



DEPARTMENT OF PUBLIC SERVICES - Engineering MOUNTAIN HOME CEMETERY

1402 WEST MAIN STREET

SURVEYED -	CONT	REVISIONS
DESIGNED TAP	SCALE	1(2)1010110
DRAWN TAP	VERTICAL NONE	1.
QA/QC -	HORIZONTAL 1"=50'	
ENG PROJ # MST0100XXX	DATE 6/1/2023	

PLAN DRAWINGS FOR RIVERSIDE CEMETERY 2023 IMPROVEMENTS

DESIGN ENGINEER

MONUMENT ENGINEERING GROUP ASSOCIATES, INC

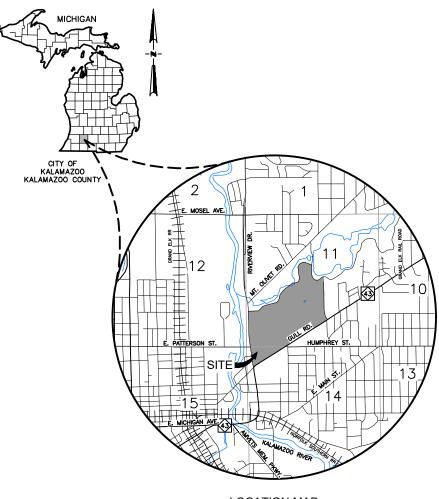
ENGINEERS-SURVEYORS-CONSULTANTS LANDSCAPE ARCHITECTS-LAND PLANNERS

298 VETERANS DRIVE, FOWLERVILLE, MI 48836 KEVIN C. McDEVITT, PE PHONE: 517-223-3512

CLIENT

CITY OF KALAMAZOO
DEPARTMENT OF MANAGEMENT SERVICES
PURCHASING DIVISION

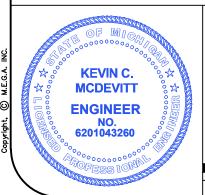
241 WEST SOUTH STREET KALAMAZOO, MI 49007-4796 PH: 269-337-8047



LOCATION MAP

Levin CM Ferritt

REGISTERED PROFESSIONAL No. 6201043260



INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS

The Group Associates

1209 EAST MILHAM, STE B PORTAGE, MI 49002 (OFFICE) 269-344-6165

298 VETERANS DRIVE FOWLERVILLE, MI 48836 (OFFICE) 517-223-3512

LAST REV: 5/19/2023

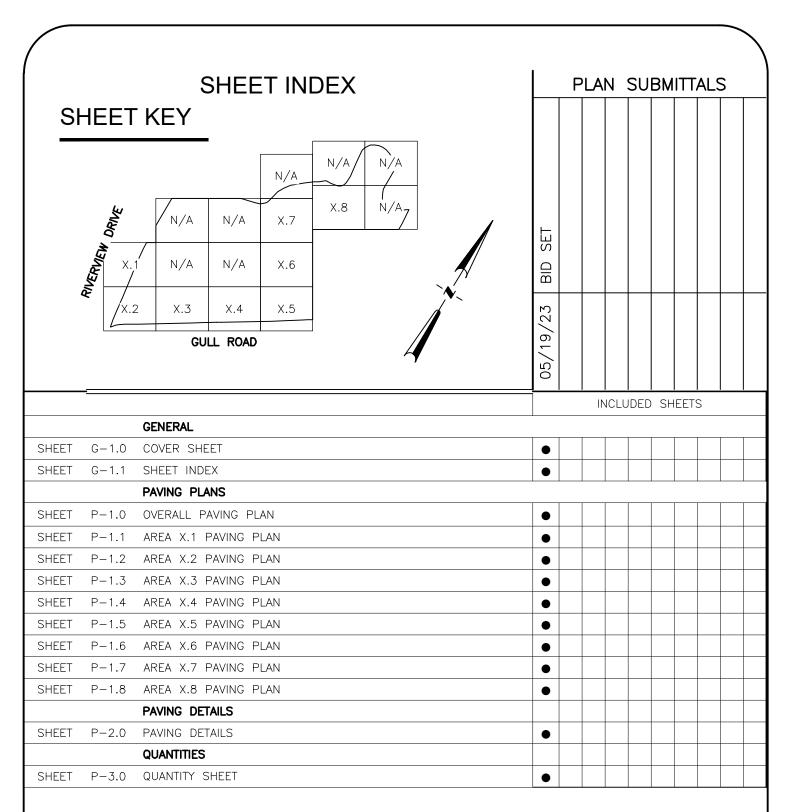
CITY OF KALAMAZOO

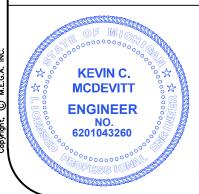
RIVERSIDE CEMETERY

2023 ROAD IMPROVEMENTS

COVER SHEET

DATE: 05/19/2023 DR. BY:KCM CHK: AP
SCALE: NO SCALE SHEET: G-1.0 FILE: 18-032_G-1.0_Cover JOB No. 18-032





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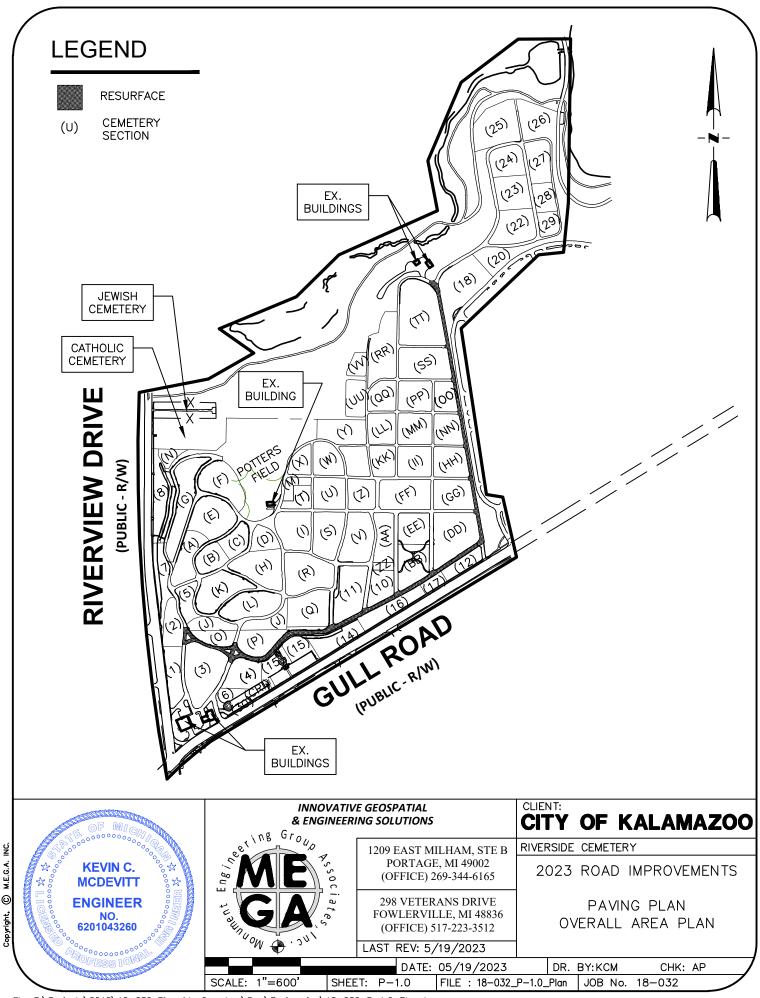
CITY OF KALAMAZOO

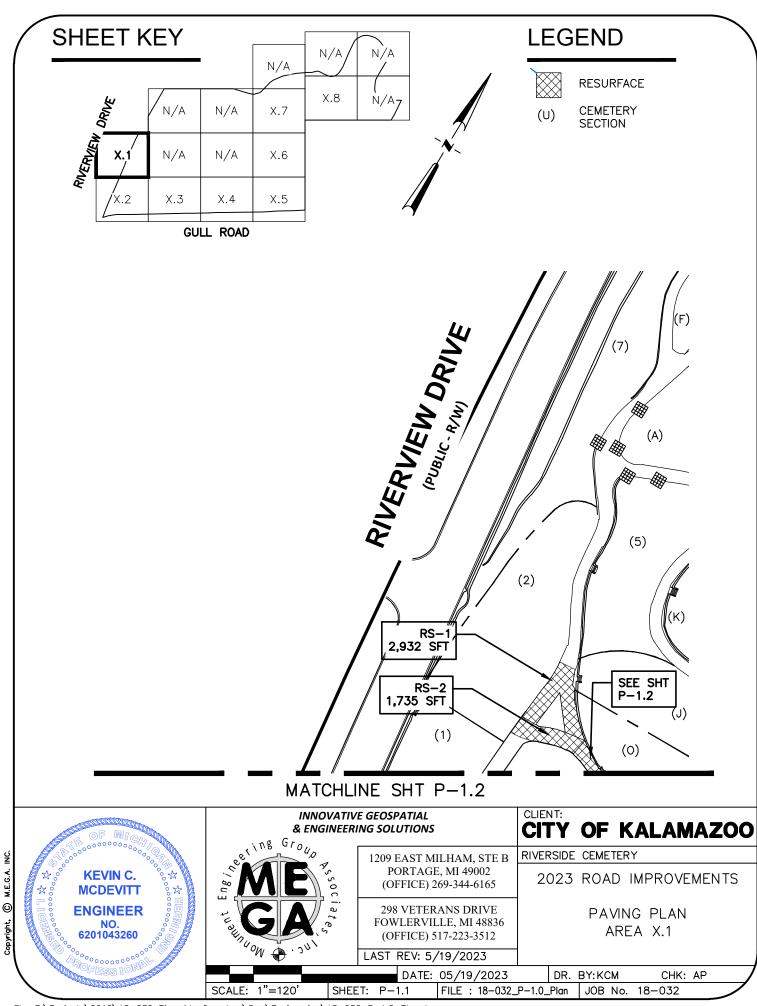
RIVERSIDE CEMETERY

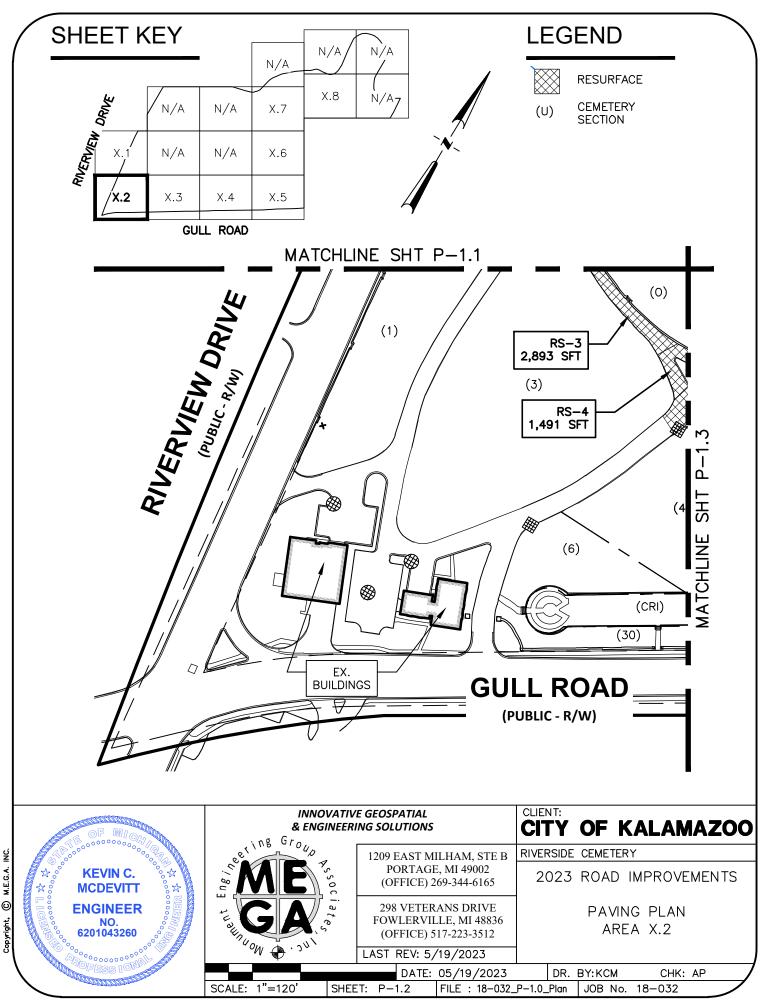
2023 ROAD IMPROVEMENTS

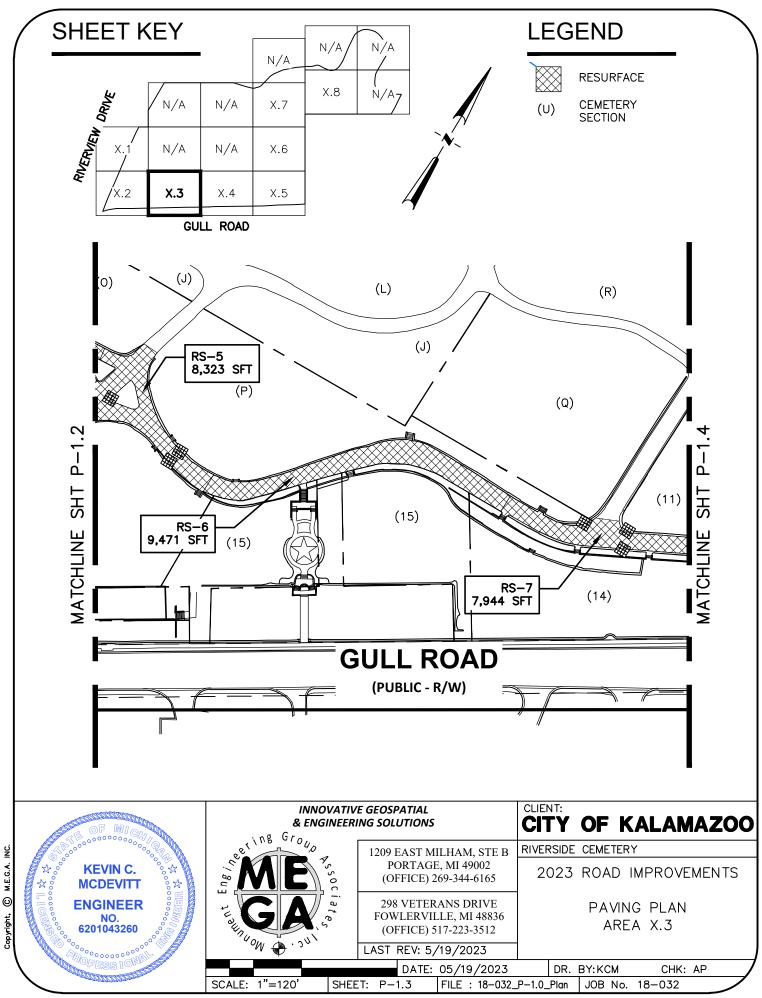
SHEET INDEX

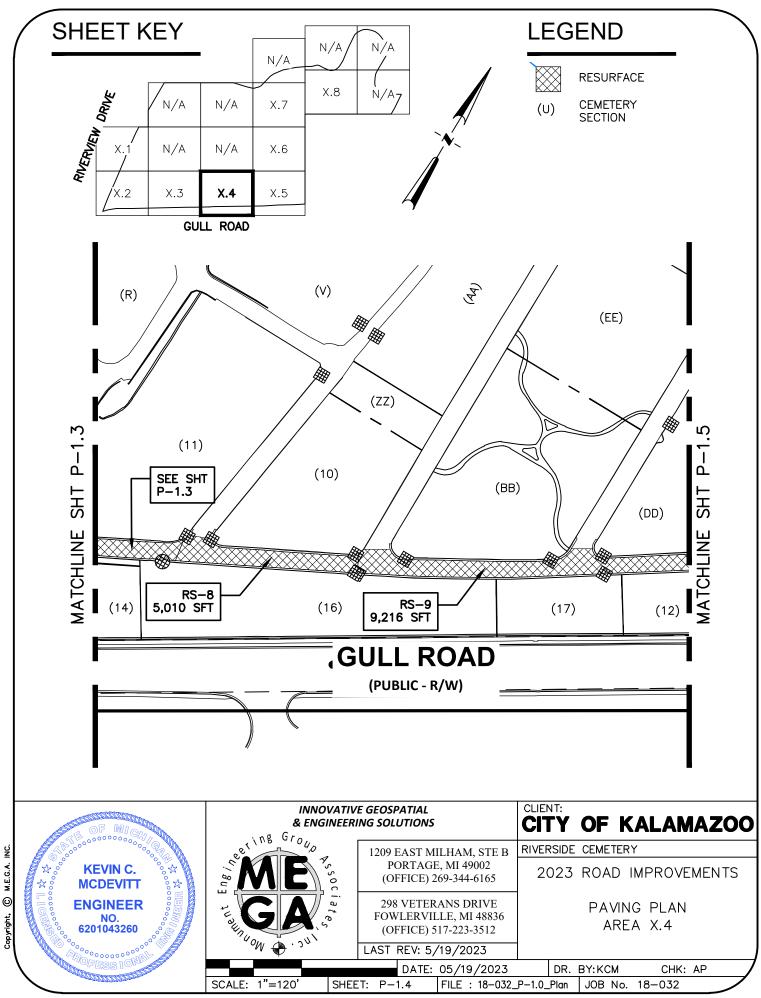
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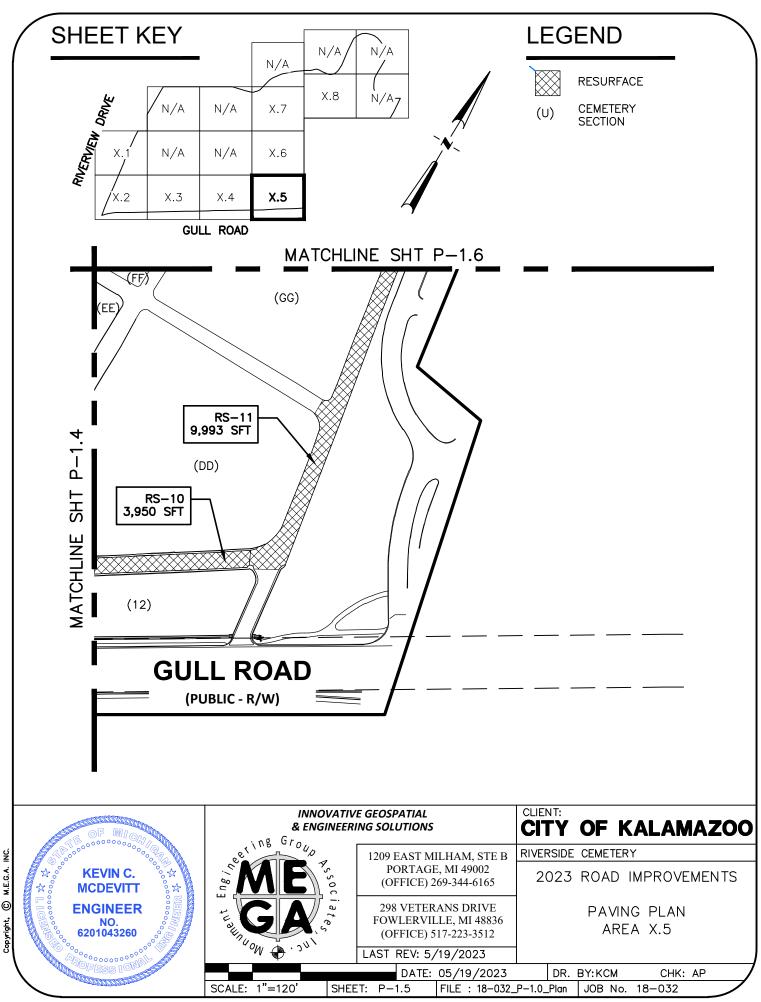


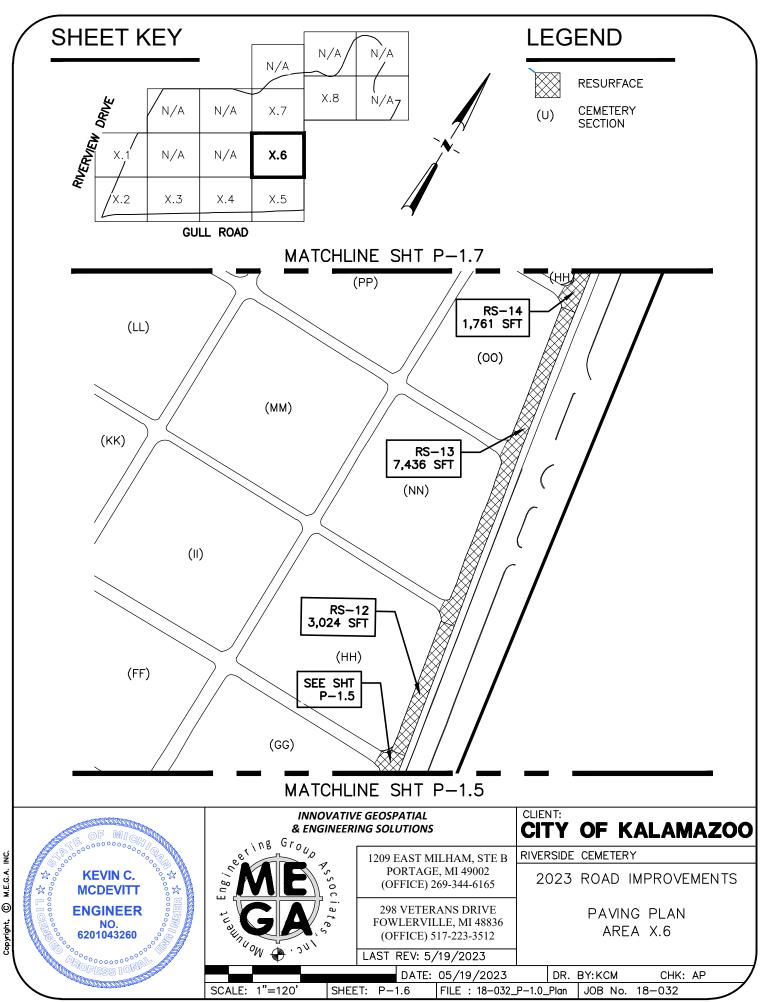


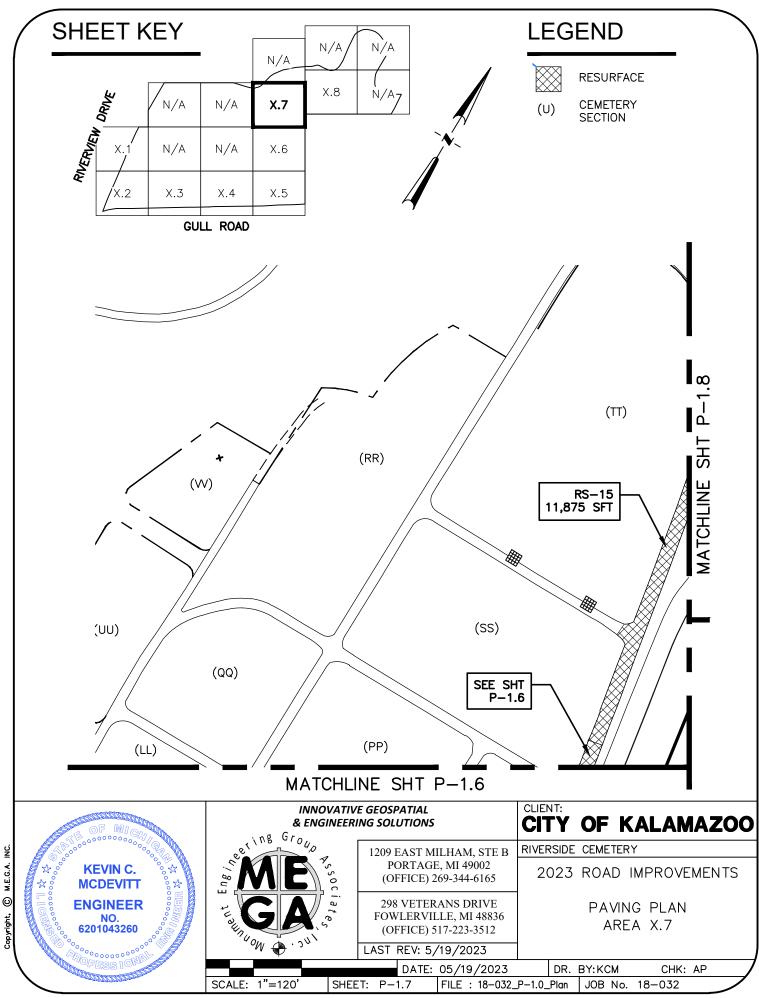


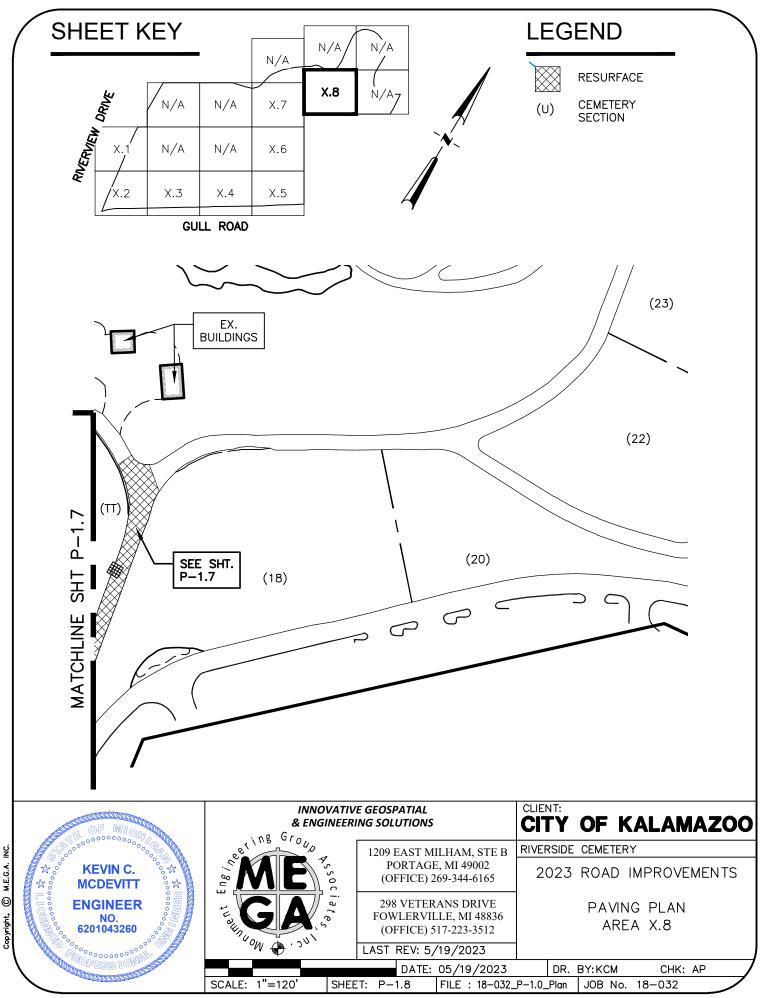






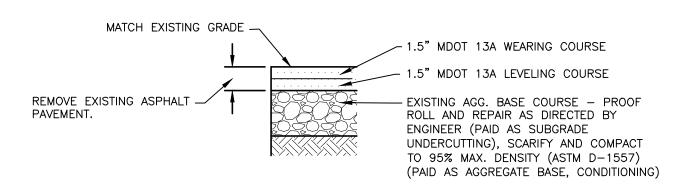






PAVING DETAILS

RESURFACE PAVEMENT SECTION





INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS



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CITY OF KALAMAZOO

RIVERSIDE CEMETERY

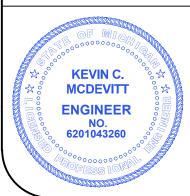
2023 ROAD IMPROVEMENTS

PAVING DETAILS

DATE: 05/19/2023 DR. BY:KCM CHK: AP

SCALE: NO SCALE SHEET: P-2.0 FILE: 18-032_P-2.0_Details JOB No. 18-032

RIVERSIDE CEMETERY, KALAMAZOO, MI General quantities								
Section No.	AREA (SFT)	AREA (SYD)	REPAIR	Pavt Rem, Modified	Subgrade Undercutting,	Aggregate Base,	HMA, 13A	Slope Restoration,
NO. (5	(311)	(טונ)		Modified	21AA	Conditioning		Type A
				(SYD)	(CYD)	(SYD)	(TON)	(SYD)
RS-1	2932	326	RESURFACE	326	11	326	54	96
RS-2	1735	193	RESURFACE	193	6	193	32	119
RS-3	2893	321	RESURFACE	321	11	321	53	223
RS-4	1491	166	RESURFACE	166	6	166	27	123
RS-5	8232	915	RESURFACE	915	31	915	151	0
RS-6	9471	1052	RESURFACE	1052	35	1052	174	0
RS-7	7944	883	RESURFACE	883	29	883	146	0
RS-8	5010	557	RESURFACE	557	19	557	92	0
RS-9	9216	1024	RESURFACE	1024	34	1024	169	0
RS-10	3950	439	RESURFACE	439	15	439	72	238
RS-11	9993	1110	RESURFACE	1110	37	1110	183	534
RS-12	3024	336	RESURFACE	336	11	336	55	212
RS-13	7436	826	RESURFACE	826	28	826	136	492
RS-14	1761	196	RESURFACE	196	7	196	32	121
RS-15	11875	1319	RESURFACE	1319	44	1319	218	673
Total	86963	9663		9663	324	9663	1594	2831



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(OFFICE) 517-223-3512 LAST REV: 5/19/2023

CLIENT: CITY OF KALAMAZOO

RIVERSIDE CEMETERY

2023 ROAD IMPROVEMENTS

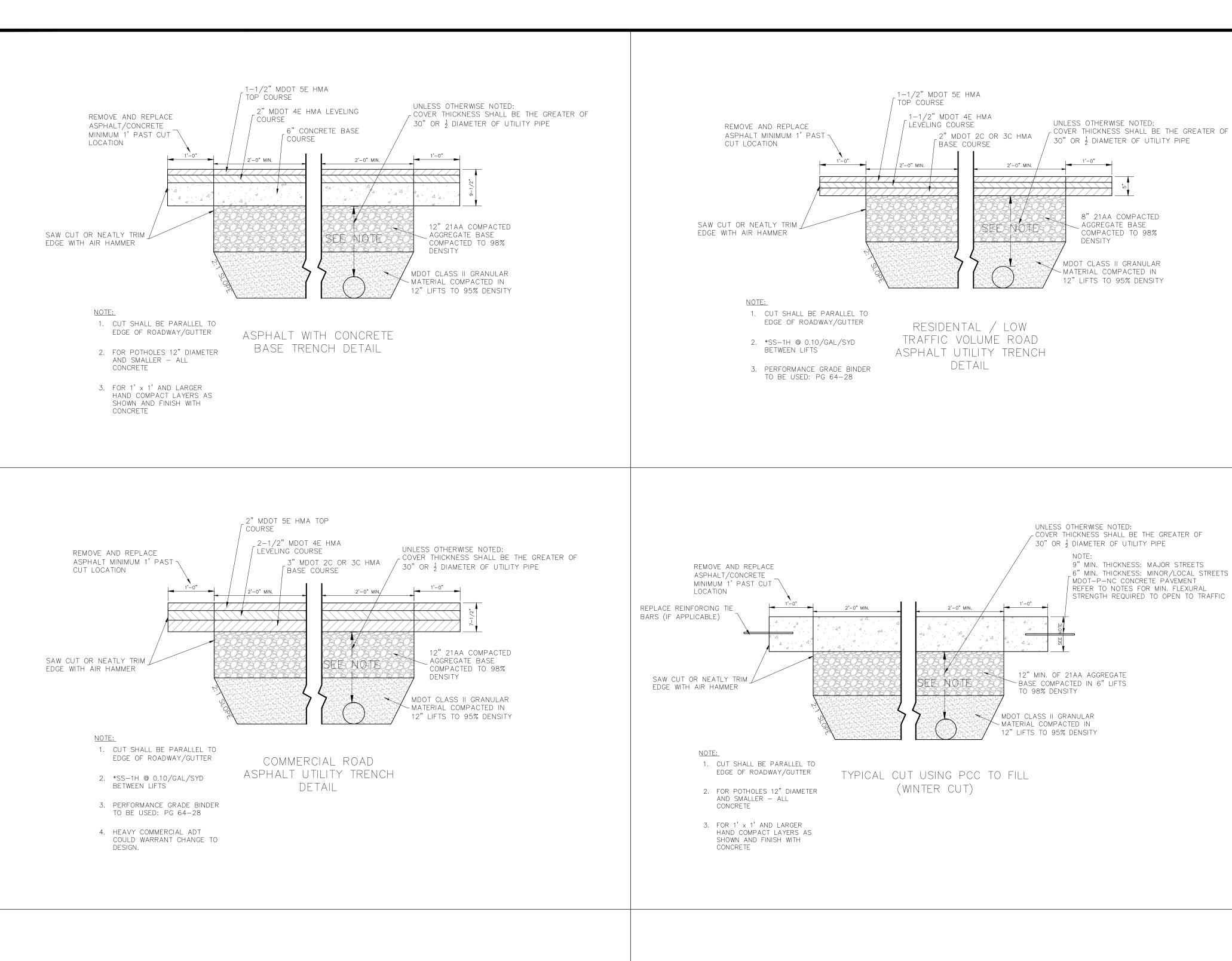
QUANTITIES

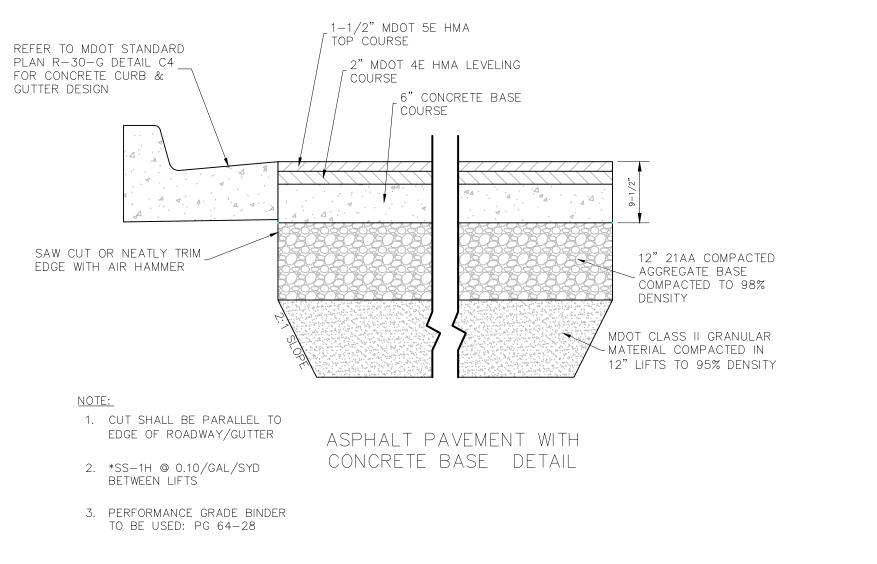
DATE: 05/19/2023 DR. BY:KCM CHK: AP

SCALE: NO SCALE SHEET: P-3.0 FILE: 18-032_P-3.0_Quant tids No. 18-032

DEPARTMENT OF PUBLIC SERVICES - Engineering ROOT CRACKING OF SIDEWALK STANDARD DETAILS CITY OF KALAMAZOO STANDARD DETAIL - SIDEWALK ROOT AVOIDANCE - MEANDERING SIDEWALK REVISIONS SCALE VERTICAL NOT TO SCALE 1. 12.18.20 - Agg base depth & option of 2C base HORIZONTAL NOT TO SCALE DATE 11/23/2020 GENERAL NOTES: AVOID ROOT DAMAGE IN THIS AREA ———DISTANCE FROM TREE: 3X TRUNK DIAMETER - MDOT STANDARD PLANS R-28-J, R-29-I, R-30-G, AND R-44-F SHALL BE FOLLOWED IN CONJUNTION WITH THESE STANDARD PLANS 5' SIDEWALK - ALL SAW CUTTING SHALL BE DONE PERPENDICULAR AND PARALLEL TO THE DIRECTION OF TRAVEL MATCH SIDEWALK TO EXISTING (4', 5', ETC.) - SAW CUTTING SHALL PROVIDE A STRAIGHT, CLEAN, EDGE TO ENHANCE BONDING TREE - ALL CUTS SHALL BE RECTANGULAR AND NEATLY CUT TO AVOID SPALLING OF PAVEMENT REMOVALS REMOVE SIDEWALK IN EITHER DIRECTION ALL ROAD/UTILITY CUTS OF AN AREA GREATER THAN 12"X12" SHALL $^{\prime}$ TO ALLOW FOR 5% (8.33% MAX) OR LESS EXTEND THE FULL WIDTH OF THE TRAVEL LANE RUNNING SLOPE FOR NEW SIDEWALK - FOR PAVEMENT WITH LOAD TRANSFER DOWEL RODS OR REINFORCEMENT: NEW LOAD TRANSFER DOWELS/REINFORCEMENT SHALL BE PLACED TO MAINTAIN BEARING CAPACITY OF ROADWAY - CUTS LESS THAN 12" SHALL BE PATCHED WITH PCC. IF GREATER THAN 12", ENSURE CUT IS IN ACCORDANCE WITH STANDARD DETAILS CITY ROW-AND MATCHING EXISTING ROADWAY - BUMPS/CUTS/MILLED AREAS WITH EDGE GREATER THAN 2" DEEP/HIGH MUST BE WEDGED WITH HMA BEFORE OPEN TO TRAFFIC. SEE STANDARD DETAIL. - MEANDERING SIDEWALK SHALL ONLY BE PLACED IN THE CITY'S ROW STANDARD DETAIL - WEDGING OR WHERE AN EASEMENT IS ESTABLISHED - NEW SIDEWALK CONSTRUCTION SHALL MEET OR EXCEED CURRENT A CUT/MILLED SECTION STANDARD DETAIL - SIDEWALK ADA AND ACCESSIBILITY STANDARDS ROOT AVOIDANCE - REPLACED SIDEWALK SHALL, TO THE EXTENT PRACTICABLE, MEET OR EXCEED ADA AND ACCESSIBILITY STANDARDS - SIDEWALK, DRIVEWAY OPENINGS & APPROACHES SHALL CONFORM TO -HMA WEDGE: 45 DEGREE MAXIMUM MDOT STANDARD PLAN DETAILS R-28-J AND R-29-I >2" MILLED/CUT AREA SUBBASE CIP TRAFFIC— - MARSHALL MIXES 13A (LEVELING) & 36A (TOP) MAY BE SUBSTITUTED MAXIMUM DEPTH: 4" -4"MIN. (6" NOM.) SAND BASE CIP FOR SUPERPAVE HMA MIX DESIGNS AS DEEMED APPROPRIATE BY THE - VARIES ~4" SIDEWALK __W1.4 OR 10 GAUGE REMESH REINFORCEMENT ENGINEER ENSURE EMBEDMENT AT MID-DEPTH - ASPHALT BINDER SHALL BE INCLUDED IN THE PAY ITEM FOR HMA <8.33% GRADE - MDOT PCC P1 MIX DESIGN SHALL BE USED FOR ALL CONCRETE ✓8.33% GRADE UNLESS OTHERWISE STATED OR DIRECTED BY THE ENGINEER - OPENING TO TRAFFIC STRENGTHS (2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION. TABLE 603-1): GEOTEXTILE FABRIC, 10' LONG -- <72 HOURS, GRADE P-NC, 300 psi TREE ROOT -- 72 HOURS +, GRADE P1, P1M, 550 psi -EXTEND REINFORCEMENT 10' IN EITHER DIRECTION STANDARD DETAIL - LOW VOLUME/RESIDENTIAL ROADS ALLOW FOR 6" OF OVERLAP, PERFORATED PIPE DETAIL MINIMUM, OF REMESH LOW SPOT OF ROADWAY~ TO CATCH-BASIN OR OTHER DRAINAGE STRUCTURE MAINTENANCE GRAVEL AT OUTLET GREATER THAN 1% GRADE -4" PERFORATED PIPE W/ SOCK 6" MAINTENANCE GRAVEL AT EDGE OF PAVEMENT STANDARD DETAIL - SIDEWALK ROOT AVOIDANCE - W/O REINFORCEMENT (USE ONLY AS DIRECTED BY ENGINEER) STANDARD DETAIL - LOW VOLUME/RESIDENTIAL ROADS POORLY DRAINED AREAS -4"MIN. (6" NOM.) SAND BASE CIP √6" SIDEWALK CROWN POINT √6-8% SLOPE NOM. —1.5" MILL & RESURFACE GEOTEXTILE FABRIC, 10' LONG 6" MAINTENANCE GRAVEL, CIF 6" MAINTENANCE GRAVEL, CIP AGGREGATE/CONCRETE BASE EXISTING GROUND--WIDTH VARIES-TYPICAL 4" SIDEWALK DETAIL 10" WELL DRAINING GRAVEL-10" WELL DRAINING GRAVE 6" CORRUGATED METAL PIPE 6" CORRUGATED METAL PIPE UNDER DRIVEWAY AREAS UNDER DRIVEWAY AREAS ——4" COMPACTED SAND OR MAINTENANCE GRAVEL— STANDARD DETAIL - LOW VOLUME/RESIDENTIAL ROADS EASILY DRAINED AREAS 12% CROSS SLOPE MAX. DRAIN TOWARD ROAD EXCEPT AS DIRECTED BY ENGINEER EXISTING GROUND CURB OR EXISTING GROUND EXPANSION JOINT 6" MAINTENANCE GRAVEL, CIP SECTION VIEW AGGREGATE/CONCRETE BASE PROFILE VIEW ——2% MIN (4% MAX)

--WIDTH VARIES--



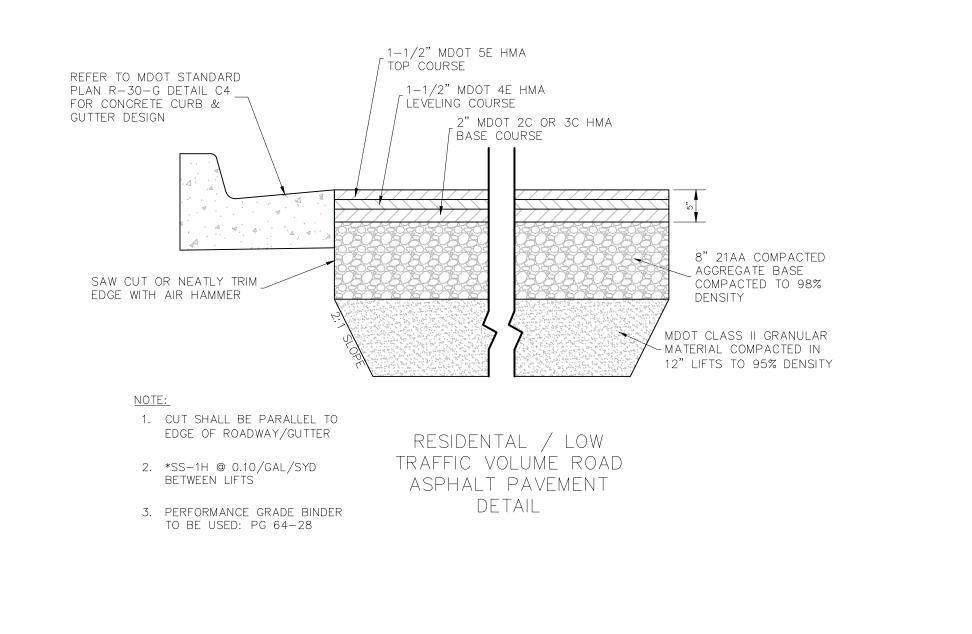


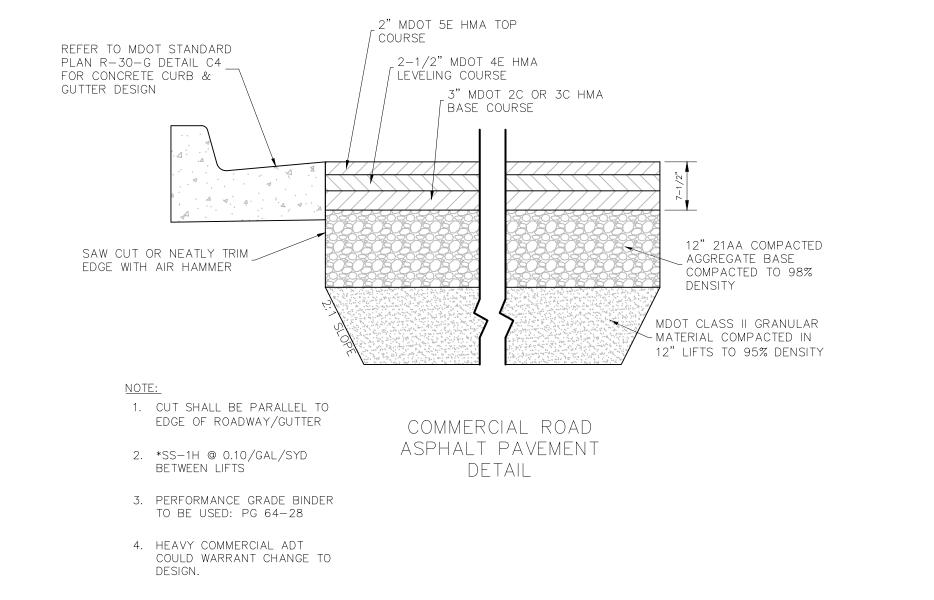
DEPARTMENT OF PUBLIC SERVICES - Engineering STANDARD DETAILS CITY OF KALAMAZOO REVEYED N/A SIGNED GHW SCALE REVISIONS VERTICAL NOT TO SCALE 1. 12.18.20 - Agg base depth & option of 2C base

GENERAL NOTES:

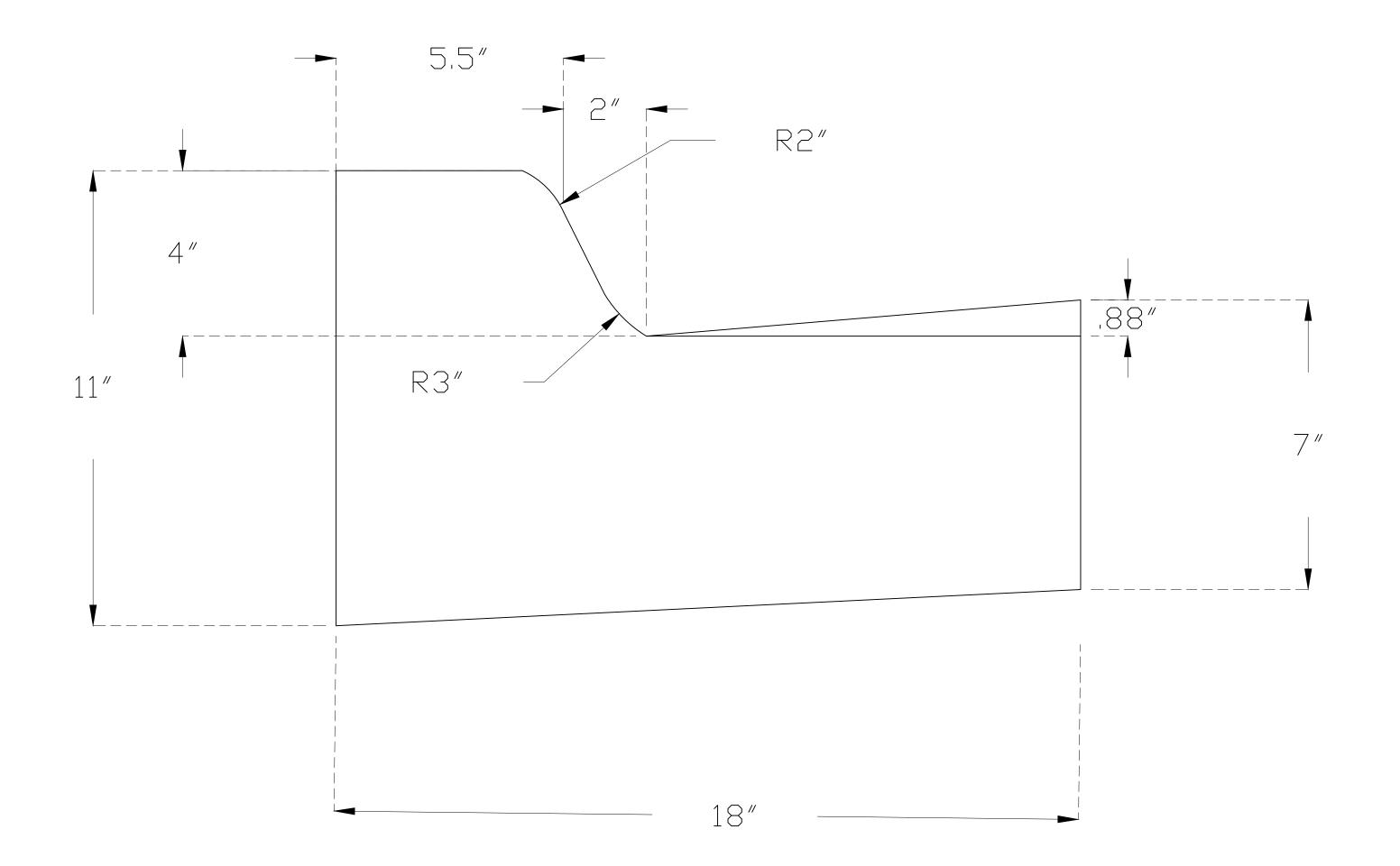
- MDOT STANDARD PLANS R-28-J, R-29-I, R-30-G, AND R-44-F SHALL BE FOLLOWED IN CONJUNTION WITH THESE STANDARD PLANS
- ALL SAW CUTTING SHALL BE DONE PERPENDICULAR AND PARALLEL TO THE DIRECTION OF TRAVEL
- SAW CUTTING SHALL PROVIDE A STRAIGHT, CLEAN, EDGE TO ENHANCE BONDING
- ALL CUTS SHALL BE RECTANGULAR AND NEATLY CUT TO AVOID SPALLING OF PAVEMENT
- ALL ROAD/UTILITY CUTS OF AN AREA GREATER THAN 12"X12"
 SHALL EXTEND THE FULL WIDTH OF THE TRAVEL LANE

 FOR PAVEMENT WITH LOAD TRANSFER DOWEL RODS OR
 REINFORCEMENT: NEW LOAD TRANSFER DOWELS/REINFORCEMENT SHALL BE PLACED TO MAINTAIN BEARING CAPACITY OF ROADWAY
- CUTS LESS THAN 12" SHALL BE PATCHED WITH PCC. IF GREATER THAN 12", ENSURE CUT IS IN ACCORDANCE WITH STANDARD DETAILS AND MATCHING EXISTING ROADWAY
- BUMPS/CUTS/MILLED AREAS WITH EDGE GREATER THAN 2"
 DEEP/HIGH MUST BE WEDGED WITH HMA BEFORE OPEN TO TRAFFIC. SEE STANDARD DETAIL.
- MEANDERING SIDEWALK SHALL ONLY BE PLACED IN THE CITY'S ROW OR WHERE AN EASEMENT IS ESTABLISHED
- NEW SIDEWALK CONSTRUCTION SHALL MEET OR EXCEED CURRENT ADA AND ACCESSIBILITY STANDARDS
- REPLACED SIDEWALK SHALL, TO THE EXTENT PRACTICABLE, MEET OR EXCEED ADA AND ACCESSIBILITY STANDARDS
- SIDEWALK, DRIVEWAY OPENINGS & APPROACHES SHALL CONFORM TO MDOT STANDARD PLAN DETAILS R-28-J AND R-29-I
- MARSHALL MIXES 13A (LEVELING) & 36A (TOP) MAY BE SUBSTITUTED FOR SUPERPAVE HMA MIX DESIGNS AS DEEMED APPROPRIATE BY THE ENGINEER
- ASPHALT BINDER SHALL BE INCLUDED IN THE PAY ITEM FOR HMA
- MDOT PCC P1 MIX DESIGN SHALL BE USED FOR ALL CONCRETE UNLESS OTHERWISE STATED OR DIRECTED BY THE ENGINEER
- OPENING TO TRAFFIC STRENGTHS (2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, TABLE 603-1):
 - -- <72 HOURS, GRADE P-NC, 300 psi
- -- 72 HOURS +, GRADE P1, P1M, 550 psi





LOW PROFILE CURB & GUTTER DETAIL





DEPARTMENT OF PUBLIC SERVICES - Engineering

STANDARD DETAILS

CITY OF KALAMAZOO

<i>I</i>		0111 01 11111	
SURVEYED N/A		CCALE	REVISIONS
DESIGNED GHW		SCALE	11211010110
DRAWN GHW	VERTICA	AL NOT TO SCALE	1.
QA/QC AL	HORIZO	NTAL NOT TO SCALE	
ENG PROJ # XXX-X	X DATE 1	1/23/2020	

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