Appendix A

20% Preliminary Engineering Plans and Design Reports
A-1

Volume A, Design Plans
(Guideway Plan and Profile,
Alignment Data, Right-of-Way,
Cross Sections, Street
Modifications, Structural,
Drainage, Utilities)
VICINITY MAP
NO SCALE
D2 SUBWAY
VICTORY STATION TO DEEP ELLUM

VOLUME A (TRACKS)
SHEET NO. SHEET TITLE
1 COVER
2 OVERALL PROJECT TITLE SHEET
3 GENERAL NOTES AND ABBREVIATIONS
4 SYMBOLS
5 GEOMETRY PLAN
6 PERMANENT ALIGNMENT CONTROL MONUMENT DATA
9-37 RIGHT-OF-WAY
28-31 HORIZONTAL ALIGNMENT SCHEMATIC
32-41 HORIZONTAL ALIGNMENT DATA
42-43 GUIDEWAY TYPICAL SECTIONS
44-53 GUIDEWAY PLAN AND PROFILE
64-145 CROSS SECTIONS
146-150 STREET MODIFICATIONS
151-211 IN-LINE AREA MAPS AND CALCULATIONS
211-215 EXISTING UTILITY COMPOSITE PLANS

VOLUME B (STATIONS)
SHEET NO. SHEET TITLE
1 COVER
2 TITLE SHEET
3 GENERAL NOTES AND ABBREVIATIONS
4 SYMBOLS
5 ARCHITECTURAL GENERAL NOTES AND ATTITUDES
6ORIA (RENAL AREA) /SYMBOLS /GEOGRAPHY
7-9 PROJECT KEY PLAN
10 PERMANENT MONUMENT DATA
11-26 MUSEUM WAY STATION
27-30 METRO CENTER STATION
93-125 COMMERCE STATION
130-221 CBD EAST STATION
202-211 LIVE OAK STATION

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PROJ. WINNIE 20% DESIGN

DART PROJECT
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
OVERALL PROJECT TITLE SHEET

IN-PROGRESS
THIS DRAWING IS INCLUDED FOR THE PURPOSE OF REVIEW UNDER THE
OWNER'S AUTHORITY.
IT IS NOT TO BE USED FOR CONSTRUCTION OR DESIGN OF ANY PURPOSE.
DART D2 SUBWAY - CBD-2
GUIDEWAY PLAN AND PROFILE KEY PLAN

DART PROJECT SHEET 2 OF 3

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

HDR ENGINEERING, INC.
ON 03/06/2020
AMANDA C. STAHLNECKER, P.E. NO. 124571

IN-PROGRESS

GC4-0002

PROJECT KEY PLAN
LINE SECTION CBD-2

DGN SPECIFICATION

CONTRACT SHEET NO.
6 OF 276

CONTRACT NO.

LIGHT RAIL TRANSIT SYSTEM

DRAWN:
DESIGNED:
CHECKED:
IN CHARGE:
DATE:

FUNCTION OF:
AUTHORITY OF:
FOR THE PURPOSE OF REVIEW UNDER THE
THIS DOCUMENT IS RELEASED

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89 + 00
96 + 00
103 + 00
111 + 00

AKARD ST
PEARL ST
MAIN ST
HARWOOD ST
COMMERCE ST
ELM STATION
CBD EAST AVE
PACIFIC
IH-345 BLVD
CHAVEZ
CEASAR ST
HAWKINS AV
GOOD AV
GASTON

58+00
63+00
73+00
78+00
84+00
90+00
96+00
102+00
108+00
114+00

MAY OR NO SCALE
DART D2 SUBWAY - SE-1 AND WYE
GUIDEWAY PLAN AND PROFILE KEY PLAN

NOT FOR CONSTRUCTION
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PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,
AMANDA C. STAHLNECKER, P.E. NO. 124571
HDR ENGINEERING, INC.
ON 03/06/2020

LINE SECTION CBD-2
LIGHT RAIL TRANSIT SYSTEM
PRELIMINARY 20% DESIGN
PLANNING AND DESIGN
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03/06/2020
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03/06/2020
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS
THIS DRAWING IS REQUIRED FOR THE PURPOSES OF REVIEW UNDER THE AUTHORITY OF:
[Company Name]
[Address]
[Project Manager]

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

DART PROJECT
RIGHT-OF-WAY PLAN
STA 28+00.00 TO STA 36+00.00

CONTRACT NO.
RC6-0003

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAYush ALL ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEY. THE EXISTING ROW SHALL BE VERIFYED BY THE FINAL DESIGNER.
2. PRELIMINARY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR REFERRED TO AS A FINAL SURVEY DOCUMENT.
3. PROPOSED ROW LIMITS PLANNED IN ENGINEERING LIMITS AND ARE SUBJECT TO CHANGE. THESE LIMITS MAY INCLUDE ADJACENT AGREEMENTS, EXEMPTIONS, ETC. AND ARE SUBJECT TO CHANGE. THESE LIMITS DO NOT INCLUDE CONSTRUCTION NEEDS.
4. BASIS OF BEARING - MEASUREMENTS FOR THIS SURVEY ARE BASED ON A HOTELLING PROVISION IN MAY 2018 WITH UPDATE FROM NOVEMBER/FALL 2019 - NEW TRANSVERSE POINTS SET IN NOV 2019.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS

DART PROJECT

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

RIGHT-OF-WAY PLAN
STA 89+00.00 TO STA 96+00.00

CONTRACT SHEET NO. 20 OF 276

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES
   ARE SHOWN FROM RECORD INFORMATION AND DO NOT
   REPRESENT AN ACTUAL ENGINEERING SURVEY. THE EXISTING
   ROW SHALL BE VERIFIED BY THE FINAL DESIGNER.
2. PRELIMINARY. THIS DOCUMENT SHALL NOT BE RECORDED
   FOR ANY PURPOSE AND SHALL NOT BE USED OR VOUCHER
   OR RELIED UPON AS A FINAL SURVEY DOCUMENT.
   (RELEASE DATE 01/10/2020)
3. PROPOSED ROW LIMITS SHOWN ARE BASED ON ENGINEERING
   WIDTHS AND MAY DIFFER TO PROVIDE FOR CLEARANCE LIMITS.
   THE LIMITS SHOWN INCLUDE CLEARANCES, APPROACHES,
   Etc. (Exemptions to Reduce ROW Limits May Be Considered.
   These Limits Do Not Include Construction Needs.
4. BASIS OF BEARING - DRAWING FOR THIS SURVEY ARE
   BASED ON A GPS CONTROL PROVIDED IN MAY 2019 WITH
   UPDATE FROM NWS IN SUMMER FALL 2019 - NEW
   TANGENT POINTS SET ON MAY 2019.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
RIGHT-OF-WAY PLAN
STA 103+00.00 TO STA 111+00.00

CONTRACT NO. RC6-0014

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM SITE INFORMATION AND DO NOT REPRESENT AN ACTUAL EARTHWORK SURVEY. THE EXISTING ROW SHALL BE VERIFIED BY THE FINAL DESIGNER.
2. PRELIMINARY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.
(RELEASE DATE 01/10/2020)
3. PROPOSED ROW LIMITS SHOWN ARE BASED ON ENGINEERING NOTES AND ARE SUBJECT TO CHANGE. THESE LIMITS MAY INCLUDE ACQUISITION AGREEMENTS, EXEMPTIONS, ETC. EXISTING ROW LIMITS SHOWN ARE APPROXIMATE AND, IF CHANGED, THESE LIMITS DO NOT INCLUDE CONSTRUCTION NEEDS.
4. BASIS OF BEARING - BEARINGS FOR THIS SURVEY ARE BASED ON A TIN CONTROL PROVIDED IN MAY 2018 WITH UPDATES FROM NOR DTM IN SUMMER/FALL 2018 - NEW TACHEOMETRY POINTS SET IN MAY 2019.

MATCH LINE CBD-2 EB STA 103+00.00
SEE Dwg no. RC6-0013

MATCH LINE CBD-2 EB STA 111+00.00
SEE Dwg no. RC6-0015
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

IN-PROGRESS

RIGHT-OF-WAY PLAN
STA 111+00.00 TO END OF CBD-2

DART PROJECT

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM PRELIMINARY INFORMATION AND DO NOT REPRESENT AN ACTUAL ECONOMIC SURVEY. THE EXISTING ROW SHALL BE VARIED BY THE FINAL DESIGNER.

2. PRELIMINARY. THIS DOCUMENT SHALL NOT BE USED FOR ANY PURPOSE AND SHALL NOT BE USED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

3. PROPOSED ROW LIMITS SHOWN ARE BASED ON ENGINEERING NOTES AND ARE SUBJECT TO CHANGE. THESE LIMITS MAY INCLUDE ACQUISITION AREAS, ENCROACHMENTS, ETC.

4. BASIS OF BEARINGS - BEARINGS FOR THIS SURVEY ARE BASED ON A TINAL CONTROL PROVIDED IN MAY 2010 WITH UPDATES FROM NON IN SUMMER/FALL 2010 - NEW TRAVERSE POINTS SET IN 2013.

CONTRACT SHEET NO. 23 OF 276

DARL 0015
### Horizontal Alignment Data

#### Curve Name

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<th>R</th>
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<th>Eccentricity</th>
<th>Speed (mph)</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 (NAD83, U.G. SURVEY 96).
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
**LINE SECTION CBD-2 EB TRACK**

**HORIZONTAL ALIGNMENT DATA**

**CENTERLINE OF EASTBOUND TRACK**

<table>
<thead>
<tr>
<th>CURVE NAME</th>
<th>OFFSET</th>
<th>CHAINAGE</th>
<th>NORTHING</th>
<th>EASTING</th>
<th>ELEMENT</th>
<th>LENGTH</th>
<th>CURVATURE DEGREE</th>
<th>CH</th>
<th>EV</th>
<th>Passenger</th>
<th>Deduction Angle</th>
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**NOTES:**

1. GRID COORDINATES = SURVEY COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, SURVEY E002.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
**LINE SECTION CBD-2 EB TRACK**

**HORIZONTAL ALIGNMENT DATA**

**CENTERLINE OF EASTBOUND TRACK**

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<th>Chord</th>
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<td>2494938.81</td>
<td>115+11.59</td>
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<td>115°45'59&quot;</td>
<td>2.00</td>
<td>114</td>
<td>53°40'03&quot; Right</td>
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<td>2494938.81</td>
<td>115+11.59</td>
<td>STRAIGHT</td>
<td>31.42</td>
<td>115°45'59&quot;</td>
<td>2.00</td>
<td>114</td>
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**NOTES:**

1. GRID COORDINATES = SURVEY COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM (NAD83, U.G., SURVEY 2000).
3. CURVE RADIUSES BASED ON THE CHORD DEFINITION.
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<th>Ext Change</th>
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<th>Degree of Curve</th>
<th>E2</th>
<th>E3</th>
<th>Speed</th>
<th>Deflection Angle</th>
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<td></td>
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### Curve Name: CBD2-AB

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<th>Ext Change</th>
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<th>Degree of Curve</th>
<th>E2</th>
<th>E3</th>
<th>Speed</th>
<th>Deflection Angle</th>
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<th>Degree of Curve</th>
<th>E2</th>
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<th>Speed</th>
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<td>0.71</td>
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<td>65° 30' 24'' Left</td>
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### Curve Name: Line Section CBD-2 WB Track

- **Notes:**
  3. Curve Radii are based on the chord definition.
### Horizontal Alignment Data

#### Curve Name  | Location  | Length | Degree of Curve | Speed | Deflection Angle |
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<tbody>
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<td>100.62</td>
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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 (ft/2100 x 0.999863513)
3. Curve radius are based on the chord definition.
### Horizontal Alignment Data

**Centerline of Westbound Track**

<table>
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<tr>
<th>Curve Name</th>
<th>N. Chain</th>
<th>E. Chain</th>
<th>Curve Type</th>
<th>Length</th>
<th>Degree of Curve</th>
<th>Curve Deflection Angle</th>
<th>Notes</th>
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**Notes:**


2. Coordinates shown herein are based on the Texas State Plane Coordinate System, NAD83, U.S. State Plane Coordinate System.

3. Curve radii are based on the chord definition.

**Coordinates:**

- Centerline of Westbound track
- Horizontal alignment data
- Line section CBD2-2
- Light Rail Transit System

**Prepared by:**

Amanda C. Stahlneccker, P.E. No. 124571

**Prepared for:**

HDR Engineering, Inc.

**Prepared on:**

03/06/2020

**Contract Sheet No.:**

37 of 276
# Horizontal Alignment Data

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage (ft)</th>
<th>Northing (ft)</th>
<th>Easting (ft)</th>
<th>Radius (ft)</th>
<th>Rate (ft)</th>
<th>Degree of Curve</th>
<th>Chord Length (ft)</th>
<th>Tangent Length (ft)</th>
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<th>Deflection Angle (IN)</th>
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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), U.S. Survey Foot.
3. Curve radii are based on the chord definition.
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<th>CHAINAGE (FT)</th>
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<th>EASTING (FT)</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, NAD83, U.S. SURVEY FOOT.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
### Horizontal Alignment Data

**Centerline of Eastbound 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, UTM, SURVEY 1983
3. Curve radii are based on the chord definition.
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Not for construction. Not an approved drawing. Preliminary 20% design.
NOTES:
1. ALL SECTIONS ARE LOOKING UPSTATION.  WITH ALL STATIONING BASED ON THE CENTERLINE OF THE EXISTING TRACKS FOR CBD AND SOUTHBOUND TRACK FOR SE-1, UNLESS OTHERWISE NOTED.
2. SEE TRACKWORK STANDARDS FOR DETAILS OF TRACK ELEMENTS. DETAILS ARE PROVIDED FOR FINAL DESIGN/CONTRACTORS' INFORMATION ONLY.
3. CATENARY POLE LOCATION IS TYPICAL AND ONLY SHOWN AS AN ILLUSTRATION.  ALL OTHER ELEMENTS SHOWN ARE DESIGNER'S/CONTRACTORS' INFORMATION ONLY.
4. AT GRADE EMBEDDED TRACK - MUSEUM WAY
5. SEE GUIDEWAY PLAN AND PROFILE SHEETS FOR DETAILS AND LIMITS OF HORIZONTAL AND VERTICAL TRACK GEOMETRY AND WALL LOCATIONS.
6. SEE TUNNEL SHEETS FOR TUNNEL, CUT AND COVER GEOMETRY AND WALL LOCATIONS.
7. SEE ARCHITECTURAL SHEETS FOR SECTIONS THROUGH STATIONS.
8. PROPOSED FENCE AS SHOWN ON PLANS. MINIMUM DISTANCE FROM TRACK CENTERLINE IS 10'.

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3. CATENARY POLE LOCATION IS TYPICAL AND ONLY SHOWN AS AN ILLUSTRATION.  ALL OTHER ELEMENTS SHOWN ARE DESIGNER'S/CONTRACTORS' INFORMATION ONLY.
4. AT GRADE EMBEDDED TRACK - MUSEUM WAY
5. SEE GUIDEWAY PLAN AND PROFILE SHEETS FOR DETAILS AND LIMITS OF HORIZONTAL AND VERTICAL TRACK GEOMETRY AND WALL LOCATIONS.
6. SEE TUNNEL SHEETS FOR TUNNEL, CUT AND COVER GEOMETRY AND WALL LOCATIONS.
7. SEE ARCHITECTURAL SHEETS FOR SECTIONS THROUGH STATIONS.
8. PROPOSED FENCE AS SHOWN ON PLANS. MINIMUM DISTANCE FROM TRACK CENTERLINE IS 10'.
This document is released for the purpose of review under the authority of:

DATE: Friday, February 28, 2020 01:11:22 PM

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

DGN SPECIFICATION

TBPE FIRM NO. F-754
HDR ENGINEERING, INC.
ON 03/06/2020
AMANDA C. STAHLNECKER, P.E. NO. 124571

PRELIMINARY 20% DESIGN
NOT AN APPROVED DRAWING
NOT FOR CONSTRUCTION
03/06/2020
BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,

APPROX LOCATION
UGT DUCT

APPROX LOCATION
UGT DUCT

APPROX LOCATION
SPECTRUM DUCT

APPROX LOCATION
UGT DUCT

APPROX LOCATION
UGT DUCT

APPROX LOCATION
UGT DUCT

APPROX LOCATION
UGT DUCT

APPROX LOCATION
UGT DUCT

APPROX LOCATION
UGT DUCT

APPROX LOCATION
UGT DUCT

APPROX LOCATION
UGT DUCT

APPROX LOCATION
UGT DUCT

PROPOSED FENCE
WALKWAY
PROPOSED PEDESTRIAN
PROPOSED
SIGNAL HOUSE
PROPOSED
WALKWAY
PEDESTRIAN
PROPOSED
PROPOSED ROW

EXISTING GROUND LINE
ex = -3.93'
LVC = 500'

PROPOSED TOP OF RAIL

PROPOSED ROW

EL 428.01
VPC 34+90.00

PROPOSED TOP OF RAIL

EL 426.63
STA 32+84.46
CBD - 2 EB
PS NO 8 TO
STA 34+69.90
CBD - 2 WB
PS NO 8 TO
STA 35+30
BEGIN PORTAL

15.5'
PORTAL TUNNEL

MUSEUM WAY STATION
À WOODALL ROGERS FREEWAY
À RIVER STREET
BROOM STREET
À EXISTING
BROOM STREET
À PROPOSED

CBD - 2 WB
15' MIN CLEARANCE
À MCKINNEY AVENUE

28+00
30+00
32+00
34+00
36+00

427.17
427.44
428.44
429.16
429.89
429.87
430.23
430.05
430.39
431.13

422.54
422.82
422.93
423.33
424.21
425.38
426.41
426.39
425.96
425.53
425.11
424.68
424.25
423.83
423.40
422.97
422.54
422.12

428.19
428.30
428.09
427.67
427.24
426.81
426.39
425.96
425.53
425.11
424.68
424.25
423.83
423.40
422.97
422.54
422.12

428.19
428.30
428.09
427.67
427.24
426.81
426.39
425.96
425.53
425.11
424.68
424.25
423.83
423.40
422.97
422.54
422.12
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

IN-PROGRESS
G U I D E W A Y  P L A N  A N D  P R O F I L E
STA 36+00.00 TO STA 44+00.00

HDR

DART PROJECT

DART

GPC
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

STA 44+00.00 TO STA 51+00.00

DRAWN: HDR ENGINEERING, INC.
ON 03/06/2020
AMANDA C. STAHLNECKER, P.E. NO. 124571

EAST HEADHOUSE STATION:
EAST TRANSFER CENTER

SAN JACINTO AVENUE
ROSS AVENUE

EXISTING GROUND ELEV
PROPOSED TOP OF RAIL ELEV

IN-PROGRESS

MATCH LINE CBD-2 STA 51+00.00
SEE DWG No. CC1-0007

GUIDEWAY PLAN AND PROFILE
PRELIMINARY 20% DESIGN

L. GUBLO
A. STAHLNECKER

D. BROWN

VER 28/2/20 01:11:45 PM

1000.00' 25 MPH
1.00" 1.50"
416.04'
Ls=
Ea=
V=
Eu=
Lc=
Rc=

(EB)
Ls=
Ea=
V=
Eu=
Lc=
Rc=

1000.00' 60.00'
416.04'
25 MPH
1.00" 1.50"

CC1-0006
GUIDEWAY CROSS SECTIONS

NOTE:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS
DART PROJECT
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
CC8-0001
STA 10+00.00 TO STA 11+50.00
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS

DART PROJECT
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
GUIDEWAY CROSS SECTIONS
STA 16+00.00 TO STA 17+50.00

NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,
DISCIPLINE SHEETS.

NOTES:
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NOT FOR CONSTRUCTION
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PRELIMINARY 20% DESIGN

IN-PROGRESS
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
DART PROJECT

CC8-0007
STA 22+00.00 TO STA 23+50.00
GUIDEWAY CROSS SECTIONS

NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED
1. Only track features displayed on cross sections. Other features can be referenced from specific discipline sheets.

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

CBD-2 GUIDEWAY CROSS SECTIONS
STA 26+00.00 TO STA 27+50.00
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
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DISCIPLINE SHEETS.
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OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC
DISCIPLINE SHEETS.

GUIDEWAY CROSS SECTIONS
CBD-2
STA 28+00.00 TO STA 29+50.00
NOTES:

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC
DISCIPLINE SHEETS.

NOTES:

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC
DISCIPLINE SHEETS.

NOTES:

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC
DISCIPLINE SHEETS.

NOTES:

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
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NOTES:

A. STAHLNECKER
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L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
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DISCIPLINE SHEETS.

NOTES:

A. STAHLNECKER
D. BROWN
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L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
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DISCIPLINE SHEETS.

NOTES:

A. STAHLNECKER
D. BROWN
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L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
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NOTES:

A. STAHLNECKER
D. BROWN
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L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
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DISCIPLINE SHEETS.

NOTES:

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED

CC8-0010

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NOTES:

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L. GUBLO
AS NOTED

CC8-0010

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CC8-0010

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CC8-0010

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AS NOTED

CC8-0010

DISCIPLINE SHEETS.
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AS NOTED

CC8-0010

DISCIPLINE SHEETS.
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NOTES:

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
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NOTES:

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED

CC8-0010

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NOTES:

A. STAHLNECKER
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L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
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DISCIPLINE SHEETS.

NOTES:

A. STAHLNECKER
D. BROWN
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L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC
DISCIPLINE SHEETS.

NOTES:

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED

CC8-0010

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC
DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

STA 30+00.00 TO STA 31+50.00
GUIDEWAY CROSS SECTIONS

NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

CC8-0012
STA 32+00.00 TO STA 33+50.00
GUIDEWAY CROSS SECTIONS
CBD-2

NOTES:

- DISCIPLINE SHEETS.
- OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

A. STAHLNECKER
D. BROWN
L. GUBLO
L. GUBLO
AS NOTED
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

03/06/2020

BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,
DISCIPLINE SHEETS.

1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS.
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DISCIPLINE SHEETS.

STA 34+00.00 TO STA 35+00.00
GUIDEWAY CROSS SECTIONS
CBD-2

NOTES:

76            276
76            276
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20\% DESIGN

03/06/2020

TBPE FIRM NO. F-754
HDR ENGINEERING, INC.

A. STAHLNECKER, P.E. NO. 124571

IN-PROGRESS
IN PROGRESS
IN PROGRESS
IN PROGRESS
IN PROGRESS

DART PROJECT
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

GUIDEWAY CROSS SECTIONS
STA 39+00.00 TO STA 40+50.00

NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,
390 400 410 420
0 20 40 60 80 100
-20 -40 -60 -80 -100

43+00

43+50

44+00

NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
GUIDEWAY CROSS SECTIONS

STA 44+50.00 TO STA 46+00.00

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

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NOTES:

DISCIPLINE SHEETS.

OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC

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NOTES:

DISCIPLINE SHEETS.

OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

03/06/2020

BIDDING OR PERMIT PURPOSES.
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020

TBPE FIRM NO. F-754
HDR ENGINEERING, INC.
ON 03/06/2020
AMANDA C. STAHLNECKER, P.E. NO. 124571

PRELIMINARY 20% DESIGN

GUIDEWAY CROSS SECTIONS
CBD-2

NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
STA 50+50.00 TO STA 52+00.00
GUIDEWAY CROSS SECTIONS

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

-20 -40 -60 -80 -100
0 20 40 60 80 100
360 370 380 390

NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

GUIDEWAY CROSS SECTIONS
STA 52+50.00 TO STA 54+00.00

NOTES:
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   OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

03/06/2020

BIDDING OR PERMIT PURPOSES.

IT IS NOT TO BE USED FOR CONSTRUCTION,

AS NOTED

STA 54+50.00 TO STA 56+00.00

GUIDEWAY CROSS SECTIONS

NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS

DISCIPLINE SHEETS.
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NOTES:
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PRELIMINARY 20% DESIGN

03/06/2020

AMANDA C. STAHLNECKER, P.E. NO. 124571

HDR ENGINEERING, INC.

ON 03/06/2020

350 360 370 380

58+50 59+00

GUIDEWAY CROSS SECTIONS
LINE SECTION CBD-2

NOTES:

1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

IN-PROGRESS
DART PROJECT
LIGHT RAIL TRANSIT SYSTEM

STA 58+50.00 TO STA 59+50.00

AMANDA C. STAHLNECKER, P.E.

CONTRACT SHEET No.

51 of 279

DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020

GUIDEWAY CROSS SECTIONS
CBD-2
STA 60+00.00 TO STA 61+50.00
VERT SCALE (IN FEET)
HORIZ SCALE (IN FEET)

NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

STA 64+00.00 TO STA 64+50.00
GUIDEWAY CROSS SECTIONS

NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS

DISCIPLINE SHEETS.
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1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

NOTES:

STA 66+00.00 TO STA 66+50.00
GUIDEWAY CROSS SECTIONS
CBD-2

HDR

gpc
DART PROJECT

03/06/2020
D. BROWN
AMANDA C. STAHLNECKER, P.E. NO. 124571
HDR ENGINEERING, INC.
ON 03/06/2020

03/06/2020
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

GUIDEWAY CROSS SECTIONS

CBD-2

03/06/2020

NOTES:
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PRELIMINARY 20% DESIGN

GUIDEWAY CROSS SECTIONS
STA 70+00.00 TO STA 70+50.00

NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS, OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020

STA 71+00.00 TO STA 71+50.00
GUIDEWAY CROSS SECTIONS
CBD-2

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,
340
350
360
370
380
-100 -80 -60 -40 -20 0 20 40 60 80 100
73+00
73+50
0
20
40
60
80
100
-20
-40
-60
-80
-100
73+00.00 TO STA 73+50.00
GUIDEWAY CROSS SECTIONS
CBD-2
NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
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NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
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IT IS NOT TO BE USED FOR CONSTRUCTION,
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE

LENGL

GUIDEWAY CROSS SECTIONS
STA 75+50.00 TO STA 77+00.00
NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
GUIDEWAY CROSS SECTIONS

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

NOTE:
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PRELIMINARY 20% DESIGN

IN-PROGRESS

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

NOTES:
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DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020

IN-PROGRESS
DRAFT
NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS, OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
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STA 87+00.00 TO STA 88+50.00
GUIDEWAY CROSS SECTIONS
CBD-2
CC8-0048
03/06/2020
HDR ENGINEERING, INC.
AMANDA C. STAHLNECKER, P.E. NO. 124571

IN-PROGRESS
DART PROJECT
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
CC8-0048
03/06/2020

NOTES:
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03/06/2020

BIDDING OR PERMIT PURPOSES.
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IN-PROGRESS

DISCIPLINE SHEETS.
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GUIDEWAY CROSS SECTIONS

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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

NOTES:
1. ONLY TRACK FEATURES DISPLAYED ON THESE SECTIONS.
   OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

STA 96+50.00 TO STA 97+00.00
GUIDEWAY CROSS SECTIONS
CBD-2

DISCIPLINE SHEETS.
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HDR ENGINEERING, INC.
ON 03/06/2020
AMANDA C. STAHLNECKER, P.E. NO. 124571

03/06/2020
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03/06/2020
PRELIMINARY 20% DESIGN

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

96+50
97+00

SCALE (IN FEET)
SCALE (IN FEET)
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS

NOTES:
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03/06/2020
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PRELIMINARY 20% DESIGN

GUIDEWAY CROSS SECTIONS
LINE SECTION CBD-2

STA 102+50.00 TO STA 103+50.00

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DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC

1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS.
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NOTES:

121            276
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,

LINE SECTION CBD-2
LIGHT RAIL TRANSIT SYSTEM

1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

NOTES:
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IN-PROGRESS
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

STA 106+00.00 TO STA 107+00.00

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

NOTES:
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

03/06/2020

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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020

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CC8-0061
STA 108+00.00 TO STA 109+50.00
GUIDEWAY CROSS SECTIONS
CBD-2

IN-PROGRESS DART PROJECT LIGHT RAIL TRANSIT SYSTEM LINE SECTION CBD-2
HDR GPC

1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS.
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CC8-0061
STA 108+00.00 TO STA 109+50.00
GUIDEWAY CROSS SECTIONS
CBD-2

IN-PROGRESS DART PROJECT LIGHT RAIL TRANSIT SYSTEM LINE SECTION CBD-2
HDR GPC

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GUIDEWAY CROSS SECTIONS
CBD-2

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HDR GPC

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GUIDEWAY CROSS SECTIONS
CBD-2

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HDR GPC

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STA 108+00.00 TO STA 109+50.00
GUIDEWAY CROSS SECTIONS
CBD-2

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HDR GPC

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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION,
460
470
480
490
112+00
113+00
112+50
113+50
NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

*IN-PROGRESS*

DART PROJECT
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

GUIDEWAY CROSS SECTIONS
STA 114+00.00 TO STA 115+12.00

NOTES:
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OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

DISCIPLINE SHEETS.

CC8-0064

127 of 279
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

STA 11+50.00 TO STA 13+00.00
GUIDEWAY CROSS SECTIONS

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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

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IN-PROGRESS

DART PROJECT
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
SF-1
GUIDEWAY CROSS SECTIONS
STA 13+50.00 TO STA 15+00.00

AMANDA C. STAHLNECKER, P.E.
TBPE FIRM NO. F-754
HDR ENGINEERING, INC.
ON 03/06/2020
IN CHARGE

DATE: FRIDAY, FEBRUARY 28, 2020
12:58:07 PM

DRAWN
DESIGNED
CHECKED
IN CHARGE
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

03/06/2020
AMANDA C. STAHLNECKER, P.E. NO. 124571

STA 15+50.00 TO STA 17+00.00
GUIDEWAY CROSS SECTIONS

NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
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GUIDEWAY CROSS SECTIONS
STA 17+50.00 TO STA 19+00.00

1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS.
NOTES:
132            276
132            276
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

NOTE:
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Preliminary 20% Design
Light Rail Transit System
Line Section CSD-2

STA 19+50.00 TO STA 21+00.00
Guideway Cross Sections

HDR Engineering, Inc.

Amanda C. Stahlnecker, P.E. No. 124571

03/06/2020

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

GUIDEWAY CROSS SECTIONS
SE-1
STA 21+50.00 TO STA 23+00.00

NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.
IT IS NOT TO BE USED FOR CONSTRUCTION.

STA 23+50.00 TO STA 25+00.00
GUIDEWAY CROSS SECTIONS
SE-1

NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

03/06/2020

TBPE FIRM NO. F-754
HDR ENGINEERING, INC.
ON 03/06/2020
AMANDA C. STAHLNECKER, P.E. NO. 124571

STA 25+50.00 TO STA 27+00.00
GUIDEWAY CROSS SECTIONS
Dr. BROWN

NOTES:
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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

A. STAHLNECKER
D. BROWN
L. GUBLO

SE-1

NOTES:

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NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

STA 29+50.00 TO STA 31+00.00

GUIDEWAY CROSS SECTIONS

NOTES:
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CC8-0075

DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

IN-PROGRESS
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
VPE
GUIDEWAY CROSS SECTIONS
STA 10+00.00 TO STA 11+50.00

NOTES:
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DISCIPLINE SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020

STA 16+00.00 TO STA 16+61.00

GUIDEWAY CROSS SECTIONS

WYE CC8-0080

DISCIPLINE SHEETS.
OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

1. ONLY TRACK FEATURES DISPLAYED ON CROSS SECTIONS. OTHER FEATURES CAN BE REFERENCED FROM SPECIFIC DISCIPLINE SHEETS.

NOTES:

143  276

143  276
PROPOSED HORD STREET

PROPOSED ROSS AVENUE

PROPOSED SAN JACINTO STREET
PROPOSED HAWKINS STREET

PROPOSED PACIFIC AVENUE/GASTON AVENUE

PROPOSED SWISS AVENUE
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
FOR BIDDING OR PERMIT PURPOSES.

NOT IN CHARGE
ON 03/06/2020
CIVIL ASSOCIATES, INC.
JENN-HWAN MA, P.E.

STREET/ALLEY/DRIVE RECONSTRUCTION
FROM C TRACK
ADA RAMP 7.5'
CONSTR.

1. SEE DWG No. CC6-0015 FOR PROPOSED TYPICAL SECTIONS:
   - CS 17+
   - ST 18+
   - TS 18+
   - SC 18+

2. VICTORY AVENUE AND HOUSTON STREET INTERSECTIONS TO BE SIGNALIZED.
   HOUSTON STREET, MUSEUM WAY, VICTORY AVENUE
   SEE NOTE 4

3. SIGNAGE TO BE ADDED AT VICTORY PARK LANE WITH MUSEUM WAY TO BE SIGNALIZED.
   TO ADDRESS REVISION IN TRAFFIC MOVEMENTS.

4. DUE TO VARYING TRACK SPACING WITHIN CURVED DOUBLE TRACK ALIGNMENTS, THE EXISTING CURB ALONG THE CURVED TRACK ALIGNMENT MAY NEED TO BE REPLACED. TIME THIS CONSTRUCTION WILL COORDINATE WITH FINAL CURB DESIGN TO ELIMINATE OR MINIMIZE THE LIMITS OF IMPACT BEYOND THE EXISTING BACK OF CURB.

TYPICAL SECTIONS:
1. SEE DWG No. CC6-0015 FOR PROPOSED TYPICAL SECTIONS:
   - CS 17+
   - ST 18+
   - TS 18+
   - SC 18+

NOTES:
- SEE NOTE 4

LEGEND
- HOUSTON STREET (SEE NOTE 4)
- MUSEUM WAY (SEE NOTE 4)
- VICTORY AVENUE (SEE NOTE 4)
- STREET ROW (SEE NOTE 4)
- EXISTING CURB TO BE REMOVED

REFERENCE:
- CENTRAL TEXAS PROJECT
- 20% DESIGN
- CIVIL ASSOCIATES, INC.
- 9330 LBJ Frwy, Ste. 1150
- Dallas, Texas 75243
- TBPE Firm Registration No. 6981
- JENN-HWAN MA, P.E.

DATE: 03/06/2020
SCALE: 1"=40'
DRAWN BY:
CHECKED BY:
DESIGNED BY:
IN-CHARGE:
DATE: 03/06/2020
CONTRACT SHEET No. 155 of 276
CONTRACT No.: 008-0326
DART PROJECT
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CSB-2
STREET MODIFICATION PLAN
MUSEUM WAY, VICTORY AVENUE
HOUSTON STREET
VICTORY PARK LANE, HOUSTON STREET
DBR-3001
TXI DWG
TXI DATE: 03/06/2020
TXI SHEET: 155
TXI SHEET: 276
TXI SHEET: 008-0326
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

NOTES:
1. SEE DWG No. CC6-0022 FOR PROPOSED TYPICAL SECTIONS: ELM STREET
2. SEE DWG No. CC6-0021 FOR PROPOSED TYPICAL SECTIONS: PACIFIC AVENUE

5. SEE DWG No. CC6-0018 FOR PROPOSED TYPICAL SECTIONS: N. CESAR CHAVEZ BLVD

LEGEND

STREET/ALLEY/DRIVE RECONSTRUCTION

CIVIL ASSOCIATES, INC.
ON 03/06/2020
JENN-HWAN MA, P.E. NO. 83964

LINE SECTION CBD-2 LIGHT RAIL TRANSIT SYSTEM
PRELIMINARY 20% DESIGN
03/06/2020
TBPE FIRM NO. F-6981
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

NOT FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

PROPOSED SIDEWALK

NOTE:
1. SEE DWG No. CC6-0024 FOR PROPOSED TYPICAL SECTIONS:
2. SEE DWG No. CC6-0035 FOR MATCH LINE SECTION CBD-2

EXISTING GOOD LATIMER EXPY ROW (N. 148.3' R.O.W.)

N. GOOD LATIMER EXPY ROW (N. GOOD LATIMER EXPRESSWAY)

EXISTING GOOD LATIMER EXPY ROW

MATCH LINE SE-1 NB STA 26+00

MATCH LINE SE-1 SB STA 26+00

NOTES:
1. SEE DWG No. CC6-0024 FOR PROPOSED TYPICAL SECTIONS:

DIANA FARRAN
JENN-HWAN MA
JENN-HWAN MA

B N. GOOD LATIMER (NB)
B N. GOOD LATIMER (SB)

LEGEND
STREET/ALLEY/DRIVE RECONSTRUCTION

SCALE (IN FEET)
1" = 40'
1. **CONCRETE**

   a. The notes cover all types of ACI-318 and AASHTO LRFD Bridge Design Specifications for concrete and masonry elements...

2. **CODES AND REFERENCES**

   a. DRAFT Draft APT 39 D2 Subway Project Development.

3. **DESIGN LOADS**


4. **DESIGN STRENGTH**


5. **DEVELOPMENT AND LAP SPACED LENGTHS FOR**, 5000 P.S.I. & 60,000 P.S.I.

   a. **REINFORCEMENT**

   b. **TENSION**

   c. **COMPRESSION**

   *NOTE: THIS TABLE IS NOT FOR CONSTRUCTION.*

6. **CONSTRUCTION AND CONTRACT TERMS**

   a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

7. **CONSTRUCTION MATERIALS**

   a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

8. **CONTRACTOR'S RESOLUTION**

   a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

9. **CONTRACTOR'S PERFORMANCE**

   a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

10. **CONTRACTOR'S RECORDS**

    a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

11. **CONTRACTOR'S REPORTS**

    a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

12. **CONTRACTOR'S RESPONSIBILITY**

    a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

13. **CONTRACTOR'S SUBCONTRACTS**

    a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

14. **CONTRACTOR'S TESTING**

    a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

15. **CONTRACTOR'S WORK**

    a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.

16. **CONSTRUCTION AND CONTRACT TERMS**

    a. All construction and contract terms shall be in the form of the parties and any other provisions of the contract.
TBM RUNNING TUNNEL WITH PRECAST SEGMENTAL LINER
TYPICAL SECTION - OPTION 1
WESTBOUND TUNNEL AS SHOWN
EASTBOUND TUNNEL OPP HAND

WESTBOUND TUNNEL (SECTION LOOKING WEST)

TBM RUNNING TUNNEL WITH CAST-IN-PLACE CONCRETE LINER
TYPICAL SECTION - OPTION 2
EASTBOUND TUNNEL AS SHOWN
WESTBOUND TUNNEL OPP HAND

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. GC3-0002.
3. DYNAMIC ENVELOPES SHOWN ARE FOR CURVED TRACK. 1.5 DEGREES OF SUPERELEVATION IS SHOWN.
4. MINIMUM CLEARANCE BETWEEN TOP OF RAIL AND BOTTOM OF Catenary CABLE SHALL BE 14 FEET.
5. SERVICES, SYSTEMS, EQUIPMENT, FACILITIES SHOWN ON THESE CROSS-SECTIONS ARE PROPOSED AND ARE ILLUSTRATIVE ONLY. SEE RELEVANT DISCIPLINE DRAWINGS FOR DETAILS.

170 OF 276
TWIN BORE RUNNING TUNNEL TYPICAL SECTION

1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING No. GC3-0002.
3. SYMBOLS, SYSTEMS EQUIPMENT, RAIL AND FACILITIES SHOWN IN THIS CROSS-SECTION PERTAIN TO THE POSITIONS ONLY. SEE RELEVANT DISCIPLINE DRAWINGS FOR DETAILS.
4. TUNNEL ROW AND ORIENTATION OF PILLAR BETWEEN DETAILS.
5. TYPICAL SECTION SHOWN FOR TBM TUNNEL WITH PRECAST SEGMENTAL LINER, SIMILAR.
6. TUNNEL ROW AND ADEQUACY OF PILLAR BETWEEN DETAILS.
7. SEE RELEVANT DISCIPLINE DRAWINGS FOR FACILITIES SHOWN ON THIS CROSS-SECTION.
8. INCOMPLETE AND FOR ILLUSTRATION ONLY.
9. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
10. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING No. GC3-0002.

NOTES:

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**Lateral Pressures Due to Weight of Soil and Water**

1. **Fixed** lateral pressure is based on an assumed construction equipment shown loading 100 psf. This assumption should be applied where it can be shown that field conditions do not allow major construction equipment to be positioned and supported on the soil. In other conditions, a flexible retaining structure shall be considered when soil top should be applied.

2. The lateral pressure due to surcharge shall be applied to flexible retaining structures. For rigid retaining structures, the lateral pressures indicated above shall be increased by a factor of 2.

3. The contractor shall evaluate lateral load effects of his construction plan to determine if greater surcharge loads are applied. For more severe construction loading, special analysis shall be undertaken by contractor.

**Additional Lateral Pressure Due to Surcharge Loads**

**Building of Construction Loads**

<table>
<thead>
<tr>
<th>No.</th>
<th>Location</th>
<th>f_p</th>
<th>f_s</th>
<th>f_z</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>2</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>3</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Distribution of Additional Pressure on Vertical Plane**

**Distribution of Additional Pressure on Plan**

**Notes:**

1. For structural, general notes, see drawing No. 03-0801.
2. For structural, columns and abbreviations. See drawing No. 03-0802.
3. For notes concerning loading diagrams on free standing See specifying drawing.
4. Additional analysis of construction loads due to surcharge loads due to surcharge loads have been in the DART design criteria manual.
5. Use lateral pressure due to surcharge to determine if greater surcharge loads are applied.

**Definition of Symbols:**

- **GWT:** Depth from ground surface to ground water table.
- **P_p:** Calculated apparent lateral pressure due to surcharge in design of retaining structure.
- **P_s:** Length of area load to design structure.
- **P_e:** Lateral pressure due to surcharge on top.
- **P_t:** Total load due to length of area to design structure (length).
- **P_f:** Total footing load isolated or footing load to design structure (length).
- **H_p:** Distance from retaining structure to footing load parallel to exclusion.
- **H_t:** Distance of area load to footing load parallel to exclusion.
- **H_f:** Distance of area load to footing load perpendicular to exclusion.
- **H_m:** Calculated apparent lateral pressure due to surcharge.
- **H_a:** Distance from retaining structure to horizontal line load.

**Additional Notes:**

- The lateral pressure due to surcharge shall be applied to flexible retaining structures. For rigid retaining structures, the lateral pressures indicated above shall be increased by a factor of 2.
- The contractor shall evaluate lateral load effects of his construction plan to determine if greater surcharge loads are applied. For more severe construction loading, special analysis shall be undertaken by contractor.
CROSS-SECTION AT COMMERCE STREET
LOOKING EAST
(Scale: 1'-0"

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0002.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING No. GC3-0001.
3. ALL DISTANCES AND ELEVATIONS SHOWN IN THIS DRAWING ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED.
4. EXISTING MAJOR UTILITIES AND OUTLINES OF EXISTING BUILDINGS SHOWN ON THIS DRAWING ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED.
5. EXISTING MAJOR UTILITIES AND OUTLINES OF EXISTING BUILDINGS SHOWN ON THIS DRAWING ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED.
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15. EXISTING MAJOR UTILITIES AND OUTLINES OF EXISTING BUILDINGS SHOWN ON THIS DRAWING ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED.
SECTION FROM STA 72+00.0 TO STA 74+66.1

SECTION FROM STA 68+05.0 TO STA 72+00.0
AND FROM STA 74+66.1 TO STA 75+26.1

RUNNING TUNNEL AND COMMERCE STREET STATION CAVERN (INITIAL SUPPORT - TYPICAL SECTIONS)
**Light Rail Transit System**

**Line Section CBD-2**

**Construction Stages**

**Pre-Construction Condition**

1. TBM Mining

**Stage 1**

- **TBM MINING**

**Stage 2**

- **First Side Drift Excavation and Support**
  1. Excavate left side drift.
  2. Install initial liner.
  3. Install rock bolts as required.
  4. Install temporary wall (if necessary).

**Stage 3**

- **Second Side Drift Excavation and Support**
  1. Excavate right side drift.
  2. Install initial liner.
  3. Install rock bolts as required.
  4. Install temporary wall (if necessary).

**Stage 4**

- **Center Drift Excavation and Support**
  1. Excavate center side drift.
  2. Complete installation of initial liner.
  3. Install temporary wall (if necessary).

**Notes:**

1. For structural general notes, see drawing No. GC3-0001.
2. For structural symbols and abbreviations, see drawing No. GC3-0002.
3. All stages shown on this drawing are pre-construction, for illustration only and are not necessarily the correct sequence. Final construction sequences and durations will be determined based on specific information.
4. Estimations of time, materials, and cost are approximate and are intended to be indicative of what may be required. Final estimations will be based on more detailed information.
5. Staging of work will follow the pattern shown, but may be adjusted due to site conditions and requirements.

**Drawing Information:**

- **Contract Sheet No.:** 004-0013
- **Drawing Scale:** 182 of 276
- **Drawing Date:** 06 MAR 2020
- **Drawing No.:** GC3-0002
- **Drawing Title:** Pre-Construction Condition
- **Drawing Description:** Light Rail Transit System, Line Section CBD-2, Construction Stages

**Contact Info:**

- **Drawing Contact:** INC

**Drawing Details:**

- **Drawn by:** C. STONE, P.E.
- **Checked by:** C. MOON
- **Approved by:** B. WHITESIDE

**Drawing Notes:**

- **TBPE Firm Registration No. F-420**
- **HNTB Corporation**
- **Engineers Architects Planners**
- **HNTB Corporation**
CUT-AND-COVER TUNNEL DIMENSIONS

<table>
<thead>
<tr>
<th>PORTAL LOCATION</th>
<th>TYPE</th>
<th>STATION LIMITS</th>
<th>TRACK SPACING (FT)</th>
<th>MINIMUM OVERALL HEIGHT (H)</th>
<th>INVERT THICKNESS (Ft)</th>
<th>ROOF THICKNESS (Ft)</th>
<th>WALL THICKNESSES</th>
<th>OVERALL WIDTH (IN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEST A</td>
<td>40-00.00</td>
<td>40-00.00</td>
<td>15'-00&quot; to 21'-00&quot;</td>
<td>25'-00&quot;</td>
<td>3'-00&quot;</td>
<td>3'-00&quot;</td>
<td>2'-00&quot;</td>
<td>7'-00&quot;</td>
</tr>
<tr>
<td>WEST B</td>
<td>40+00.00</td>
<td>40+00.00</td>
<td>21'-00&quot; to 28'-11&quot;</td>
<td>25'-00&quot;</td>
<td>3'-00&quot;</td>
<td>3'-00&quot;</td>
<td>1'-04&quot;</td>
<td>4'-07&quot;</td>
</tr>
<tr>
<td>WEST C</td>
<td>40+05.00</td>
<td>40+05.00</td>
<td>28'-11&quot; to 40'-00&quot;</td>
<td>25'-00&quot;</td>
<td>3'-00&quot;</td>
<td>3'-00&quot;</td>
<td>2'-00&quot;</td>
<td>5'-02&quot;</td>
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<tr>
<td>EAST A</td>
<td>80-20.61</td>
<td>92+00.00</td>
<td>30'-00&quot; to 45'-00&quot;</td>
<td>25'-00&quot;</td>
<td>3'-00&quot;</td>
<td>3'-00&quot;</td>
<td>2'-00&quot;</td>
<td>5'-02&quot;</td>
</tr>
<tr>
<td>EAST B</td>
<td>80+05.00</td>
<td>90+27.00</td>
<td>45'-01&quot; to 21'-01&quot;</td>
<td>24'-00&quot;</td>
<td>3'-00&quot;</td>
<td>3'-00&quot;</td>
<td>1'-04&quot;</td>
<td>6'-00&quot;</td>
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<tr>
<td>EAST C</td>
<td>101+37.00</td>
<td>103+55.23</td>
<td>21'-02&quot; to 17'-04&quot;</td>
<td>24'-00&quot;</td>
<td>3'-00&quot;</td>
<td>3'-00&quot;</td>
<td>2'-00&quot;</td>
<td>4'-10&quot;</td>
</tr>
</tbody>
</table>

WEST PORTAL: STA 41+50.00 TO STA 45+07.00
EAST PORTAL: STA 101+27.00 TO STA 101+55.23

CUT-AND-COVER TUNNEL TYPE A (SECTION LOOKING WEST)
CUT-AND-COVER TUNNEL DIMENSIONS

<table>
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<tr>
<th>PORTAL LOCATION</th>
<th>TYPE</th>
<th>STATION LIMITS</th>
<th>TRACK SPACING (FT)</th>
<th>MINIMUM OVERALL HEIGHT (FT)</th>
<th>INVERT THICKNESS (IN)</th>
<th>ROOF THICKNESS (IN)</th>
<th>WALL THICKNESS (IN)</th>
<th>EXTERIOR (IN)</th>
<th>INTERIOR (IN)</th>
<th>OVERALL WIDTH (IN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEST A</td>
<td></td>
<td>45+00.00</td>
<td>25'-7&quot; to 26'-0&quot;</td>
<td>2'-0&quot;</td>
<td>3'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>28'-0&quot; to 38'-0&quot;</td>
</tr>
<tr>
<td>WEST B</td>
<td></td>
<td>46+00.00</td>
<td>25'-7&quot; to 26'-0&quot;</td>
<td>2'-0&quot;</td>
<td>3'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>28'-0&quot; to 38'-0&quot;</td>
</tr>
<tr>
<td>WEST C</td>
<td></td>
<td>47+00.00</td>
<td>25'-7&quot; to 26'-0&quot;</td>
<td>2'-0&quot;</td>
<td>3'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>28'-0&quot; to 38'-0&quot;</td>
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<tr>
<td>EAST B</td>
<td></td>
<td>86+29.61</td>
<td>36'-2&quot; to 45'-0&quot;</td>
<td>3'-0&quot;</td>
<td>3'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>50'-0&quot; to 60'-0&quot;</td>
</tr>
<tr>
<td>EAST C</td>
<td></td>
<td>88+05.17</td>
<td>45'-0&quot; to 54'-0&quot;</td>
<td>3'-0&quot;</td>
<td>3'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>60'-0&quot; to 70'-0&quot;</td>
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NOTES:

1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS CROSSSECTION.
4. OVERALL WIDTH TO BE INCREASED AT CURVES AS NECESSARY TO ACCOMMODATE DIAMETER OF JET FANS.
5. SCAFFOLDS, FOOTINGS, ERECT RAIL, AND FACILITIES SHOWN ON CROSS-SECTIONS ARE FOR ILLUSTRATION ONLY. SEE RELEVANT DISCIPLINE DRAWINGS FOR DETAILS.

WEST PORTAL: STA 45+07.00 TO STA 46+50.00 (SECTION LOOKING WEST)
EAST PORTAL: STA 86+29.61 TO STA 93+13.09 (SECTION LOOKING EAST)
EAST PORTAL: STA 98+05.17 TO STA 101+65.00 (SECTION LOOKING WEST)

CUT-AND-COVER TUNNEL SECTION TYPE B

SCALE: NTS

DRAFT - LIGHT RAIL TRANSIT SYSTEM LINE SECTION CBD-2
CONTRACT SHEET NO. 184 OF 276
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
IN-PROGRESS
CUT-AND-COVER TUNNEL TYPE C (SECTION LOOKING WEST)

<table>
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<tr>
<th>PORTAL LOCATION</th>
<th>TYPE</th>
<th>STATION LIMITS</th>
<th>TRACK SPACING (FT)</th>
<th>MINIMUM OVERALL HEIGHT (IN)</th>
<th>INVERT THICKNESS (IN)</th>
<th>ROOF THICKNESS (IN)</th>
<th>WALL THICKNESSES</th>
<th>EXTERIOR (INSIDE) (IN)</th>
<th>INTERIOR (INSIDE) (IN)</th>
<th>OVERALL WIDTH (IN)</th>
</tr>
</thead>
</table>
| WEST A          | 45-50.00 | 45-07.00 | 15'-00 
0-00 | 25'-00 | 3'-00 | 3'-00 | 2'-00 | N/A | 38'-20 | 0-00 |
| WEST B          | 46-07.00 | 46-05.00 | 21'-00 
0-00 | 28'-11 | 3'-00 | 3'-00 | 1'-6 | 40'-00 | 0-00 |
| WEST C          | 47-05.00 | 49-26.58 | 28'-11 | 3'-00 | 3'-00 | 2'-00 | 52'-00 | 0-00 |
| EAST A          | 56-29.81 | 52-25.00 | 36'-20 | 3'-00 | 3'-00 | 2'-00 | 59'-10 | 0-00 |
| EAST B          | 58-35.00 | 55-07.00 | 45'-00 | 3'-00 | 3'-00 | 1'-6 | 68'-00 | 0-00 |

NOTES:
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. SC8-2002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS CROSS-SECTION.
4. OVERALL HEIGHT (H) TO BE INCREASED AS NEEDED, IF REQUIRED FOR INSTALLATION OF JET FANS.
5. TUNNEL, HORIZONTAL CLEARANCES, AND FACILITIES SHOWN ON THESE CROSS-SECTIONS ARE INCOMPLETE AND FOR ILLUSTRATION ONLY. SEE RELEVANT DISCIPLINE DRAWINGS FOR DETAILS.

WEST PORTAL: STA 46+50.00 TO STA 49+26.58

CUT-AND-COVER TUNNEL TYPE C (SECTION LOOKING WEST)
PLATFORM LEVEL PLAN A

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.

MATCHLINE SEE DWG No. SC6-2105

LIMIT OF C/C TUNNEL

LIMIT OF PLATFORM

MATCHLINE

20'-2" OS & GD

SCALE: 1'-0"

PLATFORM LEVEL PLAN A

METRO CENTER STATION

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

DRAFT

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

HNTB Corporation
Engineers, Architects, Planners
TBPE Firm Registration No. F-420

CREATED: 03/06/2020

CHARLES A. STONE, P.E. NO. 133866

ENGINEER IN CHARGE

IN CHARGE

DRAFT

AND ADDITIONAL SITE SPECIFIC DATA
TUNNEL/STATION VENTILATION INPUT,
RAIL/FACILITY SYSTEMS AND
CONCEPTUAL DESIGN PENDING

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.

MATCHLINE SEE DWG No. SC6-2105

LIMIT OF C/C TUNNEL

LIMIT OF PLATFORM

MATCHLINE

20'-2" OS & GD

SCALE: 1'-0"

PLATFORM LEVEL PLAN A

METRO CENTER STATION

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

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TBPE Firm Registration No. F-420

CREATED: 03/06/2020

CHARLES A. STONE, P.E. NO. 133866

ENGINEER IN CHARGE

IN CHARGE

DRAFT

AND ADDITIONAL SITE SPECIFIC DATA
TUNNEL/STATION VENTILATION INPUT,
RAIL/FACILITY SYSTEMS AND
CONCEPTUAL DESIGN PENDING

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.

MATCHLINE SEE DWG No. SC6-2105

LIMIT OF C/C TUNNEL

LIMIT OF PLATFORM

MATCHLINE

20'-2" OS & GD

SCALE: 1'-0"

PLATFORM LEVEL PLAN A

METRO CENTER STATION

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

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CHARLES A. STONE, P.E. NO. 133866

ENGINEER IN CHARGE

IN CHARGE

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AND ADDITIONAL SITE SPECIFIC DATA
TUNNEL/STATION VENTILATION INPUT,
RAIL/FACILITY SYSTEMS AND
CONCEPTUAL DESIGN PENDING

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.

MATCHLINE SEE DWG No. SC6-2105

LIMIT OF C/C TUNNEL

LIMIT OF PLATFORM

MATCHLINE

20'-2" OS & GD

SCALE: 1'-0"

PLATFORM LEVEL PLAN A

METRO CENTER STATION

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

DRAFT

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NOT AN APPROVED DRAWING
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HNTB Corporation
Engineers, Architects, Planners
TBPE Firm Registration No. F-420

CREATED: 03/06/2020

CHARLES A. STONE, P.E. NO. 133866

ENGINEER IN CHARGE

IN CHARGE

DRAFT

AND ADDITIONAL SITE SPECIFIC DATA
TUNNEL/STATION VENTILATION INPUT,
RAIL/FACILITY SYSTEMS AND
CONCEPTUAL DESIGN PENDING

NOTES:
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3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.
NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN 20% plan.

THIS PLAN.
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN 20% plan.

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

MATCHLINE
SEE DWG No. SC6-2101

MATCHLINE
SEE DWG No. SC6-2103

MATCHLINE
SEE DWG No. SC6-2105

MATCHLINE
SEE DWG No. SC6-2102

PLATFORM LEVEL PLAN B
NOTE 4'-0" = 1'-0"

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN 20% plan.

THIS PLAN.
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN 20% plan.

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

MATCHLINE
SEE DWG No. SC6-2101

MATCHLINE
SEE DWG No. SC6-2103

MATCHLINE
SEE DWG No. SC6-2105

MATCHLINE
SEE DWG No. SC6-2102

PLATFORM LEVEL PLAN B
NOTE 4'-0" = 1'-0"
NOTES:
1. For structural general notes, see drawing no. GC3-0001.
2. For structural symbols and abbreviations, see DWG No. GC3-0002.
3. Supports of excavation not shown in this plan.

BIDDING OR PERMIT PURPOSES. IT IS NOT TO BE USED FOR CONSTRUCTION, APP

DESCRIPTION
DATE
CR
AMEND
REV

REV

DATE
SCALE
DRAWN
DESIGNED
CHECKED
IN CHARGE

CONTRACT SHEET No.

DRAFT
AND ADDITIONAL SITE SPECIFIC DATA
TUNNEL/STATION VENTILATION INPUT,
RAIL/FACILITY SYSTEMS AND
CONCEPTUAL DESIGN PENDING

PLATFORM LEVEL PLAN D
SCALE: 1'-0"=

LIMIT OF PLATFORM
STA 53+85.06

LIMIT OF TBM OR SEM TUNNEL

190 OF 276

HNTB CORPORATION
TBPE Firm Registration No. 420
Engineers Architects Planners
The HNTB Companies

THIS DOCUMENT IS RELEASED
FOR THE PURPOSE OF REVIEW UNDER THE
NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN DRAWING.

PARTIAL MATCHLINE
SEE DWG No. SC6-2107
NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN DWG No. GC3-0002.
CONCOURSE LEVEL PLAN D

SCALE: 1"=1'-0"

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.

METRO CENTER STATION
CONCOURSE LEVEL PLAN
SHEET 4 OF 9

HNTB
Light Rail Transit System
Line Section CBD-2

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CONSTRUCTION DOCUMENTS INCORPORATING SYSTEM AND ECONOMIC EVALUATION DATA
AND ADDITIONAL SITE SPECIFIC DATA

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRE-JANUARY 20% DESIGN

DXFF

DATE
SCALE
DRAWN
DESIGNED
CHECKED
IN CHARGE

CONTRACT SHEET No.

DWG No.

DATE
CR
AMEND
REV

DESCRIPTION
DATE
CR
AMEND
REV

TUNNEL/STATION VENTILATION INPUT,
RAIL/FACILITY SYSTEMS AND
CONCEPTUAL DESIGN PENDING

MATCH LINE

SEE DWG No. SC6-2204

SCALE: "=1'-0"

CONCOURSE LEVEL PLAN D

SCALE: 1"=1'-0"

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.

METRO CENTER STATION
CONCOURSE LEVEL PLAN
SHEET 4 OF 9

HNTB
Light Rail Transit System
Line Section CBD-2

DRAFT
CONSTRUCTION DOCUMENTS INCORPORATING SYSTEM AND ECONOMIC EVALUATION DATA
AND ADDITIONAL SITE SPECIFIC DATA

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRE-JANUARY 20% DESIGN

DXFF

DATE
SCALE
DRAWN
DESIGNED
CHECKED
IN CHARGE

CONTRACT SHEET No.

DWG No.

DATE
CR
AMEND
REV

DESCRIPTION
DATE
CR
AMEND
REV

TUNNEL/STATION VENTILATION INPUT,
RAIL/FACILITY SYSTEMS AND
CONCEPTUAL DESIGN PENDING

MATCH LINE

SEE DWG No. SC6-2204

SCALE: "=1'-0"

CONCOURSE LEVEL PLAN D

SCALE: 1"=1'-0"

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.

METRO CENTER STATION
CONCOURSE LEVEL PLAN
SHEET 4 OF 9

HNTB
Light Rail Transit System
Line Section CBD-2

DRAFT
CONSTRUCTION DOCUMENTS INCORPORATING SYSTEM AND ECONOMIC EVALUATION DATA
AND ADDITIONAL SITE SPECIFIC DATA

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRE-JANUARY 20% DESIGN

DXFF

DATE
SCALE
DRAWN
DESIGNED
CHECKED
IN CHARGE

CONTRACT SHEET No.

DWG No.

DATE
CR
AMEND
REV

DESCRIPTION
DATE
CR
AMEND
REV

TUNNEL/STATION VENTILATION INPUT,
RAIL/FACILITY SYSTEMS AND
CONCEPTUAL DESIGN PENDING

MATCH LINE

SEE DWG No. SC6-2204

SCALE: "=1'-0"

CONCOURSE LEVEL PLAN D

SCALE: 1"=1'-0"

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.
NOTE:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.

CONCOURSE LEVEL PLAN J
SCALE: 1'-0" = 1'-0"
MEZZANINE LEVEL PLAN C

Scale: 1"=1'-0"

Limit of Mezzanine Level Slab

Notes:
1. For structural general notes, see drawing No. GC3-0002.
2. For structural symbols and abbreviations, see drawing No. GC3-0001.
3. Support of excavation not shown in this plan.
MEZZANINE LEVEL PLAN D

SCALE 1"=1'-0"

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.

1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.

DRAFT OR IN-PROGRESS
NOT AN APPROVED DRAWING
NOT FOR CONSTRUCTION
PRELIMINARY 20% DESIGN
AND ADDITIONAL SITE SPECIFIC DATA
TUNNEL/STATION VENTILATION INPUT,
RAIL/FACILITY SYSTEMS AND
CONCEPTUAL DESIGN PENDING

SCALE (IN FEET)
8 0 4 16

SESSION NO. SC6-2304

2'-0"W X 3'-0"D BEAM
3'-0" W X 4'-6" D BEAM
2'-6"W X 4'-6"D BEAM

4'-6"SLAB

MATCH LINE

META CENTER STATION
MEZZANINE LEVEL PLAN
SHEET 4 OF 4

207 OF 276
NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN DWG No. SC6-2405.
4. SEE DWG No. SC6-2407 FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS.
5. SUPPORT OF EXCAVATION NOT SHOWN IN DWG No. SC6-2405.
6. SEE DWG No. SC6-2407 FOR ADDITIONAL LOK STATION SPECIFIC DATA.
7. SUPPORT OF EXCAVATION NOT SHOWN IN DWG No. SC6-2405.
8. SEE DWG No. SC6-2407 FOR ADDITIONAL LOK STATION SPECIFIC DATA.
9. SUPPORT OF EXCAVATION NOT SHOWN IN DWG No. SC6-2405.
10. SEE DWG No. SC6-2407 FOR ADDITIONAL LOK STATION SPECIFIC DATA.
NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.
4. SLAB-TO-WALL AND BEAM-TO-WALL HAUNCHES 1'-6" X 1'-6" NOT SHOWN.

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
IN-PROGRESS

METRO CENTER STATION
ROOF LEVEL PLAN
SC6-2409 SHEET 9 OF 9

MATCHLINE SEE DWG NO. SC6-2401
MATCHLINE SEE DWG NO. SC6-2402

SCALE: ""=1'-0"

NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG NO. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.
4. SLAB-TO-WALL AND BEAM-TO-WALL HAUNCHES 1'-6" X 1'-6" NOT SHOWN.

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
IN-PROGRESS
NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DWG. No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.
4. PRIOR TO EXCAVATING FOR HEADHOUSE CONSTRUCTION:
(A) DETERMINE FROM AS-BUILT DRAWINGS AND FIELD SURVEYS TYPE OF CONSTRUCTION AND DEPTH OF EXCAVATION OF EXISTING BUILDING.
(B) BASED ON INFORMATION ON EXISTING BUILDING AND FIELD SURVEYS, DEVELOP AN EXCAVATION SEQUENCE AND AN UNDERPINNING DESIGN IN ACCORDANCE WITH DART SPECIFICATIONS SECTION 3148 AND "STRUCTURAL SPECIAL CONDITIONS OF STRUCTURES TO INHIBIT GROUND MOVEMENTS AND BUILDING SETTLEMENTS ANY WAYS CONSIDERED WERE LIMITS.
(C) DETERMINE IN THE CONDITIONS OF THE EXISTING BUILDING, EXISTING AND INTERVENTIONS, AND INSTRUMENTATION TO MONITOR EXCAVATION AND TO ALERT OR APPROPRIATE ACTION TO BE TAKEN WHEN PRESET THRESHOLDS ARE REACHED.
5. CONTRACTOR SHALL UNDERTAKE APPROPRIATE MEASURES TO PROTECT EXISTING BUILDING FROM DAMAGE THAT MAY OCCUR DURING EXCAVATION, CONSTRUCTION, AND BACKFILLING.
6. DRAFT INSTRUMENTATION AND MONITORING PLAN TO RECORD THE STRUCTURES BEHAVIOR DURING EXCAVATION AND TO ALERT FOR APPROPRIATE ACTION TO BE TAKEN WHEN PRESET THRESHOLDS ARE REACHED.
7. CONTRACTOR SHALL UNDERTAKE APPROPRIATE MEASURES TO PROTECT EXISTING BUILDING FROM DAMAGE THAT MAY OCCUR DURING EXCAVATION, CONSTRUCTION, AND BACKFILLING.

PLATFORM LEVEL PLAN A

NOT FOR CONSTRUCTION
NOT AN APPLIED DRAWING
Preliminary 20% Design
January 20% Design

CONTACT SHEET No. 218 OF 276
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING

1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.
4. PRIOR TO EXCAVATING FOR HEADHOUSE CONSTRUCTION:
   (A) DETERMINE FROM AS-BUILT DRAWINGS AND FIELD SURVEYS TYPE OF CONSTRUCTION AND DEPTH OF FOUNDATION OF EXISTING BUILDING.
   (B) BASED ON INFORMATION ON EXISTING BUILDING AND GEOTECHNICAL INFORMATION FROM GDM, DEVELOP AN EXCAVATION SEQUENCE AND AN UNDERPINNING DESIGN IN ACCORDANCE WITH DART SPECIFICATIONS SECTION 3148 00 "UNDERPINNING, SUPPORT AND RESTORATION OF STRUCTURES" TO MITIGATE GROUND MOVEMENTS AND BUILDING SETTLEMENTS THAT WOULD EXCEED ALLOWABLE LIMIT.
   (C) BASED ON THE CONDITIONS OF THE EXISTING BUILDING, ESTABLISH AND IMPLEMENT AN INSTRUMENTATION AND MONITORING PLAN TO RECORD THE STRUCTURES BEHAVIOR DURING EXCAVATION AND TO ALERT FOR APPROPRIATE ACTION TO BE TAKEN WHEN PRESET THRESHOLDS ARE REACHED.

5. CONTRACTOR SHALL UNDERTAKE APPROPRIATE MEASURES TO PROTECT EXPOSED SIDE OF EXISTING BUILDINGS AND TO PROTECT EXPOSED SIDE OF EXISTING BUILDING FROM DAMAGE THAT MAY OCCUR DURING EXCAVATION, CONSTRUCTION AND BACKFILLING FOR THE HEADHOUSE STRUCTURE.

6. DEVIATIONS FOR RESISTANCE TO FLOATATION MAY BE RESTRICTED TO ALTERNATIVE MEASURES, SUCH AS TIE-DOWN ANCHORS, IF PROVIDED.

DRAFT
IN-PROGRESS
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
15 FEB 2020

HNTB
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
COMMERCIAL STATION HEADHOUSE
PLATFORM PLAN
SHEET 2 OF 2

MATCHLINE

B. WHITESIDE

C. STONE

M A T C H L IN E

COMMERCE STATION HEADHOUSE

2'-0" 8'-6"

TO SEE DWG NO. SC6-3101

SCALE: "'=1'-0"

NOTE:

TBPE FIRM NO. F-420
HNTB CORPORATION
ON 03/06/2020
CHARLES A. STONE, P.E. NO. 133866
06 MAR 2020
NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. SC6-3201.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. SC6-3202.
3. SUPPORTS OF EXCAVATION NOT SHOWN IN THIS PLAN.
4. PRIOR TO EXCAVATING FOR HEADHOUSE CONSTRUCTION:
(A) DETERMINE FROM AS-BUILT DRAWINGS AND FIELD SURVEYS TYPE OF CONSTRUCTION AND DEPTH OF FOUNDATION OF EXISTING BUILDING.
(B) BASED ON INFORMATION ON EXISTING BUILDING FOUNDATION AND CONSTRUCTION INFORMATION FROM GDM, DEVELOP AN EXCAVATION SEQUENCE AND AN UNDERPINNING DESIGN IN ACCORDANCE WITH DART SPECIFICATIONS FOR UNDERPINNING, SUPPORT AND RESTORATION OF STRUCTURES TO MITIGATE GROUND MOVEMENTS AND BUILDING SETTLEMENTS THAT WOULD EXCEED ALLOWABLE LIMIT.
(C) BASED ON THE CONDITIONS OF THE EXISTING FOUNDATION OF EXISTING BUILDING.
5. CONTRACTOR SHALL UNDERTAKE APPROPRIATE MEASURES TO PROTECT EXISTING BUILDINGS FROM DAMAGE THAT MAY OCCUR DURING EXCAVATION, CONSTRUCTION AND BACKFILLING FOR THE HEADHOUSE STRUCTURE.

HNTB Corporation

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
COMMERCIAL STATION HEADHOUSE
LOWER MEZZANINE PLAN
SHEET 2 OF 2

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
DATE: 06 MAR 2020
TUNE IN-PROGRESS
NOTICE OF PROGRESS
DRAFT
IN PROGRESS
COMMERCIAL STATION HEAD HOUSE
LOWER MEZZANINE PLAN B
SC6-3202

APPEND LIMITS OF EXISTING BUILD (SEE NOTES 4 AND 5)

SCALE: 1" = 1'-0"

LOWER MEZZANINE LEVEL PLAN B
SCALE: 1" = 1'-0"

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
DATE: 06 MAR 2020
TUNE IN-PROGRESS
NOTICE OF PROGRESS
DRAFT
IN PROGRESS
COMMERCIAL STATION HEAD HOUSE
LOWER MEZZANINE PLAN B
SC6-3202
NOTES

1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. SC6-3301.

2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAW No. SC6-3302.

3. SUPPORTS OF EXCAVATION NOT SHOWN IN THIS PLAN.

4. PRIOR TO EXCAVATING FOR HEADHOUSE CONSTRUCTION:
   (A) DETERMINE FROM AS-BUILT DRAWINGS AND FIELD SURVEYS THE KIND OF CONSTRUCTION AND DEPTH OF EXCAVATION OF EXISTING BUILDING.
   (B) BASED ON INFORMATION ON EXISTING BUILDING AND GEOTECHNICAL INFORMATION FROM GDM, DEVELOP AN EXCAVATION SEQUENCE AND AN UNDERPINNING DESIGN IN ACCORDANCE WITH DART SPECIFICATIONS SECTION 31 48 00 "UNDERPINNING, SUPPORT AND RESTORATION OF STRUCTURES" TO MITIGATE GROUND MOVEMENTS AND BUILDING SETTLEMENTS THAT WOULD EXCEED ALLOWABLE LIMIT.
   (C) BASED ON THE CONDITIONS OF THE EXISTING FOUNDATION OF EXISTING BUILDING, DEVELOP AN EXCAVATION SEQUENCE AND AN INSTRUMENTATION AND MONITORING PLAN TO RECORD THE STRUCTURES BEHAVIOR DURING EXCAVATION AND TO ALERT FOR APPROPRIATE ACTION TO BE TAKEN WHEN PRESET THRESHOLDS ARE REACHED.

5. CONTRACTOR SHALL UNDERTAKE APPROPRIATE MEASURES TO MITIGATE GROUND MOVEMENTS FROM EXCAVATION FOR THE HEADHOUSE STRUCTURE.

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
COMMERCE STATION HEADHOUSE
MIDDLE MEZZANINE PLAN
SHEET 1 OF 2

SCALE: 1/8"=1'-0"

MIDDLE MEZZANINE LEVEL PLAN A

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

2020 JAN

HNTB
DART PROJECT

TBPE Firm Registration No. F-420
Engineers Architects Planners
The HNTB Companies
HNTB Corporation

TUNNEL/STATION VENTILATION INPUT, RAIL/FACILITY SYSTEMS AND CONCEPTUAL DESIGN PENDING
NOTES:

1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. GC3-0001.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DwG No. GC3-0002.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.
4. PRIOR TO EXCAVATING FOR HEADHOUSE CONSTRUCTION:
   (A) DETERMINE FROM AS-BUILT DRAWINGS AND FIELD SURVEYS THE TYPE OF CONSTRUCTION AND DESIGN OF FOUNDATION OF EXISTING BUILDING.
   (B) BASED ON INFORMATION ON EXISTING BUILDING AND GEO-MECHANICAL INFORMATION FROM SURVEYS, DEVELOP AN EXCAVATION SEQUENCE AND AN UNDERPINNING DESIGN IN ACCORDANCE WITH DART SPECIFICATIONS SECTION 3.0 AND 3.2 "UNDERPINNING, SUPPORT AND RESTORATION OF STRUCTURES" TO MITIGATE GROUND MOVEMENTS AND BUILDING SETTLEMENTS THAT WOULD EXCEED ALLOWABLE LIMIT.
   (C) BASED ON THE CONDITIONS OF THE EXISTING FOUNDATION OF EXISTING BUILDING.

5. CONTRACTOR SHALL UNDERTAKE APPROPRIATE MEASURES TO RECORD THE STRUCTURES BEHAVIOR DURING INSTRUMENTATION AND MONITORING PLAN TO DETERMINE FROM AS-BUILT DRAWINGS AND FIELD SURVEYS TYPE OF CONSTRUCTION AND DEPTH OF EXCAVATION AND TO ALERT FOR APPROPRIATE ACTION TO BE TAKEN WHEN PRESET THRESHOLDS ARE REACHED.

DRAFT

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
COMMERCIAL STATION HEADHOUSE
MIDDLE MEZZANINE PLAN

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
FEBRUARY 2020 DESIGN

THIS PLAN.

3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.
4. PRIOR TO EXCAVATING FOR HEADHOUSE CONSTRUCTION:
   (A) DETERMINE FROM AS-BUILT DRAWINGS AND FIELD SURVEYS THE TYPE OF CONSTRUCTION AND DESIGN OF FOUNDATION OF EXISTING BUILDING.
   (B) BASED ON INFORMATION ON EXISTING BUILDING AND GEO-MECHANICAL INFORMATION FROM SURVEYS, DEVELOP AN EXCAVATION SEQUENCE AND AN UNDERPINNING DESIGN IN ACCORDANCE WITH DART SPECIFICATIONS SECTION 3.0 AND 3.2 "UNDERPINNING, SUPPORT AND RESTORATION OF STRUCTURES" TO MITIGATE GROUND MOVEMENTS AND BUILDING SETTLEMENTS THAT WOULD EXCEED ALLOWABLE LIMIT.
   (C) BASED ON THE CONDITIONS OF THE EXISTING FOUNDATION OF EXISTING BUILDING.

5. CONTRACTOR SHALL UNDERTAKE APPROPRIATE MEASURES TO RECORD THE STRUCTURES BEHAVIOR DURING INSTRUMENTATION AND MONITORING PLAN TO DETERMINE FROM AS-BUILT DRAWINGS AND FIELD SURVEYS TYPE OF CONSTRUCTION AND DEPTH OF EXCAVATION AND TO ALERT FOR APPROPRIATE ACTION TO BE TAKEN WHEN PRESET THRESHOLDS ARE REACHED.

DRAFT

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
COMMERCIAL STATION HEADHOUSE
MIDDLE MEZZANINE PLAN

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
FEBRUARY 2020 DESIGN

THIS PLAN.
1. For structural design notes, see drawing No. SC6-3401.

2. For structural symbols and abbreviations, see DWG No. SC6-3402.

3. Support of excavation not shown in this plan.

4. Prior to excavating for Headhouse construction:
   (a) determine from AS-BUILT drawings and field surveys type of construction and depth of foundation of existing buildings.
   (b) Based on information on existing building and geotechnical information from GDM, develop an excavation sequence and an underpinning design in accordance with DART Specifications Section 314800 “Underpinning, Support and Restoration of Structures” to minimize ground movements and building settlements that will exceed allowable limits.
   (c) Based on the conditions of the existing building, establish an instrumentation and monitoring plan to record the structures’ behavior during excavation and to alert for appropriate action to be taken when project thresholds are reached.

5. Contractor shall undertake appropriate measures to protect existing building from damage that may occur during excavation, construction and backfilling for the Headhouse.


For additional site specific data, tunnel/station ventilation input, rail/facility systems and conceptual design pending.
1. For structural general notes, see drawing No. GC3-0001.
2. For structural symbols and abbreviations, see drawing No. GC3-0002.
3. Supports of excavation not shown in this plan.
4. Prior to excavating for headhouse construction, contractors shall undertake appropriate measures to protect the existing building from settlements and to ensure the proper functioning of the existing building.
5. Contractors shall undertake appropriate measures to protect exposed sides of existing buildings from damage that may occur during excavation, construction, and backfilling for the headhouse structure.
6. Keyway for resistance to floatation may be omitted if alternative measures, such as tie-down anchors, are provided.

MEASUREMENTS

- Scale: 1'-0" = 8
- Slope: 1'-0" = 1-0

NOTES

1. For structural general notes, see drawing No. GC3-0001.
2. For structural symbols and abbreviations, see drawing No. GC3-0002.
3. Supports of excavation not shown in this plan.
4. Prior to excavating for headhouse construction, contractors shall undertake appropriate measures to protect the existing building from settlements and to ensure the proper functioning of the existing building.
5. Contractors shall undertake appropriate measures to protect exposed sides of existing buildings from damage that may occur during excavation, construction, and backfilling for the headhouse structure.
6. Keyway for resistance to floatation may be omitted if alternative measures, such as tie-down anchors, are provided.

SECTION A

- Scale: 1'-0" = 8
- Slope: 1'-0" = 1-0

NOTES

1. For structural general notes, see drawing No. GC3-0001.
2. For structural symbols and abbreviations, see drawing No. GC3-0002.
3. Supports of excavation not shown in this plan.
4. Prior to excavating for headhouse construction, contractors shall undertake appropriate measures to protect the existing building from settlements and to ensure the proper functioning of the existing building.
5. Contractors shall undertake appropriate measures to protect exposed sides of existing buildings from damage that may occur during excavation, construction, and backfilling for the headhouse structure.
6. Keyway for resistance to floatation may be omitted if alternative measures, such as tie-down anchors, are provided.

DRAFT

- Scale: 1'-0" = 8
- Slope: 1'-0" = 1-0

NOT FOR CONSTRUCTION

- Scale: 1'-0" = 8
- Slope: 1'-0" = 1-0

NOT AN APPROVED DRAWING

- Scale: 1'-0" = 8
- Slope: 1'-0" = 1-0

NOT FOR CONSTRUCTION

- Scale: 1'-0" = 8
- Slope: 1'-0" = 1-0

NOT AN APPROVED DRAWING
DRAFT

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING

Preliminary 20% Design

NOT AN APPROVED DRAWING
NOT FOR CONSTRUCTION

Copyright 

IN-PROGRESS

With the exception of interior elevations, all other elevations are provided from design the drawings

HNTB

COMMERCIAL

DART PROJECT
LINE SECTION CED-2
COMMERCIAL STATION
SECTION A

NOTES:

1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.

2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING No. GC3-0002.

3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.

4. REFER TO EXCAVATIONS FOR HEADHOUSE CONSTRUCTION.

5. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.

6. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.

NOTES:

1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING No. GC3-0001.

2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING No. GC3-0002.

3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.

4. REFER TO EXCAVATIONS FOR HEADHOUSE CONSTRUCTION.

5. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.

6. SUPPORT OF EXCAVATION NOT SHOWN IN THIS DRAWING.
NOTES
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. SC6-4101.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. SC6-4102.
3. SUPPORTS OF EXCAVATION NOT SHOWN IN THIS PLAN.

PLATFORM LEVEL PLAN A

See DWG No. SC6-4105
NOTES:
1. FOR STRUCTURAL GENERAL NOTES, SEE DRAWING NO. SC8-4101.
2. FOR STRUCTURAL SYMBOLS AND ABBREVIATIONS, SEE DRAWING NO. SC8-4102.
3. SUPPORT OF EXCAVATION NOT SHOWN IN THIS PLAN.
PRELIMINARY 20% DESIGN
NOT AN APPROVED DRAWING
NOT FOR CONSTRUCTION
IT IS NOT TO BE USED FOR CONSTRUCTION,
BIDDING OR PERMIT PURPOSES.

DRAINAGE AREA MAP
SHEET 1 OF 13

1" = 40'
K. SIMS
J. TAYLOR
J. HUDSON

DRAINAGE AREA NUMBER
DRAINAGE AREA IN ACRES
RAIL CENTERLINE

J. BRISCOE

16.5'
REV
AMEND
CR
DATE
DESCRIPTION
APP
CHK
ENG
BY

CONTACT SHEET No.
CONTRACT SHEET No.

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
DRAINAGE AREA MAP
SHEET 1 OF 13

IN-PROGRESS

NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

CONTRACT SHEET No.
CONTRACT SHEET No.

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

DRAINAGE AREA BOUNDARY
100 YEAR FLOODPLAIN
DRAINAGE FLOW
DRAINAGE AREA NUMBER
DRAINAGE AREA IN ACRES
RAIL CENTERLINE

MATCH LINE CBD-2 STA 18+00.00
SEE DWG No. CC6-0102

MATCH LINE CBD-2 STA 18+00.00
SEE DWG No. CC6-0102
### DRAINAGE AREA SUMMARY TABLE

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<th>Type</th>
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<th>Runoff Coeff.</th>
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</table>

NOTES:

1. DRAINAGE DESIGN CRITERIA (FREQUENCY, INTENSITY, AND RUNOFF COEFFICIENTS) ARE BASED ON THE CITY OF DALLAS DRAINAGE DESIGN MANUAL, DATED MAY 2019.
2. ALL DRAINAGE AREAS ARE CALCULATED FOR THE 100-YEAR FREQUENCY STORM.
3. ALIGNMENTS ARE WITHIN THE ZONING LOCATED ON PAGE 2 OF THE APPENDIX.
4. DRAINAGE AREA CALCULATIONS ARE BASED ON THE CITY OF DALLAS DRAINAGE DESIGN MANUAL, DATED MAY 2019.
5. RUNOFF COEFFICIENTS ARE BASED ON THE CITY OF DALLAS DRAINAGE DESIGN MANUAL, DATED MAY 2019.

Jeffrey E. Briscoe, P.E. No. 99558
TBPE Firm No. F-10715
On 03/06/2020

IN CHARGE
J. HUDSON
J. TAYLOR

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

Light Rail Transit System
Line Section CSD-2
Drainage Area Calculations
Sheet 1 of 3
### DRAINAGE AREA SUMMARY TABLE

<table>
<thead>
<tr>
<th>DRAINAGE AREA NO.</th>
<th>DRAINAGE AREA SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

- **DRAINAGE AREA NO.**
- **DRAINAGE AREA SUMMARY**

### Additional Notes

1. **DRAINAGE DESIGN CRITERIA (FREQUENCY, INTENSITY, AND RUNOFF COEFFICIENTS)** are based on the City of Dallas Drainage Design Manual, dated May 1993.
2. ALL DRAINAGE AREAS ARE CALCULATED FOR THE 100-YEAR FREQUENCY STORM.
3. ALIGNMENT IS WITHIN THE ZONING DISTRICT: CA-1(A), CENTRAL AREA - 1.
4. INTENSITY WERE DETERMINED USING THE RAINFOLL INTENSITY DURATION TABLE LOCATED ON PAGE 2 OF THE APPENDIX.
5. RUNOFF COEFFICIENTS ARE TAKEN FROM THE TABLE: RUNOFF COEFFICIENTS AND MAXIMUM INLET TIMES LOCATED ON PAGE 1 OF THE APPENDIX.

### In-Progress

- **IN-PERSON**
- **NOT AN APPROVED DRAWING**
- **PRELIMINARY 20% DESIGN**

### Not for Construction

- **NOT AN APPROVED DRAWING**
- **PRELIMINARY 20% DESIGN**

### Drainage Area Calculations

- **LIGHT RAIL TRANSIT SYSTEM**
- **LINE SECTION CBD-2**
- **SHEET 2 OF 3**
### DRAINAGE AREA SUMMARY TABLE

<table>
<thead>
<tr>
<th>AREA NO.</th>
<th>AREA (ACRES)</th>
<th>Tc (MIN.)</th>
<th>DRAINAGE AREA (IN/HR)</th>
<th>Q (100 YR) (CFS)</th>
<th>COMMENTS</th>
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</thead>
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<tr>
<td>E10</td>
<td>0.22</td>
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<tr>
<td>E14</td>
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<td>0.62</td>
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**NOTES:**
1. DRAINAGE DESIGN CRITERIA FLOOD, HYDROLOGY, AND DRAINAGE COEFFICIENTS ARE TAKEN FROM THE CITY OF DALLAS DRAINAGE SYSTEM MANUAL, DATED MAY 2017.
2. ALL DRAINAGE AREAS ARE CALCULATED FOR THE 100-YEAR FREQUENCY FLOOD.
3. AREA LANDSCAPING REQUIREMENTS ARE TAKEN FROM THE CITY OF DALLAS DRAINAGE SYSTEM MANUAL, DATED MAY 2017.
5. SURFACE MATERIALS ARE TAKEN FROM THE TABLE ENCOD (CODES) AND WADING INLET TIMES LOCATED ON PAGE 3 OF THIS APPENDIX.

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**FAA: 361-892**

**LIGHT RAIL TRANSIT SYSTEM LINE SECTION CSD-2**

**DRAINAGE AREA CALCULATIONS SHEET 3 OF 3**
NOTES:
1. FOR ADDITIONAL AND VERTICAL GEOMETRY, SEE ADJACENT ALIGNMENT DATA SHEET AND CROSS-SECTION SHEET.
2. FOR GENERAL NOTES, ABBREVIATIONS AND SYMBOLS RELATED TO UTILITY CONSTRUCTION, SEE DWG NO. UC1-0001 AND UC2-0002.
3. UTILITY INFORMATION IS BASED UPON EXISTING UTILITY PLANS PROVIDED BY THE CITY OF DALLAS AND DALLAS WATER UTILITIES. HAND DRAWINGS MAY NOT PRECISELY REPRESENT THE EXISTENCE OF UNDERGROUND FACILITIES. UTILITY INFORMATION IS BASED UPON DATA COLLECTED FROM BOTH PUBLIC AND PRIVATE SOURCES. THE EXACT LOCATION OF THESE SYSTEMS IS BASED UPON DATA COLLECTED BY FIELD MEASUREMENT. UTILITIES SHALL BE VERIFIED BY FINAL DESIGNER.
4. INDIVIDUAL GAS SERVICES ARE KNOWN AND NOT SHOWN ON THESE DRAWINGS.
5. FINAL DESIGNER SHALL VERIFY THE HEIGHT OF ALL WATER AND SEWER FACILITIES AND PERFORM THE FOR ALL HIGH PRESSURE GAS.
6. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY IN ANY AREA OF THE PROJECT, THE CONTRACTOR SHALL CONTACT ALL COMPANIES KNOWN TO OPERATE UTILITY SYSTEMS IN THE AREA AND SHALL HAVE THEIR FACILITIES PHYSICALLY LOCATED.
7. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE SIZE OF EXISTING WATER AND WASTEWATER SERVICES.
8. STORM SEWER PLANS ARE NOT SHOWN ON THESE DRAWINGS.
9. FOR PROPOSED STATIONS, SEE ARCHITECTURAL SHEETS.

NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
EXISTING UTILITY COMPOSITE
BEGIN PROJECT TO STA 14+00.00

NOTES:
1. FOR ADDITIONAL AND VERTICAL GEOMETRY, SEE ADJACENT ALIGNMENT DATA SHEET AND CROSS-SECTION SHEET.
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8. STORM SEWER PLANS ARE NOT SHOWN ON THESE DRAWINGS.
9. FOR PROPOSED STATIONS, SEE ARCHITECTURAL SHEETS.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2
EXISTING UTILILITY COMPOSITE
STA 44+00.00 TO STA 51+00.00

NOTES:
1. SEE DWG NO. UC2-001 FOR ADDITIONAL NOTES.

IN-PROGRESS

NOT IN CHARGE

IN CHARGE

IN CHARGE

IN CHARGE

IN CHARGE

L. WYANDON

FAISAL S. SYED, P.E. NO. 84833

IN-PROGRESS

FAISAL S. SYED, P.E. NO. 84833

BIDDING OR PERMIT PURPOSES.

IN-PROGRESS

BIDDING OR PERMIT PURPOSES.

IN-PROGRESS

BIDDING OR PERMIT PURPOSES.

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IN-PROGRESS

BIDDING OR PERMIT PURPOSES.
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

NOTES:
1. SEE DWG No. UC2-001 FOR ADDITIONAL NOTES.

EXISTING UTILITY COMPOSITE
STA 89+00.00 TO STA 96+00.00

MATCH LINE CBD-2 EB STA. 89+00.00
SEE DWG No. UC2-001
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN

NOTES:
1. SEE DWG No. UC2-001 FOR ADDITIONAL NOTES.

EXISTING UTILITY COMPOSITE

L. WYANDON
H. RAZA
F. SYED

PA CIFIC A V E
GASTON AVE
FLOYD ST

SEE DWG No. CC1-0014
SEE DWG No. UC2-0019
MATCH LINE SE-1 SB STA. 28+00.00
MATCH LINE SE-1 SB STA. 29+00.00

STA 111+00.00 TO SE-1 STA. 28+00.00

SCALE (IN FEET)
1" = 40'

CONTRACT SHEET No. 272 OF 276

LIGHT RAIL TRANSIT SYSTEM
LINE SECTION CBD-2

EXISTING UTILITY COMPOSITE
STA 111+00.00 TO SE-1 STA. 28+00.00

CONTRACT
No.  UEG-0015
NOT FOR CONSTRUCTION
NOT AN APPROVED DRAWING
PRELIMINARY 20% DESIGN
03/06/2020
BIDDING OR PERMIT PURPOSES.

NOTES:
1. SEE DWG NO. UC2-001 FOR ADDITIONAL NOTES.