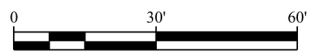


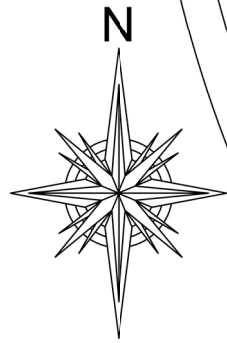
FINAL ROW PLAN REVISIONS (SUBMITTAL DATE: )

NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



APPROVALS		DATE:
DRAWN BY :	SARMAD AL TAMEEMI	08/16/2021
CHECKED BY :	ALAN KO	
APPROVED BY :	STEVEN R. BANNASCH	

PROJECT NAME	DWG. NO.	SHEET
JOHN C LODGE RAMP AT WYOMING	01-01	1 OF 5
TITLE SHEET	PROPOSAL PLAN	REV. NO.



JAMES COUZENS Fwy

WYOMING ST

LODGE SERV DR

KEELER ST

KEELER

WASHBURN

REMOVE EXIST SIDEWALK

REMOVE EXIST SIGN

REMOVE EXIST DO NOT ENTER SIGN

REMOVE EXIST PAVEMENT AND PAVEMENT BASE

REMOVE EXIST CONC. CURB

REMOVE EXIST POST

RESURFACE

REMOVE EXIST SIDEWALK

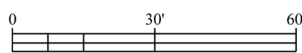
REMOVE EXIST GURDRAIL & POSTS

REMOVE EXIST DO NOT ENTER SIGN



FINAL ROW PLAN REVISIONS (SUBMITTAL DATE: )

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APPROVALS  
 DRAWN BY : SARMAD AL TAMEEMI  
 CHECKED BY : ALAN KO  
 APPROVED BY : STEVEN R. BANNASCH

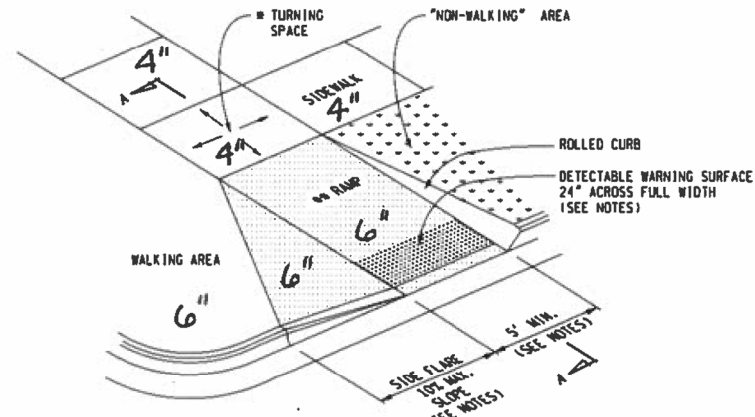
DATE:  
08/16/2021

PROJECT NAME JOHN C LODGE RAMP AT WYOMING  
 TITLE SHEET REMOVAL PLAN

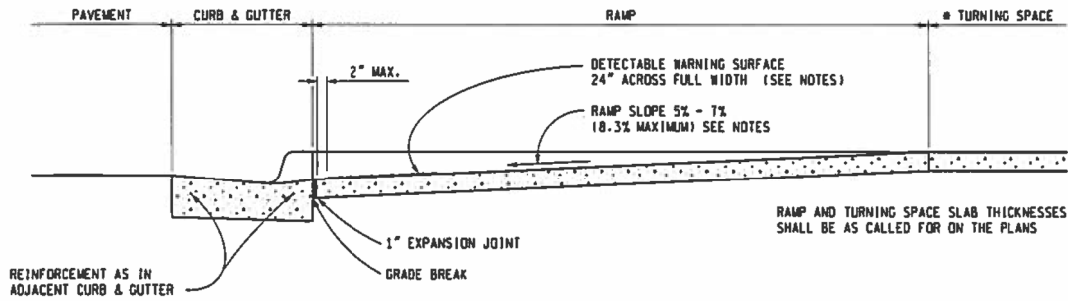
DWG. NO. 01-01  
 REV. NO.

SHEET  
2 OF 5

• MAXIMUM TURNING SPACE SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.  
 •• MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.

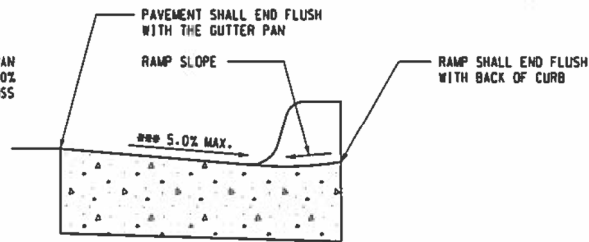


**SIDEWALK RAMP TYPE RF**  
(ROLLED / FLARED SIDES)



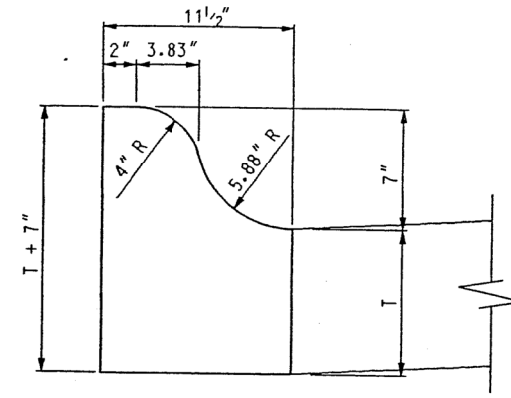
**SECTION A-A**

••• TRANSITION ADJACENT GUTTER PAN CROSS SECTION TO PROVIDE 5.0% MAXIMUM COUNTER SLOPE ACROSS THE RAMP OPENING.

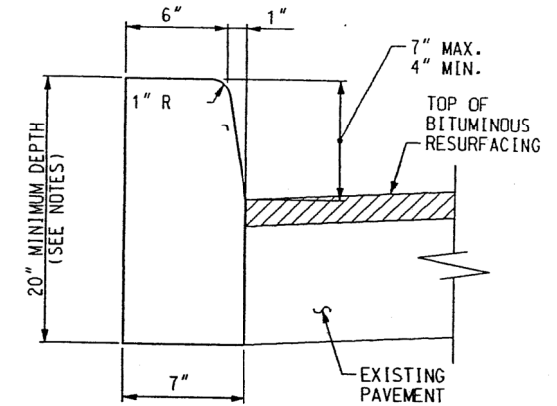


**SECTION THROUGH CURB CUT**  
(TYPICAL ALL RAMP TYPES)

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR			
<b>SIDEWALK RAMP AND DETECTABLE WARNING DETAILS</b>			
9-30-2014 F.H.W.A. APPROVAL	7-1-2014 PLAN DATE	R-28-I	SHEET 2 OF 7

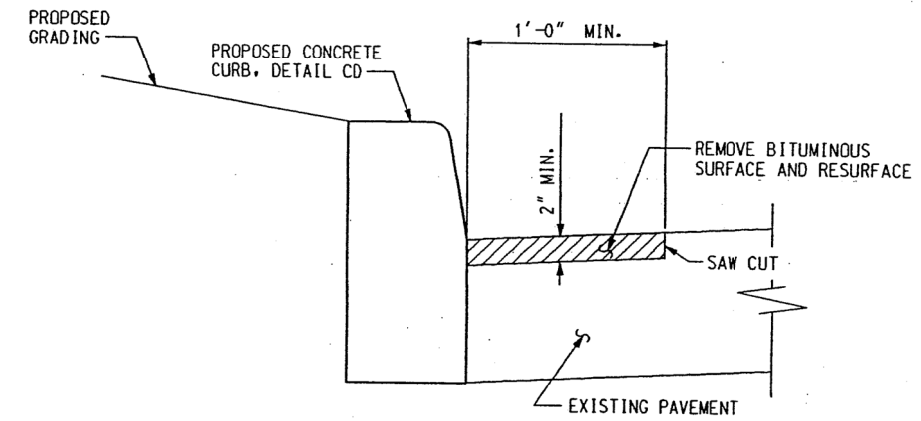


**INTEGRAL ROLL CURB  
TYPE IV**



**CONCRETE CURB, DETAIL CD**

NOTES:  
 1. DEPTH OF CURB SHALL BE 20" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.  
 2. USE WHEN REPLACING CURBS ON EXISTING BITUMINOUS PAVEMENTS TO BE RESURFACED.



THIS DETAIL SHALL BE USED AT LOCATIONS WHERE PROPOSED CURB IS CONSTRUCTED ADJACENT TO EXISTING BITUMINOUS PAVEMENT NOT TO BE RESURFACED.

**BITUMINOUS PATCHING AT  
PROPOSED CURB EDGE**

CITY OF DETROIT CITY ENGINEERING DIVISION, D.P.W. STANDARD PLAN FOR			
--- STANDARD CURB DETAILS ---			
03/07/98 PLAN DATE	DRAWING NO. 3	DETAIL STANDARD NO. C-4380	SHEET 2 OF 4

REVISED DATE (METRIC TO ENGLISH UNIT SYSTEM): DEC. 2002

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE: )

NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



NO SCALE

APPROVALS	
DRAWN BY :	SARMAD AL TAMEEMI
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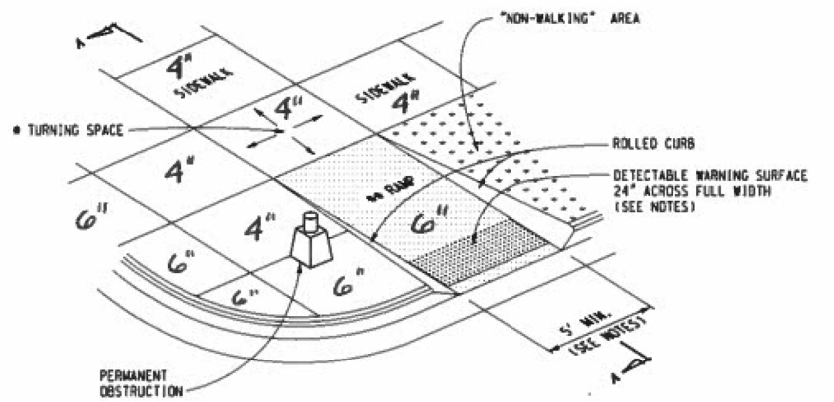
DATE:  
08/16/2021

PROJECT NAME	JOHN C LODGE RAMP AT WYOMING	DWG. NO.	01-01
TITLE SHEET	SPECIAL DETAIL	REV. NO.	

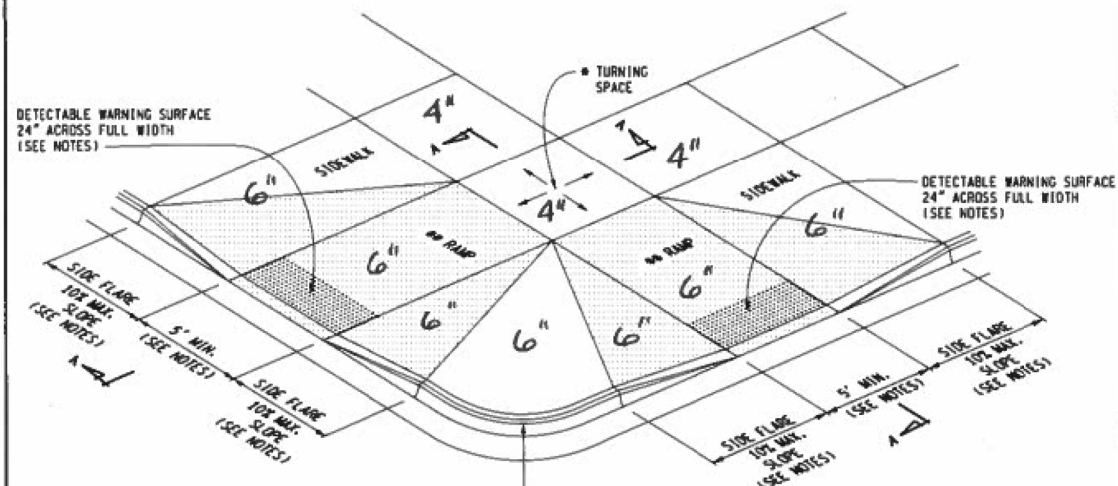
SHEET

3 OF 5

\* MAXIMUM TURNING SPACE SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.  
 \*\* MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.

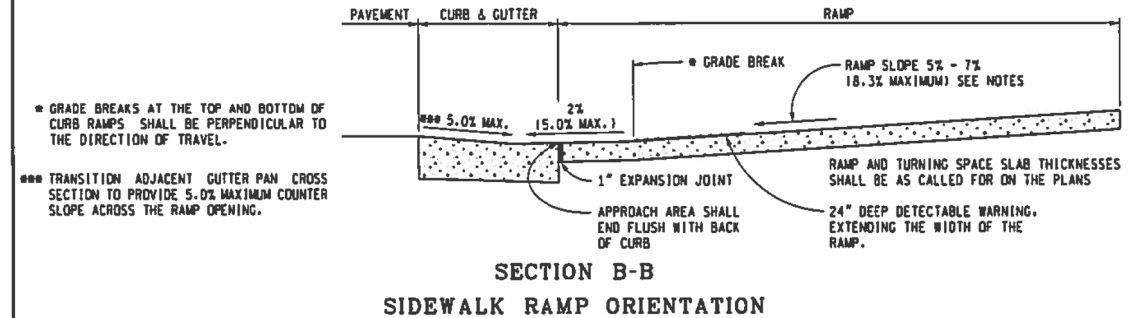
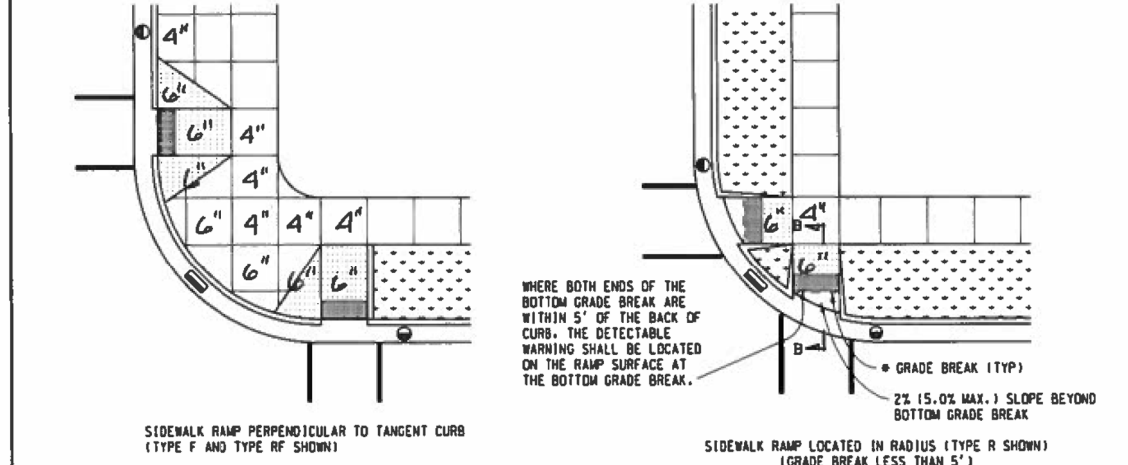
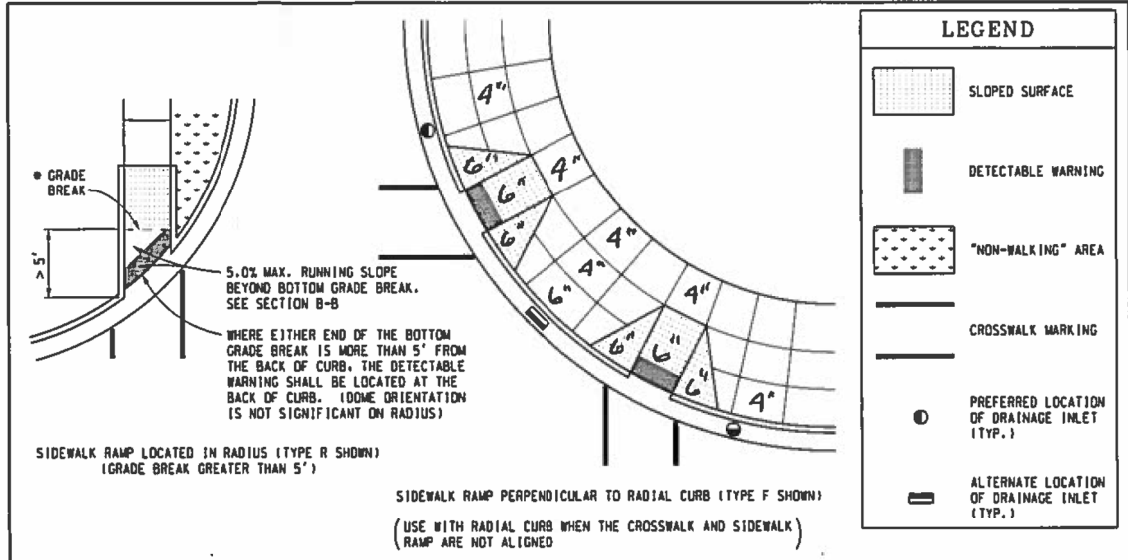


**SIDEWALK RAMP TYPE R**  
(ROLLED SIDES)



**SIDEWALK RAMP TYPE F**  
(FLARED SIDES, TWO RAMPS SHOWN)

	DEPARTMENT DIRECTOR Keith T. Stuedde	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR		
	PREPARED BY DESIGN DIVISION DRAWN BY: B.L.T. CHECKED BY: W.K.P.	APPROVED BY: <i>Randy U. Pugh</i> DIRECTOR, BUREAU OF FIELD SERVICES	<b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b>	
	APPROVED BY: <i>Mark A. Van Pelt</i> DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT	9-30-2014 F.H.W.A. APPROVAL	7-1-2014 PLAN DATE	R-28-I SHEET 1 OF 7



MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR			
<b>SIDEWALK RAMP AND          DETECTABLE WARNING DETAILS</b>			
9-30-2014 F.H.W.A. APPROVAL	7-1-2014 PLAN DATE	R-28-I	SHEET 6 OF 7

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE: )

NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

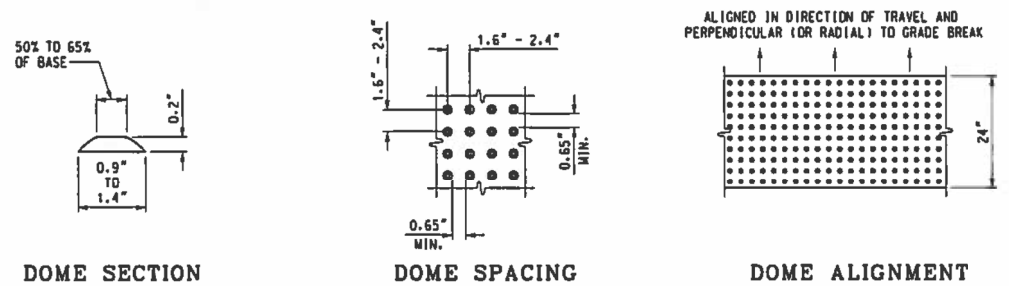


NO SCALE

APPROVALS	
DRAWN BY :	SARMAD AL TAMEEMI
CHECKED BY :	ALAN KO
APPROVED BY :	STEVEN R. BANNASCH

DATE:	08/16/2021
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PROJECT NAME	JOHN C LODGE RAMP AT WYOMING	DWG. NO.	01-01	SHEET	4 OF 5
TITLE SHEET	SPECIAL DETAIL	REV. NO.			



**DETECTABLE WARNING DETAILS**

**NOTES:**

DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.

SIDEWALK RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT MARKED AND/OR SIGNALIZED MID-BLOCK CROSSINGS.

SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE RUNNING SLOPE.

SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SNOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.

PROVIDE TURNING SPACES WHERE PEDESTRIAN TURNING MOVEMENTS ARE REQUIRED.

WHEN 5' MINIMUM WIDTHS ARE NOT FEASIBLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND TURNING SPACES TO NOT LESS THAN 4' x 4'.

DETECTABLE WARNING SURFACE COVERAGE IS 24\" MINIMUM IN THE DIRECTION OF RAMP/PATH TRAVEL AND THE FULL WIDTH OF THE RAMP/PATH OPENING EXCLUDING CURBED OR FLARED CURB TRANSITION AREAS. A BORDER OFFSET NOT GREATER THAN 2\" MEASURED ALONG THE EDGES OF THE DETECTABLE WARNING IS ALLOWABLE. FOR RADIAL CURB THE OFFSET IS MEASURED FROM THE ENDS OF THE RADIUS.

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.0%. FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSITIONED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.

THE MAXIMUM RUNNING SLOPE OF 8.3% IS RELATIVE TO A FLAT 10% REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SERIES OF RAMPS TO EXCEED 15 FEET IN LENGTH.

DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. THE LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER THE LOCATION OF THE DRAINAGE STRUCTURE. WHERE EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURER'S ADA COMPLIANT GRATE. OPENINGS SHALL NOT BE GREATER THAN 1/2\". ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

TRANSITION THE GUTTER PAN CROSS SECTION SUCH THAT THE COUNTER SLOPE IN THE DIRECTION OF RAMP TRAVEL IS NOT GREATER THAN 5.0%. MAINTAIN THE NORMAL GUTTER PAN CROSS SECTION ACROSS DRAINAGE STRUCTURES.

THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.

CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE ROADSIDE CURB LINE, SHALL BE PROVIDED WHERE AN UNOBSTRUCTED CIRCULATION PATH LATERALLY CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS BORDERED BY LANDSCAPING, UNPAVED SURFACE OR PERMANENT FIXED OBJECTS. WHERE THEY ARE NOT REQUIRED, FLARED SIDES CAN BE CONSIDERED IN ORDER TO AVOID SHARP CURB RETURNS AT RAMP OPENINGS.

DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FIELD CUT UNITS CAST AND/OR ANCHORED IN THE PAVEMENT TO RESIST SHIFTING OR HEAVING.

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SIDEWALK RAMP AND  
 DETECTABLE WARNING DETAILS**

9-30-2014 F.W.A. APPROVAL	7-1-2014 PLAN DATE	R-28-I	SHEET 7 OF 7
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FINAL ROW PLAN REVISIONS (SUBMITTAL DATE: )

NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



NO SCALE

APPROVALS		DATE:
DRAWN BY :	SARMAD AL TAMEEMI	08/16/2021
CHECKED BY :	ALAN KO	
APPROVED BY :	STEVEN R. BANNASCH	

PROJECT NAME	DWG. NO.	SHEET
JOHN C LODGE RAMP AT WYOMING	01-01	5 OF 5
TITLE SHEET	SPESIAL DETAILS	REV. NO.