Appendix A

Design Engineering Plans
Volumes A, B, C, and Stations
A-2

Volume B

Elm Fork of Trinity River to

Dallas North Tollway Line

Section CB-2 Part 1
VICINITY MAP
NO SCALE

COTTON BELT REGIONAL RAIL
ELM FORK OF TRINITY RIVER TO DALLAS NORTH TOLLWAY
LINE SECTION CB-2
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2
HORIZONTAL ALIGNMENT
SCHEMATIC
SHEET 5 OF 6

IN-PROGRESS
NOT TO SCALE FOR BIDDING, OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,
AUXILIARY TO THESE DRAWINGS.

IN-CHARGE
DATE
DESIGNED
CHECKED
DRAWN
SCALE
CONTRACT SHEET NO.
DWG No.
REV
AMEND
CR
APP
ENG
BY

CONTRACT DWG No.
OF
873
279

HDR ENGINEERING, INC.
ON 08/03/2018
CT PHONPITUCK, P.E. NO. 100125
CTP
M. MARTIN
A. STAHLNECKER
L. GUBLO

TBPE FIRM NO. F-754
CC5-2005

SHEET INTENTIONALLY BLANK - LUNA EMF REMOVED

LINE EXTENDED
## Horizontal Alignment Data

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### Notes:
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, WGS84, SURVEY POINT 0201271836, 2000.
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.
## Horizontal Alignment Data

**Line Section CB-2 NB**

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### Notes

1. Grid coordinates = surface coordinates x 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System (NAD83), Survey 1911.
3. Curve radii are based on the chord definition.
# Horizontal Alignment Data

## Line Section CB-2 NB

### Centerline of Northbound Track

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**Notes:**
1. Grid coordinates = Surface coordinates x 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, NAD83, State Plane 1983, FIPS 1201, survey foot (ft)
3. Curve radii are based on the chord definition.
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**NOTES:**
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM (WGS, 1984, SURVEY FOOT).
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.
### Horizontal Alignment Data

**Centerline of Southbound Track**

**Line Section CB-2 SB**

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**NOTES:**

1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, SURVEY FOOT.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.

**DEFINITION:**

- **CURVE RADII ARE BASED ON THE CHORD SURVEY FOOT.**
- **COORDINATES SHOWN HEREON ARE SURFACE COORDINATES X 0.999863513**
- **GRID COORDINATES = SURFACE COORDINATES X 0.999863513**
LINE SECTION CB-2 SB
HORIZONTAL ALIGNMENT DATA
CENTERLINE OF SOUTHBOUND TRACK

<table>
<thead>
<tr>
<th>CURVE NO.</th>
<th>POINT</th>
<th>CHAINAGE</th>
<th>NORTHING</th>
<th>EASTING</th>
<th>ELEMENT</th>
<th>LENGTH</th>
<th>DEGREE OF CURVATURE</th>
<th>Ea</th>
<th>Eu</th>
<th>Speed</th>
<th>Passenger</th>
<th>Freight</th>
<th>DEFLECTION</th>
<th>Dc</th>
<th>Angle</th>
<th>OPTION</th>
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<tr>
<td>CB2-JJ PI</td>
<td>2376+73.67</td>
<td>7037253.54</td>
<td>2482409.43</td>
<td>R = 22898.33</td>
<td>93.89</td>
<td>0.50</td>
<td>35</td>
<td>0°14'06&quot; Left</td>
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<td>CB2-JJ PT</td>
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<td>527.33</td>
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<td>CB2-KK PI</td>
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<tr>
<td>CB2-KK PT</td>
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<td>7037530.60</td>
<td>2483017.82</td>
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<td>517.30</td>
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</table>

**NOTES:**
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, WGS 84, 1866 SURVEY FOOT.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
### Line Section CB-2 Industry 1
### Horizontal Alignment Data

#### Centerline of CB-2 Industry 1 Track

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Change</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>E0</th>
<th>V0</th>
<th>V2</th>
<th>Forecast Speed</th>
<th>Deflection Angle</th>
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<tr>
<td>POB</td>
<td>+0+00.00</td>
<td>7053033.20</td>
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<tr>
<td>PC</td>
<td>+1+30.89</td>
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<td>2454437.21</td>
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<td>130.89</td>
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<tr>
<td>CB2-IND1-A</td>
<td>PI</td>
<td>3+11.16</td>
<td>7053138.24</td>
<td>2454469.73</td>
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<td>435.75</td>
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<td>1.04</td>
<td>MA</td>
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<td>PI</td>
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<td>PC</td>
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<td>7053409.63</td>
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<td>3°12’18” Right</td>
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<tr>
<td>PT</td>
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**Notes:**

1. Grid coordinates = Surface coordinates ± 0.0000005 ft.
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, North, U.S. Survey Foot.
3. Curve radii are based on the Chord Definition.
# Horizontal Alignment Data

## LINE SECTION CB-2 INDUSTRY 2

### CENTERLINE OF CB-2 INDUSTRY 2 TRACK

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>Ew</th>
<th>Cw</th>
<th>Passenger Speed</th>
<th>Free-Of-Speed</th>
<th>Inclination Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>P0B</td>
<td>0+00.00</td>
<td>7038155.26</td>
<td>2464455.34</td>
<td>STRAIGHT</td>
<td>30°17'</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>F1</td>
<td>0+30.17</td>
<td>7038161.41</td>
<td>2464425.80</td>
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<td>323.81</td>
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<tr>
<td>P0E</td>
<td>3+53.98</td>
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</tr>
<tr>
<td>CB2-IND2-A</td>
<td>PI</td>
<td>3+95.24</td>
<td>7038275.02</td>
<td>R = 716.20</td>
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<td>6°30' 33&quot;</td>
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<tr>
<td>F1</td>
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<tr>
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</tbody>
</table>

**Notes:**
1. Grid coordinates = surface coordinates x 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System North, U.S., Survey Foot.
3. Curves used are based on the chord definition.

---

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**HDR**

**gpc**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**CONTRACT SHEET No.**

**DRAWN BY:**

**FEB 02 2018**

**TBP FIRM No. F-754**

**HDR ENGINEERING, INC.**

---

**CURVE NAME**

**POINT**

**CHAINAGE**

**NORTHING**

**EASTING**

**ELEMENT**

**DEGREE OF CURVE**

**Ew**

**Cw**

**Passenger Speed**

**Free-Of-Speed**

**Inclination Angle**

---

**CURVE RADII ARE BASED ON THE CHORD DEFINITION.**

**COORDINATES SHOWN HEREIN ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, U.S., SURVEY FOOT.**

**GRID COORDINATES = SURFACE COORDINATES X 0.999863513**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**HDR**

**gpc**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**HDR**

**gpc**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**HDR**

**gpc**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**HDR**

**gpc**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**HDR**

**gpc**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**HDR**

**gpc**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**HDR**

**gpc**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**HDR**

**gpc**

---
# Horizontal Alignment Data

## Line Section CB-2 Industry 3

### Centerline of CB-2 Industry 3 Track

<table>
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<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>Cn</th>
<th>Cm</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>Deflection Angle</th>
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<tbody>
<tr>
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<td>10+00.00</td>
<td>7038176.30</td>
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<td>119.41</td>
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<tr>
<td>PI</td>
<td></td>
<td>11+48.06</td>
<td>7038176.30</td>
<td>2464758.31</td>
<td>STRAIGHT</td>
<td>6°21'35&quot; Right</td>
<td></td>
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<tr>
<td>CB2-IND3-A</td>
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<td>66.12</td>
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### Notes:
1. **GRIDS CoORDINATES: SURFACE COORDINATES X 0.999863513
2. **COPRINTED COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, U.S., SURVEY FOOT.
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

**NOTES:**
- Grid coordinates: surface coordinates x 0.999863513
- Coordinates shown hereon are based on the Texas State Plane Coordinate System, U.S., Survey Foot
- Curve radii are based on the chord definition.
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<th>POINT</th>
<th>CHAINAGE (FT)</th>
<th>NORTHING (FT)</th>
<th>EASTING (FT)</th>
<th>ELEMENT</th>
<th>DEGREE OF CURVATURE</th>
<th>E9</th>
<th>E10</th>
<th>Passenger</th>
<th>Curve Type</th>
<th>Deflection Angle</th>
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NOTES:
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, SURVEY WEB.
3. CURVES USED ARE BASED ON THE CHORD DEFINITION.
**Line Section CB-2 Industry 5**

**Horizontal Alignment Data**

**Centerline of CB-2 Industry 5 Track**

<table>
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<th>Point</th>
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<th>Easting</th>
<th>Element</th>
<th>Degree of Ellipticity</th>
<th>Ex</th>
<th>Ey</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
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<tr>
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<td>2466984.27</td>
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</tr>
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<td>7037469.12</td>
<td>2467152.86</td>
<td>CURVE</td>
<td>R = 319.62</td>
<td>330.90</td>
<td>300.79</td>
<td>18° 0' 0&quot;</td>
<td>1.25</td>
<td>100</td>
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<td>PT</td>
<td></td>
<td>14+80.37</td>
<td>7037284.67</td>
<td>2467170.02</td>
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<td>26.37</td>
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<tr>
<td>POE</td>
<td></td>
<td>15+06.74</td>
<td>7037258.41</td>
<td>2467172.40</td>
<td>STRAIGHT</td>
<td>28.37</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Notes:**
1. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, FEET, SURVEY FOOT.
2. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
4. GRID COORDINATES = SURFACE COORDINATES \( \times 0.999863513 \)
5. CURVE RADII ARE BASED ON THE CHORD DEFINITION.

**Definition:**
- **PI:** Point of Intersection
- **POB:** Point of Beginning
- **PC:** Point of Curve
- **PT:** Point of Tangent
- **POE:** Point of Equidistant

**Horizontal Alignment Data (continued):**

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Ellipticity</th>
<th>Ex</th>
<th>Ey</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>Deflection Angle</th>
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</thead>
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<tr>
<td>CB2-IND5-A</td>
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<td>7037469.12</td>
<td>2467152.86</td>
<td>CURVE</td>
<td>R = 319.62</td>
<td>330.90</td>
<td>300.79</td>
<td>18° 0' 0&quot;</td>
<td>1.25</td>
<td>100</td>
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<tr>
<td>PT</td>
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<td>14+80.37</td>
<td>7037284.67</td>
<td>2467170.02</td>
<td>STRAIGHT</td>
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<td>28.37</td>
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### Line Section CB-2 Industry 6
#### Horizontal Alignment Data

#### Centerline of CB-2 Industry 6 Track

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<th>Chainage (ft)</th>
<th>Northing (ft)</th>
<th>Easting (ft)</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>Eo</th>
<th>Eu</th>
<th>Passenger Speed (mph)</th>
<th>Freight Speed (mph)</th>
<th>Deflection Angle (deg)</th>
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<tr>
<td>PT</td>
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<td>2469958.82</td>
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### Notes:
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, HAZARD, U.S. SURVEY FOOT.
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.
## Line Section CB-2 Industry 7
### Horizontal Alignment Data

**Centerline of CB-2 Industry 7 Track**

<table>
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<th>Point</th>
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<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Curvature</th>
<th>E&lt;sub&gt;p&lt;/sub&gt;</th>
<th>E&lt;sub&gt;v&lt;/sub&gt;</th>
<th>Passenger</th>
<th>Freight</th>
<th>Deflection Angle</th>
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</thead>
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<td>0+00.00</td>
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<td>PI</td>
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</tr>
<tr>
<td></td>
<td>PE</td>
<td>1+00.35</td>
<td>7036861.28</td>
<td>2470354.71</td>
<td>Straight</td>
<td>6°31'30&quot; Left</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CB2-INDU7-A</td>
<td>PI</td>
<td>3+61.83</td>
<td>7036862.94</td>
<td>2470079.83</td>
<td>R = 309.71</td>
<td>426.52, Dc = 18° 35' 0&quot;</td>
<td>0.00</td>
<td>1.29</td>
<td>NA</td>
<td>10</td>
<td>10°36'15&quot; Left</td>
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<td></td>
<td>PT</td>
<td>5+33.47</td>
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<td>POE</td>
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<td>7036561.17</td>
<td>2470019.53</td>
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<td>52.85</td>
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</tbody>
</table>

**Deflection Angle**

- Curve radii are based on the chord definition.
- Curve radii are based on the Texas State Plane Coordinate System, NAD83, Survey Foot.
- Grid coordinates = coordinate system, NAD83, U.S. Coordinate System, X0.999863513

**Notes:**

1. Grid coordinates = coordinate system, X0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, NAD83, Survey Foot.
3. Curve radii are based on the chord definition.
**LINE SECTION CB-2 INDUSTRY 8**

**HORIZONTAL ALIGNMENT DATA**

**CENTERLINE OF CB-2 INDUSTRY 8 TRACK**

<table>
<thead>
<tr>
<th>CURVE NAME</th>
<th>POINT</th>
<th>CHAINAGE</th>
<th>NORTHING</th>
<th>EASTING</th>
<th>ELEMENT</th>
<th>LENGTH (FT)</th>
<th>DEGREE OF CURVATURE</th>
<th>E&lt;sub&gt;u&lt;/sub&gt;</th>
<th>E&lt;sub&gt;a&lt;/sub&gt;</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>DEFLECTION ANGLE</th>
</tr>
</thead>
<tbody>
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<td>POB</td>
<td>10+00</td>
<td>7036818.32</td>
<td>2470674.08</td>
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<td></td>
<td>30.17</td>
<td>6°21'35&quot; Right</td>
<td>0.20</td>
<td>0.20</td>
<td>10</td>
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<td></td>
</tr>
<tr>
<td>PI</td>
<td>10+30.17</td>
<td>7036812.16</td>
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<td>136.74</td>
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<td>POE</td>
<td>7+20.74</td>
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<td>2471109.65</td>
<td>STRAIGHT</td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

**NOTES:**

1. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
2. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
3. SURFACE COORDINATES = GRID COORDINATES = SURFACE COORDINATES X 0.999863513
4. COORDINATES SHOWN HEREON ARE GRID COORDINATES = SURFACE COORDINATES X 0.999863513
5. SURFACE COORDINATES = GRID COORDINATES
6. SURFACE COORDINATES = GRID COORDINATES
7. SURFACE COORDINATES = GRID COORDINATES

**CENTERLINE OF CB-2 INDUSTRY 8**

**HORIZONTAL ALIGNMENT DATA**

**LINE SECTION CB-2**

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

**CONTRACT SHEET NO.**

**CONTRACT NO.**

**DRAWN BY**

**DESIGNED BY**

**CHECKED BY**

**IN CHARGE**

**DATE**

**DWG No.**

**SCALE**

**DRAWN**

**DESIGNED**

**CHECKED**

**IN CHARGE**

**DATE**

**DWG No.**

**SCALE**

**DRAWN**

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**IN CHARGE**

**DATE**

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**SCALE**

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**DESIGNED**

**CHECKED**

**IN CHARGE**

**DATE**

**DWG No.**

**SCALE**

**DRAWN**

**DESIGNED**

**CHECKED**

**IN CHARGE**

**DATE**
**LINE SECTION CB-2 INDUSTRY 9**

**HORIZONTAL ALIGNMENT DATA**

**CENTERLINE OF CB-2 INDUSTRY 9 TRACK**

<table>
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<th>Curve Name</th>
<th>Point</th>
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<th>Northing</th>
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<th>Curve Type</th>
<th>Degree of Curve</th>
<th>Speed</th>
<th>Deflection Angle</th>
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<td>7036795.27</td>
<td>2470785.61</td>
<td>Straight</td>
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<tr>
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<tr>
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<td>1.14</td>
<td>10 71°40'33'' Right</td>
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</tbody>
</table>

**NOTES:**

1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, RAND LAW, SURVEY FTP.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
LINE SECTION CB-2 INDUSTRY 9A
HORIZONTAL ALIGNMENT DATA
CENTERLINE OF CB-2 INDUSTRY 9A TRACK

<table>
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<tr>
<th>CURVE NAME</th>
<th>POINT</th>
<th>CHAINAGE</th>
<th>NORTHERN</th>
<th>EASTERING</th>
<th>ELEMENT</th>
<th>CURVATURE</th>
<th>DEGREE OF CURVATURE</th>
<th>E =</th>
<th>E =</th>
<th>DEFECTION</th>
<th>LENGTH</th>
<th>SPEED</th>
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<td>P2</td>
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CENTERLINE OF CB-2 INDUSTRY 9A TRACK
HORIZONTAL ALIGNMENT DATA
LINE SECTION CB-2 INDUSTRY 9A

NOTES:
1. SURFACE COORDINATES = SURFACE COORDINATES x 0.999863513
2. COORDINATES SHOWN HEREIN ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, WGS 84, SURVEY FEET.
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.
### Horizontal Alignment Data

#### Section CB-2 Industry 10

**Centerline of CB-2 Industry 10 Track**

<table>
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<th>Curve Name</th>
<th>Point</th>
<th>Change</th>
<th>Northing</th>
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<th>Element</th>
<th>Degree of Curvature</th>
<th>Eo</th>
<th>Lo</th>
<th>Speed</th>
<th>Deflection Angle</th>
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<td>PE</td>
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<td>7036603.07</td>
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<td>6°21'35&quot; Right</td>
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<td>CSP-1010-A</td>
<td>13+65.04</td>
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**Notes:**

1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, U.S. SURVEY FOOT.
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.
### Horizontal Alignment Data

**Line Section CB-2 Industry 11**  
**Centerline of CB-2 Industry 11 Track**

**Table:**

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<th>Point</th>
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<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Length</th>
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<th>E</th>
<th>E</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>Deflection Angle</th>
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<tr>
<td>PI</td>
<td>0+30.17</td>
<td>7035941.25</td>
<td>2479069.02</td>
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</tr>
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<td>1.31</td>
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</tr>
</tbody>
</table>

**Notes:**
1. Grid coordinates = SURFACE COORDINATES X 0.999863513  
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, North, U.S., Survey feet.  
3. Curve radii are based on the chord definition.

---

**NOTES:**  
1. SURFACE COORDINATES X 0.999863513  
2. COORDINATES SHOWN HEREIN ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH, U.S., SURVEY FEET.  
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.
### Curve Data

#### Curve Name | Point | Chainage | Northing | Easting | Element | Degree of Curve | CH | CV | Passenger Speed | Freight Speed | Deflection Angle |
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<th></th>
</tr>
</thead>
<tbody>
<tr>
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<td>0+00.00</td>
<td>7038308.20</td>
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#### Notes
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM (NAD83, LLS, SURVEY FOOT)
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.

---

**Not An Approved Drawing**

**Preliminary 10% Design**
**LINE SECTION CB-2 BNSF SIDING**  
**HORIZONTAL ALIGNMENT DATA**  
**CENTERLINE OF CB-2 BNSF SIDING TRACK**

<table>
<thead>
<tr>
<th>CURVE NAME</th>
<th>DESIGN</th>
<th>NORTHING</th>
<th>EASTING</th>
<th>ELEMENT</th>
<th>DEGREE OF CURVATURE</th>
<th>C</th>
<th>E</th>
<th>THREE-QUARTER</th>
<th>LENGTH</th>
<th>CURVATURE</th>
<th>DEGREE OF E</th>
<th>DEFLECTION</th>
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**NOTES:**
1. SURFACE COORDINATES = SURVEY FOOT. SURFACE COORDINATES X 0.999863513 = GRID COORDINATES = SURFACE COORDINATES X 1.000805208.
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM (NAD83, U.S. SURVEY FOOT).
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.

**CENTERLINE OF CB-2 BNSF SIDING TRACK**
### Horizontal Alignment Data

**Line Section CB-2 Siding W**

**Centerline of CB-2 Siding W Track**

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Length (ft)</th>
<th>Degree of Curve (ft)</th>
<th>E0</th>
<th>E1</th>
<th>Speed</th>
<th>Deflection Angle</th>
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</tr>
<tr>
<td>PE</td>
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<td>2452509.96</td>
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<td>STRAIGHT</td>
<td>103.17</td>
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<td>0.76</td>
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<td>6° 32' 17&quot; Left</td>
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<td>103.17</td>
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</table>

**Notes:**

1. Grid coordinates = Surface coordinates x 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System: North, Lat., Survey Foot.
3. Curve radii are based on the chord definition.
### LINE SECTION CB-2 SIDING E
#### HORIZONTAL ALIGNMENT DATA
**CENTERLINE OF CB-2 SIDING E TRACK**

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<thead>
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<th>N (ft)</th>
<th>E (ft)</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>Ea</th>
<th>Eo</th>
<th>Passenger Speed (MPH)</th>
<th>Freight Speed (MPH)</th>
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**NOTES:**
1. Grid coordinates are based on the Texas State Plane Coordinate System North, U.S. Survey Foot.
2. Coordinates shown herein are grid coordinates = SURVEY FOOT X 0.999863513.
3. Curve radii are based on the chord definition.

**CURVATURE:**
- R = 716.20 ft
- 0° 6' 0" 0'
- 0, 0.56, NA
- 10, 5°49'14" Right

**DEVIATION (IN):**
- Dc = 8° 0' 0"

**HORIZONTAL ALIGNMENT DATA:**
- CB-2 SIDING E
- CENTERLINE OF CB-2 SIDING E TRACK
- LINE SECTION CB-2

**NOT AN APPROVED DRAWING**
**PRELIMINARY 10% DESIGN**

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**
**LINE SECTION CB-2**

**NOTES:**
- GRIDS COORDINATES = SURFACE COORDINATES X 0.999863513.
- COORDINATES SHOWN HEREIN ARE GRID COORDINATES = SURVEY FOOT X 0.999863513.
- CURVE RADII ARE BASED ON THE CHORD DEFINITION.
## Horizontal Alignment Data

**Line Section CB-2 BNSF Mainline**

**Centerline of CB-2 BNSF Mainline Track**

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage (ft)</th>
<th>North (ft)</th>
<th>Easting (ft)</th>
<th>Element</th>
<th>Degree of Curvature</th>
<th>Curve Type</th>
<th>Length (ft)</th>
<th>Curvature</th>
<th>Degree</th>
<th>Deflection Angle</th>
<th>Speed (MPH)</th>
<th>Speed (MPH)</th>
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</tbody>
</table>

### Notes:
2. Coordinates shown herein are grid coordinates = surface coordinates X 0.999863513.
3. Curve radii are to be based on the chord definition.

---

**Definition:**

- **POB:** Point of Beginning
- **ST:** Tangent Segment
- **SE:** Spiral Segment
- **CS:** Curve Segment
- **POE:** Point of Elevation

**Curve Table:**

- **Chainage:** Measurement along the centerline of the curve from the beginning of the curve (POB).
- **North:** Y-coordinate (Northings).
- **Easting:** X-coordinate (Easting).
- **Element:** Type of element: STRAIGHT, SPRING, or SPIRAL.
- **Degree of Curvature:** Degree of curvature of the curve.
- **Curve Type:** Type of curve: STRAIGHT, SPRING, or SPIRAL.
- **Length:** Length of the curve.
- **Curvature:** Curvature of the curve.
- **Deflection Angle:** Deflection angle of the curve.
- **Speed:** Speed of the curve.

**Line Section CB-2 BNSF Mainline**

**Centerline of CB-2 BNSF Mainline Track**

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

**CONTRACT SHEET No.:** 303 of 873
## Horizontal Alignment Data

**Line Section CB-2 BNSF Mainline (Future)**

**Centerline of CB-2 BNSF Main (Fut) Track**

### Curve Table

| Curve Name | Point |天鹅| 坐标| 北纬| 东经| 元素| 长度| 弧度| 地方| 高度| 地方| 换算| 选择
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<td>41.4'</td>
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## Horizontal Alignment Data

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### Notes
1. Grid coordinates = SURFACE COORDINATES X 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, NAD83, SURVEY FOOT.
3. Curve radii are based on the chord definition.

---

**DEFINITION.**

1. CURVE RADII ARE BASED ON THE CHORD SURVEY FOOT.
2. COORDINATES SHOWN HEREON ARE SURFACE COORDINATES X 0.999863513
3. GRID COORDINATES = NOTES:
### Line Section CB-2 DGNO Connection

**Centerline of CB-2 DGNO Connection Track**

#### Horizontal Alignment Data

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**Notes:**

1. Grid Coordinates = MGRS coordinates (WGS 1984/UTM Zone 15N)——
2. Coordinates shown herein are based on the Texas State Plane Coordinate System (WGS 1984, UTM Zone 15N).
3. Curves used are based on the chord definition.

---

Henderson, Thomas, Jr.
HDR Engineering, Inc.
Amanda Stahlnecker, P.E.
2018-02-02

**IN-PROGRESS**

**NOT AN APPROVED DRAWING**

Preliminary 10% Design

---

**CONTRACT SHEET NO.** 306 of 873

**DART PROJECT**

COTTON BELT REGIONAL RAIL SYSTEM

**LINE SECTION CB-2**

**CB-2 DGNO CONNECTION**

**HORIZONTAL ALIGNMENT DATA**

**CENTERLINE OF CB-2 DGNO CON TRACK**

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**CONTRACT NO.** 025-2032

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**DART**

**gpc**

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DART ENGINEERING SERVICES CONTRACTOR

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**DART CORPORATION**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

**CB-2 DGNO CONNECTION**

**HORIZONTAL ALIGNMENT DATA**

**CENTERLINE OF CB-2 DGNO CON TRACK**
## Curve Name | Point | Chainage | Northing | Easting | Element | Degree of Curve | Cb | Cc | Passenger Speed | Freigh Speed | Deflection Angle
---|---|---|---|---|---|---|---|---|---|---|---|---|---
P0B | POB | 0+00.00 | 7035710.33 | 2451854.12 | STRAIGHT | 39.97 | 3°49'06" Right |
FJ | 0+39.97 | 7035740.92 | 2451898.74 | STRAIGHT | 995.41 | 3°49'06" Right |
TS | 10+25.29 | 7036201.50 | 2452050.76 | SPIRAL | 62.20 |
SC | 15+49.68 | 7036282.40 | 2452580.21 |
BNSF-CON1-A | PI | 12+48.41 | 7036283.28 | 2452581.28 | SPIRAL | 60.00 |
C5 | 15+28.70 | 7036289.45 | 2452605.75 |
ST | 15+98.19 | 7036414.50 | 2452836.72 |
PI | 17+13.16 | 7036507.48 | 2453050.86 |
P0E | 18+19.06 | 7036572.05 | 2453250.41 |

### Notes:
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, SURVEY FOOT. SURFACE COORDINATES X 0.999863513
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
**LINE SECTION CB-2 BNSF CONNECTION 1 (FUTURE)**

**HORIZONTAL ALIGNMENT DATA**

**CENTERLINE OF CB-2 BNSF CONNECTION 1 (FUTURE) TRACK**

**CURVE NAME** | **Point** | **Change** | **Station** | **Facing** | **Element** | **Degree of Curve** | **Ea** | **Ev** | **Speed** | **Deflection Angle** |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
P80 | 0+00.00 | 1025390.49 | 2415123.37 | | | | | | | |
FJ | 0+00.00 | 1025390.49 | 2415123.37 | | | | | | | |
PJ | 0+04.09 | 1025435.08 | 2415120.74 | | | | | | | |
TS | 2+11.10 | 1025014.28 | 2415155.46 | | | | | | | |
SC | 2+07.32 | 1025048.53 | 2415150.09 | | | | | | | |
CS | 3+50.27 | 1025066.19 | 2415166.83 | | | | | | | |
DS | 4+10.22 | 1025064.63 | 2415152.88 | | | | | | | |
TS | 5+23.28 | 1025077.05 | 2415135.17 | | | | | | | |
SC | 5+48.68 | 1025086.51 | 2415126.31 | | | | | | | |
CS | 6+19.79 | 1025095.76 | 2415117.83 | | | | | | | |
DS | 7+19.79 | 1025104.96 | 2415109.17 | | | | | | | |
TS | 8+02.17 | 1025089.70 | 2415091.23 | | | | | | | |
SC | 8+59.10 | 1025062.12 | 2415073.20 | | | | | | | |
CS | 9+49.25 | 1025043.42 | 2415055.33 | | | | | | | |
DS | 10+08.25 | 1025032.82 | 2415047.58 | | | | | | | |
TS | 11+00.00 | 1025009.19 | 2415039.72 | | | | | | | |
SC | 11+60.00 | 1024997.09 | 2415030.94 | | | | | | | |
CS | 12+00.00 | 1024988.61 | 2415024.51 | | | | | | | |
DS | 12+16.63 | 1024975.35 | 2415018.13 | | | | | | | |
TS | 13+50.00 | 1024921.90 | 2415009.72 | | | | | | | |
SC | 13+49.25 | 1024912.65 | 2415001.32 | | | | | | | |
CS | 14+12.25 | 1024889.04 | 2414983.11 | | | | | | | |
DS | 14+42.25 | 1024866.42 | 2414965.81 | | | | | | | |
TS | 15+00.00 | 1024843.79 | 2414948.52 | | | | | | | |
SC | 15+12.25 | 1024821.14 | 2414931.23 | | | | | | | |
CS | 15+12.25 | 1024808.50 | 2414914.94 | | | | | | | |
DS | 15+12.25 | 1024795.86 | 2414898.66 | | | | | | | |
TS | 15+12.25 | 1024783.22 | 2414882.36 | | | | | | | |
P80 | 22+30.06 | 1024807.16 | 2414944.78 | | | | | | | |

**NOTES:**

1. SURFACE COORDINATES = GRID COORDINATES × 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, SURVEY FOOT.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
**LINE SECTION CB-2 BNSF CONNECTION 2**

**HORIZONTAL ALIGNMENT DATA**

**CENTERLINE OF CB-2 BNSF CONNECTION 2 TRACK**

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<th>CURVE NAME</th>
<th>POINT</th>
<th>CHAINAGE</th>
<th>NORTHING</th>
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<th>ELEMENT</th>
<th>LENGTH</th>
<th>CURVATURE</th>
<th>DEGREE OF CURVATURE</th>
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<th>Eu</th>
<th>Speed</th>
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**NOTES:**

1. SURFACE COORDINATES = SURVEY FOOT.
2. COORDINATES SHOWN HEREON ARE SURFACE COORDINATES X 0.999863513.
3. GRID COORDINATES = SURFACE COORDINATES X 0.999863513.

**DEFINITION:**

1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513.
2. COORDINATES SHOWN HEREON ARE SURFACE COORDINATES X 0.999863513.
3. SURFACE COORDINATES = SURVEY FOOT.

**IN-PROGRESS**

Note: All drawings are preliminary in nature and may be subject to change.

**DART PROJECT**

HDR ENGINEERING, INC.

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**HORIZONTAL ALIGNMENT DATA**

**LINE SECTION CB-2 GALLERIA SPUR W**

**CENTERLINE OF CB-2 GALLERIA SPUR W TRACK**

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**NOTES:**

1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, MGRS, USA SURVEY FOOT.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

**CONTRACT SHEET No. 310 of 873**
<table>
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<th>CURVE NAME</th>
<th>POINT</th>
<th>CHAINAGE</th>
<th>NORTHING</th>
<th>EASTING</th>
<th>ELEMENT</th>
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NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

RIGHT-OF-WAY PLAN
STA 2028+00.00 TO STA 2036+00.00

SCALE (IN FEET)
0 20 40 80

EXISTING RIGHT OF WAY
EXISTING PROPERTY LINE

LEGEND

IN-PROGRESS
NOT DRAWN TO SCALE

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

DART PROJECT

REV 2004

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR REFERRED TO AS A FINAL SURVEY DOCUMENT. (RELEASE DATE 02/02/2018)

R. SANTINI
M. CARTER
G. MATTHEWS
L. GILLESPIE

0.25" = 40'

MATCH LINE CB-2 NB STA 2028+00.00
MATCH LINE CB-2 SB STA 2028+00.00

SEE DWG NO. RC5-2003

(Note: Specific details and notes are present on the diagram, including property and right-of-way boundaries, dimensions, and specific distances.)
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN
THIS DOCUMENT IS RELEASED ON 02/02/2018.
DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.
LINES ARE SHOWN FROM RECORD INFORMATION AND
DO NOT REPRESENT AN ACTUAL SURVEY DOCUMENT.
FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED
OR RELIED UPON AS A FINAL SURVEY DOCUMENT.
RELEASE DATE 02/02/2018

LEGEND

EXISTING PROPERTY LINE
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY

NOTES:

1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY
LINES ARE SHOWN FROM RECORD INFORMATION AND
DO NOT REPRESENT AN ACTUAL SURVEY DOCUMENT.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED
FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED
OR RELIED UPON AS A FINAL SURVEY DOCUMENT.
RELEASE DATE 02/02/2018

SCALE (IN FEET)
1" = 40'

LONA GILLESPIE, RPLS

NATHAN D. MAIER CONSULTING ENGINEERS, INC.
TBPE FIRM NO. F-356/TBPLS NO. 100189-00

AUG 03 2018

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2
RIGHT-OF-WAY PLAN
FROM SHEET RC6-2007 TO
SHEET RC6-2007C

LUNA EMF REMOVED FROM PROJECT - SHEET INTENTIONALLY BLANK
DELETED FROM PLAN SET
SHEETS 322, 324, 325, 327, 328, 330
RELEASED FROM NS 612F

L. GILLESPIE
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

IN-PROGRESS

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT, NOR AS A PROJECT DESIGN.

LEGEND

--- EXISTING RIGHT OF WAY
--- EXISTING PROPERTY LINE

SCALE (IN FEET)

0
20
40
80

EXISTING ROW

MATCH LINE NO. RC6-2011
STA 2092+00.00 TO STA 2100+00.00
RIGHT-OF-WAY PLAN
LINE SECTION CB-2

COTTON BELT REGIONAL RAIL SYSTEM

STA 2092+00.00 TO STA 2100+00.00

CONTACT SHEET NO.

322 of 873
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. EXISTING PROPERTY LINE AND ROAD-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

1" = 40'

IN-PROGRESS

RIGHT-OF-WAY PLAN
STA 2188+00.00 TO STA 2196+00.00

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

STANDARD NOTATION

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. EXISTING PROPERTY LINE AND ROAD-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

1" = 40'

IN-PROGRESS

RIGHT-OF-WAY PLAN
STA 2188+00.00 TO STA 2196+00.00

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

STANDARD NOTATION
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.
2. EXISTING ROWS SHOWN HEREIN SHALL NOT BE DEEMED FOR ANY PURPOSE AND SHALL NOT BE CONSIDERED AS A FINAL SURVEY DOCUMENT.

LEGEND

--- EXISTING RIGHT-OF-WAY
--- EXISTING PROPERTY LINE

NOTES:
STA 2244+00.00 TO STA 2252+00.00

RIGHT-OF-WAY PLAN
COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

REVAMEND CR DATE APP CHK ENG BY
CONTRACT DWG No. REV SCALE DRAWN DESIGNED CHECKED IN CHARGE DATE
CONTRACT SHEET No.

See DWG No. RC6-2030
See DWG No. RC6-2032
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FOR RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEY SURVEY.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT. UNLESS DATED 02/02/2018.

LEGEND:

- - - - - EXISTING PROPERTY LINE
-------------------- EXISTING RIGHT OF WAY

NOTES:
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LEGEND:

- - - - - EXISTING PROPERTY LINE
-------------------- EXISTING RIGHT OF WAY

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LEGEND:

- - - - - EXISTING PROPERTY LINE
-------------------- EXISTING RIGHT OF WAY

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LEGEND:

- - - - - EXISTING PROPERTY LINE
-------------------- EXISTING RIGHT OF WAY

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LEGEND:

- - - - - EXISTING PROPERTY LINE
-------------------- EXISTING RIGHT OF WAY

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LEGEND:

- - - - - EXISTING PROPERTY LINE
-------------------- EXISTING RIGHT OF WAY

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PRELIMINARY 10% DESIGN

IN-PROGRESS

DART PROJECT
COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

GUIDEWAY PLAN AND PROFILE
STA 2068+00.00 TO STA 2076+00.00

NOTE:
1. SEE DWG. No. CC1-2001 FOR ADDITIONAL NOTES.
1. SEE DWG No. CC1-2001 FOR ADDITIONAL NOTES.

NOTES:

V=
Lc=
Rc=

Eu=
Ea=
Ls=

10 MPH
50 MPH
2.09"
2.50"
180.00'
1315.79'
0.21"
0.00"
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

1. See DWG No. CC1-2001 for additional notes.
2. Existing data shown on this plan is based on field survey data obtained from either a digital topographic, Tahl Survey, LASER survey, or a geodetic survey, providing the exact location of the existing columns.
3. In the case of a new pipe, refer to the notes for additional data. Refer to the notes for additional data.
4. Profiles for the proposed road and road tracks are to be used at the discretion of the contractor.
5. Dates to be used for road design purposes.
6. Provisions in the plan are to be used for road design purposes.

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

GUIDEWAY PLAN AND PROFILE
STA 2106+00.00 TO STA 2108+00.00

480
470
460
450
440
430
420
410

EXISTING GRD LINE
PROPOSED GRD LINE
E. ROOSEVELT ST
C. PHONPITUCK
COTTON BELT REGIONAL RAIL SYSTEM
STREET MODIFICATION TO BE DESIGNED IN THE FINAL PLAN IN DOWNTOWN CARROLLTON AREA.

IN-PROGRESS
DART PROJECT
COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

12" RCP STM
STATION STOCK PILING

NOTE:

1. See DWG No. CC1-2001 for additional notes.
2. Existing data shown on this plan is based on field survey data obtained from either a digital topographic, Tahl Survey, LASER survey, or a geodetic survey, providing the exact location of the existing columns.
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5. Dates to be used for road design purposes.
6. Provisions in the plan are to be used for road design purposes.

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

GUIDEWAY PLAN AND PROFILE
STA 2106+00.00 TO STA 2108+00.00

480
470
460
450
440
430
420
410

EXISTING GRD LINE
PROPOSED GRD LINE
E. ROOSEVELT ST
C. PHONPITUCK
COTTON BELT REGIONAL RAIL SYSTEM
STREET MODIFICATION TO BE DESIGNED IN THE FINAL PLAN IN DOWNTOWN CARROLLTON AREA.
NOTE:
1. SEE DWG. NO. CC1-2001 FOR ADDITIONAL NOTES.

SCALE (IN FEET)

NOTE:
1. SEE DWG. NO. CC1-2001 FOR ADDITIONAL NOTES.

SCALE (IN FEET)
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COIT BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

STA 2364+00.00 TO STA 2372+00.00

DART PROJECT

IN-PROGRESS

NOTE:
1. SEE DWG. No. CC1-2001 FOR ADDITIONAL NOTES.
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**SCALE (IN FEET)**

**VERT**

**SCALE**

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**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

**IN-PROGRESS**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

**GUIDEWAY PLAN AND PROFILE**

**STA 2380+00.00 TO STA 2388+00.00**

**DART PROJECT**

**NOTES:**

1. See DWG. No. CC1-2001 for additional notes.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2
GUIDEWAY PLAN AND PROFILE
STA 2388+00.00 TO END OF SEGMENT 2
STA 2389+19.87 (AHD)
BEGIN SEGMENT 2 STA 3010+01.16 (AHD)

IN-PROGRESS

NOTE:
1. SEE Dwg No. CC1-2001 FOR ADDITIONAL ITEMS.

1" = 40'
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

MATCH LINE BNSF CONN. 2 STA 8+00.00
SEC. Dwg. No. CC1-2054

NOTE:
1. SEE DWG. No. CC1-2001 FOR ADDITIONAL NOTES.

STA 0+00.00 TO STA 8+00.00
GUIDEWAY PLAN AND PROFILE
BNSF CONNECTION 2
MATCH LINE BNSF CONNECTION 2 STA 8+00.00 TO STA 8+00.00

IN-PROGRESS
DART PROJECT
COXTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

MATCH LINE BNSF CONN. 2 STA 8+00.00
SEC. Dwg. No. CC1-2054

NOTE:
1. SEE DWG. No. CC1-2001 FOR ADDITIONAL NOTES.

STA 0+00.00 TO STA 8+00.00
GUIDEWAY PLAN AND PROFILE
BNSF CONNECTION 2
MATCH LINE BNSF CONNECTION 2 STA 8+00.00 TO STA 8+00.00

IN-PROGRESS
DART PROJECT
COXTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2
NOTE:
1. SEE DWG. NO. CC1-2001 FOR ADDITIONAL NOTES.

STA 0+00.00 TO STA 6+34.28
GUIDEWAY PLAN AND PROFILE

DGNO CONNECTION
A. STAHLNECKER
M. MARTIN
C. PHONPITUCK
L. GUBLO

1" = 40'
MATCH LINE BNSF MAINLINE STA 16+00.00

NOTES:
1. SEE DWG No. CC1-2058 FOR ADDITIONAL NOTES.
2. TOP OF RAIL OF FUTURE BNSF MAINLINE TO MATCH TOP OF RAIL OF PROPOSED BNSF MAINLINE.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:

1. SEE DWG No. CC1-2001 FOR ADDITIONAL NOTES.
2. TOP OF RAIL OF FUTURE BNSF MAINLINE TO MATCH TOP OF RAIL OF PROPOSED BNSF MAINLINE.
MATCH LINE DGN NO. CC1-2002

NOTE:
1. SEE DWG No. CC1-2001 FOR ADDITIONAL NOTES.

EXISTING GROUND LEVEL
PROPOSED TOP OF RAIL LEVEL

LVC = 200'
ex = -0.13'

LVC = 200'
ex = 0.13'

LVC = 200'
ex = 0.36'

420
430
440
450
460
470
480
490

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

MATCH LINE DGN NO. CC1-2060

SEE DWG NO. CC1-2001 FOR ADDITIONAL NOTES.

NOTE:
1. SEE DWG No. CC1-2062

MATCHLINE DGN STA 8+00.00 TO STA 16+00.00

GUIDEWAY PLAN AND PROFILE
LINE SECTION CB-2

DGN
GUIDEWAY PLAN AND PROFILE
STA 8+00.00 TO STA 16+00.00

CONTRACT SHEET No. 430 of 873

COTTON BELT REGIONAL RAIL SYSTEM

IN-PROGRESS

DART PROJECT

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

DGN NO.

1" = 40'

HDR

DART

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L. GUBLO

16/7/2018

CONTRACT No. CC1-2061
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COOTON BELT REGIONAL RAIL SYSTEM
LINE SECTION C8-2
EMF CONCEPTUAL PLAN

DART PROJECT

HDR

gpc

IN-PROGRESS

NOT TO SCALE

FOR BIDDING OR PERMIT PURPOSES.

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THIS DOCUMENT IS RELEASED

LINE SECTION CB-2
COTTON BELT REGIONAL RAIL SYSTEM

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PRELIMINARY 10% DESIGN

COOTON BELT REGIONAL RAIL SYSTEM
LINE SECTION C8-2
EMF CONCEPTUAL PLAN

DART PROJECT

HDR

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COTTON BELT REGIONAL RAIL SYSTEM

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COOTON BELT REGIONAL RAIL SYSTEM
LINE SECTION C8-2
EMF CONCEPTUAL PLAN

DART PROJECT

HDR

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COOTON BELT REGIONAL RAIL SYSTEM
LINE SECTION C8-2
EMF CONCEPTUAL PLAN

DART PROJECT

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EMF CONCEPTUAL PLAN

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COTTON BELT REGIONAL RAIL SYSTEM

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LINE SECTION C8-2
EMF CONCEPTUAL PLAN

DART PROJECT

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gpc

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PRELIMINARY 10% DESIGN

NOTES:
1. SEE DWG NO. CC1-2069 FOR ADDITIONAL NOTES.

IN-PROGRESS

COBB COTTON BELT REGIONAL RAIL SYSTEM
CB-2 INDUSTRY 3
GUIDEWAY PLAN AND PROFILE

STA 10+00.00 TO STA 16+56.36

NOTE: TO TOP OF RAIL PROFILE TO BE DEVELOPED BY FINAL

EXISTING TOP OF RAIL

EXISTING GROUND ELEV

PROPOSED TOP OF RAIL ELEV

CB2-IND3-A

L = 15.96'
R = 345.00'
V = 350.00'

NOTES

PC 11+49.58
PT 15+90.24
STA 16+56.36
END CB-2 INDUSTRY 3

SCALE (IN FEET)

SCALE (IN FEET)

VERT

SCALE (IN FEET)

HORIZ

0
5
10
15
20
25
40
80
30
1. SEE DWG NO. CC1-2001 FOR ADDITIONAL NOTES.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

CB-2 INDUSTRY 4

STA 10+00.00 TO STA 13+50.00
GUIDEWAY PLAN AND PROFILE

NOTES:
1. SEE DWG No. CC1-2071 FOR ADDITIONAL NOTES.

470
480
490
500
510
520
530
540

EXISTING GROUND ELEV
PROPOSED TOP OF RAIL ELEV

IN-PROGRESS
DART PROJECT
COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

MATCH LINE CB-2 - INDUSTRY 4 STA 13+50.00

SEE DWG No. CC1-2070

HORIZ SCALE (IN FEET)
VERT SCALE (IN FEET)

Ls=
Ea=
Eu=
Lc=
Rc=
V=

350.00'
0.64'
0.50'
10 MPH
583.47'
0.00'

CB2-IND4-A
INDUSTRY 4
TRACK TO BE REMOVED
EXISTING INDUSTRY
PT 17+45.53
STA 18+36.07

AMANDA STAHLNECKER, P.E. NO. 124571
ON 02/02/2018
FEB 02 2018
TBPE FIRM NO. F-754
HDR ENGINEERING, INC.

FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF:

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IT IS NOT TO BE USED FOR CONSTRUCTION,
NOT AN APPROVED DRAWING PRELIMINARY 10% DESIGN

NOTE:
1. SEE DWG. No. CC1-2073 FOR ADDITIONAL NOTES.
**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

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**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

---

**IN-PROGRESS**

---

**DART PROJECT**

---

**GPC TECHNICAL ASSISTANCE**

---

**CB-2 INDUSTRY 6/7**

**GUIDEWAY PLAN AND PROFILE**

**STA 0+00.00 TO STA 5+20**

---

**NOTE:** Top of rail profile to be developed by final.

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**NOTE:** See DWG. No. CC1-2001 for additional notes.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTE:
1. SEE ENG. NO. CC1-2001 FOR ADDITIONAL NOTES.

IN-PROGRESS

DART PROJECT

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

NOTE: TOP OF RAIL PROFILE TO BE DEVELOPED BY FINAL DESIGNER.