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# ADA Transition Plan

## City of Ridgecrest



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## Table of Contents

I.	PROJECT DESCRIPTION .....	3
II.	PROJECT METHODOLOGY .....	3
III.	DOCUMENTING EXISTING CONDITIONS .....	4
IV.	CURB RETURN DATA ANALYSIS .....	8
V.	DRIVEWAY DATA ANALYSIS .....	12
VI.	ADA CURB RAMP AND DRIVEWAY PRIORITIZATION CRITERIA .....	15
VII.	PAVEMENT DAMAGE ANALYSIS .....	15
VIII.	ADA TRANSITION PLAN: CAPITAL IMPROVEMENT PROGRAM.....	18
	APPENDICES .....	21

## I. PROJECT DESCRIPTION

Willdan was retained by the City of Ridgecrest to provide professional engineering services for:

- A complete field survey and evaluation of existing curb returns
- Prepare a multi-year ADA Transition Plan
- Design replacement of ADA compliant curb return ramps
- Provide bidding assistance and construction inspection for the construction of the ADA curb return ramps

The improvements will address accessibility needs within a project area bounded by China Lake Boulevard on the east, Downs Street on the west, Las Flores Avenue on the north, and Upjohn Avenue on the south. Not included in this project are the east side of China Lake Blvd., the west side of Downs St., the north side of Las Flores Ave and the south side of Upjohn Ave.

Within this project area, there are 111 intersections. The following nine intersections were excluded because design of ADA accessibility improvements for these intersections has already been completed:

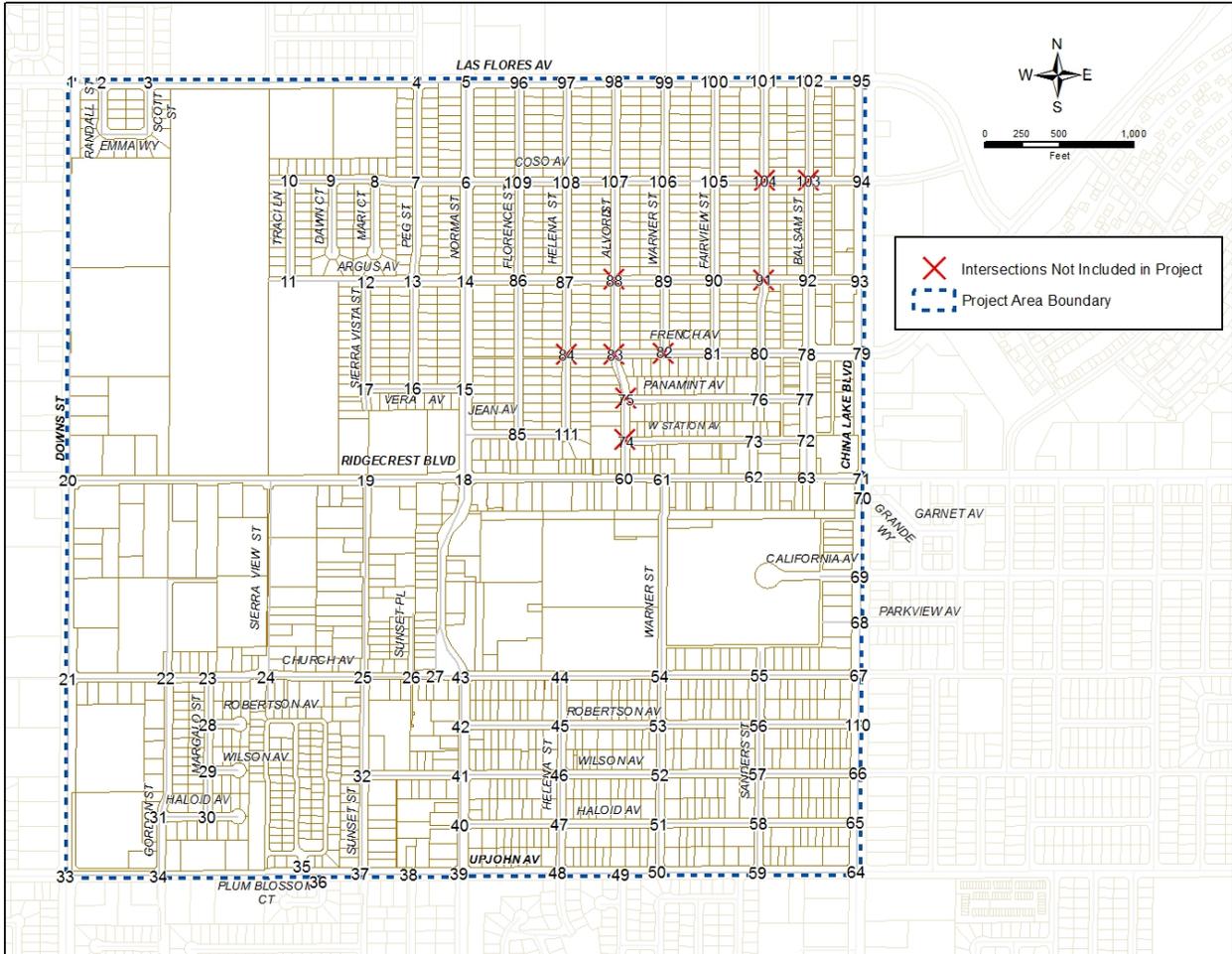
- Sanders Street and Coso Avenue
- Balsam Street and Coso Avenue
- Sanders Street and Argus Avenue
- Alvord Street and Argus Avenue
- Helena Street and French Avenue
- Warner Street and French Avenue
- Alvord Street and French Avenue
- Alvord Street and Panamint Avenue
- Alvord Street and Station Avenue

The City has directed Willdan to use the *Americans with Disabilities Act Title II Regulations 28 CFR Part 35*, more commonly referred to as the *1991 Standards*, to evaluate existing ADA curb ramps.

## II. PROJECT METHODOLOGY

Willdan assigned numbers to the intersections within the project area. The intersection corner location, NE, NW, SE or SW was appended to the intersection number to create a location ID, e.g. 1 NE, 2 SW, etc. These intersection ID's appear in the inspection and analysis results tables prepared for this project, making it easier to associate a particular table record with its location. The cross-street names for each location are also provided in the results tables.

There is a total of 253 intersection corners included in this project. A map depicting the project location, including the ID numbers assigned to each intersection, is provided in the following figure:



PROJECT LOCATION WITH ASSIGNED INTERSECTION ID'S

Willdan will prepare a plan to address the highest priority locations first and to construct the remaining improvements in phases to comport with the City’s budget constraints.

### III. DOCUMENTING EXISTING CONDITIONS

A field survey was performed to document the existing conditions of curb returns (with or without curb ramps) within the project area. Data was collected with *Trimble Juno SB* GPS handheld field computers utilizing a customized data collection application developed with ESRI *ArcPad* mobile GIS software.



All curb returns included in this project were surveyed. Locations with no curb ramps were noted and measurements made to provide data needed for design of curb ramps at those locations. Existing curb ramps were measured to determine whether they comply with 1991 ADA standards. Information collected included:

- Curb height
- Gutter width
- Sidewalk width
- Ramp Case
- Presence and condition of detectable warning surface (a.k.a. truncated dome)
- Ramp width
- Ramp depth
- Ramp slope
- Ramp cross slope
- Presence or absence of ramp lip
- Landing width
- Landing depth
- Landing slope
- Landing cross slope
- Wing slope
- Type and degree of damaged pavement, curb and/or gutter if any

A photograph of each intersection corner was taken with the GPS unit's built-in camera. The photo's JPG file name was automatically written into a *PHOTO\_FILE* attribute table field prepared for the purpose. This information allows each photo to be associated with its corresponding table record and will allow easy hyperlinking of the photos to the intersection corner location points in the City's new *ADA Curb Ramp* GIS layer, part of the deliverables for this project.

The following parameters were used as the basis of how pavement, curb or gutter damage was assessed and analyzed: *Type*, *Degree*, and *Cause*. These parameters are described in detail as follows:

Type of damage is divided into the following categories:

- Cracks/Fractures
- Surface Distress
- Uplift
- Depressions

Degree of damage (offsets) is evaluated as follows:

- Rating 1      Low:            Between 0.25" and 0.5"
- Rating 2      Moderate:      Between 0.5" and 1.0"
- Rating 3      High:            Between 1.0" and 3"
- Rating 4      Very High:     Greater than 3"

Cause of damage, if apparent, was noted with each damage record. This parameter is helpful in identification of any underlying issues which need to be addressed, such as tree roots. In the case of damage due to tree roots, the City will be able assess where the need exists for a Certified Arborist to review root trimming requirements, or removal if warranted before programming repairs.

Driveway approaches at selected locations within the project area were examined for their potential to pose an obstacle or hazard to a person in a wheelchair. The locations that were inspected are:

- South side of Las Flores Ave between Sanders St. and China Lake Blvd.
- West side of China Lake Blvd between Upjohn St. and Las Flores Ave.
- Ridgecrest Blvd between China Lake Blvd and Downs St.
- East side Downs St. between Upjohn St. and Las Flores Ave.
- Balsam St. between Ridgecrest Blvd and Argus Ave.

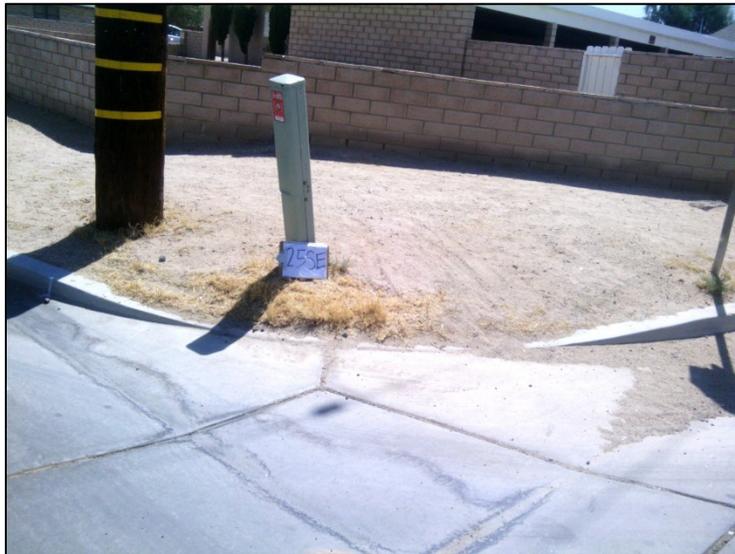
The driveway approach inspection was conducted by driving the project area while taking videos of all the driveways.

Other obstacles to ADA access were noted. Street light poles on Ridgecrest Blvd. west of China Lake Blvd. have been installed in the sidewalk, posing obstacles to people in wheelchairs. One such location is shown in the photograph below.



RIDGECREST BLVD. WEST OF CHINA LAKE BLVD

In a few locations it was found that other items such as utility cabinets, power poles or traffic signal poles may create obstacles to people in wheelchairs. For example, a communications equipment cabinet was noted on the southeast corner of Sunset St. and Church Ave. It would likely need to be relocated to allow construction of an access ramp at that location. However, this location is not currently on an accessible route: there is currently no sidewalk at this location, so there is no requirement to construct a curb ramp here at the present time. Please see the photograph below.



SOUTHEAST CORNER OF SUNSET ST. AND CHURCH AVE.

**IV. CURB RETURN DATA ANALYSIS**

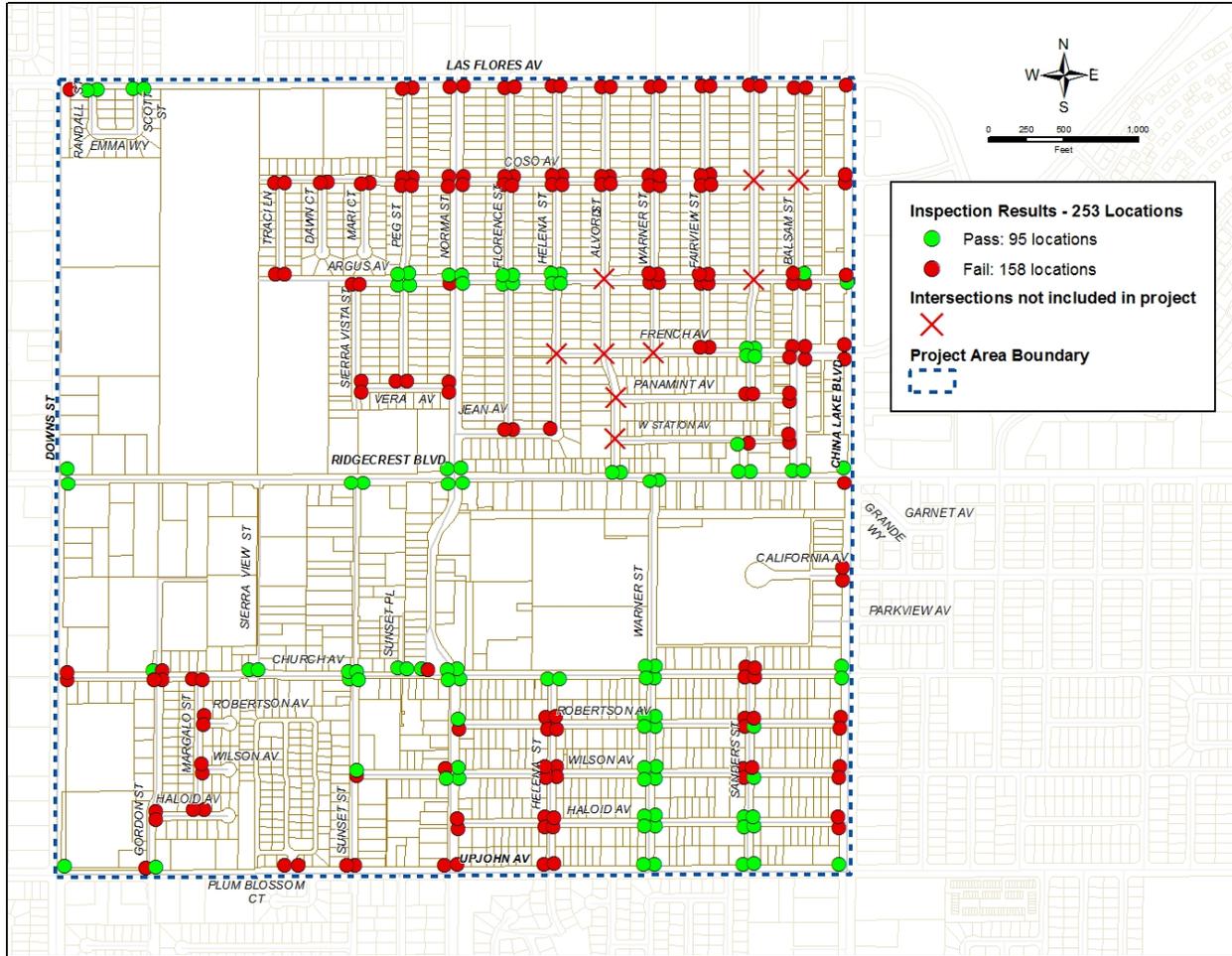
Field survey data for the 253 street corners included in the project was analyzed to determine the following:

- Is the street corner on an accessible route?
- Does the curb return have a ramp?
- Does the curb ramp pass the 1991 ADA standards for dimensions and slopes of ramps, landings and wings (a.k.a. flares)?
- Does the curb ramp have a lip?
- Does the curb ramp have a detectable warning surface (a.k.a. truncated dome)?

The results of the field survey data analysis are provided in the following table.

<b>Inspection Result</b>	<b>Pass/Fail Reason</b>	<b>No. of Locations</b>
Pass	Street corner is not on an accessible route	17
Pass	Curb ramp passes 1991 ADA standard	78
Fail	No curb ramp on accessible route	72
Fail	Curb ramp not built to 1991 ADA standard	22
Fail	Curb ramp has a lip	4
Fail	Curb ramp has a lip and no detectable warning	21
Fail	Curb ramp has a lip and damaged detectable warning	1
Fail	Curb ramp has no detectable warning	38
<b>Total:</b>		<b>253</b>

Of the 253 intersection corners included in this project, 95 locations passed the inspection and 158 locations failed the inspection. The following figure depicts those results by location.

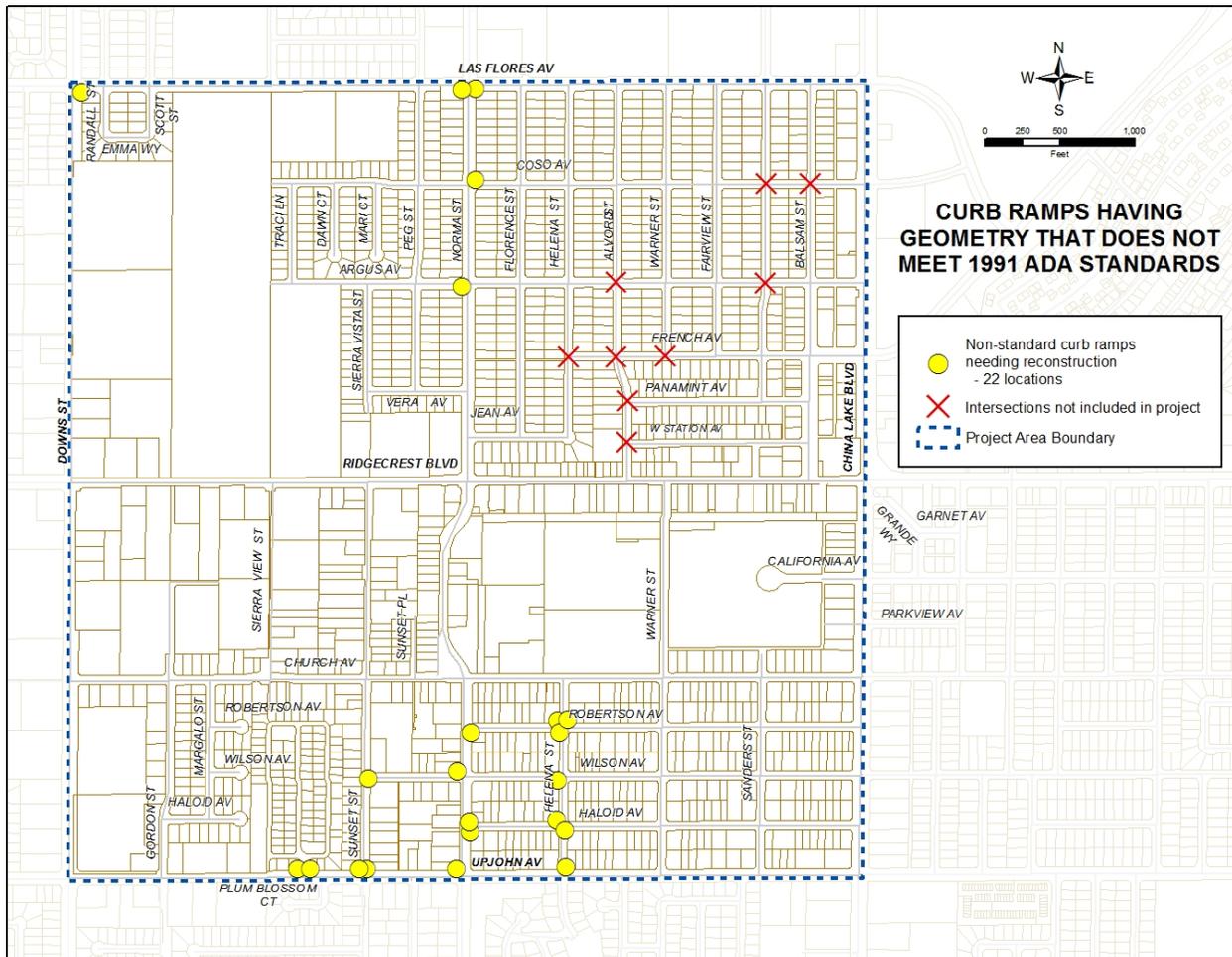


CURB RAMP INSPECTION RESULTS: PASS/FAIL

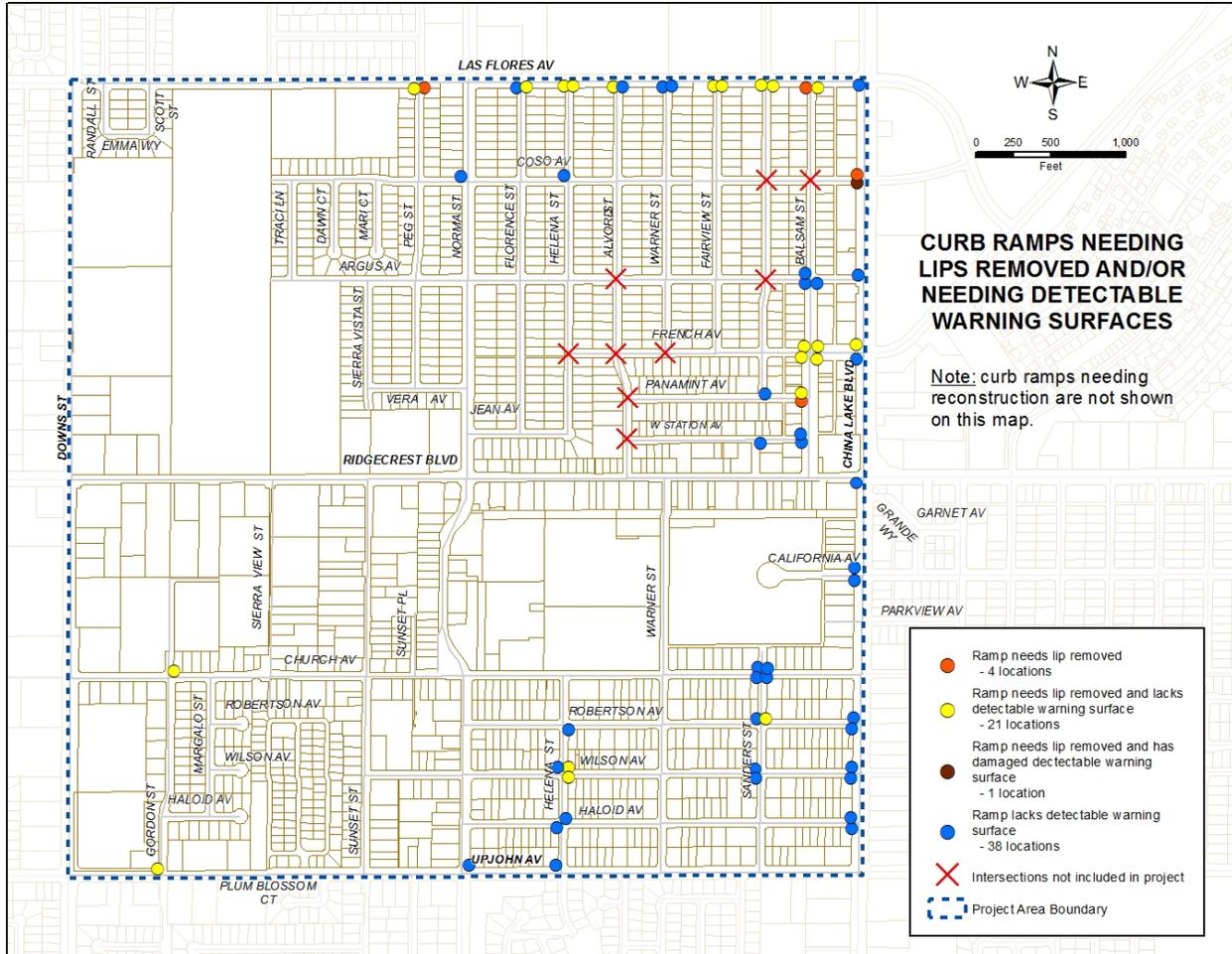
A table containing inspection results for each of the 253 intersection corners included in the project is provided in the Appendix.



The map below depicts the locations of existing curb ramps that need to be reconstructed to meet the 1991 ADA standards.



The following map depicts curb ramps with dimensions and slopes that comply with standards, but have lips that need to be removed, lack a detectable warning surface, or have a damaged detectable warning surface.



## V. DRIVEWAY DATA ANALYSIS

Driveway approaches at selected locations within the project area were checked to determine whether they were constructed to ADA standards. The locations that were inspected were:

- West side of China Lake Blvd between Upjohn St. and Las Flores Ave.
- Ridgecrest Blvd between China Lake Blvd. and Downs St.
- East side of Downs St. between Upjohn St. and Las Flores Ave.
- South side of Las Flores Ave. between Sanders St. and China Lake Blvd.

- Balsam St. between Argus Ave. and Ridgecrest Blvd.
- French Ave between Sanders St. and China Lake Blvd.

The inspection was conducted by driving the project area while taking videos of all the driveways, supplemented by using Google Earth Street View.

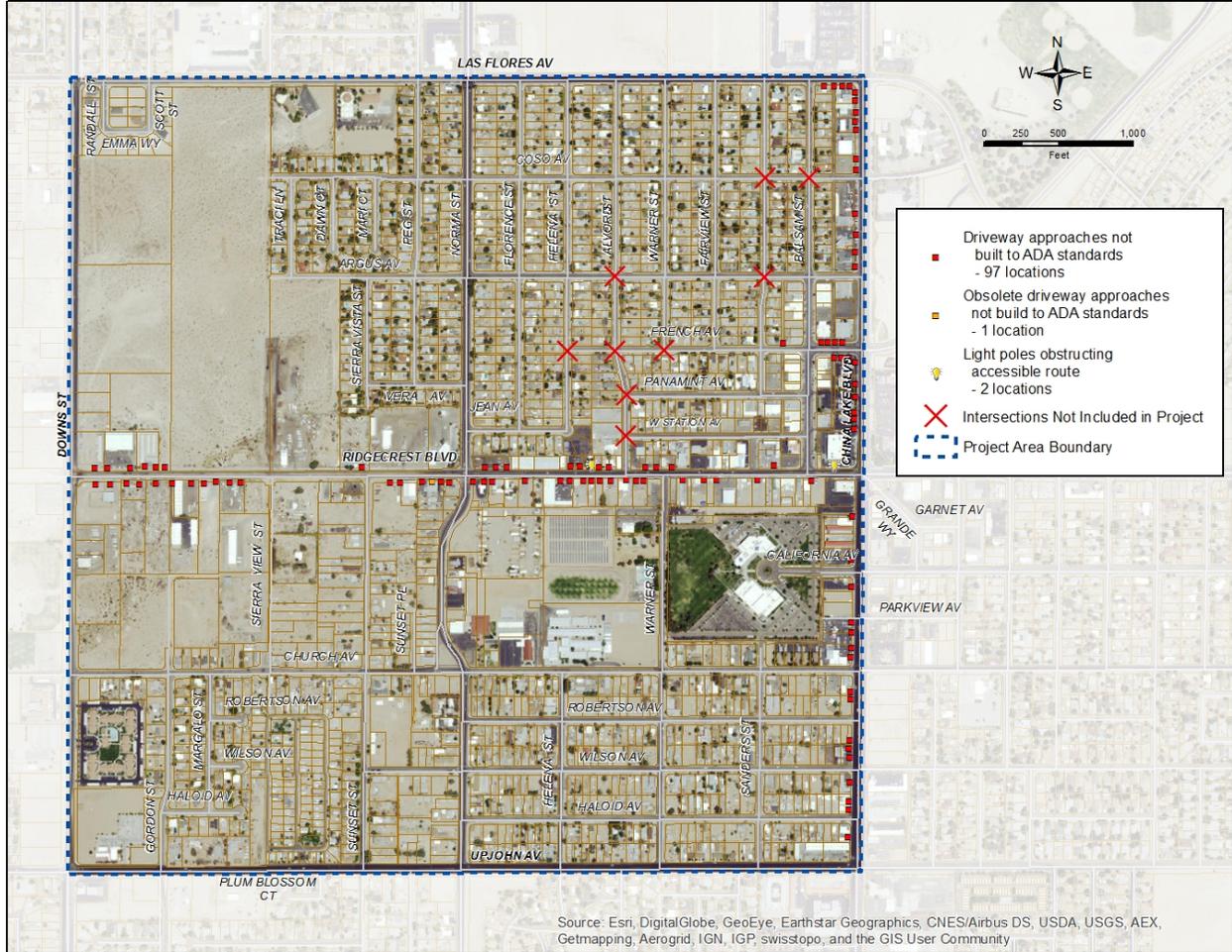
98 driveway approaches appear not to be constructed to ADA standards as the driveways do not have continuous accessible path. One of these driveway approaches appears to be obsolete; there is no longer a driveway at that location. The following is a list of observations based on the visual inspection.

- 33 driveway approaches on the west side of China Lake Blvd. between Las Flores Ave. and Upjohn Ave. appear not to have been constructed to ADA standards.
- 49 driveway approaches on Ridgecrest Blvd. between China Lake Blvd and Downs St. appear not to have been constructed to ADA standards. One of these driveway approaches is obsolete. There is no longer a driveway there. The location is in front of *High Sierra Auto and Truck Repair* at 501 W. Ridgecrest Blvd.
- 4 driveway approaches on the south side of Las Flores Ave between Balsam St. and China Lake Blvd. appear not to have been constructed to ADA standards.
- 8 driveway approaches on French Ave between Sanders St. and China Lake Blvd. appear not to have been constructed to ADA standards.
- No driveway approaches on Balsam St. between Ridgecrest Blvd. and Argus Ave. appear to need any further attention at this time.
- No driveway approaches on the east side of Downs St. appear to need any further attention at this time. The east side of Downs St. is not an accessible route except for the first 500 feet south of Las Flores Ave where there are no driveways, and in front of the Larkspur Village Family Apartments where sidewalks are new and driveway approaches are fully ADA compliant. Downs St. between Upjohn Ave. and Ridgecrest Blvd. will be improved as part of a separate City project.

To bring driveway approaches up to standard, the City will have to remove and reconstruct portions of the driveway outside of the City's right-of-way to join existing grade.

Two light poles were also noted on the north side of Ridgecrest Blvd. that appear to obstruct the accessible route. One light pole is about 160 feet west of China Lake Blvd. The other is located about 200 feet west of Alvord St.

The following figure illustrates the locations of driveway approaches that appear not to have been constructed to ADA standards. The locations of 2 light poles that appear to obstruct the accessible route are also shown.



There appears to be an obsolete ADA ramp on the south side of Ridgecrest Blvd. about 270 feet east of China Lake Blvd. The ramp is in front of a vacant lot. A pylon appears to block ingress into the vacant lot from the ADA ramp. Although the ramp and wings may conform to ADA standards, the combination of the ramp and the driveway to the immediate west of the ramp appears to pose an unnecessary inconvenience to people in wheelchairs. The photograph below depicts that location.



## VI. ADA CURB RAMP AND DRIVEWAY PRIORITIZATION CRITERIA

### Assigning ADA Transition Priority

The following criteria were used to assign priorities for repair or reconstruction to meet ADA standards:

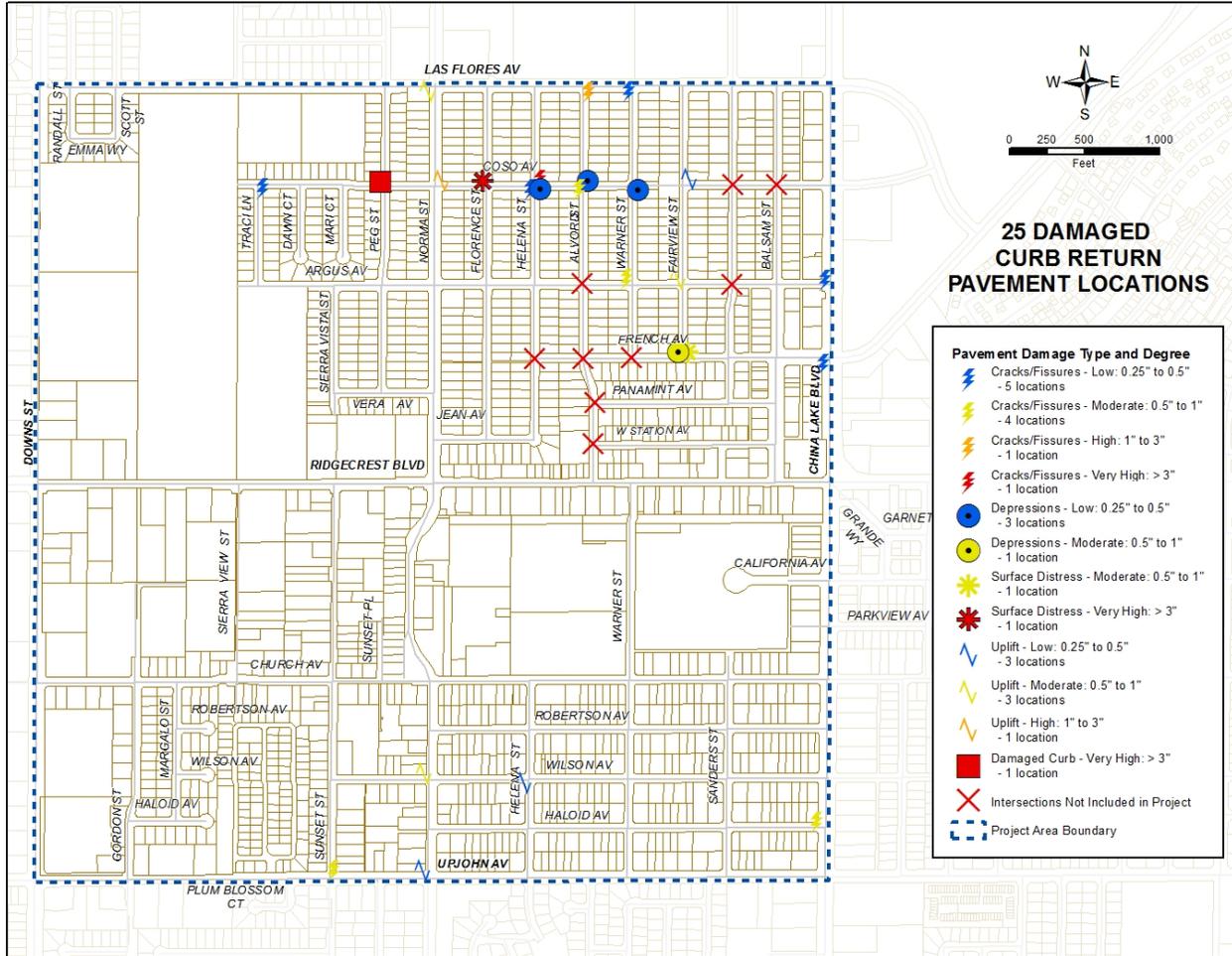
- Locations where the city has received complaints from the public are given the highest priority.
- Locations in commercial land use areas where there is a lot of pedestrian traffic are given high priority.
- Locations that have no curb ramps are given higher priority than locations that have curb ramps with geometry that do not meet ADA standards.
- Locations that have curb ramps with geometry that do not meet ADA standards are given higher priority than locations that only lack detectable warning surfaces and/or need lips removed.

## VII. PAVEMENT DAMAGE ANALYSIS

As discussed above in the section, *Documenting Existing Conditions*, the type and severity of any observed pavement, spandrel or cross-gutter damage at each intersection corner was documented. Damaged concrete was observed at 25 locations. The following table provides a summary of the types and degree of pavement damage observed.

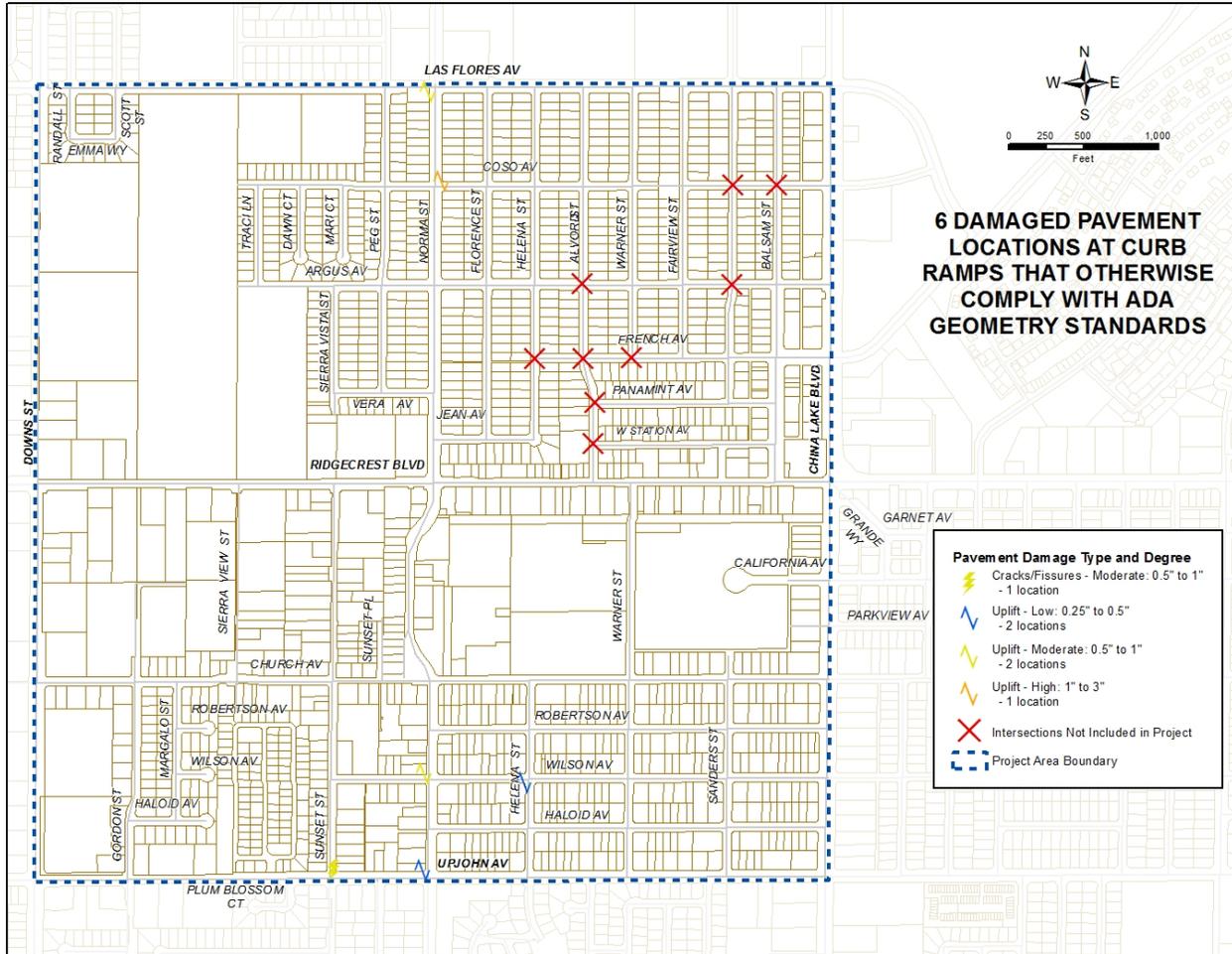
<b>Damage Type</b>	<b>Damage Degree</b>	<b>Number of Locations</b>
Cracks/Fissures	Low: 0.25" to 0.5"	5
Cracks/Fissures	Moderate: 0.5" to 1"	4
Cracks/Fissures	High: 1" - 3"	1
Cracks/Fissures	Very high: >3"	1
Depressions	Low: 0.25" to 0.5"	3
Depressions	Moderate: 0.5" to 1"	1
Surface Distress	Moderate: 0.5" to 1"	1
Surface Distress	Very high: >3"	1
Uplift	Low: 0.25" to 0.5"	3
Uplift	Moderate: 0.5" to 1"	3
Uplift	High: 1" - 3"	1
Damaged Curb	High: 1" - 3"	1

The map below depicts 25 locations of curb returns at which damaged pavement was observed.



Only 6 of these 25 damaged locations are *not* at locations where a curb ramp either needs to be installed, or where an existing curb ramp needs to be reconstructed. The remaining 19 locations will have the damaged pavement repaired when the existing ramp is reconstructed or a new ramp installed.

The following figure shows the locations of damaged pavement where the curb ramp may need a lip removed or a detectable warning surface installed, but is otherwise ok.



There are other locations where sidewalk pavement and curbs may be damaged, but a sidewalk, curb and gutter condition assessment at locations other than at curb returns is beyond the scope of this project.

## VIII. ADA TRANSITION PLAN: CAPITAL IMPROVEMENT PROGRAM

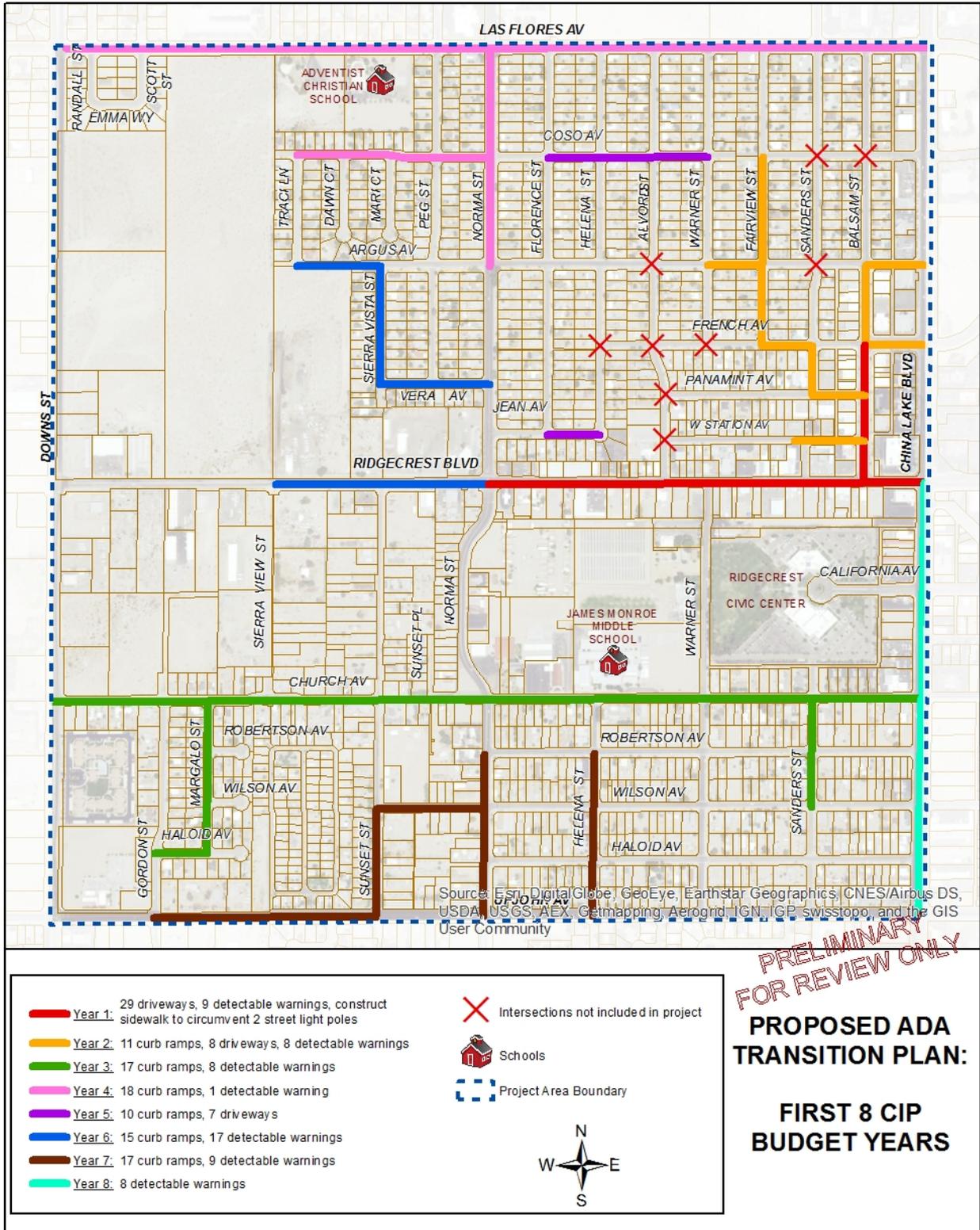
The City is funding its ADA Transition Plan Capital Improvement Program (CIP) by means of County Community Development Block Grants (CDBG). \$162,109 is available for the first year and \$138,000 for subsequent years.

Cost of transporting concrete has risen recently due to changes in State labor laws. At present it is assumed that the cost to construct a curb ramp will be approximately \$5,200, cost to construct

a driveway will be \$5,000 and cost to install a detectable warning surface (a.k.a. truncated dome) will be \$600.

Using the cost assumptions presented above, for the first CIP year it will be possible to construct 31 ramps or driveways and install 5 detectable warnings since cost of design, construction management, inspection and administration has already been funded for Year 1. For subsequent years, it will be possible to construct 17 ramps or driveways and install 5 detectable warnings.

The city's priorities are likely to change with time, so this report provides a proposed CIP phasing plan for just the first eight years of the ADA Transition program. After that time, or possibly earlier, there may be a need to re-evaluate the CIP phasing due to changing priorities or budget. The following figure shows a proposed ADA CIP phasing plan for the first eight years of the program.



Installing curb ramps at locations that lack them is given a higher priority than upgrading existing non-standard curb ramps.

## APPENDICES

## **APPENDIX A: CURB RAMP FIELD DATA AND ANALYSIS RESULTS**

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS
Argus Ave	Balsam St	92	SW	35.626068	-117.671238	6"	2	5	Case A	NONE		4	8	6.2	0.0	No	5	4	1.2	0.2	6.5	n/a			PHOTO_FILE_20160914_073517.jpg	Fail	No detectable warning	
Argus Ave	Balsam St	92	SE	35.626070	-117.670983	6"	2	8	Case A	NONE		5	9	4.8	0.4	No	4	4	1.6	0.2	4.3	n/a			PHOTO_FILE_20160914_073735.jpg	Fail	No detectable warning	
Argus Ave	Balsam St	92	NE	35.626235	-117.671038	6"	2	5	Case C	Good	Yellow	5	5	0.1	0.2	No	5	5	1.7	0.5	2.9	n/a			PHOTO_FILE_20160914_073933.jpg	Pass		
Argus Ave	Balsam St	92	NW	35.626243	-117.671245	6"	2	5	Case A	NONE		4	5	6.5	0.3	No	5	5	1.0	0.4	4.5	n/a			PHOTO_FILE_20160914_074150.jpg	Fail	No detectable warning	
Argus Ave	Fairview St	90	SW	35.626078	-117.673328	6"	2	5	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_072128.jpg	Fail	No curb ramp	
Argus Ave	Fairview St	90	SE	35.626103	-117.673169	6"	2	5	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_072222.jpg	Fail	No curb ramp	
Argus Ave	Fairview St	90	NE	35.626237	-117.673158	6"	2	5	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_072335.jpg	Fail	No curb ramp	
Argus Ave	Fairview St	90	NW	35.626235	-117.673353	6"	2 ft	5	NO RAMP					0.0	0.0				0.0	0.0	0.0	Uplift	Moderate: 0.5" to 1"			PHOTO_FILE_20160914_072430.jpg	Fail	No curb ramp
Argus Ave	Florence St	86	SW	35.626092	-117.677744	6"	2 ft	4	Case F	Good	Yellow	5	8	6.3	0.6	No	5	4	2.0	0.9	5.2	n/a			PHOTO_FILE_20160907_113024.jpg	Pass		
Argus Ave	Florence St	86	SE	35.626085	-117.677561	6"	2	4	Case F	Good	Yellow	5	8	5.5	0.2	No	5	4	1.3	0.3	4.1	n/a			PHOTO_FILE_20160907_113210.jpg	Pass		
Argus Ave	Florence St	86	NE	35.626238	-117.677561	6"	2	4	Case C	Good	Yellow	5	5	0.9	0.6	No	5	5	1.1	0.2	2.8	n/a			PHOTO_FILE_20160907_113351.jpg	Pass		
Argus Ave	Florence St	86	NW	35.626238	-117.677779	6"	2 ft	5	Case C	Good	Yellow	5	5	0.0	0.1	No	5	5	1.3	0.1	4.2	n/a			PHOTO_FILE_20160907_113534.jpg	Pass		
Argus Ave	Helena St	87	NE	35.626247	-117.676489	6"	2 ft	5 ft	Case C	Good	Yellow	5	5	1.4	0.2	No	5	5	1.7	1.4	3.3	n/a			PHOTO_FILE_20160907_114733.jpg	Pass		
Argus Ave	Helena St	87	NW	35.626238	-117.676693	6"	2	5	Case C	Good	Yellow	5	5	0.2	0.1	No	5	5	1.2	0.3	3.5	n/a			PHOTO_FILE_20160907_114935.jpg	Pass		
Argus Ave	Helena St	87	SW	35.626083	-117.676678	6"	2 ft	5	Case G	Good	Yellow	6	4	0.9	0.8	No	8	4	0.1	1.9	3.0	n/a			PHOTO_FILE_20160907_115141.jpg	Pass		
Argus Ave	Helena St	87	SE	35.626083	-117.676488	6"	2	5	Case C	Good	Yellow	5	5	2.7	0.7	No	5	5	1.4	1.1	1.3	n/a			PHOTO_FILE_20160907_115323.jpg	Pass		
Argus Ave	Norma St	14	SW	35.626085	-117.678974	6"	2 ft	4	Case F	NONE		3	6	9.8	2.1	No	4	4	2.0	1.5	12.4	n/a			PHOTO_FILE_20160831_095858.jpg	Fail	Ramp slope > 1:12. Ramp flare/wing in pedestrian path has slope > 1:10. No detectable warning	
Argus Ave	Norma St	14	NW	35.626238	-117.679004	8"	2 ft	5 ft	Case D	Fair	Yellow	5	5	1.0	0.0	No	5	5	2.6	0.8	6.9	n/a			PHOTO_FILE_20160831_100114.jpg	Pass		
Argus Ave	Norma St	14	NE	35.626243	-117.678704	8"	2 ft	6	Case D	Good	Yellow	5	5	2.7	0.5	No	5	6	2.3	0.7	6.2	n/a			PHOTO_FILE_20160831_100341.jpg	Pass		
Argus Ave	Norma St	14	SE	35.626083	-117.678691	8"	2 ft	4 ft	Case F	Good	Yellow	5	8	8.2	0.0	No	5	4	2.5	1.0	9.1	n/a			PHOTO_FILE_20160831_100700.jpg	Pass		
Argus Ave	Peg St	13	SW	35.626057	-117.680108	6"	2 ft	4 ft	Case A	Fair	Yellow	5	7	6.6	0.3	No	6	3	6.0	0.4	6.7	n/a			PHOTO_FILE_20160831_094129.jpg	Pass		
Argus Ave	Peg St	13	SE	35.626048	-117.679904	6"	2 ft	5 ft	Case F	Fair	Yellow	5	8	6.6	0.2	No	5	3	3.5	0.3	6.1	n/a			PHOTO_FILE_20160831_094452.jpg	Pass		
Argus Ave	Peg St	13	NE	35.626267	-117.679898	6"	2 ft	5	Case C	Fair	Yellow	5	5	3.8	1.4	No	5	5	2.4	2.8	8.0	n/a			PHOTO_FILE_20160831_094724.jpg	Pass		
Argus Ave	Peg St	13	NW	35.626233	-117.680108	6"	2 ft	5 ft	Case C	Fair	Yellow	5	5	0.1	1.8	No	5	5	4.2	1.7	7.0	n/a			PHOTO_FILE_20160831_094931.jpg	Pass		
Argus Ave	Sierra Vista St	12	SW	35.626088	-117.681164	6"	2 ft	5 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a			PHOTO_FILE_20160831_093044.jpg	Fail	No curb ramp	
Argus Ave	Sierra Vista St	12	SE	35.626068	-117.681003	6"	2 ft	4 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a			PHOTO_FILE_20160831_093153.jpg	Fail	No curb ramp	
Argus Ave	Traci Ln	11	NW	35.626263	-117.682904	6"	2 ft	4 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a			PHOTO_FILE_20160831_092232.jpg	Fail	No curb ramp	
Argus Ave	Traci Ln	11	NE	35.626253	-117.682721	6"	2 ft	5 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a			PHOTO_FILE_20160831_092451.jpg	Fail	No curb ramp	
Argus Ave	Warner St	89	SW	35.626098	-117.674463	6"	2	5	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_071422.jpg	Fail	No curb ramp	

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS
Argus Ave	Warner St	89	SE	35.626098	-117.674291	6"	2	5	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a				PHOTO_FILE_20160914_071516.jpg	Fail	No curb ramp
Argus Ave	Warner St	89	NE	35.626248	-117.674291	6"	2	5	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a				PHOTO_FILE_20160914_071614.jpg	Fail	No curb ramp
Argus Ave	Warner St	89	NW	35.626240	-117.674486	6"	2	5	NO RAMP					0.0	0.0				0.0	0.0	0.0	Cracks/Fissures	Moderate: 0.5" to 1"			PHOTO_FILE_20160914_071710.jpg	Fail	No curb ramp
China Lake Blvd	Argus Ave	93	SW	35.626085	-117.670033	6"	2 ft	6	Case C	Fair	Yellow	5	6	1.9	0.5	No	6	6	1.3	0.1	3.5	n/a				PHOTO_FILE_20160914_074549.jpg	Pass	
China Lake Blvd	Argus Ave	93	NW	35.626218	-117.670048	6"	2 ft	9	Case A	NONE		4	9	4.0	1.1	No	5	9	1.3	1.5	3.9	Cracks/Fissures	Low: 0.25" to 0.5"			PHOTO_FILE_20160914_074829.jpg	Fail	No detectable warning
China Lake Blvd	California Ave	69	SW	35.620592	-117.670161	6"	2 ft	5 ft	Case C	NONE		4	10	3.9	0.0	No	5	5	1.4	0.0	3.3	n/a				PHOTO_FILE_20160907_083344.jpg	Fail	No detectable warning
China Lake Blvd	California Ave	69	NW	35.620795	-117.670136	6"	2	4	Case A	NONE		4	10	5.1	0.4	No	5	4	0.8	0.0	6.8	n/a				PHOTO_FILE_20160907_083621.jpg	Fail	No detectable warning
China Lake Blvd	Church Ave	67	NW	35.619005	-117.670191	6"	2 ft	5	Case C	Good	Yellow	5	6	1.0	0.8	No	5	5	1.2	1.5	2.3	n/a				PHOTO_FILE_20160907_081127.jpg	Pass	
China Lake Blvd	Church Ave	67	SW	35.618823	-117.670183	6"	2 ft	5	Case A	Good	Yellow	5	8	4.4	0.9	No	5	5	1.3	1.0	5.6	n/a				PHOTO_FILE_20160907_081335.jpg	Pass	
China Lake Blvd	Coso Ave	94	SW	35.627895	-117.670030	8"	2	6	Case C	Poor	Yellow	5	7	0.5	0.6	Yes	4	6	1.0	1.2	5.1	n/a				PHOTO_FILE_20160914_085018.jpg	Fail	Ramp has lip. Detectable warning damaged
China Lake Blvd	Coso Ave	94	NW	35.628053	-117.670018	8"	2	6	Case C	Fair	Yellow	4	7	0.6	0.2	Yes	4	6	2.8	1.0	3.6	n/a				PHOTO_FILE_20160914_085205.jpg	Fail	Ramp has lip
China Lake Blvd	French Ave	79	SW	35.624692	-117.670103	8"	2 ft	6	Case A	NONE		4	9	4.5	0.1	No	5	5	1.4	0.2	6.1	Cracks/Fissures	Low: 0.25" to 0.5"			PHOTO_FILE_20160907_101830.jpg	Fail	No detectable warning
China Lake Blvd	French Ave	79	NW	35.624917	-117.670068	8"	2 ft	6	Case C	NONE		5	7	5.5	0.5	Yes	6	6	0.5	1.0	5.0	n/a				PHOTO_FILE_20160907_102049.jpg	Fail	Ramp has lip. No detectable warning
China Lake Blvd	Haloid Ave	65	NE	35.616047	-117.670248	8"	2 ft	6	Case C	NONE		5	5	6.4	1.0	No	5	5	3.1	0.2	1.4	n/a				PHOTO_FILE_20160907_073746.jpg	Fail	No detectable warning
China Lake Blvd	Haloid Ave	65	NW	35.616240	-117.670268	6"	2 ft	6	Case A	NONE		4	6	3.8	0.8	No	5	5	1.9	0.2	6.6	Cracks/Fissures	Moderate: 0.5" to 1"	broken curb		PHOTO_FILE_20160907_074022.jpg	Fail	No detectable warning
China Lake Blvd	Las Flores Ave	95	SW	35.629700	-117.670030	8"	2 ft	6	Case C	NONE		5	6	7.4	0.1	No	5	6	2.6	0.3	3.9	n/a				PHOTO_FILE_20160914_090228.jpg	Fail	No detectable warning
China Lake Blvd	Robertson Ave	110	NW	35.618073	-117.670200	6"	2 ft	6	Case A	NONE		4	8	3.0	0.2	No	5	4	0.9	0.3	6.8	n/a				PHOTO_FILE_20160907_075716.jpg	Fail	No detectable warning
China Lake Blvd	Robertson Ave	110	SW	35.617877	-117.670270	6"	2 ft	6	Case A	NONE		4	6	6.0	1.1	No	5	4	0.3	0.1	5.6	n/a				PHOTO_FILE_20160907_075911.jpg	Fail	No detectable warning
China Lake Blvd	Upjohn Ave	64	NW	35.615377	-117.670261	6"	2	6	Case C	Good	Yellow	6	6	1.1	0.4	No	6	6	1.4	0.8	2.6	n/a				PHOTO_FILE_20160907_073244.jpg	Pass	
China Lake Blvd	Wilson Ave	66	NW	35.617162	-117.670240	6"	2 ft	6	Case C	NONE		4	6	3.9	0.4	No	6	5	1.5	0.2	5.6	n/a				PHOTO_FILE_20160907_075023.jpg	Fail	No detectable warning
China Lake Blvd	Wilson Ave	66	SW	35.616975	-117.670188	6"	2 ft	6	Case A	NONE		4	8	3.0	0.6	No	5	4	1.4	0.4	4.6	n/a				PHOTO_FILE_20160907_075222.jpg	Fail	No detectable warning
Church Ave	Downs St	21	SE	35.618808	-117.687656	8"	2 ft	4 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_112321.jpg	Fail	No curb ramp
Church Ave	Downs St	21	NE	35.618917	-117.687621	8"	2 ft	0	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_112441.jpg	Fail	No curb ramp
Church Ave	Gordon St	22	NW	35.618937	-117.685679	6"	2 ft	0	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_112902.jpg	Pass	No accessible route at this location.

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS
Church Ave	Gordon St	22	NE	35.618972	-117.685484	6"	2 ft	4	Case A	NONE		4	5	6.5	0.2	Yes	6	4	4.2	0.9	11.1	n/a				PHOTO_FILE_20160831_113117.jpg	Fail	Ramp has lip. No detectable warning
Church Ave	Gordon St	22	SE	35.618800	-117.685479	6"	2 ft	5 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_113235.jpg	Fail	No curb ramp
Church Ave	Gordon St	22	SW	35.618797	-117.685663	6"	2 ft	5	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_113352.jpg	Fail	No curb ramp
Church Ave	Helena St	44	SW	35.618795	-117.676810	6"	2 ft	5	Case A	Good	Yellow	6	5	7.1	0.4	No	6	4	1.6	1.7	7.7	n/a				PHOTO_FILE_20160901_090747.jpg	Pass	
Church Ave	Helena St	44	SE	35.618817	-117.676581	6"	2 ft	5 ft	Case A	Fair	Yellow	4	7	6.7	0.7	No	4	4	2.4	0.5	7.2	n/a				PHOTO_FILE_20160901_091003.jpg	Pass	
Church Ave	Margalo St	23	SW	35.618808	-117.684791	6"	2 ft	5	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_113613.jpg	Fail	No curb ramp
Church Ave	Margalo St	23	SE	35.618802	-117.684578	6"	2 ft	5 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_113738.jpg	Fail	No curb ramp
Church Ave	Norma St	43	SE	35.618818	-117.678791	8"	2 ft	5	Case A	Good	Yellow	5	7	5.6	1.5	No	5	5	2.4	2.0	7.6	n/a				PHOTO_FILE_20160901_085322.jpg	Pass	
Church Ave	Norma St	43	NE	35.618960	-117.678854	6"	2	5	Case C	Good	Yellow	5	5	1.0	0.1	No	5	5	4.1	0.2	6.8	n/a				PHOTO_FILE_20160901_085523.jpg	Pass	
Church Ave	Norma St	43	NW	35.618967	-117.679064	0	0	0	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160901_085635.jpg	Pass	No accessible route at this location.
Church Ave	Norma St	43	SW	35.618830	-117.679046	8"	2 ft	5	Case C	Good	Yellow	6	5	1.8	1.1	No	5	5	1.5	0.5	6.8	n/a				PHOTO_FILE_20160901_085837.jpg	Pass	
Church Ave	Norma St W	27	SW	35.618968	-117.679604	8"	2 ft	5	Case C	Good	Yellow	5	5	0.9	1.5	No	5	5	1.6	0.7	7.0	n/a				PHOTO_FILE_20160831_130224.jpg	Pass	
Church Ave	Norma St W	27	NE	35.618973	-117.679516	0	0	0	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_130335.jpg	Fail	No curb ramp
Church Ave	Sanders St	55	NW	35.619000	-117.672345	6"	2 ft	6	Case D	NONE		4	5	4.8	0.6	No	5	5	4.3	0.4	7.8	n/a				PHOTO_FILE_20160901_121852.jpg	Fail	No detectable warning
Church Ave	Sanders St	55	SW	35.618817	-117.672363	6"	2 ft	6	Case C	NONE		5	5	3.9	0.3	No	5	5	2.0	2.1	7.5	n/a				PHOTO_FILE_20160901_122842.jpg	Fail	No detectable warning
Church Ave	Sanders St	55	SE	35.618815	-117.672131	6"	2 ft	6	Case C	NONE		5	5	3.3	2.9	No	5	5	3.7	2.9	7.1	n/a				PHOTO_FILE_20160901_123042.jpg	Fail	No detectable warning
Church Ave	Sanders St	55	NE	35.618970	-117.672158	6"	2 ft	6	Case A	NONE		4	5	4.0	0.1	No	5	4	1.5	0.3	6.0	n/a				PHOTO_FILE_20160901_123320.jpg	Fail	No detectable warning
Church Ave	Sierra View St	24	NW	35.618987	-117.683521	6"	2 ft	4 ft	Case A	Good	Yellow	4	5	7.1	0.5	No	7	4	7.6	0.2	6.9	n/a				PHOTO_FILE_20160831_114258.jpg	Pass	
Church Ave	Sierra View St	24	NE	35.618983	-117.683328	6"	2 ft	0	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_114358.jpg	Pass	No accessible route at this location.
Church Ave	Sunset Pl	26	NW	35.619001	-117.680171	6"	2 ft	0	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_125642.jpg	Pass	No accessible route at this location.
Church Ave	Sunset Pl	26	NE	35.618996	-117.679963	6"	2 ft	5	Case C	Fair	Yellow	4	5	2.4	0.5	No	5	5	1.6	1.4	9.1	n/a				PHOTO_FILE_20160831_125912.jpg	Pass	
Church Ave	Sunset St	25	SW	35.618807	-117.681261	6"	2 ft	0	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_114713.jpg	Pass	No accessible route at this location.
Church Ave	Sunset St	25	NW	35.618932	-117.681239	6"	2 ft	0	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_114818.jpg	Pass	No accessible route at this location.
Church Ave	Sunset St	25	NE	35.618945	-117.681138	6"	2	0	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_114910.jpg	Pass	No accessible route at this location.

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS
Church Ave	Sunset St	25	SE	35.618810	-117.681098	6"	2 ft	0	NO RAMP					0.0	0.0										elec cable in ramp	PHOTO_FILE_20160831_115043.jpg	Pass	No accessible route at this location.
Church Ave	Warner St	54	SE	35.618805	-117.674393	6"	2 ft	5 ft	Case C	Good	Yellow	5	5	1.3	1.2	No	5	5	2.3	1.6	5.8	n/a				PHOTO_FILE_20160901_110619.jpg	Pass	
Church Ave	Warner St	54	NE	35.619018	-117.674376	6"	2 ft	5 ft	Case D	Good	Yellow	5	5	1.1	1.0	No	5	5	5.0	0.7	6.2	n/a				PHOTO_FILE_20160901_110908.jpg	Pass	
Church Ave	Warner St	54	NW	35.618982	-117.674581	6"	2 ft	5 ft	Case A	Good	Yellow	4	6	8.1	0.7	No	4	4	1.4	1.1	7.2	n/a				PHOTO_FILE_20160901_111226.jpg	Pass	
Church Ave	Warner St	54	SW	35.618808	-117.674586	6"	2 ft	5 ft	Case A	Good	Yellow	5	5	7.8	0.9	No	5	5	1.4	0.4	7.0	n/a				PHOTO_FILE_20160901_111447.jpg	Pass	
Coso Ave	Alvord St	107	NE	35.628020	-117.675411	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	Depressions	Low: 0.25" to 0.5"		PHOTO_FILE_20160914_111930.jpg	Fail	No curb ramp
Coso Ave	Alvord St	107	NW	35.628040	-117.675549	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_112035.jpg	Fail	No curb ramp
Coso Ave	Alvord St	107	SW	35.627915	-117.675544	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	Cracks/Fissures	Moderate: 0.5" to 1"		PHOTO_FILE_20160914_112128.jpg	Fail	No curb ramp
Coso Ave	Alvord St	107	SE	35.627910	-117.675386	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_112232.jpg	Fail	No curb ramp
Coso Ave	Dawn Ct	9	SE	35.627950	-117.681724	6"	2 ft	5 ft	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160831_090217.jpg	Fail	No curb ramp
Coso Ave	Dawn Ct	9	SW	35.627938	-117.681896	6"	2 ft	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160831_090349.jpg	Fail	No curb ramp
Coso Ave	Fairview St	105	NE	35.628067	-117.673103	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	Uplift	Low: 0.25" to 0.5"		PHOTO_FILE_20160914_110707.jpg	Fail	No curb ramp
Coso Ave	Fairview St	105	NW	35.628035	-117.673308	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_110813.jpg	Fail	No curb ramp
Coso Ave	Fairview St	105	SW	35.627908	-117.673316	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_110913.jpg	Fail	No curb ramp
Coso Ave	Fairview St	105	SE	35.627888	-117.673133	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_111010.jpg	Fail	No curb ramp
Coso Ave	Florence St	109	NE	35.628042	-117.677538	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_113102.jpg	Fail	No curb ramp
Coso Ave	Florence St	109	NW	35.628047	-117.677714	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	Surface Distress	Very High: > 3"		PHOTO_FILE_20160914_113226.jpg	Fail	No curb ramp
Coso Ave	Florence St	109	SW	35.627913	-117.677711	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_113319.jpg	Fail	No curb ramp
Coso Ave	Florence St	109	SE	35.627883	-117.677559	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160914_113419.jpg	Fail	No curb ramp
Coso Ave	Helena St	108	NE	35.628040	-117.676458	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	Cracks/Fissures	Very High: > 3"		PHOTO_FILE_20160914_112500.jpg	Fail	No curb ramp
Coso Ave	Helena St	108	NW	35.628058	-117.676651	6"	2	5	Case A	NONE		4	5	6.8	0.1	No	5	5	1.6	0.4	7.9	n/a				PHOTO_FILE_20160914_112644.jpg	Fail	No detectable warning
Coso Ave	Helena St	108	SW	35.627943	-117.676673	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	Cracks/Fissures	Low: 0.25" to 0.5"		PHOTO_FILE_20160914_112742.jpg	Fail	No curb ramp
Coso Ave	Helena St	108	SE	35.627905	-117.676473	6"	2	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	Depressions	Low: 0.25" to 0.5"		PHOTO_FILE_20160914_112852.jpg	Fail	No curb ramp
Coso Ave	Mari Ct	8	SE	35.627935	-117.680768	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160831_085831.jpg	Fail	No curb ramp
Coso Ave	Mari Ct	8	SW	35.627923	-117.680961	6"	1.5 ft	6	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160831_090003.jpg	Fail	No curb ramp
Coso Ave	Peg St	7	NE	35.628018	-117.679824	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0					0.0	0.0	0.0				PHOTO_FILE_20160831_085145.jpg	Fail	No curb ramp
Coso Ave	Peg St	7	NW	35.628037	-117.680044	6"	1.5 ft	5	NO RAMP					0.0	0.0					0.0	0.0	0.0	replace curb	Very High: > 3"		PHOTO_FILE_20160831_085332.jpg	Fail	No curb ramp
Coso Ave	Peg St	7	SW	35.627878	-117.680053	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0					0.0	0.0	0.0				PHOTO_FILE_20160831_085440.jpg	Fail	No curb ramp
Coso Ave	Peg St	7	SE	35.627890	-117.679876	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0					0.0	0.0	0.0				PHOTO_FILE_20160831_085540.jpg	Fail	No curb ramp
Coso Ave	Traci Ln	10	SW	35.627912	-117.682861	6"	2 ft	5 ft	NO RAMP					0.0	0.0					0.0	0.0	0.0	n/a			PHOTO_FILE_20160831_090805.jpg	Fail	No curb ramp

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS	
Coso Ave	Traci Ln	10	SE	35.627943	-117.682694	6"	2 ft	5 ft	NO RAMP					0.0	0.0							Cracks/Fissures	Low: 0.25" to 0.5"			PHOTO_FILE_20160831_090911.jpg	Fail	No curb ramp	
Coso Ave	Warner St	106	NW	35.628033	-117.674503	6"	2	5	NO RAMP					0.0	0.0							n/a				PHOTO_FILE_20160914_111337.jpg	Fail	No curb ramp	
Coso Ave	Warner St	106	SE	35.627880	-117.674461	6"	2	5	NO RAMP					0.0	0.0							n/a				PHOTO_FILE_20160914_111512.jpg	Fail	No curb ramp	
Coso Ave	Warner St	106	SW	35.627883	-117.674258	6"	2 ft	5	NO RAMP					0.0	0.0							Depressions	Low: 0.25" to 0.5"			PHOTO_FILE_20160914_111603.jpg	Fail	No curb ramp	
Coso Ave	Warner St	106	NE	35.628050	-117.674244	6"	2	5	NO RAMP					0.0	0.0							n/a				PHOTO_FILE_20160914_111713.jpg	Fail	No curb ramp	
Downs St	Las Flores Ave	1	SE	35.629663	-117.687513	8"	2 ft	5.5	Case A	NONE		4	10	10.0	1.0	No	7.5	3	1.8	0.7	12.0	n/a				PHOTO_FILE_20160831_071534.jpg	Fail	Ramp slope > 1:12. No detectable warning	
French Ave	Balsam St	78	SE	35.624670	-117.670981	6"	2 ft	10	Case A	NONE		4	8	5.1	0.2	Yes	6	4	1.9	0.8	5.6	n/a				PHOTO_FILE_20160907_100805.jpg	Fail	Ramp has lip. No detectable warning	
French Ave	Balsam St	78	NE	35.624913	-117.670973	6"	2 ft	12	Case A	NONE		5	9	4.9	0.6	Yes	5	4	0.8	0.7	6.0	n/a				PHOTO_FILE_20160907_101008.jpg	Fail	Ramp has lip. No detectable warning	
French Ave	Balsam St	78	NW	35.624900	-117.671268	6"	2 ft	10	Case A	NONE		5	8	4.8	0.2	Yes	5	5	2.0	0.5	3.8	n/a				PHOTO_FILE_20160907_101208.jpg	Fail	Ramp has lip. No detectable warning	
French Ave	Balsam St	78	SW	35.624752	-117.671308	6"	2	8	Case A	NONE		4	8	4.2	0.1	Yes	4	8	1.1	1.1	5.8	n/a				PHOTO_FILE_20160907_101410.jpg	Fail	Ramp has lip. No detectable warning	
French Ave	Fairview St	81	NE	35.624867	-117.673156	6"	2 ft	5	NO RAMP					0.0	0.0							Surface Distress	Moderate: 0.5" to 1"			PHOTO_FILE_20160907_104945.jpg	Fail	No curb ramp	
French Ave	Fairview St	81	NW	35.624890	-117.673340	6"	2	5	NO RAMP					0.0	0.0							Depressions	Moderate: 0.5" to 1"			PHOTO_FILE_20160907_105051.jpg	Fail	No curb ramp	
French Ave	Sanders St	80	NE	35.624872	-117.672105	6"	2	5	Case C	Fair	Yellow	4	4	0.8	0.0	No	5	5	1.5	0.1	4.2	n/a				PHOTO_FILE_20160907_103255.jpg	Pass		
French Ave	Sanders St	80	NW	35.624877	-117.672300	6"	2 ft	5	Case C	Fair	Yellow	5	5	1.8	0.3	No	5	5	1.3	0.0	3.4	n/a				PHOTO_FILE_20160907_103440.jpg	Pass		
French Ave	Sanders St	80	SW	35.624735	-117.672298	6"	2 ft	5 ft	Case C	Fair	Yellow	5	5	1.6	0.3	No	5	5	3.8	0.8	4.2	n/a				PHOTO_FILE_20160907_103625.jpg	Pass		
French Ave	Sanders St	80	SE	35.624728	-117.672118	6"	2 ft	10	Case C	Fair	Yellow	5	5	2.1	0.7	No	5	10	1.0	0.9	0.4	n/a				PHOTO_FILE_20160907_103821.jpg	Pass		
Haloid Ave	Gordon St	31	NE	35.616383	-117.685638	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_132310.jpg	Fail	No curb ramp
Haloid Ave	Gordon St	31	SE	35.616267	-117.685613	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_132408.jpg	Fail	No curb ramp
Haloid Ave	Helena St	47	NW	35.616247	-117.676855	6"	2	5	Case C	NONE		5	5	9.8	0.7	No	5	5	2.6	0.3	8.2	n/a				PHOTO_FILE_20160901_094213.jpg	Fail	Ramp slope > 1:12. No detectable warning	
Haloid Ave	Helena St	47	SW	35.616077	-117.676875	6"	2 ft	5	Case C	NONE		5	5	7.2	1.3	No	5	5	3.5	0.6	7.6	n/a		grass growth		PHOTO_FILE_20160901_094404.jpg	Fail	No detectable warning	
Haloid Ave	Helena St	47	SE	35.616078	-117.676686	6"	2	5	Case A	NONE		5	5	12.1	3.0	No	5	5	2.4	1.2	3.8	n/a				PHOTO_FILE_20160901_094616.jpg	Fail	Ramp slope > 1:12. No detectable warning	

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS
Haloid Ave	Helena St	47	NE	35.616250	-117.676675	6"	2 ft	5	Case C	NONE		5	5	6.4	0.5	No	5	5	2.8	0.9	5.5	n/a				PHOTO_FILE_20160901_094808.jpg	Fail	No detectable warning
Haloid Ave	Margalo St	30	NE	35.616397	-117.684621	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160831_131850.jpg	Fail	No curb ramp
Haloid Ave	Margalo St	30	NW	35.616412	-117.684779	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160831_131957.jpg	Fail	No curb ramp
Haloid Ave	Sanders St	58	NW	35.616248	-117.672401	6"	2	0	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160901_125854.jpg	Pass	No accessible route at this location.
Haloid Ave	Sanders St	58	SW	35.616088	-117.672380	6"	2 ft	0	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160901_125956.jpg	Pass	No accessible route at this location.
Haloid Ave	Sanders St	58	SE	35.616103	-117.672216	6"	2 ft	0	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160901_130053.jpg	Pass	No accessible route at this location.
Haloid Ave	Sanders St	58	NE	35.616240	-117.672203	6"	2 ft	0	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160901_130153.jpg	Pass	No accessible route at this location.
Haloid Ave	Warner St	51	SE	35.616113	-117.674431	6"	2	5	Case C	Good	Yellow	6	5	2.0	1.2	No	5	5	0.8	2.0	7.0	n/a				PHOTO_FILE_20160901_102320.jpg	Pass	
Haloid Ave	Warner St	51	NE	35.616248	-117.674430	6"	2 ft	5	Case A	Good	Yellow	5	6	4.8	0.6	No	5	4	0.8	0.3	5.7	n/a				PHOTO_FILE_20160901_102557.jpg	Pass	
Haloid Ave	Warner St	51	NW	35.616272	-117.674618	6"	2 ft	5	Case C	Good	Yellow	5	5	2.1	0.4	No	5	5	2.8	0.7	7.7	n/a				PHOTO_FILE_20160901_102811.jpg	Pass	
Haloid Ave	Warner St	51	SW	35.616103	-117.674635	6"	2 ft	5 ft	Case C	Fair	Yellow	5	5	1.9	0.9	No	5	5	4.1	0.8	4.3	n/a				PHOTO_FILE_20160901_103108.jpg	Pass	
Jean Ave	Florence St	85	NE	35.623398	-117.677566	6"	2 ft	4	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160907_111923.jpg	Fail	No curb ramp
Jean Ave	Florence St	85	NW	35.623397	-117.677756	6"	2	4	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160907_112018.jpg	Fail	No curb ramp
Jean Ave	Helena St	111	NW	35.623383	-117.676696	6"	2 ft	4	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160907_111712.jpg	Fail	No curb ramp
Las Flores Ave	Alvord St	98	SW	35.629678	-117.675549	6"	2	6	Case C	NONE		5	5	1.1	0.0	Yes	5	6	1.5	0.5	3.4	n/a				PHOTO_FILE_20160914_094034.jpg	Fail	Ramp has lip. No detectable warning
Las Flores Ave	Alvord St	98	SE	35.629710	-117.675378	6"	2	6	Case A	NONE		4	6	6.7	0.9	No	5	6	2.1	0.4	7.0	Cracks/Fissures	High: 1" to 3"	curb		PHOTO_FILE_20160914_094230.jpg	Fail	No detectable warning
Las Flores Ave	Balsam St	102	SW	35.629675	-117.671181	6"	2	6	Case C			5	5	0.4	0.4	Yes	5	6	1.5	0.4	2.8	n/a				PHOTO_FILE_20160914_100859.jpg	Fail	Ramp has lip
Las Flores Ave	Balsam St	102	SE	35.629693	-117.670978	6"	2	6	Case C	NONE		5	5	0.1	0.2	Yes	6	6	1.8	0.1	3.2	n/a				PHOTO_FILE_20160914_101104.jpg	Fail	Ramp has lip. No detectable warning
Las Flores Ave	Fairview St	100	SW	35.629690	-117.673288	6"	2	6	Case C	NONE		5	5	0.4	0.2	Yes	5	5	1.0	2.0	2.5	n/a				PHOTO_FILE_20160914_095249.jpg	Fail	Ramp has lip. No detectable warning
Las Flores Ave	Fairview St	100	SE	35.629683	-117.673111	6"	2	6	Case C	NONE		5	5	1.0	0.0	Yes	5	5	0.1	0.2	4.5	n/a				PHOTO_FILE_20160914_095442.jpg	Fail	Ramp has lip. No detectable warning
Las Flores Ave	Florence St	96	SW	35.629710	-117.677724	6"	2 ft	6	Case A	NONE		5	5	6.4	0.7	No	5	5	3.2	0.1	6.7	n/a				PHOTO_FILE_20160914_092455.jpg	Fail	No detectable warning
Las Flores Ave	Florence St	96	SE	35.629683	-117.677496	6"	2 ft	6	Case C	NONE		5	5	0.7	1.0	Yes	5	6	1.9	0.4	4.1	n/a				PHOTO_FILE_20160914_092653.jpg	Fail	Ramp has lip. No detectable warning

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS	
Las Flores Ave	Helena St	97	SW	35.629708	-117.676651	6"	2	6	Case C	NONE		4	5	0.9	0.8	Yes	5	5	1.4	0.1	4.0	n/a				PHOTO_FILE_20160914_093518.jpg	Fail	Ramp has lip. No detectable warning	
Las Flores Ave	Helena St	97	SE	35.629705	-117.676463	6"	2	6	Case C	NONE		4	6	0.6	0.9	Yes	5	6	0.3	0.6	3.1	n/a				PHOTO_FILE_20160914_093653.jpg	Fail	Ramp has lip. No detectable warning	
Las Flores Ave	Norma St	5	SE	35.629707	-117.678654	8"	2 ft	6	Case A	NONE		4	9	10.7	0.7	No	7	3	0.7	0.2	13.8	n/a				PHOTO_FILE_20160831_082503.jpg	Fail	Ramp slope > 1:12. No detectable warning	
Las Flores Ave	Norma St	5	SW	35.629692	-117.678963	8"	2 ft	6	Case B	NONE		4	10	10.1	16.0	Yes	10	3	0.4	1.4	11.8	Uplift	Moderate: 0.5" to 1"	Tree roots		PHOTO_FILE_20160831_082948.jpg	Fail	Ramp slope > 1:12. Ramp has lip. No detectable warning. Pavement uplift 0.5"-1.0".	
Las Flores Ave	Peg St	4	SE	35.629680	-117.679811	8"	2 ft	6	Case C	Good	Yellow	5	5	1.3	0.3	Yes	7	6	1.2	1.0	6.3	n/a				PHOTO_FILE_20160831_080429.jpg	Fail	Ramp has lip	
Las Flores Ave	Peg St	4	SW	35.629665	-117.680023	8"	2 ft	6	Case C	NONE		4	5	1.4	1.2	Yes	6	6	2.1	0.4	4.9	n/a				PHOTO_FILE_20160831_080740.jpg	Fail	Ramp has lip. No detectable warning	
Las Flores Ave	Randall St	2	SE	35.629688	-117.686898	8"	2 ft	5	Case C	Good	Yellow	4	5	3.0	7.0	No	5	5	1.7	4.1	1.6	n/a				PHOTO_FILE_20160831_074044.jpg	Pass		
Las Flores Ave	Randall St	2	SW	35.629648	-117.687083	6"	2 ft	5 ft	Case C	Good	Red	4	5	0.6	1.4	No	7	5	2.3	1.6	4.0	n/a				PHOTO_FILE_20160831_074331.jpg	Pass		
Las Flores Ave	Sanders St	101	SW	35.629690	-117.672171	6"	2 ft	6	Case C	NONE		6	6	4.7	0.6	Yes	10	4	1.6	0.5	4.1	n/a				PHOTO_FILE_20160914_095759.jpg	Fail	Ramp has lip. No detectable warning	
Las Flores Ave	Sanders St	101	SE	35.629717	-117.672004	6"	2	6	Case C	NONE		6	5	1.1	0.1	Yes	5	5	1.2	1.3	5.4	n/a				PHOTO_FILE_20160914_095956.jpg	Fail	Ramp has lip. No detectable warning	
Las Flores Ave	Scott St	3	SW	35.629680	-117.686066	6"	2 ft	5 ft	Case C	Good	Yellow	4	5	1.4	0.5	No	7	5	2.5	0.6	4.2	n/a				PHOTO_FILE_20160831_074833.jpg	Pass		
Las Flores Ave	Scott St	3	SE	35.629705	-117.685836	8"	2 ft	5	Case C	Good	Yellow	4	5	3.3	1.8	No	7	5	1.6	2.9	4.2	n/a				PHOTO_FILE_20160831_075717.jpg	Pass		
Las Flores Ave	Warner St	99	SW	35.629687	-117.674441	6"	2	6	Case C	NONE		6	5	5.4	0.7	No	5	5	1.4	0.6	3.7	Cracks/Fissures	Low: 0.25" to 0.5"			PHOTO_FILE_20160914_094722.jpg	Fail	No detectable warning	
Las Flores Ave	Warner St	99	SE	35.629693	-117.674233	6"	2	6	Case C	NONE		5	5	5.4	0.1	No	5	5	1.7	0.2	3.9	n/a				PHOTO_FILE_20160914_094926.jpg	Fail	No detectable warning	
Norma St	Coso Ave	6	NW	35.628022	-117.678998	6"	2 ft	4 ft	Case A	NONE		8	6	3.1	0.7	No	4	4	3.7	0.0	8.1	n/a				PHOTO_FILE_20160831_084759.jpg	Fail	No detectable warning	
Norma St	Coso Ave	6	NE	35.628013	-117.678746	6"	2 ft	5 ft	Case B	NONE		4	5	9.1	0.0	No	3	5	5.5	1.5	3.9	Uplift	High: 1" to 3"	Tree roots		PHOTO_FILE_20160831_084327.jpg	Fail	Ramp slope > 1:12. No detectable warning	
Norma St	Coso Ave	6	SE	35.627893	-117.678671	6"	2 ft	5	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_084512.jpg	Fail	No curb ramp
Norma St	Coso Ave	6	SW	35.627870	-117.678959	6"	2 ft	6	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_084648.jpg	Fail	No curb ramp

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS
Norma St	Haloid Ave	40	SE	35.616052	-117.678869	8"	2 ft	5 ft	Case C	NONE		4	5	9.2	2.2	No	5	5	2.1	4.6	4.2	n/a				PHOTO_FILE_20160901_082716.jpg	Fail	Ramp slope > 1:12. No detectable warning
Norma St	Haloid Ave	40	NE	35.616232	-117.678843	8"	2 ft	5	Case C	NONE		4	5	8.7	2.8	No	5	5	3.6	2.4	10.3	n/a				PHOTO_FILE_20160901_082943.jpg	Fail	Ramp slope > 1:12. Ramp flare/wing in pedestrian path has slope > 1:10. No detectable warning.
Norma St	Robertson Ave	42	SE	35.617912	-117.678823	8"	2 ft	5 ft	Case C	NONE		4	6	13.7	1.0	No	6	6	4.1	1.0	7.3	n/a				PHOTO_FILE_20160901_084623.jpg	Fail	Ramp slope > 1:12. No detectable warning
Norma St	Robertson Ave	42	NE	35.618063	-117.678816	8"	2 ft	5 ft	Case C	Good	Yellow	5	6	0.1	1.1	No	5	5	3.1	0.3	5.7	n/a				PHOTO_FILE_20160901_084915.jpg	Pass	
Norma St	Vera Ave	15	NW	35.624273	-117.678999	6"	1.5 ft	4 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a				PHOTO_FILE_20160831_101026.jpg	Fail	No curb ramp
Norma St	Vera Ave	15	SW	35.624093	-117.679009	8"	2 ft	4 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0	n/a				PHOTO_FILE_20160831_101143.jpg	Fail	No curb ramp
Norma St	Wilson Ave	41	SE	35.616995	-117.678836	8"	2	5	Case C	Good	Yellow	5	5	1.1	1.3	No	5	5	0.6	2.4	3.6	n/a				PHOTO_FILE_20160901_083514.jpg	Pass	
Norma St	Wilson Ave	41	NE	35.617152	-117.678818	8"	2 ft	5	Case C	Good	Yellow	5	5	0.6	2.6	No	5	5	2.1	0.9	8.0	n/a				PHOTO_FILE_20160901_083720.jpg	Pass	
Norma St	Wilson Ave	41	NW	35.617157	-117.679123	8"	2	4	Case A	NONE		4	6	11.8	0.4	No	5	4	1.6	1.8	2.7	Uplift	Moderate: 0.5" to 1"			PHOTO_FILE_20160901_083937.jpg	Fail	Ramp slope > 1:12. No detectable warning
Norma St	Wilson Ave	41	SW	35.617013	-117.679109	8"	2 ft	4	Case A	Good	Yellow	4	5	7.5	0.4	No	4	4	2.1	1.0	8.4	n/a				PHOTO_FILE_20160901_084142.jpg	Pass	
Panamint Ave	Balsam St	77	SW	35.623903	-117.671336	8"	2	8	Case A	Good	Yellow	4	8	3.6	0.7	Yes	5	6	1.1	0.5	3.6	n/a				PHOTO_FILE_20160907_095622.jpg	Fail	Ramp has lip
Panamint Ave	Balsam St	77	NW	35.624053	-117.671330	8"	2 ft	8	Case A	NONE		4	9	6.2	0.2	Yes	6	4	3.5	0.4	3.4	n/a				PHOTO_FILE_20160907_095832.jpg	Fail	Ramp has lip. No detectable warning
Panamint Ave	Sanders St	76	NW	35.624042	-117.672316	8"	2 ft	6	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160907_094903.jpg	Fail	No curb ramp
Panamint Ave	Sanders St	76	NE	35.624040	-117.672153	8"	2 ft	10	Case A	NONE		4	9	5.3	0.5	No	5	6	1.6	0.3	5.2	n/a				PHOTO_FILE_20160907_095105.jpg	Fail	No detectable warning
Ridgecrest Blvd	Alvord St	60	NE	35.622605	-117.675183	6"	2	6	Case G	Good	Yellow	6	9	2.5	1.7	No	6	10	0.2	0.7	3.7	n/a				PHOTO_FILE_20160901_131536.jpg	Pass	
Ridgecrest Blvd	Alvord St	60	NW	35.622598	-117.675331	6"	2 ft	5	Case C	Good	Yellow	4	7	0.5	0.0	No	5	5	0.9	0.4	3.9	n/a				PHOTO_FILE_20160901_131803.jpg	Pass	
Ridgecrest Blvd	Balsam St	63	NW	35.622623	-117.671275	6"	2	6	Case A	Good	Yellow	6	14	3.0	0.4	No	6	5	0.7	0.7	3.4	n/a				PHOTO_FILE_20160901_133647.jpg	Pass	
Ridgecrest Blvd	Balsam St	63	NE	35.622617	-117.671023	6"	2 ft	10	Case A	Good	Yellow	5	7	4.3	0.2	No	10	5	1.2	0.5	3.9	n/a				PHOTO_FILE_20160901_133903.jpg	Pass	
Ridgecrest Blvd	China Lake Blvd	71	SW	35.622392	-117.670118	8"	2	6	Case A	NONE		4	10	5.3	0.1	No	6	6	1.7	0.3	4.7	n/a				PHOTO_FILE_20160907_085203.jpg	Fail	No detectable warning

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS
Ridgecrest Blvd	China Lake Blvd	71	NW	35.622623	-117.670138	8"	2 ft	5	Case C	Good	Yellow	5	10	2.2	0.9	No	5	5	1.7	0.1	3.7	n/a				PHOTO_FILE_20160907_085411.jpg	Pass	
Ridgecrest Blvd	Downs St	20	NE	35.622697	-117.687606	8"	2 ft	6	Case A	Good	Yellow	5	6	6.3	0.9	No	5	4	0.7	0.3	8.8	n/a				PHOTO_FILE_20160831_110238.jpg	Pass	
Ridgecrest Blvd	Downs St	20	SE	35.622412	-117.687574	8"	2 ft	6	Case C	Good	Yellow	5	6	0.4	1.1	No	6	6	1.0	0.1	3.3	n/a				PHOTO_FILE_20160831_110551.jpg	Pass	
Ridgecrest Blvd	Norma St	18	NW	35.622640	-117.679038	8"	2 ft	5 ft	Case A	Good	Yellow	5	6	6.9	0.1	No	5	4	1.7	0.9	6.2	n/a				PHOTO_FILE_20160831_102734.jpg	Pass	
Ridgecrest Blvd	Norma St	18	NE	35.622687	-117.678739	8"	2 ft	5 ft	Case C	Good	Yellow	5	4	1.1	1.4	No	5	5	0.3	0.6	4.7	n/a				PHOTO_FILE_20160831_103106.jpg	Pass	
Ridgecrest Blvd	Norma St	18	SE	35.622410	-117.678703	8"	2 ft	6	Case C	Good	Yellow	5	6	1.4	1.0	No	5	6	1.3	2.3	3.4	n/a				PHOTO_FILE_20160831_103441.jpg	Pass	
Ridgecrest Blvd	Norma St	18	SW	35.622353	-117.679009	8"	2 ft	6	Case C	Good	Yellow	5	6	1.5	0.2	No	6	6	1.1	0.0	6.3	n/a				PHOTO_FILE_20160831_103734.jpg	Pass	
Ridgecrest Blvd	Sanders St	62	NE	35.622623	-117.672316	6"	2 ft	6	Case C	Good	Yellow	5	12	2.4	1.7	No	5	4	0.8	1.4	4.7	n/a				PHOTO_FILE_20160901_133026.jpg	Pass	
Ridgecrest Blvd	Sanders St	62	NW	35.622607	-117.672483	6"	2 ft	10	Case A	Good	Yellow	4	11	4.1	1.8	No	5	5	0.6	0.9	3.1	n/a				PHOTO_FILE_20160901_133227.jpg	Pass	
Ridgecrest Blvd	Sunset St	19	SE	35.622455	-117.680966	8"	2 ft	6	Case C	Good	Yellow	5	6	0.7	0.2	No	10	6	1.9	0.0	3.6	n/a				PHOTO_FILE_20160831_104339.jpg	Pass	
Ridgecrest Blvd	Sunset St	19	SW	35.622412	-117.681209	8"	2 ft	6	Case D	Good	Yellow	5	6	1.8	7.0	No	6	6	1.5	1.0	4.1	n/a				PHOTO_FILE_20160831_104557.jpg	Pass	
Ridgecrest Blvd	Warner St	61	SE	35.622442	-117.674286	6"	2	5	Case G	Good	Yellow	4	11	0.4	0.8	No	5	5	0.8	0.7	3.3	n/a				PHOTO_FILE_20160901_132328.jpg	Pass	
Ridgecrest Blvd	Warner St	61	SW	35.622433	-117.674483	6"	2 ft	5	Case G	Good	Yellow	5	11	2.9	0.2	No	5	5	0.5	0.8	4.5	n/a				PHOTO_FILE_20160901_132518.jpg	Pass	
Robertson Ave	Helena St	45	NW	35.618057	-117.676828	6"	2 ft	5	Case C	NONE		5	9	9.4	0.2	No	5	5	1.1	0.4	8.1	n/a				PHOTO_FILE_20160901_091557.jpg	Fail	Ramp slope > 1:12. No detectable warning
Robertson Ave	Helena St	45	SW	35.617877	-117.676816	6"	2	10	Case C	NONE		5	10	8.6	1.7	Yes	10	6	3.8	0.9	5.3	n/a				PHOTO_FILE_20160901_091906.jpg	Fail	Ramp slope > 1:12. Ramp has lip. No detectable warning
Robertson Ave	Helena St	45	SE	35.617890	-117.676638	6"	2 ft	5	Case C	NONE		5	5	8.2	0.7	No	5	5	4.1	0.3	9.9	n/a				PHOTO_FILE_20160901_092219.jpg	Fail	No detectable warning
Robertson Ave	Helena St	45	NE	35.618087	-117.676646	6"	2	5	Case C	NONE		5	5	9.7	0.5	No	5	5	2.9	0.3	8.2	n/a				PHOTO_FILE_20160901_092448.jpg	Fail	Ramp slope > 1:12. No detectable warning
Robertson Ave	Margalo St	28	NE	35.618077	-117.684583	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_131023.jpg	Fail	No curb ramp
Robertson Ave	Margalo St	28	SE	35.617968	-117.684554	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_131129.jpg	Fail	No curb ramp
Robertson Ave	Sanders St	56	NW	35.618062	-117.672361	6"	2 ft	5	Case A	NONE		6	6	6.1	1.1	No	5	3	2.5	0.3	9.6	n/a				PHOTO_FILE_20160901_123909.jpg	Fail	No detectable warning

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS
Robertson Ave	Sanders St	56	SW	35.617907	-117.672366	6"	2 ft	5	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160901_124011.jpg	Fail	No curb ramp
Robertson Ave	Sanders St	56	SE	35.617902	-117.672168	6"	0	0	NO RAMP					0.0	0.0					0.0	0.0					PHOTO_FILE_20160901_124118.jpg	Pass	No accessible route at this location.
Robertson Ave	Sanders St	56	NE	35.618062	-117.672161	6"	2 ft	5	Case A	NONE		6	6	4.3	1.4	Yes	5	3	1.6	0.6	5.3	n/a				PHOTO_FILE_20160901_124317.jpg	Fail	Ramp has lip. No detectable warning
Robertson Ave	Warner St	53	SE	35.617925	-117.674390	6"	2 ft	5 ft	Case A	Good	Yellow	5	5	7.9	0.1	No	5	4	1.4	1.4	5.8	n/a				PHOTO_FILE_20160901_105212.jpg	Pass	
Robertson Ave	Warner St	53	NE	35.618102	-117.674390	6"	2 ft	5 ft	Case A	Good	Red	5	5	6.0	1.6	No	5	4	1.7	0.9	4.4	n/a				PHOTO_FILE_20160901_105424.jpg	Pass	
Robertson Ave	Warner St	53	NW	35.618075	-117.674623	6"	2 ft	5 ft	Case A	Good	Yellow	5	5	6.6	0.6	No	5	4	0.8	0.5	6.6	n/a				PHOTO_FILE_20160901_105707.jpg	Pass	
Robertson Ave	Warner St	53	SW	35.617922	-117.674611	6"	2 ft	5 ft	Case C	Good	Yellow	5	5	2.3	0.4	No	5	5	1.2	1.3	5.6	n/a				PHOTO_FILE_20160901_105920.jpg	Pass	
Station Ave	Balsam St	72	SW	35.623152	-117.671340	6"	2 ft	6	Case A	NONE		4	10	4.8	0.7	No	5	5	2.9	0.3	4.4	n/a				PHOTO_FILE_20160907_090849.jpg	Fail	No detectable warning
Station Ave	Balsam St	72	NW	35.623298	-117.671353	6"	2 ft	10	Case A	NONE		4	10	4.4	1.1	No	5	10	1.6	0.9	5.0	n/a				PHOTO_FILE_20160907_091049.jpg	Fail	No detectable warning
Station Ave	Sanders St	73	SE	35.623130	-117.672258	6"	2	5	Case A	NONE		6	5	3.1	0.9	No	6	4	0.4	1.0	1.9	n/a				PHOTO_FILE_20160907_091501.jpg	Fail	No detectable warning
Station Ave	Sanders St	73	SW	35.623142	-117.672511	6"	2 ft	6	Case C	Fair	Yellow	5	10	1.3	0.6	No	10	10	0.6	0.7	2.8	n/a				PHOTO_FILE_20160907_091727.jpg	Pass	
Upjohn Ave	Downs St	33	NE	35.615378	-117.687694	8"	2 ft	6	Case A	Good	Yellow	4	9	7.6	1.5	No	4	4	1.4	2.2	7.6	n/a				PHOTO_FILE_20160901_072814.jpg	Pass	
Upjohn Ave	Gordon St	34	NW	35.615345	-117.685864	8"	2 ft	6	Case A	NONE		4	6	5.3	1.0	Yes	4	4	3.9	0.9	7.7	n/a				PHOTO_FILE_20160901_073511.jpg	Fail	Ramp has lip. No detectable warning
Upjohn Ave	Gordon St	34	NE	35.615338	-117.685688	6"	0	0	NO RAMP					0.0	0.0					0.0	0.0			ac dike	PHOTO_FILE_20160901_073638.jpg	Pass	No accessible route at this location.	
Upjohn Ave	Helena St	48	NW	35.615360	-117.676895	6"	2	5	Case C	NONE		4	5	3.3	0.2	No	5	5	3.6	0.0	9.5	n/a				PHOTO_FILE_20160901_095551.jpg	Fail	No detectable warning
Upjohn Ave	Helena St	48	NE	35.615398	-117.676670	6"	2 ft	5 ft	Case C	NONE		4	5	1.5	1.5	No	5	5	2.3	0.1	10.2	n/a				PHOTO_FILE_20160901_100151.jpg	Fail	Ramp flare/wing in pedestrian path has slope > 1:10 (wing slope is 10.2%). No detectable warning
Upjohn Ave	Norma St	39	NW	35.615378	-117.679139	8"	2 ft	6	Case C	NONE		4	6	12.5	1.9	No	6	6	3.6	0.6	6.9	Uplift	Low: 0.25" to 0.5"			PHOTO_FILE_20160901_081744.jpg	Fail	Ramp slope > 1:12. No detectable warning
Upjohn Ave	Norma St	39	NE	35.615403	-117.678894	8"	2 ft	6	Case B	NONE		4	7	7.8	1.5	No	5	3	2.1	1.0	12.0	n/a				PHOTO_FILE_20160901_081954.jpg	Fail	No detectable warning

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS	
Upjohn Ave	Sanders St	59	NW	35.615377	-117.672425	6"	2 ft	0	NO RAMP					0.0	0.0											PHOTO_FILE_20160901_130420.jpg	Pass	No accessible route at this location.	
Upjohn Ave	Sanders St	59	NE	35.615363	-117.672238	6"	2	0	NO RAMP					0.0	0.0												PHOTO_FILE_20160901_130525.jpg	Pass	No accessible route at this location.
Upjohn Ave	Sierra View St	35	NW	35.615388	-117.682728	8"	2	6	Case A	NONE		4	8	10.3	0.9	No	7	4	0.9	2.1	12.8	n/a					PHOTO_FILE_20160901_074305.jpg	Fail	Ramp slope > 1:12. No detectable warning
Upjohn Ave	Sierra View St	35	NE	35.615358	-117.682456	8"	2	6	Case A	Good		4	8	10.6	1.5	No	7	4	0.9	3.9	10.6	n/a					PHOTO_FILE_20160901_074509.jpg	Fail	Ramp slope > 1:12.
Upjohn Ave	Sunset St	37	NE	35.615387	-117.681149	8"	2 ft	5	Case C	Good	Yellow	4	5	3.6	1.7	No	5	5	1.8	1.2	20.2	Cracks/Fissures	Moderate: 0.5" to 1"		cracked spandrel	PHOTO_FILE_20160901_075949.jpg	Fail	Ramp flare/wing in pedestrian path has slope > 1:10	
Upjohn Ave	Sunset St	37	NW	35.615388	-117.681329	8"	2 ft	6	Case A	NONE		4	6	9.5	0.3	No	6	4	1.4	1.4	14.3	n/a					PHOTO_FILE_20160901_080149.jpg	Fail	Ramp slope > 1:12. No detectable warning
Upjohn Ave	Warner St	50	NE	35.615412	-117.674440	6"	2	5	Case A	Good	Yellow	5	5	7.0	0.5	No	5	4	2.9	0.7	7.8	n/a					PHOTO_FILE_20160901_101530.jpg	Pass	
Upjohn Ave	Warner St	50	NW	35.615388	-117.674653	6"	2	5	Case A	Good	Yellow	5	5	8.0	0.4	No	5	4	1.3	0.5	8.2	n/a					PHOTO_FILE_20160901_101753.jpg	Pass	
Vera Ave	Peg St	16	NW	35.624245	-117.680156	6"	2 ft	4 ft	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_101408.jpg	Fail	No curb ramp
Vera Ave	Peg St	16	NE	35.624297	-117.679948	6"	2 ft	4 ft	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_101526.jpg	Fail	No curb ramp
Vera Ave	Sierra Vista St	17	NE	35.624235	-117.680998	6"	2 ft	4 ft	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_101739.jpg	Fail	No curb ramp
Vera Ave	Sierra Vista St	17	SE	35.624108	-117.681023	6"	2 ft	4 ft	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_101854.jpg	Fail	No curb ramp
Wilson Ave	Helena St	46	NE	35.617163	-117.676648	6"	2 ft	5	Case C	NONE		5	5	2.9	1.3	Yes	5	5	3.6	0.1	6.0	n/a					PHOTO_FILE_20160901_093239.jpg	Fail	Ramp has lip. No detectable warning
Wilson Ave	Helena St	46	SE	35.617013	-117.676611	6"	2	5	Case C	NONE		5	5	2.1	1.7	Yes	5	5	2.2	0.1	3.2	n/a					PHOTO_FILE_20160901_093423.jpg	Fail	Ramp has lip. No detectable warning
Wilson Ave	Helena St	46	SW	35.616990	-117.676856	6"	2 ft	5 ft	Case A	NONE		4	5	8.4	0.3	No	5	4	1.7	0.1	13.1	Uplift	Low: 0.25" to 0.5"				PHOTO_FILE_20160901_093621.jpg	Fail	Ramp slope > 1:12. No detectable warning. Pavement uplift 0.25"-0.5".
Wilson Ave	Helena St	46	NW	35.617158	-117.676821	6"	2	5	Case C	NONE		5	5	1.4	0.9	No	5	5	1.0	0.7	3.5	n/a					PHOTO_FILE_20160901_093840.jpg	Fail	No detectable warning
Wilson Ave	Margalo St	29	SE	35.617092	-117.684578	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_131447.jpg	Fail	No curb ramp
Wilson Ave	Margalo St	29	NE	35.617248	-117.684594	6"	1.5 ft	5 ft	NO RAMP					0.0	0.0												PHOTO_FILE_20160831_131548.jpg	Fail	No curb ramp
Wilson Ave	Sanders St	57	NW	35.617147	-117.672341	6"	2	5	Case A	NONE		4	5	5.8	0.1	No	6	4	1.0	0.4	6.2	n/a					PHOTO_FILE_20160901_125025.jpg	Fail	No detectable warning

**APPENDIX A: CURB RETURN FIELD DATA AND ANALYSIS RESULTS**

STREET NAME	CROSS STREET NAME	INTERSECTION NO.	CORNER	NORTHING	EASTING	CURB HEIGHT	GUTTER WIDTH	SIDEWALK WIDTH	RAMP CASE	DETECTABLE WARNING CONDITION	DETECTABLE WARNING COLOR	RAMP WIDTH	RAMP DEPTH	RAMP SLOPE	RAMP CROSS SLOPE	RAMP HAS LIP?	LANDING WIDTH	LANDING DEPTH	LANDING SLOPE	LANDING CROSS SLOPE	WING SLOPE	DAMAGE TYPE	DEGREE OF DAMAGE	CAUSE OF DAMAGE (IF APPARENT)	COMMENTS	PHOTO JPG FILE NAME	PASS/FAIL	PASS/FAIL REMARKS
Wilson Ave	Sanders St	57	NE	35.617005	-117.672385	6"	2 ft	5	Case A	NONE		5	6	5.6	0.4	No	7	4	1.5	0.0	4.5	n/a				PHOTO_FILE_20160901_125221.jpg	Fail	No detectable warning
Wilson Ave	Sanders St	57	SW	35.616980	-117.672218	6"	2 ft	5 ft	Case A			5	7	2.5	0.1	No	7	4	1.8	0.9	5.3	n/a				PHOTO_FILE_20160901_125432.jpg	Pass	
Wilson Ave	Sanders St	57	NE	35.617148	-117.672201	6"	2 ft	5 ft	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160901_125522.jpg	Fail	No curb ramp
Wilson Ave	Sunset St	32	SE	35.617033	-117.681116	6"	2 ft	5 ft	Case C	Good	Yellow	5	6	1.2	1.9	No	5	5	1.4	0.5	10.9	n/a				PHOTO_FILE_20160831_133050.jpg	Fail	Ramp flare/wing in pedestrian path has slope > 1:10.
Wilson Ave	Sunset St	32	NE	35.617122	-117.681113	6"	2 ft	5	NO RAMP					0.0	0.0				0.0	0.0	0.0					PHOTO_FILE_20160831_133231.jpg	Pass	No accessible route at this location.
Wilson Ave	Warner St	52	SE	35.616987	-117.674420	6"	2 ft	5 ft	Case C	Good	Yellow	5	5	0.2	0.7	No	5	5	1.0	3.2	4.3	n/a				PHOTO_FILE_20160901_103911.jpg	Pass	
Wilson Ave	Warner St	52	NE	35.617143	-117.674390	6"	2 ft	5	Case A	Good	Yellow	5	5	7.3	0.5	No	5	4	1.5	1.6	3.1	n/a				PHOTO_FILE_20160901_104205.jpg	Pass	
Wilson Ave	Warner St	52	NW	35.617185	-117.674571	6"	2 ft	5 ft	Case C	Good	Yellow	5	5	1.7	1.3	No	5	5	3.2	0.8	6.5	n/a				PHOTO_FILE_20160901_104421.jpg	Pass	
Wilson Ave	Warner St	52	SW	35.616985	-117.674655	6"	2 ft	5 ft	Case A	Good	Yellow	5	5	7.6	0.6	No	5	5	1.8	1.6	6.3	n/a				PHOTO_FILE_20160901_104649.jpg	Pass	

**APPENDIX B: ADA 1991 STANDARDS FOR CURB RAMPS AND DETECTABLE WARNINGS**

**4.7 Curb Ramps**

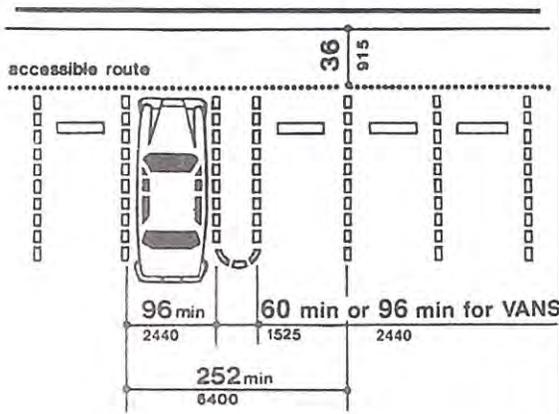


Fig. 9  
Dimensions of Parking Spaces

slopes not exceeding 1:50 (2%) in all directions.

**4.7 Curb Ramps.**

**4.7.1 Location.** Curb ramps complying with 4.7 shall be provided wherever an accessible route crosses a curb.

**4.7.2 Slope.** Slopes of curb ramps shall comply with 4.8.2. The slope shall be measured as shown in Fig. 11. *Transitions from ramps to walks, gutters, or streets shall be flush and free of abrupt changes. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1:20.*

**4.7.3 Width.** The minimum width of a curb ramp shall be 36 in (915 mm), exclusive of flared sides.

**4.7.4 Surface.** Surfaces of curb ramps shall comply with 4.5.

**4.7.5 Sides of Curb Ramps.** If a curb ramp is located where pedestrians must walk across the ramp, or where it is not protected by handrails or guardrails, it shall have flared sides; the maximum slope of the flare shall be 1:10 (see Fig. 12(a)). Curb ramps with returned

curbs may be used where pedestrians would not normally walk across the ramp (see Fig. 12(b)).

**4.7.6 Built-up Curb Ramps.** Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes (see Fig. 13).

**4.7.7 Detectable Warnings.** A curb ramp shall have a detectable warning complying with 4.29.2. *The detectable warning shall extend the full width and depth of the curb ramp.*

**4.7.8 Obstructions.** Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.

**4.7.9 Location at Marked Crossings.** Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides (see Fig. 15).

**4.7.10 Diagonal Curb Ramps.** If diagonal (or corner type) curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have 48 in (1220 mm) minimum clear space as shown in Fig. 15(c) and (d). If diagonal curb ramps are provided at marked crossings, the 48 in (1220 mm) clear space shall be within the markings (see Fig. 15(c) and (d)). If diagonal curb ramps have flared sides, they shall also have at least a 24 in (610 mm) long segment of straight curb located on each side of the curb ramp and within the marked crossing (see Fig. 15(c)).

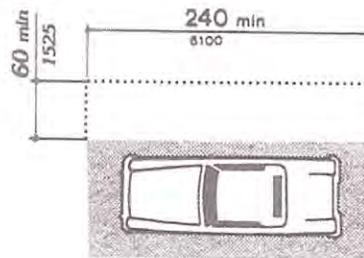


Fig. 10  
Access Aisle at Passenger Loading Zones

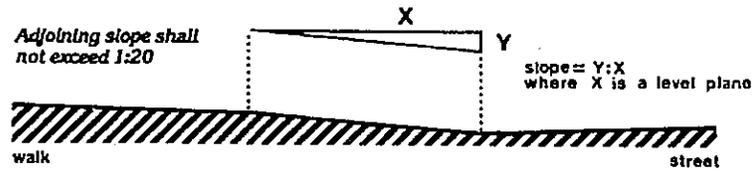
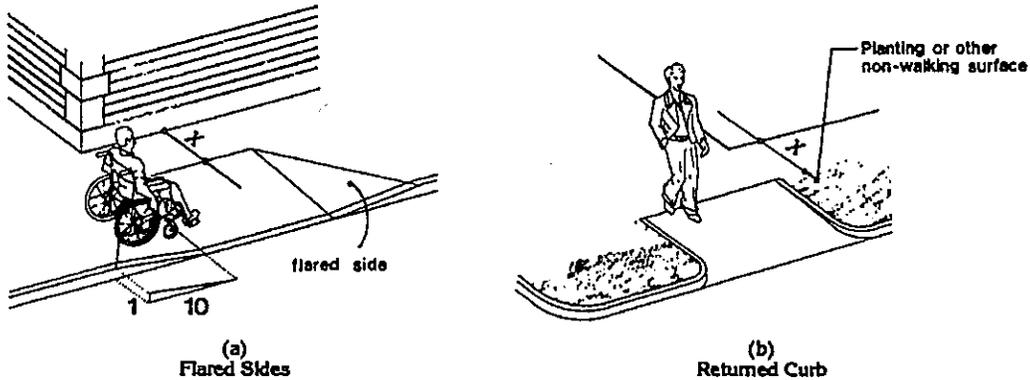


Fig. 11  
Measurement of Curb Ramp Slopes



If X is less than 48 in, then the slope of the flared side shall not exceed 1:12.

Fig. 12  
Sides of Curb Ramps

**4.7.11 Islands.** Any raised islands in crossings shall be cut through level with the street or have curb ramps at both sides and a level area at least 48 in (1220 mm) long between the curb ramps in the part of the island intersected by the crossings (see Fig. 15(a) and (b)).

**4.8 Ramps.**

**4.8.1\* General.** Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 4.8.

**4.8.2\* Slope and Rise.** The least possible slope shall be used for any ramp. The maximum slope of a ramp in new construction shall be 1:12. The maximum rise for any run shall be 30 in (760 mm) (see Fig. 16). Curb ramps and

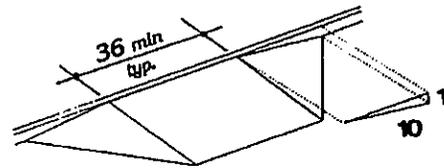
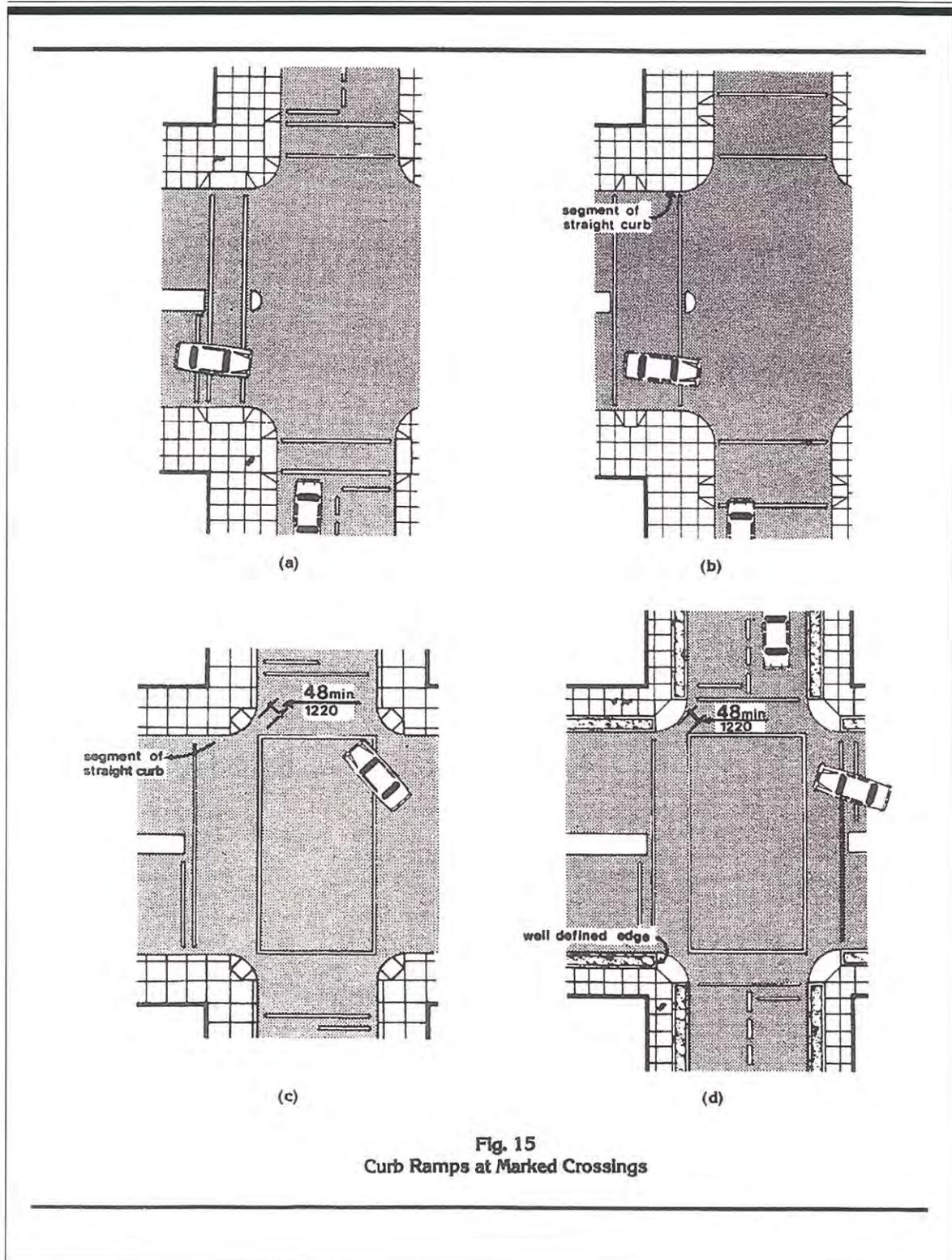
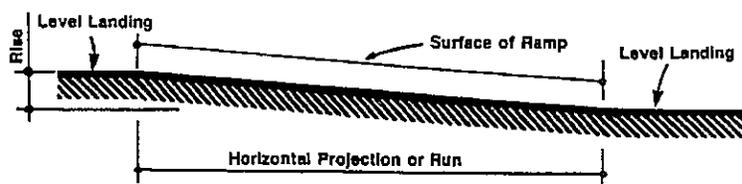


Fig. 13  
Built-Up Curb Ramp

ramps to be constructed on existing sites or in existing buildings or facilities may have slopes and rises as *allowed in 4.1.6(3)(a)* if space limitations prohibit the use of a 1:12 slope or less.

4.8 Ramps





Slope	Maximum Rise		Maximum Horizontal Projection	
	in	mm	ft	m
1:12 to < 1:16	30	760	30	9
1:16 to < 1:20	30	760	40	12

Fig. 16  
Components of a Single Ramp Run and Sample Ramp Dimensions

**4.8.3 Clear Width.** The minimum clear width of a ramp shall be 36 in (915 mm).

**4.8.4\* Landings.** Ramps shall have level landings at bottom and top of each ramp and each ramp run. Landings shall have the following features:

(1) The landing shall be at least as wide as the ramp run leading to it.

(2) The landing length shall be a minimum of 60 in (1525 mm) clear.

(3) If ramps change direction at landings, the minimum landing size shall be 60 in by 60 in (1525 mm by 1525 mm).

(4) If a doorway is located at a landing, then the area in front of the doorway shall comply with 4.13.6.

**4.8.5\* Handrails.** If a ramp run has a rise greater than 6 in (150 mm) or a horizontal projection greater than 72 in (1830 mm), then it shall have handrails on both sides. Handrails are not required on curb ramps or *adjacent to seating in assembly areas*. Handrails shall comply with 4.26 and shall have the following features:

(1) Handrails shall be provided along both sides of ramp segments. The inside handrail on switchback or dogleg ramps shall always be continuous.

(2) If handrails are not continuous, they shall extend at least 12 in (305 mm) beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface (see Fig. 17).

(3) The clear space between the handrail and the wall shall be 1 - 1/2 in (38 mm).

(4) Gripping surfaces shall be continuous.

(5) *Top of handrail gripping surfaces shall be mounted between 34 in and 38 in (865 mm and 965 mm) above ramp surfaces.*

(6) *Ends of handrails shall be either rounded or returned smoothly to floor, wall, or post.*

(7) *Handrails shall not rotate within their fittings.*

**4.8.6 Cross Slope and Surfaces.** The cross slope of ramp surfaces shall be no greater than 1:50. Ramp surfaces shall comply with 4.5.

4.9 Stairs

<p><b>4.8.7 Edge Protection.</b> Ramps and landings with drop-offs shall have curbs, walls, railings, or projecting surfaces that prevent people from slipping off the ramp. Curbs shall be a minimum of 2 in (50 mm) high (see Fig. 17).</p> <p><b>4.8.8 Outdoor Conditions.</b> Outdoor ramps and their approaches shall be designed so that water will not accumulate on walking surfaces.</p> <p><b>4.9 Stairs.</b></p> <p><b>4.9.1* Minimum Number.</b> <i>Stairs required to be accessible by 4.1 shall comply with 4.9.</i></p> <p><b>4.9.2 Treads and Risers.</b> On any given flight of stairs, all steps shall have uniform riser heights and uniform tread widths. Stair treads shall be no less than 11 in (280 mm) wide, measured from riser to riser (see Fig. 18(a)). <i>Open risers are not permitted.</i></p> <p><b>4.9.3 Nosings.</b> The undersides of nosings shall not be abrupt. The radius of curvature at the leading edge of the tread shall be no greater than 1/2 in (13 mm). Risers shall be sloped or the underside of the nosing shall have an angle not less than 60 degrees from the horizontal. Nosings shall project no more than 1-1/2 in (38 mm) (see Fig. 18).</p> <p><b>4.9.4 Handrails.</b> Stairways shall have handrails at both sides of all stairs. Handrails shall comply with 4.26 and shall have the following features:</p> <p>(1) Handrails shall be continuous along both sides of stairs. The inside handrail on switchback or dogleg stairs shall always be continuous (see Fig. 19(a) and (b)).</p> <p>(2) If handrails are not continuous, they shall extend at least 12 in (305 mm) beyond the top riser and at least 12 in (305 mm) plus the width of one tread beyond the bottom riser. At the top, the extension shall be parallel with the floor or ground surface. At the bottom, the handrail shall continue to slope for a distance of the width of one tread from the bottom riser; the remainder of the extension shall be horizontal (see Fig. 19(c) and (d)). Handrail extensions shall comply with 4.4.</p> <p>(3) The clear space between handrails and wall shall be 1-1/2 in (38 mm).</p>	<p>(4) Gripping surfaces shall be uninterrupted by newel posts, other construction elements, or obstructions.</p> <p>(5) <i>Top of handrail gripping surface shall be mounted between 34 in and 38 in (865 mm and 965 mm) above stair nosings.</i></p> <p>(6) <i>Ends of handrails shall be either rounded or returned smoothly to floor, wall or post.</i></p> <p>(7) <i>Handrails shall not rotate within their fittings.</i></p> <p><b>4.9.5 Detectable Warnings at Stairs.</b> <i>(Reserved).</i></p> <p><b>4.9.6 Outdoor Conditions.</b> Outdoor stairs and their approaches shall be designed so that water will not accumulate on walking surfaces.</p> <p><b>4.10 Elevators.</b></p> <p><b>4.10.1 General.</b> <i>Accessible elevators shall be on an accessible route and shall comply with 4.10 and with the ASME A17.1-1990, Safety Code for Elevators and Escalators. Freight elevators shall not be considered as meeting the requirements of this section unless the only elevators provided are used as combination passenger and freight elevators for the public and employees.</i></p> <p><b>4.10.2 Automatic Operation.</b> Elevator operation shall be automatic. Each car shall be equipped with a self-leveling feature that will automatically bring the car to floor landings within a tolerance of 1/2 in (13 mm) under rated loading to zero loading conditions. This self-leveling feature shall be automatic and independent of the operating device and shall correct the overtravel or undertravel.</p> <p><b>4.10.3 Hall Call Buttons.</b> Call buttons in elevator lobbies and halls shall be centered at 42 in (1065 mm) above the floor. Such call buttons shall have visual signals to indicate when each call is registered and when each call is answered. Call buttons shall be a minimum of 3/4 in (19 mm) in the smallest dimension. The button designating the up direction shall be on top. (See Fig. 20.) <i>Buttons shall be raised or flush. Objects mounted beneath hall call buttons shall not project into the elevator lobby more than 4 in (100 mm).</i></p>
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**4.29 Detectable Warnings**

**4.29 Detectable Warnings.**

**4.29.1 General.** Detectable warnings required by 4.1 and 4.7 shall comply with 4.29.

**4.29.2\* Detectable Warnings on Walking Surfaces.** Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 in (23 mm), a height of nominal 0.2 in (5 mm) and a center-to-center spacing of nominal 2.35 in (60 mm) and shall contrast visually with adjoining surfaces, either light-on-dark, or dark-on-light.

*The material used to provide contrast shall be an integral part of the walking surface. Detectable warnings used on interior surfaces shall differ from adjoining walking surfaces in resiliency or sound-on-cane contact.*

**4.29.3 Detectable Warnings on Doors To Hazardous Areas.** (Reserved).

**4.29.4 Detectable Warnings at Stairs.** (Reserved).

**4.29.5 Detectable Warnings at Hazardous Vehicular Areas.** If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings, or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36 in (915 mm) wide, complying with 4.29.2.

**4.29.6 Detectable Warnings at Reflecting Pools.** The edges of reflecting pools shall be protected by railings, walls, curbs, or detectable warnings complying with 4.29.2.

**4.29.7 Standardization.** (Reserved).

**4.30 Signage.**

**4.30.1\* General.** Signage required to be accessible by 4.1 shall comply with the applicable provisions of 4.30.

**4.30.2\* Character Proportion.** Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1 and a stroke-width-to-height ratio between 1:5 and 1:10.

**4.30.3 Character Height.** Characters and numbers on signs shall be sized according to the viewing distance from which they are to be read. The minimum height is measured using an upper case X. Lower case characters are permitted.

<b>Height Above Finished Floor</b>	<b>Minimum Character Height</b>
Suspended or Projected Overhead in compliance with 4.4.2	3 in (75 mm) minimum

**4.30.4\* Raised and Brailled Characters and Pictorial Symbol Signs (Pictograms).** Letters and numerals shall be raised 1/32 in, upper case, sans serif or simple serif type and shall be accompanied with Grade 2 Braille. Raised characters shall be at least 5/8 in (16 mm) high, but no higher than 2 in (50 mm). Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram. The border dimension of the pictogram shall be 6 in (152 mm) minimum in height.

**4.30.5\* Finish and Contrast.** The characters and background of signs shall be egg-shell, matte, or other non-glare finish. Characters and symbols shall contrast with their background --either light characters on a dark background or dark characters on a light background.

**4.30.6 Mounting Location and Height.** Where permanent identification is provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall space to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall. Mounting height shall be 60 in (1525 mm) above the finish floor to the centerline of the sign. Mounting location for such signage shall be so that a person may approach within 3 in (76 mm) of signage without encountering protruding objects or standing within the swing of a door.

**4.30.7\* Symbols of Accessibility.**

(1) Facilities and elements required to be identified as accessible by 4.1 shall use the international symbol of accessibility. The