AUDIT REPORT TRACKING SYSTEM (ARTS)

SECTION I: SUMMARY INFORMATION			
Audit Title:	GOkc Sidewalk Repair Program Could Be Improved	**Audit Release Date:** **Full Report / Highlights**	04/22/2019
Department:	Public Works	**Last Report Date:**	01/29/2020
Department Director:	Sherri McIntyre	**This Report Date:**	03/12/2020
Contact Person/Phone:	Mark Montgomery 816-256-6038	**Expected Presentation Date:**	TBD

SECTION II: PRIOR ARTS REPORTS	
1st ARTS Report 01/29/2020	

SECTION III: RECORD OF IMPLEMENTED RECOMMENDATIONS	
1. Implemented 07/01/19	3. Implemented 04/31/19
2. Implemented 05/02/19	4. Implemented 07/01/19

SECTION IV: SUMMARY OF IMPLEMENTATION EFFORTS

Recommendation 1: The director of public works should ensure staff enforce GOkc Sidewalk Repair contract requirements.

Status of Recommendation: Implemented

Implemented – Sections 1740 and 1030 of the construction contract have been modified to reflect the field practices and staff is to the follow the contract requirements. The contractor is informed on the updated sections in the contract in the Preconstruction conference and the inspectors will receive training on the updated sections of the contract before spring construction. A refresher ADA ramp training was performed on February 20, 2020 with Public Works staff. The inspectors will be spot checked during construction by their supervisor and Assistant City Engineer to ensure the inspectors are enforcing contract requirements. The outcome from this implementation improved services/processes.

Recommendation 2: The director of public works should ensure inspectors use a standardized inspection checklist for GOkc Sidewalk Repair projects consisting of all contract requirements and do inspections throughout the project.

Status of Recommendation: Implemented

Implemented – A new sidewalk blockface inspection GoBond check list has been created. The new checklist requires the inspector and his supervisor to sign each blockface inspection and shows each blockface name at the top of the checklist. The outcome from this implementation improved services/processes.

SECTION V: ADDITIONAL OUTCOMES

SIDEWALK INSPECTION BLOCKFACE CHECKLIST (GO BOND)

Street:_____From:_____To:_____

- ☐ Mark the boundaries of the demolition limits.
- ☐ Video all areas of the project that will be affected by construction.
- ☐ Check the tree list for conflicts. If there are any tree conflicts, contact Parks and Recreation/Tree Service at 513-8900. See Tree removal (SOP)
- ☐ Make sure that the contractor gives property owners sufficient notice of the start of the project. Door hangers within 24 hours of start of removals.
- ☐ Inspectors are responsible to notify property owners that any decorative work (landscaping) that is in the City right-of-way needs to be removed and relocated by the property owner before construction begins.
- ☐ Make sure that “NO PARKING” signs are installed, and the Traffic Operations Section and Police are given a 24-hour notice for enforcement of lane closures.
- ☐ Make sure that “Sidewalk Closed” signs are installed at appropriate locations and detour is setup if needed.
- ☐ If a water services curb stop cannot locate in the video notify Water Services Department of the address and that the curb stop needs to be located.
- ☐ Keep a daily record of all activities on the project in the project diary.
- ☐ Make sure that wage rates are posted and visible. For example, tool box on truck, project sign, port-a-potty, etc.
- ☐ Make sure that a port-a-potty is on the job site. Make sure that the contractor has established an appropriate area for storage of equipment and materials. If this is to be done on private property, a third-party agreement should be signed by the property owners and the contractor. The inspector is not to negotiate the agreement.
- ☐ Make sure that the proper traffic/safety signage is in place. This includes cones, barricades, caution tape, etc.
- ☐ Once an ADA ramp has been poured the inspector should complete the ADA compliance form to confirm compliance within 24 hours after the pour.
- ☐ Joint Patterns: Sidewalks: Sidewalk surfaces shall be marked with a transverse joint spaced at a distance equal to the width of the sidewalk. Sidewalk greater than 6 feet in width shall be divided by longitudinal joints spaced not less than 30 inches no more than 60 inches with transverse joints spaced to form a square pattern. Edger tool marks shall remain showing unless the sidewalk is slip-formed and subsequently sawed. Curb joints should align with sidewalk joints where they abut.
- ☐ Joint Patterns: Driveways and bicycle/pedestrian paths: In general, no driveway slab dimension shall exceed 10 feet, although widths no more than 24 times the slab thickness will be permitted to match existing joint patterns.
- ☐ Isolation Joints: Shall be placed where directed by the plans or Engineer. The preformed isolation joint material shall be left ½ inch below the surface, or a suitable tear strip will be provided to allow for the application of the joint sealer. The newly poured edges of these joints shall be rounded with an edging tool of 1/4inch radius.

☐ Contraction Joints: Contraction joints shall be thickness 1 inch deep by 1/8-inch-wide with ¼ inch radius for 4-inch-thick concrete and 1.5 inches deep by 1/8 inch wide with ¼ inch radius for 6 inch thick concrete and 2 inches deep by 1/8 inch wide with ¼ inch radius for 8 inch thick concrete. 1.5 and 2 inches contraction joints shall be saw to the depth required at the end of each day. Joint sealer is not required for contraction joints.

☐ On the day of demolition, make sure that the contractor has notified the property owners a second time that construction is getting ready to start. This is accomplished by the contractor walking to the door. This helps to ensure that a property owner who is at home can get any vehicle out before being blocked by construction. Within a maximum period of three (3) working days after tear-out of drive approaches, walk-ins and walk-outs, sidewalks, and curbs, the new concrete shall be placed.

☐ Make sure the contractor has appropriate equipment and trucks available to haul off debris. Demolition debris should be hauled off at the same time demolition is completed.

☐ In case of damage to a utility, the inspector shall make sure the contractor has notified the proper utility. If contractor has not, the inspector shall notify the appropriate utility. Contact numbers for the utilities are located on page 1180-1 of the project manual. Inspector shall document utility damage in the project diary.

☐ Once the contractor has set the forms, the inspector shall check alignment, elevation, subgrade, and the quality control of the materials placed. Refer to Section 02775-1 of the project manual for specific requirements.

☐ The inspectors shall contact the materials testing lab at 513-4720 and let them know when the soil, concrete, or asphalt can be tested.

☐ Inspector shall obtain all concrete and asphalt tickets and make sure the right concrete or asphalt mix design is being used for the project. Material tickets are to be kept in the project file.

☐ Inspectors should request testing of materials at least once in the AM and once in the PM. Inspectors shall document in the diary the construction location of where the testing materials were obtained. Inspectors should take the temperature of concrete when the ambient temperatures rise above 90°. When the concrete temperature is above 90°, the contractor shall be notified and must provide a method to lower concrete temperature prior to placement. If temperature cannot be lowered, the placement shall stop.

☐ Make sure utilities are adjusted. For example, manholes, sprinklers, water meters, hydrant valves, water valves, handrails, fencing, roof drains, etc.

☐ Make sure that the forms are removed. Ensure that the curbs, sidewalk, and driveways are backfilled, and all excess rock, concrete, asphalt, and debris is removed from the parkway before backfilling areas shall be accomplished within three (3) working days after the concrete placement.

☐ When concrete forms are removed from the curb and “honey comb” is present, the contractor shall grout open areas at the back of curb prior to backfilling.

☐ Make sure that the contractor removes their trash daily.

☐ Prior to asphalt placement, asphalt should be saw cut in a straight line, cleaned of lose debris, and tack coated with asphalt emulsion. Make sure that the contractor compacts the asphalt with a vibratory compactor or asphalt roller at the appropriate temperature for proper compaction.

☐ The asphalt used shall be Type III. Virgin or recycled asphalt shall be used.

☐ Do preliminary walk through for the concrete punch list. This should be completed with the project manager in attendance. Look for cracks, chips, and concrete placed out of specification.

- ☐ Contractor should rough backfill the curbs, sidewalk, and driveways after 48 hours.
- ☐ Contractor is required to inform the citizens with a door hanger within 24 hours after sidewalk backfill when sod or hydro seed will be installed on both sides of adjacent block faces.
- ☐ The contractor is responsible to place suitable soil of up to 6". It shall be top soil that is free from rocks, roots, and trash.
- ☐ Prior to sod or hydro seeding placement, make sure the contractor has cut-in the sodding where it ties into existing lawns and fertilizer has been spread. Make sure the sod is watered and rolled. Make sure the hydro seed is watered. Refer to Section 02920-1 of the project manual for specific requirements and Section 2400 of the Standards and Specifications Manual.
- ☐ Within a maximum period of ten (10) working days after all concrete is placed <u>on one side of a blockface</u>, the Contractor shall be required to complete all joint caulking, pavement restoration and sodding or hydro seeding.
- ☐ The inspector shall complete all field measurements as the job work progresses.
- ☐ Complete final walk through for final acceptance after sod is down or hydro seed is established, and the contractor has completed all caulking.
- ☐ Inspectors shall check all areas on the project where materials were stored to ensure that the areas have been properly restored.

Inspector Signature: _____ **Date:** _____

Supervisor Signature: _____ **Date:** _____

CRITERIA USED FOR IDENTIFYING PORTIONS OF SIDEWALKS, DRIVEWAYS, OR CURBS TO BE SUBSTANDARD (Revised 4/8/09)

This criteria defines the criteria that would cause a portion of sidewalk, driveway, or curb to be considered out of repair.

<u>Sidewalk and Sidewalk Areas Across Driveway</u>

1. Any square having a crack ¾ inch or more wide shall be replaced. (1/2 inch or more wide within the downtown loop.)*

2. An adjoining square whose edge differs vertically by more than ¾ inch shall be replaced. (1/2 inch within the downtown loop.)*

3. Any square that has multiple cracks or structurally unsound shall be replaced.

4. Any square that has a loose or missing piece(s) greater than 4 square inches shall be replaced.

5. Any square that is upheaved or depressed, thereby causing an abrupt change in grade beyond specification shall be replaced.

6. Any loose material used as a sidewalk shall be replaced.

7. Any square with intersecting cracks, loose aggregate, or a deteriorating surface shall be replaced.

8. Any curb abutting sidewalk is considered subject to the same criteria as for sidewalk condemnation.

9. Any material used as a sidewalk that fails to meet the strength and endurance standards established by Standard Plan shall be replaced.

10. Sidewalk that is 25 feet or less in length that is between two squares of sidewalk meeting criteria 1 through 9 above shall be replaced when necessary to provide positive drainage or to provide proper vertical alignment.

DRIVEWAY

1. Any driveway having a crack in it 1 inch or more wide shall be replaced. (1/2 inch or more wide within the downtown loop area.)*

2. Any driveway that differs vertically by more than 1 inch either above or below the sidewalk shall be replaced. (by more than ½ inch within the downtown loop area.)*

3. Any driveway that has a loose or missing piece(s) greater than 4 square inches shall be replaced.

4. Any driveway that is raveled or has surface spalling affecting more than 40% of the surface area shall be replaced.

5. Any driveway that cannot serve its intended purpose shall be removed and the area restored with curb, landscaping, and sidewalk as necessary.

Curb

1. Any curb having a measured height of 2 ½ inches or less above the street surface measured at the edge of pavement shall be replaced to the nearest joints.

2. Any curb having a gutter section of 4 inches or more below the street surface measured at the edge of pavement shall be replaced to the nearest joints.

3. Any curb that is raveled or has surface spalling affecting more than 40% of the surface area shall be replaced to the nearest joints.

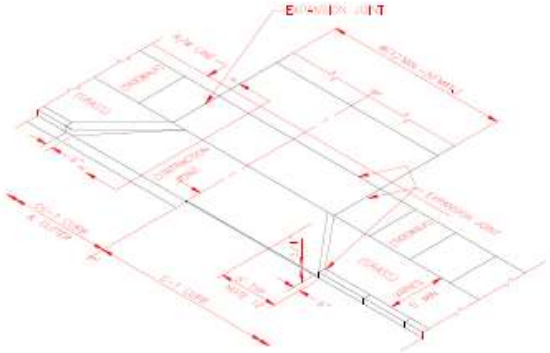
4. The vertical transition from the new curb to the existing curb shall not exceed a slope of ½" per foot.

(Example of acceptable slope)

5. Any section of curb that is 25 feet or less in length that is between two sections of curb meeting criteria 1 through 4 above shall be replaced to the nearest joints if the curb height is 5 ½ inches or less above the street surface measured at the edge of pavement.

**Downtown loop area defined as being bounded by Interstate 70 on the north and east, Interstate 35 on the south and Interstate 29 on the west.*

DRIVEWAY ENTRANCES



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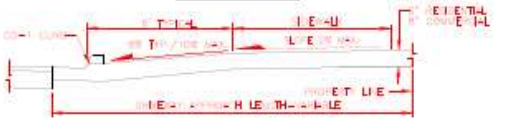
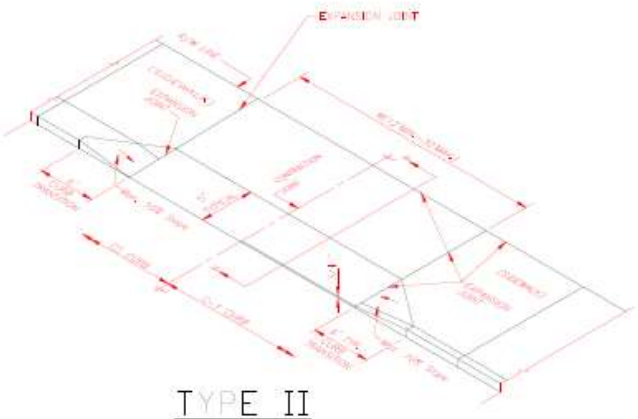
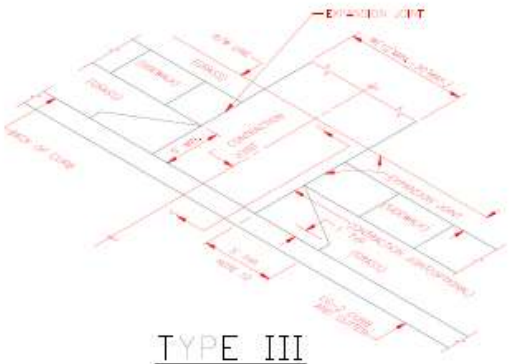


SECTION A–A (CC–1 CURB SHOWN)

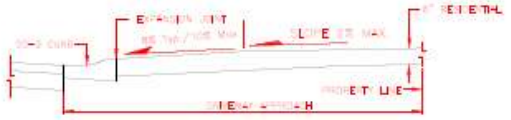


TYPE II

SECTION B–B (CS OR C–1 CURB)



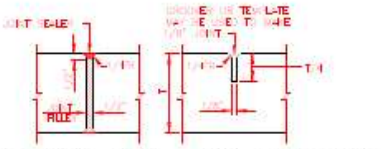
TYPE III



SECTION C–C (CG–2 CURB)

NOTES:

1. SIDEWALK CROSS SLOPES THROUGH DRIVEWAY MUST BE less than 2% MAX TO COMPLY WITH THE AMERICAN DISABILITY ACT.
2. THE TOP 6" OF DRIVEWAY SUBGRADE SHALL BE COMPACTED TO 95% OF STANDARD MAXIMUM DENSITY.
3. THAT PORTION OF THE DRIVE WITHIN STREET R.O.W. SHALL BE P.C.C. CONCRETE. CONCRETE SHALL CONFORM TO Section 2300.
4. EXPANSION JOINT FILLER AND JOINT SEALING COMPOUND SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2209.2.
5. CURING MEMBRANES SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2301.5
6. CURB TRANSITIONS ON DRIVEWAY FLARES ARE CONSIDERED PART OF DRIVEWAY.
7. IN CBD, 6 x 6-W2.9 x W2.9 REINFORCING SHALL BE PLACED IN CENTER OF SLAB THICKNESS.
8. ON PARK DEPT. PROPERTY USE TYPE VI ENTRANCE AND PLACE 6 x 6-W1.4 x W1.4 REINFORCING IN CENTER OF SLAB THICKNESS.
9. CONTRACTION JOINTS SHALL BE SPACED AT 12' MAX. BOTH DIRECTIONS.
10. FORM 3/4 " LIP AT PAVEMENT LINE ON DRIVES IN C-1 & CS CURBS.
11. MINIMUM SIDEWALK WIDTHS: 4' RESIDENTIAL, 5' HIGHER CLASS STREET
12. WHERE DRIVE WIDTH IS 14 FEET OR LESS FLARES SHALL BE 7.5 FEET WIDE AT CURB AND SHALL EXTEND AT A 45 ANGLE THROUGH THE SIDEWALK.
13. SIDEWALK SLOPE 2% MAX AT TIE IN.



EXPANSION JOINT CONTRACTION JOINT

JOINT DETAILS

Director of Public Works Date

Entry No.

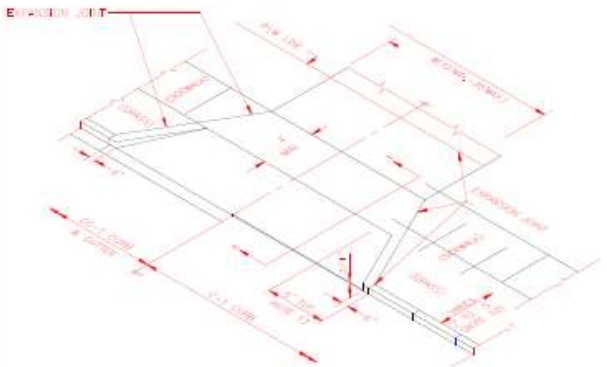
Kansas City, Missouri
Public Works Department
Engineering Division

DRIVEWAY ENTRANCES

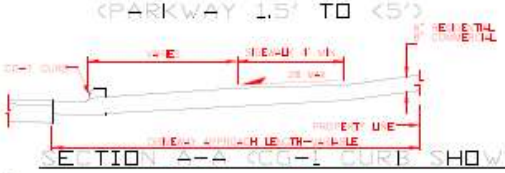
STANDARD DRAWING NUMBER

D-1

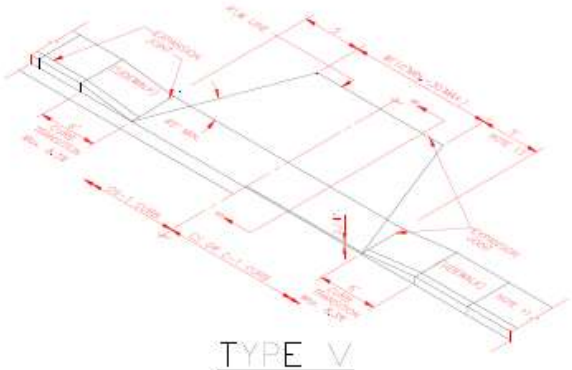
RECONSTRUCTED DRIVEWAYS



TYPE IV
(PARKWAY 1.5' TO <5')

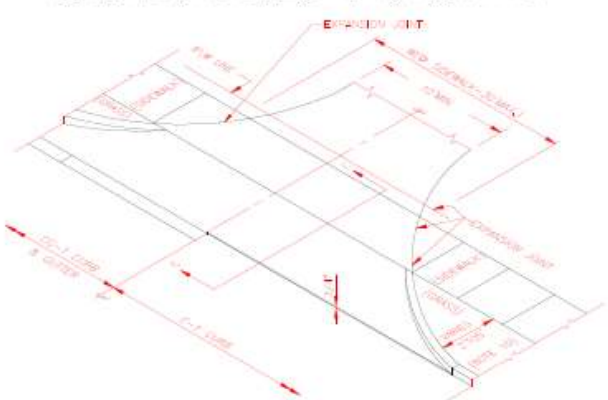


SECTION A-A (CG-1 CURB SHOWN)



TYPE V

SECTION B-B (CS CURB SHOWN)



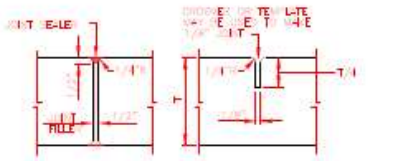
TYPE VI
(PARKWAY 1.5' TO <5')

SECTION C-C (CG-1 CURB SHOWN)

12' MINIMUM RADIUS ON A 10' WIDE DRIVE
10' MINIMUM RADIUS ON 12' WIDE A GREATER
SEE DRAWING C-1 FOR COMMERCIAL RADIUS

NOTES:

1. SIDEWALK CROSS SLOPES THROUGH DRIVEWAY MUST BE less than 2% MAX TO COMPLY WITH THE AMERICAN DISABILITY ACT.
2. THE TOP 6" OF DRIVEWAY SUBGRADE SHALL BE COMPACTED TO 95% OF STANDARD MAXIMUM DENSITY.
3. THAT PORTION OF THE DRIVE WITHIN STREET R.O.W. SHALL BE P.C.C. CONCRETE. CONCRETE SHALL CONFORM TO Section 2300.
4. EXPANSION JOINT FILLER AND JOINT SEALING COMPOUND SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2209.2.
5. CURING MEMBRANES SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2301.5
6. CURB TRANSITIONS ON DRIVEWAY FLARES ARE CONSIDERED PART OF DRIVEWAY.
7. IN CBD, 6 x 6-W2.9 x W2.9 REINFORCING SHALL BE PLACED IN CENTER OF SLAB THICKNESS.
8. ON PARK DEPT. PROPERTY USE TYPE VI ENTRANCE AND PLACE 6 x 6-W1.4 x W1.4 REINFORCING IN CENTER OF SLAB THICKNESS.
9. CONTRACTION JOINTS SHALL BE SPACED AT 12' MAX. BOTH DIRECTIONS.
10. FORM 3/4 " LIP AT PAVEMENT LINE ON DRIVES IN C-1 & CS CURBS.
11. IF PARKWAY IS 2' OR LESS, PAVE WITH CONCRETE AS PART OF THE SIDEWALK.
12. TYPE V ENTRANCE IS NOT RECOMMENDED FOR USE IN KANSAS CITY. CURB SIDE WALK MAY BE USED ON LOW TRAFFIC STREETS IN SITUATIONS WHERE NORMAL SIDEWALK SET BACKS WOULD REQUIRE THE CONSTRUCTION OF RETAINING WALLS
13. WHERE DRIVE WIDTH IS 14 FEET OR LESS FLARES SHALL BE 7.5 FEET WIDE AT CURB AND SHALL EXTEND AT A 45 ANGLE THROUGH THE SIDEWALK.
14. SIDEWALK SLOPE 2% MAX. AT TIE IN.



EXPANSION JOINT CONTRACTION JOINT

JOINT DETAILS

Director of Public Works Date

Entry No.

Kansas City, Missouri
Public Works Department
Engineering Division

RECONSTRUCTED DRIVEWAYS

STANDARD DRAWING NUMBER
D-2