

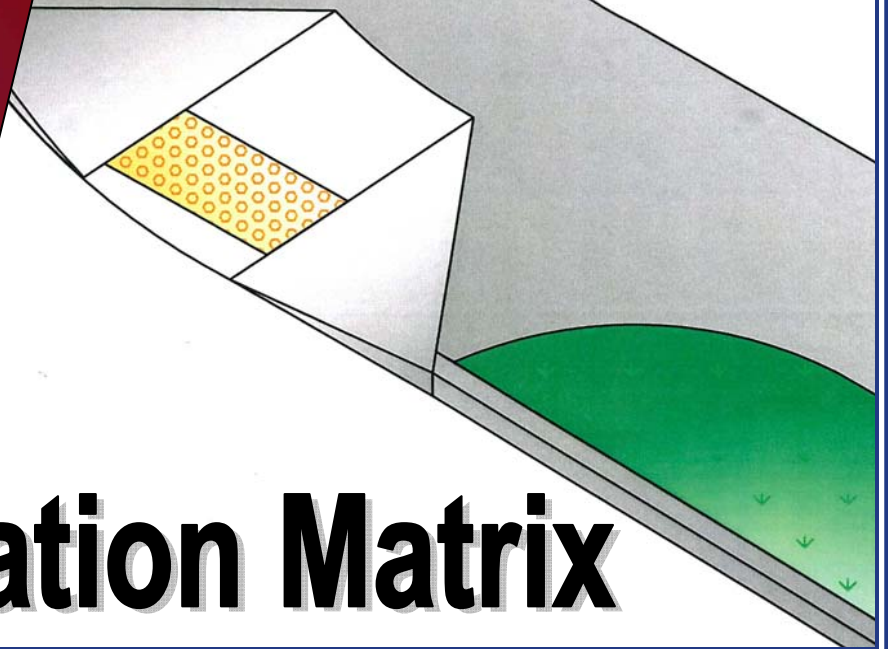


Ramp UP




City of Tacoma


Curb Ramp Installation Matrix




RAMP UP! - City of Tacoma's Curb Ramp Installation Matrix

 DESCRIPTION OF WORK	NEW CONSTR.	ALTERATION	MAINT.	COMMENTS
STREET PAVING				
New street paving or overlay through an intersection (Figures 1 & 2).	X			Sidewalk ramps, including receiving ramps, are required on all corners of the intersection where pedestrian crossings are permitted and curbing or sidewalk is present. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (page 3 of 4) for receiving ramp requirements.
Chip Seal or slurry seal street through an intersection.			X	No action required
New street paving or overlay greater than 50% of the roadway width (regardless of length), and up to or beyond a corner's radius (Figure 3).		X		Sidewalk ramps, including receiving ramps, are required on the leg of the intersection that the new street pavement approaches and where curbing or sidewalk is present. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (page 3 of 4) for receiving ramp requirements.
SIGNALS AND CROSSWALKS				
Construct a new traffic signal, or upgrade the existing traffic signal, including installation of audible pedestrian signal equipment (Figure 4).	X			Sidewalk ramps, including receiving ramps, are required on all corners of the intersection where pedestrian crossings are permitted and curb or sidewalk is present. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (page 3 of 4) for receiving ramp requirements.
Complete routine maintenance on a traffic signal where there is no alteration to the sidewalk or street			X	No action required.
Installation of a new pedestrian crosswalk (Figure 5).	X			Construct new, replace existing or retrofit sidewalk ramps (including receiving ramps) within the work area where pedestrian crossings are permitted and curb or sidewalk is present. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (page 3 of 4) for receiving ramp requirements.
Installation of a new pedestrian activated signal/flashing beacon for a new or existing crossing (Figure 5).	X			Construct new, replace existing or retrofit sidewalk ramps (including receiving ramps) within the work area where pedestrian crossings are permitted and where curbing or sidewalk is present. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (page 3 of 4) for receiving ramp requirements.
SIDEWALKS AND TRAILS				
New or reconstructed sidewalk or trail construction up to and/or within a corner's radius (Figure 6).	X			Sidewalk ramps, including receiving ramps, shall be upgraded/constructed on the leg of the intersection that the new sidewalk or trail approaches where curbing or sidewalk is present. The ramps on the corner's adjacent leg shall be upgraded/constructed if the proposed construction extends beyond the midpoint (>50%) of the corner's radius. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (page 3 of 4) for receiving ramp requirements.
Reconstruct sidewalk midblock (Figure 6).			X	No action required.
New or reconstructed sidewalk or trail that abuts or crosses an existing driveway or alley approach.	X			Replace driveway/alley approach per City standards, or construct and route a 4-foot wide (minimum) accessible sidewalk at the back of the driveway/alley. Layout shall be as acceptable to the City. Existing single family homes are exempt from improving driveways other than their own, and for constructing alley approach improvements.


RAMP UP! - City of Tacoma's Curb Ramp Installation Matrix

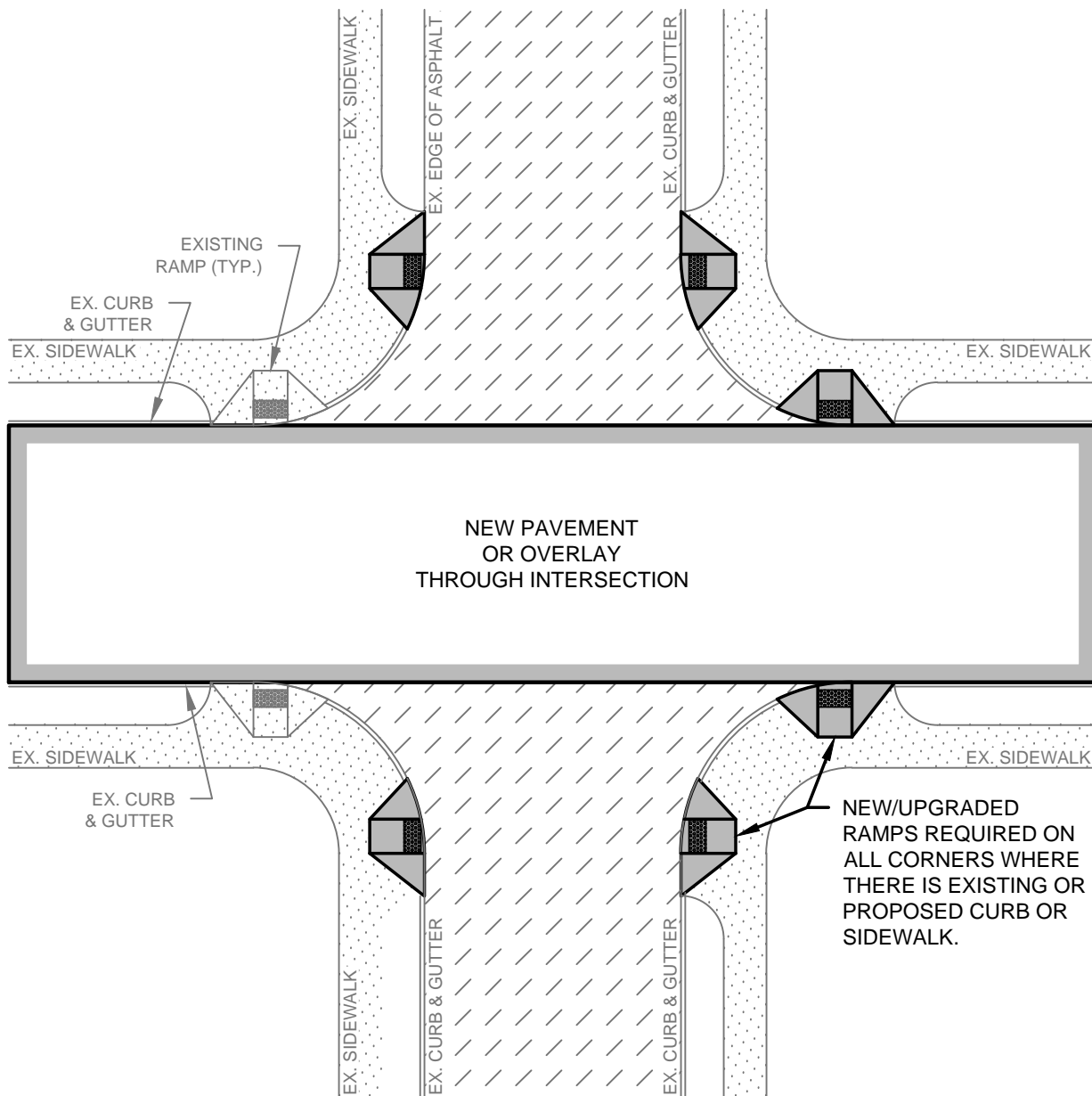
 DESCRIPTION OF WORK	NEW CONSTR.	ALTERATION	MAINT.	COMMENTS
CURB AND GUTTER				
New or reconstructed curb or curb and gutter up to or within a corner's radius (Figure 7).	X			Sidewalk ramps, including receiving ramps, shall be upgraded/constructed on the leg of the intersection that the new curb and/or gutter approaches. The ramps on the corner's adjacent leg shall be upgraded/constructed if the proposed construction extends beyond the midpoint (>50%) of the corner's radius. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (page 3 of 4) for receiving ramp requirements.
Replacing curb or curb and gutter midblock.			X	No action required.
UTILITY IMPROVEMENTS				
Utility excavations through an intersection requiring more than 50% of the intersection's total area to be removed (Figure 8).		X		Construct new, replace existing or retrofit sidewalk ramps (including receiving ramps) within the intersection where pedestrian crossings are permitted and where curbing or sidewalk is present. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (page 3 of 4) for receiving ramp requirements.
Utility excavations that impact more than 50% of a block's width (regardless of length), and extend up to or beyond a corner's radius.		X		See STREET PAVING category, Figure 3.
Planter strip trenching regardless of location.			X	No action required.
'A' STYLE CATCH BASIN				
Removal or replacement of an 'A' Style Catch Basin, or rehabilitation/upgrade of an 'A' Style Catch Basin where curb, gutter or sidewalk is impacted (Figure 9).		X		Construct new, replace existing or retrofit sidewalk ramps (including receiving ramps) only on the corner radius where the work takes place, where pedestrian crossings are permitted, and where curbing or sidewalk is present. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (page 3 of 4) for receiving ramp requirements.
Rehabilitation/upgrade of 'A' Style Catch Basin where no curb, gutter or sidewalk is impacted.			X	No action required.
ON-STREET PARKING				
Repaint existing on-street parking stalls.			X	No action required.
Layout modifications to existing on-street parking stalls (e.g., change parallel parking to angle parking).		X		Stripe new ADA accessible stalls (4% of parking stalls within a block must be ADA compliant), construct new ramps to provide sidewalk access. On-Street parking shall maintain a cross-slope of no more than 2% in any direction. One in every eight ADA accessible stalls (at least one) must be van accessible.
On-Street parking stall striping associated with new construction (e.g., new pavement/overlay, new parking areas within planter strip/ROW, etc.).	X			Stripe new ADA accessible stalls (4% of parking stalls within a block must be ADA compliant), construct new ramps to provide sidewalk access. On-Street parking shall maintain a cross-slope of no more than 2% in any direction. One in every eight ADA accessible stalls (at least one) must be van accessible.
On-Street accessible parking stalls requested by citizens or commercial businesses.		X		Accessible parking stalls shall be installed per the City's existing policy for on-street parking. Accessible parking curb ramp requirements shall be determined by the Engineering Division, Traffic Section.

RAMP_UP! - City of Tacoma's Curb Ramp Installation Matrix

 DESCRIPTION OF WORK	NEW CONSTR.	ALTERATION	MAINT.	COMMENTS
MISCELLANEOUS STRIPING				
Installation of Bike Lanes			X	No action required.
Lane Reconfiguration			X	No action required.
RECEIVING RAMP CONSTRUCTION				
If a ramp is upgraded/constructed and an existing receiving ramp is present, will the existing receiving ramp be upgraded or reconstructed?	X	X		The existing receiving ramp shall be upgraded/reconstructed if more than two (2) barriers to accessibility exist. Receiving ramp barriers are identified in the <u>POTENTIAL RECEIVING RAMP BARRIERS</u> section of the <u>GENERAL NOTES</u> (page 4). The City shall make the final determination regarding the need for a ramp upgrade or its reconstruction.
If a ramp is upgraded/constructed and an existing receiving ramp is NOT present, will a new ramp be constructed?	X			If there is no receiving ramp present, a receiving structure/ramp shall be constructed per the <u>POTENTIAL RECEIVING RAMP BARRIERS</u> section of the <u>GENERAL NOTES</u> (page 4). Ramp construction scenarios are presented on Figure 10.
OTHER				
Tree installation or removal without curb, gutter or sidewalk impacts.	X			Does not change use, no action required. Maintain clear accessible path in accordance with City requirements.
Speed hump installation without impact to curb, gutter, sidewalk, or pedestrian route.	X			Does not change use, no action required.
Traffic Circle	X			Traffic circles will be evaluated on a case-by-case basis by City staff.
Roundabout	X			Construct sidewalk ramps, including receiving ramps, on all corners of the intersection where curbing or sidewalk is present. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (see above) for receiving ramp requirements.
Pedestrian Island	X			Construct new, replace existing or retrofit sidewalk ramps (including receiving ramps) only for the leg of the intersection to which the pedestrian island applies. If a receiving ramp already exists, it shall be upgraded or replaced if more than two (2) barriers to accessibility exist. See the RECEIVING RAMP CONSTRUCTION category (see above) for receiving ramp requirements.

RAMP UP! - City of Tacoma's Curb Ramp Installation Matrix

	DESCRIPTION OF WORK	NEW CONSTR.	ALTERATION	MAINT.	COMMENTS
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><u>GENERAL NOTES</u></p> <ul style="list-style-type: none"> All measurements shall be as determined by the City. All curb ramp construction/upgrades shall be built concurrent with all other planned work. Arterial and mid-block crossings shall be as approved by the City. All roadway restoration shall be in accordance with the City's Pavement Restoration Policy. Directional ramps are preferred over 45-degree ramps. Forty-Five (45) degree ramps shall be installed only after approval by the City's ADA Coordinator and/or the Construction Division Manager. Installation of one 45-degree ramp will require the installation/upgrade of at least two, possibly three, additional 45-degree receiving ramps (full intersection ramp build out). All curb ramp designs shall be stamped by a licensed Professional Engineer. If meeting the current design standards is not possible, ramps shall be constructed to the maximum extent feasible as indicated by an Engineer's note on the stamped drawings. Rationale supporting the design variance shall include a description of the scope of work, the site-specific factors affecting compliance, and the measures implemented to improve compliance. </div> <div style="width: 48%;"> <p><u>POTENTIAL RECEIVING RAMP BARRIERS</u> (more than 2 req'd for upgrade/replacement of existing receiving ramps)</p> <ul style="list-style-type: none"> A longitudinal slope greater than 8.33%, but less than or equal to 10%. A cross slope greater than 2%, but less than or equal to 4%. Non-compliant or absent landings. Change in level (not flush) at grade breaks. No wings or pedestrian/return curbs on ramp. Out of alignment with opposing ramp. <p>(A ramp with a longitudinal or cross slope greater than 10% or 4%, respectively, shall be considered non-compliant and shall require replacement.)</p> <p><u>RECEIVING RAMP CONSTRUCTION GUIDELINES</u></p> <ul style="list-style-type: none"> If only <u>concrete curbing</u> (no sidewalk) exists at a crossing's receiving end, a concrete ramp/wings/landing (up to 4'x4') shall be constructed as directed by the City. If only <u>sidewalk</u> (no concrete curb) exists at a crossing's receiving end, a temporary asphalt ramp/wings/landing (up to 4'x4') shall be constructed as directed by the City. If there is <u>no sidewalk and curb</u> at a crossing's receiving end, the curb shall be modified and a asphalt landing (up to 4'x4') shall be constructed as directed by the City. <u>See Figure 10 for receiving ramp construction requirements.</u> </div> </div>					



NOTES:

SEE FIGURES 2, 3 AND 8 FOR ADDITIONAL STREET PAVING REQUIREMENTS.

RAMP CONSTRUCTION IS REQUIRED IF THERE IS SIDEWALK OR CURB PRESENT AT EITHER END OF THE PEDESTRIAN CROSSING. SEE FIGURE 10 FOR THE VARIOUS RAMP CONSTRUCTION SCENARIOS.

SEE THE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

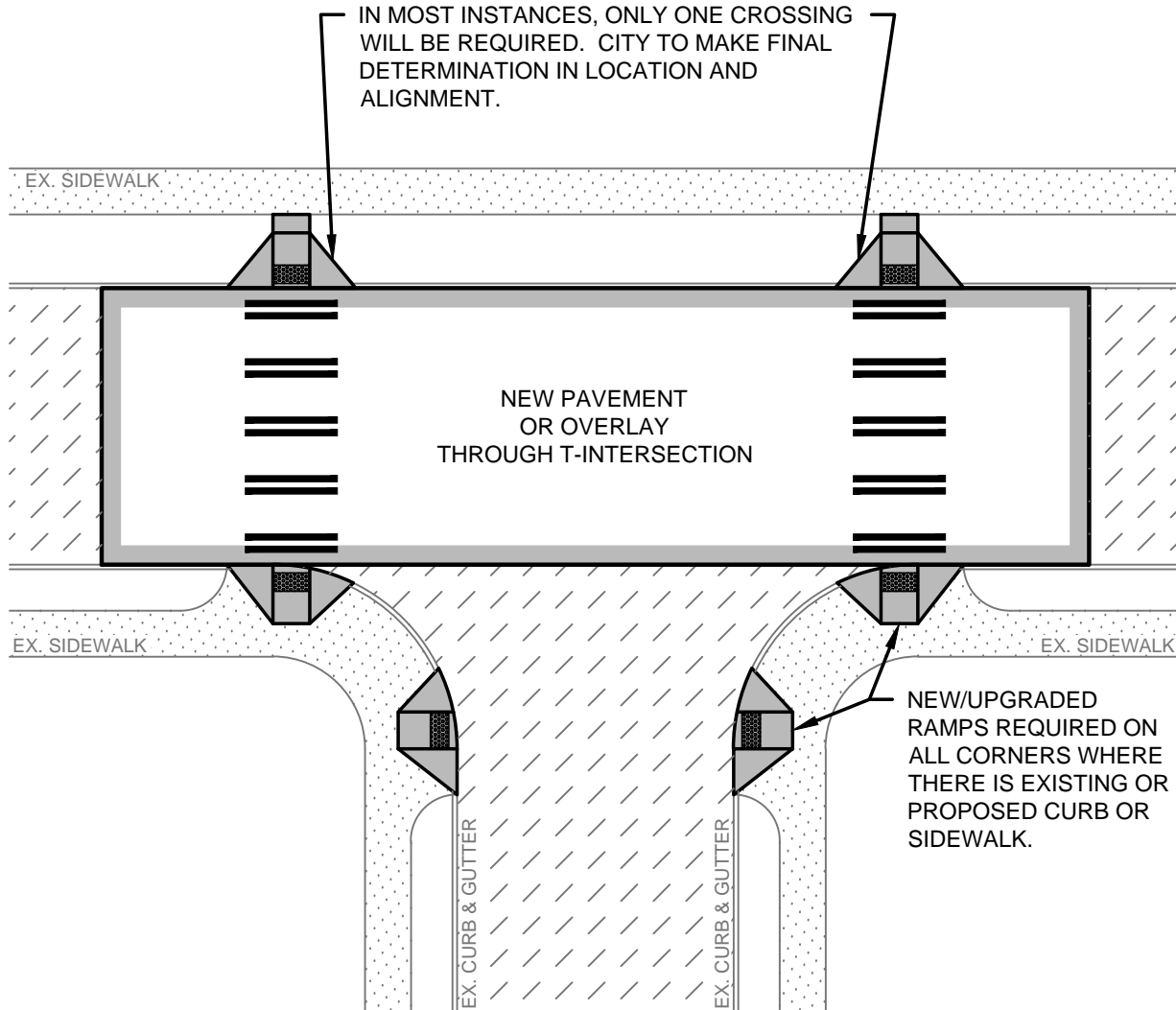
<p>CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS</p>	<p>CURB RAMP INSTALLATION MATRIX</p>	<p>FIGURE 1 STREET PAVING IMPROVEMENTS FULL INTERSECTION</p>
	<p>ISSUED: MARCH 21, 2011</p>	

NOTES:

SEE FIGURES 1, 3 AND 8 FOR ADDITIONAL STREET PAVING REQUIREMENTS.

RAMP CONSTRUCTION IS REQUIRED IF THERE IS SIDEWALK OR CURB PRESENT AT EITHER END OF THE PEDESTRIAN CROSSING. SEE FIGURE 10 FOR THE VARIOUS RAMP CONSTRUCTION SCENARIOS.

SEE THE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

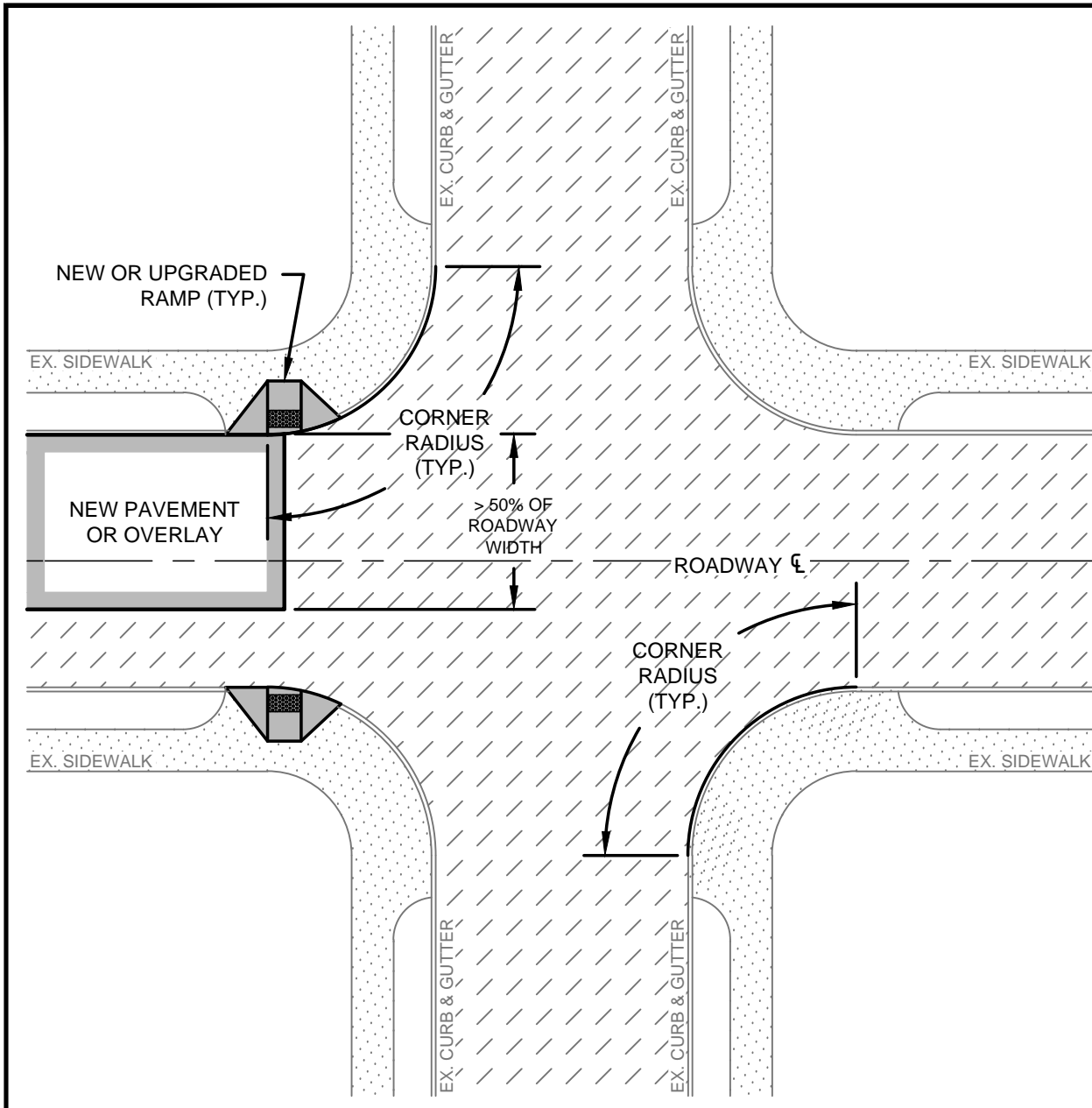


CURB RAMP INSTALLATION MATRIX

**FIGURE 2
STREET PAVING IMPROVEMENTS
T-INTERSECTION**

**CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS**

ISSUED: MARCH 21, 2011



NOTES:

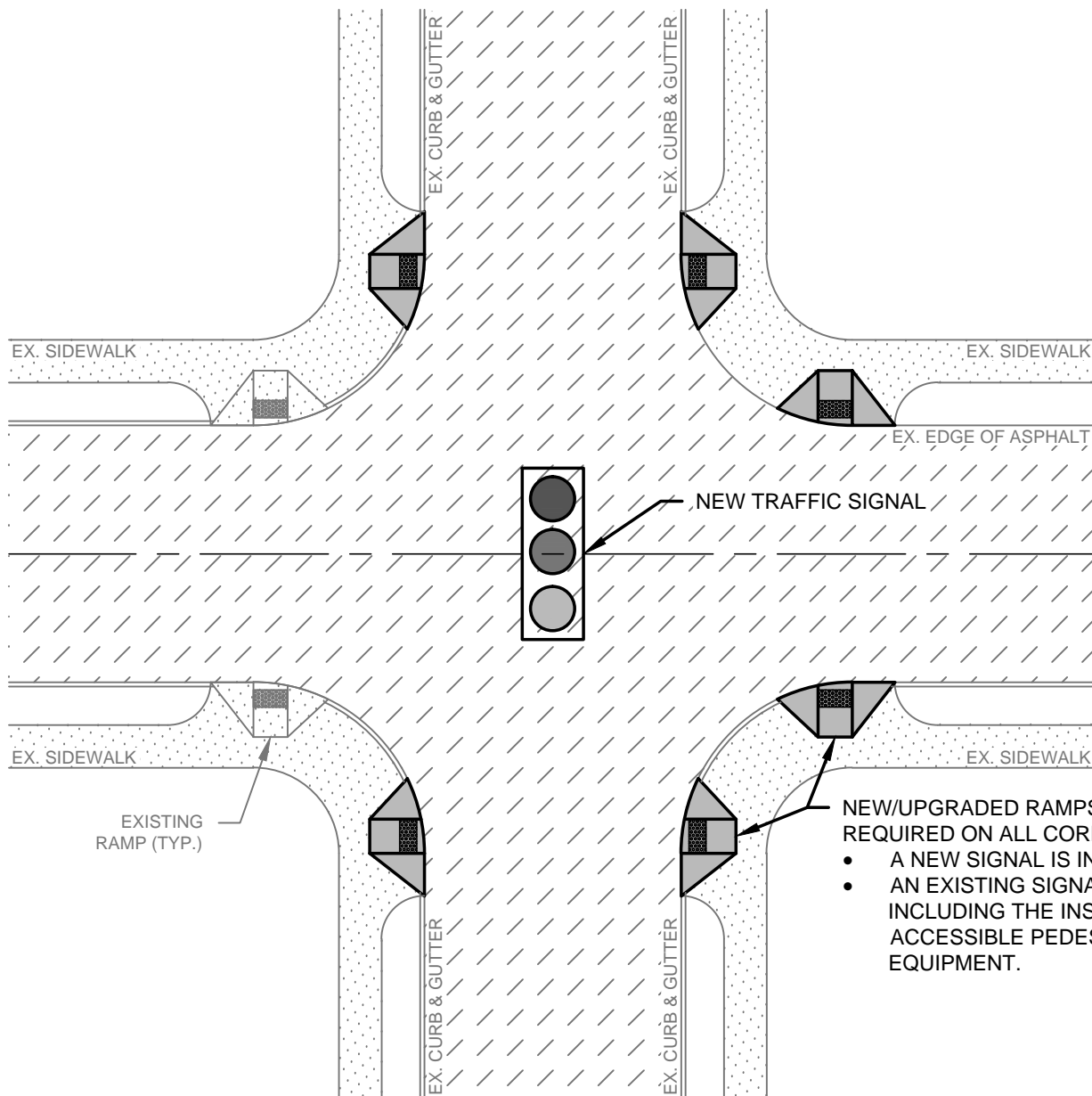
- NEW/UPGRADED RAMPS REQUIRED WHEN:
- PAVEMENT/OVERLAY EXTENDS UP TO OR WITHIN THE CORNER'S RADIUS; AND
 - PAVEMENT/OVERLAY IS GREATER THAN 50% OF ROADWAY WIDTH (REGARDLESS OF PAVEMENT/OVERLAY LENGTH).

FOR RAMP REQUIREMENTS WHEN THE PAVING/OVERLAY EXTENDS INTO THE INTERSECTION, SEE FIGURES 1, 2 AND 8.

RAMP CONSTRUCTION IS REQUIRED IF THERE IS SIDEWALK OR CURB PRESENT AT EITHER END OF THE PEDESTRIAN CROSSING. SEE FIGURE 10 FOR THE VARIOUS RAMP CONSTRUCTION SCENARIOS.

SEE THE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

<p>CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS</p>	<p>CURB RAMP INSTALLATION MATRIX</p>	<p>FIGURE 3 STREET PAVING IMPROVEMENTS ABUTTING INTERSECTION</p>
	<p>ISSUED: MARCH 21, 2011</p>	



NOTE:

RAMP CONSTRUCTION IS REQUIRED IF THERE IS SIDEWALK OR CURB PRESENT AT EITHER END OF THE PEDESTRIAN CROSSING. SEE FIGURE 10 FOR THE VARIOUS RAMP CONSTRUCTION SCENARIOS.

SEE THE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

INSTALLATION OF ACCESSIBLE PEDESTRIAN SIGNAL (APS) SYSTEMS SHALL COMPLY WITH THE LATEST VERSION OF PROWAG.

CONDUIT FOR APS EQUIPMENT SHALL BE INSTALLED DURING CURB RAMP CONSTRUCTION AT ALL SIGNALIZED INTERSECTIONS AND AT INTERSECTIONS WHERE SIGNALIZATION IS ANTICIPATED WITHIN THE NEXT 6 YEARS. COORDINATE WITH PUBLIC WORKS - ENGINEERING, TRAFFIC SECTION.

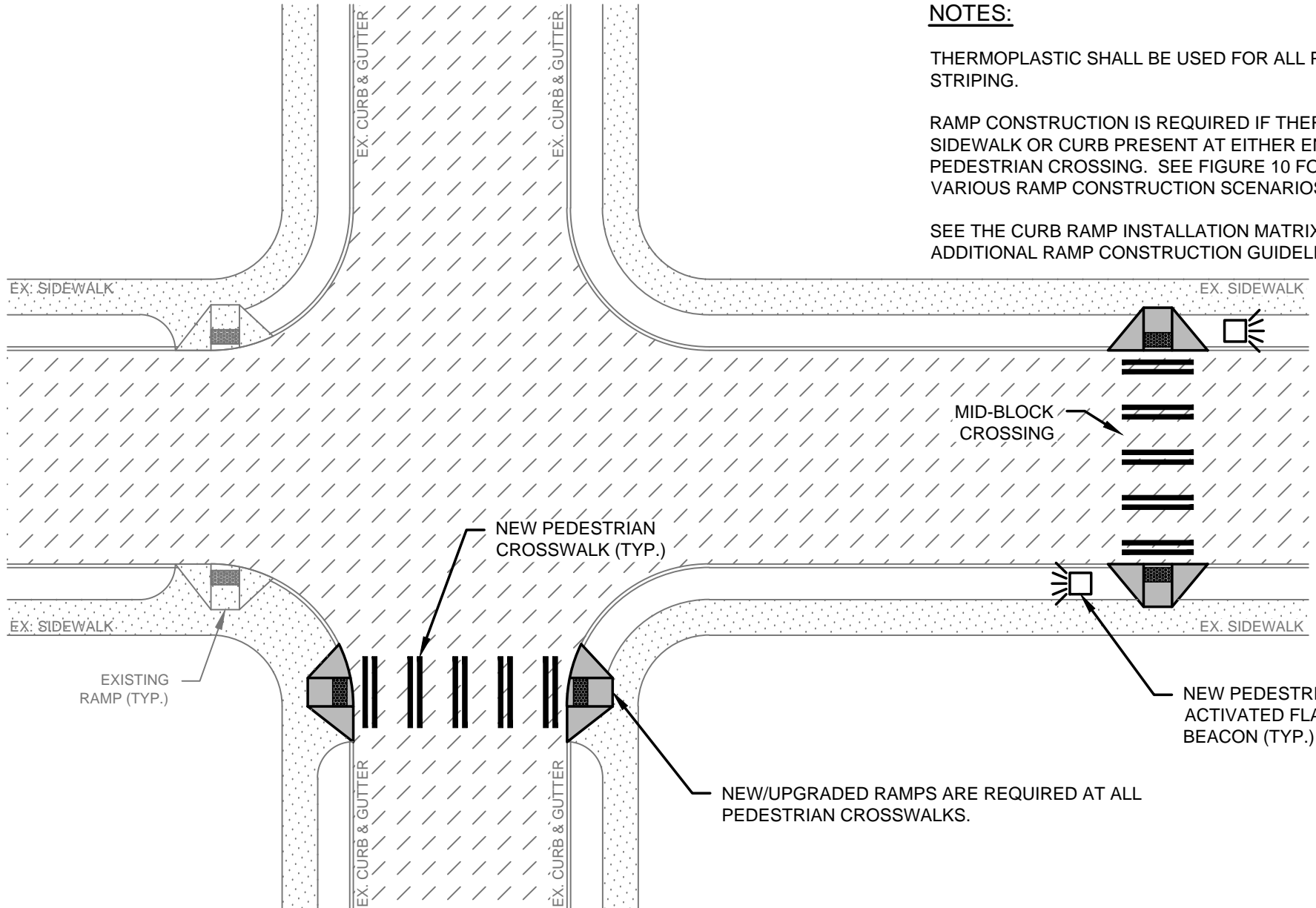
- NEW/UPGRADED RAMPS (TYP.) REQUIRED ON ALL CORNERS WHEN:
- A NEW SIGNAL IS INSTALLED; OR
 - AN EXISTING SIGNAL IS UPGRADED, INCLUDING THE INSTALLATION OF ACCESSIBLE PEDESTRIAN SIGNAL EQUIPMENT.

CURB RAMP INSTALLATION MATRIX

**FIGURE 4
TRAFFIC SIGNAL IMPROVEMENTS**

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ISSUED: MARCH 21, 2011



NOTES:

THERMOPLASTIC SHALL BE USED FOR ALL PEDESTRIAN STRIPING.

RAMP CONSTRUCTION IS REQUIRED IF THERE IS SIDEWALK OR CURB PRESENT AT EITHER END OF THE PEDESTRIAN CROSSING. SEE FIGURE 10 FOR THE VARIOUS RAMP CONSTRUCTION SCENARIOS.

SEE THE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

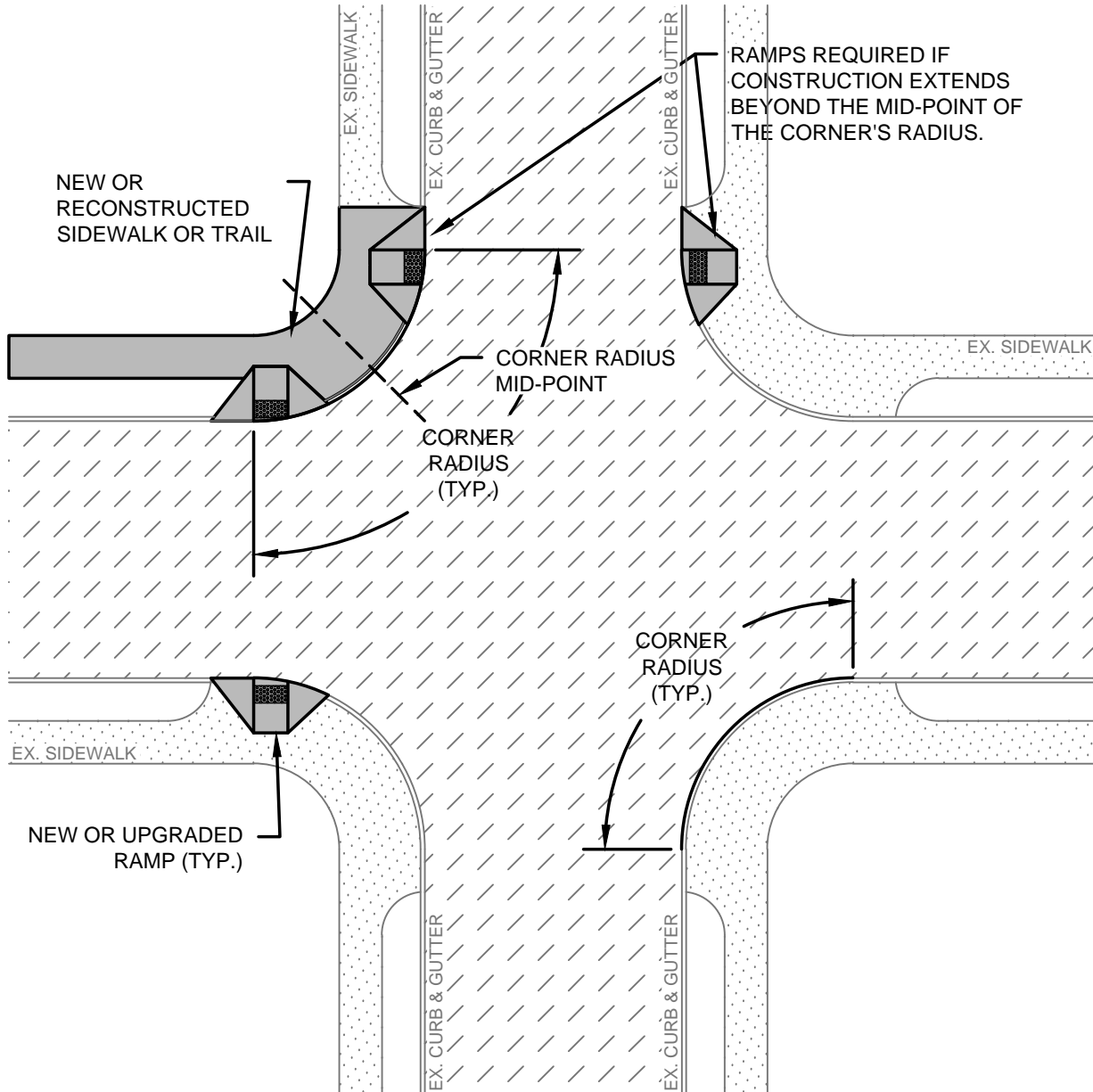
NEW/UPGRADED RAMPS ARE REQUIRED AT ALL PEDESTRIAN CROSSWALKS.

CURB RAMP INSTALLATION MATRIX

**FIGURE 5
PEDESTRIAN CROSSWALK
IMPROVEMENTS**

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DEPARTMENT OF PUBLIC WORKS**

ISSUED: MARCH 21, 2011



NOTES:

NEW/UPGRADED RAMPS REQUIRED WHEN NEW OR RECONSTRUCTED SIDEWALK OR TRAIL IS INSTALLED UP TO OR WITHIN THE CORNER'S RADIUS.

RAMP UPGRADE/CONSTRUCTION IS REQUIRED ON THE LEG OF THE INTERSECTION THE CONSTRUCTION APPROACHES, INCLUDING ON THE ADJACENT LEG IF CONSTRUCTION EXTENDS BEYOND THE MIDPOINT OF THE CORNER'S RADIUS.

EXISTING SINGLE FAMILY HOMES ARE EXEMPT FROM SIDEWALK RAMP, ALLEY APPROACH, AND DRIVEWAY (OTHER THAN THEIR OWN) CONSTRUCTION REQUIREMENTS.

RAMP CONSTRUCTION IS REQUIRED IF THERE IS SIDEWALK OR CURB PRESENT AT EITHER END OF THE PEDESTRIAN CROSSING. SEE FIGURE 10 FOR THE VARIOUS RAMP CONSTRUCTION SCENARIOS.

SEE THE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

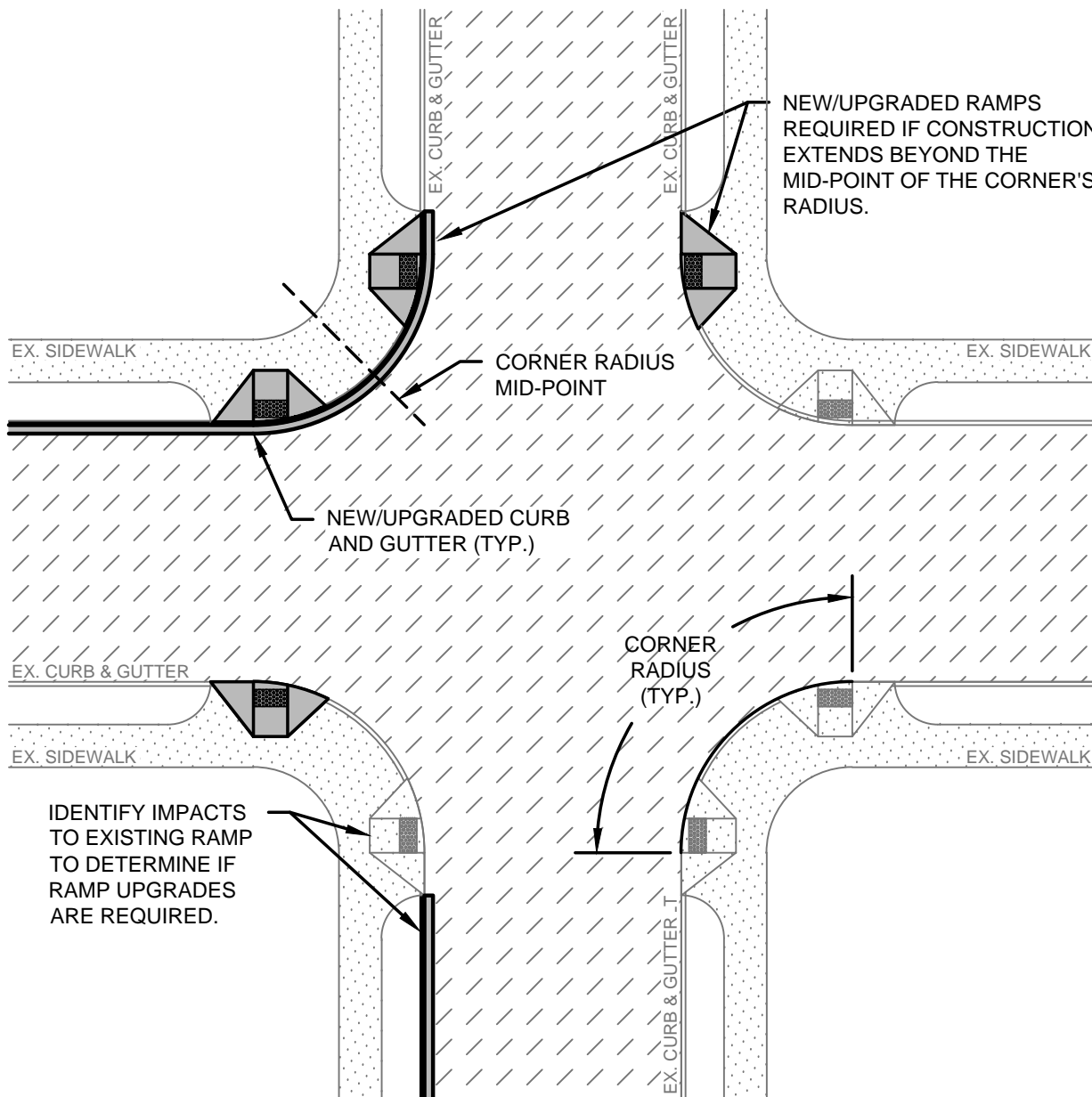
RECONSTRUCT SIDEWALK MID-BLOCK/OUTSIDE THE CORNER RADIUS, NO RAMPS REQUIRED. SEE SIDEWALK MAINTENANCE POLICY FOR ADDITIONAL INFORMATION.

CURB RAMP INSTALLATION MATRIX

**CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS**

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**FIGURE 6
SIDEWALK AND TRAIL IMPROVEMENTS**



NOTES:

NEW/UPGRADED RAMPS REQUIRED WHEN NEW/UPGRADED CURB AND/OR GUTTER EXTENDS UP TO OR WITHIN THE CORNER'S RADIUS.

RAMP UPGRADE/CONSTRUCTION IS REQUIRED ON THE LEG OF THE INTERSECTION THE CONSTRUCTION APPROACHES, INCLUDING ON THE ADJACENT LEG IF CONSTRUCTION EXTENDS BEYOND THE MIDPOINT OF THE CORNER'S RADIUS.

EXISTING SINGLE FAMILY HOMES ARE EXEMPT FROM SIDEWALK RAMP, ALLEY APPROACH, AND DRIVEWAY (OTHER THAN THEIR OWN) CONSTRUCTION REQUIREMENTS.

IF RAMPS ARE LOCATED OUTSIDE THE CORNER'S RADIUS, BUT IMPACTED BY CURB AND/OR GUTTER IMPROVEMENTS, RAMPS SHALL BE REPLACED OR UPGRADED AS DESCRIBED ABOVE OR AS REQUIRED BY THE CITY.

RAMP CONSTRUCTION IS REQUIRED IF THERE IS SIDEWALK OR CURB PRESENT AT EITHER END OF THE PEDESTRIAN CROSSING. SEE FIGURE 10 FOR THE VARIOUS RAMP CONSTRUCTION SCENARIOS.

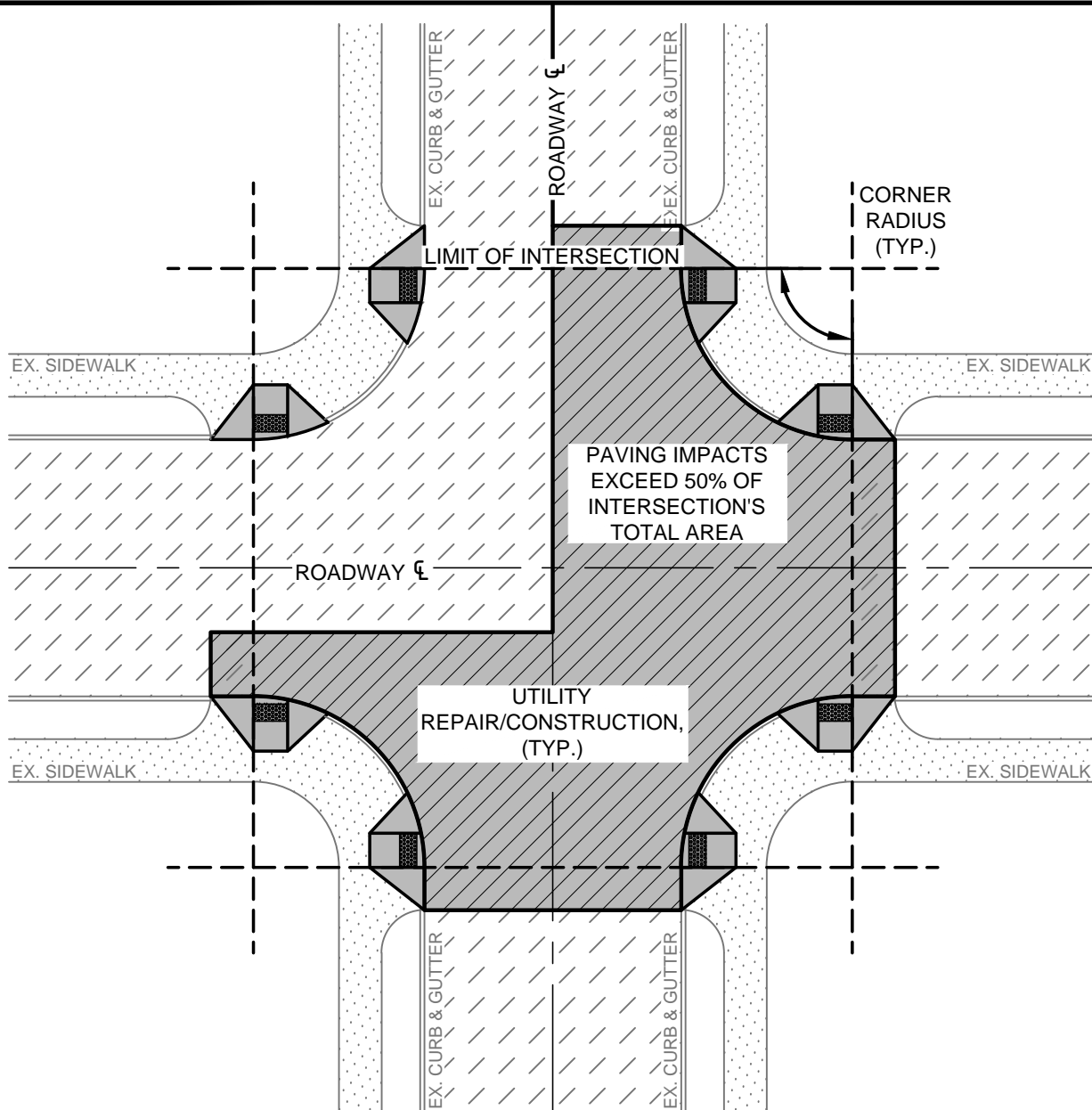
SEE THE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

CURB RAMP INSTALLATION MATRIX

**FIGURE 7
CURB AND GUTTER IMPROVEMENTS**

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NOTES:

NEW/UPGRADED RAMPS REQUIRED ON ALL CORNERS WHEN UTILITY REPAIR/CONSTRUCTION REQUIRES MORE THAN 50% OF THE INTERSECTION'S TOTAL AREA.

SEE FIGURE 3 FOR RAMP REQUIREMENTS WHEN PAVING IS LESS THAN 50% OF THE INTERSECTION'S AREA.

RAMP CONSTRUCTION IS REQUIRED IF THERE IS SIDEWALK OR CURB PRESENT AT EITHER END OF THE PEDESTRIAN CROSSING. SEE FIGURE 10 FOR THE VARIOUS RAMP CONSTRUCTION SCENARIOS.

SEE THE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

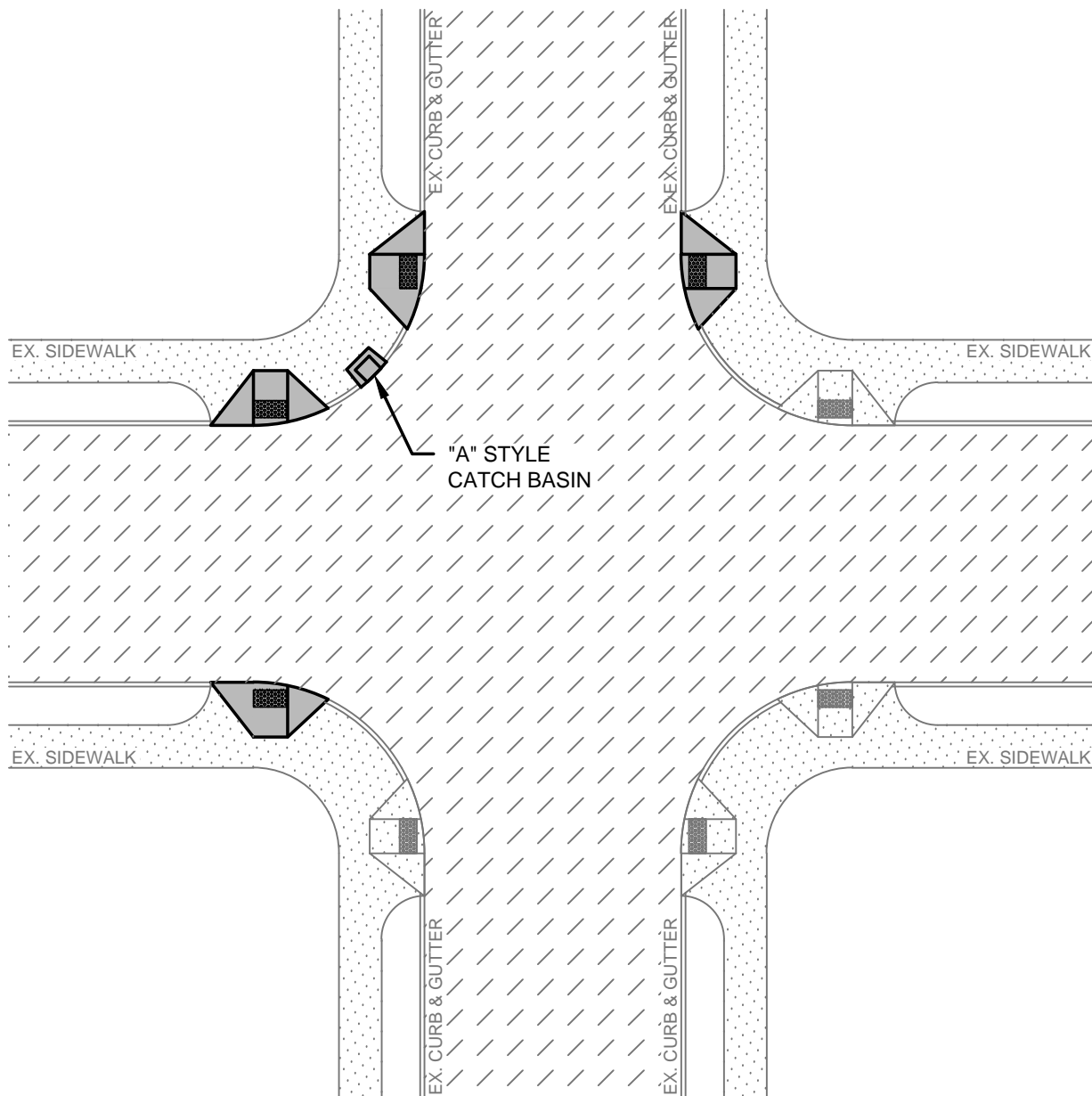
 AREA WHERE UTILITY REPAIR/CONSTRUCTION/STREET RESTORATION IS PLANNED.

CURB RAMP INSTALLATION MATRIX

**FIGURE 8
UTILITY IMPROVEMENTS
FULL INTERSECTION**

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DEPARTMENT OF PUBLIC WORKS**

ISSUED: MARCH 21, 2011



NOTES:

NEW/UPGRADED RAMPS ARE REQUIRED ON ADJACENT LEGS OF THE INTERSECTION WHEN:

- AN 'A' STYLE CATCH BASIN IS REMOVED OR REPLACED; OR
- AN 'A' STYLE CATCH BASIN IS REHABILITATED/UPGRADED AND CURB OR SIDEWALK IS IMPACTED.

RAMP CONSTRUCTION IS REQUIRED IF THERE IS SIDEWALK OR CURB PRESENT AT EITHER END OF THE PEDESTRIAN CROSSING. SEE FIGURE 10 FOR THE VARIOUS RAMP CONSTRUCTION SCENARIOS.

SEE THE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

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CURB RAMP INSTALLATION MATRIX

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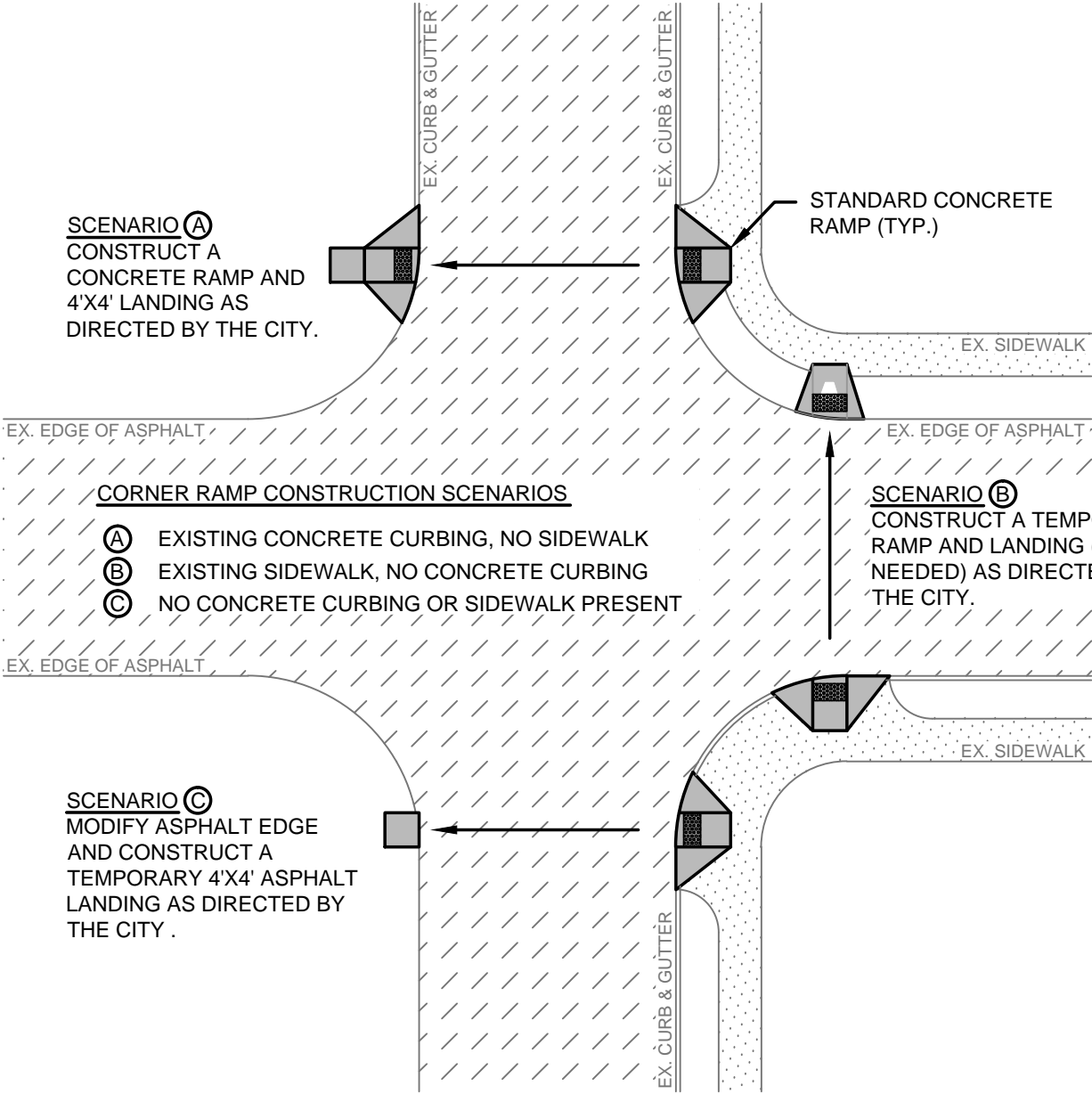
**FIGURE 9
CATCH BASIN IMPROVEMENTS**

NOTES:

SEE CURB RAMP INSTALLATION MATRIX FOR ADDITIONAL RAMP CONSTRUCTION GUIDELINES.

TEMPORARY RAMPS AND LANDINGS MAY BE CONSTRUCTED OUT OF ASPHALT (2" OF 3/8" COMMERCIAL HMA OVER 3" CSTC) OR CONCRETE PER **STANDARD PLAN SU-04**.

TACTILE SURFACES ARE REQUIRED ON ALL RAMPS AND LANDINGS. VANGUARD, OR EQUIVALENT, MAY BE APPLIED TO ASPHALT PAVEMENT.



SCENARIO A
CONSTRUCT A CONCRETE RAMP AND 4'X4' LANDING AS DIRECTED BY THE CITY.

STANDARD CONCRETE RAMP (TYP.)

CORNER RAMP CONSTRUCTION SCENARIOS

- A EXISTING CONCRETE CURBING, NO SIDEWALK
- B EXISTING SIDEWALK, NO CONCRETE CURBING
- C NO CONCRETE CURBING OR SIDEWALK PRESENT

SCENARIO B
CONSTRUCT A TEMPORARY RAMP AND LANDING (AS NEEDED) AS DIRECTED BY THE CITY.

SCENARIO C
MODIFY ASPHALT EDGE AND CONSTRUCT A TEMPORARY 4'X4' ASPHALT LANDING AS DIRECTED BY THE CITY.

CURB RAMP INSTALLATION MATRIX

**FIGURE 10
RAMP CONSTRUCTION SCENARIOS**

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