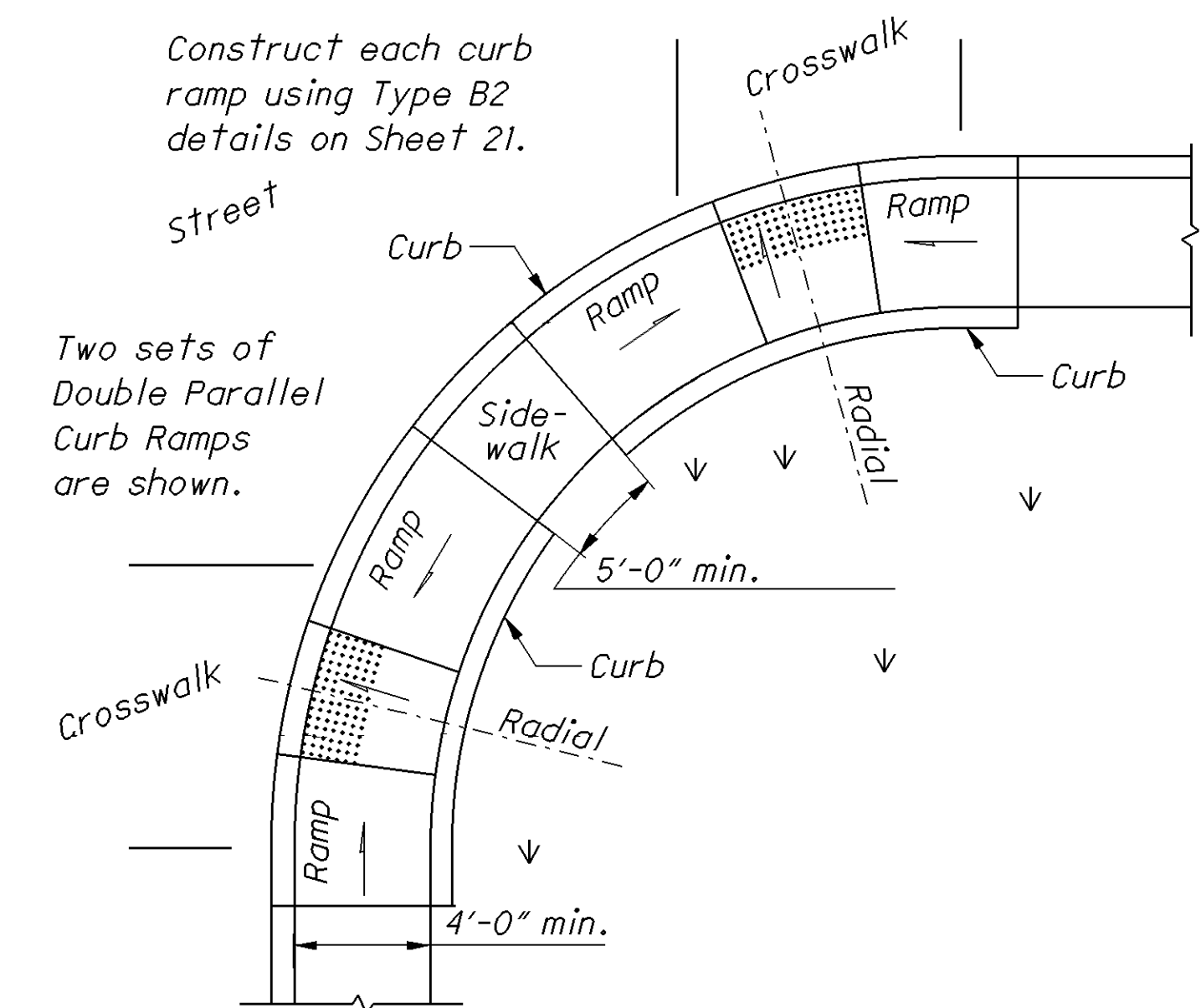
Construct each curb ramp using Type A1 details on Sheet 21.

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



Construct each curb ramp using Type A2 details on Sheet 21.

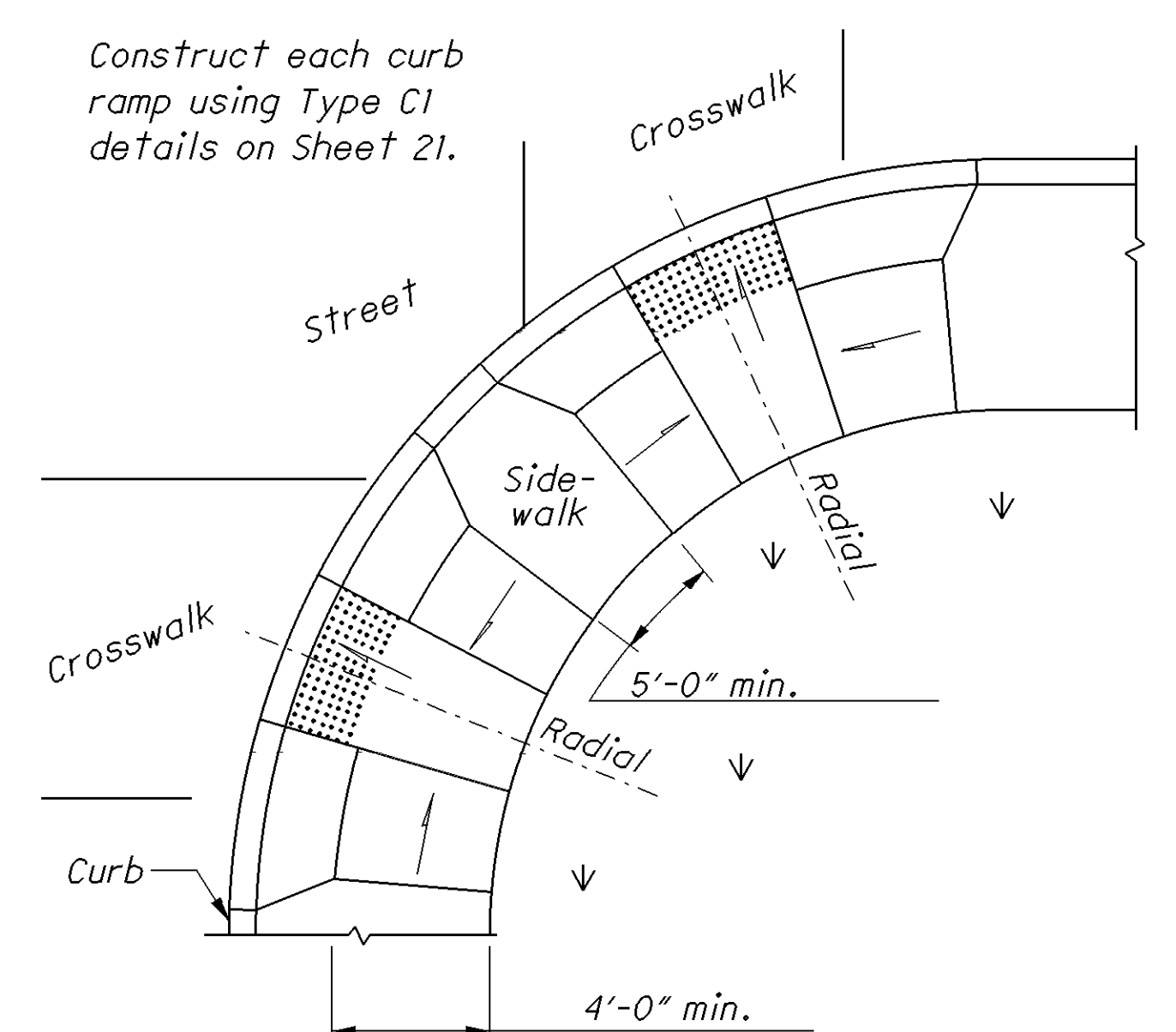
Use curb ramps with returned curbs where buffer is wide enough to accommodate ramp slope.



Construct each curb ramp using Type B2 details on Sheet 21.

Two sets of Double Parallel Curb Ramps are shown.

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



Construct each curb ramp using Type C1 details on Sheet 21.

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

PERPENDICULAR CURB RAMPS

PARALLEL CURB RAMPS

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 21 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 22. 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 1/8" 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 1/2" 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.

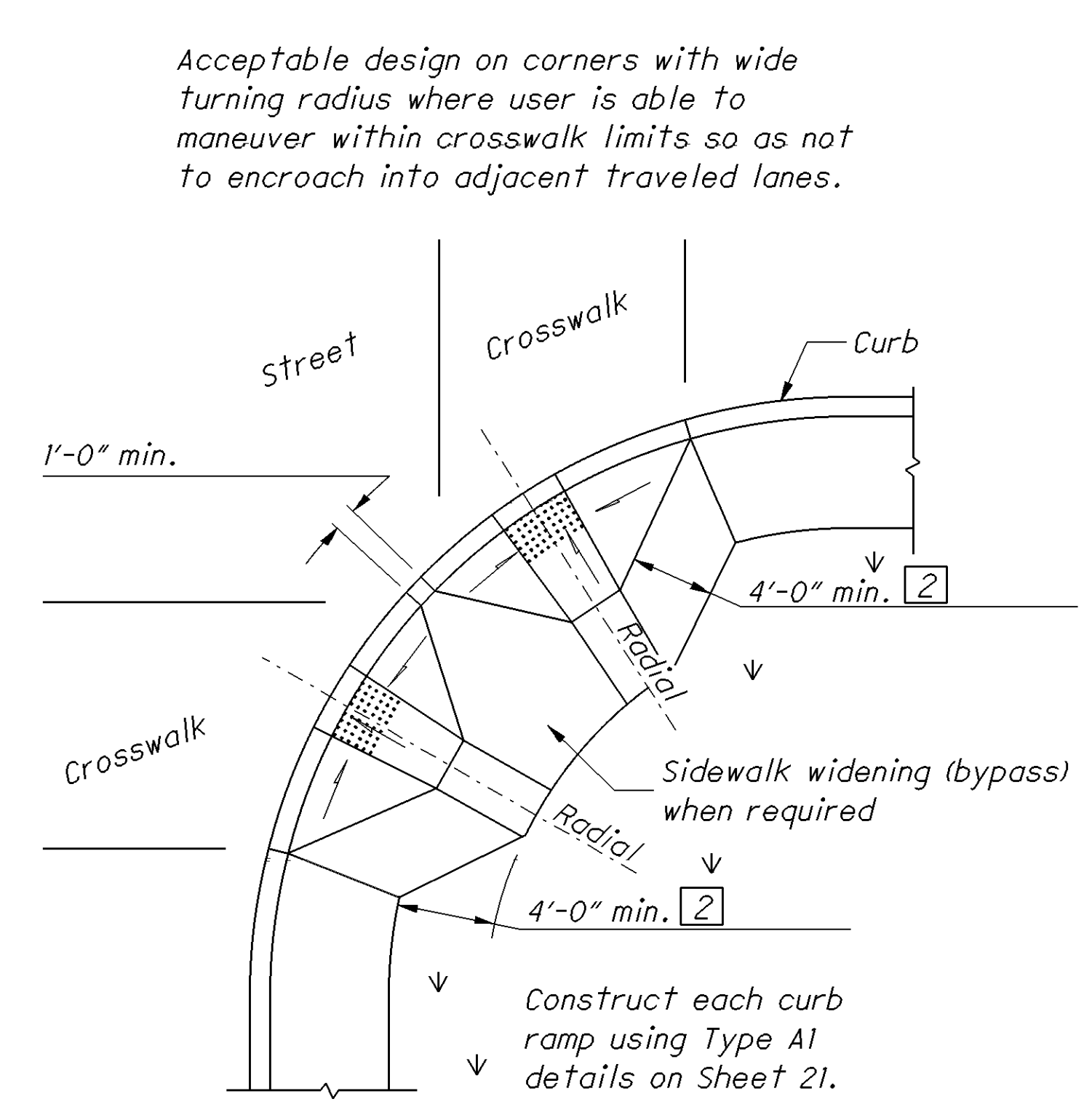
METHOD OF PAYMENT: New Curb Ramps constructed in new or existing Walk are paid for under Item 690 Special Misc.: Curb Ramp, Type -- (A1, A2, B1, B2, B3, C1, C2, or D) each, and includes the cost of any additional materials and installation (including detectable warnings), grading, forming and finishing.

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

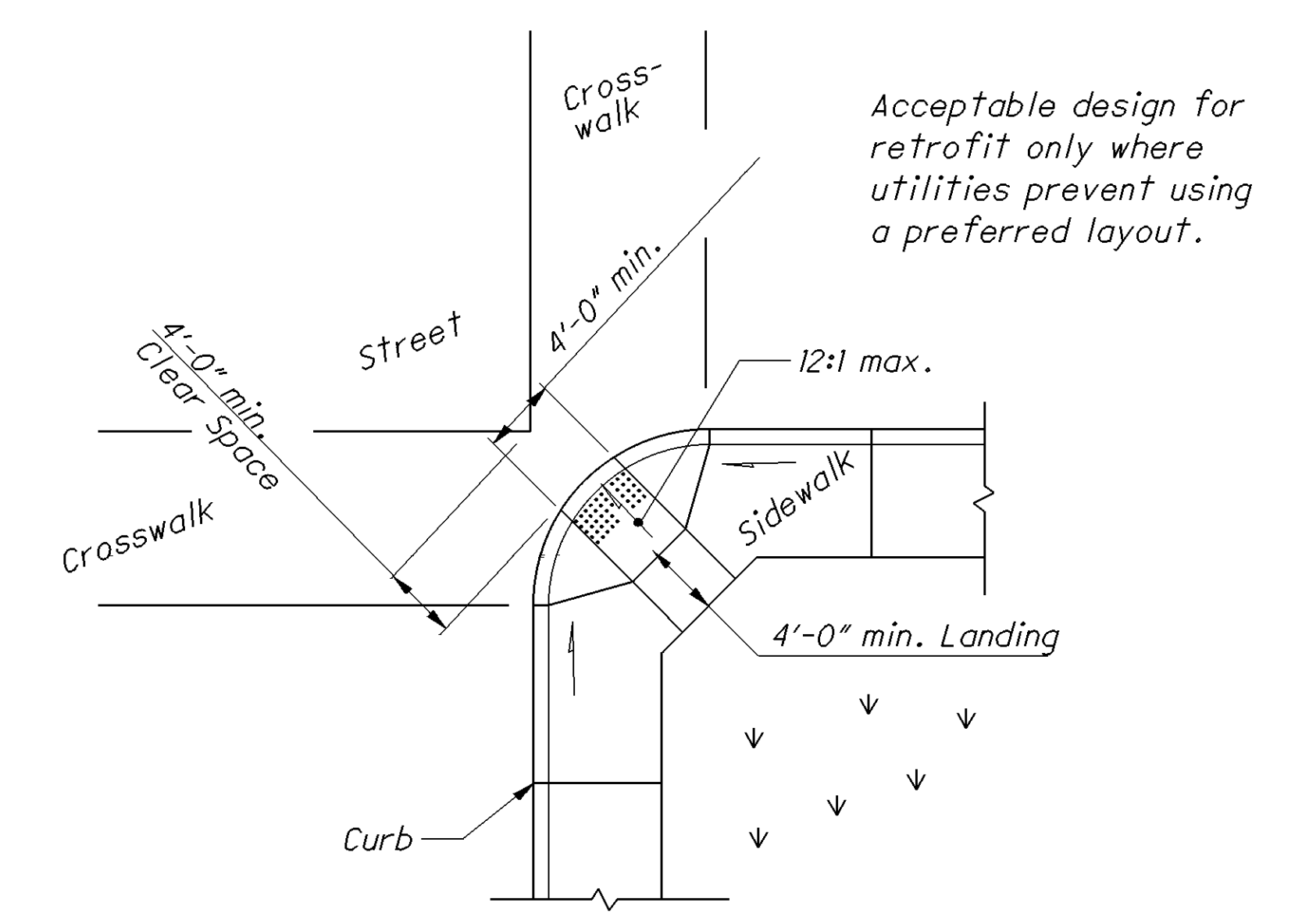
② May be reduced to 3'-4" in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.



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 CONSTRUCTION PLACEMENT



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

DIAGONAL RAMP (Type D)

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" .

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 indefinitely, the transition from existing 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 or 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.

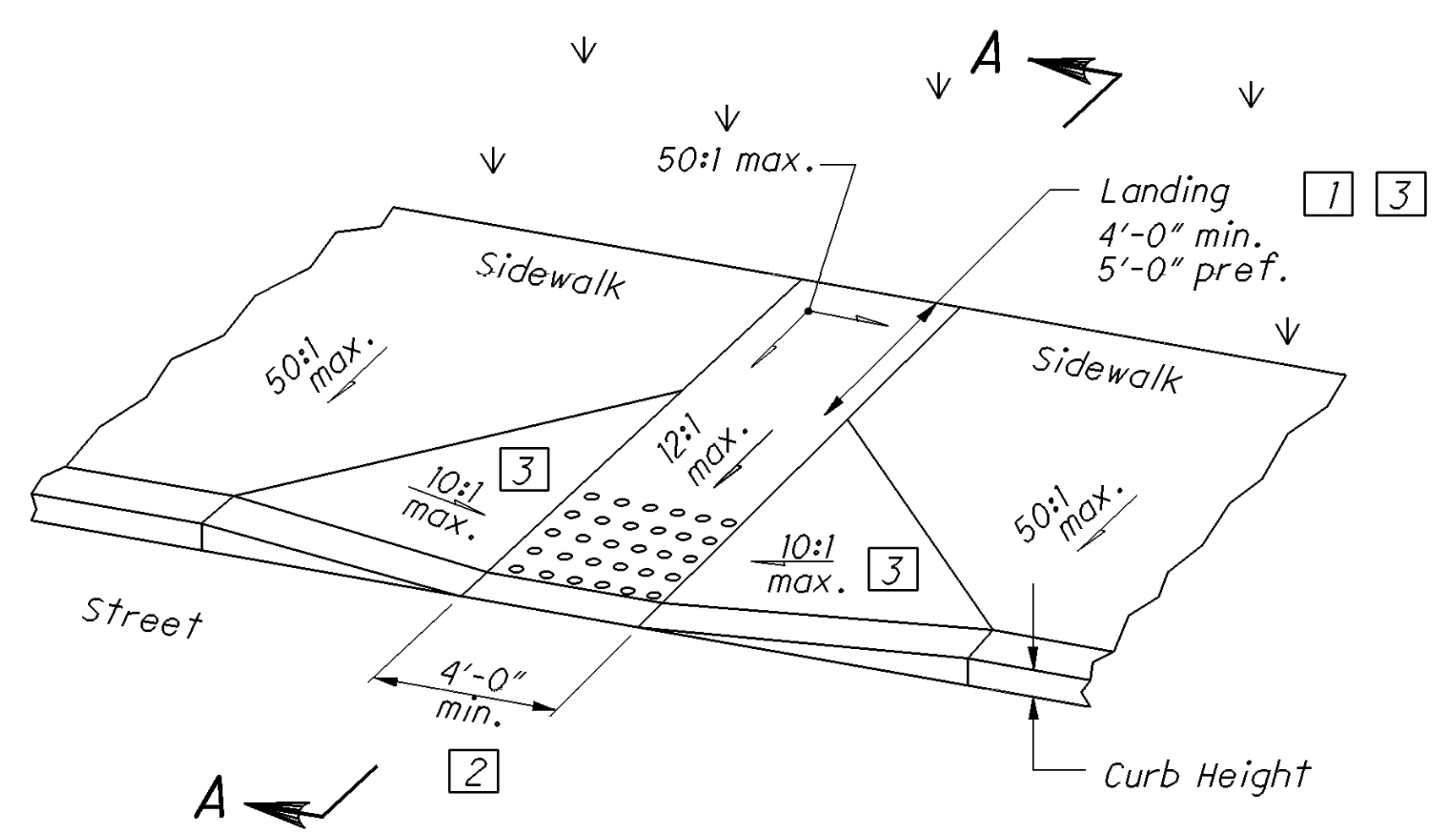
Ramp landings shall be 4' min. x 4' min. with a 50:1 or flatter cross slope and running slope, unless otherwise shown.

LEGEND

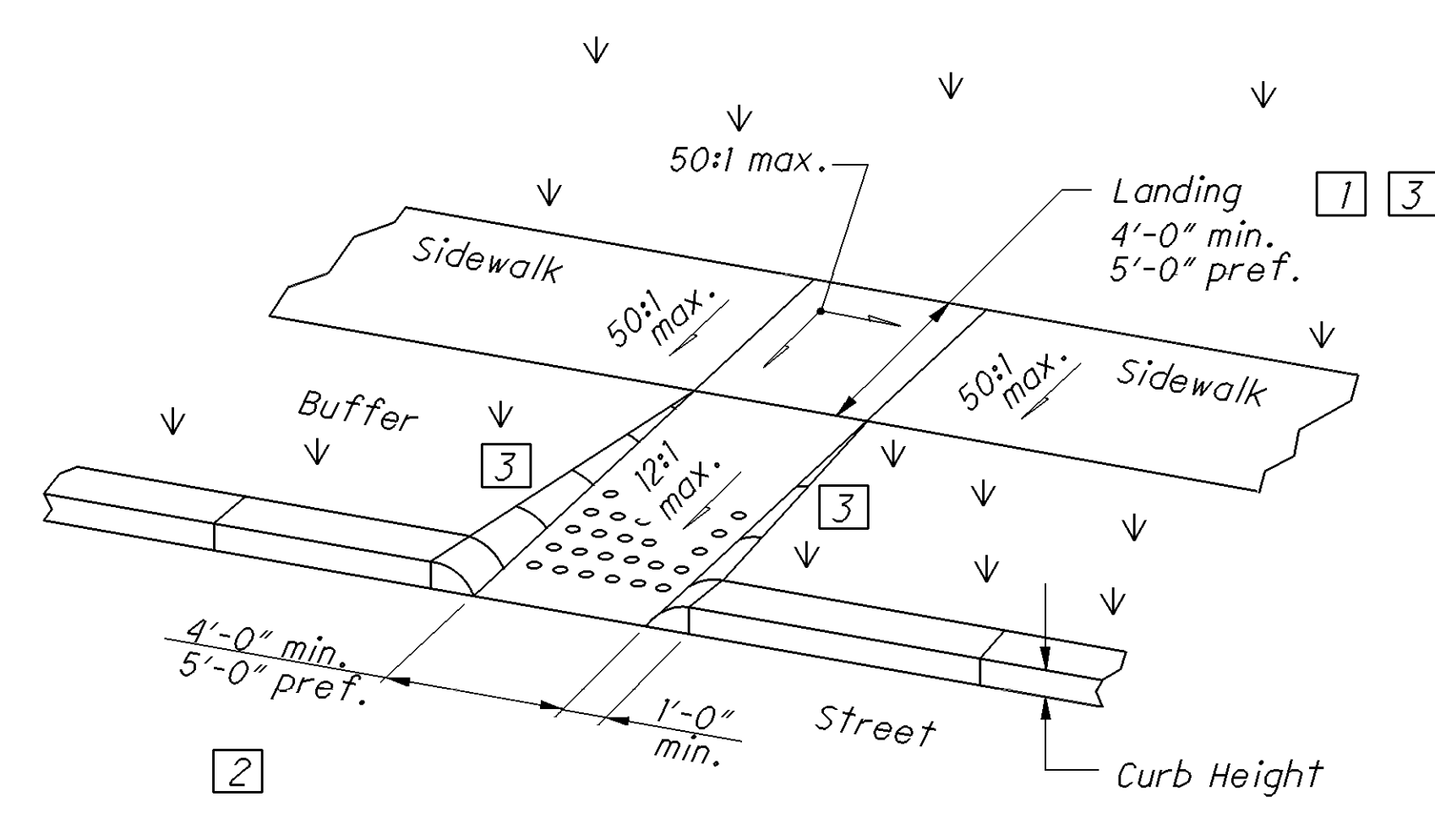
- 1 Dimension may be reduced to 3'-0" in existing sidewalks if the landing is unconstrained along the back edge.
- 2 May be reduced to 3'-4" in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The 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 22 for Sections.

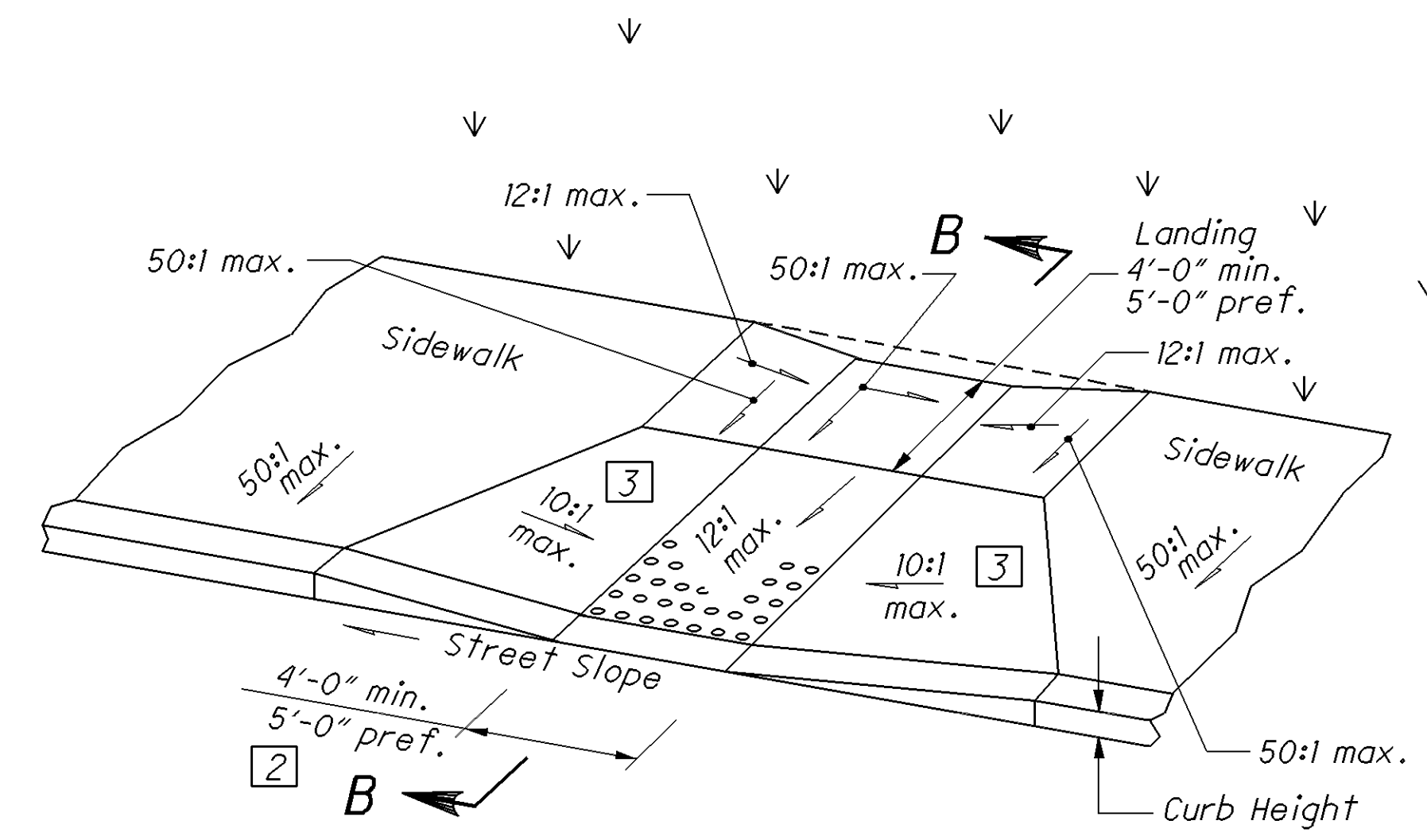


Type A1 (Perpendicular with flared sides)

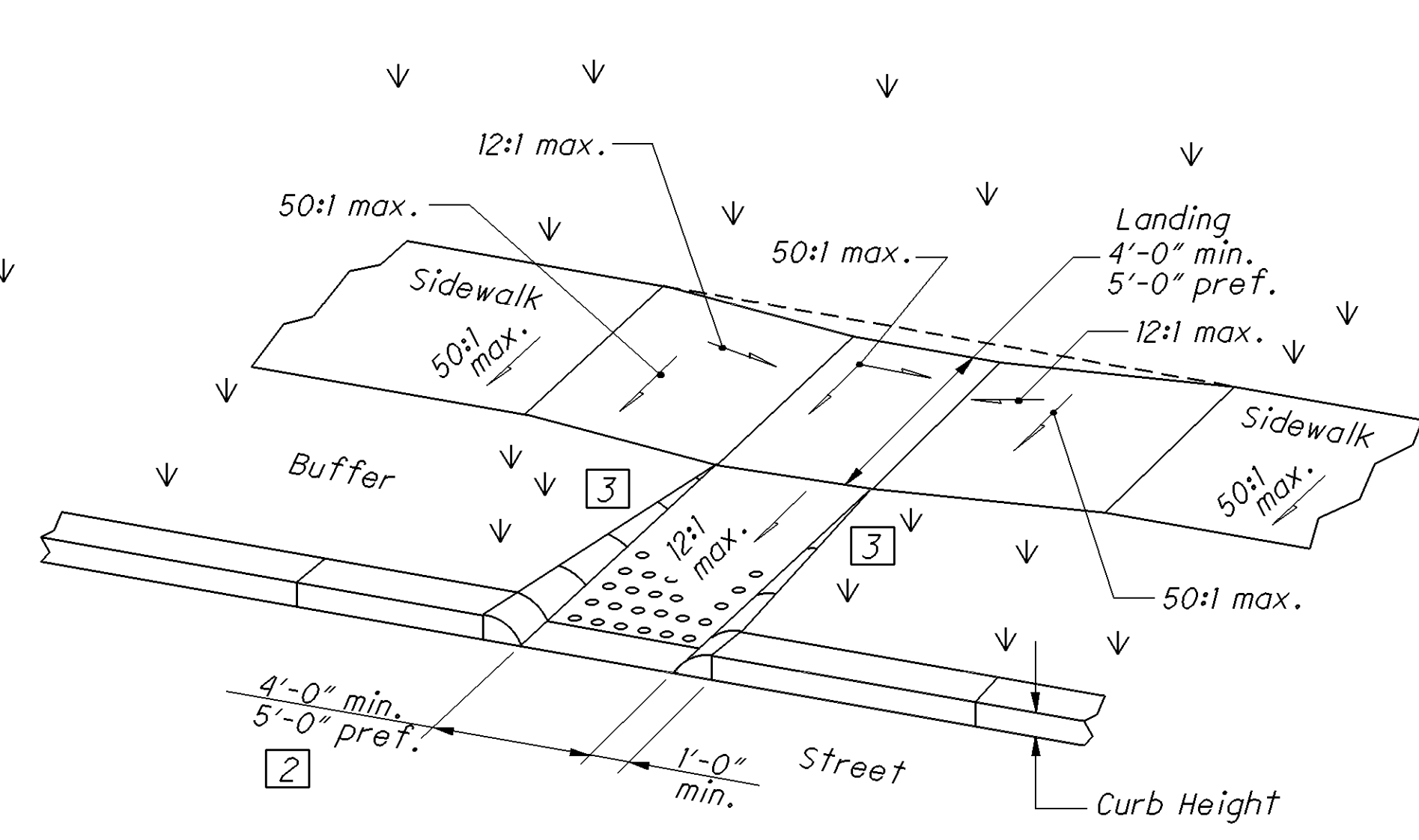


Type A2 (Perpendicular with returned curb)

PERPENDICULAR CURB RAMP DETAILS

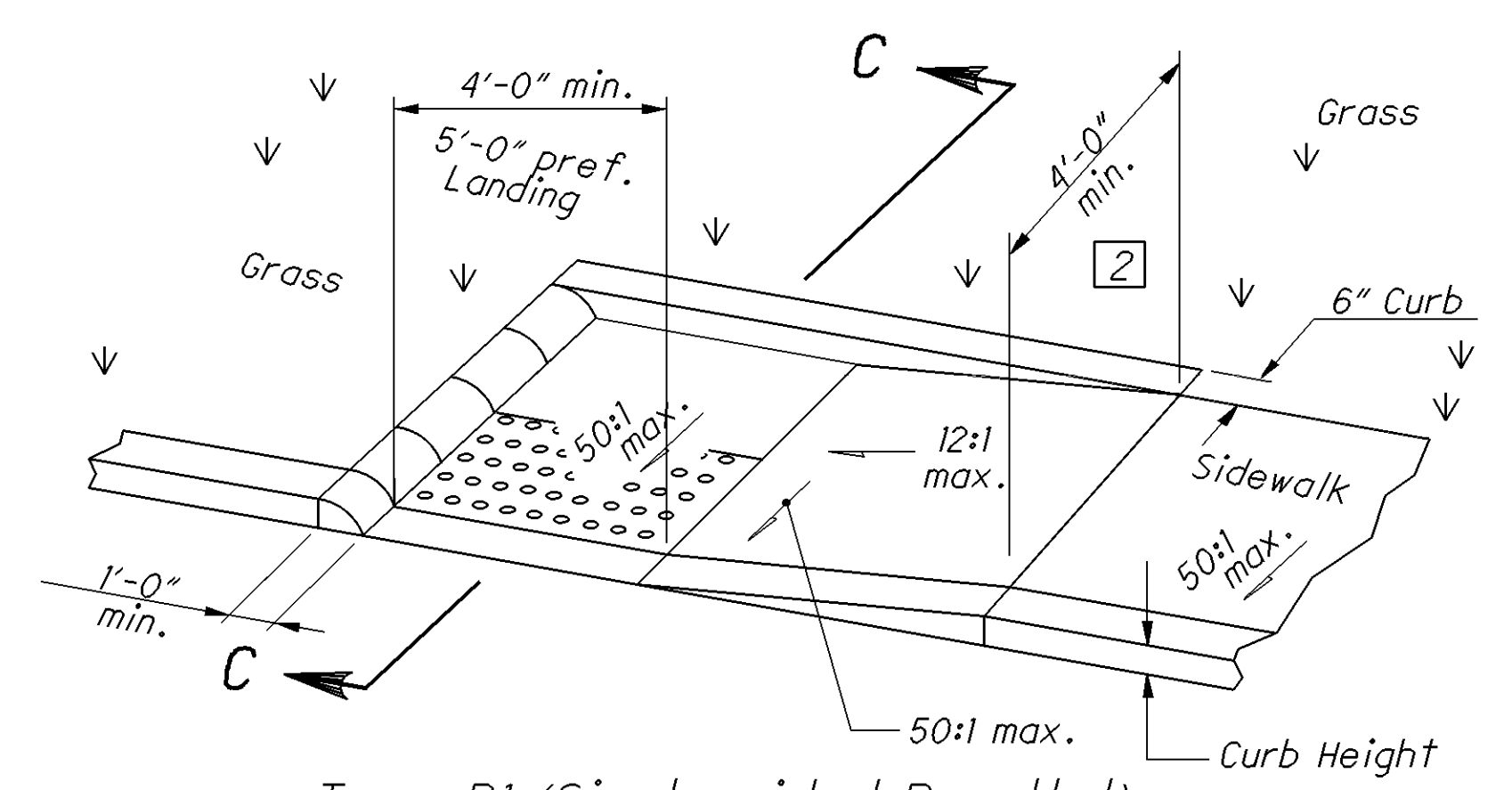


Type C1 (Combined with flared sides)

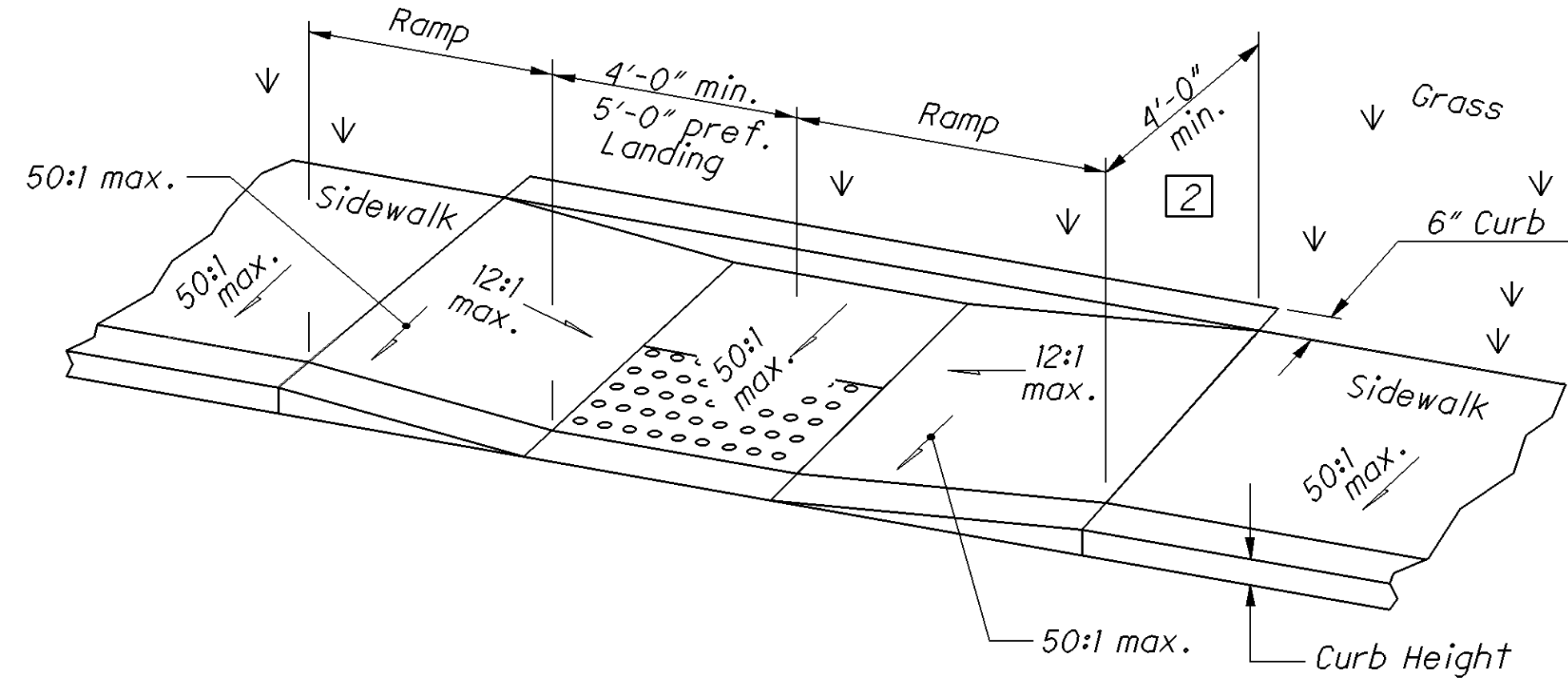


Type C2 (Combined with returned curb)

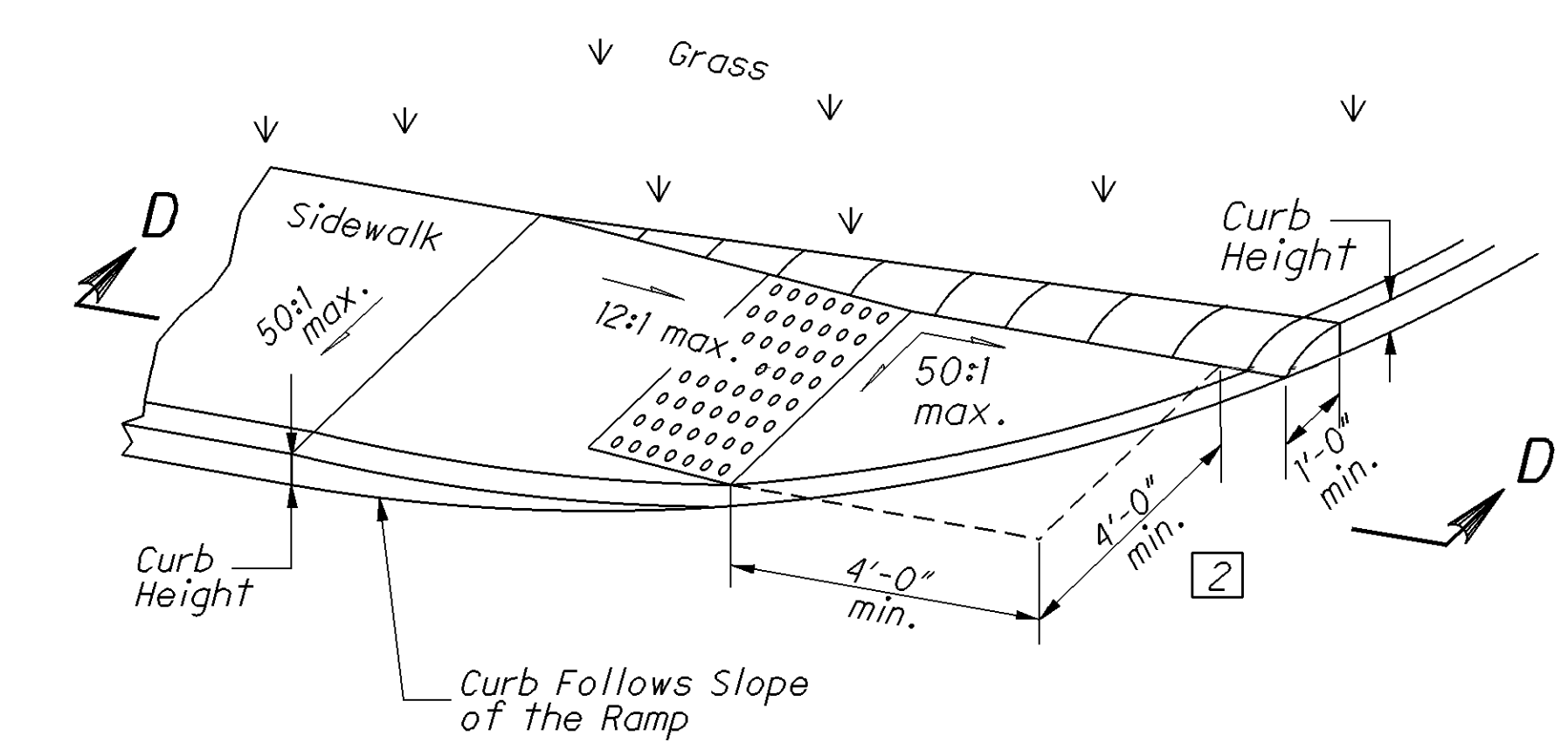
COMBINED CURB RAMP DETAILS



Type B1 (Single sided Parallel)

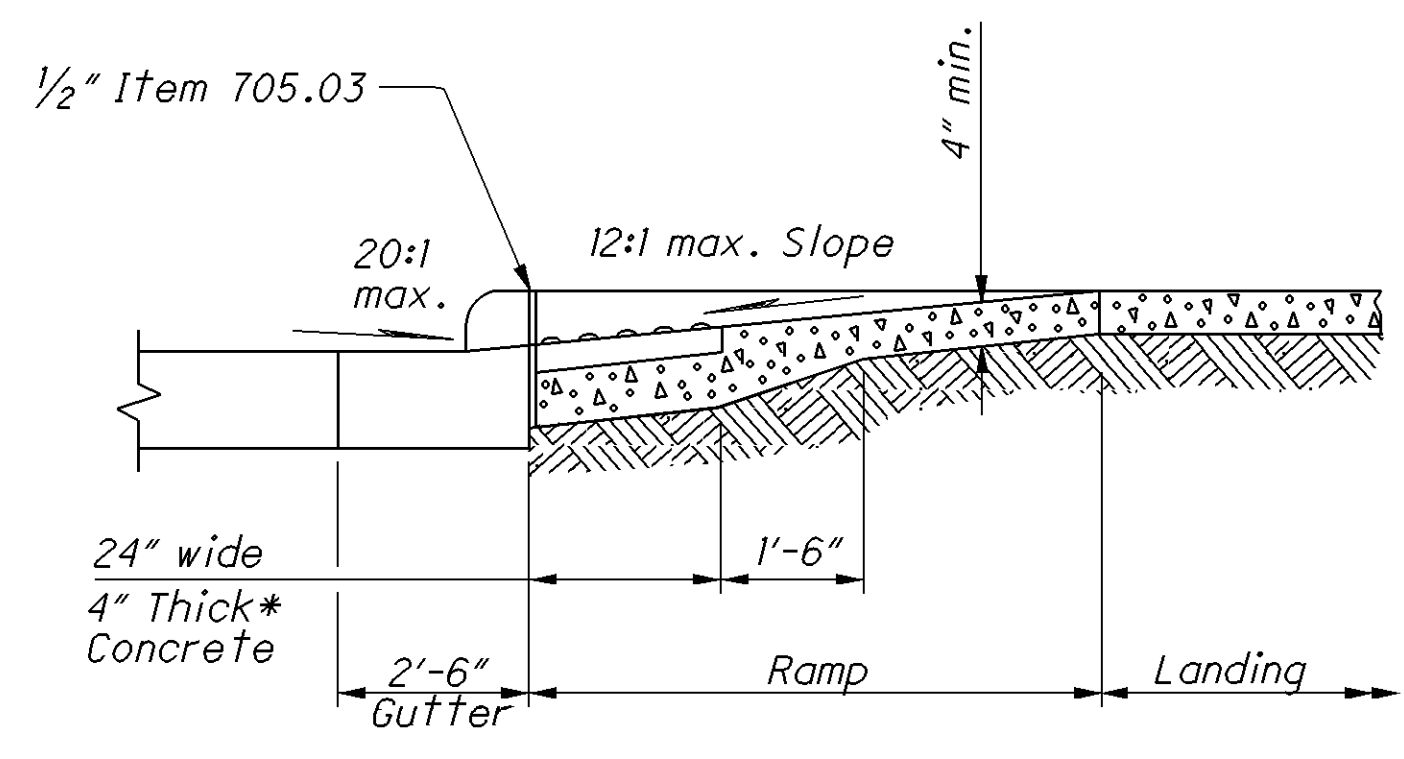


Type B2 (Double sided Parallel)

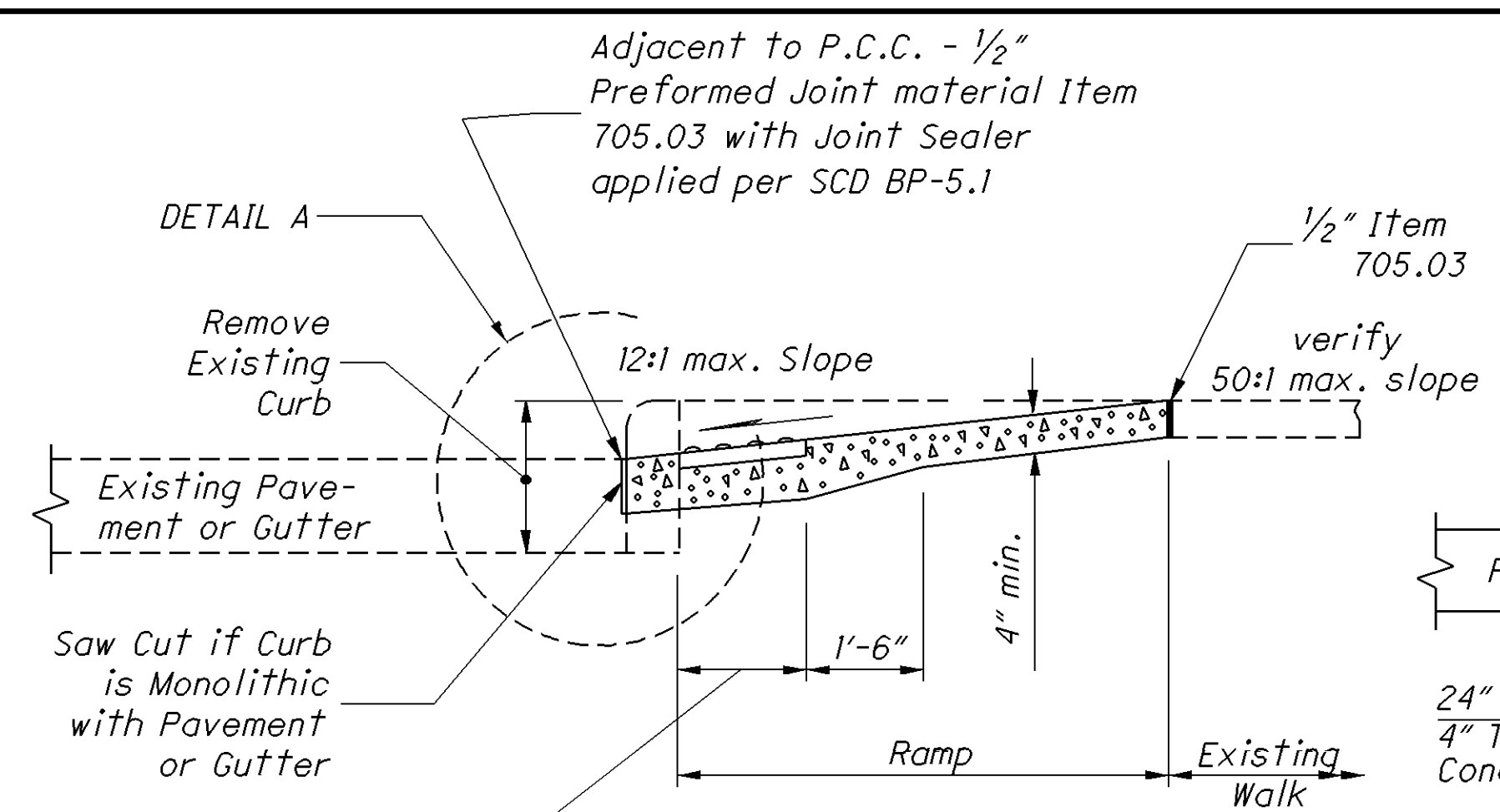


Type B3 (Single sided Parallel)

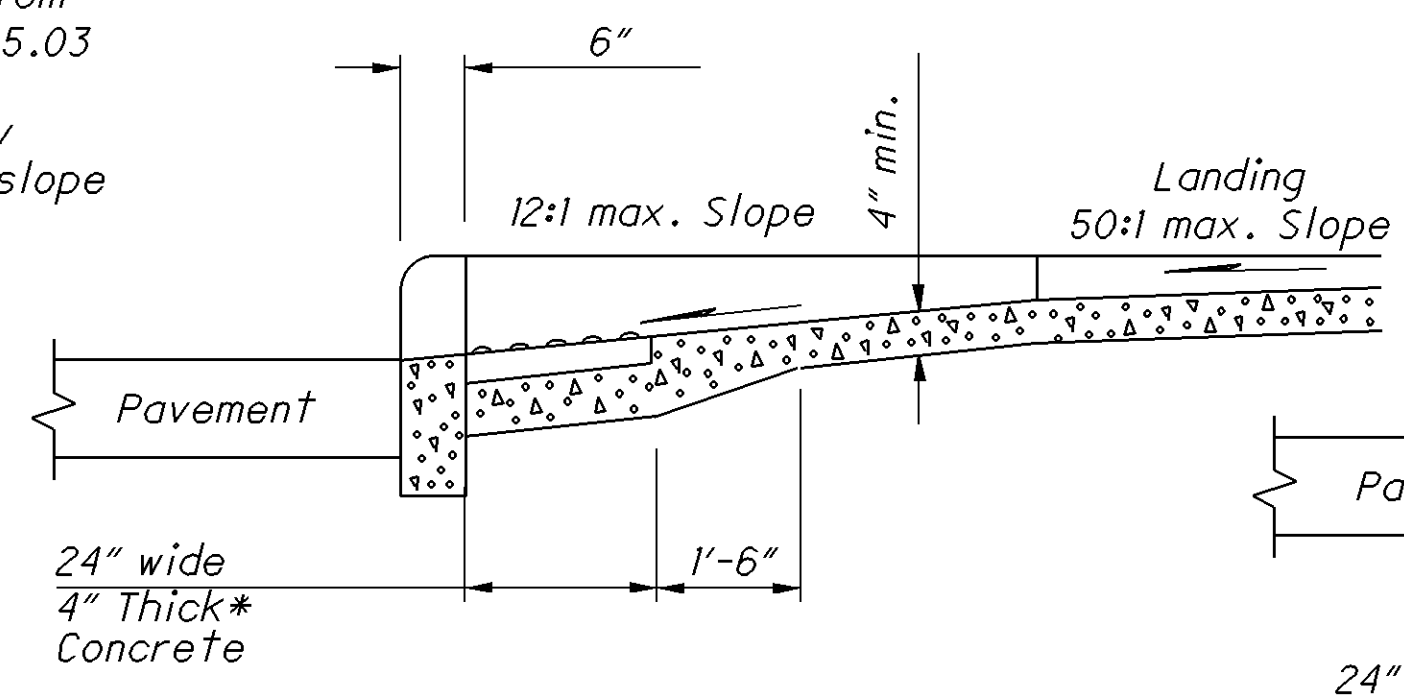
PARALLEL CURB RAMP DETAILS



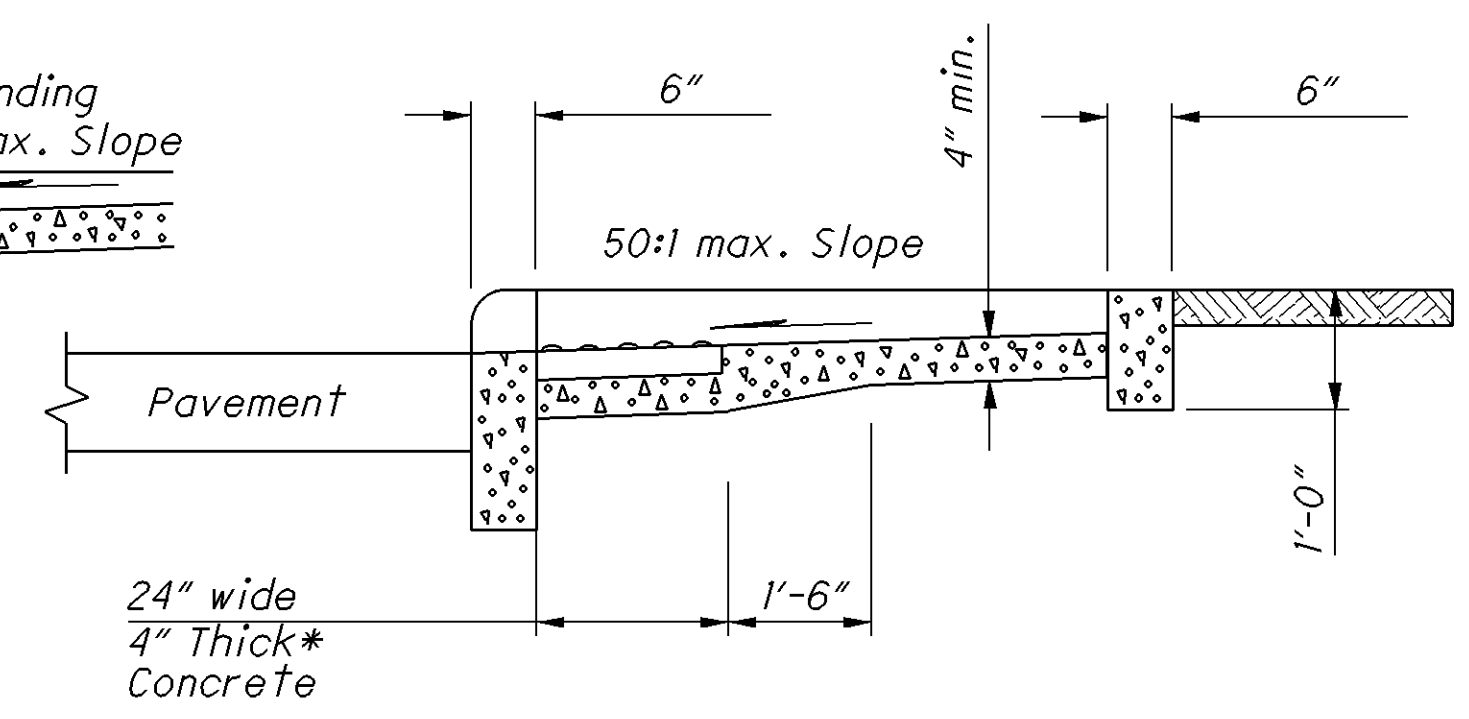
SECTION A-A
NORMAL DETAIL
See Sheet 21.



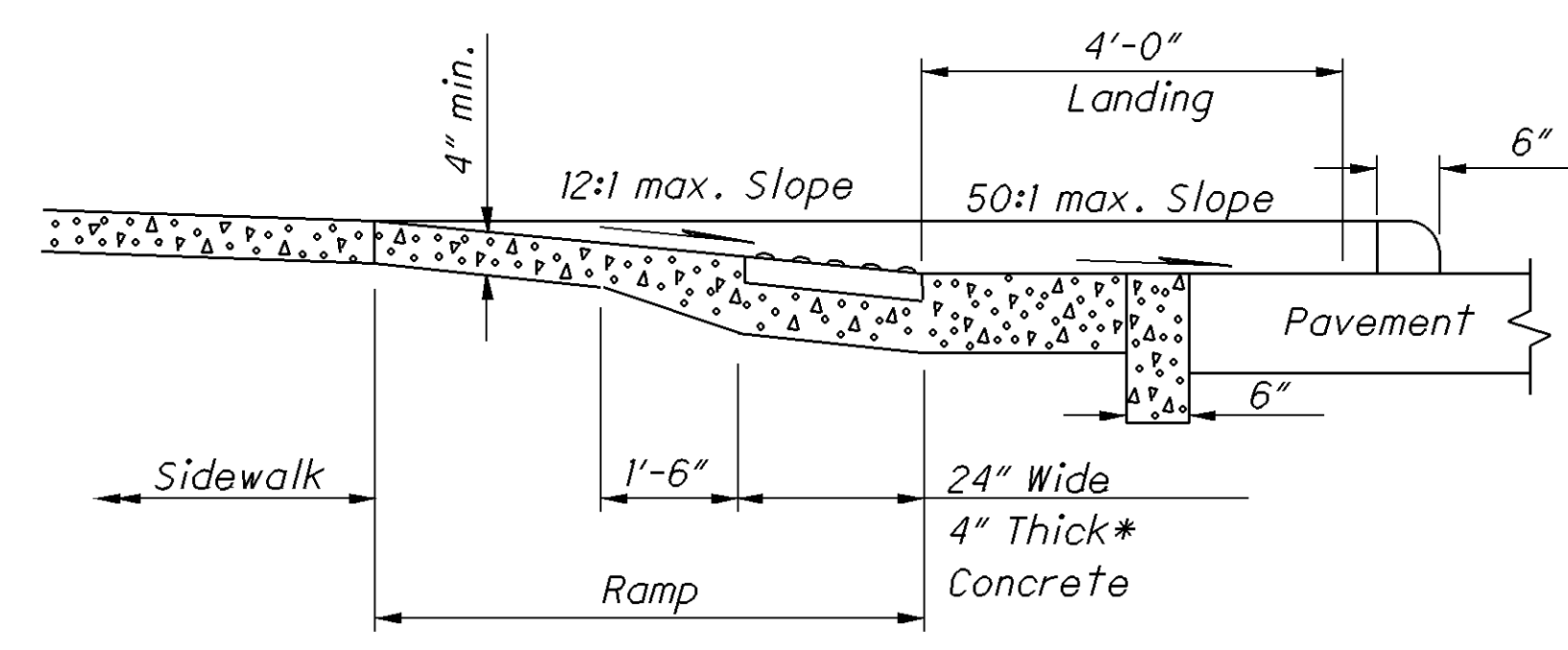
SECTION A-A
EXISTING WALK DETAIL
See Sheet 21.



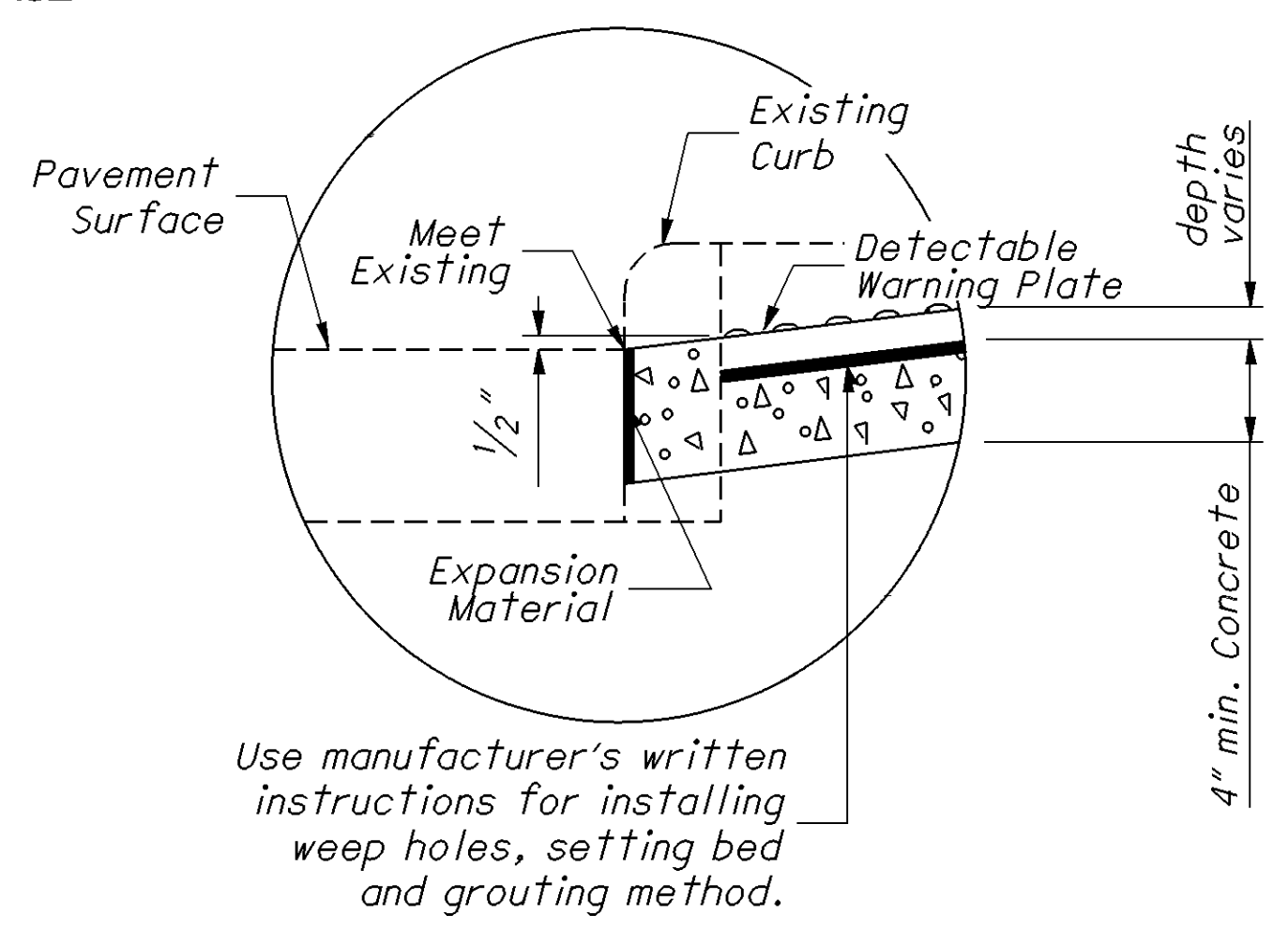
SECTION B-B
See Sheet 21.



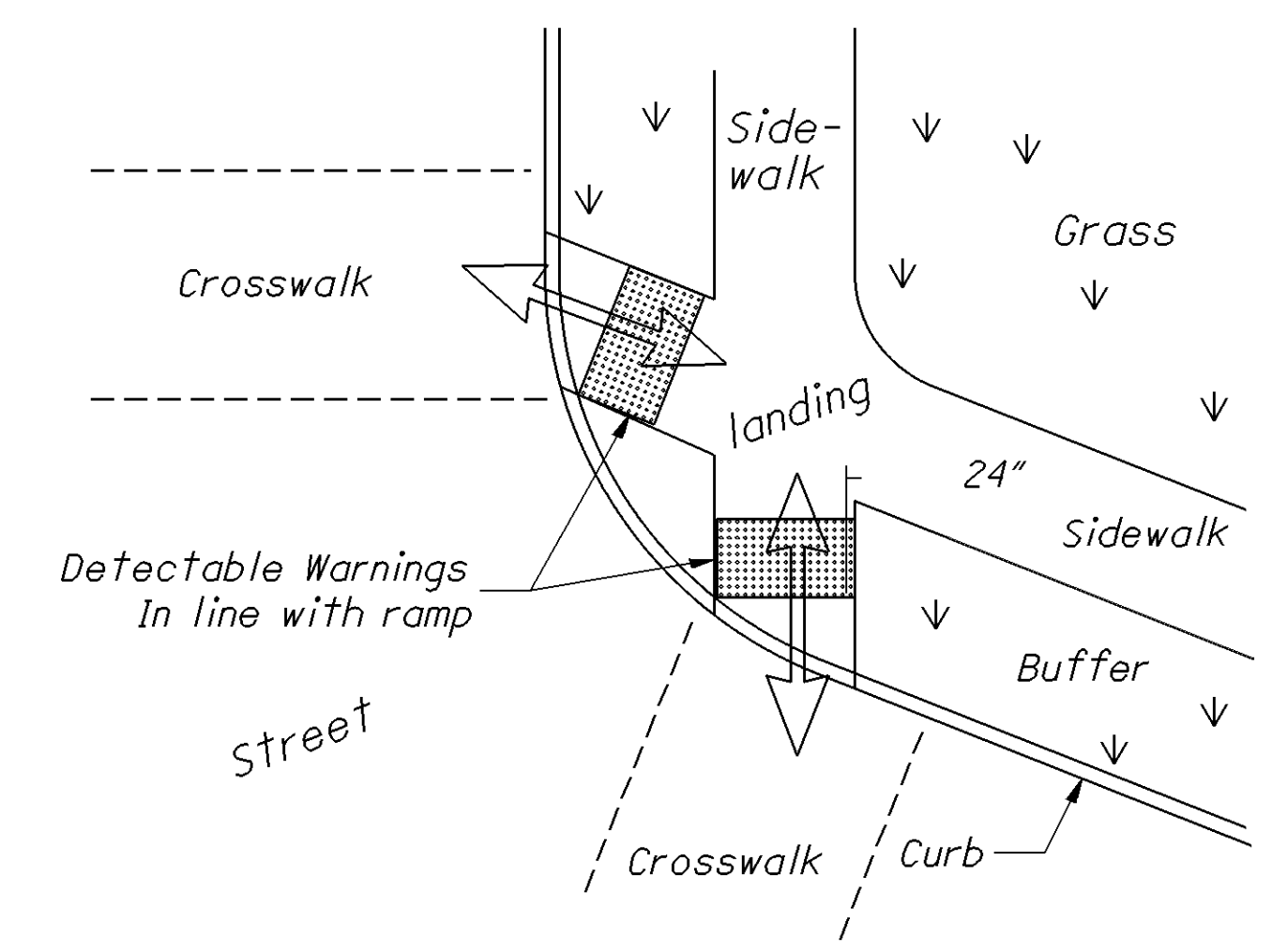
SECTION C-C
See Sheet 21.



SECTION D-D
See Sheet 21.



DETAIL A



DETECTABLE WARNING ALIGNMENT

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

DETECTABLE WARNINGS NOTES

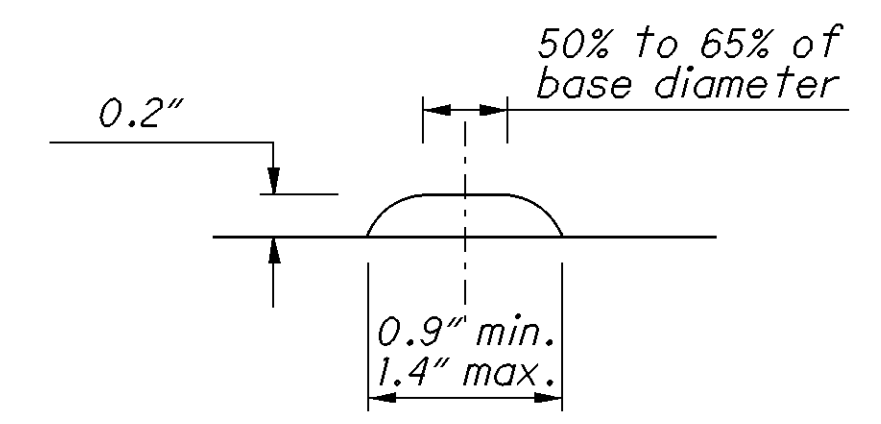
GENERAL: Detectable Warnings are a distinctive surface pattern of truncated domes which are detectable by cane or underfoot to alert people with vision impairments of their approach to streets and hazardous drop-offs.

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 inch 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 20.

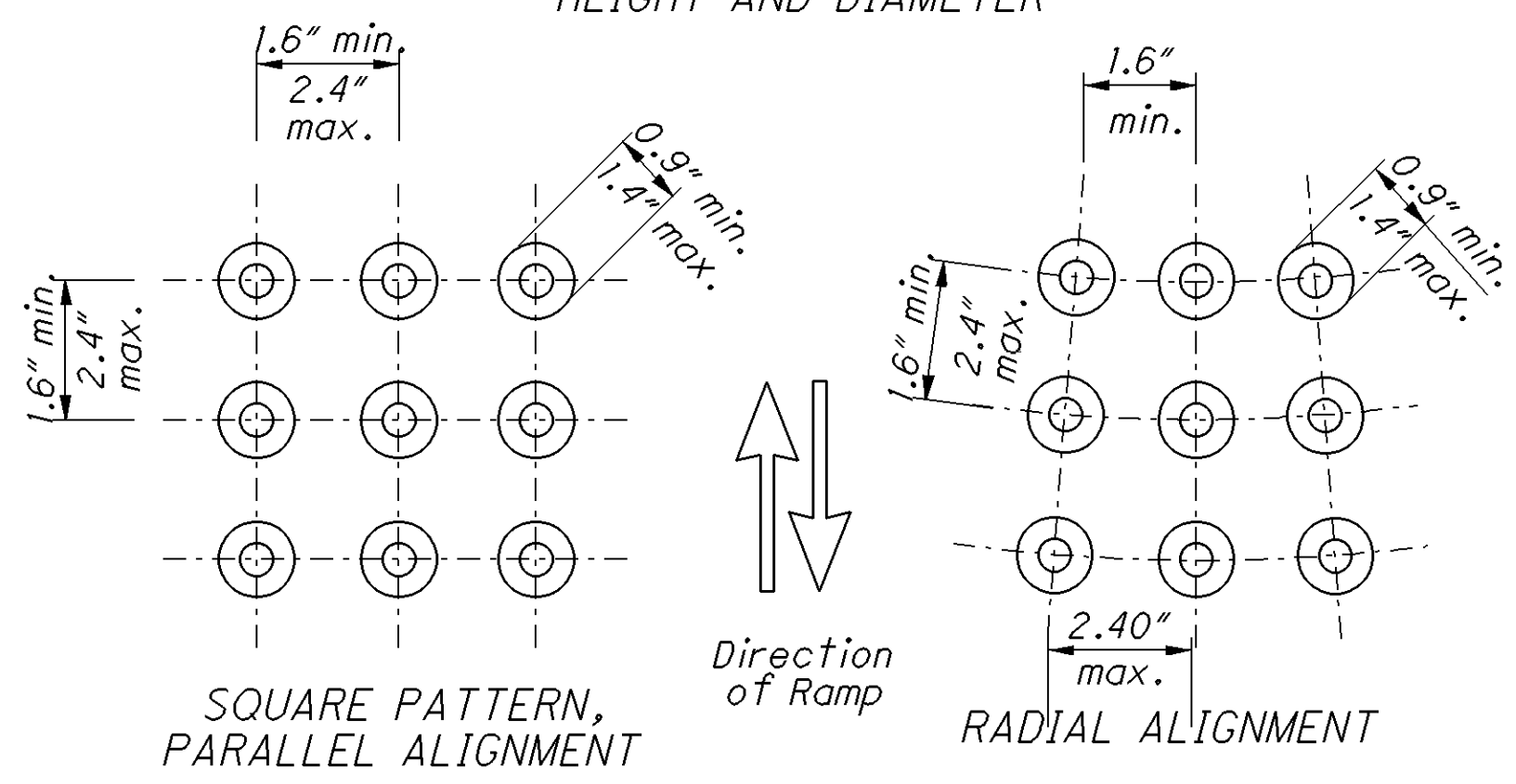
The depth of concrete underneath detectable warning products shall be a minimum of 4 inch. See DETAIL A.

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 inch strip should be adjacent to the back of curb. For non-standard layouts, detectable warning materials may have to be mitered and placed segmentally.

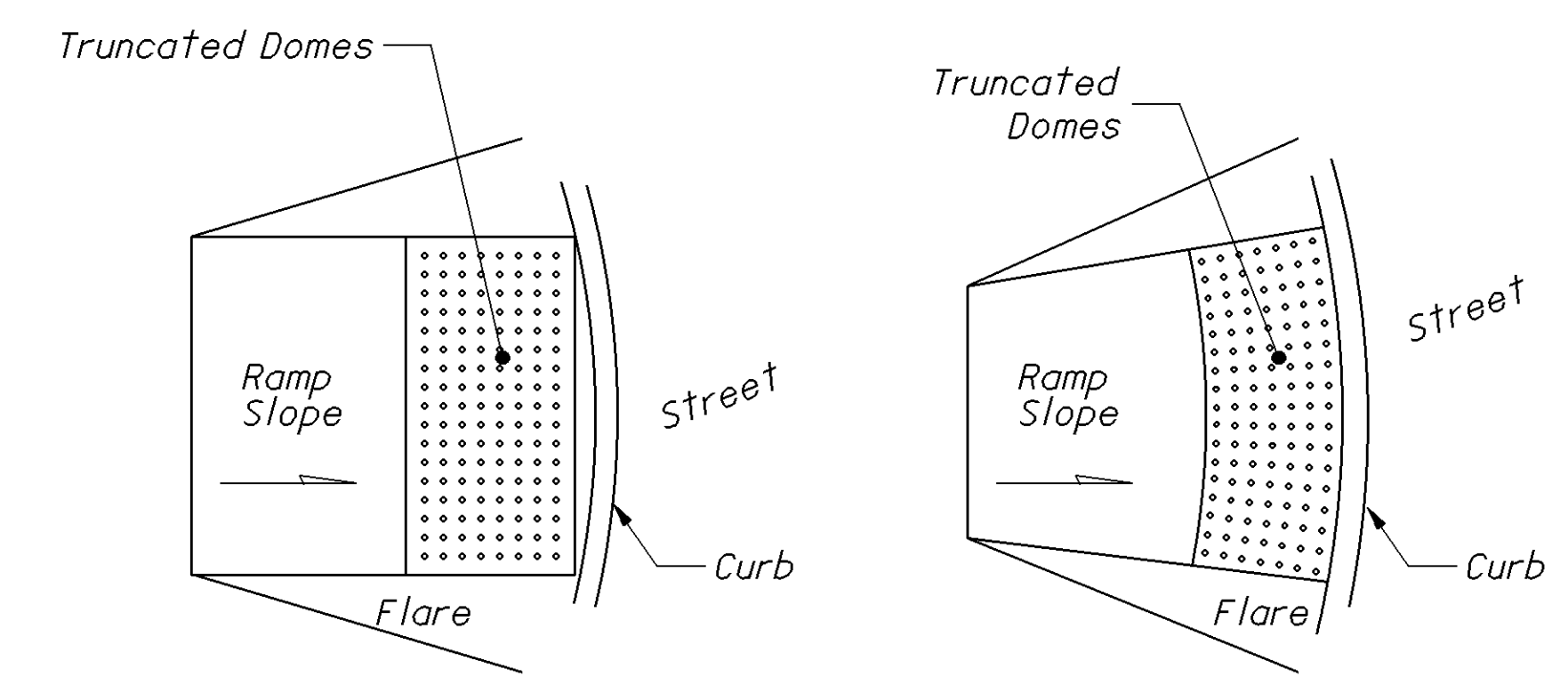
PRODUCTS & COLORS: Color of the detectable warnings should contrast with surrounding concrete walk and ramp. Black is not an acceptable color. Approved products and guidance on color may be found on the Office of Roadway Engineering Service's Detectable Warnings Approved List. Install products as per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



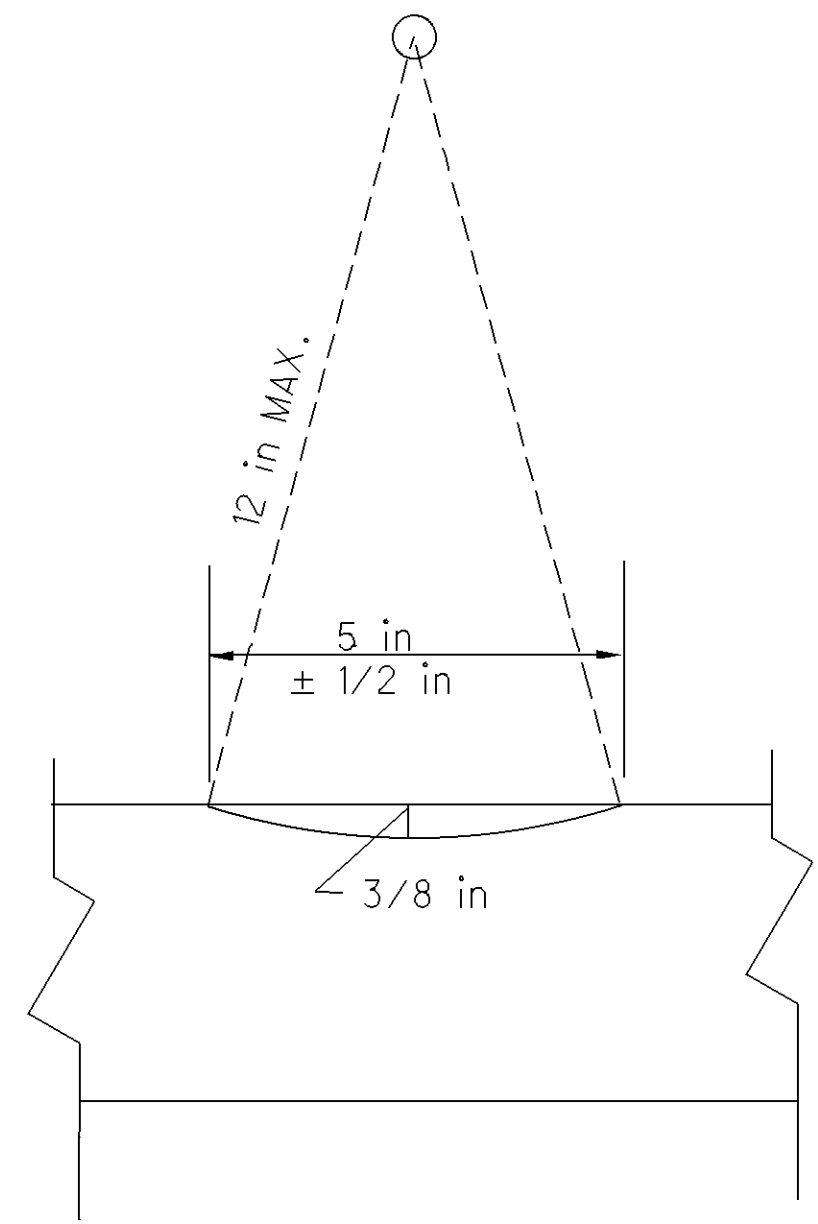
HEIGHT AND DIAMETER



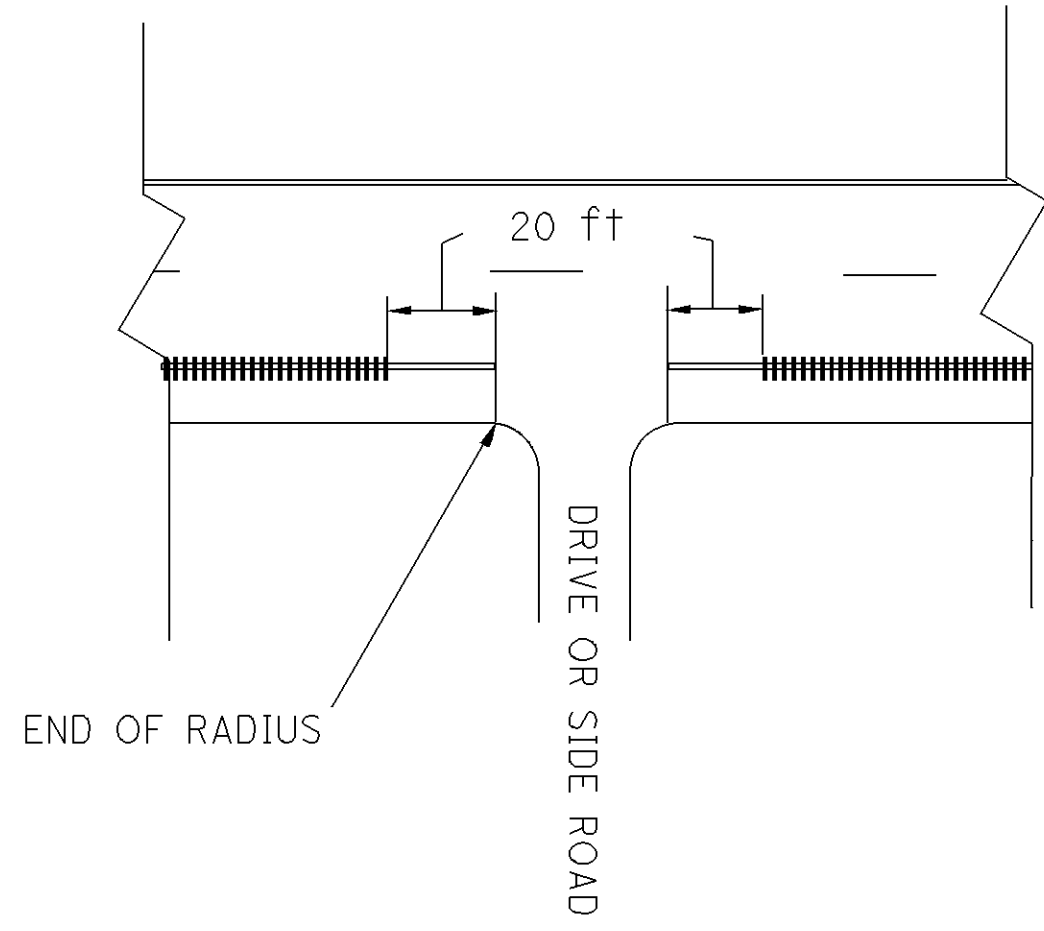
TRUNCATED DOMES DETAILS



DOME ALIGNMENT ON RADIUS CURB



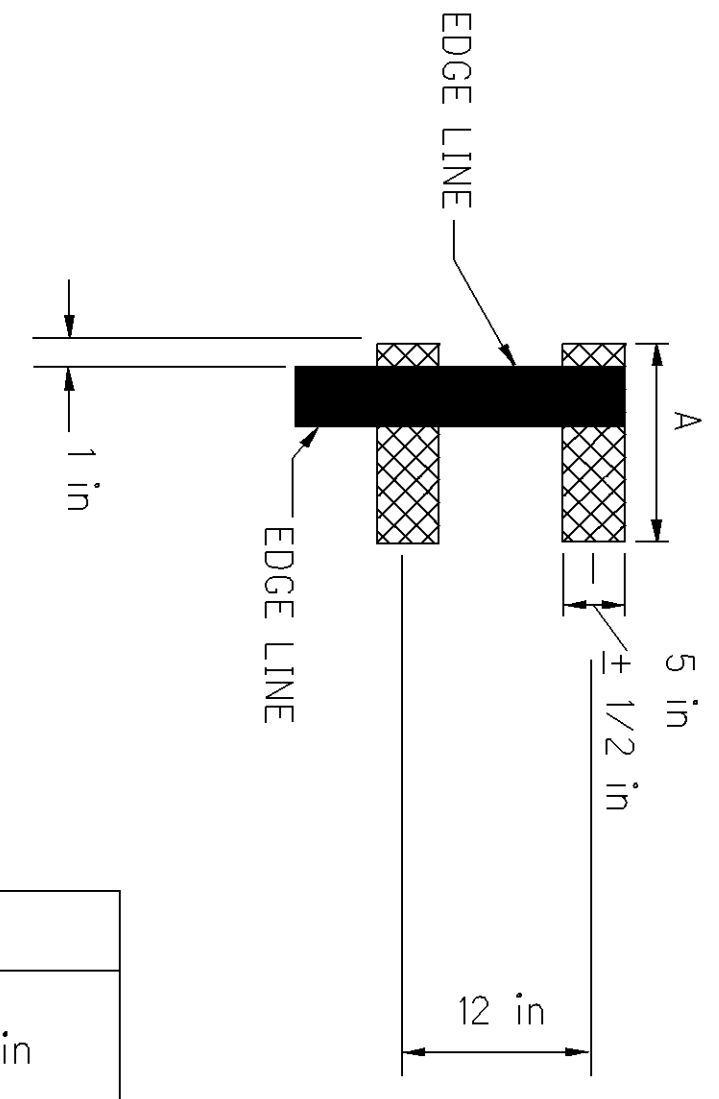
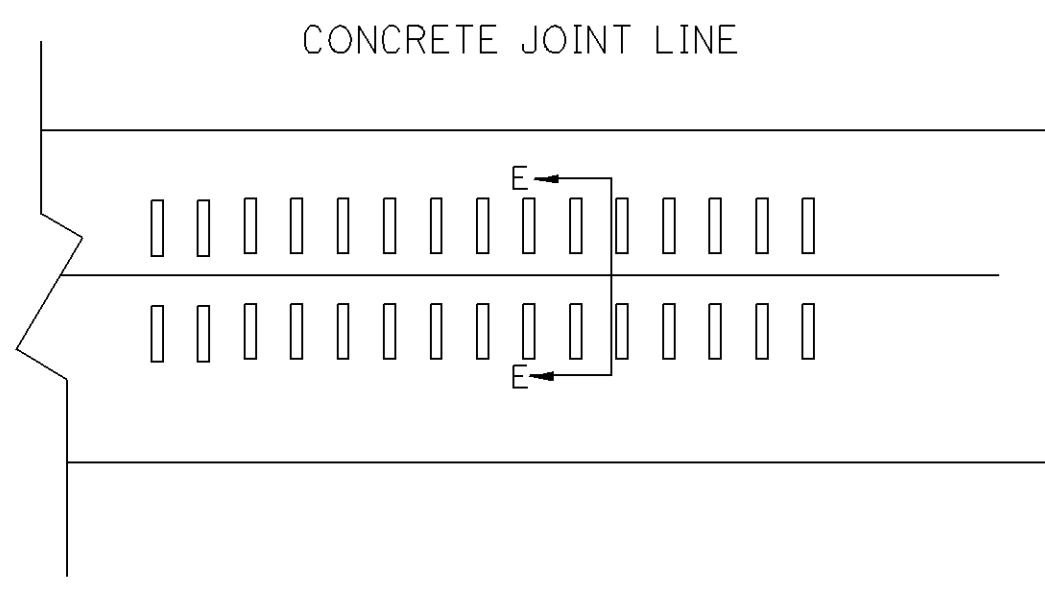
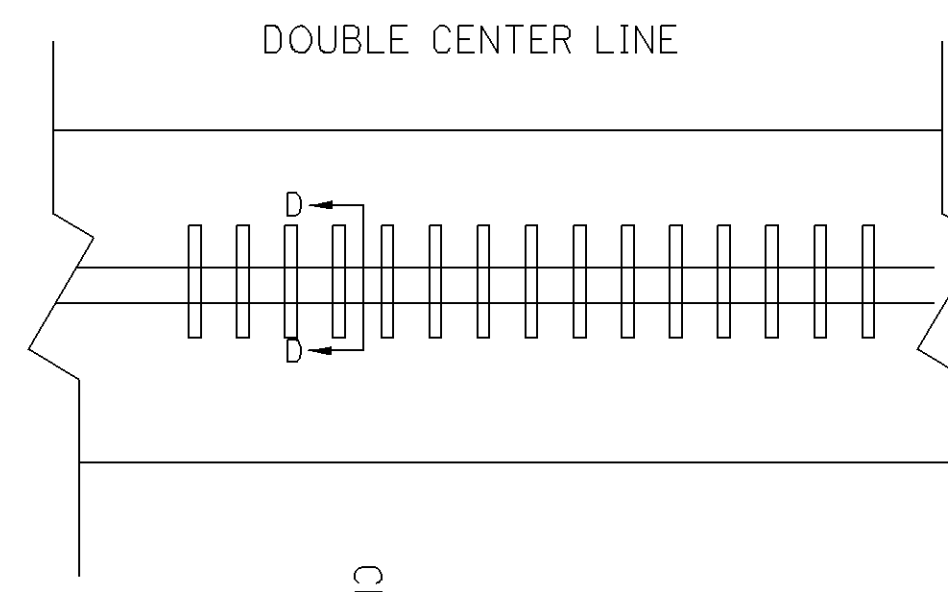
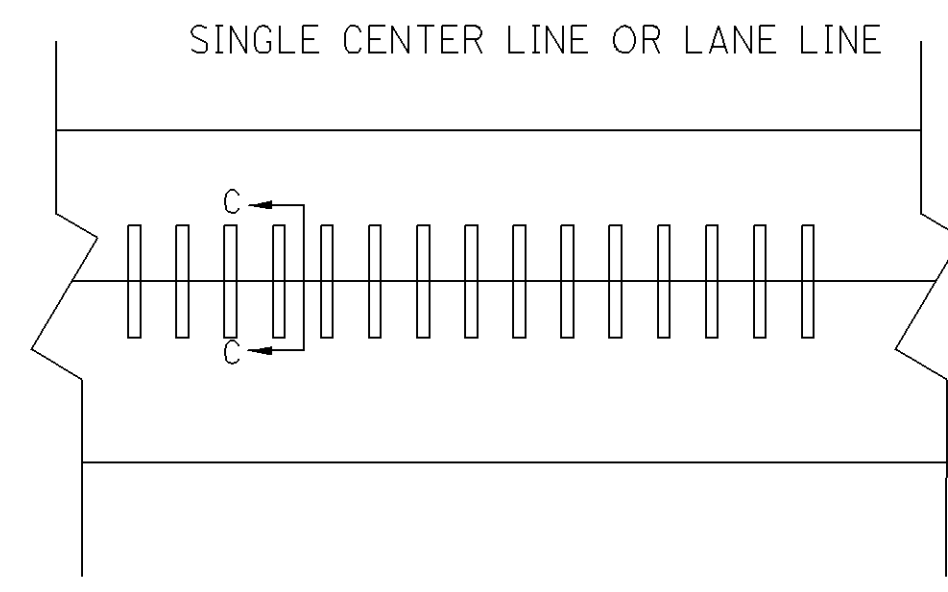
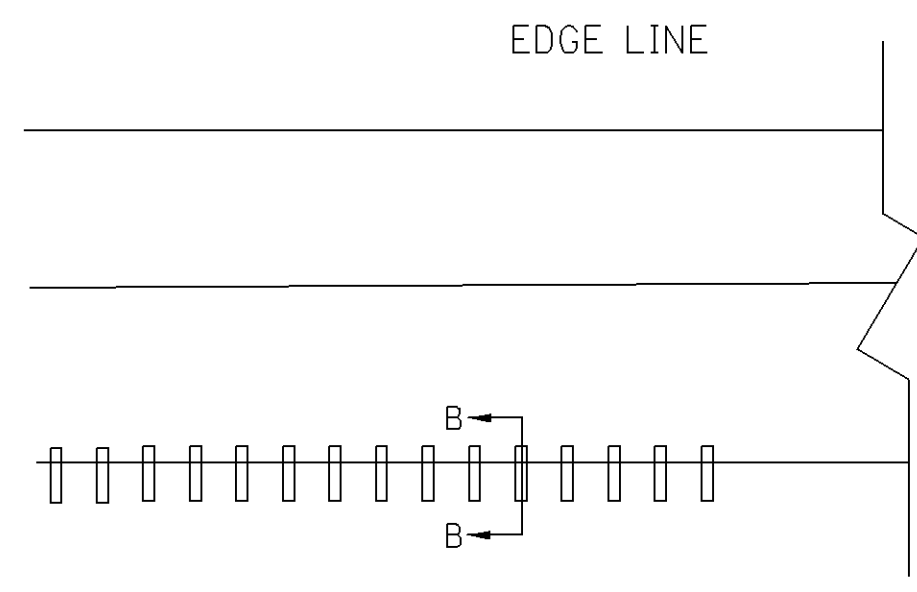
PROFILE



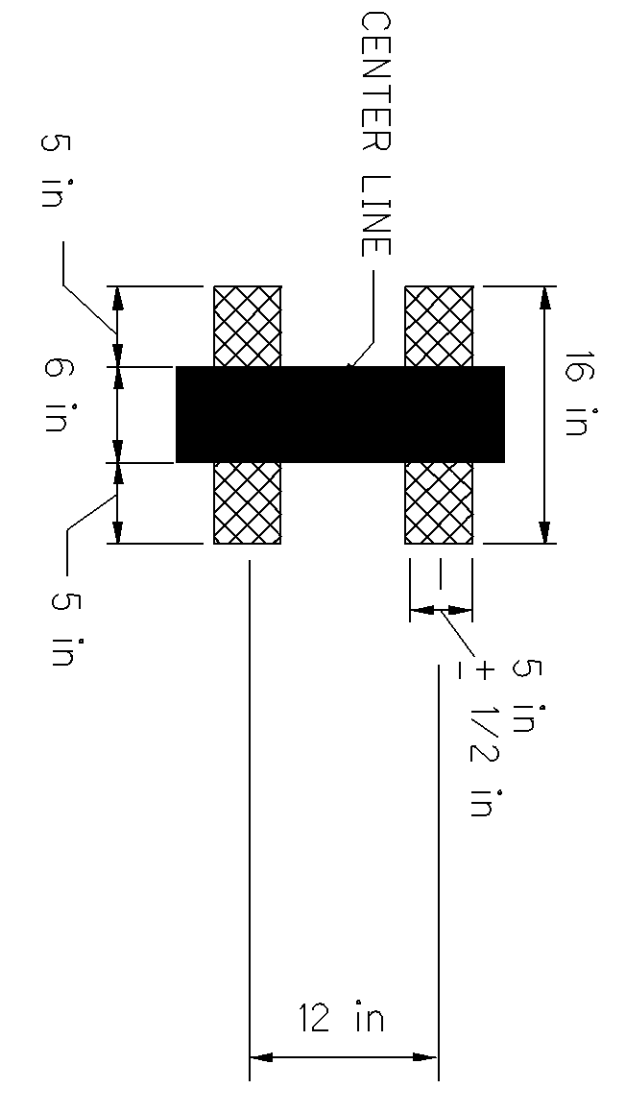
SIDE ROAD AND DRIVE RUMBLE STRIPE INSTALLATION DETAILS

NOTES

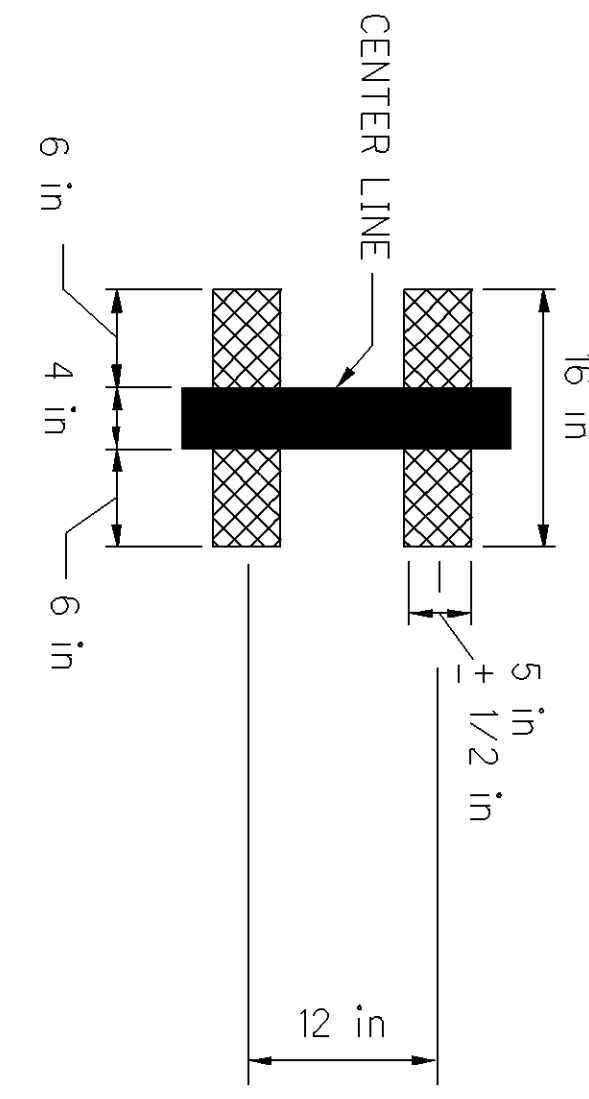
1. Rumble stripes shall be interrupted for driveways and intersections.
2. Rumble stripes shall be paid for in accordance with Item 618.
3. Rumble stripes shall be installed on a 62 foot cycle, i.e. 50 feet rumble stripes followed by a 12 foot gap.
4. Apply final pavement markings after rumble stripes are completed.
5. Location of the construction joint shall be verified in the field.



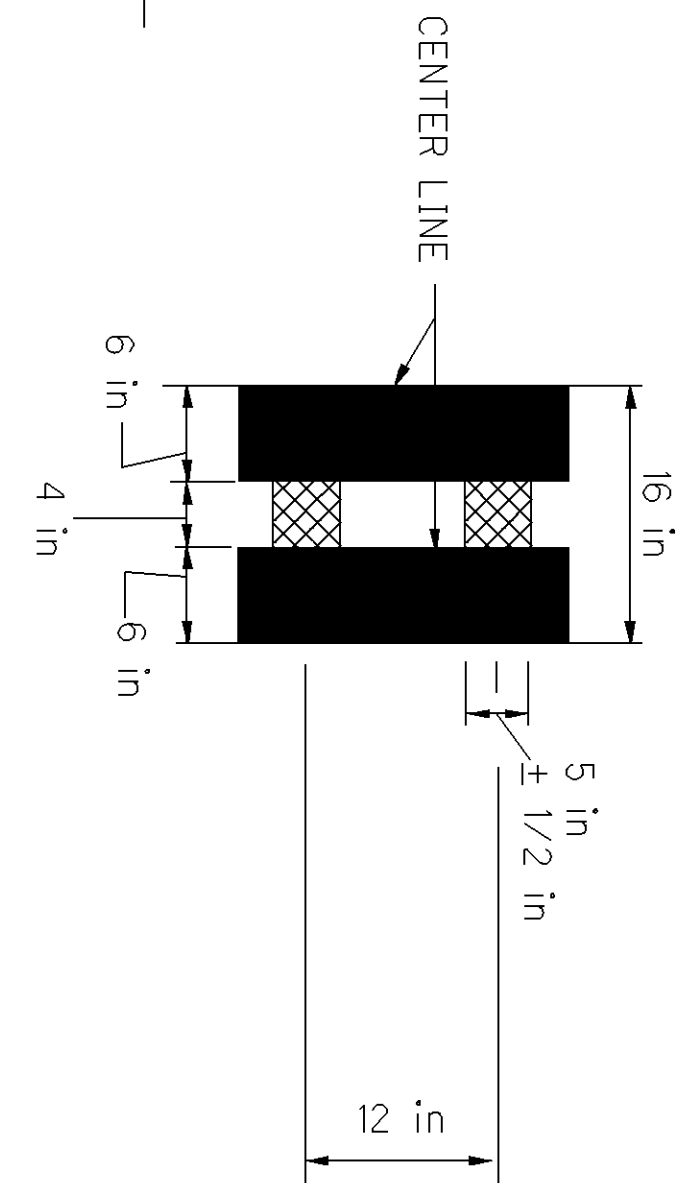
SECTION B-B
EDGE LINE RUMBLE STRIPE



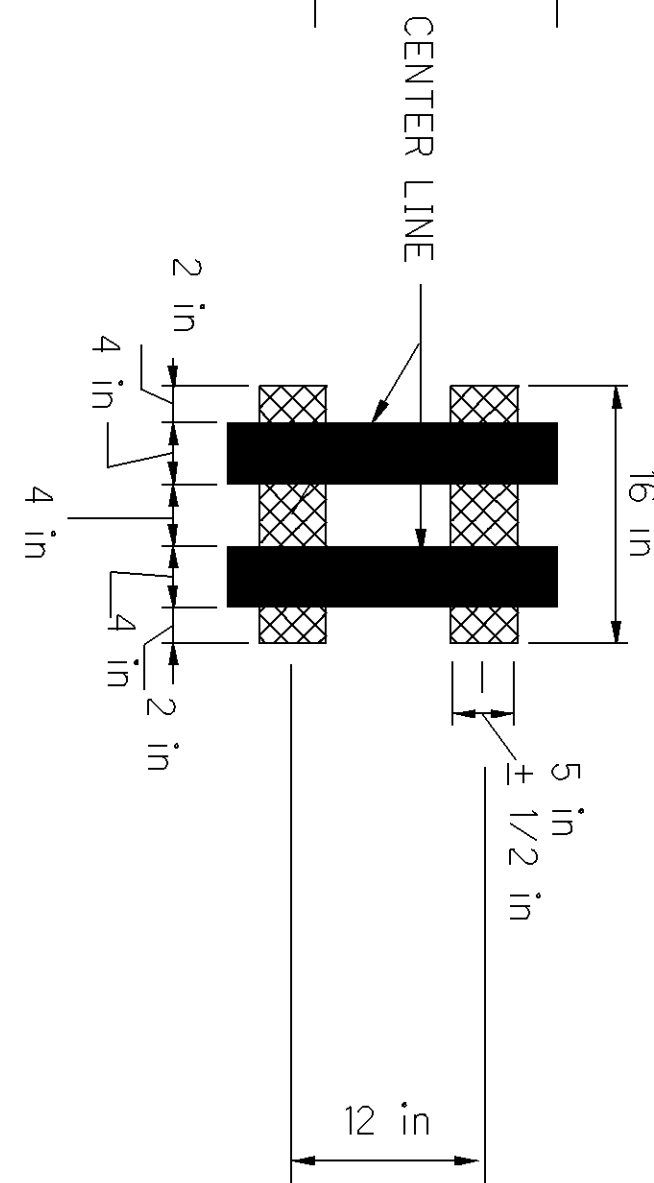
SECTION C-C
6" CENTER LINE OR LANE LINE
RUMBLE STRIPE



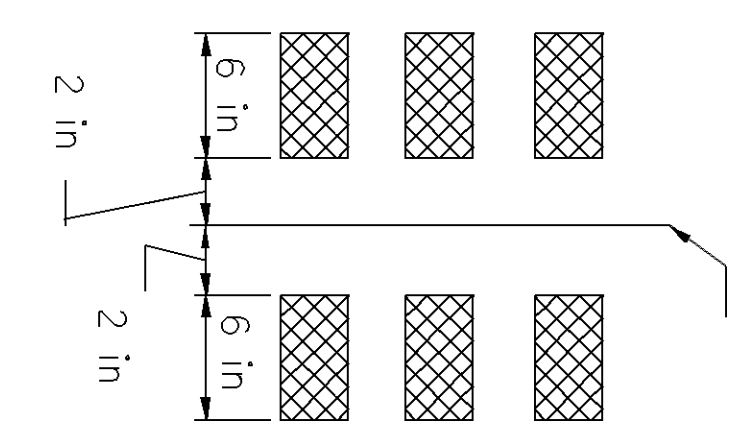
SECTION C-C
4" CENTER LINE OR LANE LINE
RUMBLE STRIPE



SECTION D-D
6" CENTER LINE RUMBLE STRIPE



SECTION D-D
4" CENTER LINE RUMBLE STRIPE



SECTION E-E
PORTLAND CEMENT CONCRETE
JOINT CENTER LINE RUMBLE STRIPE

P.C. CONCRETE
JOINT LINE

SHOULDER WIDTH	A
2-5 ft	6 in
5 ft-1 in - 8 ft	10 in
≥ 8 ft- 1 in	16 in

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ITEM 817 EDGE LINE										
L O C A T I O N	C O U N T Y	R O U T E	S.L.M.		T O T A L L E N G T H (MILES)	I N F O R M A T I O N O N L Y			T O T A L E D G E L I N E M I L E S	R E M A R K S
						W H I T E E D G E L I N E Q U A N T I T I E S				
			FROM	TO		T O T A L M I L E S	H I G H W A Y M I L E S	R A M P M I L E S		
1	FAI	S.R. 158	2.48	9.46	6.98	13.96	13.96		13.96	
1	FAI	S.R. 158	10.16	15.83	5.67	11.34	11.34		11.34	
LOCATION 1 TOTALS									25.30	
2	LIC	S.R. 158	0.00	0.56	0.56	1.12	1.12		1.12	FAI.CO. TO SUSPEND WORK
2	LIC	S.R. 158	1.15	2.28	1.13	2.26	2.26		2.26	RESUME WORK TO U.S. 40
LOCATION 2 TOTALS									3.38	

ITEM 817 CENTER LINE										
L O C A T I O N	C O U N T Y	R O U T E	S.L.M.		T O T A L L E N G T H (MILES)	I N F O R M A T I O N O N L Y		T O T A L C E N T E R L I N E M I L E S	R E M A R K S	
						C E N T E R L I N E Q U A N T I T I E S				
			FROM	TO		T O T A L M I L E S	E Q U I V A L E N T S O L I D L I N E			
1	FAI	S.R. 158	2.48	15.83	13.35	13.35	16.847	13.35	LANCASTER CORP. TO LIC. CO.	
LOCATION 1 TOTALS									13.35	
2	LIC	S.R. 158	0.00	0.56	0.56	0.56	1.120	0.56	FAI.CO. TO SUSPEND WORK	
2	LIC	S.R. 158	1.15	2.28	1.13	1.13	1.364	1.13	REUME WORK TO U.S. 40	
LOCATION 2 TOTALS									1.69	

642/644 AUXILIARY MARKING

LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	SLM	TRANVERSE/DIAGONAL LINES (24")		STOP LINE (24")	ITEM 642 12" CROSSWALK LINE	WORD ON PAVEMENT		SCHOOL SYMBOL MARKING		LANE ARROWS		8" CHANNELIZING LINE	RAILROAD SYMBOL MARKING	REMARKS		
						WHITE FT.	YELLOW FT.			ONLY		72" EACH	96" EACH	72" EACH	96" EACH				TURN	
										72"	96"								LT.	RT.
1	FAI	S.R. 158	ORCHARD DR.	RT				12										PLACE 19' FROM SR 158 C/L		
1	FAI	S.R. 158	TWP. RD. 250	RT				22										PLACE 20' FROM SR 158 C/L		
1	FAI	S.R. 158	TWP. RD. 250	LT				20										PLACE 19' FROM SR 158 C/L		
1	FAI	S.R. 158	SCHADEL DR. NW	RT				16										PLACE 19' FROM SR 158 C/L		
1	FAI	S.R. 158	VALLEYVIEW DR. NW	RT				18										PLACE 18' FROM SR 158 C/L		
1	FAI	S.R. 158	ON SR 158 BEFORE COONPATH					12												
1	FAI	S.R. 158	COONPATH RD. NW	RT				15										PLACE 19' FROM SR 158 C/L		
1	FAI	S.R. 158	COONPATH RD. NW	LT				18										PLACE 19' FROM SR 158 C/L		
1	FAI	S.R. 158	ON SR 158 AFTER COONPATH					12												
1	FAI	S.R. 158	GINDER RD. NW	RT				14										PLACE 20' FROM SR 158 C/L		
1	FAI	S.R. 158	GINDER RD. NW	LT				19										PLACE 16' FROM SR 158 C/L		
1	FAI	S.R. 158	CARROL EAST RD. NW	RT				22										PLACE 20' FROM SR 158 C/L		
1	FAI	S.R. 158	CARROL EAST RD. NW	LT				30										PLACE 19' FROM SR 158 C/L		
1	FAI	S.R. 158	PLEASANTVILLE RD.	RT				32										PLACE 22' FROM SR 158 C/L		
1	FAI	S.R. 158	PLEASANTVILLE RD.	LT				40										PLACE 22' FROM SR 158 C/L		
1	FAI	S.R. 158	LEONARD RD. NW	RT				20										PLACE 20' FROM SR 158 C/L		
1	FAI	S.R. 158	LEONARD RD. NW	LT				26										PLACE 21' FROM SR 158 C/L		
1	FAI	S.R. 158	CREEKVIEW DR.	LT				17										PLACE AS DIRECTED		
1	FAI	S.R. 158	ON SR 158 SLM 8.97		8.97						1							PLACE AS DIRECTED		
1	FAI	S.R. 158	SCHOOL DR.	RT				19										PLACE 19' FROM SR 158 C/L		
1	FAI	S.R. 158	LEFT TURN AT SCHOOL DRIVE										3		250			PLACE AS DIRECTED		
1	FAI	S.R. 158	SCHOOL DR.	RT				19										PLACE 19' FROM SR 158 C/L		
1	FAI	S.R. 158	ON SR 158 SLM 9.28		9.28						1							PLACE AS DIRECTED		
1	FAI	S.R. 158	KELLNER AVE.	LT				15										PLACE 17' FROM SR 158 C/L		
1	FAI	S.R. 158	TREMONT DR.	RT				35										PLACE AS DIRECTED		
1	FAI	S.R. 158	FAIRVIEW DR.	LT				24										PLACE AS DIRECTED		
1	FAI	S.R. 158	ON SR 158 AT FAIRVIEW															PLACE AS DIRECTED		
1	FAI	S.R. 158	DORCHESTER DR.	RT				17										PLACE AS DIRECTED		
1	FAI	S.R. 158	ON SR 158 AT ELMWOOD															PLACE AS DIRECTED		
1	FAI	S.R. 158	ELMWOOD AVE.	LT				17	66									PLACE AS DIRECTED		
1	FAI	S.R. 158	ELMWOOD AVE.	RT				23										PLACE AS DIRECTED		
1	FAI	S.R. 158	JEFFERSON ST.	RT				15	60									PLACE AS DIRECTED		
1	FAI	S.R. 158	JEFFERSON ST.	LT				10	48									PLACE AS DIRECTED		
1	FAI	S.R. 158	JOHNSON ST.	RT				11	44									PLACE AS DIRECTED		
1	FAI	S.R. 158	JOHNSON ST.	LT				14	46									PLACE AS DIRECTED		
1	FAI	S.R. 158	ON SR 158 AT JOHNSON						84									PLACE AS DIRECTED		
			SUB-TOTALS										3							
LOCATION 1 TOTALS (CARRIED TO NEXT SHEET)							244	584	348			2		3	250					

CALCULATED
LME
CHECKED
DNM

PAVEMENT MARKING DATA (AUXILIARY MARKING DATA)

FAI-158-2.48
LIC-158-0.00

642/644 AUXILIARY MARKING

LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	SLM	TRANVERSE/DIAGONAL LINES (24")		STOP LINE (24")	ITEM 644 12" CROSSWALK LINE	ITEM 642 12" CROSSWALK LINE	WORD ON PAVEMENT		SCHOOL SYMBOL MARKING		LANE ARROWS		8" CHANNELIZING LINE	RAILROAD SYMBOL MARKING	REMARKS
						WHITE	YELLOW				ONLY		TURN						
						FT.	FT.				72"	96"	72"	96"	LT.	RT.			
											EACH	EACH	EACH	EACH	EACH	EACH			
LOCATION 1 TOTALS (CARRIED FROM PREVIOUS SHEET)							244	584		348			2		3		250		
1	FAI	S.R. 158	E. MONROE ST.	RT					44										PLACE AS DIRECTED
1	FAI	S.R. 158	W. MONROE ST.	LT					62										PLACE AS DIRECTED
1	FAI	S.R. 158	BEFORE S.R.256					22	114										PLACE AS DIRECTED
1	FAI	S.R. 158	AFTER S.R. 256					23	114										PLACE AS DIRECTED
1	FAI	S.R. 158	SR 158 AT MULBERRY						88										PLACE AS DIRECTED
1	FAI	S.R. 158	MULBERRY ST.	LT					60										PLACE AS DIRECTED
1	FAI	S.R. 158	MULBERRY ST.	RT					58										PLACE AS DIRECTED
1	FAI	S.R. 158	CLIFF ST.	LT					46										PLACE AS DIRECTED
1	FAI	S.R. 158	CLIFF ST.	RT				16											PLACE 24' FROM SR 158 CL
1	FAI	S.R. 158	WATER ST.	LT				50											PLACE 22' FROM SR 158 CL
1	FAI	S.R. 158	SR 158 AT SLM 10.05		10.05													1	PLACE AS DIRECTED
1	FAI	S.R. 158	FRONT ST.	RT				8											PLACE 22' FROM SR 158 CL
1	FAI	S.R. 158	FRONT ST.	LT				23											PLACE 20' FROM SR 158 CL
1	FAI	S.R. 158	ALLEY	RT					22										PLACE AS DIRECTED
1	FAI	S.R. 158	ALLEY	LT					26										PLACE AS DIRECTED
1	FAI	S.R. 158	ROME ST.	RT					50										PLACE AS DIRECTED
1	FAI	S.R. 158	ROME ST.	LT				15	56										PLACE AS DIRECTED
1	FAI	S.R. 158	SR 158 AT SLM 10.18		10.18													1	PLACE AS DIRECTED
1	FAI	S.R. 158	HUNTWORK ST.	RT				16											PLACE 17' FROM SR 158 CL
1	FAI	S.R. 158	HUNTWORK ST.	LT				19											PLACE 19' FROM SR 158 CL
1	FAI	S.R. 158	NORTH ST.	RT				16											PLACE 18' FROM SR 158 CL
1	FAI	S.R. 158	NORTH ST.	LT				11											PLACE 16' FROM SR 158 CL
1	FAI	S.R. 158	ROLEY RD.	LT				10											PLACE AS DIRECTED
1	FAI	S.R. 158	BICKEL CHURCH RD.	RT				12											PLACE AS DIRECTED
1	FAI	S.R. 158	BICKEL CHURCH RD.	LT				12											PLACE AS DIRECTED
1	FAI	S.R. 158	STEMEN RD.	RT				17											PLACE 13' FROM SR 158 CL
1	FAI	S.R. 158	STEMEN RD.	LT				16											PLACE 13' FROM SR 158 CL
1	FAI	S.R. 158	SR 204	RT				16											PLACE 15' FROM SR 158 CL
1	FAI	S.R. 158	SR 204	LT				16											PLACE 15' FROM SR 158 CL
1	FAI	S.R. 158	BLACKLICK RD.	RT				16											PLACE 10' FROM SR 158 CL
1	FAI	S.R. 158	BLACKLICK RD.	LT				16											PLACE 10' FROM SR 158 CL
			SUB-TOTALS					244						3					
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)							244	934	740	348			2		3		250	2	
2	LIC	S.R. 158	PALMER RD.	LT				15											PLACE 10' FROM SR 158 CL
2	LIC	S.R. 158	PALMER RD.	RT				15											PLACE 10' FROM SR 158 CL
2	LIC	S.R. 158	ON S.R. 158 AT OUTVILLE RD.					16											PLACE AS DIRECTED
2	LIC	S.R. 158	AT U.S. 40					30											PLACE 14' FROM SR 158 CL
			SUB-TOTALS																
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)								76											

CALCULATED
LME
CHECKED
DNM

PAVEMENT MARKING DATA (AUXILIARY MARKING DATA)

FAI-158-2.48
LIC-158-0.00

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		PRISMATIC RETRO-REFLECTOR COLORS					REMARKS
								RAISED PAVEMENT MARKER REMOVED	RPM	INFORMATION ONLY					
										ONE-WAY		TWO-WAY			
										EACH	EACH	WHITE	YELLOW	YELLOW / YELLOW	
1	FAI	S.R. 158	2.48	2.75	0.27	1,426	GAP	18	18			18			START LANCASTER CORP.
1	FAI	S.R. 158	2.75	2.84	0.09	475	11	8	8			8			PC 2.75 PT 2.84 L=317' DEG 6
1	FAI	S.R. 158	2.84	5.47	2.63	13,886	GAP / 7	206	206	32		174			STOPS AT COONPATH RD. - SLM 4.30
1	FAI	S.R. 158	5.47	5.59	0.12	634	11	8	8			8			PC 5.47 PT 5.59 L=317' DEG 6
1	FAI	S.R. 158	5.59	7.40	1.81	9,557	GAP	119	119			119			
1	FAI	S.R. 158	7.40	7.49	0.09	475	11	12	12			12			PC 7.40 PT 7.49 L=475' DEG 9
1	FAI	S.R. 158	7.49	8.77	1.28	6,758	GAP	84	84			84			
1	FAI	S.R. 158	8.77	8.81	0.04	211	11	5	5			5			PC 8.77 PT 8.81 L=211' DEG 7
1	FAI	S.R. 158	8.81	8.84	0.03	158	GAP	2	2			2			SUSPEND BALTIMORE CORP.
1	FAI	S.R. 158	10.50	10.51	0.01	53	GAP	3	3			3			RESUME BALTIMORE CORP.
1	FAI	S.R. 158	10.51	10.53	0.02	106	11	3	3			3			PC 10.51 PT 10.53 L=106' DEG 6
1	FAI	S.R. 158	10.53	10.62	0.09	475	GAP	6	6			6			
1	FAI	S.R. 158	10.62	10.66	0.04	211	11	5	5			5			PC 10.62 PT 10.66 L=211' DEG 8
1	FAI	S.R. 158	10.66	10.78	0.12	634	GAP	8	8			8			
1	FAI	S.R. 158	10.78	10.99	0.21	1,109	12	32	32			32			PC 10.87 PT 10.90 L=158' DEG 16
1	FAI	S.R. 158	10.99	15.83	4.84	25,555	GAP / 7	351	351	32		319			STOPS AT SR 204 - SLM 13.79
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)								870	870						
2	LIC	S.R. 158	0.00	0.50	0.50	2,640	GAP	33	33			33			SUSPEND KIRKERSVILLE CORP.
2	LIC	S.R. 158	1.87	2.08	0.21	1,109	GAP	14	14			14			RESUME KIRKERSVILLE CORP.
2	LIC	S.R. 158	2.11	2.28	0.17	898	12 / 7	46	46	16		30			PC 2.20 PT 2.26 L=317' DEG 16, STOP AT U.S. 40
LOCATION 2 TOTALS (CARRIED TO SUB-SUMMARY)								93	93						

RAISED PAVEMENT MARKER DATA

**FAI-158-2.48
LIC-158-0.00**

LOCATION 1 SHEET TOTALS													ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
Sht. 2	Sht. 3	Sht. 4	Sht. 5	Sht. 6	Sht. 8	Sht. 10	Sht. 12	Sht. 13	Sht. 15	Sht. 24	Sht. 26	Sht. 27					
	2,620	1,740					6,953	130					202	23500	11,443	SQ YD	WEARING COURSE REMOVED
									678				202	30000	678	SQ FT	WALK REMOVED
									18				202	32000	18	FT	CURB REMOVED
			26.00										209	60500	26.00	MILE	LINEAR GRADING
						26.00							209	72051	26.00	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
250													253	01000	250	CU YD	PAVEMENT REPAIR
					175,180	29,629							254	01000	204,809	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
					11,766	2,148	298	21					407	10000	14,233	GALLON	TACK COAT
					7,936	1,462		8					407	14000	9,406	GALLON	TACK COAT FOR INTERMEDIATE COURSE
					1,374	75							407	20000	1,449	GALLON	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE
					952	72	227						407	20100	1,251	GALLON	TACK COAT, TRACKLESS TACK, SURFACE COURSE
12,072													408	10001	12,072	GALLON	PRIME COAT, AS PER PLAN
		85			8,174	1,384		7					448	46050	9,650	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
				400									448	46051	400	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN
128	251				5,928	1,025		10					448	46904	7,342	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
				286									448	46905	286	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN
							245						448	47020	245	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
								56					516	31011	56	FT	2" DEEP JOINT SEALER, AS PER PLAN
		6											604	09000	6	EACH	CATCH BASIN ADJUSTED TO GRADE
		2											604	20600	2	EACH	INLET ADJUSTED TO GRADE
		9											604	34500	9	EACH	MANHOLE ADJUSTED TO GRADE
									716				608	10000	716	SQ FT	4" CONCRETE WALK
													609	26000	135	FT	CURB, TYPE 6
			160										614	11110	160	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
101													614	12460	101	EACH	WORK ZONE MARKING SIGN
		7											614	13000	7	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			100										614	18401	100	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
					26.53								614	21400	26.53	MILE	WORK ZONE CENTER LINE, CLASS II
						1,688							617	10101	1,688	CU YD	COMPACTED AGGREGATE, AS PER PLAN
							12.24						618	41000	12.24	MILE	EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)
												870	621	00100	870	EACH	RPM
												870	621	54000	870	EACH	RAISED PAVEMENT MARKER REMOVED
		15											638	10800	15	EACH	VALVE BOX ADJUSTED TO GRADE
											348		642	00600	348	FT	CROSSWALK LINE, TYPE 1
											250		644	00400	250	FT	CHANNELIZING LINE, 8"
											934		644	00500	934	FT	STOP LINE
											740		644	00600	740	FT	CROSSWALK LINE
											244		644	00700	244	FT	TRANSVERSE/DIAGONAL LINE
											2		644	01000	2	EACH	RAILROAD SYMBOL MARKING
											2		644	01100	2	EACH	SCHOOL SYMBOL MARKING, 72"
											3		644	01300	3	EACH	LANE ARROW
								2					690	98000	2	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A1
								3					690	98000	3	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A2
								1					690	98000	1	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE B1
								104					690	98200	104	SQ FT	SPECIAL - MISC.: DETECTABLE WARNING
										25.30			817	00100	25.30	MILE	EDGE LINE, 4"
										13.35			817	00300	13.35	MILE	CENTER LINE

CALCULATED
LME
CHECKED
DNM

LOCATION 1 SUB-SUMMARY

FAI-158-2.48
LIC-158-0.00

LOCATION 2 SHEET TOTALS										ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
Sht. 2	Sht. 3	Sht. 4	Sht. 5	Sht. 8	Sht. 10	Sht. 12	Sht. 24	Sht. 26	Sht. 27					
	40	40				840				202	23500	920	SQ YD	WEARING COURSE REMOVED
			3.40							209	60500	3.40	MILE	LINEAR GRADING
					3.40					209	72051	3.40	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
40										253	01000	40	CU YD	PAVEMENT REPAIR
				22,482	3,966					254	01000	26,448	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
				1,687	298	64				407	10000	2,049	GALLON	TACK COAT
				1,124	199					407	14000	1,323	GALLON	TACK COAT FOR INTERMEDIATE COURSE
1,803										408	10001	1,803	GALLON	PRIME COAT, AS PER PLAN
		2		1,093	193					448	46050	1,288	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
	2	31		781	138					448	46904	952	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
						30				448	47020	30	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
				16						614	11110	16	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
9										614	12460	9	EACH	WORK ZONE MARKING SIGN
		4								614	13000	4	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			20							614	18401	20	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
				3.38						614	21400	3.38	MILE	WORK ZONE CENTER LINE, CLASS II
					221					617	10101	221	CU YD	COMPACTED AGGREGATE, AS PER PLAN
					2.26					618	41000	2.26	MILE	EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)
									93	621	00100	93	EACH	RPM
									93	621	54000	93	EACH	RAISED PAVEMENT MARKER REMOVED
								76		644	00500	76	FT	STOP LINE
							3.38			817	00100	3.38	MILE	EDGE LINE, 4"
							1.69			817	00300	1.69	MILE	CENTER LINE

CALCULATED
LME
CHECKED
DNM

LOCATION 2 SUB-SUMMARY

FAI-158-2.48
LIC-158-0.00

LOCATION TOTALS			FUNDING SPLITS		ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION	SEE SHEET
LOCATION 1 01/STR/PV/	LOCATION 2 01/STR/PV/		01/STR/PV	02/STR/PV						
11,443	920		12,363		202	23500	12,363	SQ YD	WEARING COURSE REMOVED	
678			678		202	30000	678	SQ FT	WALK REMOVED	
18			18		202	32000	18	FT	CURB REMOVED	
26.00	3.40		29.40		209	60500	29.40	MILE	LINEAR GRADING	
26.00	3.40		29.40		209	72051	29.40	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	2
250	40		290		253	02000	290	CU YD	PAVEMENT REPAIR	
204,809	26,448		231,257		254	01000	231,257	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
14,233	2,049		16,282		407	10000	16,282	GALLON	TACK COAT	
9,406	1,323		10,729		407	14000	10,729	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
1,449			1,449		407	20000	1,449	GALLON	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE	
1,251			1,251		407	20100	1,251	GALLON	TACK COAT, TRACKLESS TACK, SURFACE COURSE	
12,072	1,803		13,875		408	10001	13,875	GALLON	PRIME COAT, AS PER PLAN	2
9,650	1,288		10,938		448	46050	10,938	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
400			400		448	46051	400	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN	6
7,342	952		8,294		448	46904	8,294	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
286			286		448	46905	286	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN	6
245	30		275		448	47020	275	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
56			56		516	31011	56	FT	2" DEEP JOINT SEALER, AS PER PLAN	2
6			6		604	09000	6	EACH	CATCH BASIN ADJUSTED TO GRADE	
2			2		604	20600	2	EACH	INLET ADJUSTED TO GRADE	
9			9		604	34500	9	EACH	MANHOLE ADJUSTED TO GRADE	
716			716		608	10000	716	SQ FT	4" CONCRETE WALK	
135			135		609	26000	135	FT	CURB, TYPE 6	
160	16		176		614	11110	176	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
101	9		110		614	12460	110	EACH	WORK ZONE MARKING SIGN	
7	4		11		614	13000	11	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
100	20		120		614	18401	120	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	5
26.53	3.38			29.91	614	21400	29.91	MILE	WORK ZONE CENTER LINE, CLASS II	

F158-MCS_001.DGN 2-5-13

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GENERAL SUMMARY

**FAI-158-2.48
LIC-158-0.00**

LOCATION TOTALS			FUNDING SPLITS		ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION	SEE SHEET
LOCATION 1 01/STR/PV/	LOCATION 2 01/STR/PV/		01/STR/PV	02/STR/PV						
1,688	221		1,909		617	10101	1,909	CU YD	COMPACTED AGGREGATE, AS PER PLAN	2
12.24	2.26		14.50		618	41000	14.50	MILE	EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)	
870	93			963	621	00100	963	EACH	RPM	
870	93			963	621	54000	963	EACH	RAISED PAVEMENT MARKER REMOVED	
15			15		638	10800	15	EACH	VALVE BOX ADJUSTED TO GRADE	
348				348	642	00600	348	FT	CROSSWALK LINE, TYPE 1	
250				250	644	00400	250	FT	CHANNELIZING LINE, 8"	
934	76			1,010	644	00500	1,010	FT	STOP LINE	
740				740	644	00600	740	FT	CROSSWALK LINE	
244				244	644	00700	244	FT	TRANSVERSE/DIAGONAL LINE	
2				2	644	01000	2	EACH	RAILROAD SYMBOL MARKING	
2				2	644	01100	2	EACH	SCHOOL SYMBOL MARKING, 72"	
3				3	644	01300	3	EACH	LANE ARROW	
2			2		690	98000	2	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A1	
3			3		690	98000	3	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE A2	
1			1		690	98000	1	EACH	SPECIAL - MISC.: CURB RAMPS, TYPE B1	
104			104		690	98200	104	SQ FT	SPECIAL - MISC.: DETECTABLE WARNING	
25.30	3.38			28.68	817	00100	28.68	MILE	EDGE LINE, 4"	
13.35	1.69			15.04	817	00300	15.04	MILE	CENTER LINE	

GENERAL SUMMARY

FAI-158-2.48
LIC-158-0.00