

E. 34th Street Station Schematic Design

Presented to: Planning & Development Committee
March 1, 2016

Greater Cleveland Regional Transit Authority




Project Background


- Station services the Red, Green & Blue Lines.
- Station must be brought to current ADA Accessibility Guidelines (ADAAG).
- Station currently has a low ridership; we hope the project will support increased ridership and economic development opportunities.
- Construction Budget: \$5 million.


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The map displays the Greater Cleveland Regional Transit Authority (RTA) service area. Key features include:
 - **Stations:** Tower City Public Square Station (top left), E 159th Station (bottom right), and E 349th Campus Station (middle right).
 - **Proposed Site Location:** A red arrow points to a specific area near the E 349th Campus Station.
 - **Landmarks:** Various colored zones represent different areas, including 'University Heights' (purple), 'University City' (blue), and 'University Heights' (green).
 - **Infrastructure:** Major roads like I-190, I-275, and I-490 are shown, along with local roads like E 10th, E 15th, and E 20th.

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The photograph shows a view of an existing station structure from a bridge. The structure features a curved, glass-enclosed roof supported by dark metal pillars. The station is situated above a set of railroad tracks. In the background, there are green trees, utility poles, and a cloudy sky.

Existing Condition – View of Station from Bridge

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Existing Condition – View of Station Platform

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Existing Condition – View Looking Up Service Road

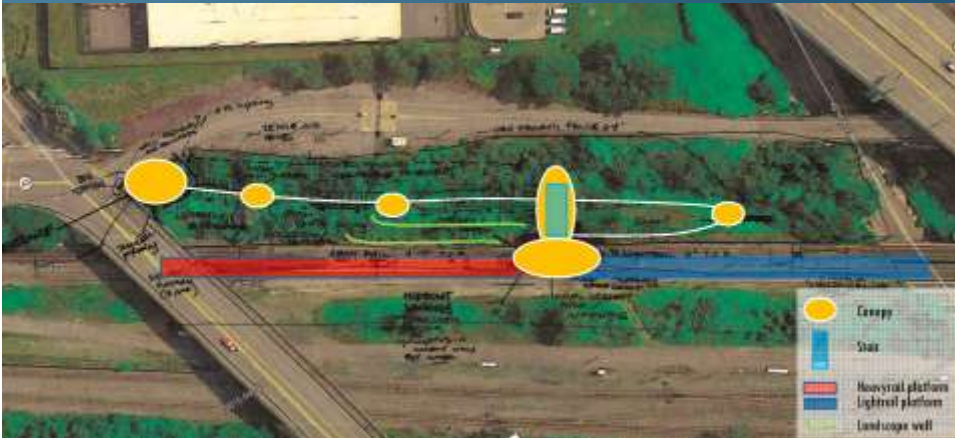
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Existing Condition – View Looking Down Service Road

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Schematic Design Concept Study

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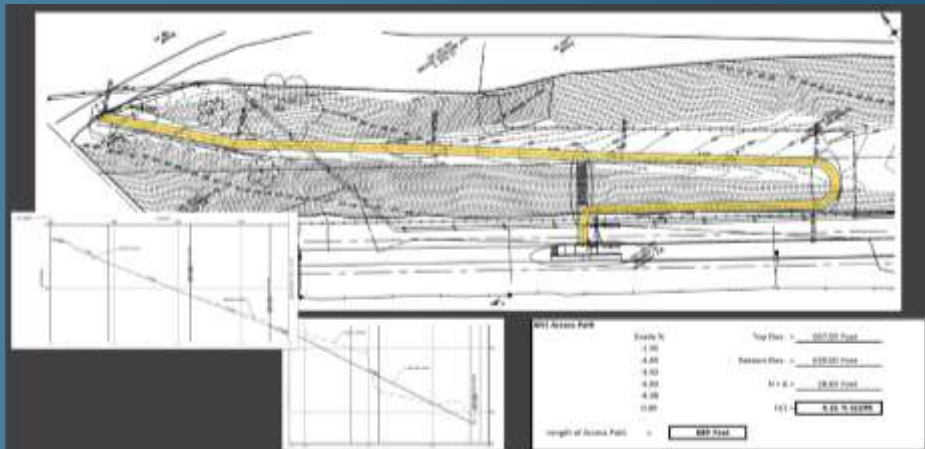


Pedestrian Track Crossing

- Crossing will be protected utilizing existing equipment from Brookpark Station.
 - Crossing has operated safely for 14 years.
- Crossing will effect service schedule due to frequency of trains through station.



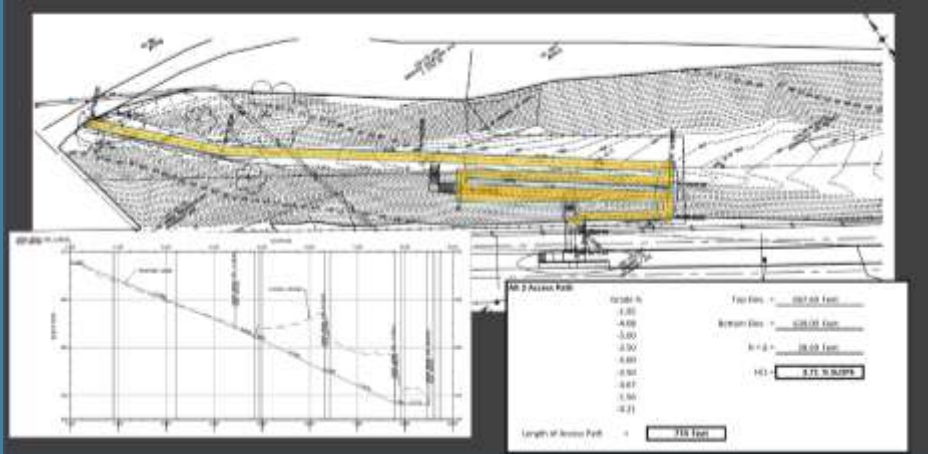
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Schematic Design Concepts - Option 1 (Casual Path)

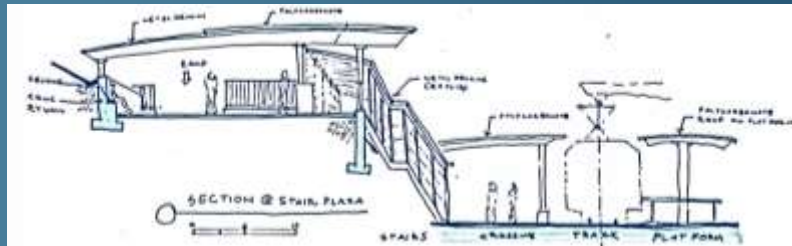
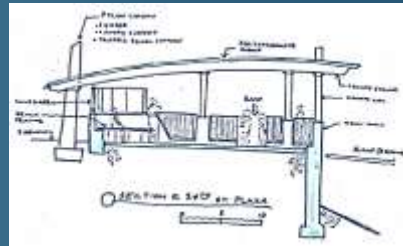
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Schematic Design Concepts - Option 2 (Switchback Path)

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Schematic Design Concept Sketches

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Note: Below estimates are not a comprehensive of the total cost for the access path.

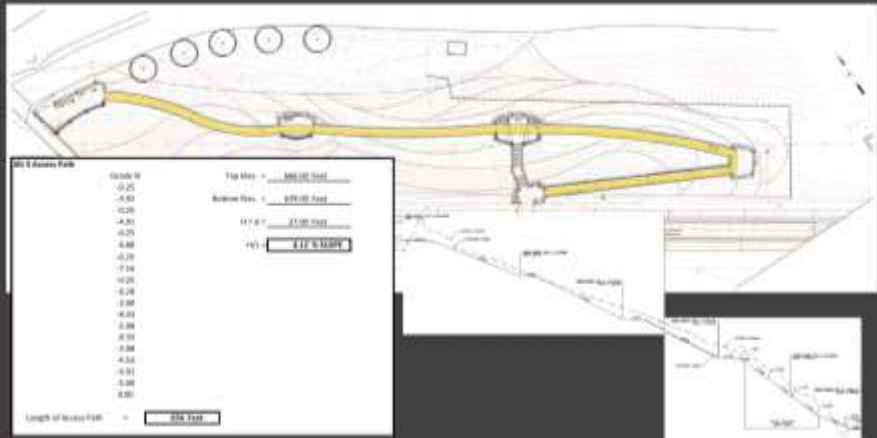
Option 1 - Casual Path					Option 2 - Switchback				
Description	Qty	Unit	Unit Price	Total Cost	Description	Qty	Unit	Unit Price	Total Cost
Handrail	1,420	LF	\$520.00	\$738,400	Handrail	1,390	LF	\$120.00	\$166,800
Stairs	88	LF	\$105.00	\$9,240	Stairs	88	LF	\$100.00	\$8,800
Pavement	4,880	SF	\$15.00	\$73,200	Pavement	5,420	SF	\$15.00	\$81,300
Canopy	1,940	SF	\$170.00	\$330,000	Canopy	2,540	SF	\$170.00	\$431,800
Earthwork	227	CY	\$50.00	\$11,350	Earthwork	1,748	CY	\$50.00	\$87,400
Retaining Wall (Precast)	308	LF	\$50.00	\$15,400	Retaining Wall (Outdoor Pile)	1,800	LF	\$150.00	\$270,000
			Subtotal	\$906,750				Subtotal	\$1,096,900
			Contingency (10%)	\$102,625				Contingency (10%)	\$110,610
			Total Cost	\$1,009,375				Total Cost	\$1,207,510

Cost Increases:

- Additional Canopy
- Additional Earthwork
- Additional Retaining Wall


Schematic Design Concepts – Options Cost Comparison

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Grade	Top	Bottom	Width
0.25	100.00	99.00	10.00
0.50	99.00	98.00	10.00
1.00	98.00	97.00	10.00
1.50	97.00	96.00	10.00
2.00	96.00	95.00	10.00
2.50	95.00	94.00	10.00
3.00	94.00	93.00	10.00
3.50	93.00	92.00	10.00
4.00	92.00	91.00	10.00
4.50	91.00	90.00	10.00
5.00	90.00	89.00	10.00
5.50	89.00	88.00	10.00
6.00	88.00	87.00	10.00
6.50	87.00	86.00	10.00
7.00	86.00	85.00	10.00
7.50	85.00	84.00	10.00
8.00	84.00	83.00	10.00
8.50	83.00	82.00	10.00
9.00	82.00	81.00	10.00
9.50	81.00	80.00	10.00
10.00	80.00	79.00	10.00
10.50	79.00	78.00	10.00
11.00	78.00	77.00	10.00
11.50	77.00	76.00	10.00
12.00	76.00	75.00	10.00
12.50	75.00	74.00	10.00
13.00	74.00	73.00	10.00
13.50	73.00	72.00	10.00
14.00	72.00	71.00	10.00
14.50	71.00	70.00	10.00
15.00	70.00	69.00	10.00
15.50	69.00	68.00	10.00
16.00	68.00	67.00	10.00
16.50	67.00	66.00	10.00
17.00	66.00	65.00	10.00
17.50	65.00	64.00	10.00
18.00	64.00	63.00	10.00
18.50	63.00	62.00	10.00
19.00	62.00	61.00	10.00
19.50	61.00	60.00	10.00
20.00	60.00	59.00	10.00
20.50	59.00	58.00	10.00
21.00	58.00	57.00	10.00
21.50	57.00	56.00	10.00
22.00	56.00	55.00	10.00
22.50	55.00	54.00	10.00
23.00	54.00	53.00	10.00
23.50	53.00	52.00	10.00
24.00	52.00	51.00	10.00
24.50	51.00	50.00	10.00
25.00	50.00	49.00	10.00
25.50	49.00	48.00	10.00
26.00	48.00	47.00	10.00
26.50	47.00	46.00	10.00
27.00	46.00	45.00	10.00
27.50	45.00	44.00	10.00
28.00	44.00	43.00	10.00
28.50	43.00	42.00	10.00
29.00	42.00	41.00	10.00
29.50	41.00	40.00	10.00
30.00	40.00	39.00	10.00
30.50	39.00	38.00	10.00
31.00	38.00	37.00	10.00
31.50	37.00	36.00	10.00
32.00	36.00	35.00	10.00
32.50	35.00	34.00	10.00
33.00	34.00	33.00	10.00
33.50	33.00	32.00	10.00
34.00	32.00	31.00	10.00
34.50	31.00	30.00	10.00
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35.50	29.00	28.00	10.00
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37.00	26.00	25.00	10.00
37.50	25.00	24.00	10.00
38.00	24.00	23.00	10.00
38.50	23.00	22.00	10.00
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67.50	-35.00	-36.00	10.00
68.00	-36.00	-37.00	10.00
68.50	-37.00	-38.00	10.00
69.00	-38.00	-39.00	10.00
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70.00	-40.00	-41.00	10.00
70.50	-41.00	-42.00	10.00
71.00	-42.00	-43.00	10.00
71.50	-43.00	-44.00	10.00
72.00	-44.00	-45.00	10.00
72.50	-45.00	-46.00	10.00
73.00	-46.00	-47.00	10.00
73.50	-47.00	-48.00	10.00
74.00	-48.00	-49.00	10.00
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75.50	-51.00	-52.00	10.00
76.00	-52.00	-53.00	10.00
76.50	-53.00	-54.00	10.00
77.00	-54.00	-55.00	10.00
77.50	-55.00	-56.00	10.00
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78.50	-57.00	-58.00	10.00
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80.00	-60.00	-61.00	10.00
80.50	-61.00	-62.00	10.00
81.00	-62.00	-63.00	10.00
81.50	-63.00	-64.00	10.00
82.00	-64.00	-65.00	10.00
82.50	-65.00	-66.00	10.00
83.00	-66.00	-67.00	10.00
83.50	-67.00	-68.00	10.00
84.00	-68.00	-69.00	10.00
84.50	-69.00	-70.00	10.00
85.00	-70.00	-71.00	10.00
85.50	-71.00	-72.00	10.00
86.00	-72.00	-73.00	10.00
86.50	-73.00	-74.00	10.00
87.00	-74.00	-75.00	10.00
87.50	-75.00	-76.00	10.00
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88.50	-77.00	-78.00	10.00
89.00	-78.00	-79.00	10.00
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90.00	-80.00	-81.00	10.00
90.50	-81.00	-82.00	10.00
91.00	-82.00	-83.00	10.00
91.50	-83.00	-84.00	10.00
92.00	-84.00	-85.00	10.00
92.50	-85.00	-86.00	10.00
93.00	-86.00	-87.00	10.00
93.50	-87.00	-88.00	10.00
94.00	-88.00	-89.00	10.00
94.50	-89.00	-90.00	10.00
95.00	-90.00	-91.00	10.00
95.50	-91.00	-92.00	10.00
96.00	-92.00	-93.00	10.00
96.50	-93.00	-94.00	10.00
97.00	-94.00	-95.00	10.00
97.50	-95.00	-96.00	10.00
98.00	-96.00	-97.00	10.00
98.50	-97.00	-98.00	10.00
99.00	-98.00	-99.00	10.00
99.50	-99.00	-100.00	10.00
100.00	-100.00	-101.00	10.00

Schematic Design - Option 3 (Casual Path with Ramp)

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Schematic Design - Option 3

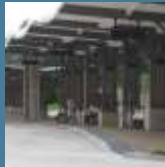
- Advantages.
 - Reduces the paths total travel distance.
 - Utilizes the natural hillside grades.
 - Keeps earthwork and retaining walls to a minimum.
- Construction Estimate: \$4.9 million.
- Construction Schedule: 15 months.
 - Red Line platform to be closed during construction.

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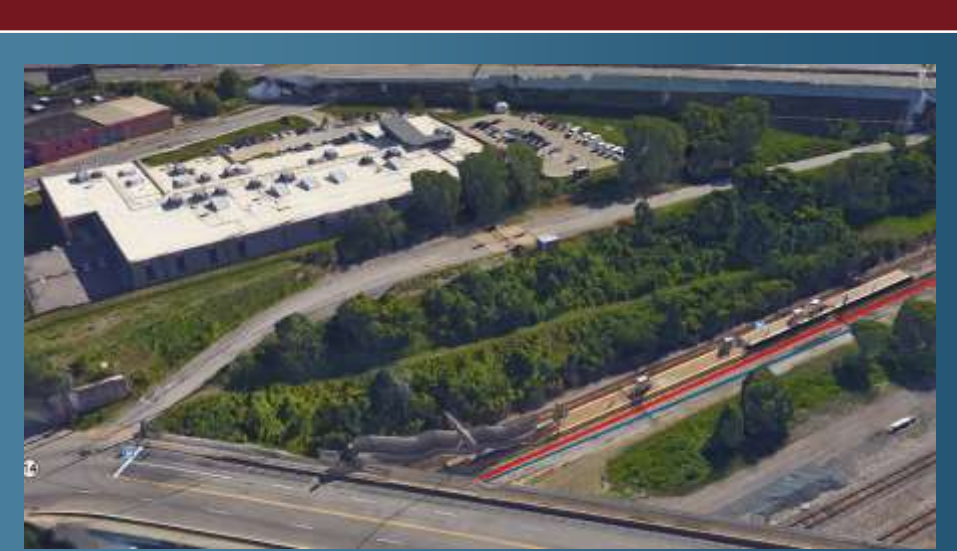
Schematic Design – Option 3

- Materials:
 - Permeable Asphalt Pavement
 - Cast-in-place Concrete Walls
 - Tube Steel Framing
 - Polycarbonate & Metal Canopies
 - Thermoplastic Guardrails & Handrails



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Schematic Design – Aerial View Existing

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Schematic Design – Aerial View New

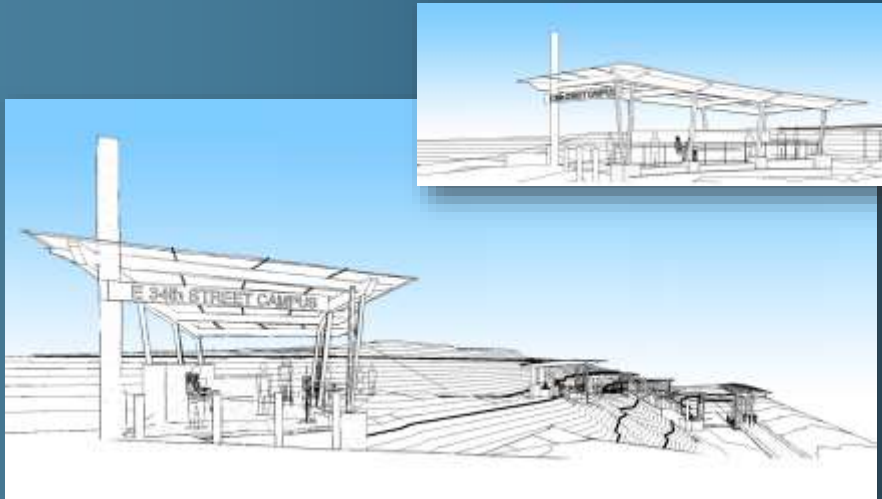
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Schematic Design – Entrance Plaza Existing View

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Schematic Design – Entrance Plaza


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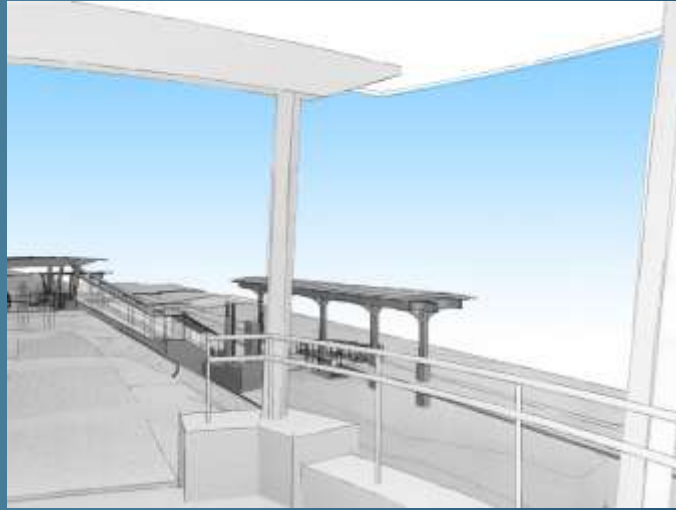


Schematic Design – Entrance Plaza

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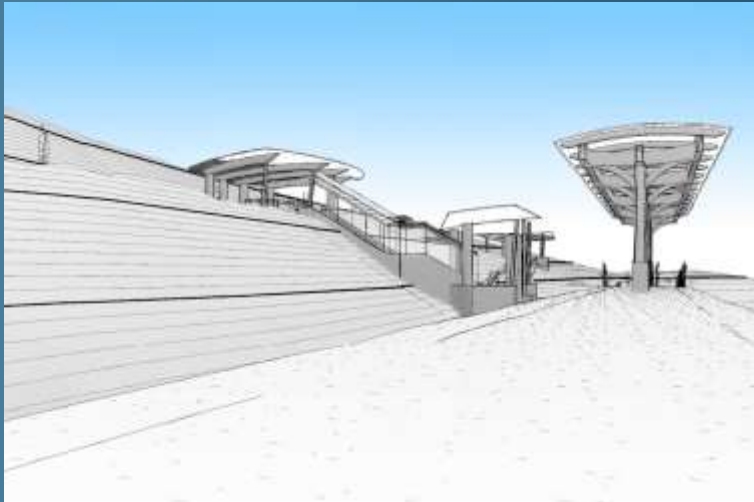
Schematic Design – Pause Point Elevation

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Schematic Design – View form Upper Pause Point

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Schematic Design – View of Stair Plaza & Platform Canopy

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Sustainability

- SITES
 - Focuses more on site design than building design.
 - Program is administered by the Green Building Certification Institute (GBCI).
 - Achieve a minimum of Silver.

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Community Involvement

- GCRTA's CAB, ADA & Transit Improvement Advisory Committees
 - Presented 30% Schematic Design February 5, 2016
 - Recommended Introducing seating at pause points along ramps
 - Using a 1:15 slope at ramp sections from lower pause point to track crossing.

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Community Involvement

- Public Engagement & Design Review
 - Mayor's Streetscape & Infrastructure Committee – March 15, 2016
 - Stakeholder and Public Meeting – March 16, 2016
 - East Regional Design Review Committee – April 26, 2016
 - Cleveland City Planning Commission – May 6, 2016

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Project Schedule

- Interim Design (60%) Submittal – May 3, 2016
- Final Design (98%) Submittal – August 18, 2016
- Issue for Bid Documents – October 28, 2016
- Anticipated Award at January 2017 Board Meeting
- Start Construction – March 2017
- Complete Construction – May 2018

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Questions / Comments

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