GENERAL NOTES:

1. The attached photos and sketches are approximate - Contractor to confirm exact path widths and coordinate on site to meet ADA guidelines.

2. Each RR crossing detectable warning strip to be chalked out and approved by Zoo Facility Management prior to cutting pavement.

3. The detectable warning surface shall be located so that the edge nearest the rail crossing is 6 ft minimum and 15 ft maximum from the centerline of the nearest rail. The rows of truncated domes in a detectable warning surface shall be aligned to be parallel with the direction of wheelchair travel.

4. Cut, remove and transport existing concrete and asphalt to be recycled. Form and pour 6" thick (3500psi natural concrete with #4 bars at 12" o.c. each way over min. of 6" compacted granular fill.

5. Detectable warning strip purchase and installation per manufacturer’s details and specifications. If providing a different product than ADA Solutions Detectable Warning Surface Panels, Cast-in-place, Replaceable, obtain written zoo approval prior to submitting bid. Specification attached.

6. Provide a total of four extra detectable warning units of each size for future use: (4) 2’ x 4’ and (4) 2’ x 3’.

7. Bid Add Alternate A: Replace/repair/seal asphalt paving as required due to warning strip installation at all installation locations.

8. Note, painting not in contract. Zoo to paint pavement markings at RR crossing, etc. as needed.

Basis of design - ADA Solutions Detectable Warning Surface Panels, Cast-in-place, Replaceable or equal. See attached specification.

CROSSING

1. SERVICE AREA
2. PUBLIC PATHWAY
3. PUBLIC PATHWAY
4. SERVICE AREA (NO AUTOMATIC GATE)
5. PUBLIC PATHWAY
6. PUBLIC PATHWAY
7. PUBLIC PATHWAY
8. PUBLIC PATHWAY
9. PUBLIC PATHWAY
10. PUBLIC PATHWAY
11. PUBLIC PATHWAY
12. PUBLIC PATHWAY

ALIGN NEW CONCRETE FULLY BEHIND EXISTING AUTOMATIC GATE WHERE APPLICABLE

VARES - COORDINATE TO MANUFACTURERS STANDARD WARNING STRIP MODULE

6’-0” MIN 15’-0” MAX

4

SEE GENERAL NOTE #3

2’x3’

2’x4’

2’x3’

Existing Automatic Gate

Center Line of Train Track

Saint Louis Zoo Aerial Image
1 Government Drive, St Louis MO

TYPICAL WARNING STRIP

0’-6”
Installation Procedure

Be sure to read and understand all of these instructions before you begin.

A. The physical characteristics of the concrete shall be as specified in the contract documents while maintaining a slump range of 4-7 inches to permit the solid placement of the ADA Cast-In-Place Replaceable Tactile Unit (ADAREP) in the wet cement.

B. The concrete shall be poured and finished level, true and smooth to the required dimensions prior to the placement of the ADAREP unit.

C. Place the ADAREP unit 6-8 inches from the curb line. Working in a grid pattern, tamp the ADAREP unit into the wet concrete using a rubber mallet and a piece of wood. Continue this process until all of the air has been released, and the ADAREP unit surface is flush with the surrounding area. IMPORTANT: Avoid striking the surface of the ADAREP unit directly.

D. Following the placement, the ADAREP unit elevation should be checked to the adjacent surface with a straight edge. The ADAREP unit elevation should be consistent with the Contract Drawings and Specifications. Any required adjustments must be made prior to the time when the concrete begins to set.

E. IMPORTANT NOTICE TO INSTALLER: To allow for expansion and contraction, after tile is installed, use a 1/4" finish edge trowel around entire perimeter. On a continuous run, be sure to space each unit 1/8" apart.

F. When you are confident that the ADAREP unit is in place and no further adjustments are needed, place a cinder block on both ends, if necessary, to hold the ADAREP unit in place while the concrete sets.

G. During and after the ADAREP unit installation, as well as the concrete curing stage, no walking or external forces can be placed on the ADAREP unit. The area must be protected from pedestrian traffic until concrete is cured. The ADAREP Warning Surface will be ready for pedestrian traffic within 2-4 hours.

H. Be sure to remove plastic protective covering from the face of the ADAREP Unit once the concrete is cured.

*Not recommended or warranted for asphalt installation.

Do not cut Cast-In-Place Replaceable Tactile. Use an appropriate sized tactile or Radius Tactile to fit the requirement.
Contact manufacturer for more details.

PRODUCT SIZES
2'x3' 2'x4' 2'x5'
2'x4' 2'x5' 2'x5' 3'x4' 3'x5'

APPLICATION
Fresh Pour
Concrete Ramps
& Replacement

Sizes: 2'x3' and 2'x4'
Color: Yellow #33538
2.35"o.c. dome spacing
DETECTABLE WARNING SURFACE PANEL
Cast-In-Place Replaceable 24" x 36"
2.29" (58.1 MM) x 2.40" (60.96 MM) IN-LINE TRUNCATED DOME SPACING
PART SIZE: 24" (609.6 MM) X 36.57" (928.8 MM)

IN-LINE TRUNCATED DOME SPACING

PERIMETER EMBEDMENT DETAIL

B PANEL-TO-PANEL JOINT DETAIL

B DETAIL - INSTALLED IN CONCRETE

INSTALLATION NOTE: ALLOW 0.125" [3.18] GAP BETWEEN ADJACENT PANELS WHEN INSTALLING PANELS IN SERIES TO PROVIDE ALLOWANCE FOR THERMAL EXPANSION

DETAIL E

PERIMETER EMBEDMENT DETAIL A

FINISH PERIMETER OF PANELS WITH 1/4" [6.35] RADIUS EDGE IN CONCRETE TO PROVIDE ALLOWANCE FOR PANEL EXPANSION

5-Year Warranty

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DETECTABLE WARNING SURFACE PANEL
Cast-In-Place Replaceable 24" x 36"
2.29" (58.1 MM) x 2.40" (60.96 MM) IN-LINE TRUNCATED DOME SPACING

INCIDENTALS

Framing: 5" x 11/4"

Weatherproof, high-visibility, slip-resistant material.

Anchors: 1/2" corrosion-resistant concrete inserts.

WARRANTY

ADA-TILE® units shall be guaranteed in writing for a period of five (5) years from date of contract's final completion. The guarantee excludes breakage and deformation of the tactile warning surface material.
Asphalt Pavement repair as required

14' detectable warning strips
2 - 2' x 4' units = 8'
2 - 2' x 3' units = 3'

16' detectable warning strips
4 - 2' x 4' units = 16'

SEE TPICAL WARNING STRIP DETAIL ON SHEET A2

new concrete shall be fully behind existing automatic gates

align new concrete behind existing automatic gate

Asphalt Pavement repair as required

align new concrete behind existing automatic gate

Photo #1: Existing

Photo #2: Proposed
Note: Detectable warning may straddle both asphalt and exposed aggregate concrete. Sawcut existing exposed aggregate concrete pavement as required to meet requirements of Typical Warning Strip detail on sheet A2.
Photo #1: Existing

Photo #2: Existing

Photo #3: Proposed

Aerial Image Proposed Sketch (no scale)
South side:
23' detectable warning strips
1 - 2' x 3' units = 3'
5 - 2' x 4' units = 20'

North side
22' detectable warning strips
4 - 2' x 4' units = 16'
2 - 2' x 3' units = 6'

South side:
23' detectable warning strips
1 - 2' x 3' units = 3'
5 - 2' x 4' units = 20'

North side
22' detectable warning strips
4 - 2' x 4' units = 16'
2 - 2' x 3' units = 6'

SEE TPICAL WARNING STRIP DETAIL ON SHEET A2
Sawcut and remove existing concrete full width of pavement to asphalt joint.

Note: Sawcut and remove existing concrete full width of pavement to asphalt joint.

10' detectable warning strips
(1) - 2' x 4' units
(2) - 2' x 3' unit

11' detectable warning strips
(2) - 2' x 4' units
(1) - 2' x 3' unit

SEEN TPICAL WARNING STRIP DETAIL ON SHEET A2
Sawcut and remove existing concrete full width of pavement to asphalt joint.

12' detectable warning strips
3 - 2’ x 4’ units = 12’

SEE TPICAL WARNING STRIP DETAIL ON SHEET A2

Existing automatic gates

Photo #1: Existing

Photo #2: Existing

Aerial Photo: Proposed
32' detectable warning strips
8 - 2' x 4' units = 28'

22' detectable warning strips
4 - 2' x 4' units = 16'
2 - 2' x 3' units = 6'

SEE TPICAL WARNING STRIP DETAIL ON SHEET A2
Photo #1: Existing

Photo #2: Existing

Photo #2: Proposed

Aerial image: Proposed Plan

SEE TPICAL WARNING STRIP DETAIL ON SHEET A2

The Living World
Train Station
RAMP DN.

18'-0" PATH WIDTH

23'-0" ASPHALT PATH WIDTH

17' detectable warning strips
2 - 2' x 4' units = 8'
3 - 2' x 3' units = 9'

23' detectable warning strips
5 - 2' x 4' units = 20'
1 - 2' x 3' units = 3'

18'-0" PATH WIDTH

SEE TPICAL WARNING STRIP DETAIL ON SHEET A2

The Living World
Train Station
RAMP DN.

18'-0" PATH WIDTH

23'-0" ASPHALT PATH WIDTH

17' detectable warning strips
2 - 2' x 4' units = 8'
3 - 2' x 3' units = 9'

23' detectable warning strips
5 - 2' x 4' units = 20'
1 - 2' x 3' units = 3'
Photo #1: Existing

Photo #2: Proposed

Photo #2: Existing

Aerial image: Proposed Plan

SEE TYPICAL WARNING STRIP DETAIL ON SHEET A2

21' detectable warning strips
3 - 2' x 4' units = 12'
3 - 2' x 3' units = 9'

40' detectable warning strips
10 - 2' x 4' units = 40'

42'-0"
ASPHALT PATH WIDTH

21'-0"
22'-4"
ASPHALT PATH

40'-0"
Avoid existing inlet when locating Detectable Warning Strip

21' detectable warning strips
3 - 2' x 4' units = 12'
3 - 2' x 3' units = 9'

19' detectable warning strips
4 - 2' x 4' units = 16'
1 - 2' x 3' units = 3'

Clear existing inlet when locating Detectable Warning Strip

SEE TYPICAL WARNING STRIP DETAIL ON SHEET A2
20' detectable warning strips
5 - 2' x 4' units = 20'

22' detectable warning strips
4 - 2' x 4' units = 16'
2 - 2' x 3' units = 6'

Aerial image Proposed Plan

SEE TYPICAL WARNING STRIP DETAIL ON SHEET A2
18' detectable warning strips
3 - 2' x 4' units = 12'
2 - 2' x 3' units = 6'

24' detectable warning strips
6 - 2' x 4' units = 24'

align new concrete behind existing automatic gate

SEE TYPICAL WARNING STRIP DETAIL ON SHEET A2