

# SCOPE OF WORK

## BID#26-01

v0

### Department of Homeland Security Federal Emergency Management Agency

#### General Info

<b>Project #</b>	35314	<b>Project Type</b>	Standard
<b>Project Category</b>	E - Buildings and Equipment	<b>Applicant</b>	Teatro De Artes De Juan Seguin (187-U6HF5-00)
<b>Project Title</b>	Building and Equipment Exterior	<b>Event</b>	4332DR-TX (4332DR)

#### Damage Description and Dimensions

The Disaster # 4332DR, which occurred between *08/23/2017* and *09/15/2017*, caused:

##### Damage #108307; Teatro De Artes De Juan Seguin

###### General Facility Information:

- **Facility Type:** Building
- **Building Type:** Community Center
- **Facility:** Performing Arts Center
- **Facility Description:** It is a single story building with a domed roof with conventional composition shingles connected to a flat roof that is tar and gravel.
- **Approx. Year Built:** 1950
- **Location Description:** 921 W. New Braunfels, Seguin, Texas
- **GPS Latitude/Longitude:** 29.58418, -97.97740
- **Number of Stories:** 1

###### General Damage Information:

- **Date Damaged:** 8/27/2017
- **Cause of Damage:** applicant stated that high velocity winds and driving rain caused the front porch including the pier and beam foundation to shift from its piers. The applicant also stated that the high velocity winds and driving rain caused damage to the roof allowing water into the building from multiple points of entry

###### Summary By External Component - 01:

- Building Exterior, 33.33 CY of concrete front porch , 45 FT long x 5 FT wide x 4 FT high, high velocity winds and driving rain caused the porch to shift from its piers, 0% work completed.

**Due to shifting of the building there is a Scope Modification to the ADA Ramp and it will need to be built on West Side. Please see information below.**



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# Ramp Slope Calculator

## Ramp

A ramp is an inclined pathway that is built with a slope exceeding 1:20, meaning that for every 20 inches of horizontal length, or run, there is a vertical rise of one inch. It is mandatory for ramps to adhere to the established ADA guidelines for ramps.

## What is the method for calculating the slope of a ramp?

The slope can be expressed as percentage, angle or rise: run ratio.

### 1. Rise / Run ratio

This is the ratio of one part rise to the corresponding part of the run. It can be expressed as 1:12 or 1/12 or 1 in 12. Typical slope are 1:12, 1:20 and 1:8. e.g. 1:12 means for every 1 feet of vertical rise, 12 feet horizontal length are required.

$$\text{Slope (Ratio)} = \text{Rise: Run}$$

### 2. Angle

It's the degree to which the ramp is tilted with respect to the run, or the angle at which the ramp rises above the horizontal.

$$\text{Slope (Angle)} = \tan^{-1} ($$

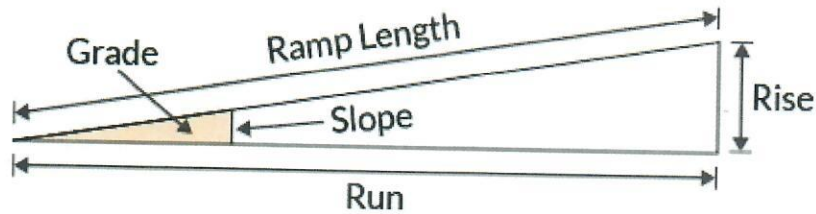
Dimensions:

Ramp User

Unassisted user, ADA max slope

Slope, 1:

12



Rise

21

in

$$\text{Angle} = \tan^{-1}(1) = 45^\circ$$

Ramp

Slope ( $\theta$ )

4.764

degrees

Slope (%)

8

Run

21

ft

Ramp Length

21.073

ft

they take up a lot of room.

- The ramp's entrance should ideally be situated next to the steps.

## 2. Slope

- A ramp's slope must not exceed 1:12 in new buildings.
- 1:16 is the comfortable slope.
- The minimal slope is 1:20; anything less is not considered a ramp, therefore there is no need for railings.

**Maximum rise allowed in each case is 30 inches (760 mm).**

In cases where there are space limitations in existing sites, buildings, and facilities, steeper ADA ramp slopes may be allowed. However, there are stricter restrictions on the maximum rise that apply.

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1:10 to < 1:12	6 inches (150mm)
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Please keep in mind that according to the ADA, slopes that are steeper than 1:8 are prohibited.

### 3. Clear width

The minimum required width for a ramp to be considered accessible is 36 inches (915 mm). It is important to consider the mounting of handrails during the design of a ramp.

### 4. Landings

It is important for every ramp to have level landings at both the top and bottom of each section, particularly if the ramp has multiple sections or turns. The essential landing features are as follows:

- The minimum required landing length is 60 inches (1525mm), and it is recommended that the landing's width be equal to or greater than the ramp's run.
- In order to ensure safe maneuvers, it is important to provide sufficient space. For instance, if the ramp construction changes direction by making a 90-degree turn, the minimum landing size required is 60 inches by 60 inches.

### 5. Handrails

If the rise is greater than 6 inches and the run is greater than 72 inches, then handrails are required on both sides in order to meet the ADA standards.

### 6. Miscellaneous

The ramps must adhere to certain guidelines for safety purposes.

- The cross slope or camber should not exceed 1:50.
- The ramp should be constructed using suitable materials to prevent any sliding or slipping.
- It is also important to have edge protection and handrail extensions.
- If the ramp is outdoors, it is crucial to consider weather conditions and ensure proper drainage.

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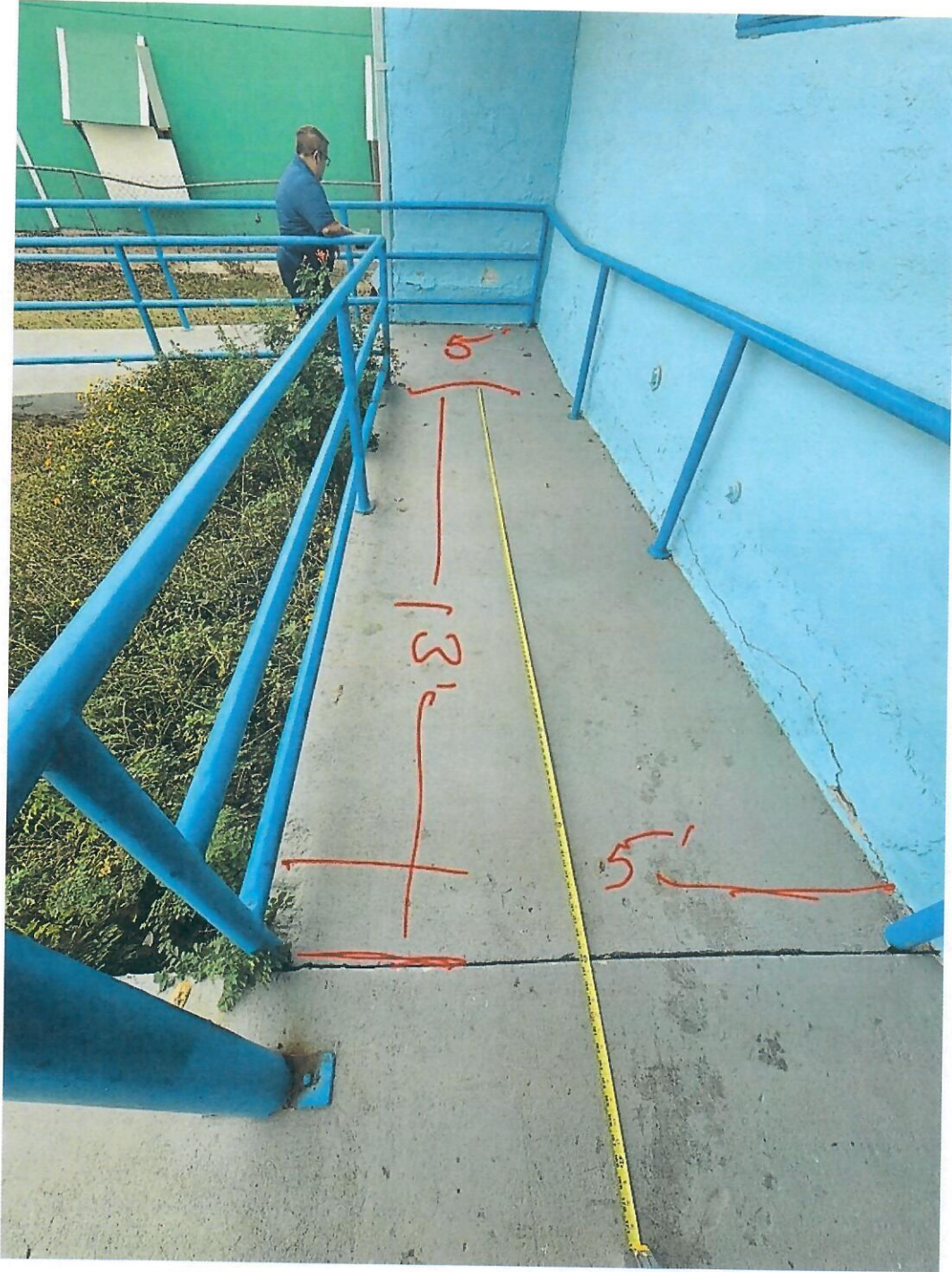
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CENTRO DE ARTES  
DE JUAN SEGUIN  
Cultural Arts Center

13'

12'

30'

Rise

Plan