

CONCEPTUAL ALIGNMENTS, PROFILES,  
STATION LOCATIONS, AND TYPICAL SECTIONS

PHASE 2  
TASK 10.3 LOCALLY PREFERRED ALTERNATIVE  
DELIVERABLE 10.3.1

EOT CONTRACT NO. 7720RNG  
REVISED DRAFT ENVIRONMENTAL IMPACT REPORT/  
DRAFT ENVIRONMENTAL IMPACT STATEMENT  
TRANSPORTATION IMPROVEMENTS IN THE  
URBAN RING CORRIDOR

Prepared for:  
THE MASSACHUSETTS EXECUTIVE OFFICE OF TRANSPORTATION (EOT)



HALF-SCALE IF 11x17

NOVEMBER 2008

Prepared by:  
**EarthTech**

in association with:  
HNTB Corporation  
Hatch Mott MacDonald  
Nitsch Engineering

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**THE URBAN RING PHASE 2**

**REVISED DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT**



# INDEX (2 OF 2)

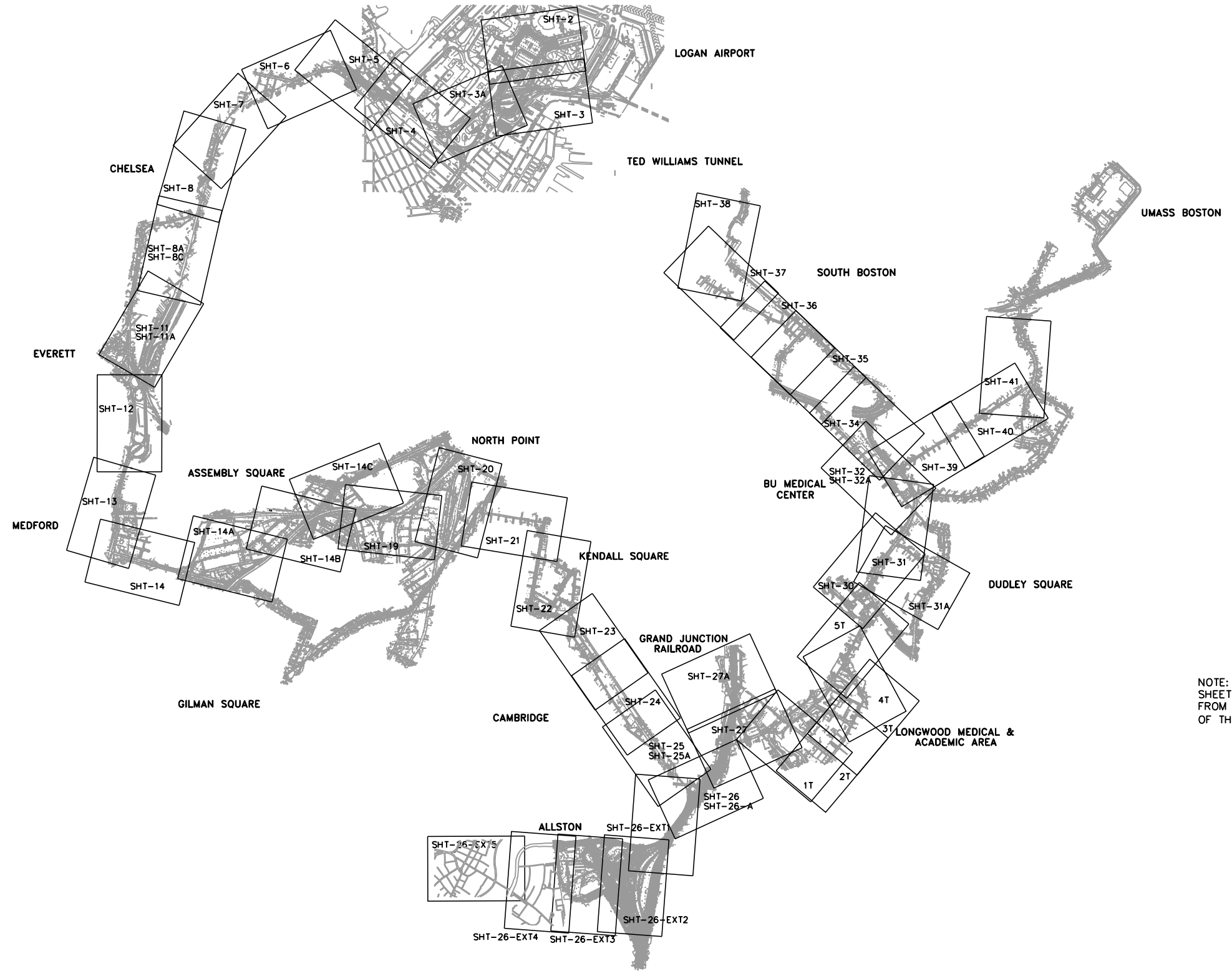
| SHT NO.   | DESCRIPTION   | SHT NO.                          | DESCRIPTION  |
|-----------|---|----------------------------------|--|
|           | <b><u>ALIGNMENT AND PROFILE (CONT'D)</u></b>  |                                  |  |
| 34        | PLAN - ALBANY STREET, BOSTON - EAST CONCORD STREET TO FRONTAGE ROAD<br>BUS RAPID TRANSIT ROUTE 7  | TYP-6                            | BUSWAY TYPICAL SECTIONS - CAMBRIDGE - GRAND JUNCTION RAILROAD TRANSVERSE SECTION C-C STAGES 1&2<br>- (LOOKING WEST TOWARDS BOSTON))  |
| 35        | PLAN - ALBANY STREET, BROADWAY BRIDGE, BOSTON - FRONTAGE STREET TO FOUNDRY STREET<br>BUS RAPID TRANSIT ROUTE 7                                | TYP-6A                           | BUSWAY TYPICAL SECTIONS - CAMBRIDGE/BOSTON - GRAND JUNCTION RAILROAD TRANSVERSE SECTION C-C STAGES 3&4 (FINAL)<br>- (LOOKING WEST TOWARDS BOSTON)                          |
| 36        | PLAN - A STREET, BOSTON - WEST BROADWAY TO WORMWOOD STREET<br>BUS RAPID TRANSIT ROUTE 7   | TYP-6B                           | BUSWAY TYPICAL SECTIONS - BOSTON - GRAND JUNCTION RAILROAD TRANSVERSE SECTION D-D AT STORROW DRIVE<br>STAGES 1 & 2 - (LOOKING WEST TOWARDS BOSTON)                         |
| 37        | PLAN - A STREET & CONGRESS STREET, BOSTON<br>BUS RAPID TRANSIT ROUTE 7  | TYP-6C                           | BUSWAY TYPICAL SECTIONS - BOSTON - GRAND JUNCTION RAILROAD TRANSVERSE SECTION D-D AT STORROW DRIVE<br>STAGE 3 (FINAL) - (LOOKING WEST TOWARDS BOSTON)                      |
| 38        | PLAN - CONGRESS STREET, BOSTON<br>BUS RAPID TRANSIT ROUTE 7   | TYP-6D                           | BUSWAY TYPICAL SECTIONS - MEDFORD - MALDEN RIVER NEW BRIDGE SECTION G-G - (LOOKING WEST)<br>SOMERVILLE - INNER BELT NEW BRIDGE SECTION H-H - (LOOKING SOUTH)               |
| 39        | PLAN - MASSACHUSETTS AVENUE, BOSTON - MELNEA CASS BLVD TO NEW MARKET SQUARE<br>BUS RAPID TRANSIT ROUTE 6                                      | TYP-7                            | BUSWAY TYPICAL SECTIONS - BOSTON - AT-GRADE-MELNEA CASS BOULEVARD - (LOOKING WEST) (2)   |
| 40        | PLAN - MASSACHUSETTS AVENUE, BOSTON - NEW MARKET SQUARE TO EDWARD EVERETT SQUARE<br>BUS RAPID TRANSIT ROUTE 6                                 | TYP-8                            | BUSWAY TYPICAL SECTIONS - BOSTON - AT-GRADE-MELNEA CASS BOULEVARD - (LOOKING WEST) (2)   |
| 41        | PLAN & PROFILE - COLUMBIA ROAD, BOSTON - MASSACHUSETTS AVENUE TO THADDEUS KOSCIUSZKO CIRCLE<br>BUS RAPID TRANSIT ROUTE 6                      | TYP-9                            | BUSWAY TYPICAL SECTIONS - BOSTON - MOUNTFORT STREET (LOOKING EAST) (3)   |
| 26-ext1   | PLAN - MASSACHUSETTS TURNPIKE, BOSTON - BU BRIDGE TO BEACON PARK YARD<br>BUS RAPID TRANSIT ROUTE 6  | TYP-10                           | BUSWAY TYPICAL SECTIONS - CAMBRIDGE - SECTION A-A - GRAND JUNCTION RAILROAD - (LOOKING WEST) (2)   |
| 26-ext2   | PLAN - BEACON PARK YARD TO CAMBRIDGE STREET, BOSTON<br>BUS RAPID TRANSIT ROUTE 6  | TYP-11                           | BUSWAY TYPICAL SECTIONS - CAMBRIDGE - MODIFIED UNDERPASS SECTION B-B AT MEMORIAL DRIVE - (LOOKING WEST)  |
| 26-ext2-P | PROFILE - BEACON PARK YARD TO CAMBRIDGE STREET, BOSTON<br>BUS RAPID TRANSIT ROUTE 6   | TYP-12                           | BUSWAY TYPICAL SECTIONS - BOSTON - NEW BOSTON UNIVERSITY BRIDGE UNDERPASS SECTION E-E<br>EVERETT - UNDERPASS SECTIONS L-L & F-F (LOOKING WEST)                             |
| 26-ext3   | PLAN - CAMBRIDGE STREET TO WESTERN AVENUE, BOSTON<br>BUS RAPID TRANSIT ROUTE 6  | TYP-13                           | BUSWAY TYPICAL SECTION - SOMERVILLE - BUSWAY UNDERPASS OF INNER BELT ROAD UNDER RAILROAD SECTION I-I<br>- (LOOKING SOUTH)  |
| 26-ext4   | PLAN - WESTERN AVENUE TO NORTH HARVARD STREET, BOSTON<br>BUS RAPID TRANSIT ROUTE 6  |                                  |  |
| 26-ext5   | PLAN - JFK STREET, CAMBRIDGE - LARS ANDERSON BRIDGE TO HARVARD SQUARE<br>BUS RAPID TRANSIT ROUTE 6  |                                  |  |
|           | <b><u>TYPICAL SECTIONS (TYP)</u></b>  |                                  |  |
| TYP-1     | BUSWAY TYPICAL SECTIONS - EAST BOSTON - AT GRADE-EAST BOSTON HAUL ROAD,<br>AT-GRADE-ON EXISTING RAILROAD ROW                                  | CRS-1<br>CRS-2-5                 | PLAN & PROFILE - CHELSEA COMMUTER RAIL STATION<br>CROSS SECTIONS - CHELSEA COMMUTER RAIL STATION   |
| TYP-2     | BUSWAY TYPICAL SECTIONS - AT-GRADE-WITH EXISTING COMMUTER RAIL/FREIGHT RAIL<br>CHELSEA - AT COMMUTER RAIL STATION                             | CRS-6<br>CRS-7-10                | PLAN & PROFILE - RUGGLES COMMUTER RAIL STATION<br>CROSS SECTIONS - RUGGLES COMMUTER RAIL STATION   |
| TYP-3     | BUSWAY TYPICAL SECTIONS - EVERETT - BOAT SECTION, BOSTON - BOAT SECTION,<br>COMMUTER RAIL - AT-GRADE WITH EXISTING COMMUTER RAIL/FREIGHT RAIL | CRS-11<br>CRS-12-14<br>CRS-15-17 | PLAN & PROFILE - SULLIVAN COMMUTER RAIL STATION<br>CROSS SECTIONS - SULLIVAN COMMUTER RAIL STATION<br>TRACK RE-ALIGNMENT & CROSSOVER PLAN - SULLIVAN COMMUTER RAIL STATION |
| TYP-4     | BUSWAY TYPICAL SECTION - EVERETT - ROADWAY OVERPASS WIDENING SECTION J-J & K-K  |                                  |  |
| TYP-5     | BUSWAY TYPICAL SECTIONS - EVERETT - AT RAILROAD ROW WITH RETAINING WALL ON ONE SIDE<br>EVERETT - AT EXISTING RAILROAD ROW                     |                                  |  |

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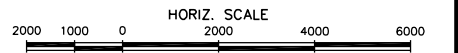
HALF-SIZE IF 11" X 17"

|          |             |                          |                       |            |  |   |       |                                      |   |
|----------|-------------|--------------------------|-----------------------|------------|--|---|-------|--------------------------------------|---|
|          |             |                          |                       |            |  |   |       |                                      |   |
|          |             | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <b>EOT</b> | EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE | URBAN RING PHASE 2<br>INDEX (2 OF 2) | SHEET NO.<br>1C                               |
|          |             | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |            |  |   |       |                                      | CONTRACT NO.<br>97713                         |
|          |             | CHECKED BY<br>WPM/PSC/AS | REVISION              |            |  |   |       |                                      | DRAWING NO.<br>RDEIR-100-index-shti-and-shtii |
| REVISION | DESCRIPTION | DATE                     | APPROVED              |            |  |   |       |                                      |   |

**EarthTech** EARTH TECH  
300 BAKER AVENUE, CONCORD, MA 01742



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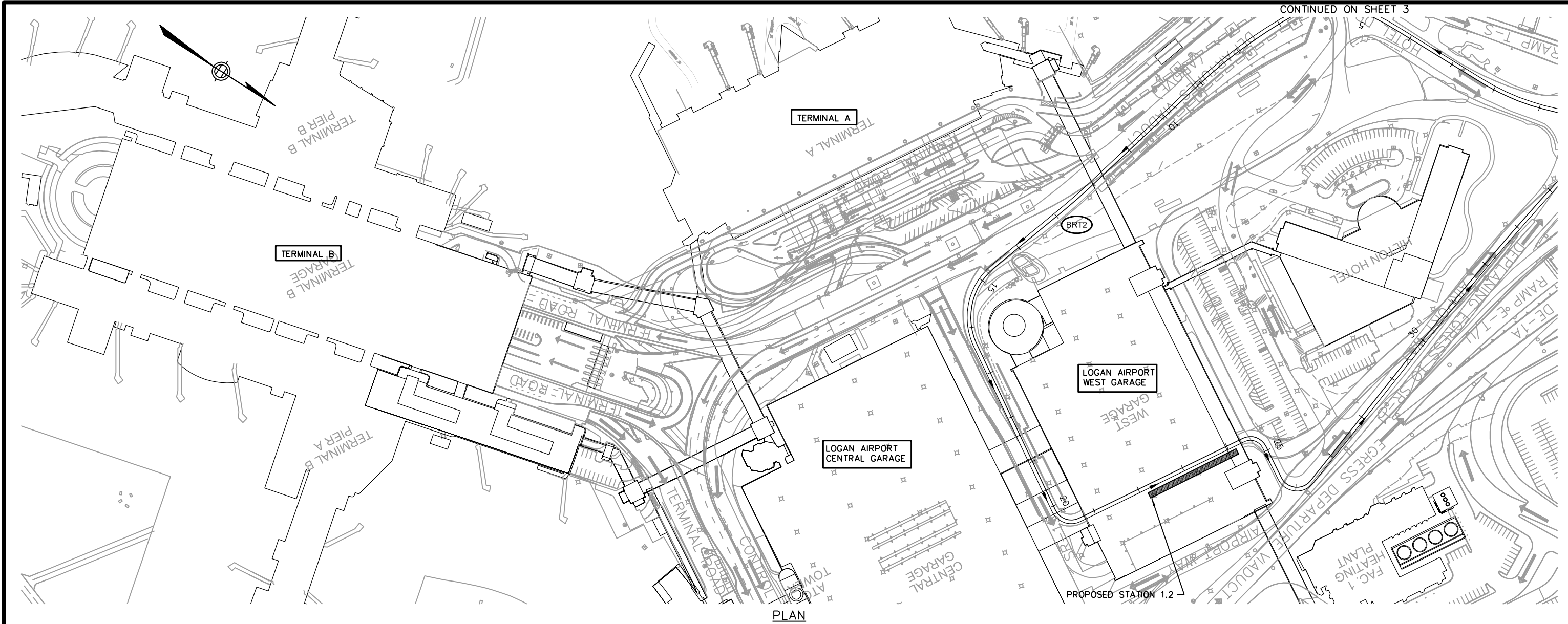
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|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>OFFICE OF<br/>TRANSPORTATION</b>        | <b>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</b> | TITLE                                  | SHEET NO.<br>1D                         |
|          |             |      |          | DRAWN BY<br>JAD/JGW/JAB  | SCALE<br>AS NOTED     |  |  | <b>URBAN RING PHASE 2<br/>KEY PLAN</b> | CONTRACT NO.<br>97713                   |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |  |  |  | DRAWING NO.<br>RDEIR-100-keyplan-shtiii |
|          |             |      |          | APPROVED BY<br>JAD       |                       |  |  |  |   |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |  <b>EARTH TECH</b><br>300 BAKER AVENUE, CONCORD, MA 01742 |  |  |   |



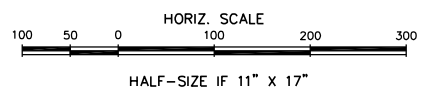
## STATION SUMMARY TABLE

| <u>STATION</u> | <u>DESCRIPTION</u>    | <u>SHEET NO.</u> | <u>STATION</u> | <u>DESCRIPTION</u>        | <u>SHEET NO.</u> |
|----------------|-----------------------|------------------|----------------|---------------------------|------------------|
| 1.2            | LOGAN WEST GARAGE     | 3                | 7.3            | ALLSTON WEST STATION      | 26-ext2          |
| 1.3            | AIRPORT               | 3A               | 7.5            | NORTH HARVARD STREET      | 26-ext2          |
|                |                       |                  | 7.6            | WESTERN AVENUE            | 26-ext3, 26-ext4 |
| 2.2            | GRIFFIN WAY           | 6                | 7.7            | HARVARD SQUARE            | 26-ext5          |
| 2.3            | DOWNTOWN CHELSEA      | 8                |                |                           |                  |
| 2.4            | MYSTIC MALL           | 8                | 8.2            | YAWKEY                    | 27A              |
|                |                       |                  | 8.4            | FENWAY STATION/PARK DRIVE | 1T               |
| 3.3            | EVERETT               | 12               | 8.8            | LMA                       | 3T               |
|                |                       |                  | 8.11           | RUGGLES                   | 5T, 30           |
| 4.2            | WELLINGTON            | 13               |                |                           |                  |
| 4.3            | ASSEMBLY SQUARE       | 14A, 14B         | 9.1            | WASHINGTON STREET         | 31A              |
| 4.9            | INNER BELT            | 19               | 9.2            | DUDLEY SQUARE             | 31A              |
| 4.10           | SULLIVAN SQUARE       | 14C              | 9.3            | CROSTOWN CENTER           | 32               |
|                |                       |                  | 9.4            | BU MEDICAL CENTER         | 32, 33A, 34      |
| 5.1            | NEW LECHMERE          | 20               |                |                           |                  |
| 5.2            | FIRST STREET/GALLERIA | 21               | 10.3           | NEW MARKET                | 39, 40           |
| 5.3            | BINNEY STREET         | 21, 22           | 10.6           | EDWARD EVERETT SQUARE     | 40, 41           |
| 5.4            | FULKERSON STREET      | 22               | 10.8           | JFK/UMASS                 | 41               |
| 5.5            | KENDALL/MIT           | 22               |                |                           |                  |
|                |                       |                  | 11.1           | BROADWAY                  | 36               |
| 6.1            | MASS AVENUE/MIT       | 23, 24           | 11.2           | A STREET                  | 36               |
| 6.2            | CAMBRIDGEPORT         | 24               | 11.5           | WORLD TRADE CENTER        | 38               |
| 6.3            | BU BRIDGE             | 26               |                |                           |                  |

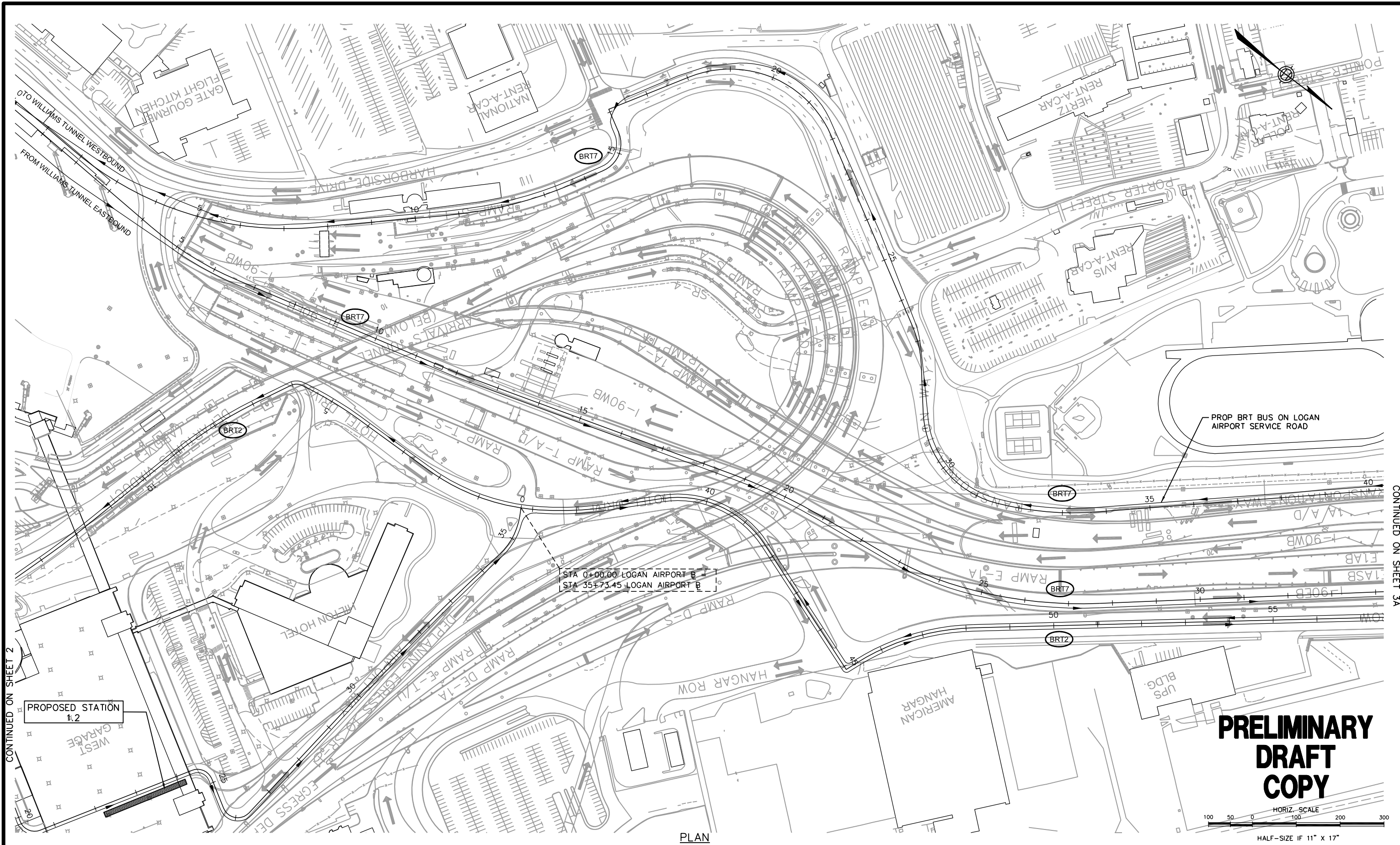
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|----------|-------------|------|----------|--------------------------|-----------------------|---|---|---|--|--|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |  | EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION          | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>STATION SUMMARY TABLE | SHEET NO.<br>1E                            |
|          |             |      |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |   |   |   |  | CONTRACT NO.<br>97713                      |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |   |   |  | DRAWING NO.<br>RDEIR-100-STATION-TABLE.DWG |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD       |                       |  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |  |  |



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|----------|-------------|------|----------|--------------------------|-----------------------|---|--|-------------------------------------|--|----------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION<br><b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | <b>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</b> | TITLE                               | <b>URBAN RING PHASE 2<br/>PLAN - LOGAN AIRPORT, BOSTON<br/>BUS RAPID TRANSIT ROUTE 2</b> | SHEET NO.<br>2 |
|          |             |      |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |   |  | CONTRACT NO.<br>97713               |  |                |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  | DRAWING NO.<br>97713-RDEIR-SHT2.DWG |  |                |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |                                     |  |                |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |   |  |                                     |  |                |



PLAN

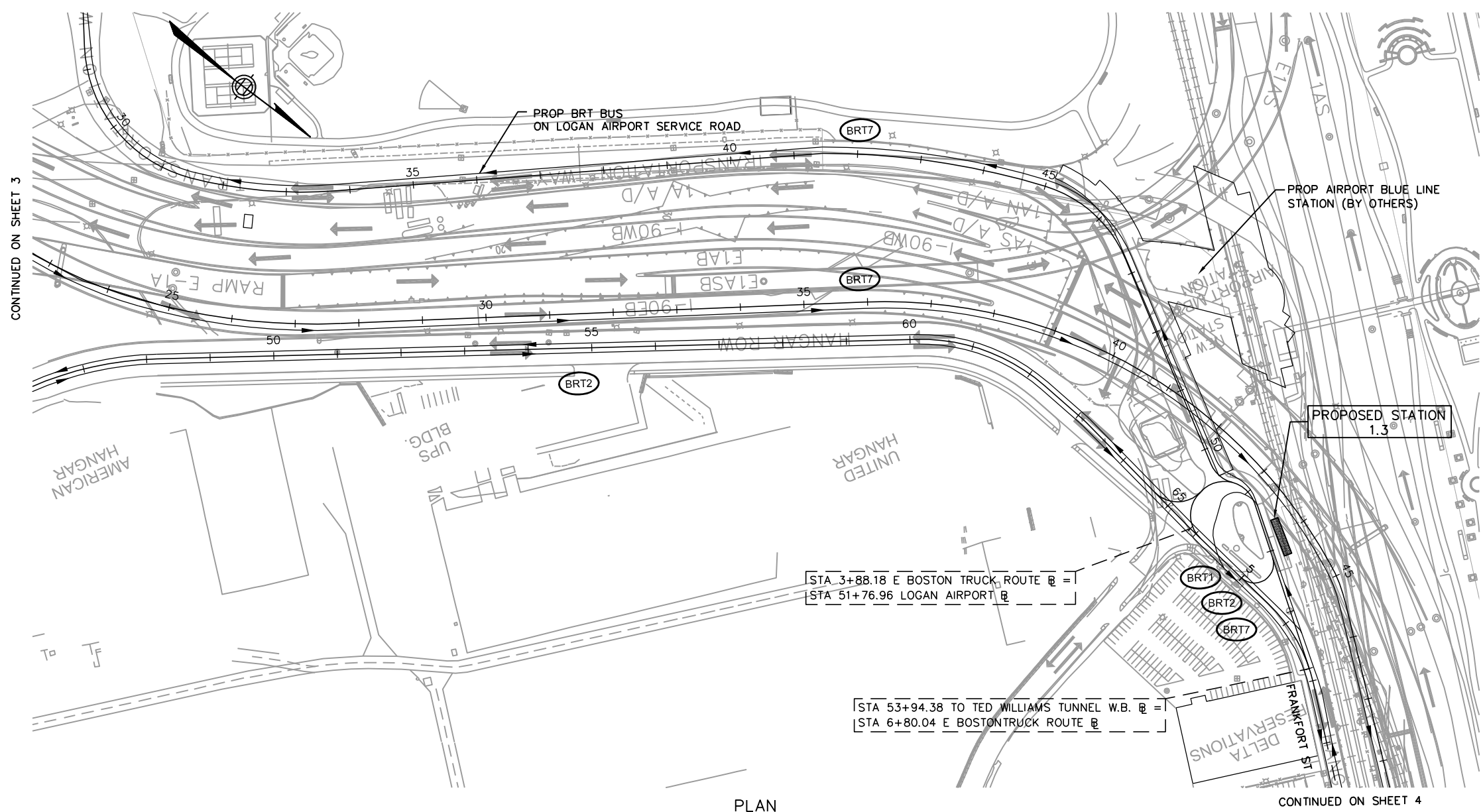
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HORIZ. SCALE  
100 50 0 100 200 300  
HALF-SIZE IF 11" X 17"

CONTINUED ON SHEET 2

CONTINUED ON SHEET 3A

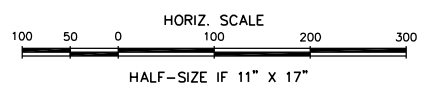
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|          |                   | DESIGNED BY<br>WPM  | DATE<br>NOVEMBER 2008 | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION                | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>PLAN - LOGAN AIRPORT, BOSTON<br>BUS RAPID TRANSIT ROUTES 2 & 7 | SHEET NO.<br>3                  |
|          |                   | DRAWN BY<br>JAD/JAB | SCALE<br>AS NOTED     |   |   |   | CONTRACT NO.<br>97713           |
| REV 1    | REVISED BUS ROUTE | NOV-08              | JAD                   | <b>EarthTech</b><br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |   | DRAWING NO.<br>97713-RDEIR-SHT3 |
| REVISION | DESCRIPTION       | DATE                | APPROVED              |   |   |   |                                 |



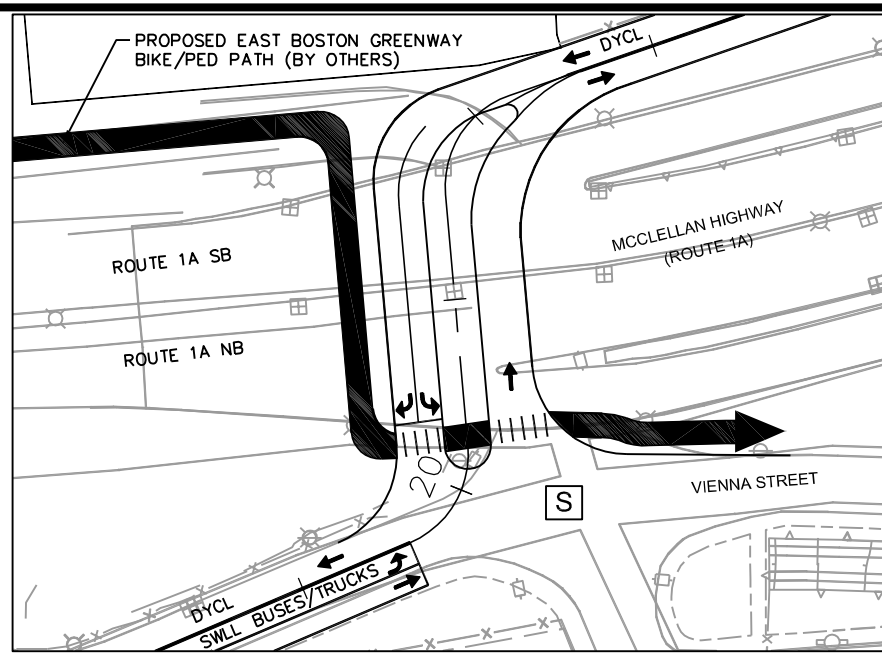
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CONTINUED ON SHEET 4

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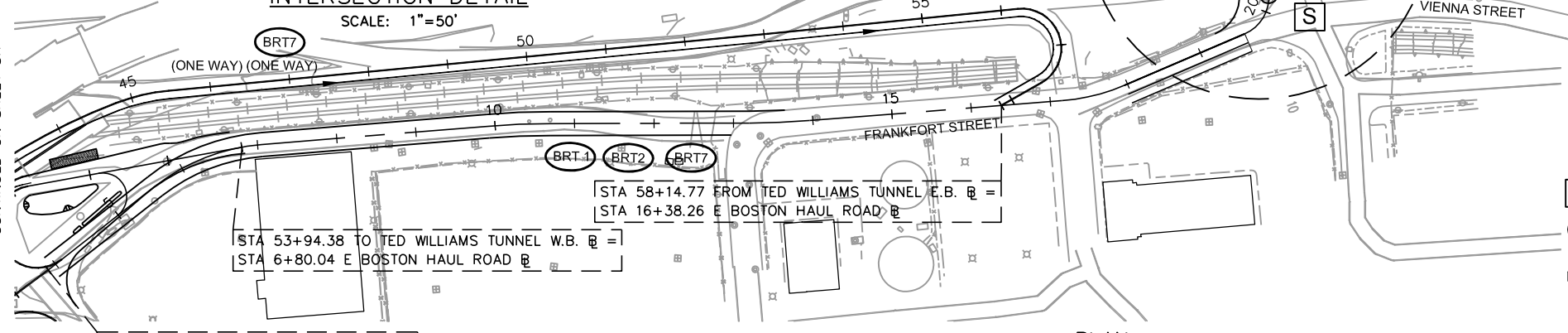
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|          |                   |        |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>PLAN - LOGAN AIRPORT TO EAST BOSTON TRUCK ROUTE, BOSTON<br>BUS RAPID TRANSIT ROUTES 1, 2 & 7 | SHEET NO.<br>3A                  |
|          |                   |        |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |  |                                   |   | CONTRACT NO.<br>97713            |
| REV 1    | REVISED BUS ROUTE | NOV-08 | JAD      | CHECKED BY<br>WPM/PSC/AS | REVISION              | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |   | DRAWING NO.<br>97713-RDEIR-SHT3A |
| REVISION | DESCRIPTION       | DATE   | APPROVED | APPROVED BY<br>JAD       |                       |  |                                   |   |                                  |



INTERSECTION DETAIL

SCALE: 1"=50'

CONTINUED ON SHEET 3A



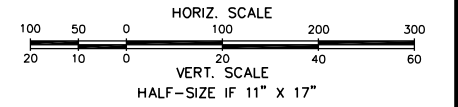
PLAN

PROP BRT BUSWAY/EAST BOSTON HAUL ROAD

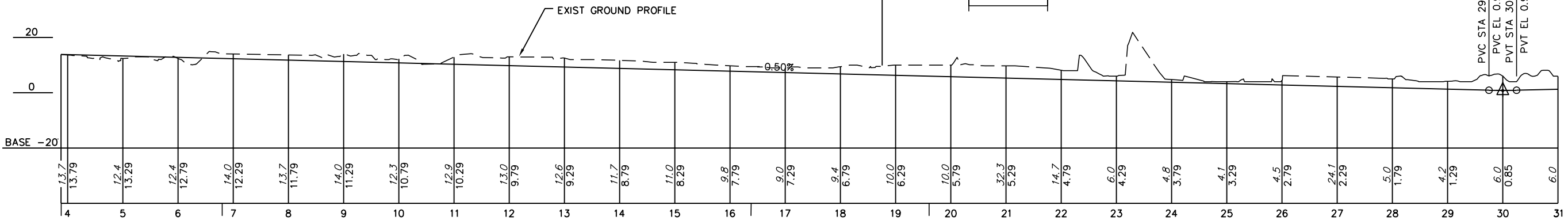
**S** = PROPOSED SIGNAL  
**S** = EXISTING SIGNAL (UPGRADED)

NOTE: SEE EAST BOSTON HAUL ROAD TYPICAL SECTION

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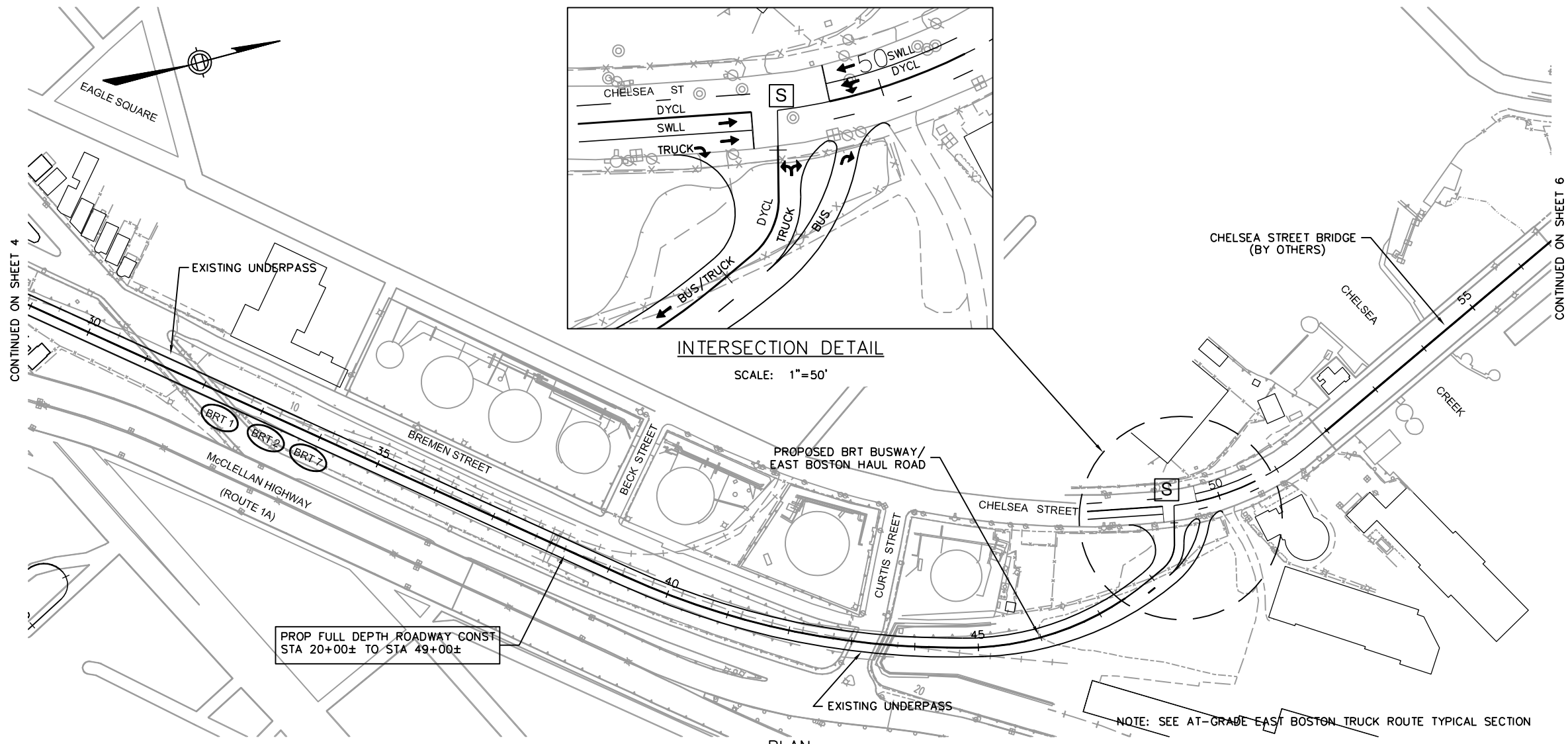
LP ELEV = 0.85  
 LP STA = 30+00  
 PVI STA = 30+00  
 PVI ELEV = 0.79  
 A.D. = 1.00  
 K = 50.00  
 50' VC



PROFILE

STA 3+88.18 E BOSTON HAUL ROAD @ = STA 51+76.96 LOGAN AIRPORT @  
 STA 53+94.38 TO TED WILLIAMS TUNNEL W.B. @ = STA 6+80.04 E BOSTON HAUL ROAD @  
 STA 58+14.77 FROM TED WILLIAMS TUNNEL E.B. @ = STA 16+38.26 E BOSTON HAUL ROAD @  
 STA 0+00.00 VIENNA STREET @ = STA 19+60.71 E BOSTON HAUL ROAD @

|                          |             |                       |          |  |                                   |  |                                 |
|--------------------------|-------------|-----------------------|----------|--|-----------------------------------|--|---------------------------------|
| DESIGNED BY<br>WPM       |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - EAST BOSTON HAUL ROAD, BOSTON<br>STA 3+88.18 TO 31+00<br>BUS RAPID TRANSIT ROUTES 1, 2 & 7 | SHEET NO.<br>4                  |
| DRAWN BY<br>JAD          |             | SCALE<br>AS NOTED     |          |  |                                   |  |                                 |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |  | CONTRACT NO.<br>97713           |
| APPROVED BY<br>JAD       |             |                       |          |  |                                   |  | DRAWING NO.<br>97713-RDEIR-SHT4 |
| REVISION                 | DESCRIPTION | DATE                  | APPROVED |  |                                   |  |                                 |



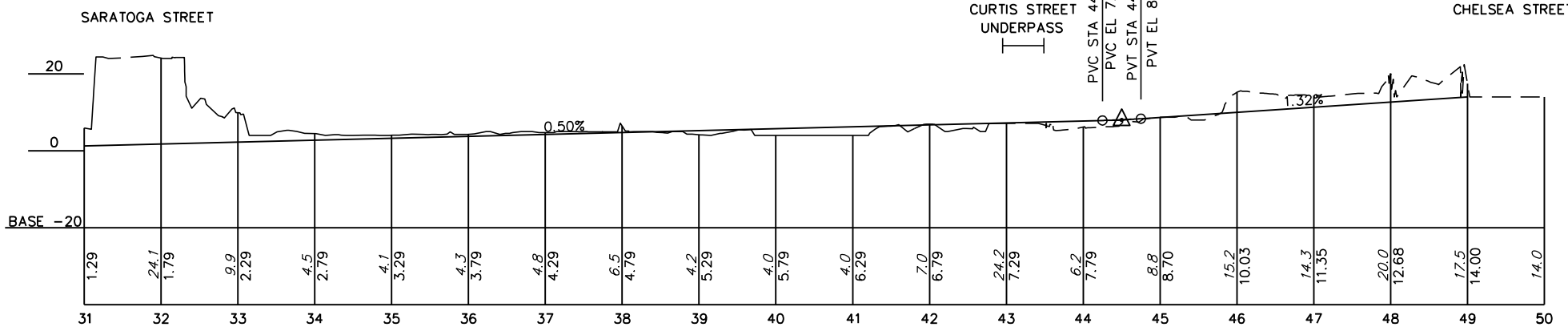
INTERSECTION DETAIL  
SCALE: 1"=50'

PLAN

PROP FULL DEPTH ROADWAY CONST  
STA 20+00± TO STA 49+00±

PROP BRT BUSWAY/EAST BOSTON HAUL ROAD  
BRT 1 BRT 2 BRT 7

PVI STA = 44+50  
PVI ELEV = 8.04  
A.D. = 0.82  
K = 60.66  
50' VC

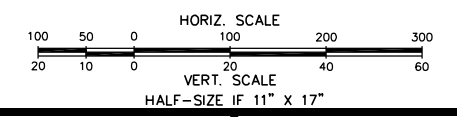


PROFILE

S = PROPOSED SIGNAL  
S = EXISTING SIGNAL (UPGRADED)

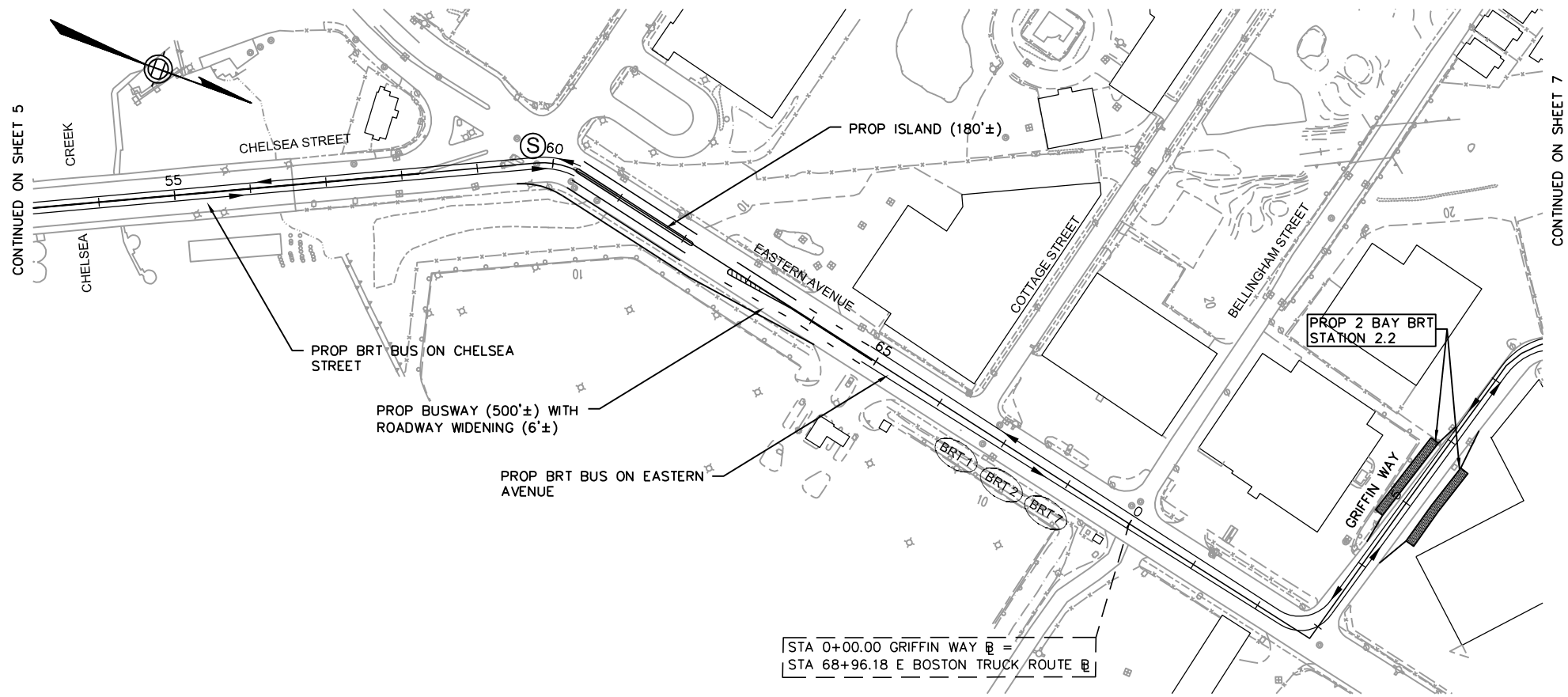
NOTE: SEE AT-GRADE EAST BOSTON TRUCK ROUTE TYPICAL SECTION

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|--------------------------|-------------|-----------------------|----------|---|---|--|----------------|
| DESIGNED BY<br>WPM       |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION                | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><b>URBAN RING PHASE 2<br/>PLAN &amp; PROFILE - EAST BOSTON HAUL ROAD, BOSTON<br/>STA 31+00 TO STA 55+00<br/>BUS RAPID TRANSIT ROUTES 1, 2 &amp; 7</b> | SHEET NO.<br>5 |
| DRAWN BY<br>JAD/JAB      |             | SCALE<br>AS NOTED     |          |   |   |  |                |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              |          |   |   |  |                |
| APPROVED BY<br>JAD       |             |                       |          | <b>EarthTech</b><br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   | DRAWING NO.<br>97713-RDEIR-SHT5  |                |
| REVISION                 | DESCRIPTION | DATE                  | APPROVED |   |   |  |                |

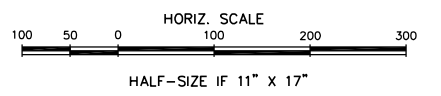




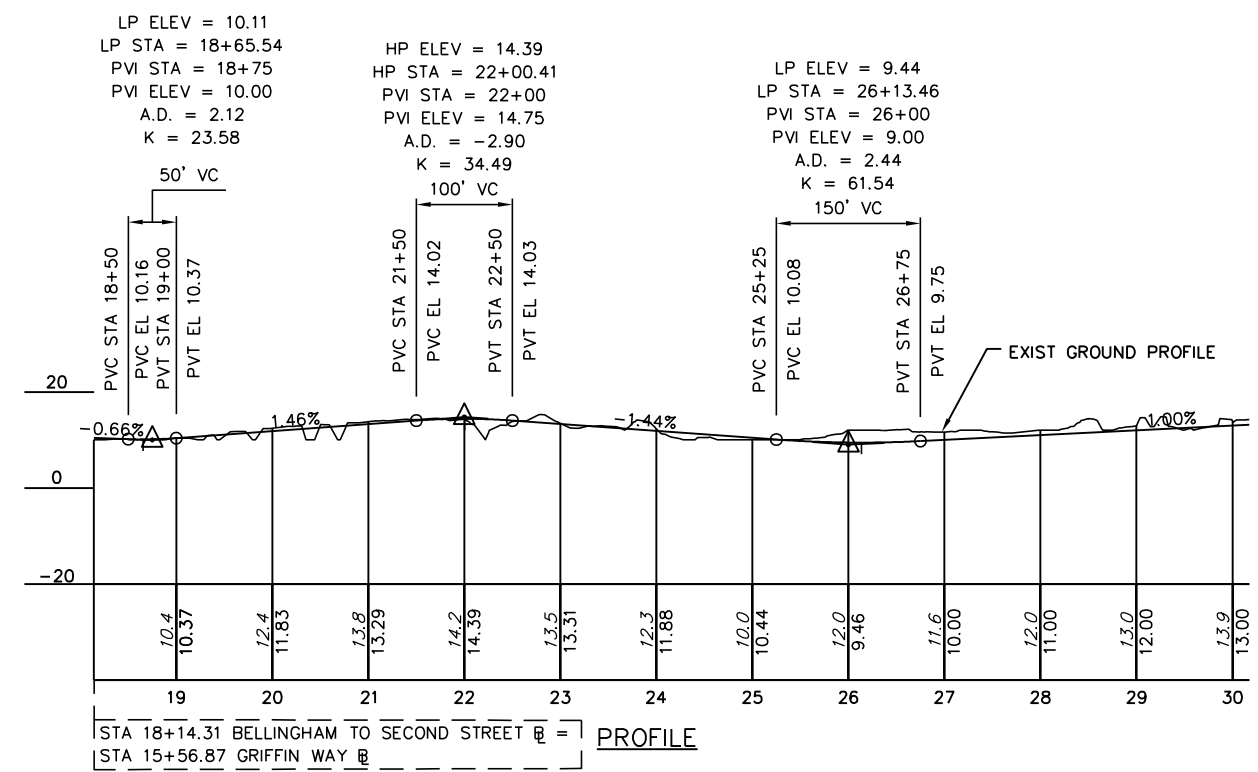
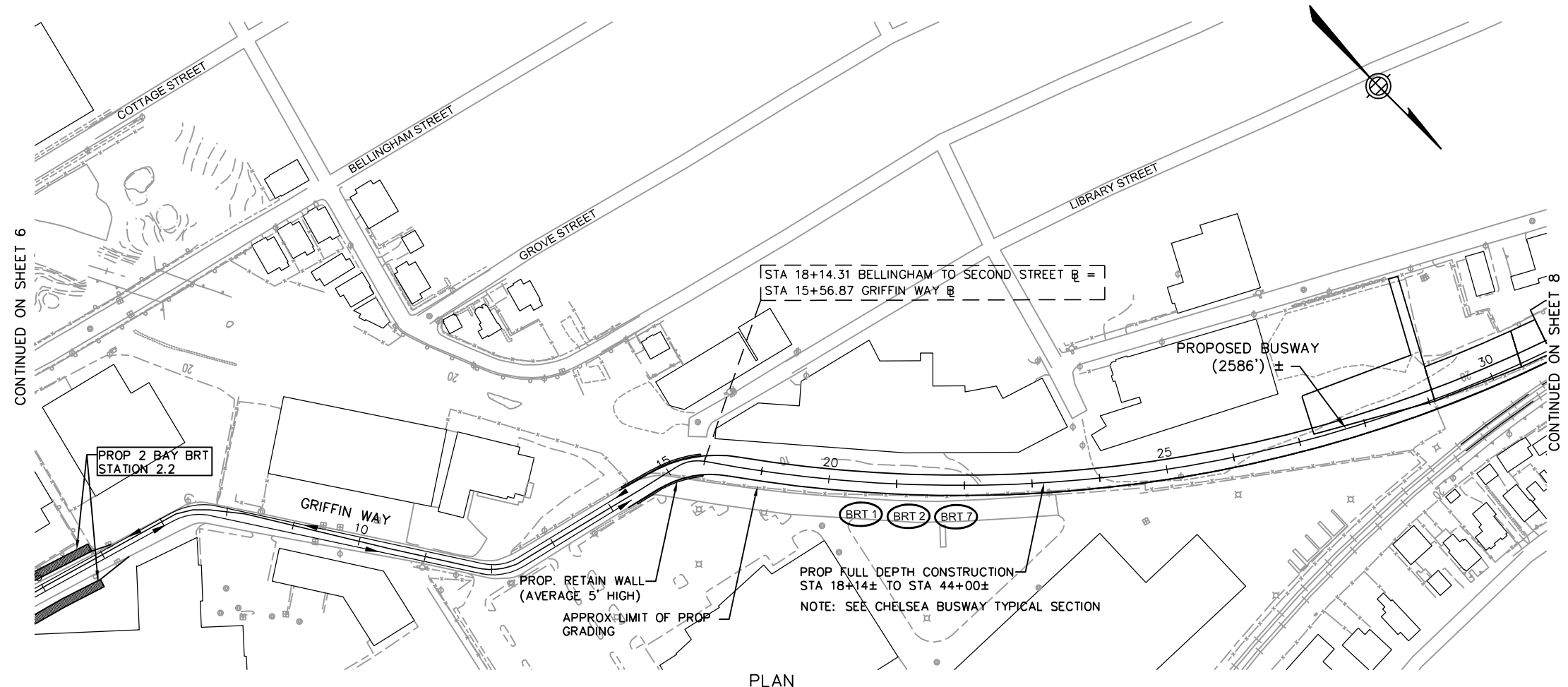
PLAN

Ⓢ = EXISTING SIGNAL (UPGRADED)

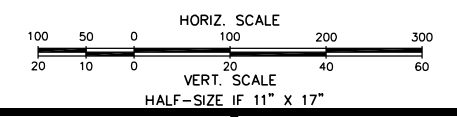
**PRELIMINARY  
DRAFT  
COPY**



|          |             |      |          |                    |                       |   |   |  |                                 |
|----------|-------------|------|----------|--------------------|-----------------------|---|---|--|---------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE OFFICE OF TRANSPORTATION</b><br><br><b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | <b>THE URBAN RING PHASE 2</b><br>RDEIR/DEIS | TITLE  | SHEET NO.<br>6                  |
|          |             |      |          | DRAWN BY<br>JAD    | SCALE<br>AS NOTED     |   |   | URBAN RING PHASE 2<br>PLAN - CHELSEA STREET, EASTERN AVENUE, GRIFFIN WAY, CHELSEA<br>BUS RAPID TRANSIT ROUTES 1, 2 & 7 | CONTRACT NO.<br>97713           |
|          |             |      |          | CHECKED BY<br>WPM  | REVISION              |   |   |  | DRAWING NO.<br>97713-RDEIR-SHT6 |
|          |             |      |          | APPROVED BY<br>JAD |                       |   |   |  |                                 |
| REVISION | DESCRIPTION | DATE | APPROVED |                    |                       |   |   |  |                                 |



**PRELIMINARY  
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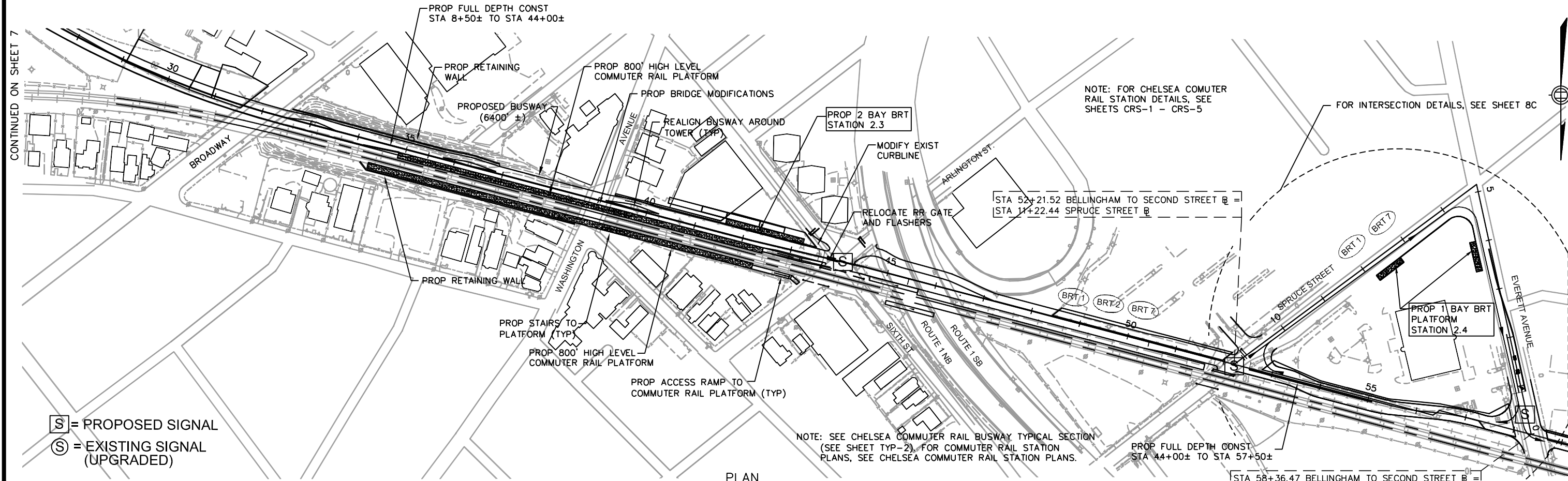


|                    |                       |   |   |  |                                 |
|--------------------|-----------------------|---|---|--|---------------------------------|
| DESIGNED BY<br>WPM | DATE<br>NOVEMBER 2008 | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION                | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - CSX/EASTERN BRANCH, CHELSEA<br>STA 13+00 TO STA 28+00<br>BUS RAPID TRANSIT ROUTES 1, 2 & 7 | SHEET NO.<br>7                  |
| DRAWN BY<br>JAD    | SCALE<br>AS NOTED     |   |   |  | CONTRACT NO.<br>97713           |
| CHECKED BY<br>WPM  | REVISION              | <b>EarthTech</b><br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |  | DRAWING NO.<br>97713-RDEIR-SHT7 |
| APPROVED BY<br>JAD |                       |   |   |  | REVISION                        |
| REVISION           | DESCRIPTION           | DATE  | APPROVED                                |  |                                 |



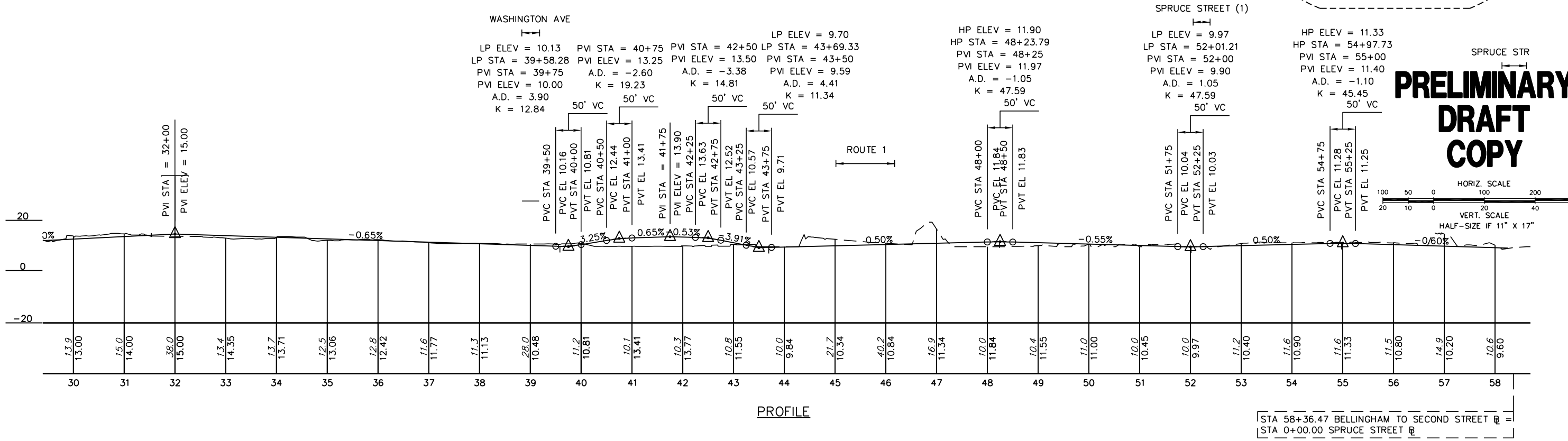
CONTINUED ON SHEET 7

CONTINUED ON SHEET 8A

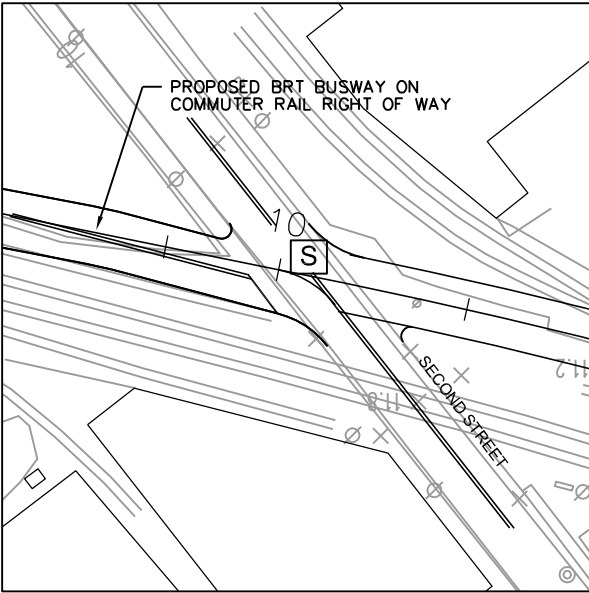
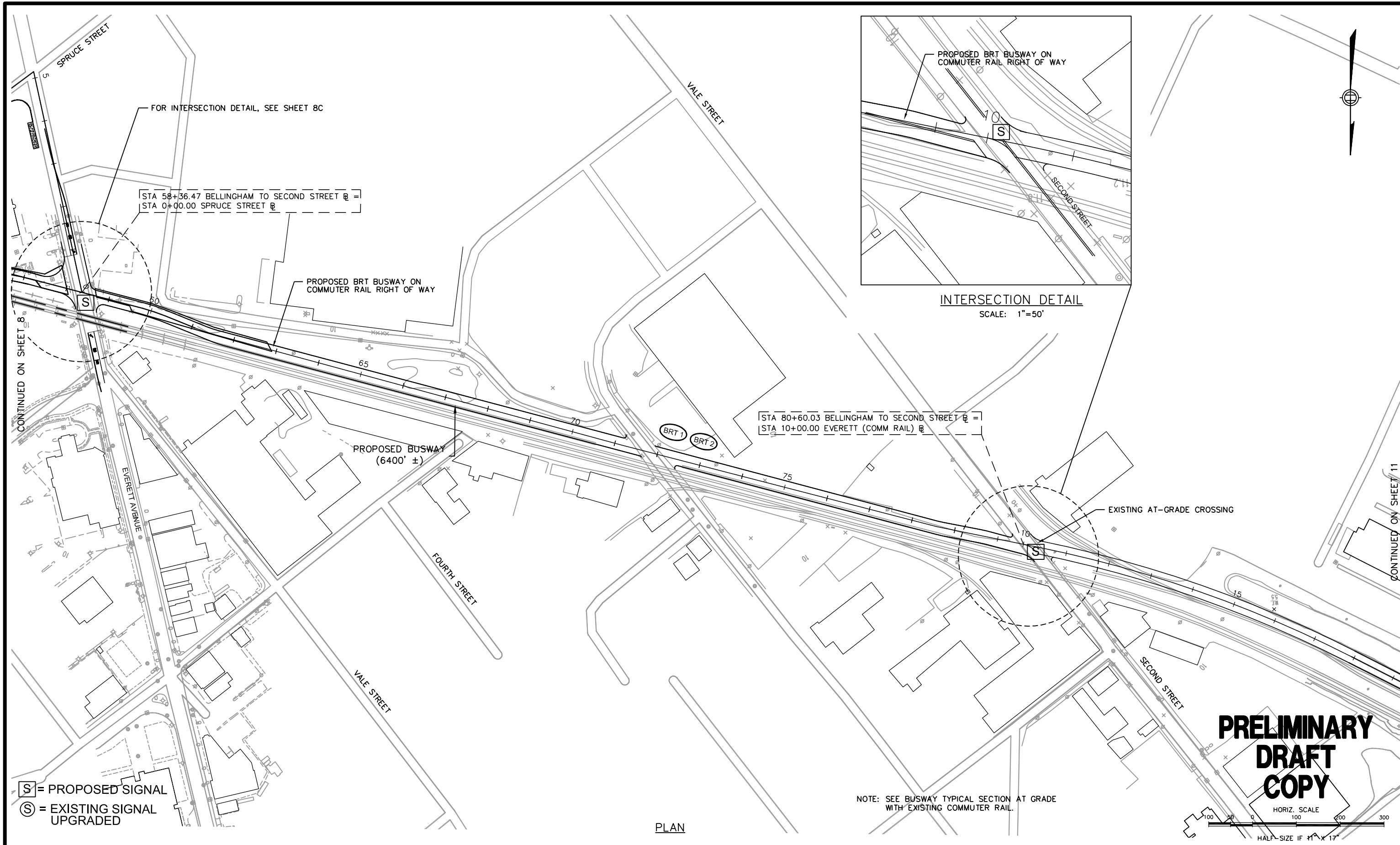


**S** = PROPOSED SIGNAL  
**S** = EXISTING SIGNAL (UPGRADED)

PLAN



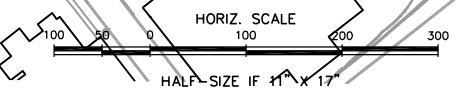
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|--------------------|-----------------------|--|-----------------------------------|---|---------------------------------|
| DESIGNED BY<br>WPM | DATE<br>NOVEMBER 2008 | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - CSX/EASTERN BRANCH, CHELSEA<br>STA 28+00 TO STA 58+36.47<br>BUS RAPID TRANSIT ROUTES 1, 2 & 7 | SHEET NO.<br>8                  |
| DRAWN BY<br>JAD    | SCALE<br>AS NOTED     |  |                                   |   | CONTRACT NO.<br>97713           |
| CHECKED BY<br>WPM  | REVISION              | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |   | DRAWING NO.<br>97713-RDEIR-SHT8 |
| APPROVED BY<br>JAD |                       |  |                                   |   | REVISION                        |
| REVISION           | DESCRIPTION           | DATE   | APPROVED                          |   |                                 |



S = PROPOSED SIGNAL  
 S = EXISTING SIGNAL  
 UPGRADED

NOTE: SEE BUSWAY TYPICAL SECTION AT GRADE  
 WITH EXISTING COMMUTER RAIL.

**PRELIMINARY  
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PLAN

| REVISION | DESCRIPTION | DATE | APPROVED |
|----------|-------------|------|----------|
|          |             |      |          |
|          |             |      |          |
|          |             |      |          |

|                          |                       |
|--------------------------|-----------------------|
| DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |
| DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |
| CHECKED BY<br>WPM/PSC/AS | REVISION              |
| APPROVED BY<br>JAD       |                       |

**EOT** EXECUTIVE OFFICE OF TRANSPORTATION

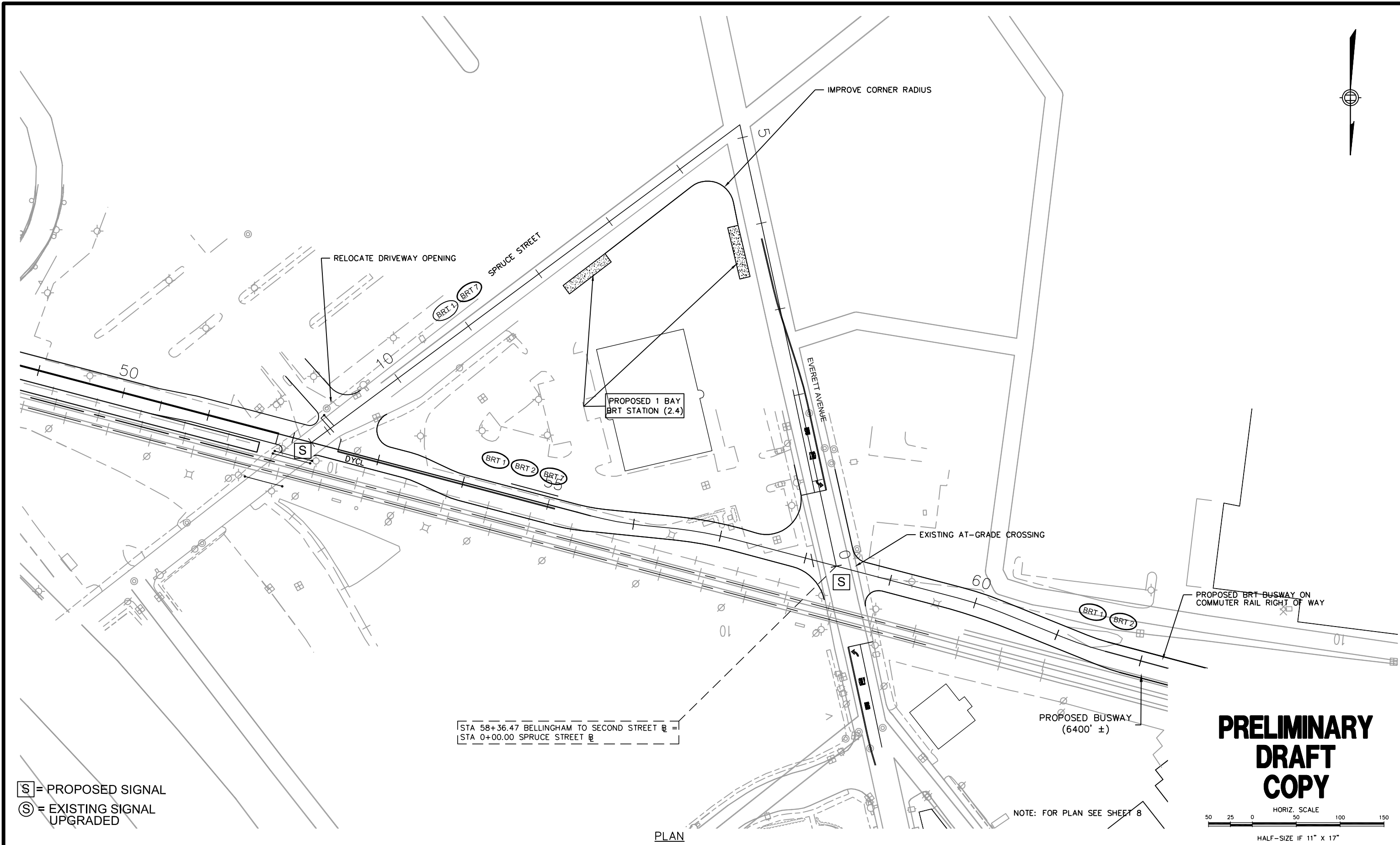
**EarthTech** EARTH TECH  
 300 BAKER AVENUE, CONCORD, MA 01742

THE URBAN RING  
 PHASE 2  
 RDEIR/DEIS

TITLE

URBAN RING PHASE 2  
 PLAN - CSX/EASTERN BRANCH, CHELSEA  
 EVERETT AVENUE TO SECOND STREET  
 STA 58+36.47 TO STA 80+60.03  
 BUS RAPID TRANSIT ROUTES 1 & 2

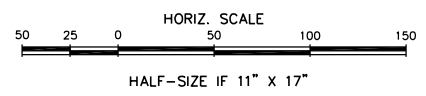
|                                  |
|----------------------------------|
| SHEET NO.<br>8A                  |
| CONTRACT NO.<br>97713            |
| DRAWING NO.<br>97713-RDEIR-SHT8A |



[S] = PROPOSED SIGNAL  
 [Ⓢ] = EXISTING SIGNAL UPGRADED

STA 58+36.47 BELLINGHAM TO SECOND STREET  
 STA 0+00.00 SPRUCE STREET

**PRELIMINARY  
 DRAFT  
 COPY**



PLAN

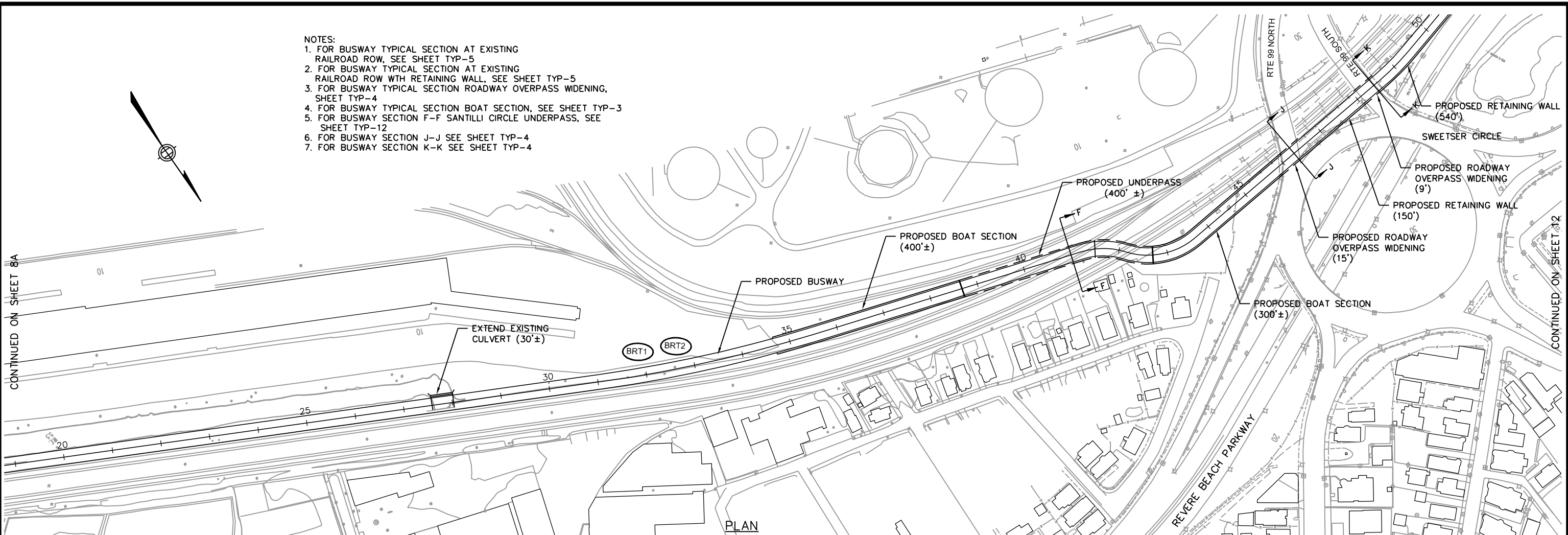
NOTE: FOR PLAN SEE SHEET 8

|          |             |      |          |                          |                       |   |  |   |   |                 |
|----------|-------------|------|----------|--------------------------|-----------------------|---|--|---|---|-----------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <br><b>EXECUTIVE<br/>         OFFICE OF<br/>         TRANSPORTATION</b> | <b>THE URBAN RING<br/>         PHASE 2<br/>         RDEIR/DEIS</b> | TITLE   | <b>URBAN RING PHASE 2<br/>         PLAN - CSX/EASTERN BRANCH, CHELSEA<br/>         DETAILS<br/>         BUS RAPID TRANSIT ROUTES 1, 2 &amp; 7</b> | SHEET NO.<br>8C |
|          |             |      |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |   |  | CONTRACT NO.<br>97713                             |   |                 |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  | DRAWING NO.<br>97713-RDEIR-SHT8C                  |   |                 |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |   |   |                 |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |   | EarthTech  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |                 |

- NOTES:
1. FOR BUSWAY TYPICAL SECTION AT EXISTING RAILROAD ROW, SEE SHEET TYP-5
  2. FOR BUSWAY TYPICAL SECTION AT EXISTING RAILROAD ROW WITH RETAINING WALL, SEE SHEET TYP-5
  3. FOR BUSWAY TYPICAL SECTION ROADWAY OVERPASS WIDENING, SEE SHEET TYP-4
  4. FOR BUSWAY TYPICAL SECTION BOAT SECTION, SEE SHEET TYP-3
  5. FOR BUSWAY SECTION F-F SANTILLI CIRCLE UNDERPASS, SEE SHEET TYP-12
  6. FOR BUSWAY SECTION J-J SEE SHEET TYP-4
  7. FOR BUSWAY SECTION K-K SEE SHEET TYP-4

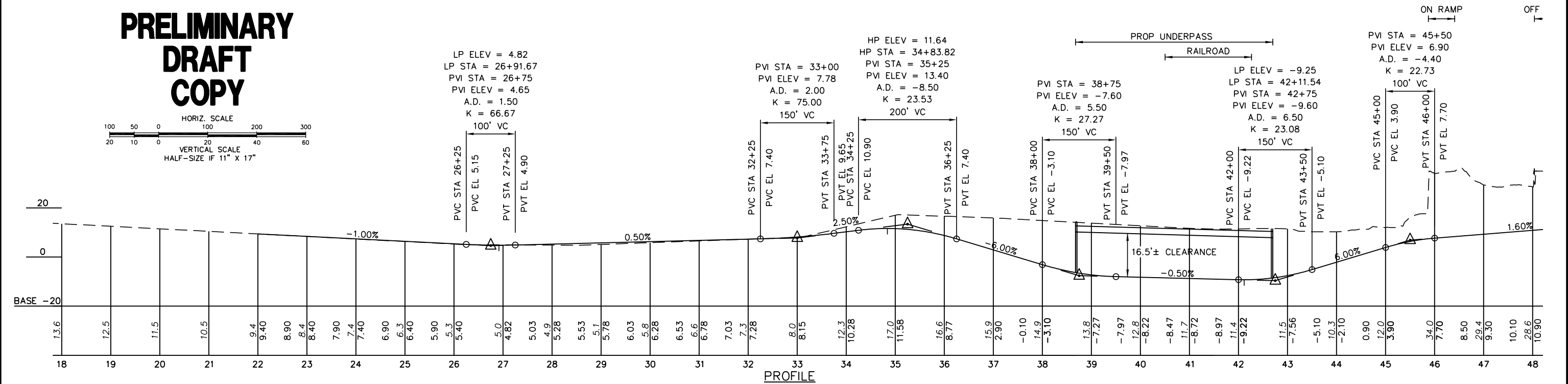
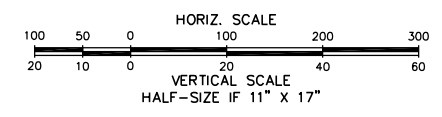
CONTINUED ON SHEET 8A

CONTINUED ON SHEET 12



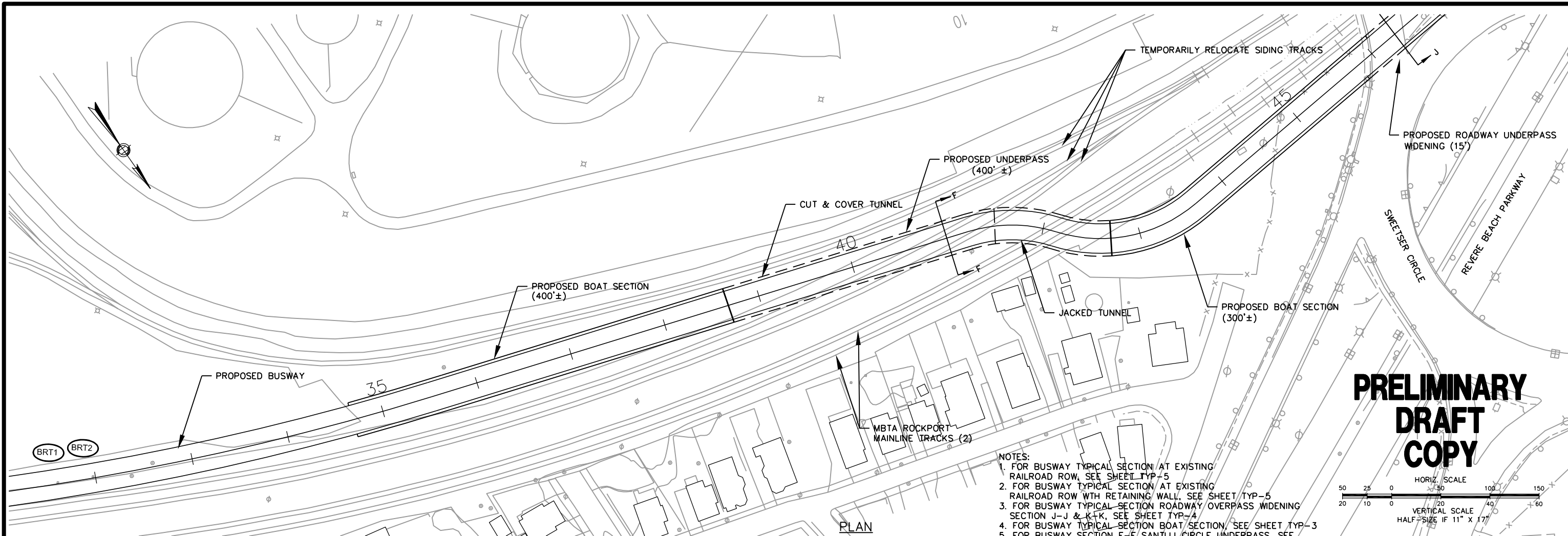
PLAN

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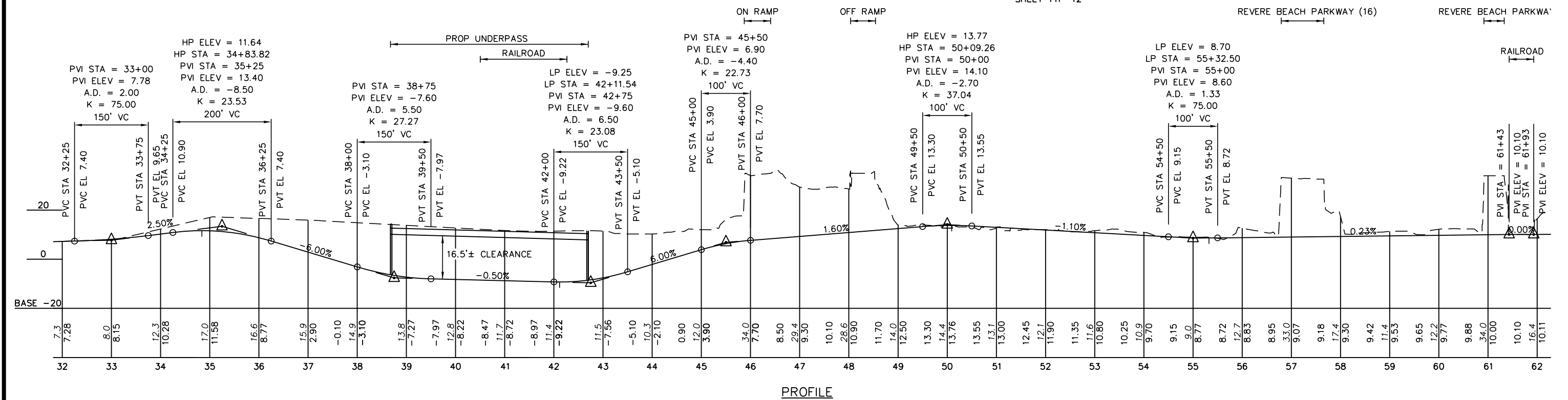


PROFILE

|                          |             |                       |  |                                   |   |                                   |
|--------------------------|-------------|-----------------------|--|-----------------------------------|---|-----------------------------------|
| DESIGNED BY<br>WPM       |             | DATE<br>NOVEMBER 2008 | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - CSX/EASTERN BRANCH, EVERETT<br>SECOND STREET TO SWEETSER CIRCLE<br>BUS RAPID TRANSIT ROUTES 1 & 2 | SHEET NO.<br>11                   |
| DRAWN BY<br>JAD/JAB      |             | SCALE<br>AS NOTED     |  |                                   |   | CONTRACT NO.<br>97713             |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |   | DRAWING NO.<br>97713-RDEIR-sht-11 |
| REVISION                 | DESCRIPTION | DATE                  |  |                                   |   | APPROVED                          |



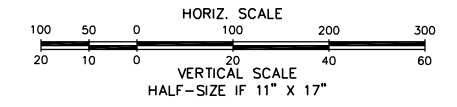
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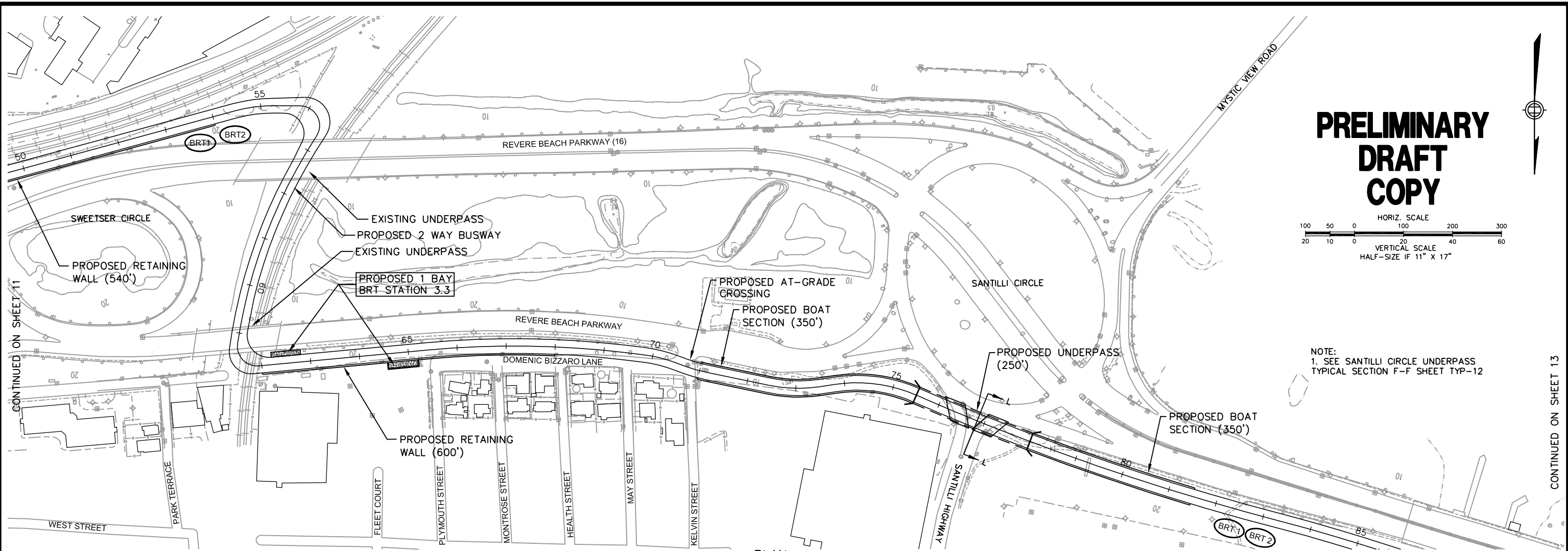
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|--------------------------|-------------|-----------------------|----------|---|-----------------------------------|---|------------------------------------|
| DESIGNED BY<br>WPM       |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION               | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - CSX/EASTERN BRANCH, EVERETT<br>SECOND STREET TO SWEETSER CIRCLE<br>BUS RAPID TRANSIT ROUTES 1 & 2 | SHEET NO.<br>11A                   |
| DRAWN BY<br>JAD/JAB      |             | SCALE<br>AS NOTED     |          |   |                                   |   |                                    |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              |          | EarthTech EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   | CONTRACT NO.<br>97713   | DRAWING NO.<br>97713-RDEIR-sh1-11A |
| APPROVED BY<br>JAD       |             |                       |          |   |                                   |   |                                    |
| REVISION                 | DESCRIPTION | DATE                  | APPROVED |   |                                   |   |                                    |



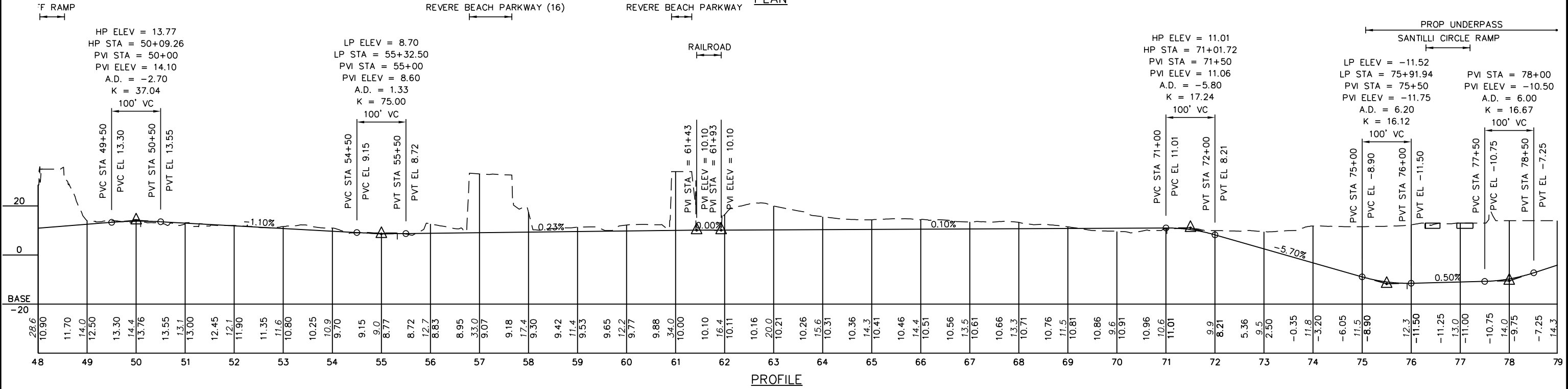
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NOTE:  
1. SEE SANTILLI CIRCLE UNDERPASS  
TYPICAL SECTION F-F SHEET TYP-12



PLAN

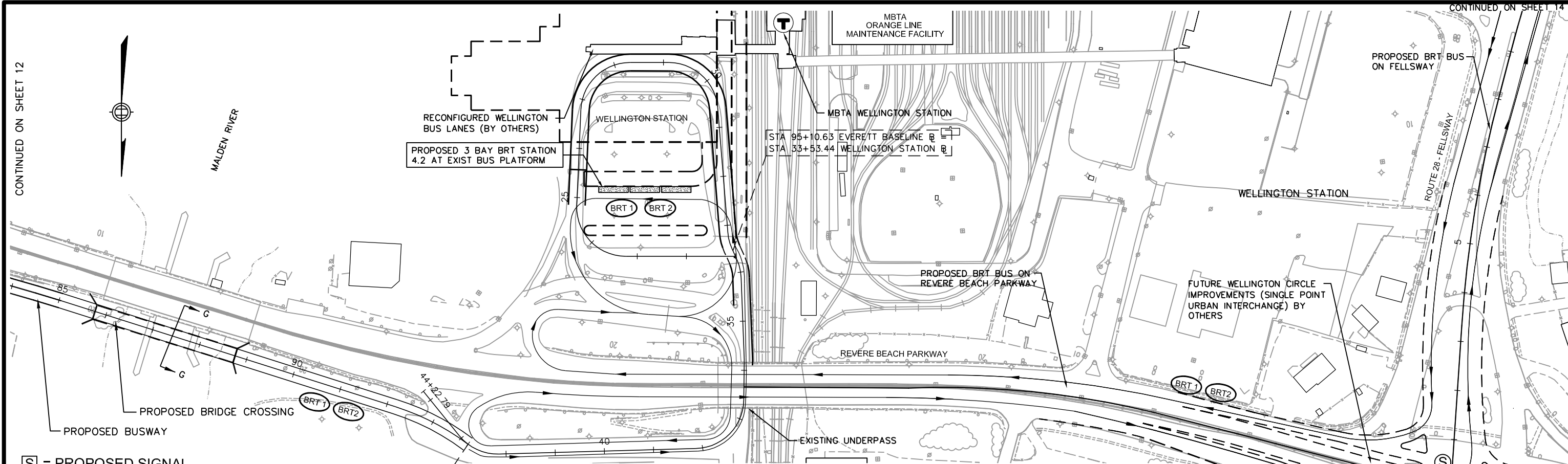


PROFILE

|                          |             |                       |          |   |                                      |  |                 |
|--------------------------|-------------|-----------------------|----------|---|--------------------------------------|--|-----------------|
| DESIGNED BY<br>WPM       |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION               | THE URBAN RING PHASE 2<br>RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - CSX/EASTERN BRANCH, EVERETT<br>SWEETSER CIRCLE TO MALDEN RIVER<br>BUS RAPID TRANSIT ROUTES 1 & 2 | SHEET NO.<br>12 |
| DRAWN BY<br>JAD/JAB      |             | SCALE<br>AS NOTED     |          |   |                                      |  |                 |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              |          | EarthTech EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                      | DRAWING NO.<br>97713-RDEIR-SHT-12  |                 |
| REVISION                 | DESCRIPTION | DATE                  | APPROVED |   |                                      |  |                 |

CONTINUED ON SHEET 12

CONTINUED ON SHEET 14



Ⓢ = PROPOSED SIGNAL  
 Ⓞ = UPGRADE SIGNAL

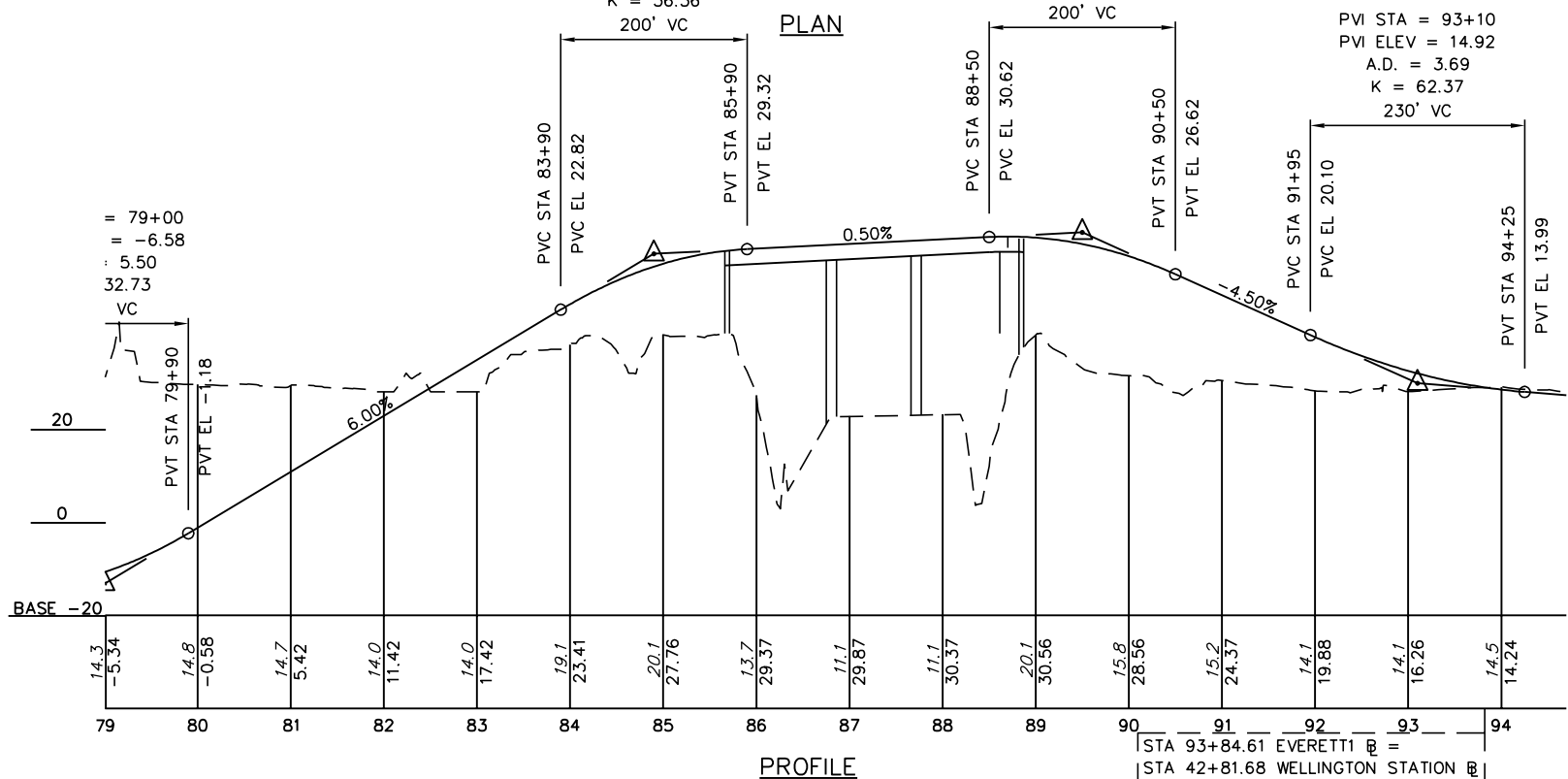
NOTE:  
 1. FOR MALDEN RIVER BRIDGE CROSSING  
 TYPICAL SECTION G-G, SEE SHEET TYP-6C  
 2. CONSTRUCTION OF NEW BUSWAY BRIDGE  
 TO BE COORDINATED WITH PLANNED  
 REPLACEMENT OF ADJACENT RT. 16/REVERE  
 BEACH PARKWAY BRIDGE BY THE  
 DEPARTMENT OF CONSERVATION AND  
 RECREATION (DCR) AT MALDEN RIVER  
 CROSSING.

STA 93+84.61 EVERETT1 @ =  
 STA 42+81.68 WELLINGTON STATION @

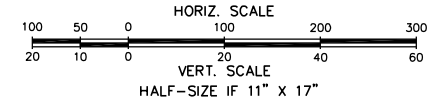
HP ELEV = 30.67  
 HP STA = 88+70  
 PVI STA = 89+50  
 PVI ELEV = 31.12  
 A.D. = -5.00  
 K = 40.00

PVI STA = 84+90  
 PVI ELEV = 28.82  
 A.D. = -5.50  
 K = 36.36

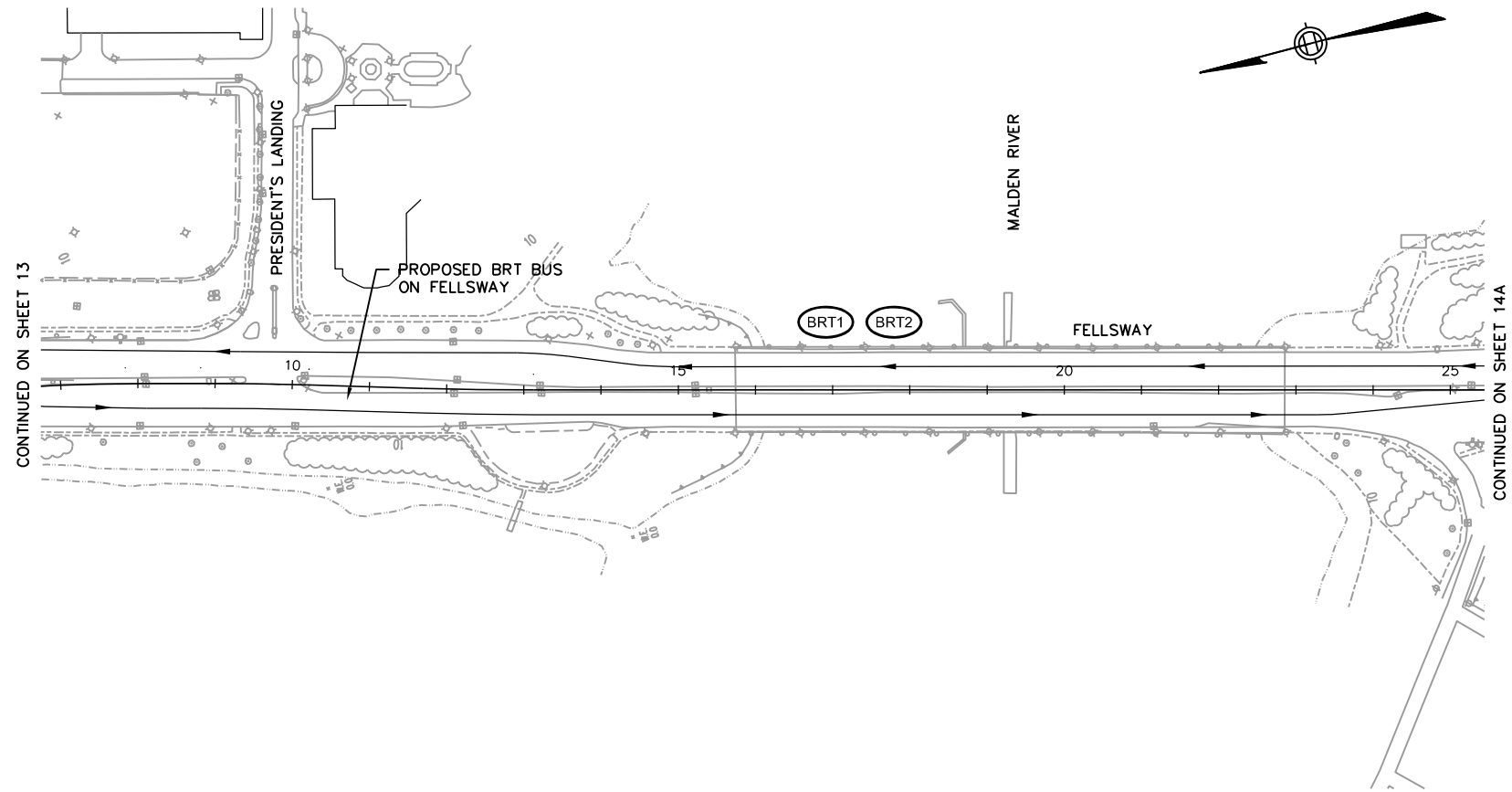
PVI STA = 93+10  
 PVI ELEV = 14.92  
 A.D. = 3.69  
 K = 62.37



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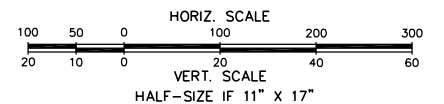


|                          |             |                       |          |  |   |   |                                   |  |
|--------------------------|-------------|-----------------------|----------|--|---|---|-----------------------------------|--|
| DESIGNED BY<br>WPM       |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>PLAN & PROFILE - REVERE BEACH PARKWAY, MEDFORD<br>MALDEN RIVER TO WELLINGTON STATION<br>BUS RAPID TRANSIT ROUTES 1 & 2 | SHEET NO.<br>13                   |  |
| DRAWN BY<br>JAD/JAB      |             | SCALE<br>AS NOTED     |          |  |   |   | CONTRACT NO.<br>97713             |  |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              |          |  |   |   | DRAWING NO.<br>97713-RDEIR-sht-13 |  |
| REVISION                 | DESCRIPTION | DATE                  | APPROVED | APPROVED BY<br>JAD                                     |   | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742   |                                   |  |



PLAN

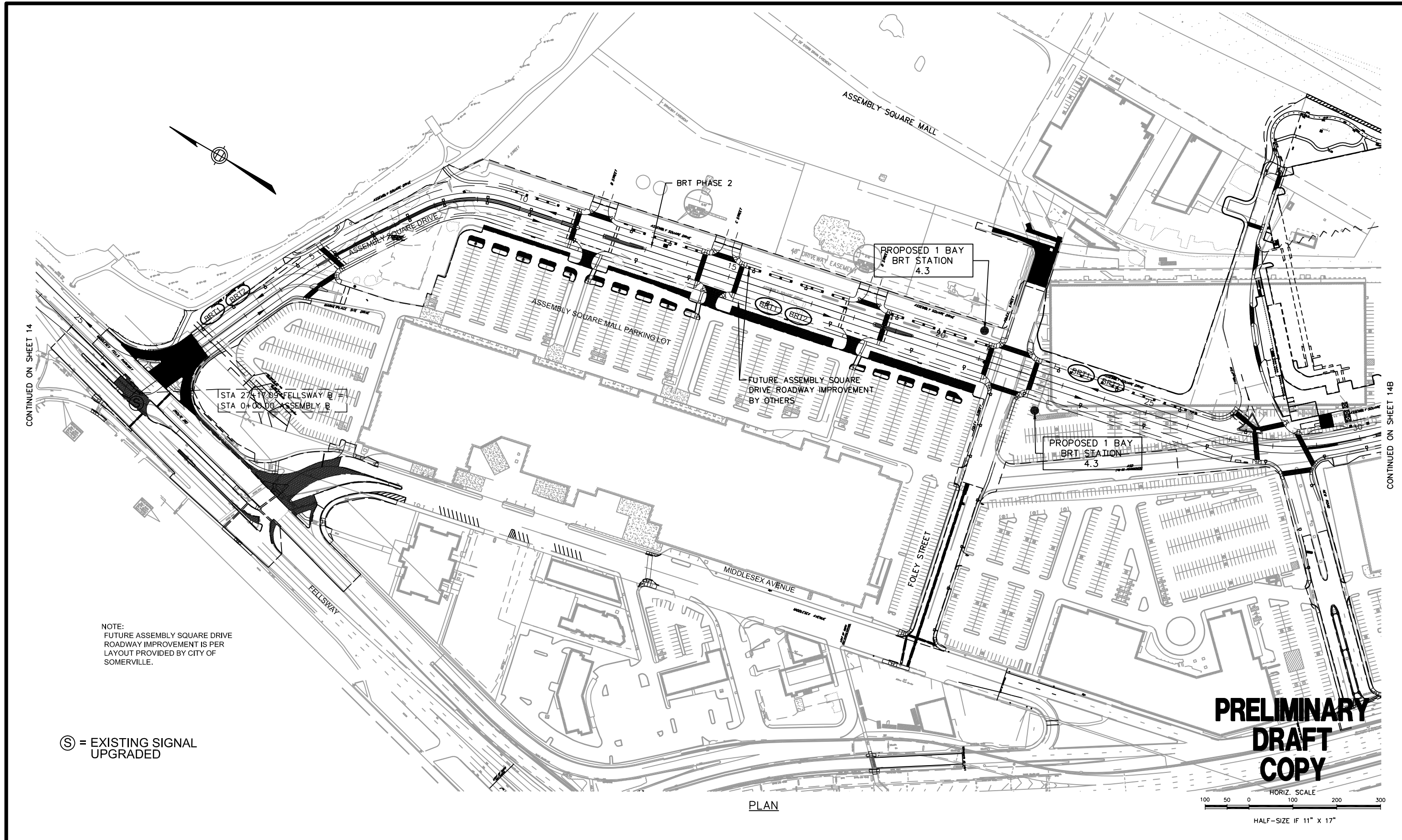
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COPY**



|          |             |      |          |                          |                       |   |  |  |                                   |
|----------|-------------|------|----------|--------------------------|-----------------------|---|--|--|-----------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>OFFICE OF<br/>TRANSPORTATION</b> | <b>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</b> | TITLE<br><br><b>URBAN RING PHASE 2<br/>PLAN &amp; PROFILE – FELLSWAY, MEDFORD<br/>WELLINGTON STATION TO ASSEMBLY SQUARE DRIVE<br/>BUS RAPID TRANSIT ROUTES 1 &amp; 2</b> | SHEET NO.<br>14                   |
|          |             |      |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |   |  |  | CONTRACT NO.<br>97713             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |  | DRAWING NO.<br>97713-RDEIR-sht-14 |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |  |                                   |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |   |  |  |                                   |

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300 BAKER AVENUE, CONCORD, MA 01742





CONTINUED ON SHEET 14

CONTINUED ON SHEET 14B

| REVISION | DESCRIPTION       | DATE   | APPROVED |
|----------|-------------------|--------|----------|
| 1        | REVISED BUS ROUTE | NOV-08 | JAD      |

|             |            |          |               |
|-------------|------------|----------|---------------|
| DESIGNED BY | WPM        | DATE     | NOVEMBER 2008 |
| DRAWN BY    | JAD/JAB    | SCALE    | AS NOTED      |
| CHECKED BY  | WPM/PSC/AS | REVISION |               |
| APPROVED BY | JAD        |          |               |

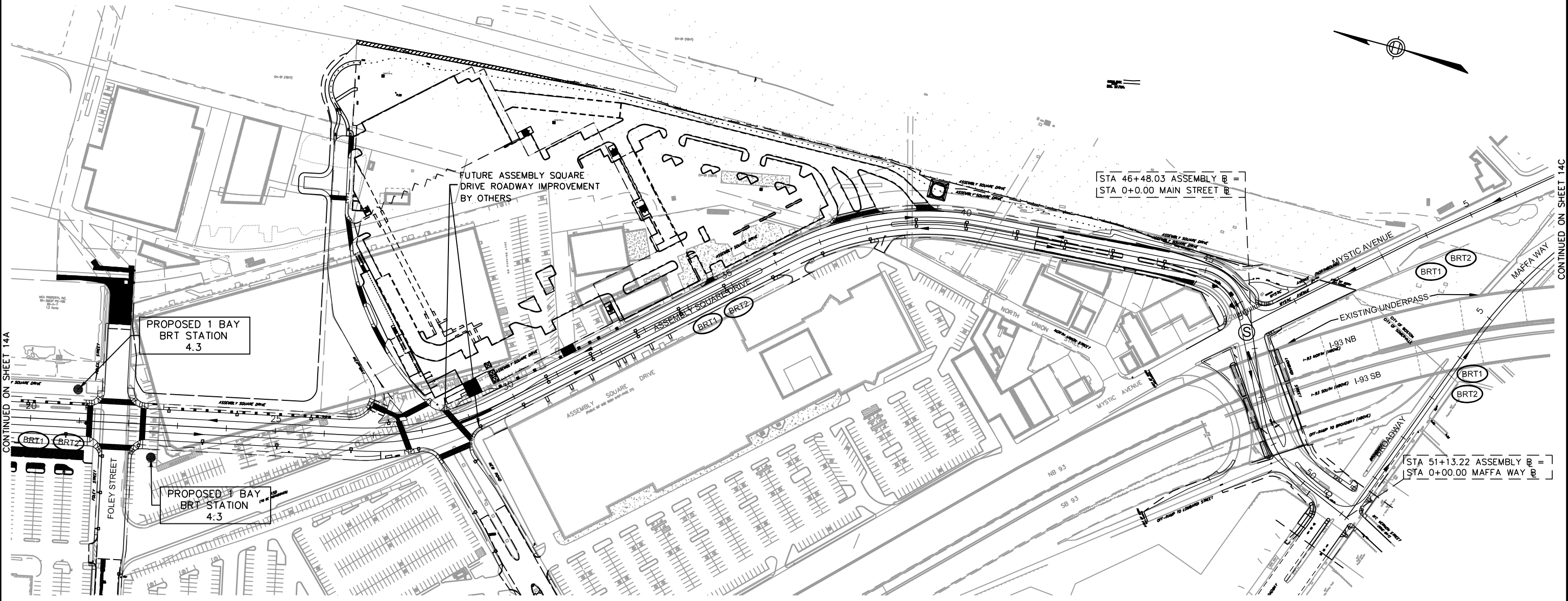
**EOT** EXECUTIVE OFFICE OF TRANSPORTATION

**EarthTech** EARTH TECH  
300 BAKER AVENUE, CONCORD, MA 01742

THE URBAN RING PHASE 2  
RDEIR/DEIS

|       |   |
|-------|---|
| TITLE | URBAN RING PHASE 2<br>PLAN - ASSEMBLY SQUARE, SOMERVILLE<br>ASSEMBLY SQUARE DRIVE TO FOLEY STREET<br>BUS RAPID TRANSIT ROUTES 1 & 2 |
|-------|---|

|              |                     |
|--------------|---------------------|
| SHEET NO.    | 14A                 |
| CONTRACT NO. | 97713               |
| DRAWING NO.  | 97713-RDEIR-sht-14A |



CONTINUED ON SHEET 14A

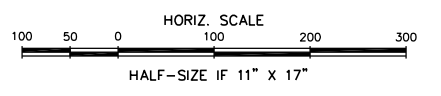
CONTINUED ON SHEET 14C

PLAN

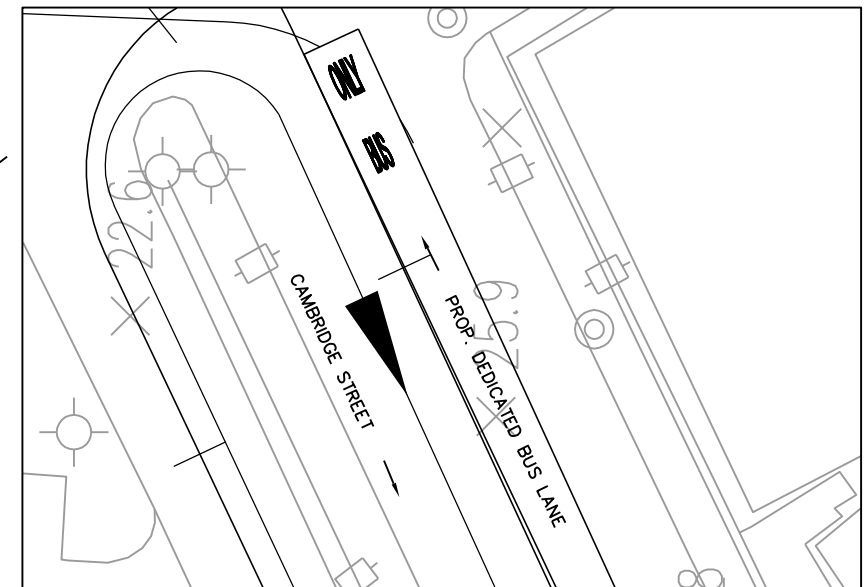
Ⓢ = EXISTING SIGNAL UPGRADED

NOTE:  
FUTURE ASSEMBLY SQUARE DRIVE  
ROADWAY IMPROVEMENT IS PER  
LAYOUT PROVIDED BY CITY OF  
SOMERVILLE.

**PRELIMINARY  
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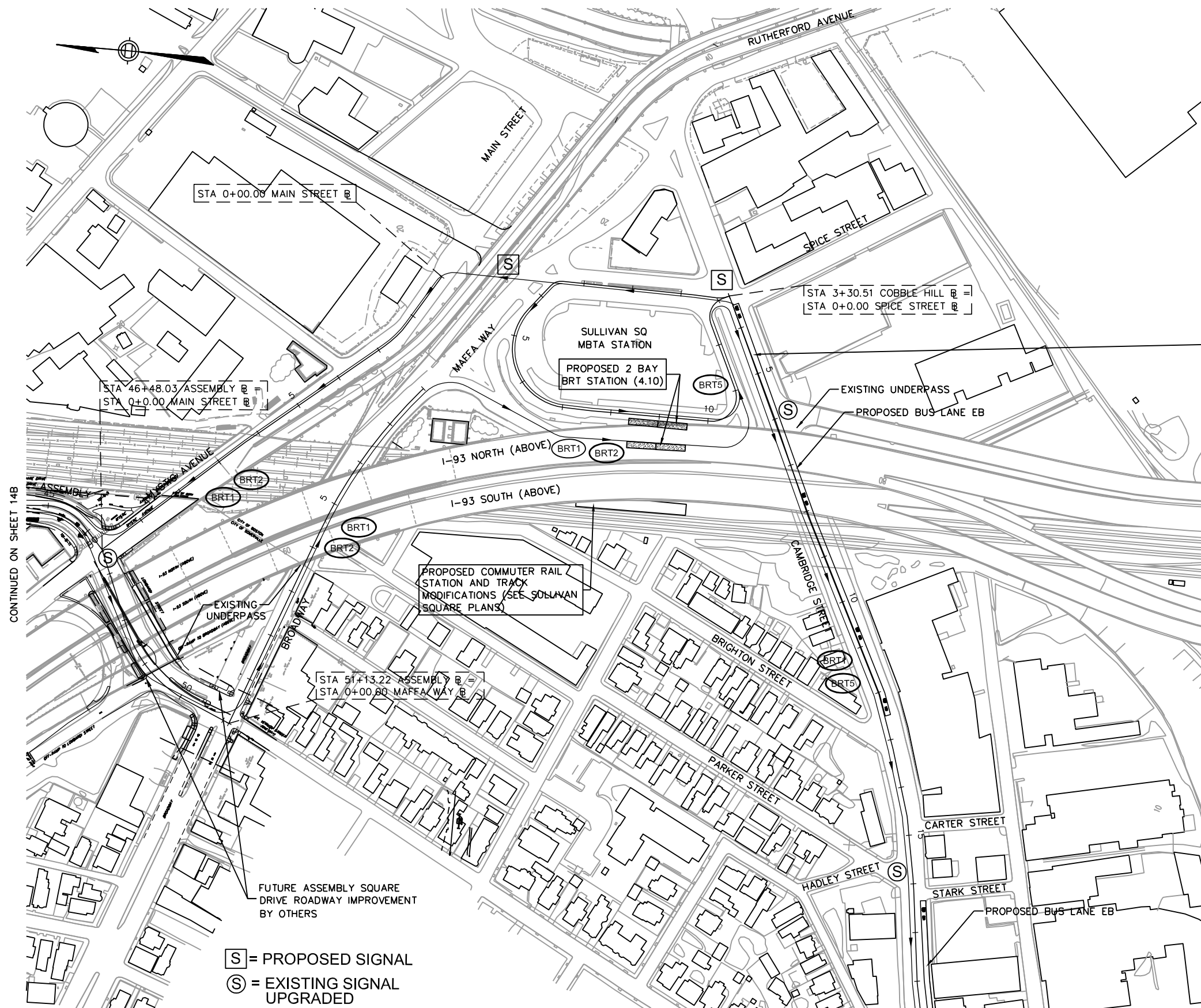


|          |             |      |          |                      |                       |   |   |  |                       |
|----------|-------------|------|----------|----------------------|-----------------------|---|---|--|-----------------------|
|          |             |      |          | DESIGNED BY<br>WPM   | DATE<br>NOVEMBER 2008 | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION                | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>PLAN - ASSEMBLY SQUARE, SOMERVILLE<br>FOLEY STREET TO MYSTIC AVENUE/MAIN STREET<br>BUS RAPID TRANSIT ROUTES 1 & 2 | SHEET NO.<br>14B      |
|          |             |      |          | DRAWN BY<br>JAD/JAB  | SCALE<br>AS NOTED     |   |   |  | CONTRACT NO.<br>97713 |
|          |             |      |          | CHECKED BY<br>PSC/AS | REVISION              | <b>EarthTech</b><br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   | DRAWING NO.<br>97713-RDEIR-sht-14B   |                       |
|          |             |      |          | APPROVED BY<br>JAD   | 1                     |   |   |  | REVISION              |
| REVISION | DESCRIPTION | DATE | APPROVED |                      |                       |   |   |  |                       |



TYPICAL DETAIL - CAMBRIDGE STREET

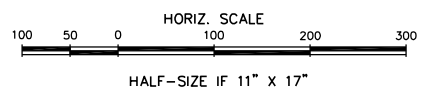
SCALE: 1"=20'



CONTINUED ON SHEET 14B

CONTINUED ON SHEET 19

PLAN



**PRELIMINARY  
DRAFT  
COPY**

| REVISION | DESCRIPTION       | DATE   | APPROVED |
|----------|-------------------|--------|----------|
| 1        | REVISED BUS ROUTE | NOV-08 | JAD      |

|             |            |          |               |
|-------------|------------|----------|---------------|
| DESIGNED BY | WPM        | DATE     | NOVEMBER 2008 |
| DRAWN BY    | JAD        | SCALE    | AS NOTED      |
| CHECKED BY  | WPM/PSC/AS | REVISION |               |
| APPROVED BY | JAD        |          |               |

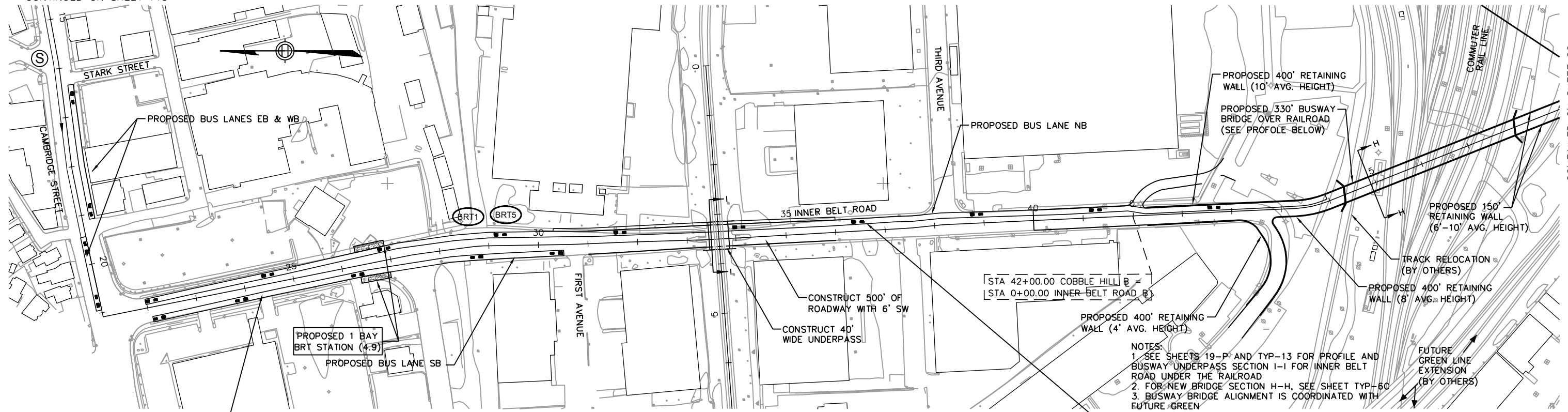
**EOT** EXECUTIVE OFFICE OF TRANSPORTATION

**EarthTech** EARTH TECH  
 300 BAKER AVENUE, CONCORD, MA 01742

**THE URBAN RING PHASE 2**  
 RDEIR/DEIS

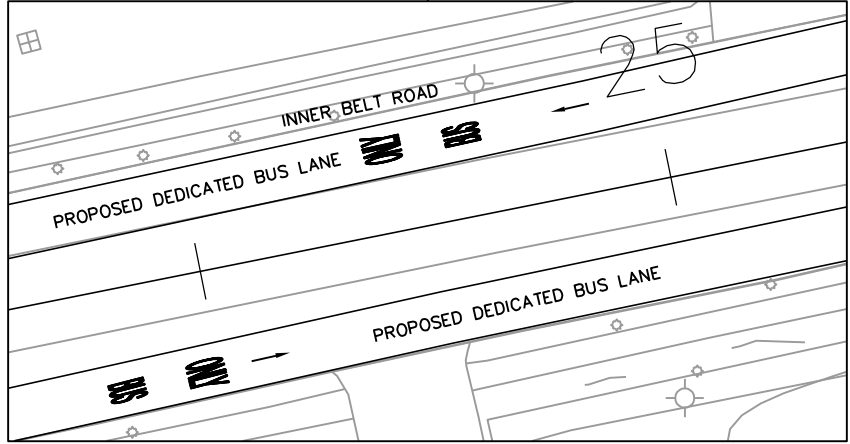
TITLE: URBAN RING PHASE 2  
 PLAN - SULLIVAN SQUARE, SOMERVILLE  
 MAIN STREET, MAFFA WAY, CAMBRIDGE STREET  
 BUS RAPID TRANSIT ROUTES 1, 2 & 5

|              |                     |
|--------------|---------------------|
| SHEET NO.    | 14C                 |
| CONTRACT NO. | 97713               |
| DRAWING NO.  | 97713-RDEIR-sht-14C |



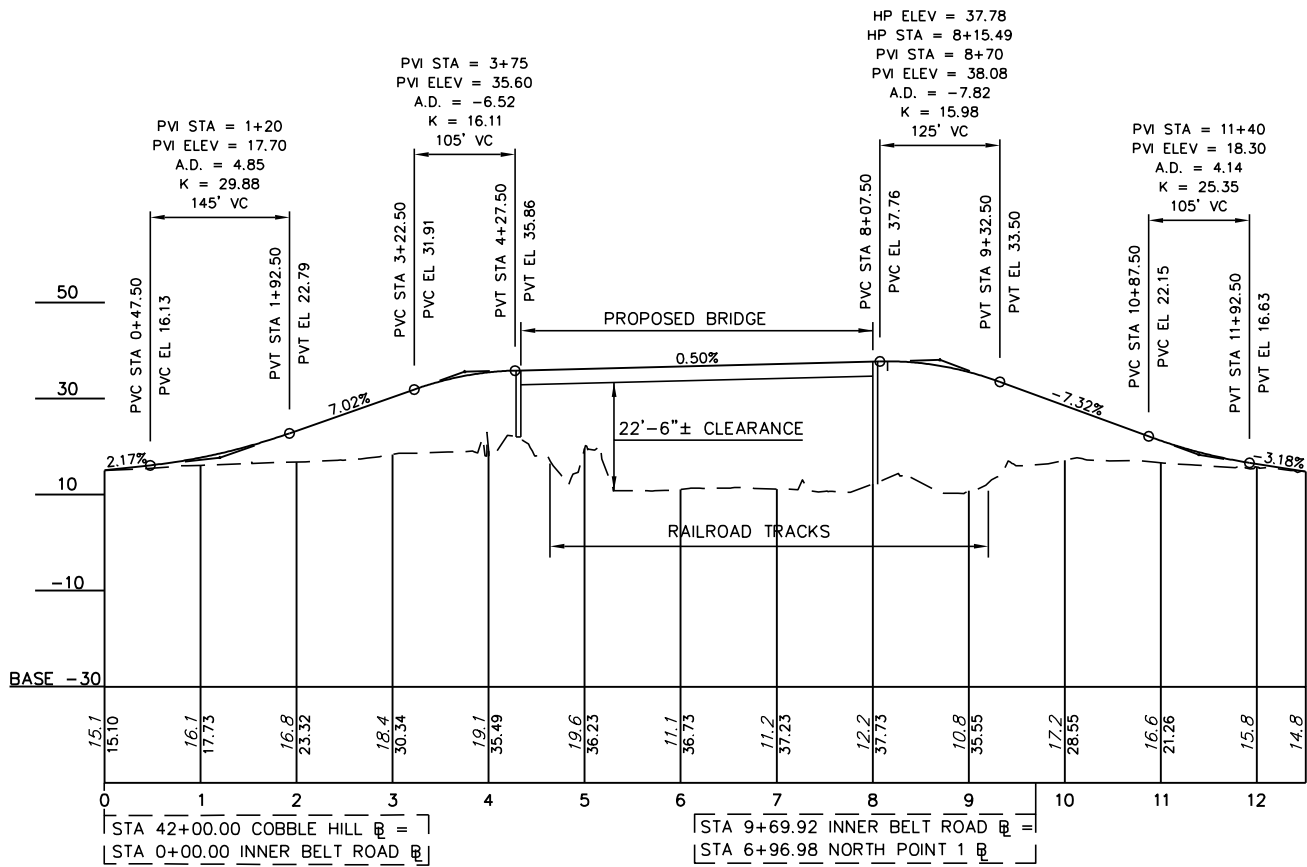
PLAN

- NOTES:  
 1. SEE SHEETS 19-P AND TYP-13 FOR PROFILE AND BUSWAY UNDERPASS SECTION I-I FOR INNER BELT ROAD UNDER THE RAILROAD  
 2. FOR NEW BRIDGE SECTION H-H, SEE SHEET TYP-6C  
 3. BUSWAY BRIDGE ALIGNMENT IS COORDINATED WITH FUTURE GREEN LINE EXTENSION BY OTHERS  
 4. BUSWAY BRIDGE SUPPORT COLUMN LOCATIONS TO BE COORDINATED WITH MBTA

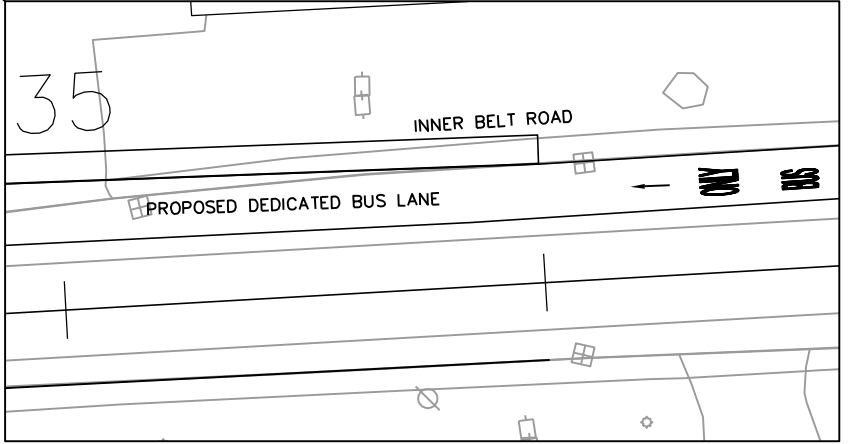


TYPICAL DETAIL - INNER BELT ROAD

SCALE: 1"=20'



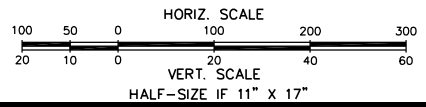
PROFILE



TYPICAL DETAIL - INNER BELT ROAD

SCALE: 1"=20'

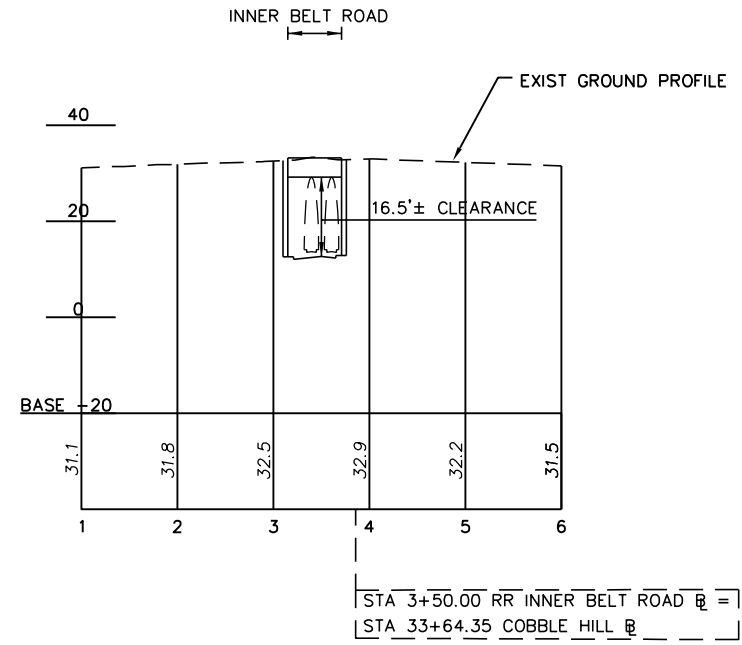
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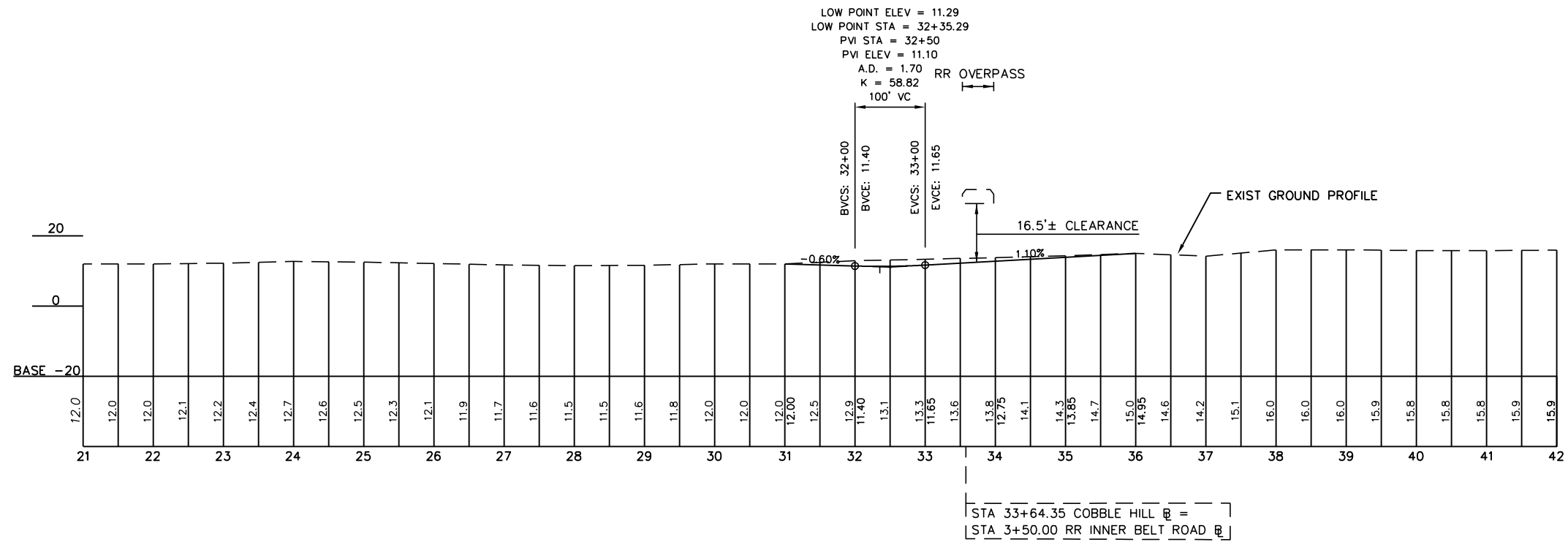
Ⓢ = EXISTING SIGNAL UPGRADED

|          |             |      |          |                          |                       |  |  |                                   |
|----------|-------------|------|----------|--------------------------|-----------------------|--|--|-----------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | EXECUTIVE OFFICE OF TRANSPORTATION<br>THE URBAN RING PHASE 2<br>RDEIR/DEIS | TITLE  | SHEET NO.<br>19                   |
|          |             |      |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |  | URBAN RING PHASE 2<br>PLAN & PROFILE - INNER BELT ROAD, SOMERVILLE<br>CAMBRIDGE STREET TO GREEN LINE<br>BUS RAPID TRANSIT ROUTES 1 & 5 | CONTRACT NO.<br>97713             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |  |  | DRAWING NO.<br>97713-RDEIR-sht-19 |
|          |             |      |          | APPROVED BY<br>JAD       |                       |  |  |                                   |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |  |  |                                   |

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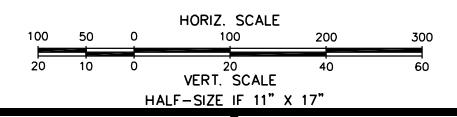


RAILROAD OVERPASS AT INNER BELT ROAD



INNER BELT ROAD  
 PROFILE

**PRELIMINARY  
 DRAFT  
 COPY**

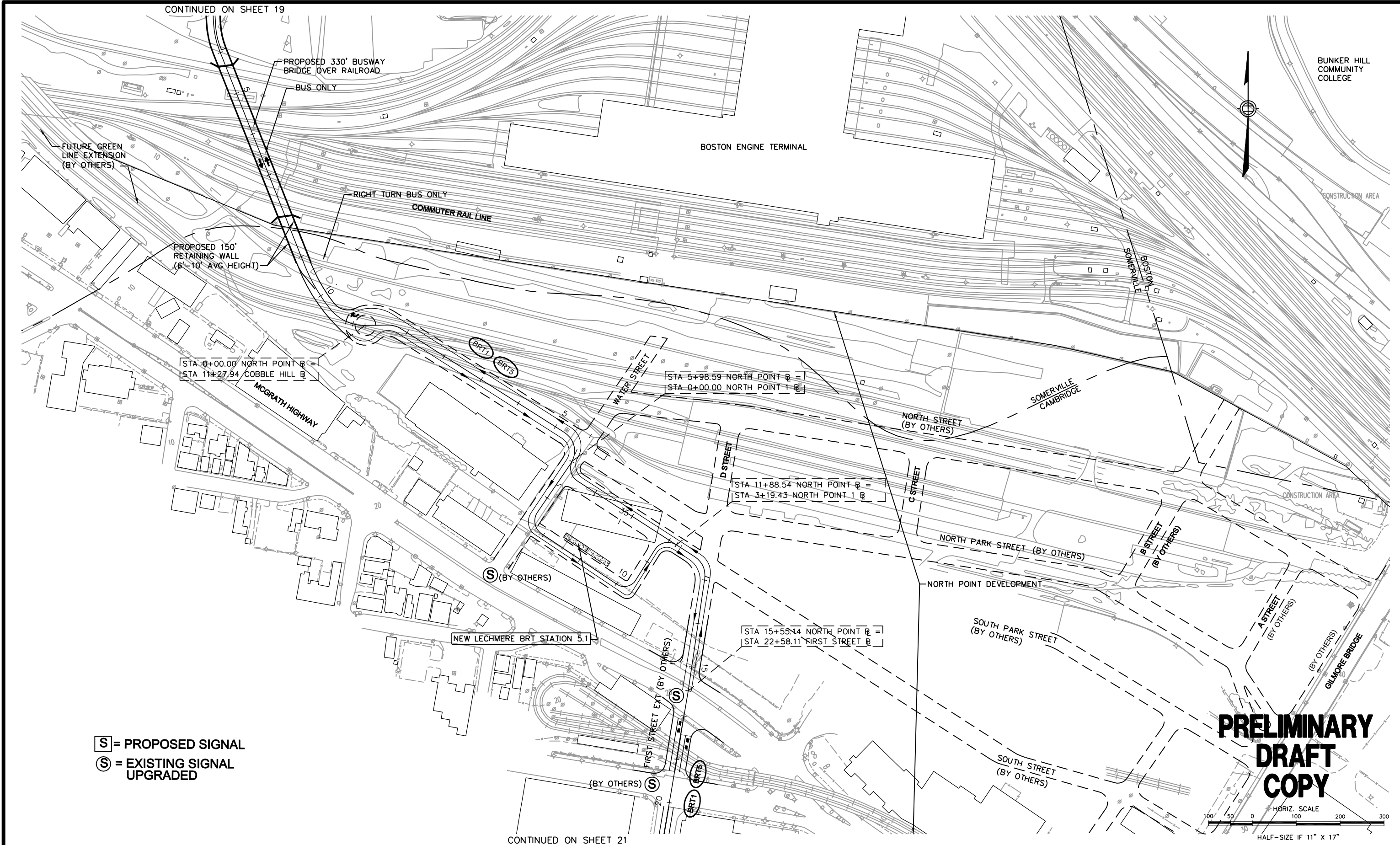


|          |             |      |          |             |     |      |               |            |                                    |                                   |       |   |           |              |                        |
|----------|-------------|------|----------|-------------|-----|------|---------------|------------|------------------------------------|-----------------------------------|-------|---|-----------|--------------|------------------------|
| REVISION | DESCRIPTION | DATE | APPROVED | DESIGNED BY | WPM | DATE | NOVEMBER 2008 | <b>EOT</b> | EXECUTIVE OFFICE OF TRANSPORTATION | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE | URBAN RING PHASE 2<br>PROFILE - INNER BELT ROAD, SOMERVILLE<br>CAMBRIDGE STREET TO GREEN LINE COMMUTER RAIL<br>BUS RAPID TRANSIT ROUTES 1 & 5 | SHEET NO. | 19-P         |                        |
|          |             |      |          | DRAWN BY    | JAD |      | SCALE         |            |                                    |                                   |       |   | AS NOTED  | CONTRACT NO. | 97713                  |
|          |             |      |          | CHECKED BY  | PSC |      | REVISION      |            |                                    |                                   |       |   |           | DRAWING NO.  | 97713-RDEIR-sht-19-pro |
|          |             |      |          | APPROVED BY | JAD |      |               |            |                                    |                                   |       |   |           |              |                        |

**EarthTech** EARTH TECH  
 300 BAKER AVENUE, CONCORD, MA 01742



CONTINUED ON SHEET 19



BUNKER HILL  
COMMUNITY  
COLLEGE

BOSTON ENGINE TERMINAL

RIGHT TURN BUS ONLY  
COMMUTER RAIL LINE

PROPOSED 150'  
RETAINING WALL  
(6'-10' AVG HEIGHT)

STA 0+00.00 NORTH POINT B  
STA 11+27.94 COBBLE HILL B

STA 5+98.59 NORTH POINT B =  
STA 0+00.00 NORTH POINT 1 B

STA 11+88.54 NORTH POINT B =  
STA 3+19.43 NORTH POINT 1 B

STA 15+55.44 NORTH POINT B =  
STA 22+58.11 FIRST STREET B

NEW LECHMERE BRT STATION 5.1

**S** = PROPOSED SIGNAL  
**S** = EXISTING SIGNAL  
UPGRADED

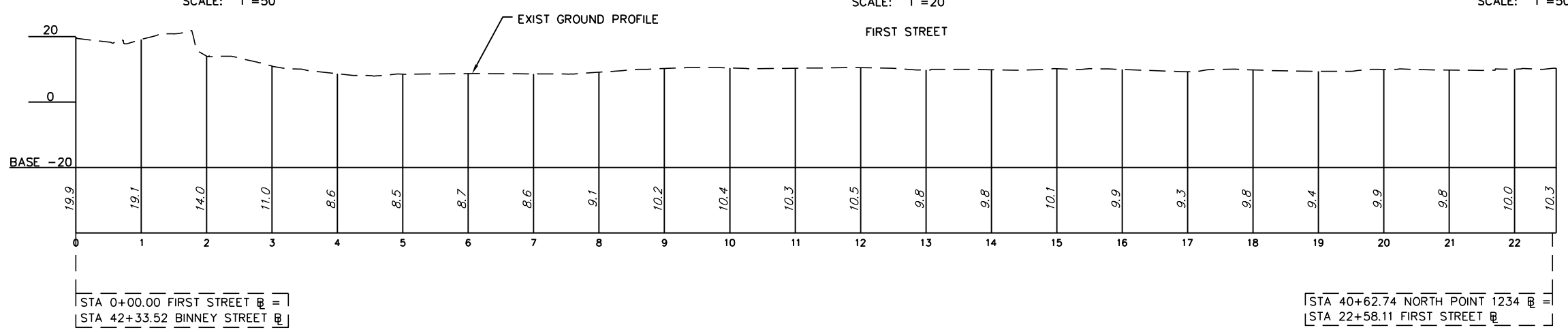
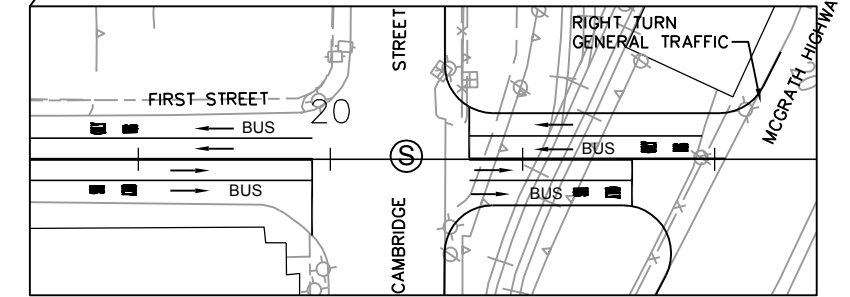
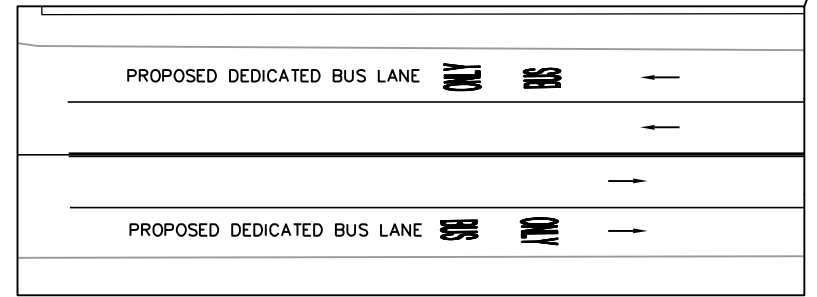
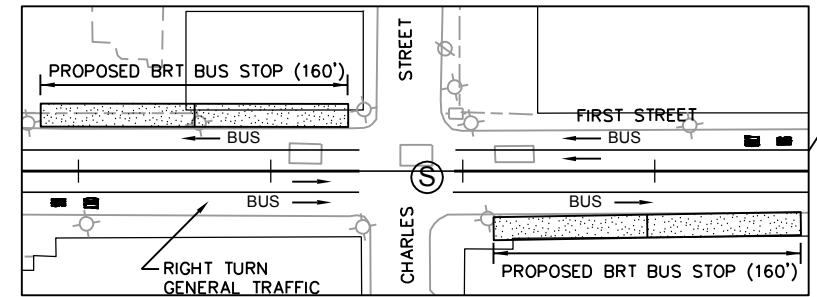
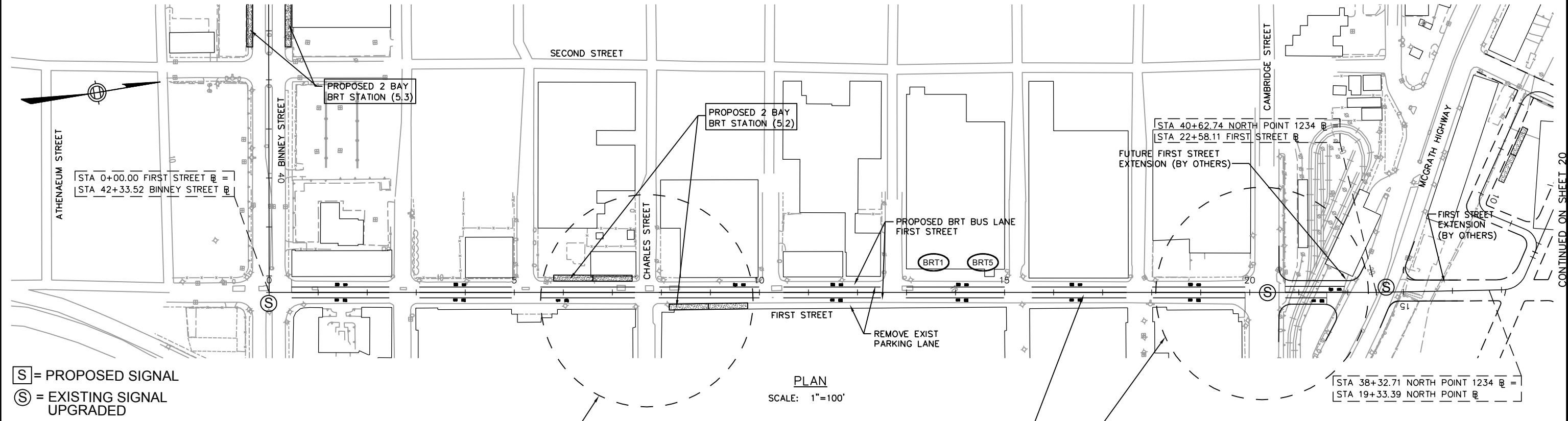
**PRELIMINARY  
DRAFT  
COPY**

HORIZ. SCALE  
100 50 0 100 200 300  
HALF-SIZE IF 11" X 17"

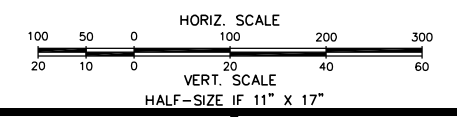
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|          |             |      |          |                          |                       |   |  |   |  |                       |
|----------|-------------|------|----------|--------------------------|-----------------------|---|--|---|--|-----------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <p>EXECUTIVE<br/>OFFICE OF<br/>TRANSPORTATION</p> | <p>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</p> | TITLE   | SHEET NO.<br>20  |                       |
|          |             |      |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |   |  | <p>EARTH TECH<br/>300 BAKER AVENUE, CONCORD, MA 01742</p> | PLAN - URBAN RING PHASE 2<br>INNER BELT ROAD TO FIRST STREET<br>BUS RAPID TRANSIT ROUTES 1 & 5 | CONTRACT NO.<br>97713 |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |   | DRAWING NO.<br>97713-RDEIR-sht-20  |                       |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD       |                       |   |  |   |  |                       |

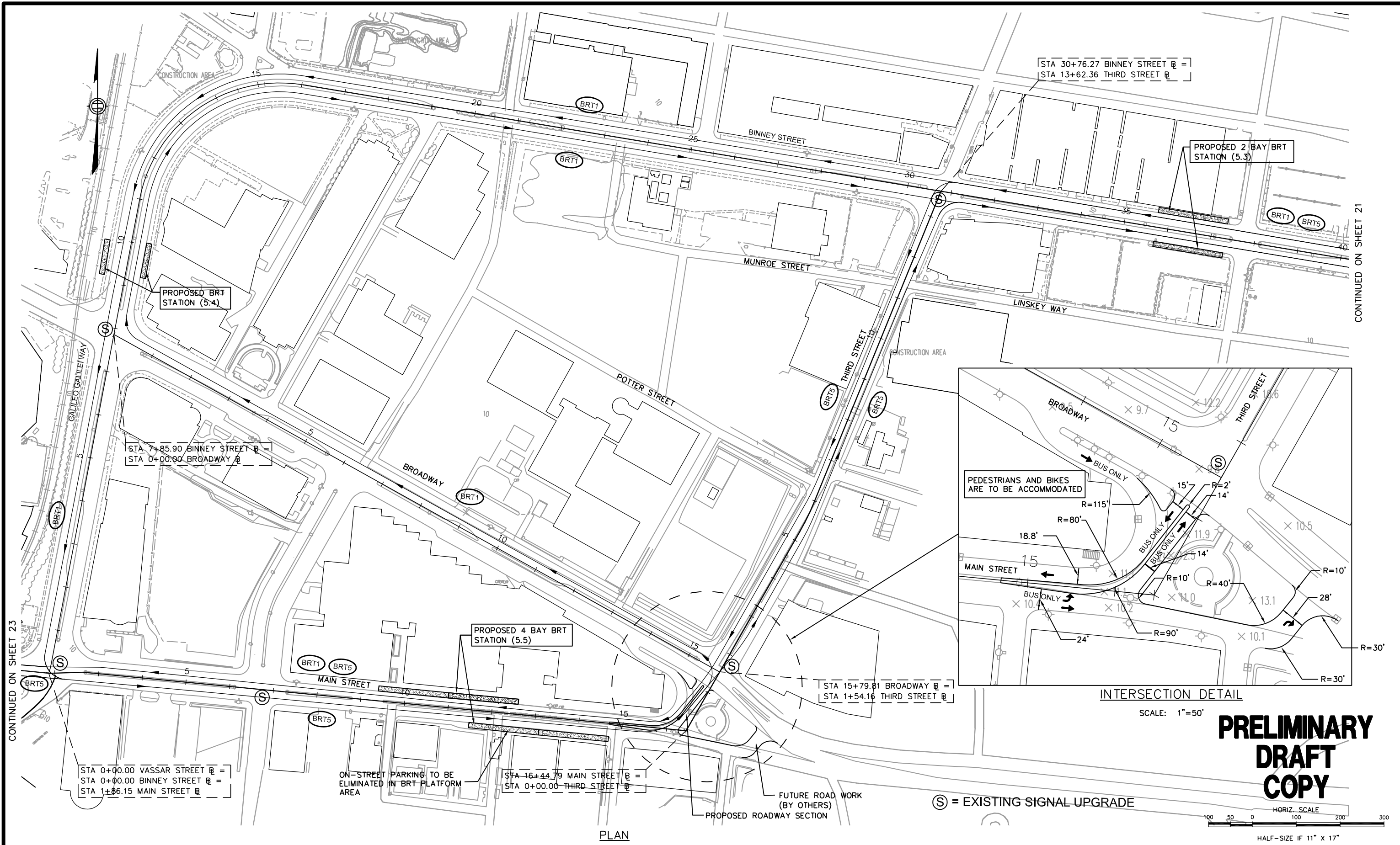
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**PRELIMINARY  
DRAFT  
COPY**

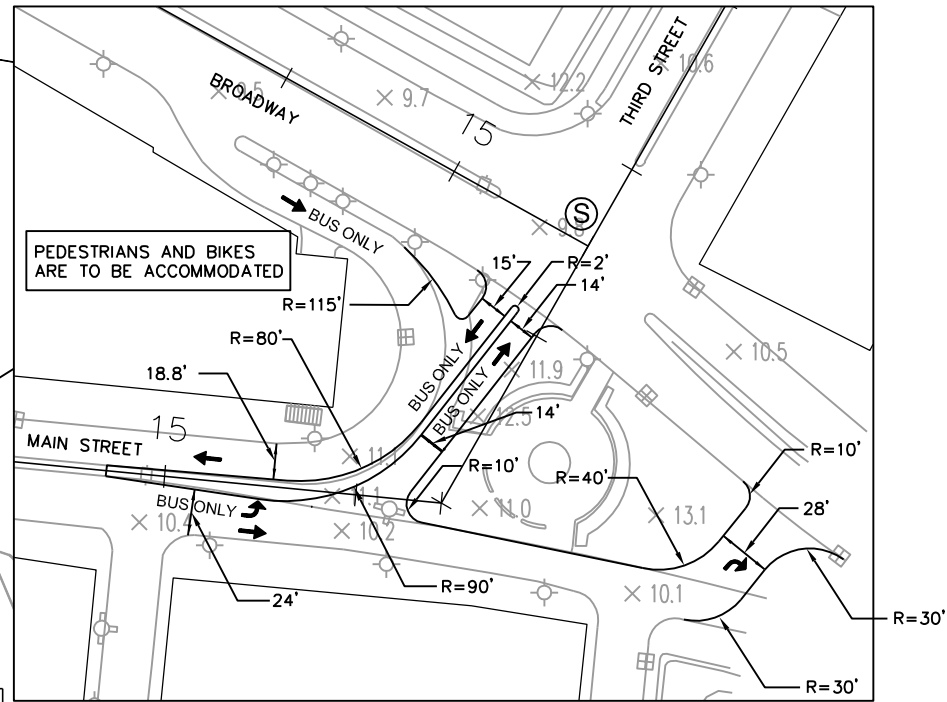


|                          |                       |  |                                   |   |                                   |
|--------------------------|-----------------------|--|-----------------------------------|---|-----------------------------------|
| DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - FIRST STREET, CAMBRIDGE<br>MCGRATH HIGHWAY TO BINNEY STREET<br>BUS RAPID TRANSIT ROUTES 1 & 5 | SHEET NO.<br>21                   |
| DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |  |                                   |   |                                   |
| CHECKED BY<br>WPM/PSC/AS | REVISION              | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |   | CONTRACT NO.<br>97713             |
| APPROVED BY<br>JAD       |                       |  |                                   |   | DRAWING NO.<br>97713-RDEIR-sht-21 |
| REVISION                 | DESCRIPTION           | DATE   | APPROVED                          |   |                                   |



CONTINUED ON SHEET 23

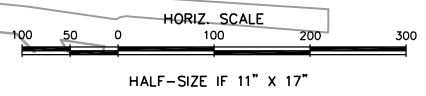
CONTINUED ON SHEET 21



INTERSECTION DETAIL

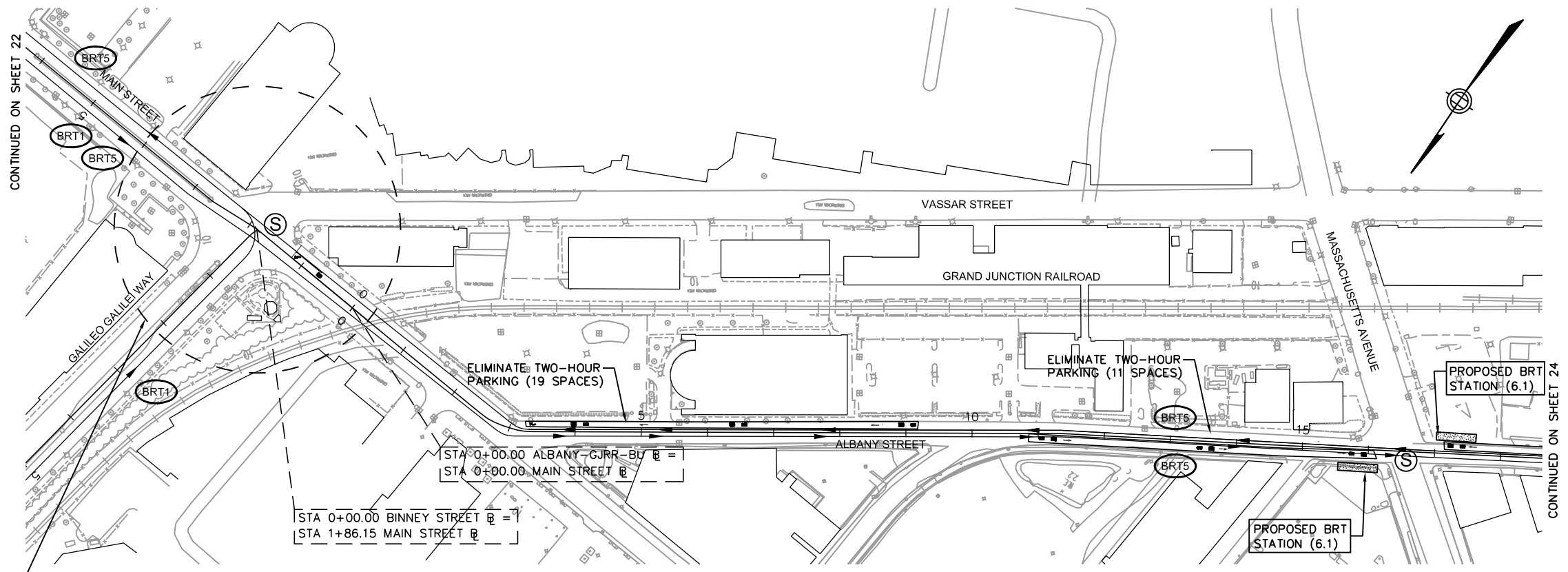
SCALE: 1"=50'

**PRELIMINARY  
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COPY**



|                      |             |                       |          |   |   |   |                 |
|----------------------|-------------|-----------------------|----------|---|---|---|-----------------|
| DESIGNED BY<br>WPM   |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION                | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>PLAN - KENDALL SQUARE, CAMBRIDGE<br>BINNEY STREET TO VASSAR STREET<br>BUS RAPID TRANSIT ROUTES 1 & 5 | SHEET NO.<br>22 |
| DRAWN BY<br>JAD/JAB  |             | SCALE<br>AS NOTED     |          |   |   |   |                 |
| CHECKED BY<br>PSC/AS |             | REVISION              |          | <b>EarthTech</b><br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | DRAWING NO.<br>97713-RDEIR-sht-22       |   |                 |
| APPROVED BY<br>JAD   |             |                       |          |   |   |   |                 |
| REVISION             | DESCRIPTION | DATE                  | APPROVED |   |   |   |                 |

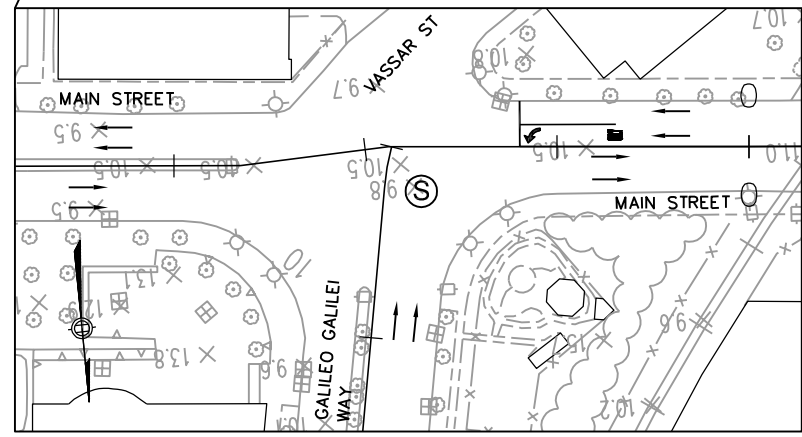




CONTINUED ON SHEET 22

CONTINUED ON SHEET 24

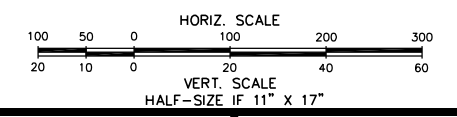
PLAN



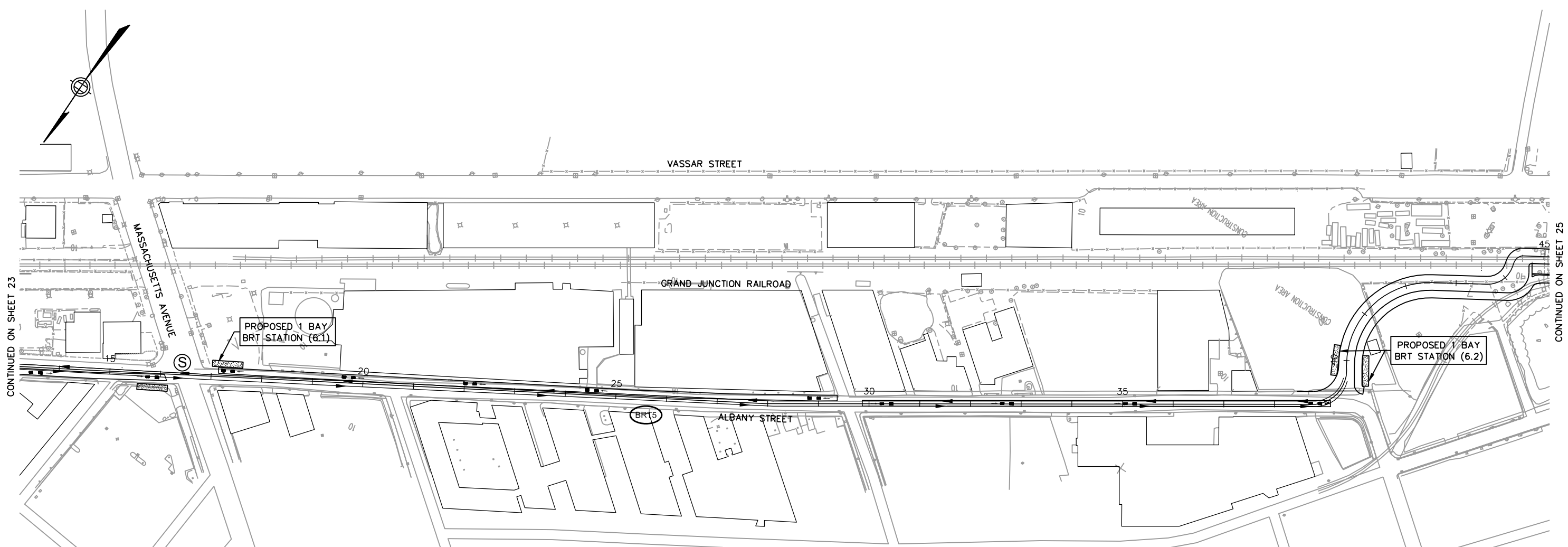
INTERSECTION DETAIL

S = PROPOSED SIGNAL  
 S = EXISTING SIGNAL UPGRADED

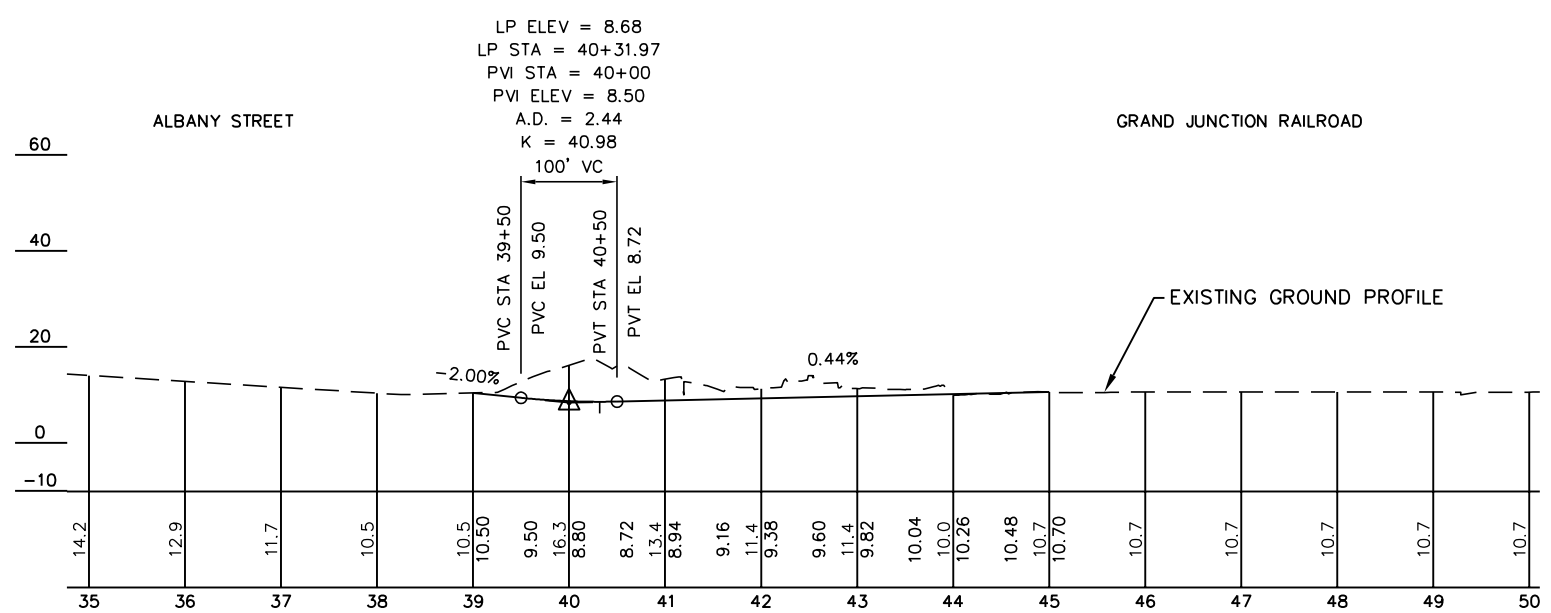
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|          |             |      |          |                          |                       |   |  |  |                                   |
|----------|-------------|------|----------|--------------------------|-----------------------|---|--|--|-----------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <b>EXECUTIVE<br/>         OFFICE OF<br/>         TRANSPORTATION</b> | <b>THE URBAN RING<br/>         PHASE 2<br/>         RDEIR/DEIS</b> | TITLE  | SHEET NO.<br>23                   |
|          |             |      |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |   |  | <b>URBAN RING PHASE 2<br/>         PLAN - ALBANY STREET, CAMBRIDGE<br/>         MAIN STREET TO MASSACHUSETTS AVENUE<br/>         BUS RAPID TRANSIT ROUTE 5</b> | CONTRACT NO.<br>97713             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |  | DRAWING NO.<br>97713-RDEIR-sht-23 |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |  |                                   |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |   |  |  |                                   |



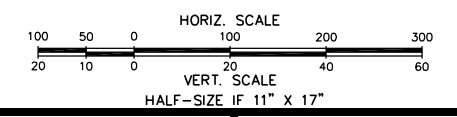
PLAN



PROFILE

S = PROPOSED SIGNAL  
 S = EXISTING SIGNAL UPGRADED

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|             |             |          |               |
|-------------|-------------|----------|---------------|
| DESIGNED BY | WPM         | DATE     | NOVEMBER 2008 |
| DRAWN BY    | JAD/JAB     | SCALE    | AS NOTED      |
| CHECKED BY  | WPM/PSC/AS  | REVISION |               |
| APPROVED BY | JAD         |          |               |
| REVISION    | DESCRIPTION | DATE     | APPROVED      |

|             |            |
|-------------|------------|
| DESIGNED BY | WPM        |
| DRAWN BY    | JAD/JAB    |
| CHECKED BY  | WPM/PSC/AS |
| APPROVED BY | JAD        |

**EOT** EXECUTIVE OFFICE OF TRANSPORTATION

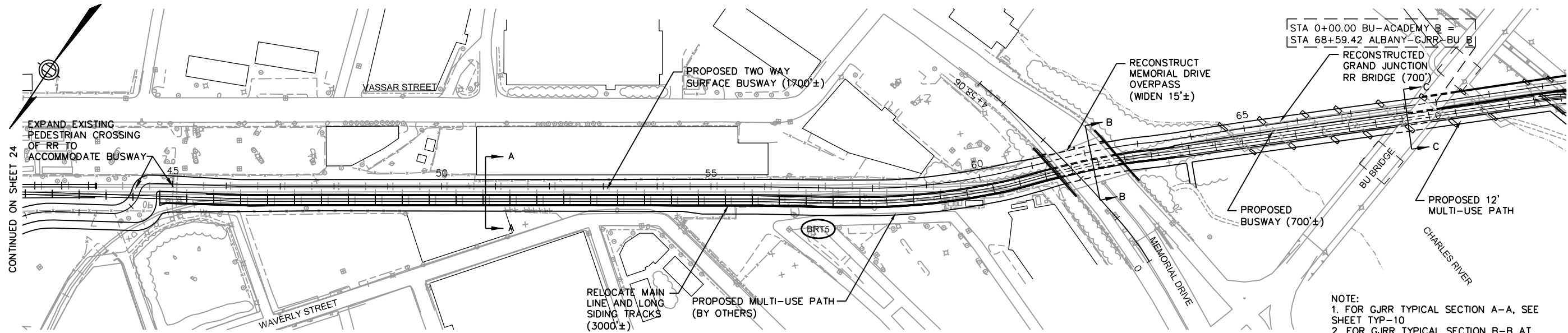
**EarthTech** EARTH TECH  
 300 BAKER AVENUE, CONCORD, MA 01742

THE URBAN RING PHASE 2  
 RDEIR/DEIS

TITLE

URBAN RING PHASE 2  
 PLAN - ALBANY STREET, CAMBRIDGE  
 MASSACHUSETTS AVENUE TO WAVERLY STREET  
 BUS RAPID TRANSIT ROUTE 5

|              |                    |
|--------------|--------------------|
| SHEET NO.    | 24                 |
| CONTRACT NO. | 97713              |
| DRAWING NO.  | 97713-RDEIR-sht-24 |

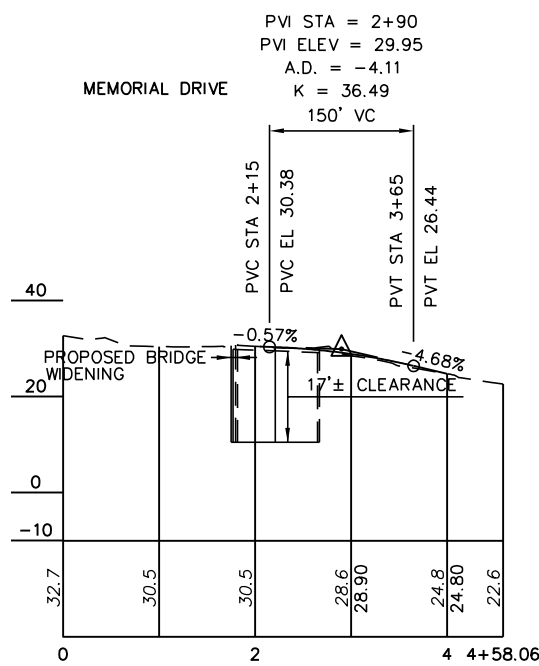


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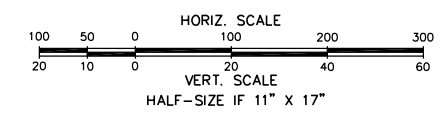
CONTINUED ON SHEET 26

PLAN

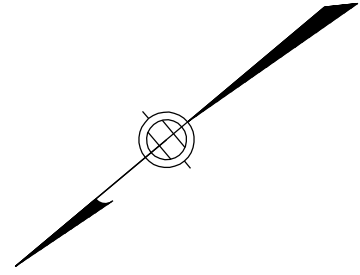
- NOTE:
1. FOR GJRR TYPICAL SECTION A-A, SEE SHEET TYP-10
  2. FOR GJRR TYPICAL SECTION B-B AT MEMORIAL DRIVE, SEE SHEET TYP-11
  3. FOR GJRR TRANSVERSE SECTION C-C STAGES 1, 2, 3 & 4(FINAL), SEE SHEETS TYP-6 & TYP-6A
  4. FOR GJRR 50 SCALE PLAN, SEE SHEET 25A
  5. GJRR BRIDGE RECONSTRUCTION TO CONSIST OF RECONSTRUCTED SUPERSTRUCTURE AND WIDENED SUBSTRUCTURE.



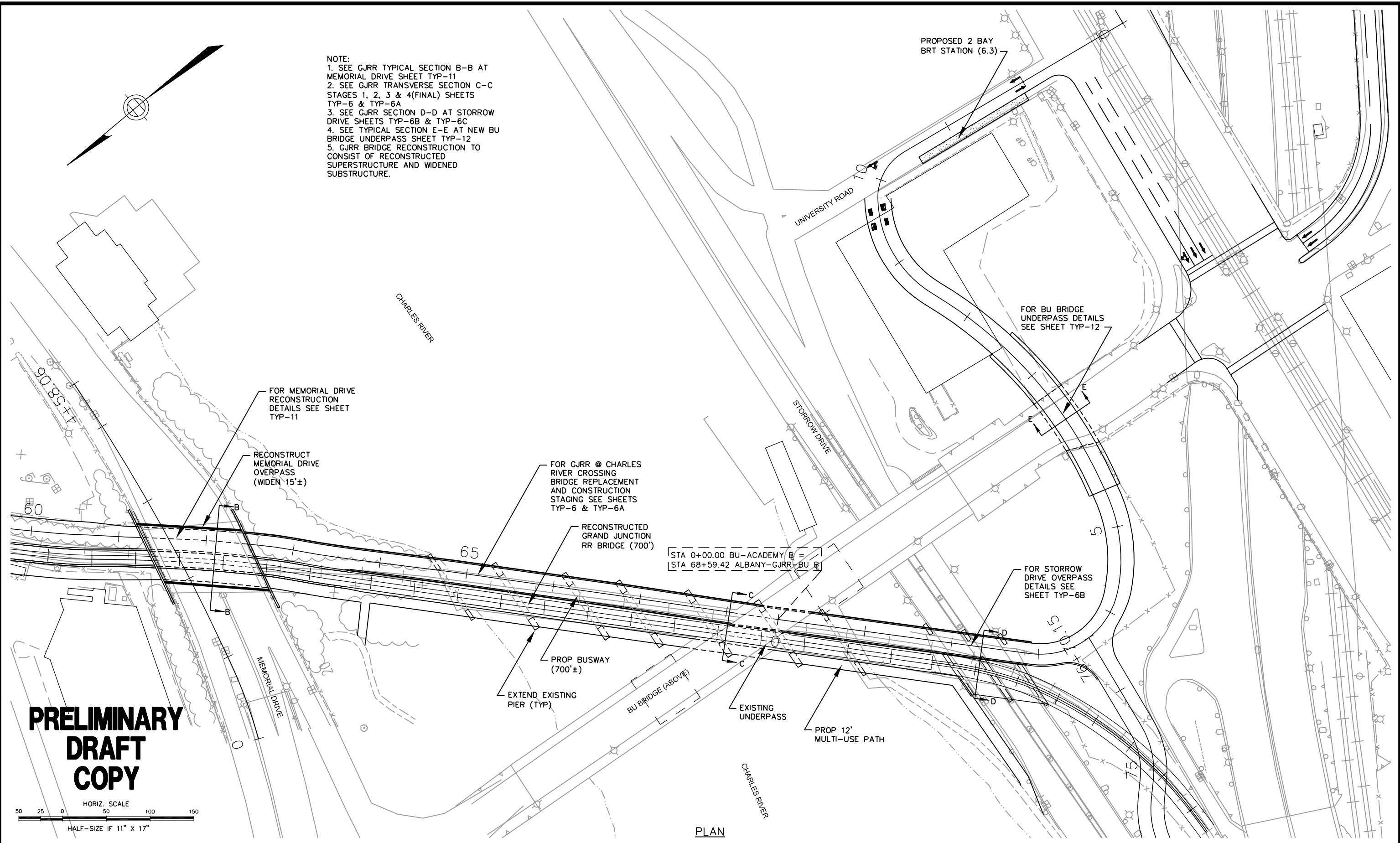
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|          |             |      |          |                          |                       |   |  |   |                                   |
|----------|-------------|------|----------|--------------------------|-----------------------|---|--|---|-----------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <b>EXECUTIVE OFFICE OF TRANSPORTATION</b><br><br><b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | <b>THE URBAN RING PHASE 2</b><br><b>PHASE 2</b><br><b>RDEIR/DEIS</b> | TITLE   | SHEET NO.<br>25                   |
|          |             |      |          | DRAWN BY<br>JAD          | SCALE<br>AS NOTED     |   |  | URBAN RING PHASE 2<br>PLAN & PROFILE - GRAND JUNCTION RAILROAD, CAMBRIDGE<br>WAVERLY STREET TO BU BRIDGE<br>BUS RAPID TRANSIT ROUTE 5 | CONTRACT NO.<br>97713             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |   | DRAWING NO.<br>97713-RDEIR-sht-25 |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |   |                                   |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |   |  |   |                                   |

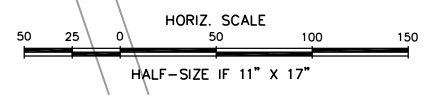


NOTE:  
 1. SEE GJRR TYPICAL SECTION B-B AT MEMORIAL DRIVE SHEET TYP-11  
 2. SEE GJRR TRANSVERSE SECTION C-C STAGES 1, 2, 3 & 4(FINAL) SHEETS TYP-6 & TYP-6A  
 3. SEE GJRR SECTION D-D AT STORROW DRIVE SHEETS TYP-6B & TYP-6C  
 4. SEE TYPICAL SECTION E-E AT NEW BU BRIDGE UNDERPASS SHEET TYP-12  
 5. GJRR BRIDGE RECONSTRUCTION TO CONSIST OF RECONSTRUCTED SUPERSTRUCTURE AND WIDENED SUBSTRUCTURE.

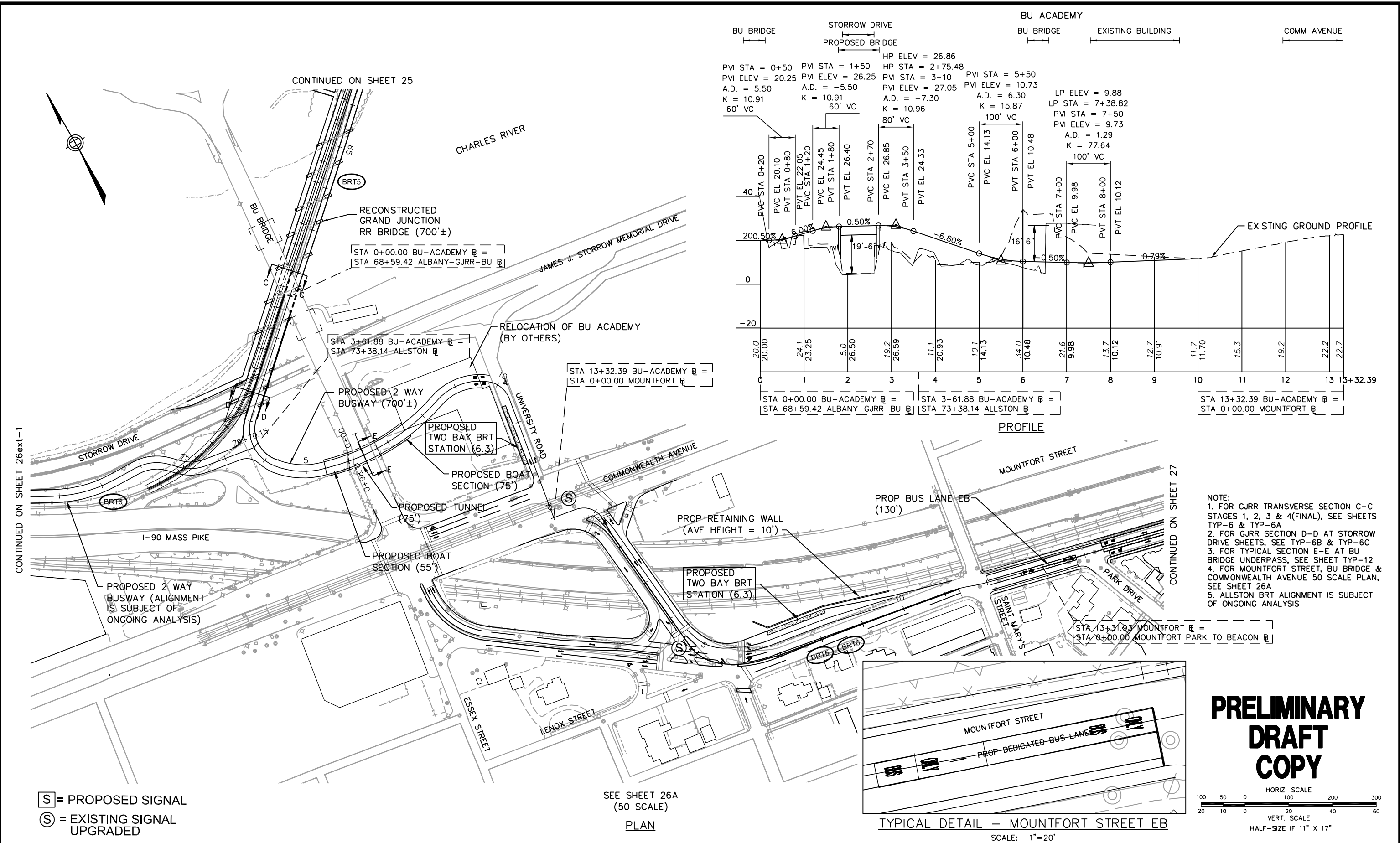


PLAN

**PRELIMINARY  
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|                          |             |                       |          |  |                                   |  |                                       |
|--------------------------|-------------|-----------------------|----------|--|-----------------------------------|--|---------------------------------------|
| DESIGNED BY<br>WPM       |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN - GRAND JUNCTION RAILROAD, CAMBRIDGE<br>MEMORIAL DRIVE TO STORROW DRIVE<br>BUS RAPID TRANSIT ROUTE 5 | SHEET NO.<br>25A                      |
| DRAWN BY<br>JAD          |             | SCALE<br>AS NOTED     |          |  |                                   |  | CONTRACT NO.<br>97713                 |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |  | DRAWING NO.<br>97713-RDEIR-sht-25A-50 |
| REVISION                 | DESCRIPTION | DATE                  | APPROVED |  |                                   |  | APPROVED BY<br>JAD                    |

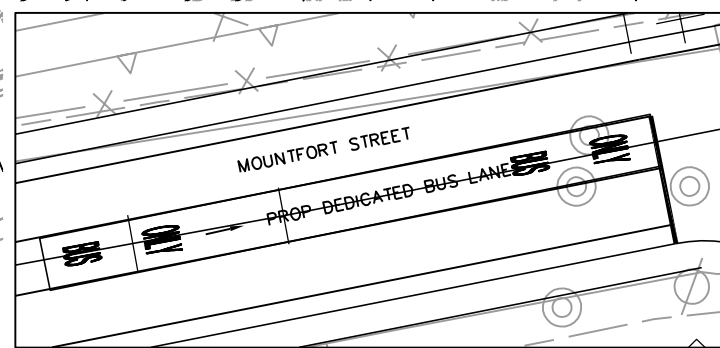


CONTINUED ON SHEET 26ext-1

CONTINUED ON SHEET 27

S = PROPOSED SIGNAL  
S = EXISTING SIGNAL UPGRADED

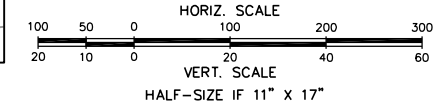
SEE SHEET 26A  
(50 SCALE)  
PLAN



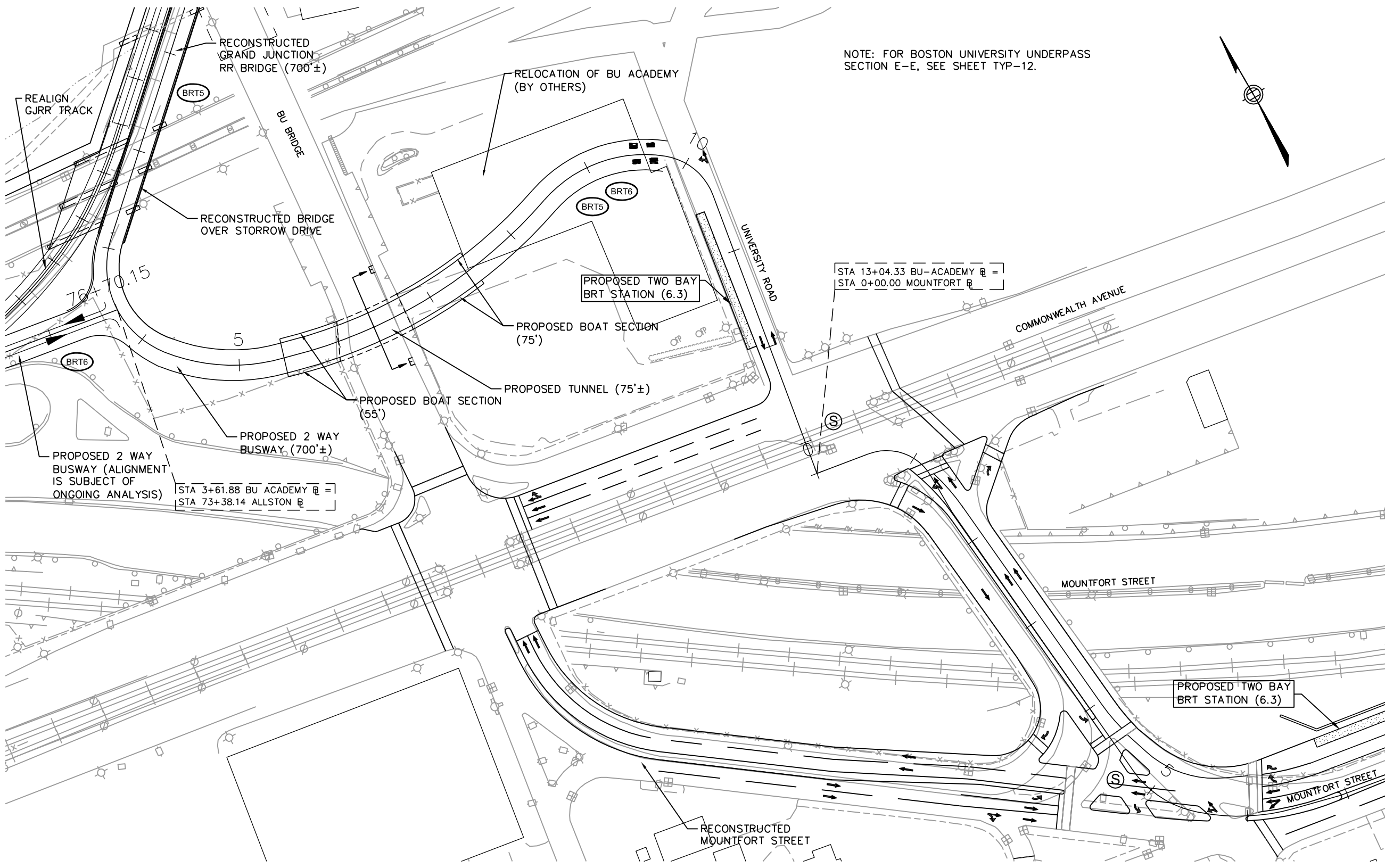
TYPICAL DETAIL - MOUNTFORT STREET EB  
SCALE: 1"=20'

- NOTE:
1. FOR GJRR TRANSVERSE SECTION C-C STAGES 1, 2, 3 & 4(FINAL), SEE SHEETS TYP-6 & TYP-6A
  2. FOR GJRR SECTION D-D AT STORROW DRIVE SHEETS, SEE TYP-6B & TYP-6C
  3. FOR TYPICAL SECTION E-E AT BU BRIDGE UNDERPASS, SEE SHEET TYP-12
  4. FOR MOUNTFORT STREET, BU BRIDGE & COMMONWEALTH AVENUE 50 SCALE PLAN, SEE SHEET 26A
  5. ALLSTON BRT ALIGNMENT IS SUBJECT OF ONGOING ANALYSIS

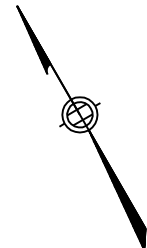
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|             |             |          |               |                  |   |  |                                   |
|-------------|-------------|----------|---------------|------------------|---|--|-----------------------------------|
|             |             |          |               |                  |   |  |                                   |
| DESIGNED BY | WPM         | DATE     | NOVEMBER 2008 | <b>EOT</b>       | EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION          | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS  | TITLE                             |
| DRAWN BY    | JAD         | SCALE    | AS NOTED      |                  |   |  |                                   |
| CHECKED BY  | WPM/PSC/AS  | REVISION |               |                  |   |  |                                   |
| APPROVED BY | JAD         |          |               | <b>EarthTech</b> | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | URBAN RING PHASE 2<br>PLAN & PROFILE - MOUNTFORT STREET, BROOKLINE<br>BU BRIDGE, COMMONWEALTH AVENUE<br>BUS RAPID TRANSIT ROUTES 5 & 6 | SHEET NO.<br>26                   |
| REVISION    | DESCRIPTION | DATE     | APPROVED      |                  |   |  | CONTRACT NO.<br>97713             |
|             |             |          |               |                  |   |  | DRAWING NO.<br>97713-RDEIR-sht-26 |



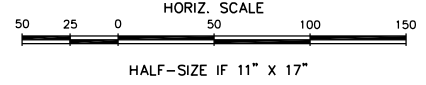
NOTE: FOR BOSTON UNIVERSITY UNDERPASS SECTION E-E, SEE SHEET TYP-12.



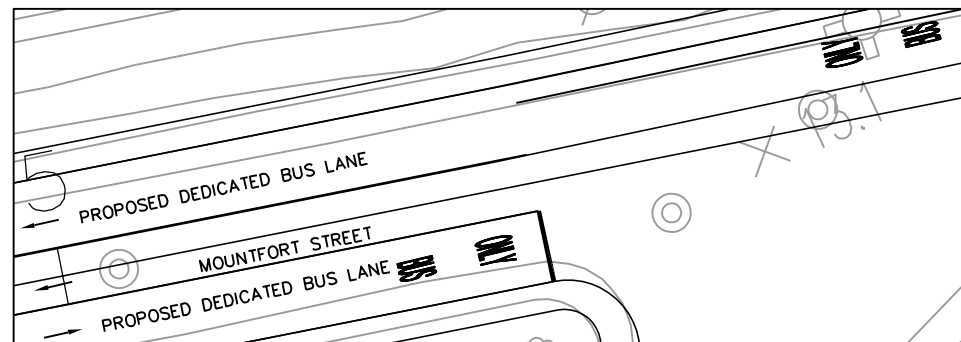
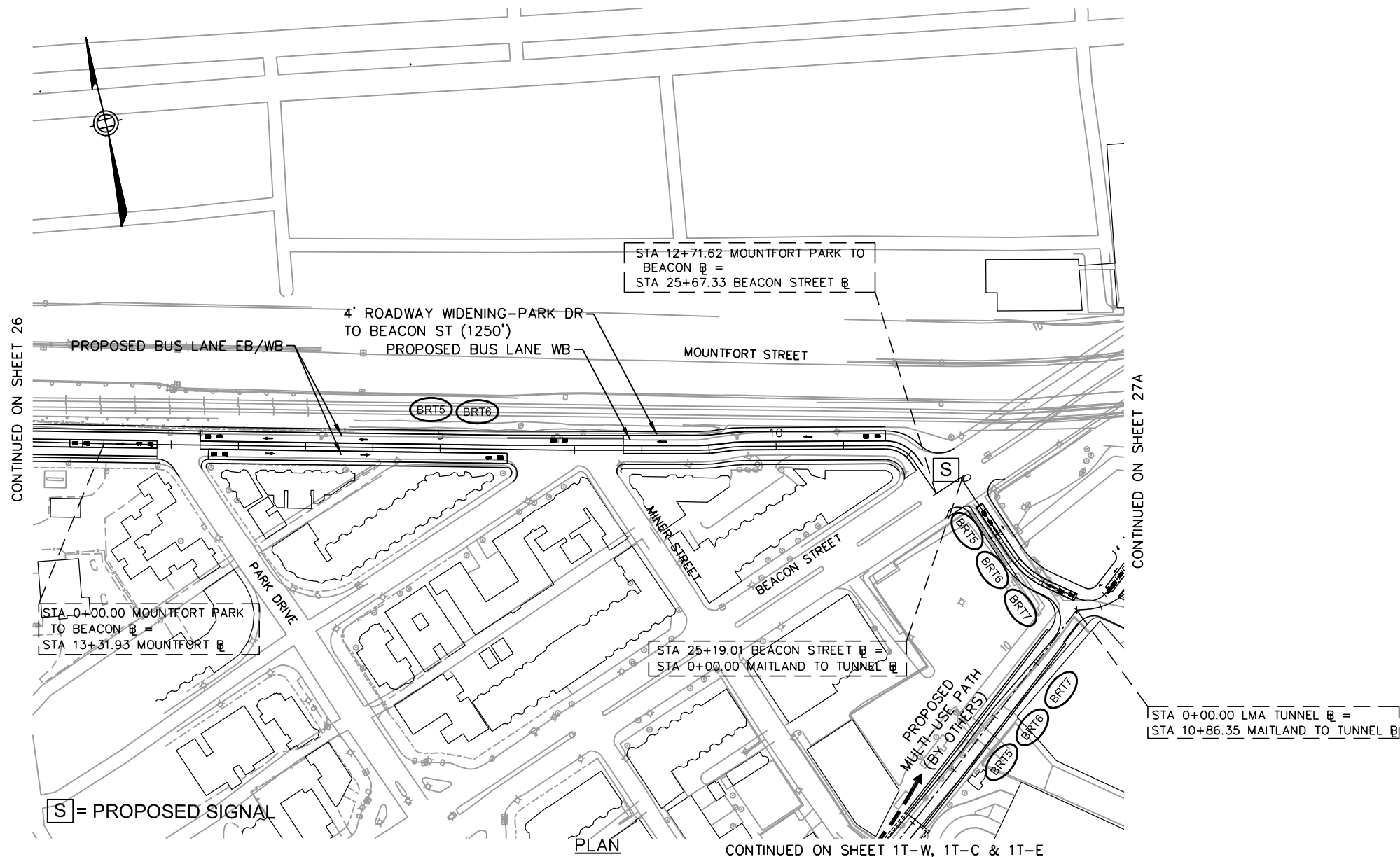
PLAN

[S] = PROPOSED SIGNAL  
 [S with circle] = EXISTING SIGNAL UPGRADED

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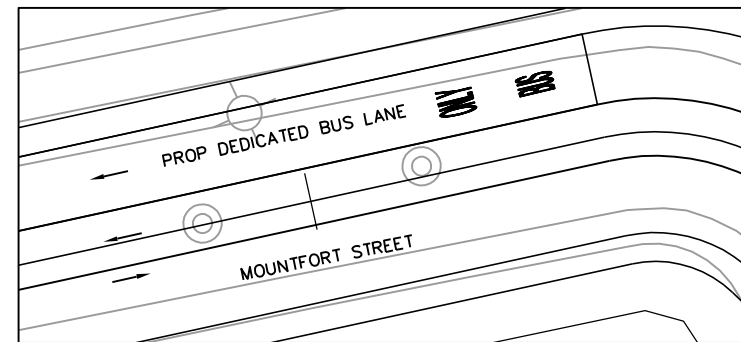


|          |             |      |          |                          |                       |           |                                    |   |       |  |                                    |
|----------|-------------|------|----------|--------------------------|-----------------------|-----------|------------------------------------|---|-------|--|------------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |           | EXECUTIVE OFFICE OF TRANSPORTATION | THE URBAN RING PHASE 2 RDEIR/DEIS                 | TITLE | URBAN RING PHASE 2<br>PLAN - MOUNTFORT STREET, BROOKLINE<br>BU BRIDGE, COMMONWEALTH AVENUE<br>BUS RAPID TRANSIT ROUTES 5 & 6 | SHEET NO.<br>26A                   |
|          |             |      |          | DRAWN BY<br>JAD          | SCALE<br>AS NOTED     |           |                                    |   |       |  | CONTRACT NO.<br>97713              |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              | EarthTech |                                    | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |       |  | DRAWING NO.<br>97713-RDEIR-sht-26A |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD       |                       |           |                                    |   |       |  |                                    |



TYPICAL DETAIL - MOUNTFORT STREET EB/WB

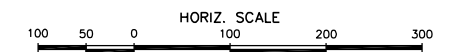
SCALE: 1"=20'



TYPICAL DETAIL - MOUNTFORT STREET WB

SCALE: 1"=20'

**PRELIMINARY  
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COPY**



HALF-SIZE IF 11" X 17"

| REVISION | DESCRIPTION                                 | DATE   | APPROVED |
|----------|---|--------|----------|
| 1        | REVISED TUNNEL PORTAL LOCATION AND BASELINE | NOV/08 |          |

|             |            |          |               |
|-------------|------------|----------|---------------|
| DESIGNED BY | WPM        | DATE     | NOVEMBER 2008 |
| DRAWN BY    | JAD/JAB    | SCALE    | AS NOTED      |
| CHECKED BY  | WPM/PSC/AS | REVISION |               |
| APPROVED BY | JAD        |          |               |

**EOT** EXECUTIVE OFFICE OF TRANSPORTATION

**EarthTech** EARTH TECH  
300 BAKER AVENUE, CONCORD, MA 01742

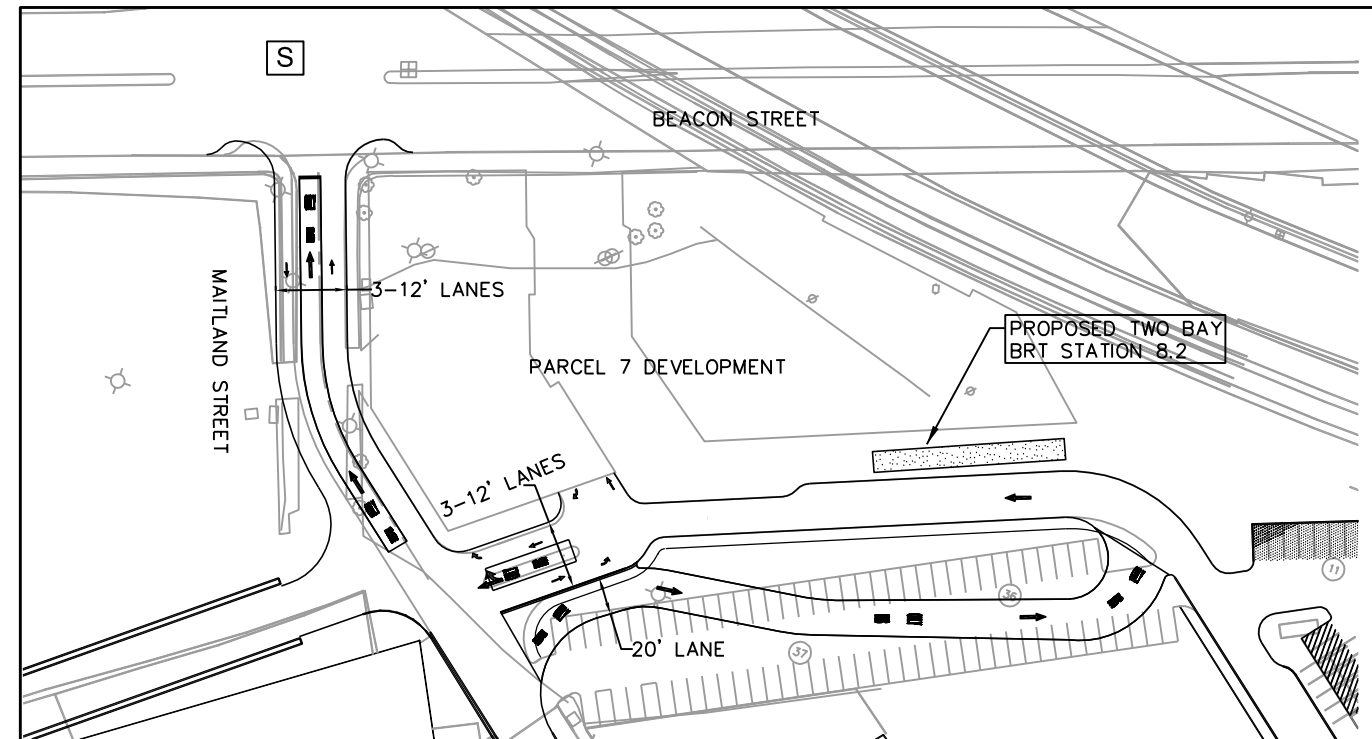
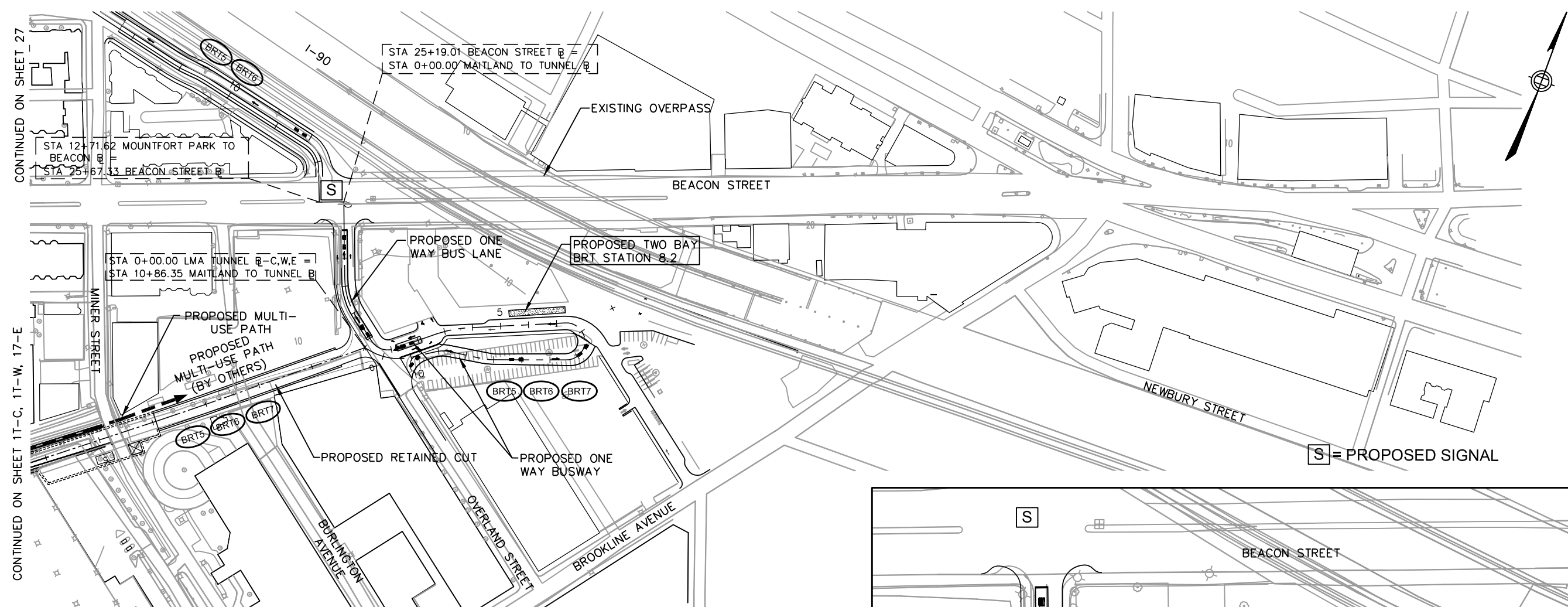
THE URBAN RING  
PHASE 2  
RDEIR/DEIS

TITLE

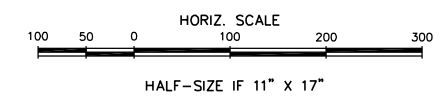
URBAN RING PHASE 2  
PLAN - MOUNTFORT STREET, BROOKLINE AVENUE, BOSTON  
MOUNTFORT STREET TO FENWAY  
BUS RAPID TRANSIT ROUTES 5, 6 & 7

|              |                    |
|--------------|--------------------|
| SHEET NO.    | 27                 |
| CONTRACT NO. | 97713              |
| DRAWING NO.  | 97713-RDEIR-sht-27 |



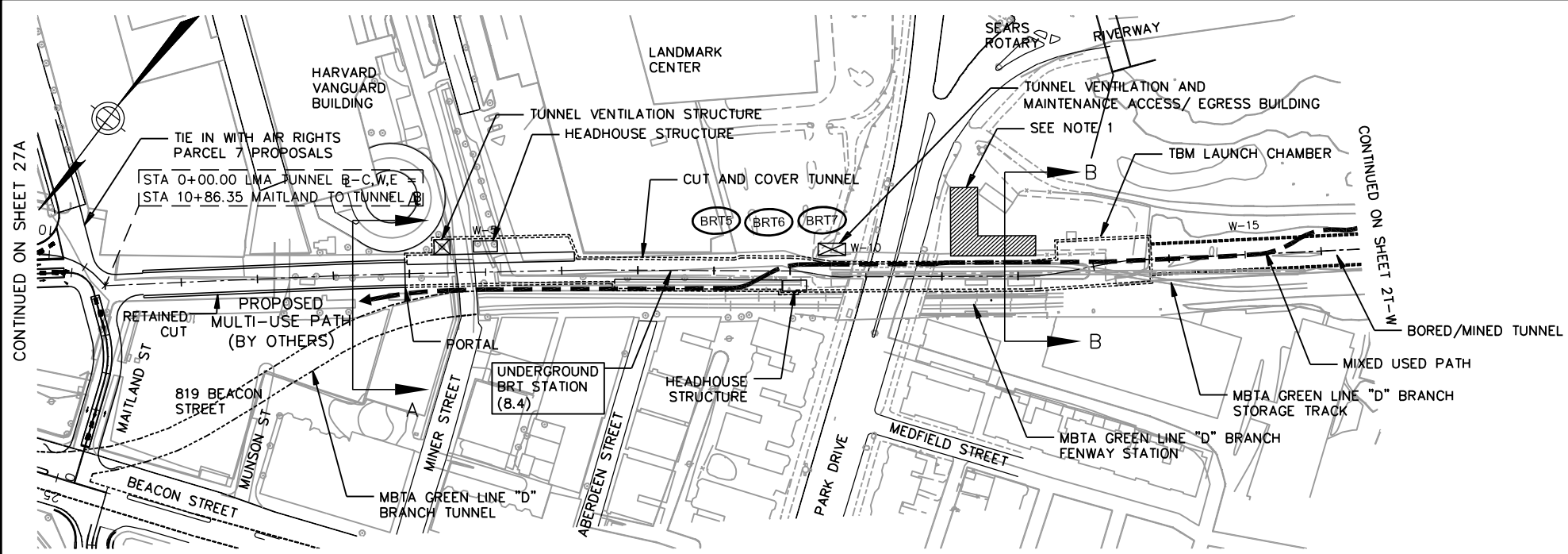


**PRELIMINARY DRAFT COPY**

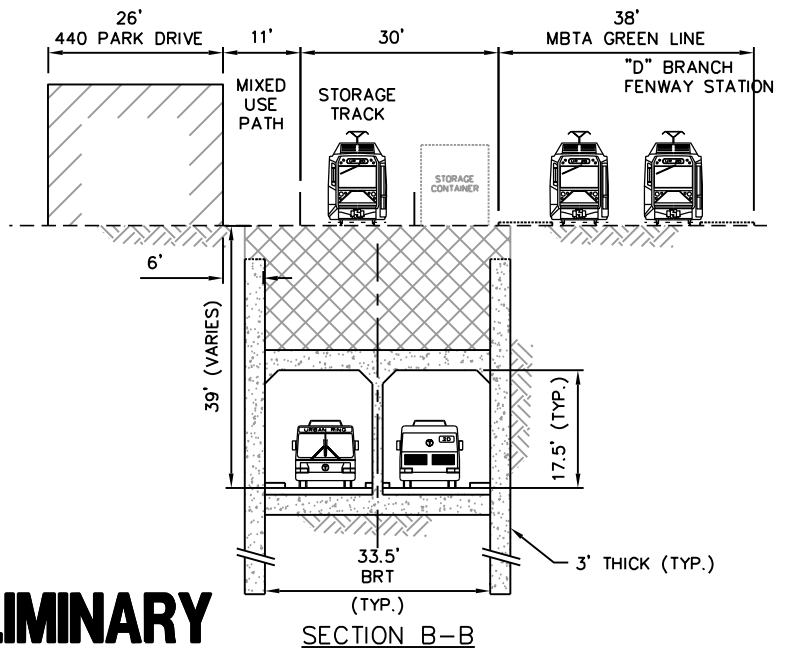
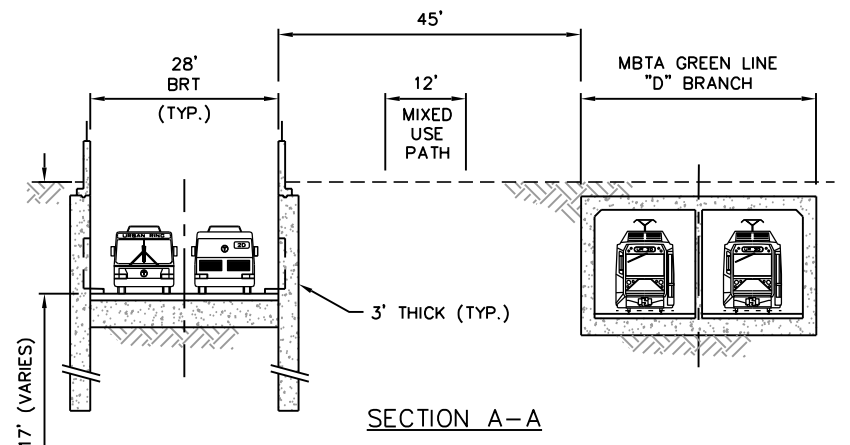
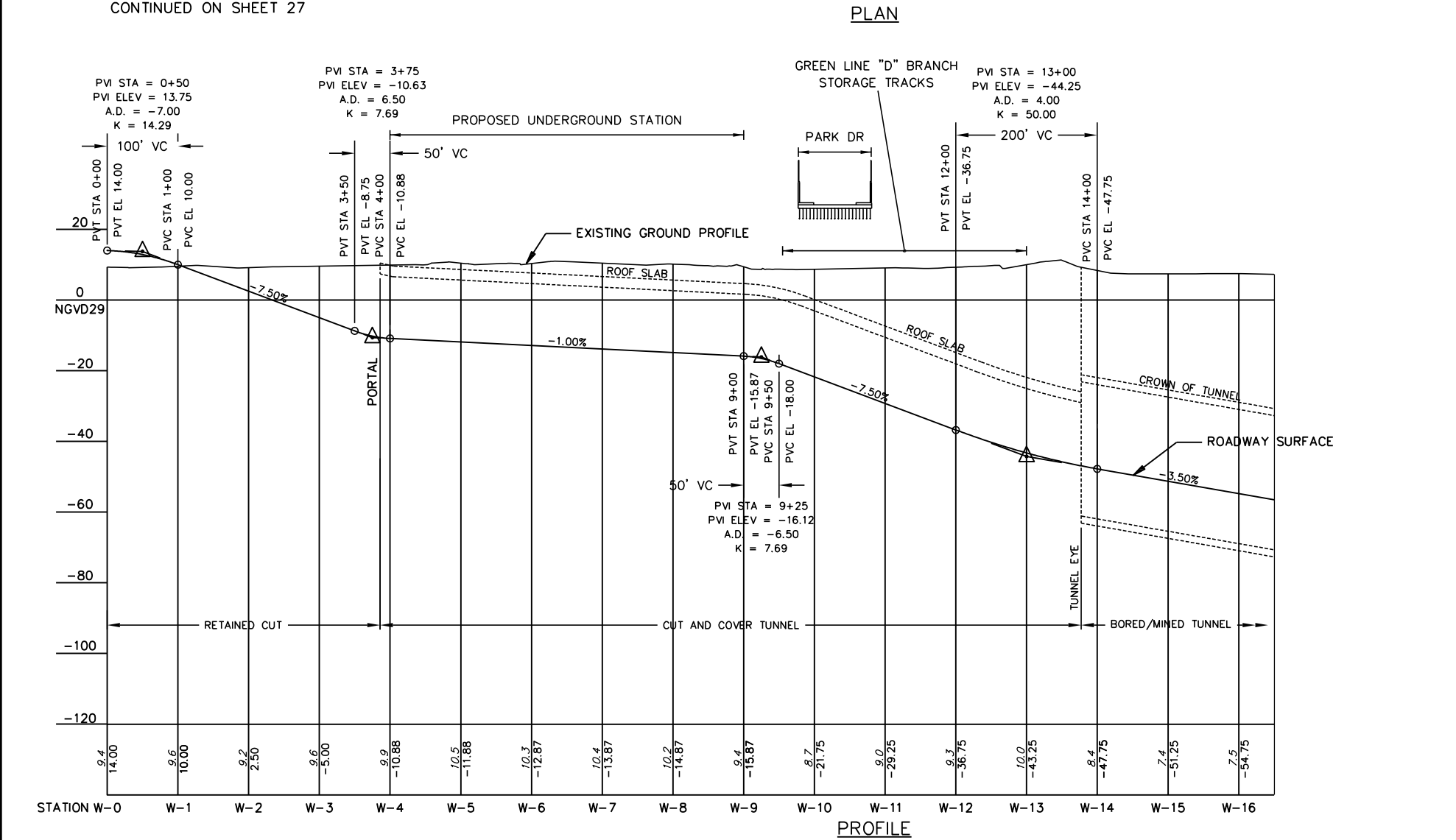


|                          |                       |  |   |   |                                    |
|--------------------------|-----------------------|--|---|---|------------------------------------|
| DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | EXECUTIVE OFFICE OF TRANSPORTATION<br><br><b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE                                       | SHEET NO.                          |
| DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |  |   | URBAN RING PHASE 2<br>PLAN - YAWKEY, BOSTON | 27A                                |
| CHECKED BY<br>WPM/PSC/AS | REVISION              |  |   | BUS RAPID TRANSIT ROUTE 5,6,7               | CONTRACT NO.<br>97713              |
| APPROVED BY<br>JAD       |                       |  |   |   | DRAWING NO.<br>97713-RDEIR-sht-27A |
| REV 1                    | REVISED PARCEL 7      | NOV-08   | JAD                                     |   |                                    |
| REVISION                 | DESCRIPTION           | DATE   | APPROVED                                |   |                                    |

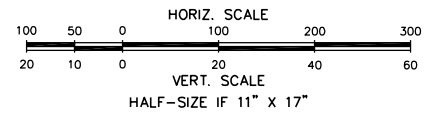




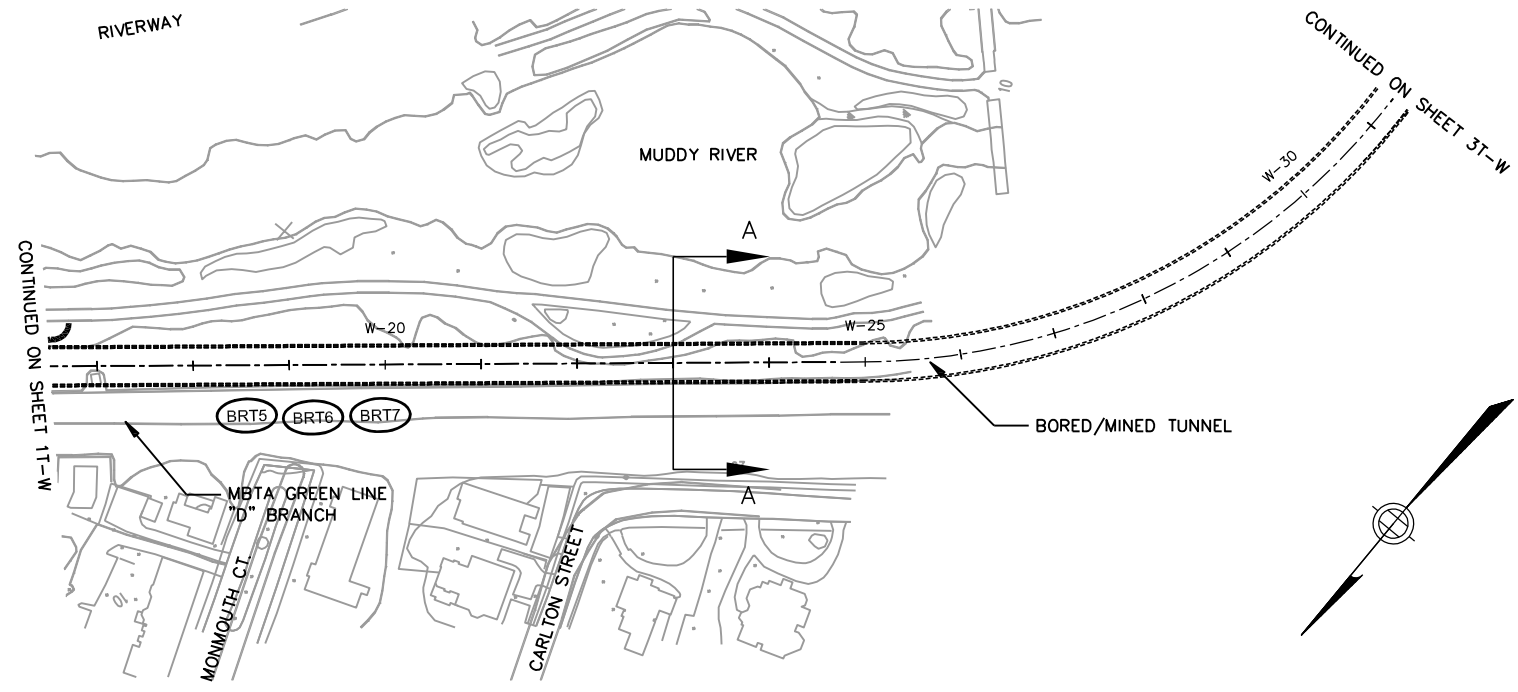
- NOTE:
1. THE RIVERWAY ADMINISTRATION BUILDING AT 440 PARK DRIVE IS LOCATED WITHIN A NATIONAL REGISTER HISTORIC DISTRICT AND IS LISTED AS A LOCAL LANDMARK. EARTH SUPPORT SYSTEMS IN CLOSE PROXIMITY TO THIS BUILDING SHALL BE DESIGNED TO ENSURE THAT POTENTIAL GROUND MOVEMENTS ARE KEPT WITHIN ACCEPTABLE LIMITS TO AVOID DAMAGE. TEMPORARY DISPLACEMENT OF SOME OUTDOOR FUNCTIONS ASSOCIATED WITH THIS BUILDING WILL BE REQUIRED DURING CONSTRUCTION.
  2. TOP OF ROCK SURFACE IS BELOW EL. -120. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
  3. MBTA GREEN LINE "D" BRANCH FENWAY STATION TO REMAIN OPEN DURING CONSTRUCTION. TEMPORARY CHANGES TO PLATFORMS AND STATION ACCESS WILL BE REQUIRED.
  4. MBTA GREEN LINE "D" BRANCH STORAGE TRACK TO BE TEMPORARILY DISPLACED DURING CONSTRUCTION AND RESTORED ON COMPLETION OF CONSTRUCTION.
  5. EXISTING AND PLANNED MIXED USE PATH BETWEEN PARK DRIVE AND MINER STREET WILL BE TEMPORARILY RELOCATED DURING CONSTRUCTION AND RESTORED ON COMPLETION OF CONSTRUCTION.
  6. TOE ELEVATION OF RETAINING WALLS AND THE NEED FOR PERMANENT TIEBACKS WILL BE DETERMINED IN FUTURE PHASES OF DESIGN.
  7. SIZE AND LOCATION OF VENT BUILDING ARE SUBJECT TO FURTHER ENGINEERING AND ANALYSIS OF TUNNEL VENTILATION REQUIREMENTS.



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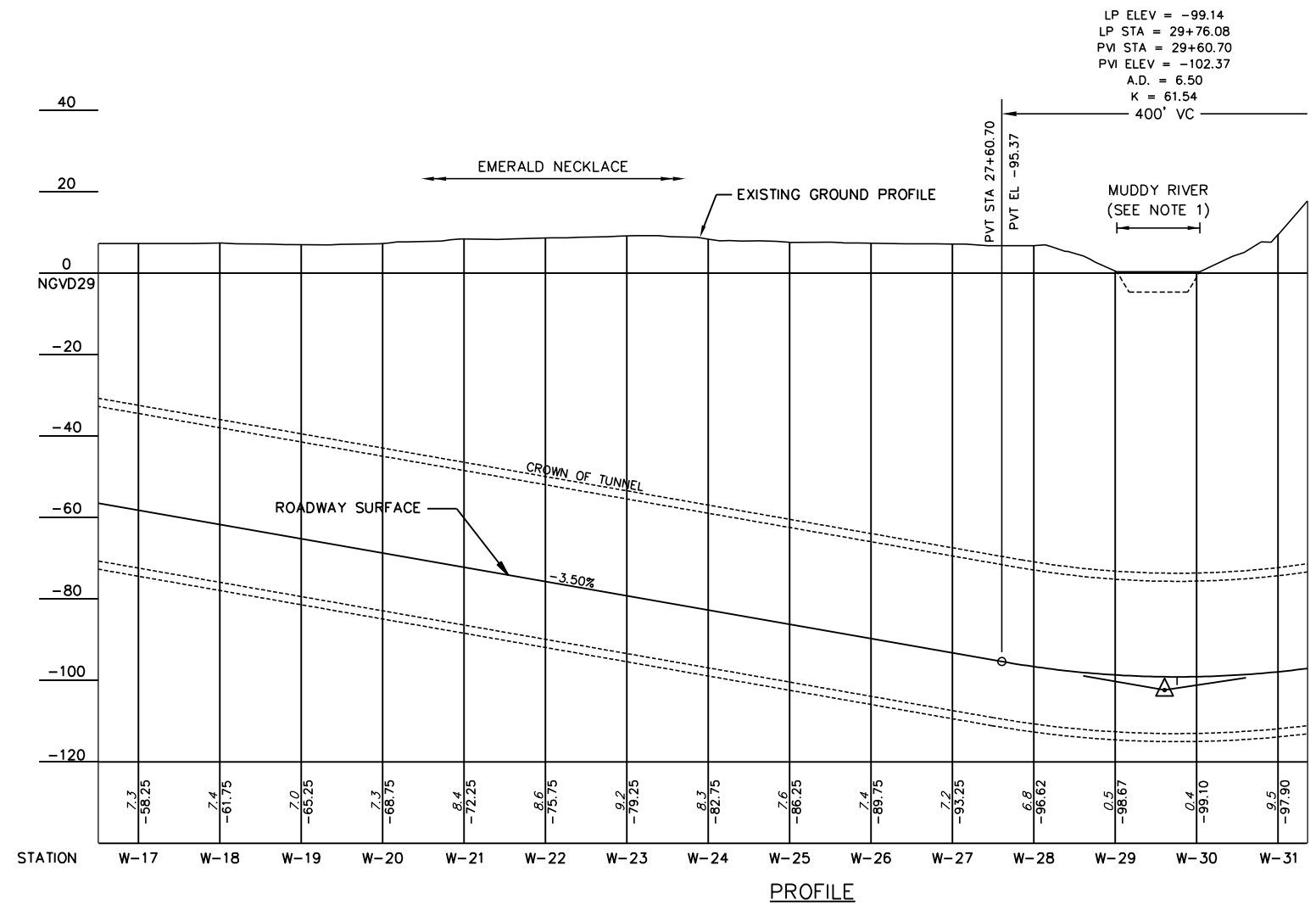


|   |                       |  |                                   |  |  |
|---|-----------------------|--|-----------------------------------|--|--|
| DESIGNED BY<br>DMW                              | DATE<br>NOVEMBER 2008 | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL (WESTERN)<br>STA W-0+00 - STA W-16+50 | SHEET NO.<br>1T-W                          |
| DRAWN BY<br>DJ                                  | SCALE<br>AS NOTED     |  |                                   |  | CONTRACT NO.<br>97713                      |
| CHECKED BY<br>JD                                | REVISION<br>A3        | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |  | DRAWING NO.<br>RDEIR-H2TW-100-sh101_03.dwg |
| APPROVED BY<br>ST                               |                       |  |                                   |  |  |
| A3 UNDERGROUND STATION ADDED AT LANDMARK CENTER | NOV/08                |  |                                   |  |  |
| REVISION  | DESCRIPTION           | DATE   | APPROVED                          |  |  |

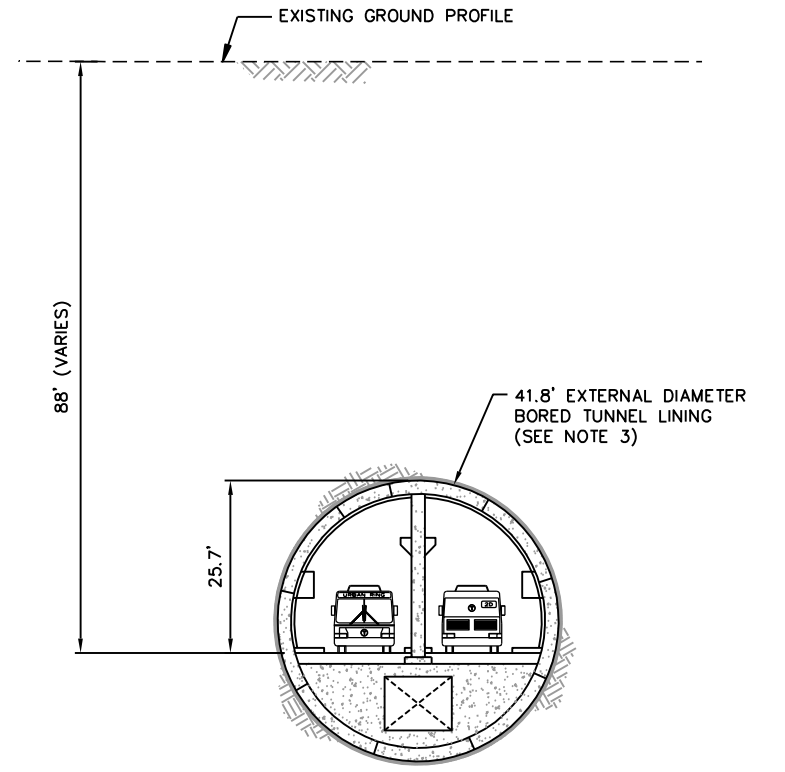


PLAN

- NOTE:
1. APPROXIMATE DEPTH OF MUDDY RIVER INFERRED FROM AVAILABLE USACE DRAWINGS FOR MUDDY RIVER RESTORATION PROJECT (50% SUBMISSION, MARCH 2007).
  2. TOP OF ROCK SURFACE IS BELOW EL. -120. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
  3. THE CURRENT CONCEPT IS BASED ON THE USE OF A TUNNEL BORING MACHINE FOR TUNNEL CONSTRUCTION. THE CONSTRUCTION METHODOLOGY WILL NEED FURTHER ASSESSMENT ONCE A PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM HAS BEEN UNDERTAKEN.

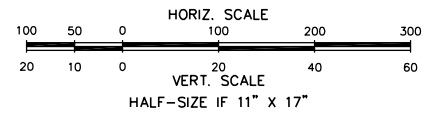


PROFILE

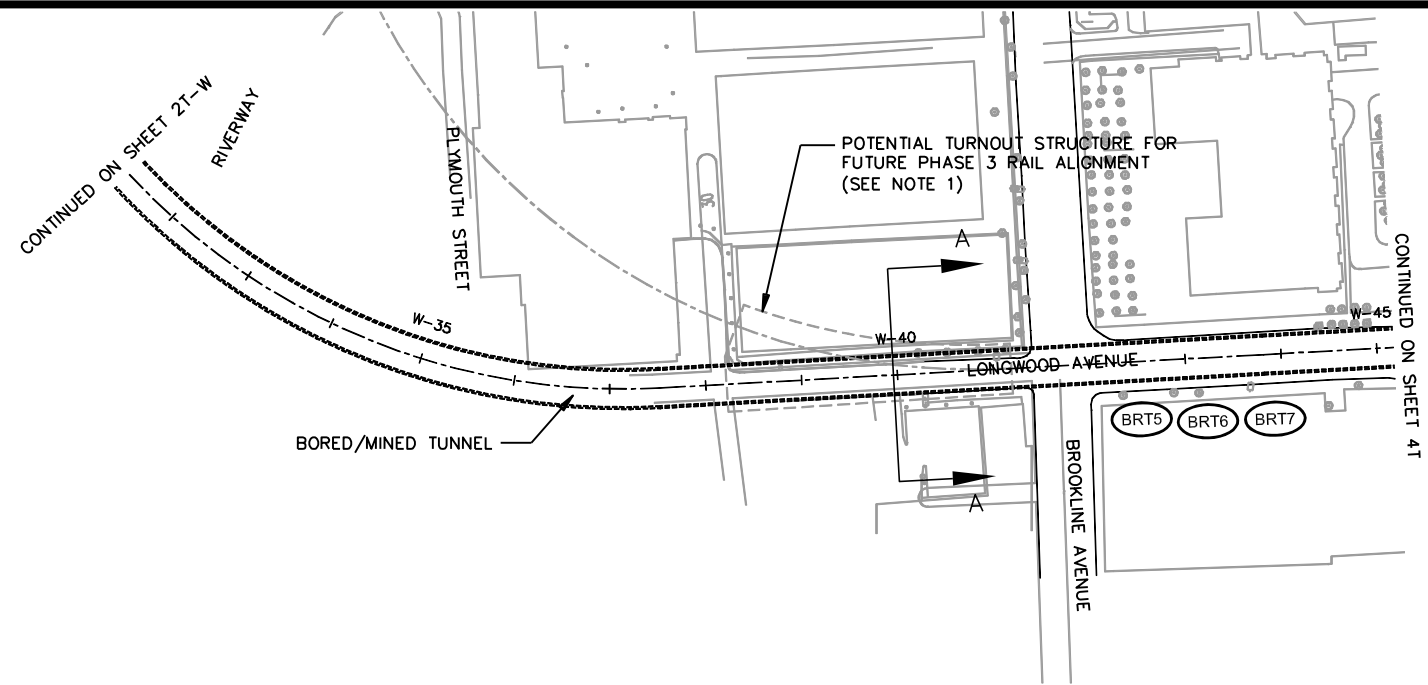
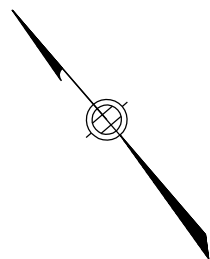


SECTION A-A

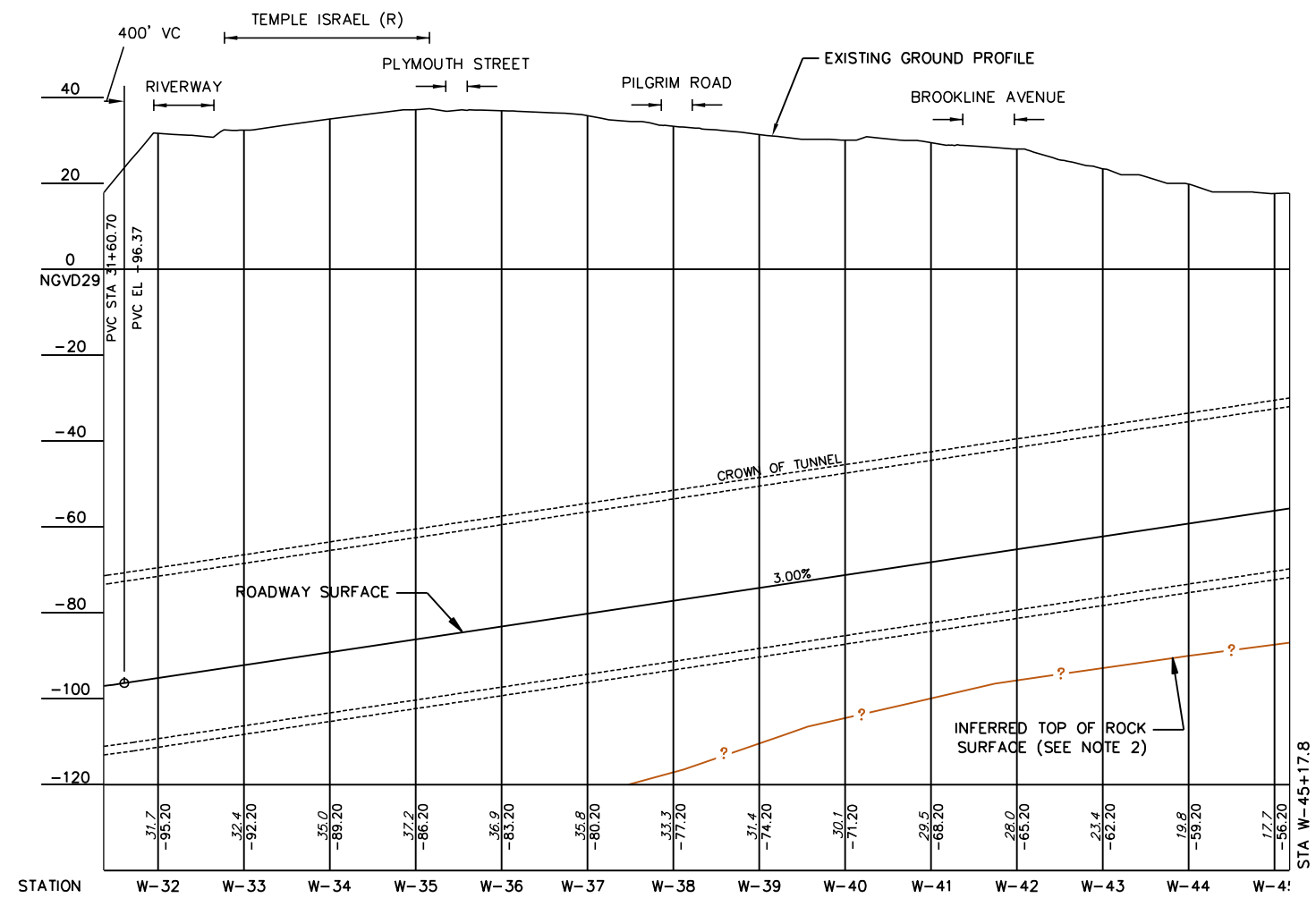
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|--------------------|-------------|-----------------------|----------|--|-----------------------------------|---|--|
| DESIGNED BY<br>DMW |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL (WESTERN)<br>STA W-16+50 - STA W-31+36.5 | SHEET NO.<br>2T-W                          |
| DRAWN BY<br>DJ     |             | SCALE<br>AS NOTED     |          |  |                                   |   |  |
| CHECKED BY<br>JD   |             | REVISION<br>A3        |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |   | CONTRACT NO.<br>97713                      |
| APPROVED BY<br>ST  |             |                       |          |  |                                   |   | DRAWING NO.<br>RDEIR-H2TW-100-sh101_03.dwg |
| REVISION           | DESCRIPTION | DATE                  | APPROVED |  |                                   |   |  |



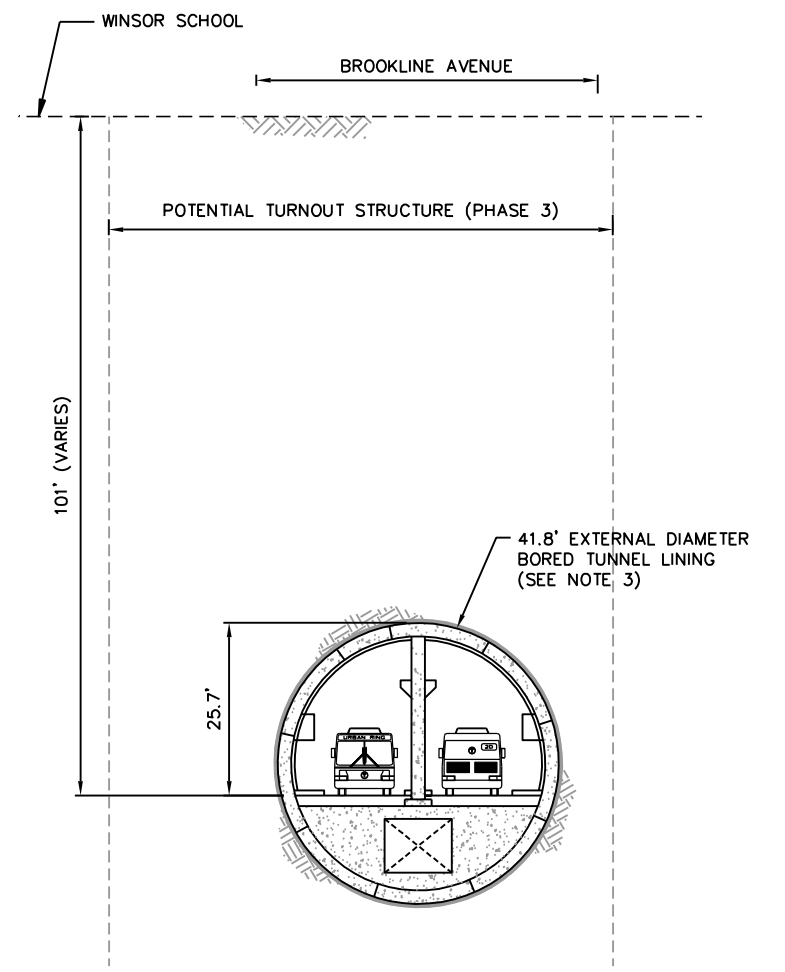
PLAN



PROFILE

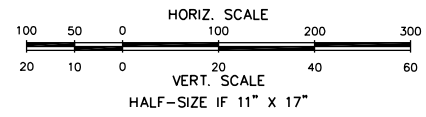
NOTE:

1. TURNOUT STRUCTURE COULD BE BUILT DURING PHASE 2 CONSTRUCTION OR ALTERNATIVELY PROVISIONS CAN BE MADE IN PHASE 2 TO ALLOW FUTURE CONSTRUCTION OF THE TURNOUT.
2. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
3. THE CURRENT CONCEPT IS BASED ON THE USE OF A TUNNEL BORING MACHINE FOR TUNNEL CONSTRUCTION. THE CONSTRUCTION METHODOLOGY WILL NEED FURTHER ASSESSMENT ONCE A PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM HAS BEEN UNDERTAKEN.

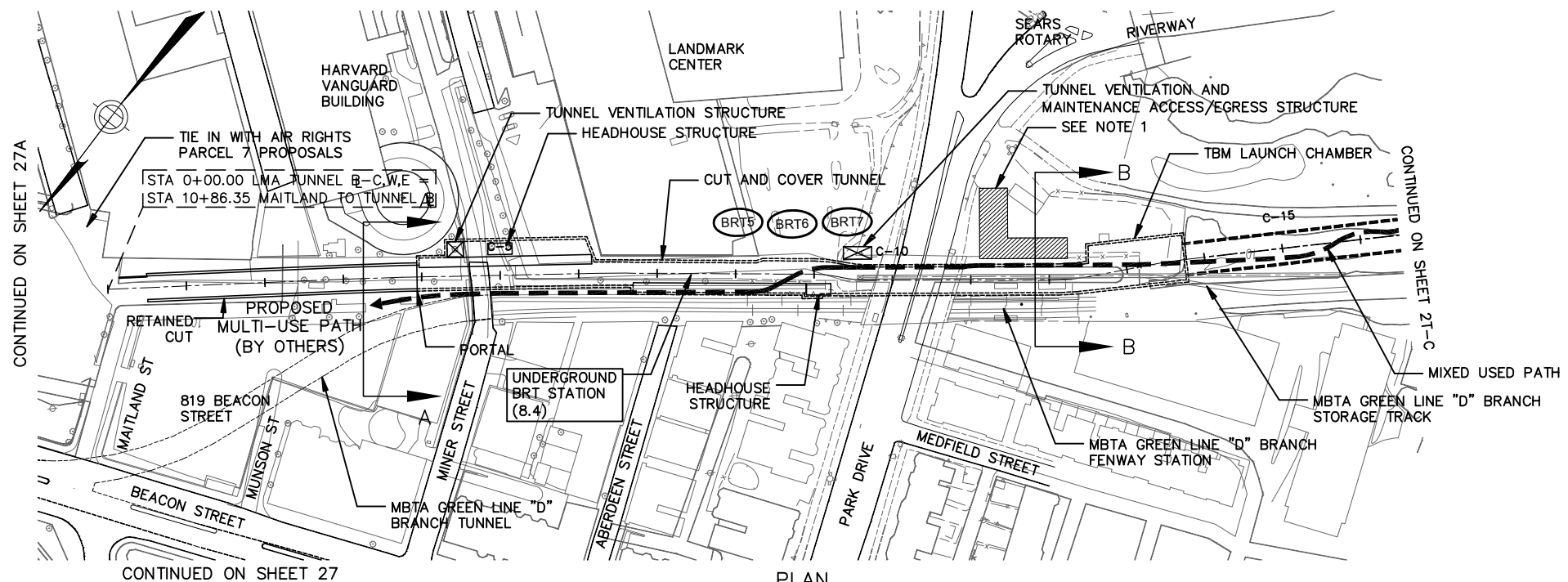


SECTION A-A

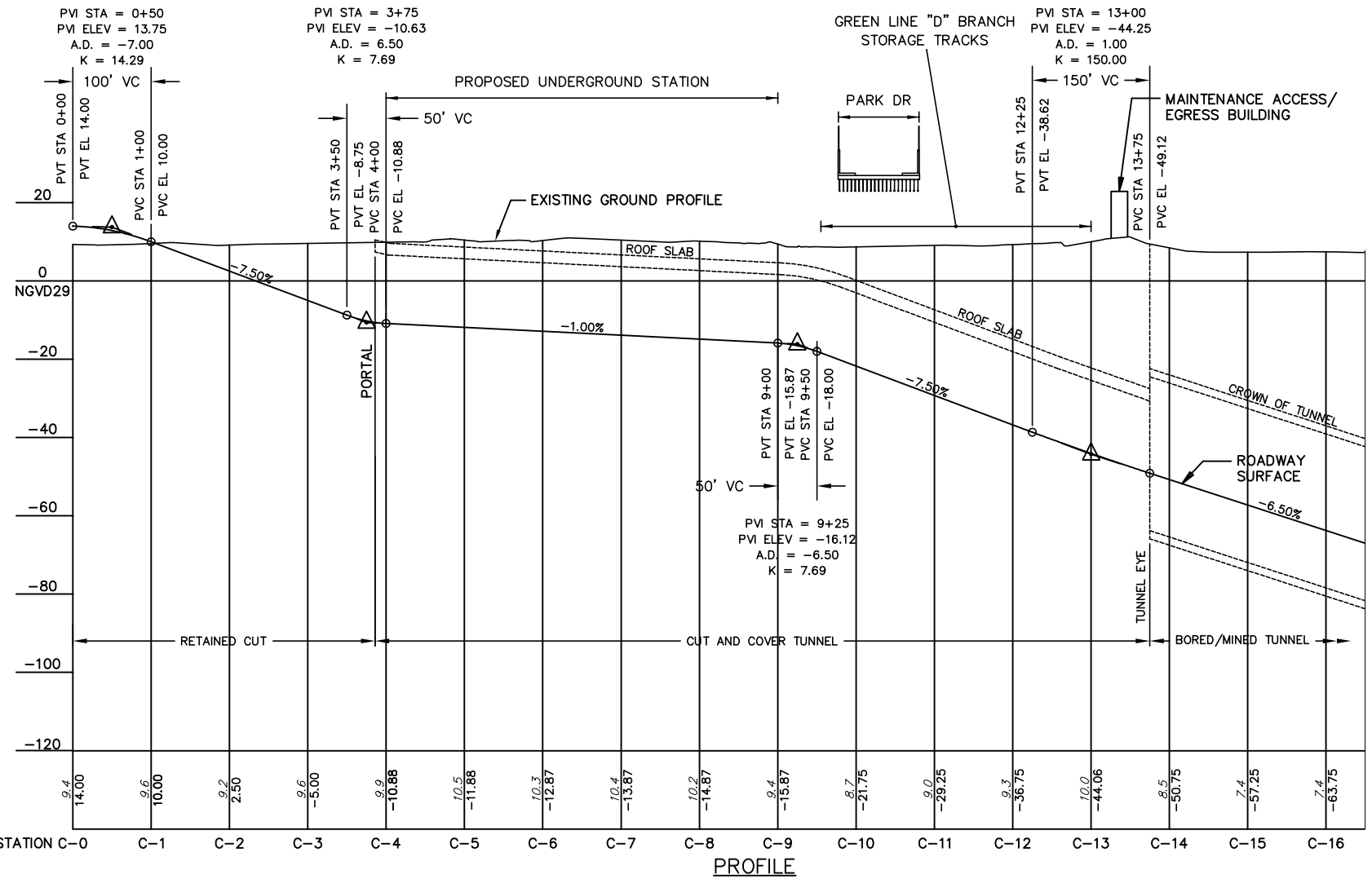
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COPY**



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|--------------------|--|-----------------------|----------|--|--|-------|--|--|
| DESIGNED BY<br>DMW |  | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2<br>LMA TUNNEL (WESTERN)<br>RDEIR/DEIS | TITLE | URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL (WESTERN)<br>STA W-31+36.5 - STA W-45+17.8 | SHEET NO.<br>3T-W                          |
| DRAWN BY<br>DJ     |  | SCALE<br>AS NOTED     |          |  |  |       |  |  |
| CHECKED BY<br>JD   |  | REVISION<br>A3        |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |  |       |  | CONTRACT NO.<br>97713                      |
| APPROVED BY<br>ST  |  |                       |          |  |  |       |  | DRAWING NO.<br>RDEIR-H2TW-100-sh101_03.dwg |
| REVISION           | DESCRIPTION                                  | DATE                  | APPROVED |  |  |       |  |  |
| A3                 | UNDERGROUND STATION ADDED AT LANDMARK CENTER | NOV/08                |          |  |  |       |  |  |



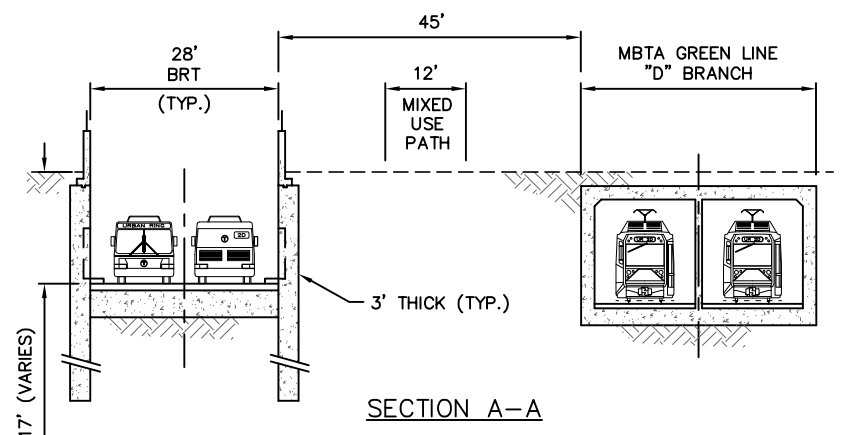
PLAN



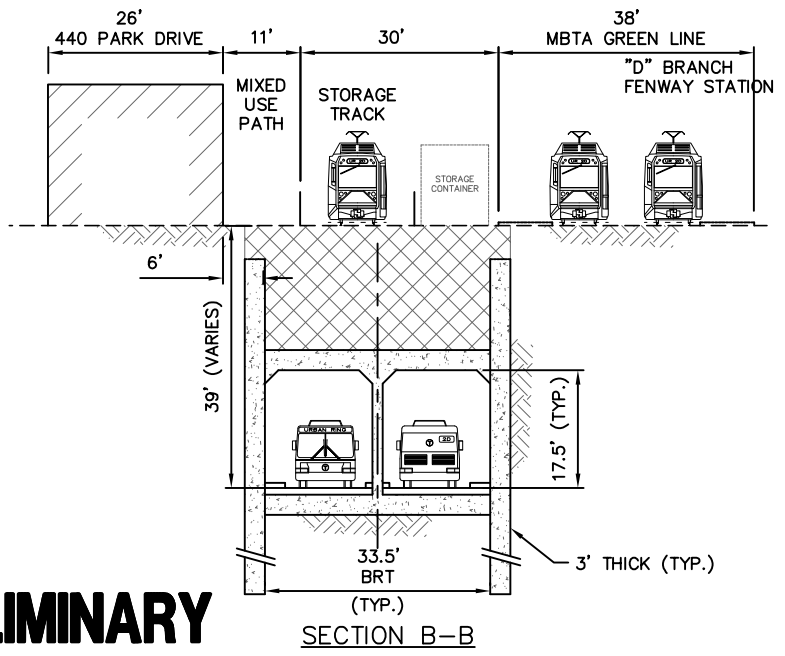
PROFILE

NOTE:

1. THE RIVERWAY ADMINISTRATION BUILDING AT 440 PARK DRIVE IS LOCATED WITHIN A NATIONAL REGISTER HISTORIC DISTRICT AND IS LISTED AS A LOCAL LANDMARK. EARTH SUPPORT SYSTEMS IN CLOSE PROXIMITY TO THIS BUILDING SHALL BE DESIGNED TO ENSURE THAT POTENTIAL GROUND MOVEMENTS ARE KEPT WITHIN ACCEPTABLE LIMITS TO AVOID DAMAGE. TEMPORARY DISPLACEMENT OF SOME OUTDOOR FUNCTIONS ASSOCIATED WITH THIS BUILDING WILL BE REQUIRED DURING CONSTRUCTION.
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3. MBTA GREEN LINE "D" BRANCH FENWAY STATION TO REMAIN OPEN DURING CONSTRUCTION. TEMPORARY CHANGES TO PLATFORMS AND STATION ACCESS WILL BE REQUIRED.
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5. EXISTING AND PLANNED MIXED USE PATH BETWEEN PARK DRIVE AND MINER STREET WILL BE TEMPORARILY RELOCATED DURING CONSTRUCTION AND RESTORED ON COMPLETION OF CONSTRUCTION.
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7. SIZE AND LOCATION OF VENT BUILDING ARE SUBJECT TO FURTHER ENGINEERING AND ANALYSIS OF TUNNEL VENTILATION REQUIREMENTS.

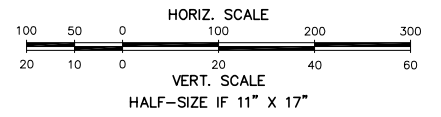


SECTION A-A

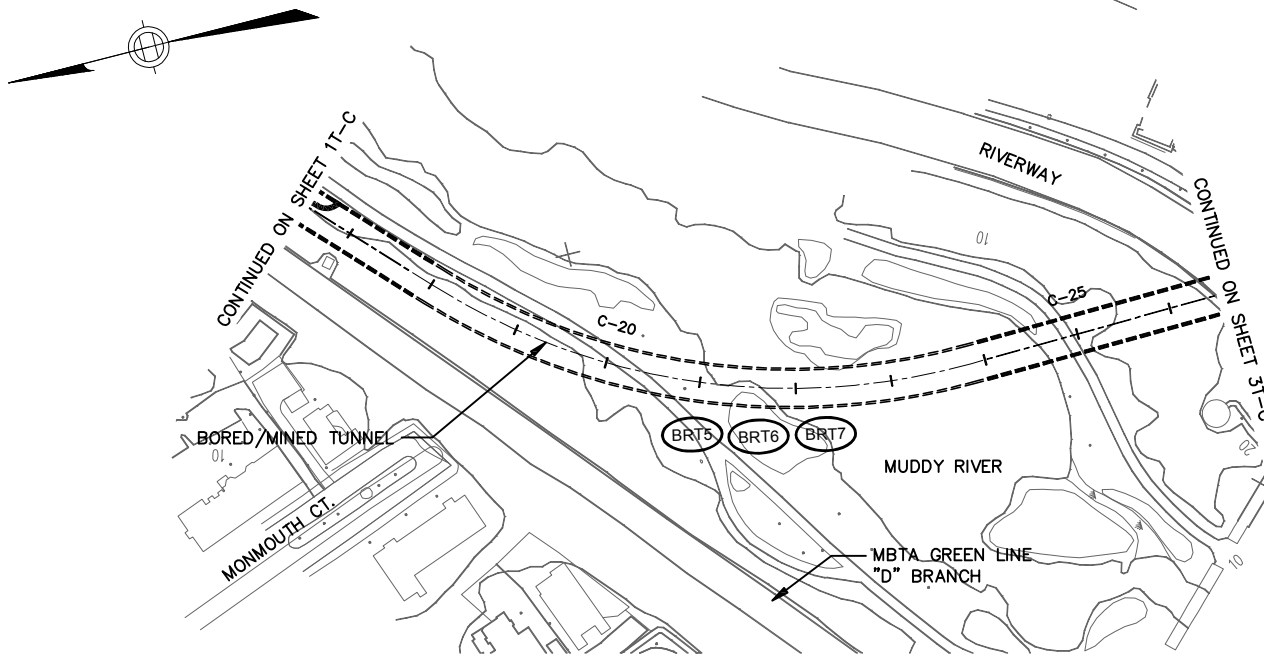


SECTION B-B

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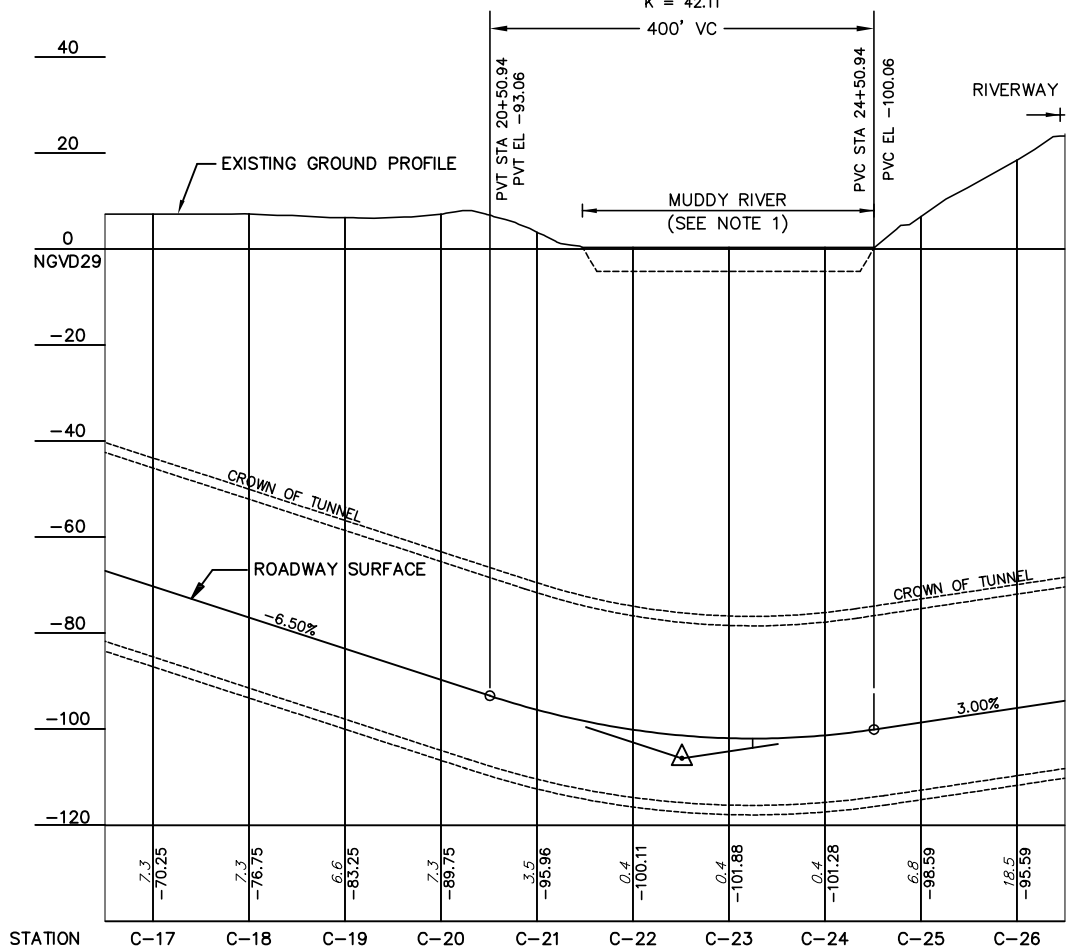


|                    |   |  |                                   |  |  |
|--------------------|---|--|-----------------------------------|--|--|
| DESIGNED BY<br>DMW | DATE<br>NOVEMBER 2008                                       | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL (CENTRAL)<br>STA C-0+00 - STA C-16+50 | SHEET NO.<br>1T-C                          |
| DRAWN BY<br>DJ     | SCALE<br>AS NOTED   |  |                                   |  | CONTRACT NO.<br>97713                      |
| CHECKED BY<br>JD   | REVISION<br>A3  | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |  | DRAWING NO.<br>RDEIR-H2TC-100-sht01_03.dwg |
| APPROVED BY<br>ST  |   |  |                                   |  |  |
| REVISION<br>A3     | DESCRIPTION<br>UNDERGROUND STATION ADDED AT LANDMARK CENTER | DATE<br>NOV/08   | APPROVED                          |  |  |



PLAN

LP ELEV = -101.96  
 LP STA = 23+24.63  
 PVI STA = 22+50.94  
 PVI ELEV = -106.06  
 A.D. = 9.50  
 K = 42.11

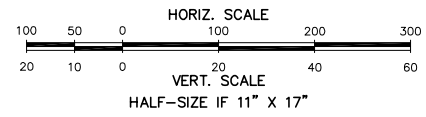


PROFILE

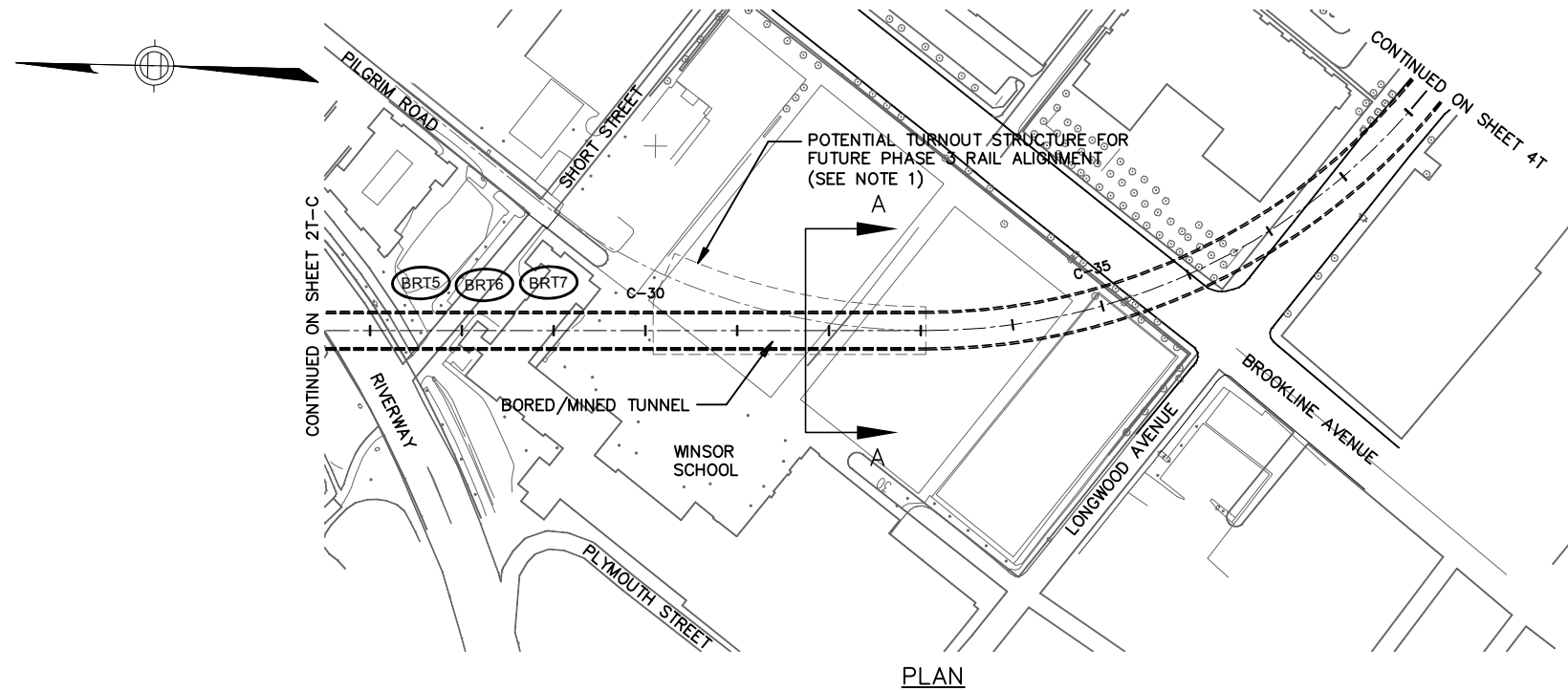
NOTE:

1. APPROXIMATE DEPTH OF MUDDY RIVER INFERRED FROM AVAILABLE USACE DRAWINGS FOR MUDDY RIVER RESTORATION PROJECT (50% SUBMISSION, MARCH 2007).
2. TOP OF ROCK SURFACE IS BELOW EL. -120. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
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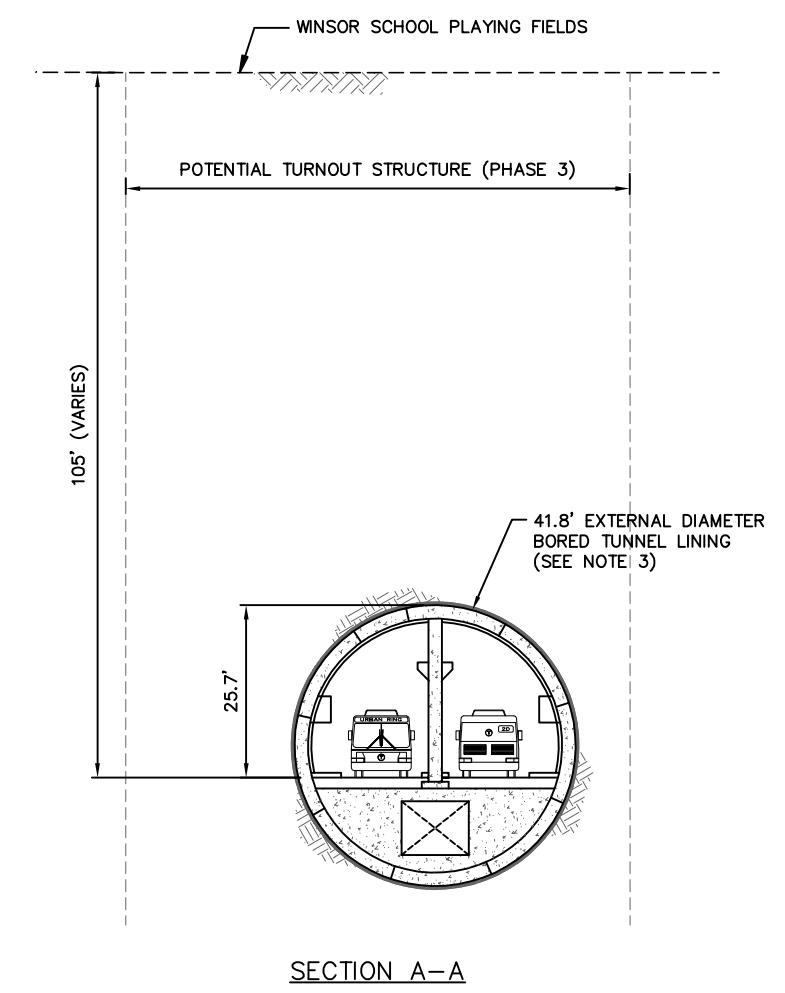
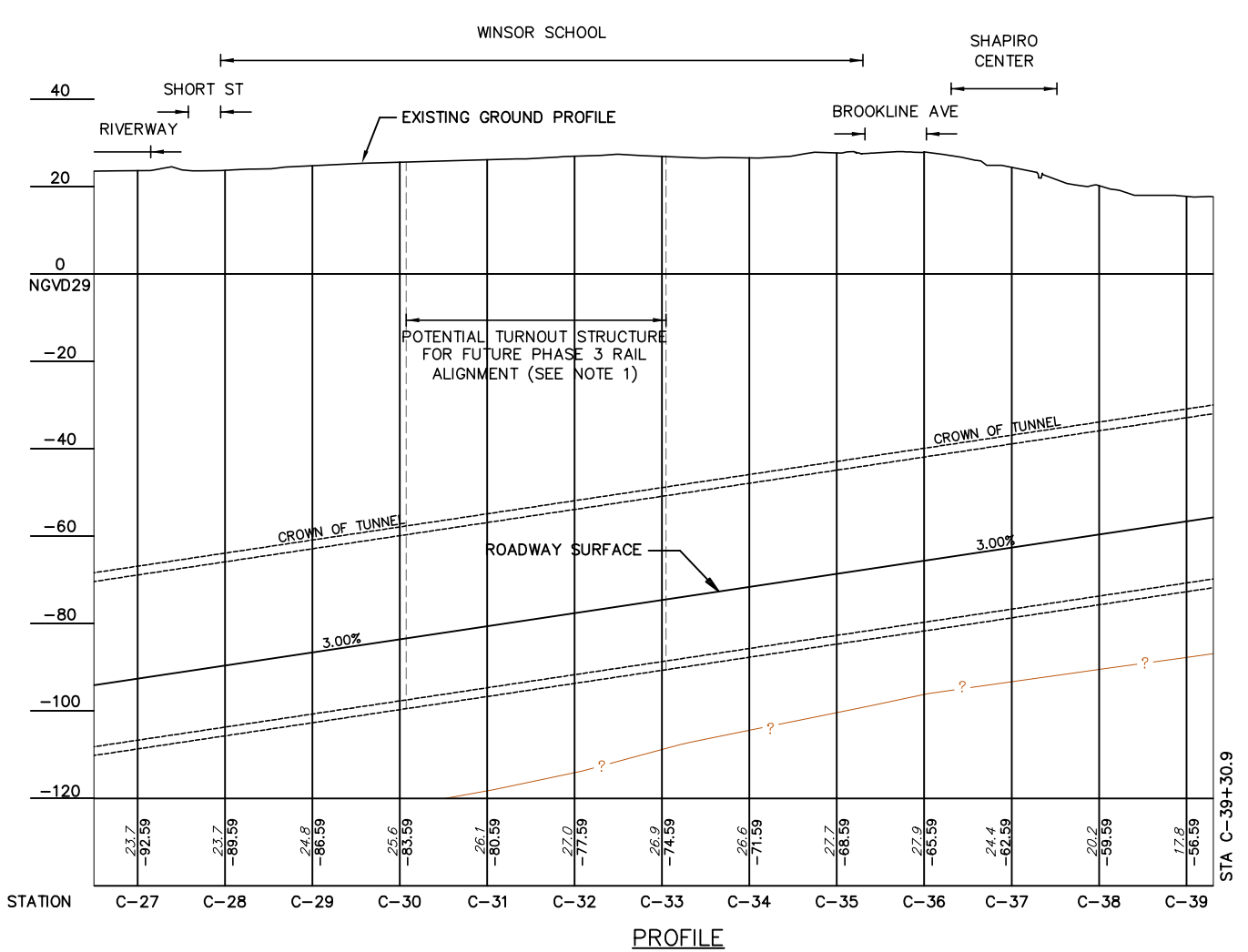
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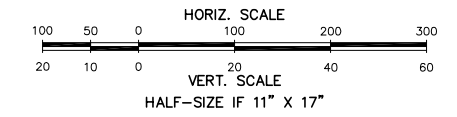
|                    |             |                       |          |  |   |   |  |  |  |
|--------------------|-------------|-----------------------|----------|--|---|---|--|--|--|
| DESIGNED BY<br>DMW |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL (CENTRAL)<br>STA C-16+50 - STA C-26+50 |  | SHEET NO.<br>2T-C                          |  |
| DRAWN BY<br>DJ     |             | SCALE<br>AS NOTED     |          |  |   |   |  | CONTRACT NO.<br>97713                      |  |
| CHECKED BY<br>JD   |             | REVISION<br>A3        |          |  |   |   |  | DRAWING NO.<br>RDEIR-H2TC-100-sht01_03.dwg |  |
| APPROVED BY<br>ST  |             | DATE<br>NOV/08        |          | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742      |   |   |  |  |  |
| REVISION           | DESCRIPTION | DATE                  | APPROVED |  |   |   |  |  |  |



- NOTE:
1. TURNOUT STRUCTURE COULD BE BUILT DURING PHASE 2 CONSTRUCTION OR ALTERNATIVELY PROVISIONS CAN BE MADE IN PHASE 2 TO ALLOW FUTURE CONSTRUCTION OF THE TURNOUT.
  2. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
  3. THE CURRENT CONCEPT IS BASED ON THE USE OF A TUNNEL BORING MACHINE FOR TUNNEL CONSTRUCTION. THE CONSTRUCTION METHODOLOGY WILL NEED FURTHER ASSESSMENT ONCE A PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM HAS BEEN UNDERTAKEN.

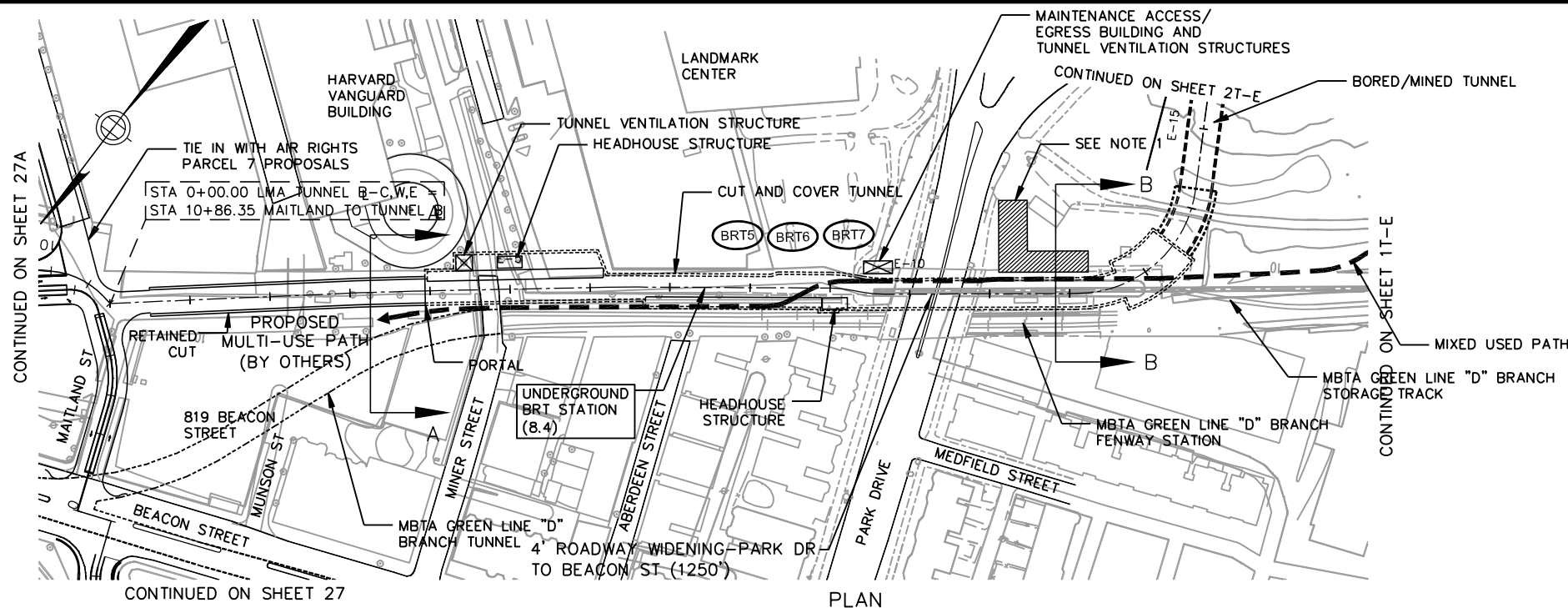


**PRELIMINARY  
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COPY**



|                    |             |                       |          |   |   |  |  |                       |  |
|--------------------|-------------|-----------------------|----------|---|---|--|--|-----------------------|--|
| DESIGNED BY<br>DMW |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION                | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE  |  | SHEET NO.<br>3T-C     |  |
| DRAWN BY<br>DJ     |             | SCALE<br>AS NOTED     |          |   |   | URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL (CENTRAL)<br>STA C-26+50 - STA C-39+30.9 |  | CONTRACT NO.<br>97713 |  |
| CHECKED BY<br>JD   |             | REVISION<br>A3        |          | <b>EarthTech</b><br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |  | DRAWING NO.<br>RDEIR-H2TC-100-sht01_03.dwg |                       |  |
| APPROVED BY<br>ST  |             |                       |          |   |   |  |  |                       |  |
| REVISION           | DESCRIPTION | DATE                  | APPROVED |   |   |  |  |                       |  |

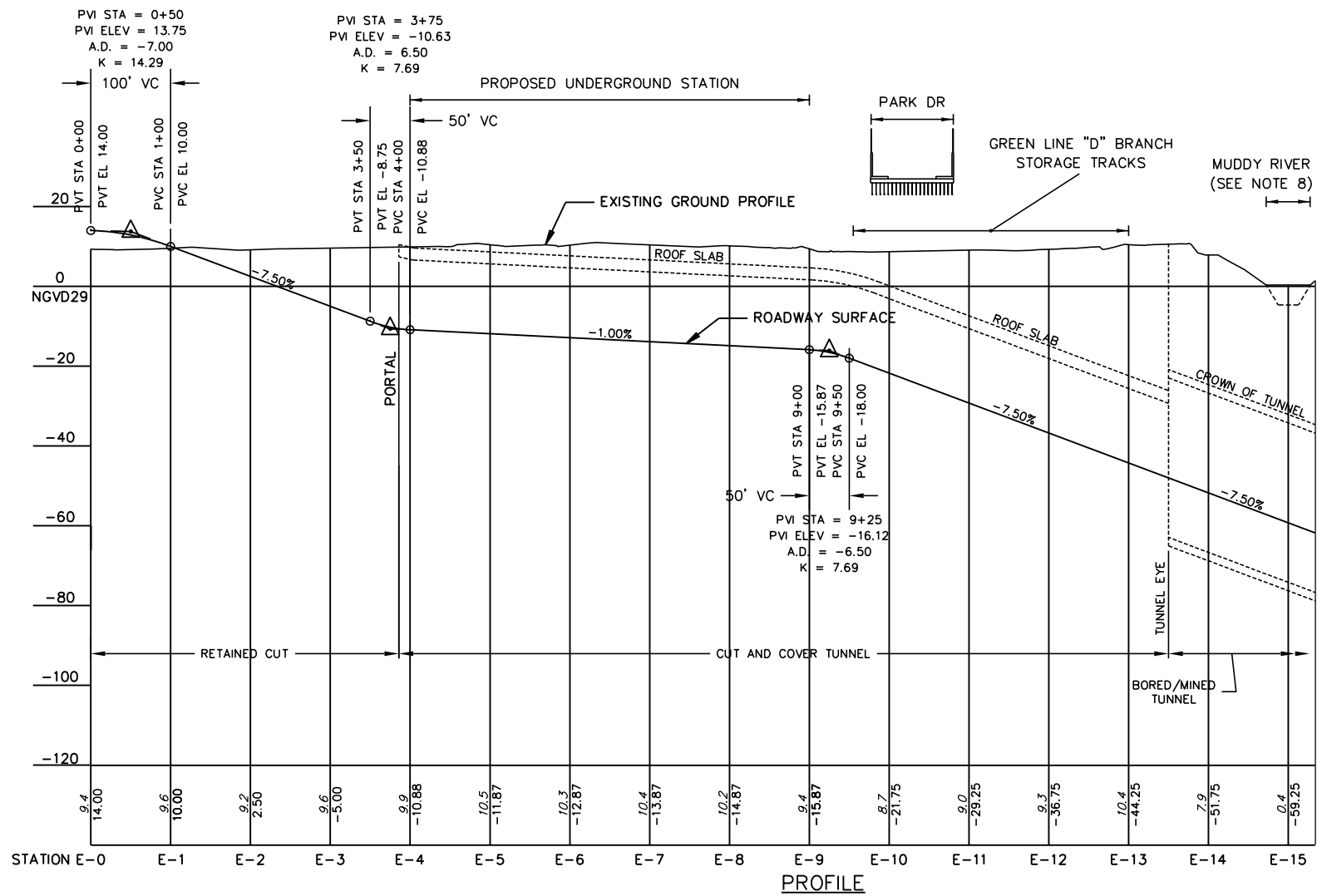




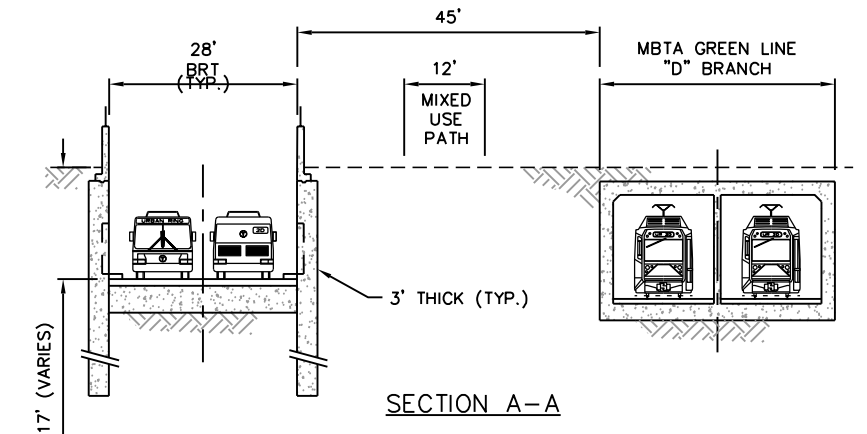
PLAN

NOTE:

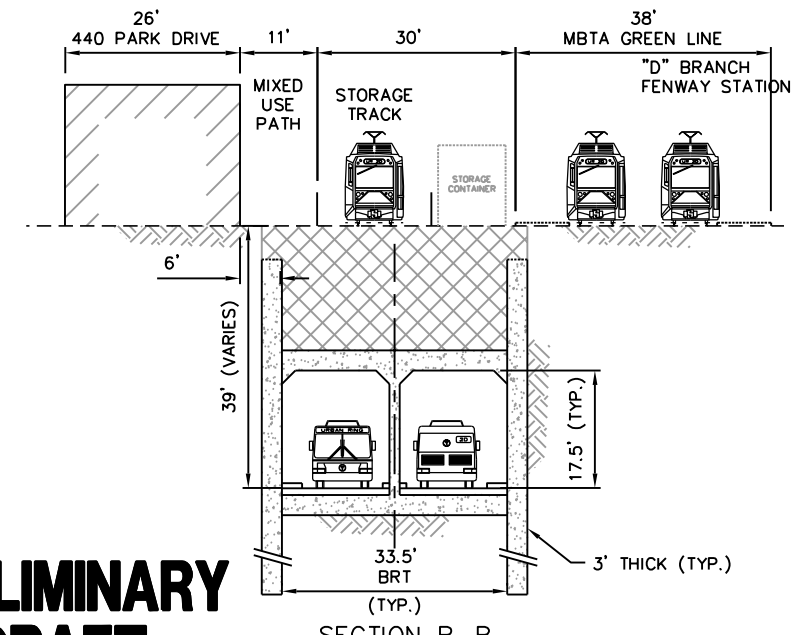
1. THE RIVERWAY ADMINISTRATION BUILDING AT 440 PARK DRIVE IS LOCATED WITHIN A NATIONAL REGISTER HISTORIC DISTRICT AND IS LISTED AS A LOCAL LANDMARK. EARTH SUPPORT SYSTEMS IN CLOSE PROXIMITY TO THIS BUILDING SHALL BE DESIGNED TO ENSURE THAT POTENTIAL GROUND MOVEMENTS ARE KEPT WITHIN ACCEPTABLE LIMITS TO AVOID DAMAGE. TEMPORARY DISPLACEMENT OF SOME OUTDOOR FUNCTIONS ASSOCIATED WITH THIS BUILDING WILL BE REQUIRED DURING CONSTRUCTION.
2. TOP OF ROCK SURFACE IS BELOW EL. -120. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
3. MBTA GREEN LINE "D" BRANCH FENWAY STATION TO REMAIN OPEN DURING CONSTRUCTION. TEMPORARY CHANGES TO PLATFORMS AND STATION ACCESS WILL BE REQUIRED.
4. MBTA GREEN LINE "D" BRANCH STORAGE TRACK TO BE TEMPORARILY DISPLACED DURING CONSTRUCTION AND RESTORED ON COMPLETION OF CONSTRUCTION.
5. EXISTING AND PLANNED MIXED USE PATH BETWEEN PARK DRIVE AND MINER STREET WILL BE TEMPORARILY RELOCATED DURING CONSTRUCTION AND RESTORED ON COMPLETION OF CONSTRUCTION.
6. TOE ELEVATION OF RETAINING WALLS AND THE NEED FOR PERMANENT TIEBACKS WILL BE DETERMINED IN FUTURE PHASES OF DESIGN.
7. SIZE AND LOCATION OF VENT BUILDING ARE SUBJECT TO FURTHER ENGINEERING AND ANALYSIS OF TUNNEL VENTILATION REQUIREMENTS.
8. APPROXIMATE DEPTHS OF MUDDY RIVER INFERRED FROM AVAILABLE ASACE DRAWINGS FOR MUDDY RIVER RESTORATION PROJECT (50% SUBMISSION, MARCH 2007)



PROFILE

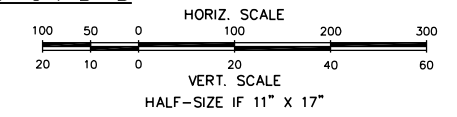


SECTION A-A

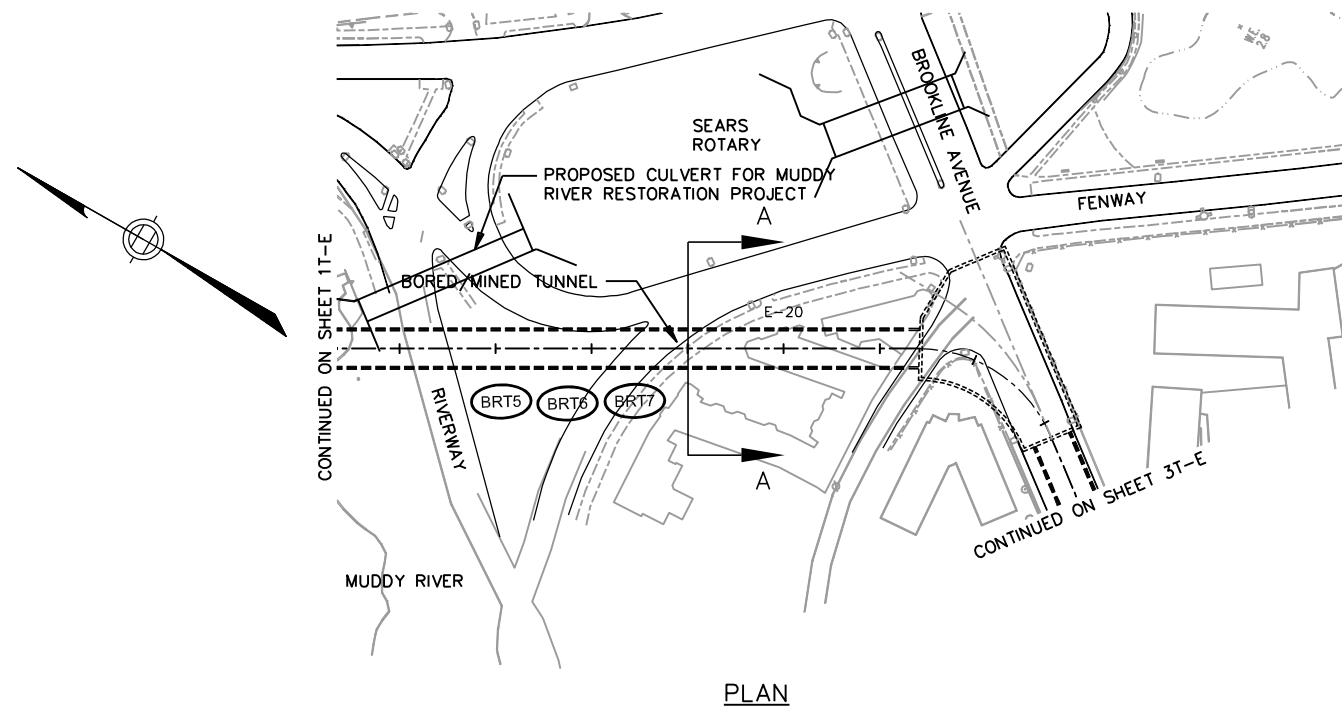


SECTION B-B

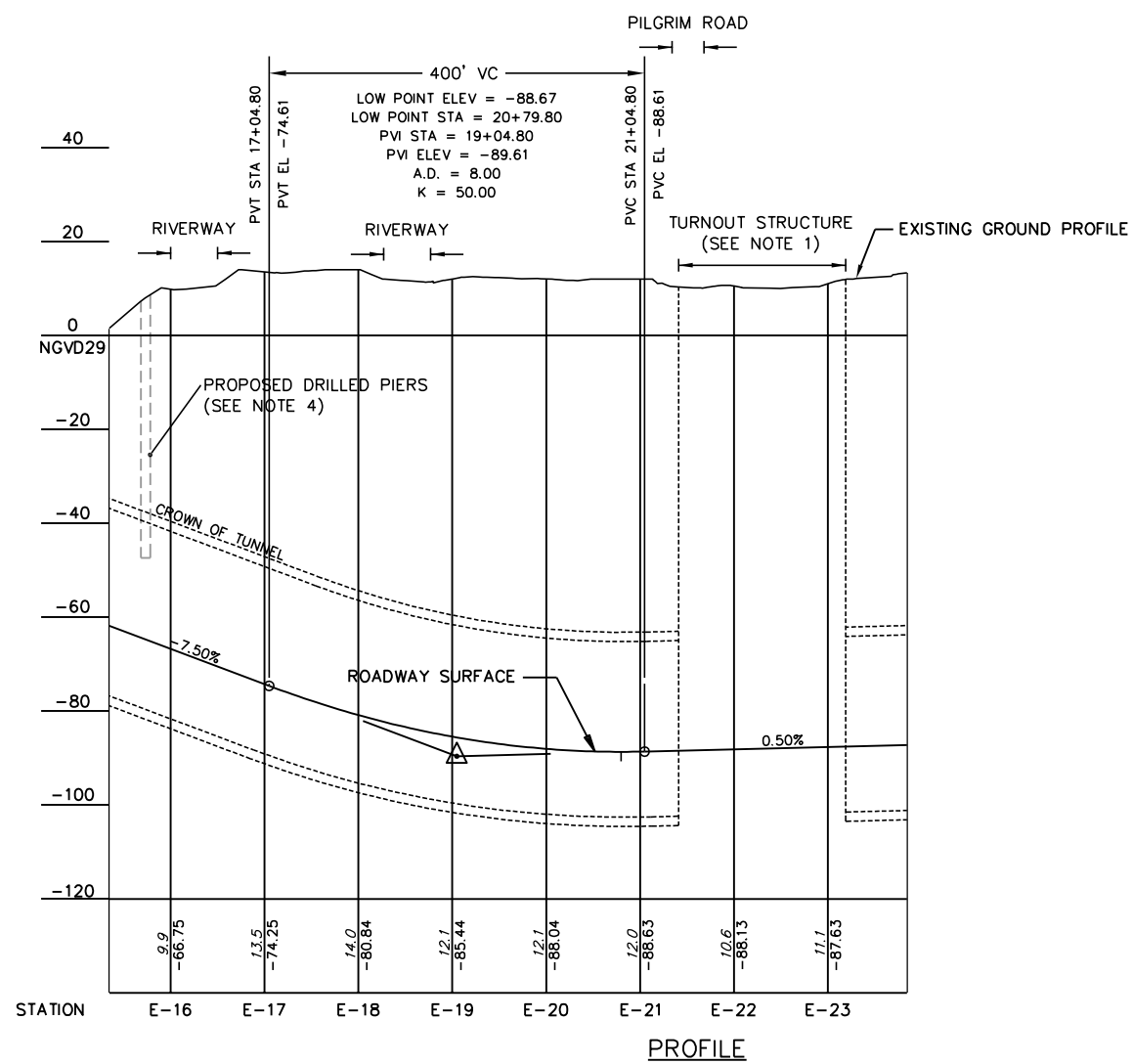
**PRELIMINARY  
DRAFT  
COPY**



|                    |  |                       |          |  |                                      |  |   |
|--------------------|--|-----------------------|----------|--|--------------------------------------|--|---|
| DESIGNED BY<br>DMW |  | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2<br>RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL (EASTERN)<br>STA E-0+00 - STA E-15+34.2 | SHEET NO.<br>1T-E                         |
| DRAWN BY<br>DJ     |  | SCALE<br>AS NOTED     |          |  |                                      |  |   |
| CHECKED BY<br>JD   |  | REVISION<br>A3        |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                      |  | CONTRACT NO.<br>97713                     |
| APPROVED BY<br>ST  |  |                       |          |  |                                      |  | DRAWING NO.<br>RDEIR-H2TE-100-sh01_03.dwg |
| REVISION           | DESCRIPTION                                  | DATE                  | APPROVED |  |                                      |  |   |
| A3                 | UNDERGROUND STATION ADDED AT LANDMARK CENTER | NOV/08                |          |  |                                      |  |   |

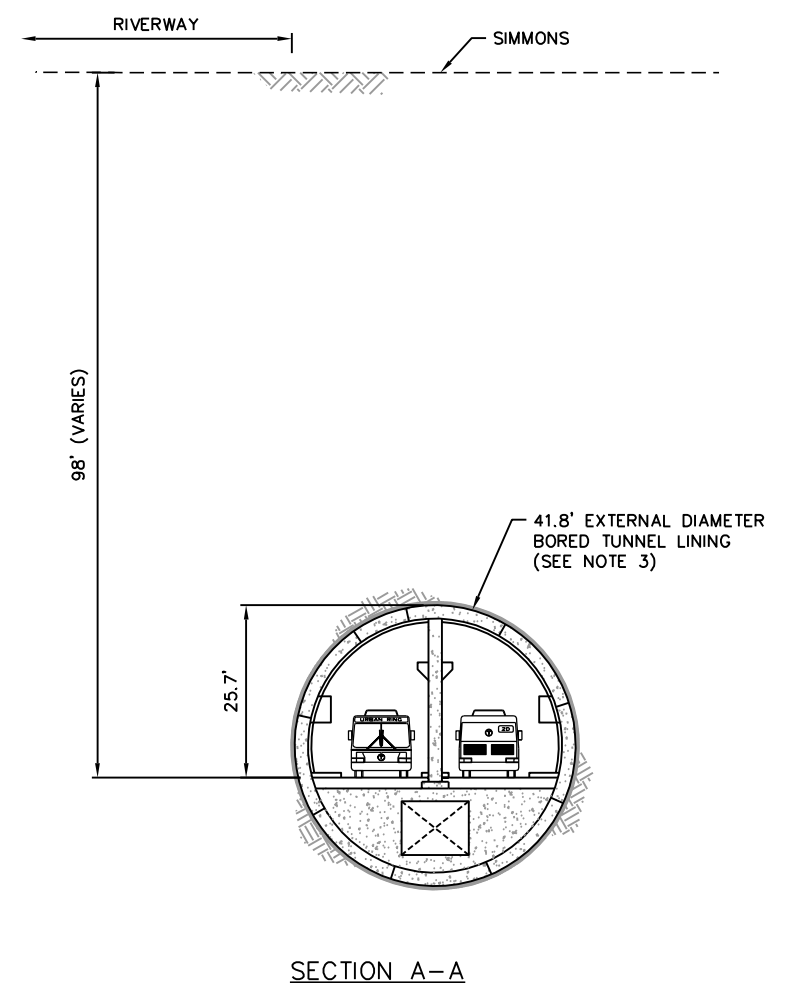


PLAN



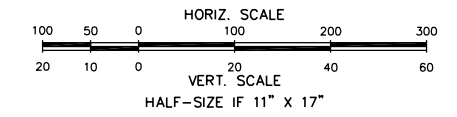
PROFILE

- NOTE:
1. TURNOUT STRUCTURE WILL BE EITHER MINED OR CUT AND COVER DEPENDING ON SELECTED CONSTRUCTION METHODOLOGY FOR RUNNING TUNNELS.
  2. TOP OF ROCK SURFACE IS BELOW EL. -120. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
  3. THE CURRENT CONCEPT IS BASED ON THE USE OF A TUNNEL BORING MACHINE FOR TUNNEL CONSTRUCTION. THE CONSTRUCTION METHODOLOGY WILL NEED FURTHER ASSESSMENT ONCE A PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM HAS BEEN UNDERTAKEN.
  4. APPROXIMATE TOE LEVEL OF DRILLED PIERS AS PART OF MUDDY RIVER RESTORATION PROJECT IS EL. -47, INFERRED FROM AVAILABLE USACE DRAWINGS (50% SUBMISSION, MARCH 2007). FURTHER COORDINATION WITH USACE WILL BE NEEDED AS PROJECT ADVANCES.

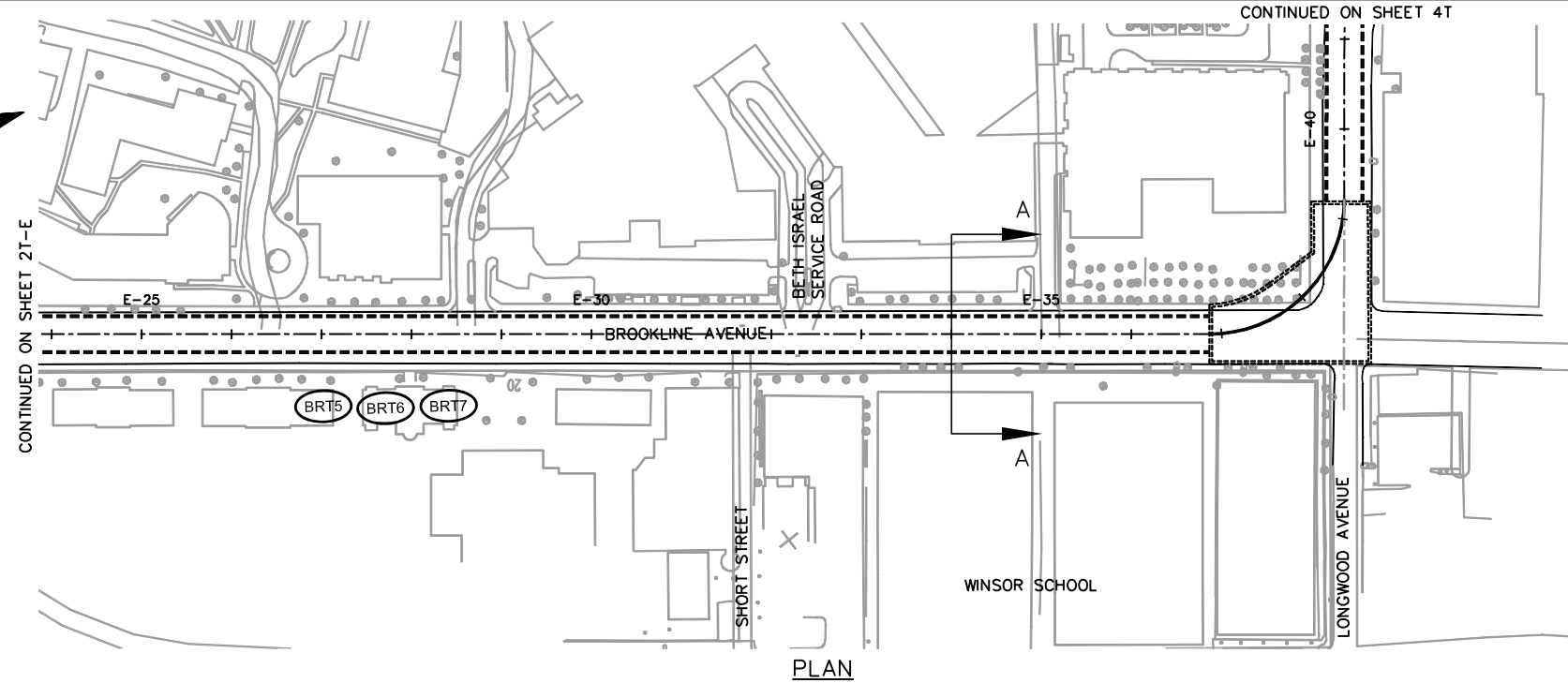
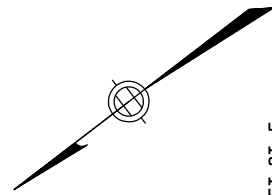


SECTION A-A

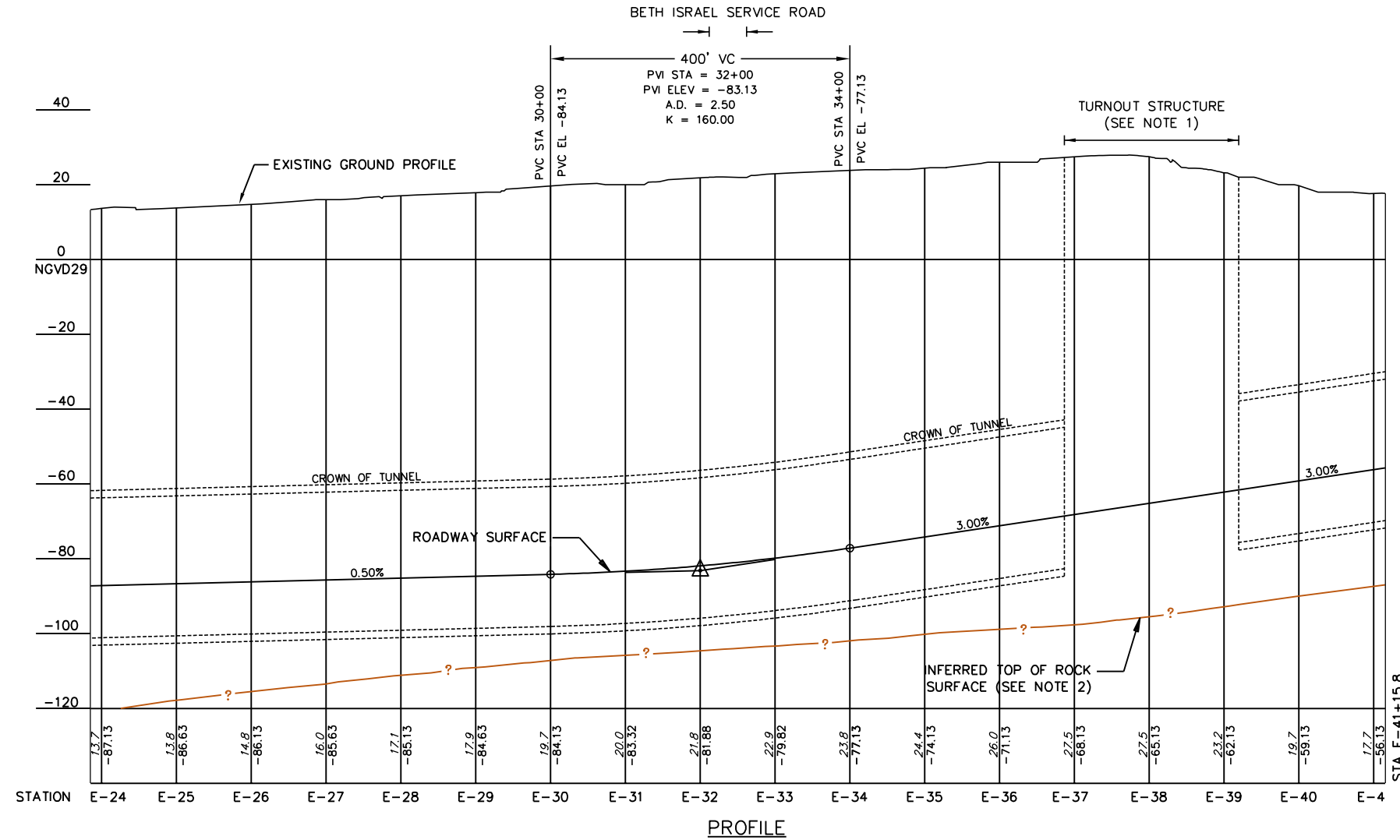
**PRELIMINARY  
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|--------------------|--|-----------------------|--|---|--|---|---|---|--|
| DESIGNED BY<br>DMW |  | DATE<br>NOVEMBER 2008 |  | <b>EOT</b>  | EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS           | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL (EASTERN)<br>STA E-15+34.2 - STA E-23+84.8 | SHEET NO.<br>2T-E                         |  |
| DRAWN BY<br>DJ     |  | SCALE<br>AS NOTED     |  |   |  |   |   | CONTRACT NO.<br>97713                     |  |
| CHECKED BY<br>JD   |  | REVISION<br>A3        |  | EarthTech   |  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   | DRAWING NO.<br>RDEIR-H2TE-100-sh01_03.dwg |  |
| APPROVED BY<br>ST  |  | DATE<br>NOV/08        |  | DESCRIPTION<br>UNDERGROUND STATION ADDED AT LANDMARK CENTER |  | DATE<br>NOV/08                                    |   | APPROVED                                  |  |

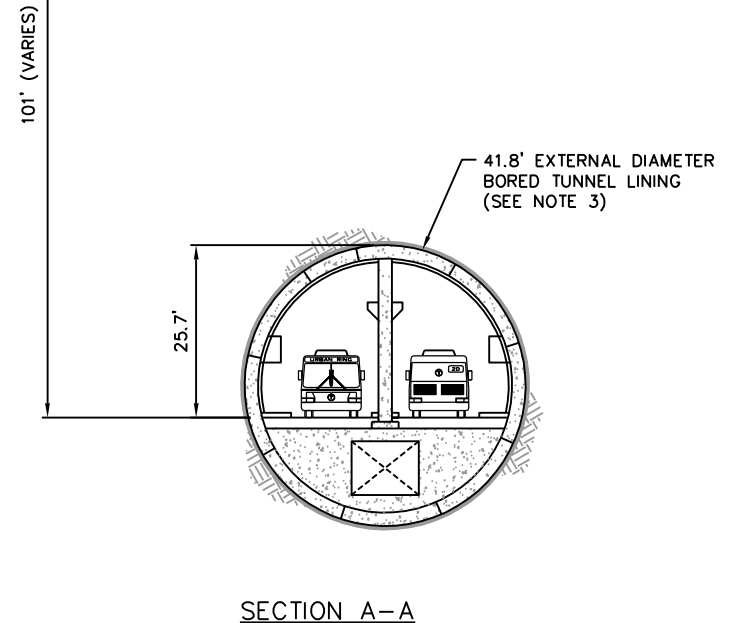
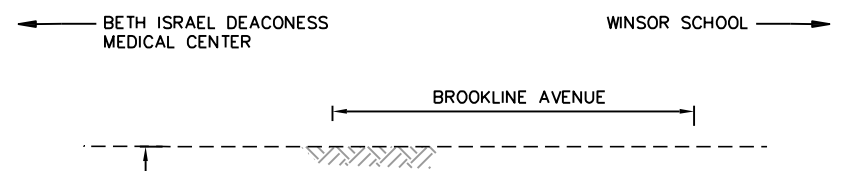


PLAN



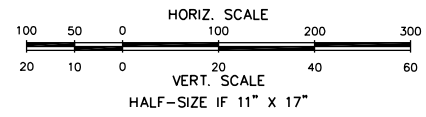
PROFILE

- NOTE:
1. TURNOUT STRUCTURE WILL BE EITHER MINED OR CUT AND COVER DEPENDING ON SELECTED CONSTRUCTION METHODOLOGY FOR RUNNING TUNNELS.
  2. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
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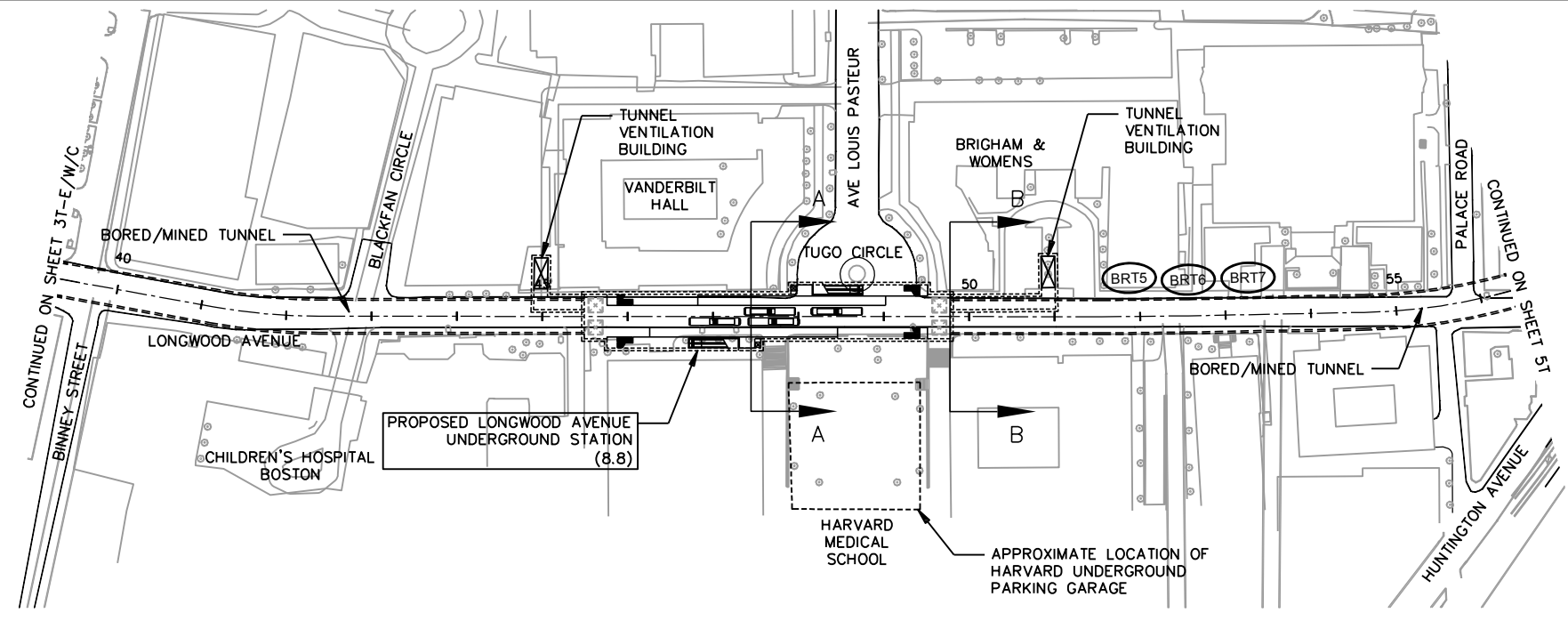


SECTION A-A

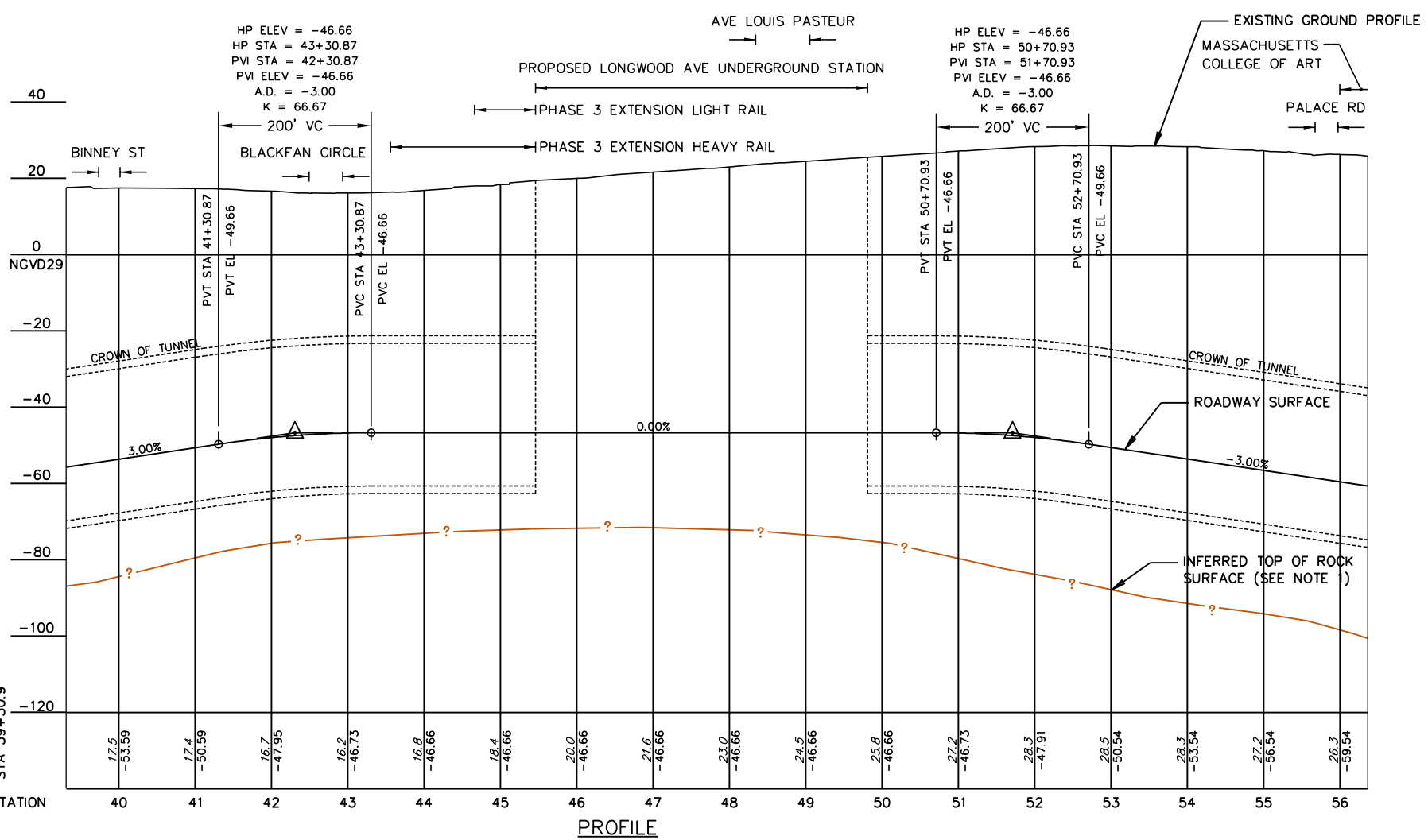
**PRELIMINARY DRAFT COPY**



|                  |  |                     |          |  |   |       |  |  |
|------------------|--|---------------------|----------|--|---|-------|--|--|
| DESIGNED BY: DMW |  | DATE: NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2<br>PHASE 2<br>RDEIR/DEIS | TITLE | URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL (EASTERN)<br>STA E-23+84.8 - STA E-41+15.8 | SHEET NO.<br>3T-E                        |
| DRAWN BY: DJ     |  | SCALE: AS NOTED     |          |  |   |       |  |  |
| CHECKED BY: JD   |  | REVISION: A3        |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |       |  | CONTRACT NO.<br>97713                    |
| APPROVED BY: ST  |  |                     |          |  |   |       |  | DRAWING NO.<br>RDEIR-H2E-100-sh01_03.dwg |
| REVISION         | DESCRIPTION                                  | DATE                | APPROVED |  |   |       |  |  |
| A3               | UNDERGROUND STATION ADDED AT LANDMARK CENTER | NOV/08              |          |  |   |       |  |  |



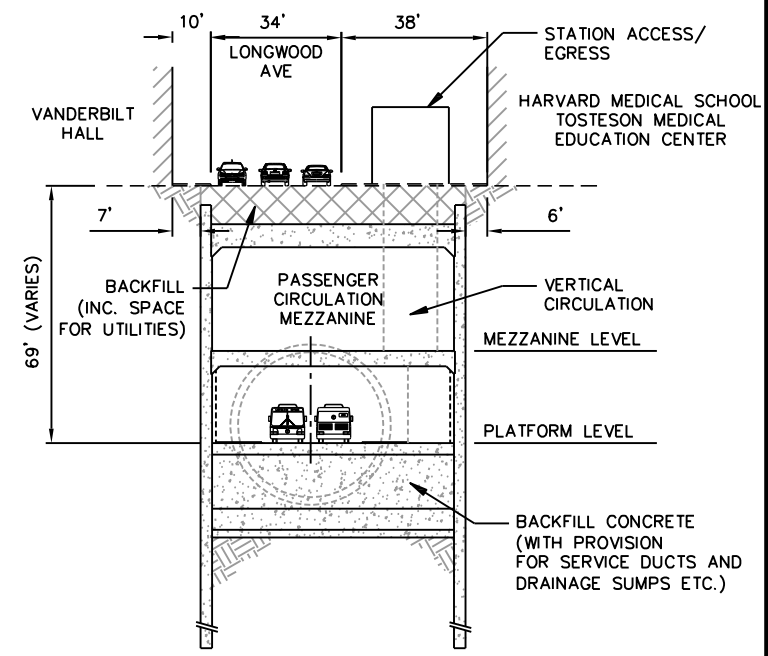
PLAN



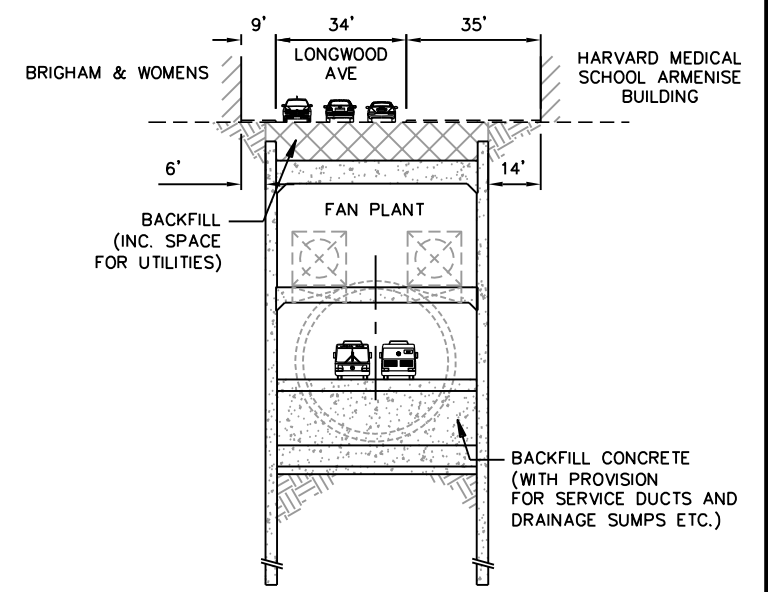
PROFILE

NOTE:

- TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
- SIZE AND LOCATION OF THE VENT BUILDINGS ARE SUBJECT TO FURTHER ENGINEERING AND ANALYSIS OF TUNNEL VENTILATION REQUIREMENTS.

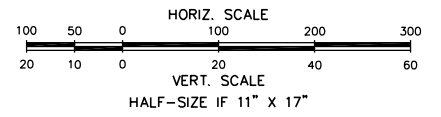


SECTION A-A

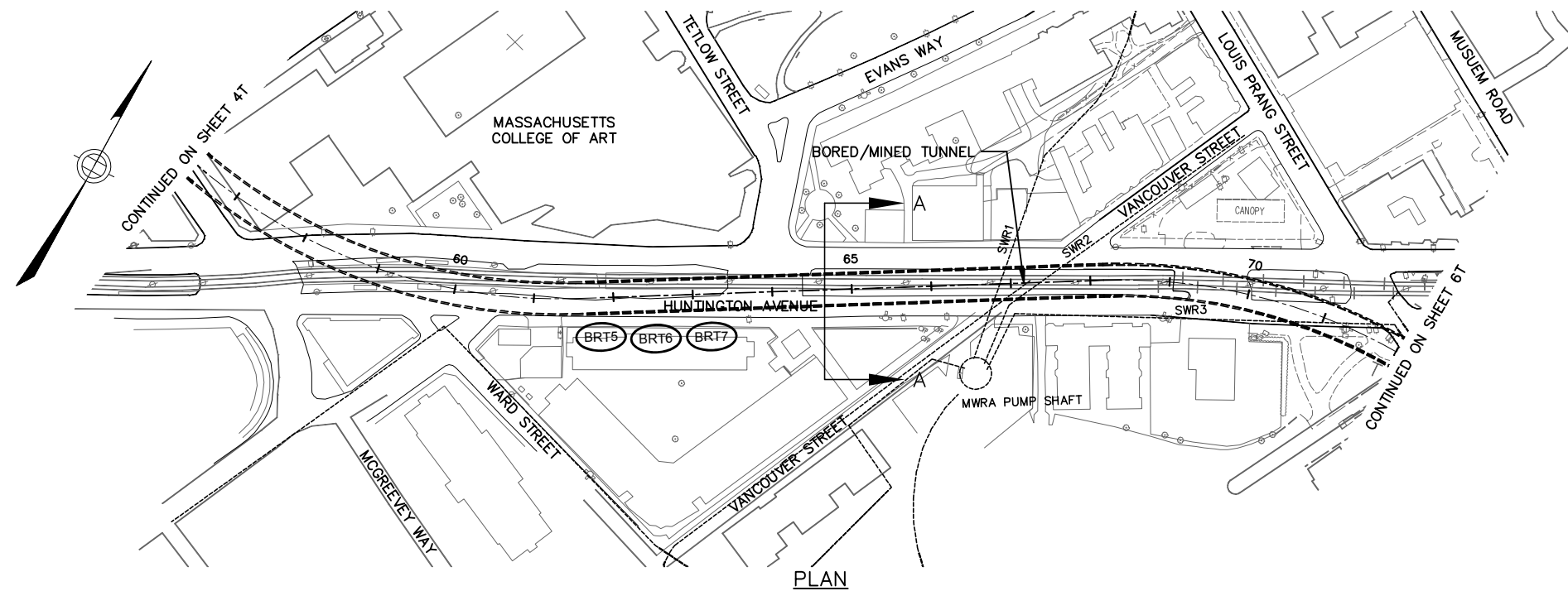


SECTION B-B

**PRELIMINARY  
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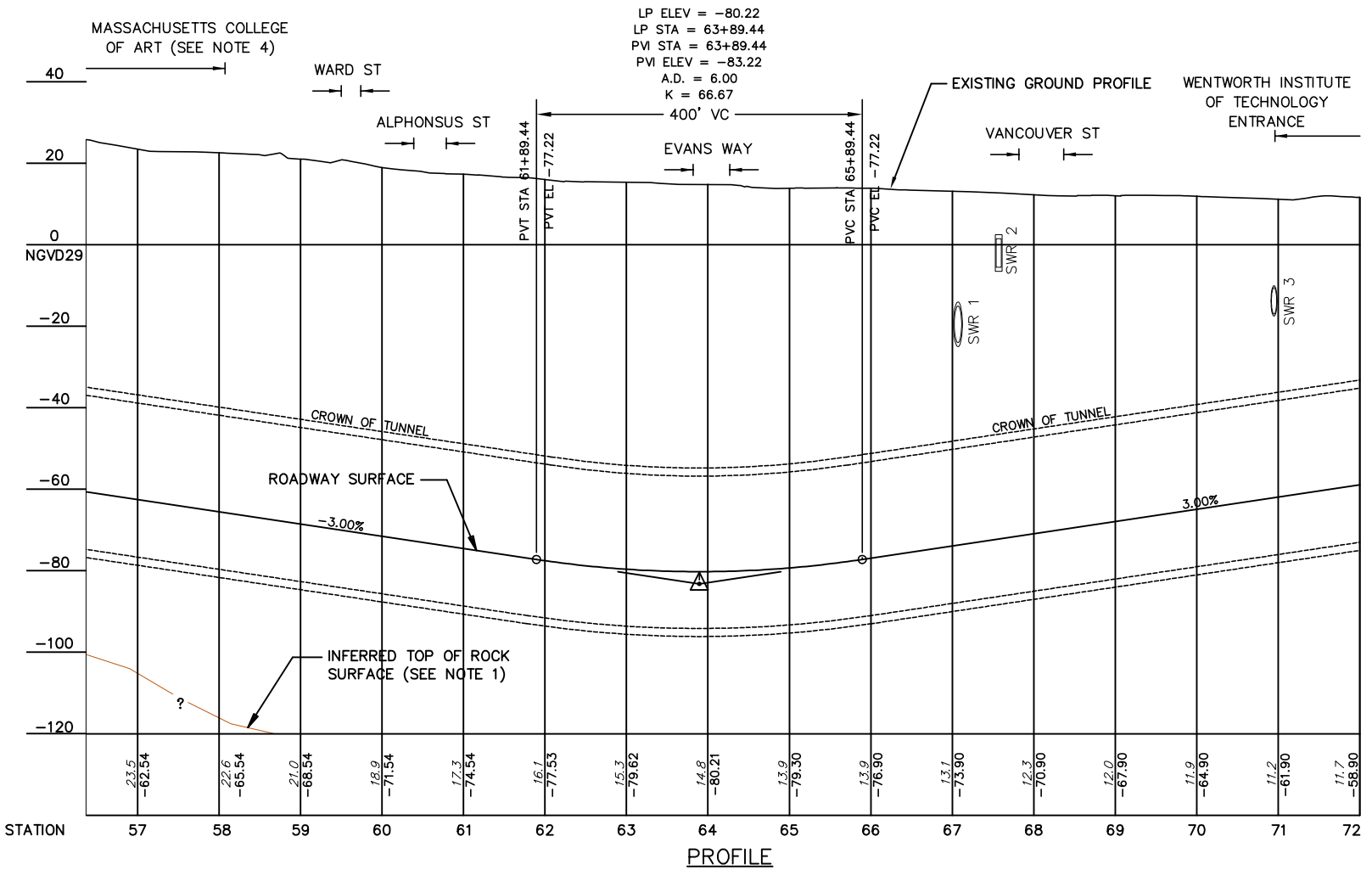
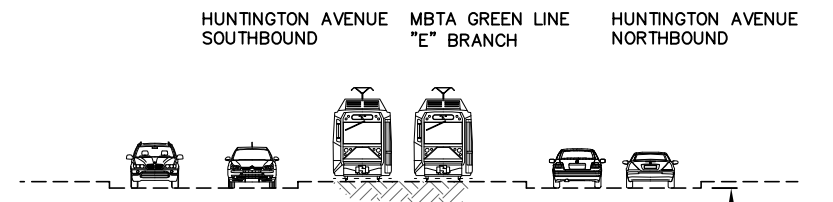


|                    |  |                       |          |  |                                   |   |  |
|--------------------|--|-----------------------|----------|--|-----------------------------------|---|--|
| DESIGNED BY<br>DMW |  | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL<br>STA 39+30.9 - STA 56+36.5 | SHEET NO.<br>4T                          |
| DRAWN BY<br>DJ     |  | SCALE<br>AS NOTED     |          |  |                                   |   |  |
| CHECKED BY<br>JD   |  | REVISION<br>A3        |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   | CONTRACT NO.<br>97713   | DRAWING NO.<br>RDEIR-H2I-100-sh04_06.dwg |
| APPROVED BY<br>ST  |  |                       |          |  |                                   |   |  |
| A3                 | UNDERGROUND STATION ADDED AT LANDMARK CENTER | NOV/08                |          |  |                                   |   |  |
| REVISION           | DESCRIPTION                                  | DATE                  | APPROVED |  |                                   |   |  |

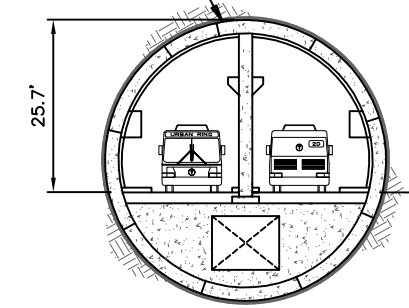


**NOTE:**

1. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION IS TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
2. THE CURRENT CONCEPT IS BASED ON THE USE OF A TUNNEL BORING MACHINE FOR TUNNEL CONSTRUCTION. THE CONSTRUCTION METHODOLOGY WILL NEED FURTHER ASSESSMENT ONCE A PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM HAS BEEN UNDERTAKEN.
3. SEWER LOCATIONS ARE APPROXIMATE.
4. MASSACHUSETTS COLLEGE OF ART KENNEDY BUILDING DESIGN DRAWINGS DATED 12/18/61 INDICATE A MAT FOUNDATION WITHOUT PILES.
5. MAJOR UTILITIES AND SEWERS WILL BE PROTECTED DURING CONSTRUCTION.



41.8' EXTERNAL DIAMETER BORED TUNNEL LINING (SEE NOTE 2)

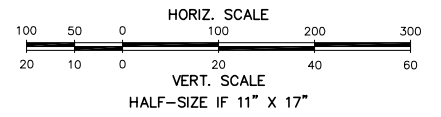


SECTION A-A

**PRELIMINARY DRAFT COPY**

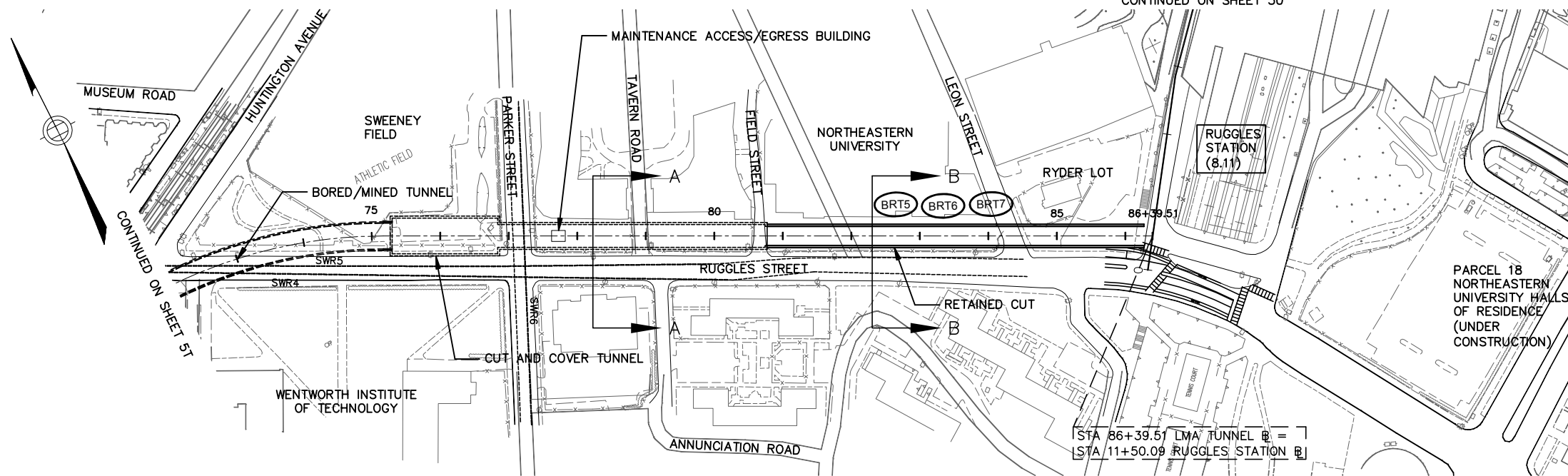
**LEGEND:**

- SWR 1: 108" MWRA SOUTH CHARLES RELIEF SEWER, INV. EL. -24.0±
- SWR 2: 78"x84" CHARLES RIVER VALLEY SEWER, INV. EL. -5.5±
- SWR 3: 72" I.D. MAIN DRAINAGE RELIEF SEWER, INV. EL. -17.0±



|                    |             |                       |          |  |                                   |   |   |
|--------------------|-------------|-----------------------|----------|--|-----------------------------------|---|---|
| DESIGNED BY<br>DMW |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - FENWAY, BOSTON<br>LMA TUNNEL<br>STA 56+36.5 - STA 72+01 | SHEET NO.<br>5T                           |
| DRAWN BY<br>DJ     |             | SCALE<br>AS NOTED     |          |  |                                   |   |   |
| CHECKED BY<br>JD   |             | REVISION<br>A3        |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |   | CONTRACT NO.<br>97713                     |
| APPROVED BY<br>ST  |             |                       |          |  |                                   |   | DRAWING NO.<br>RDEIR-H2T-100-sht04_06.dwg |
| REVISION           | DESCRIPTION | DATE                  | APPROVED |  |                                   |   |   |

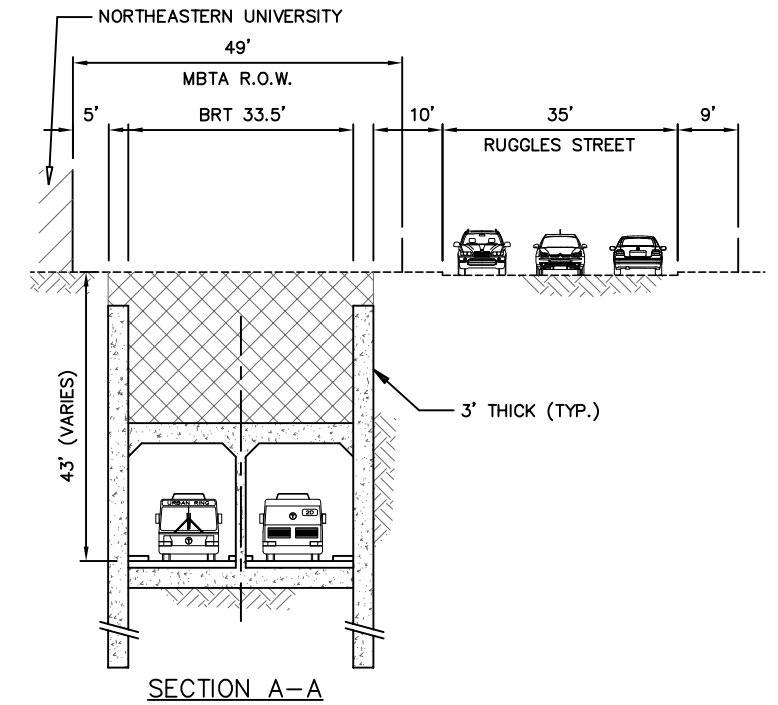




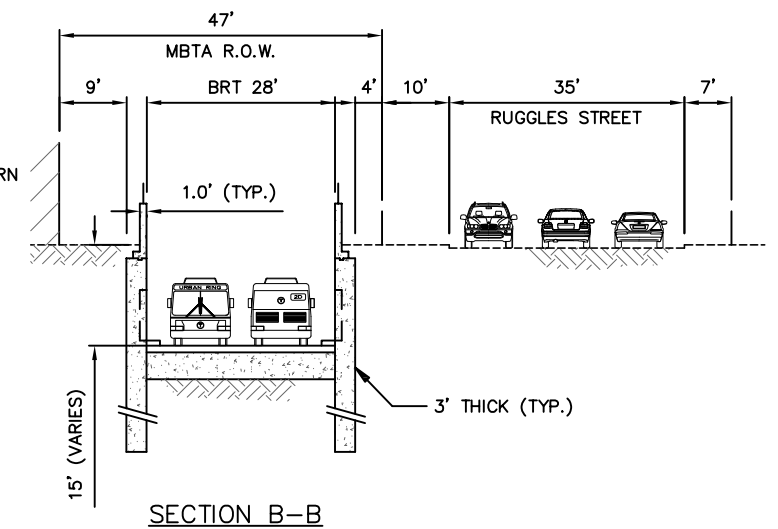
PLAN

NOTE:

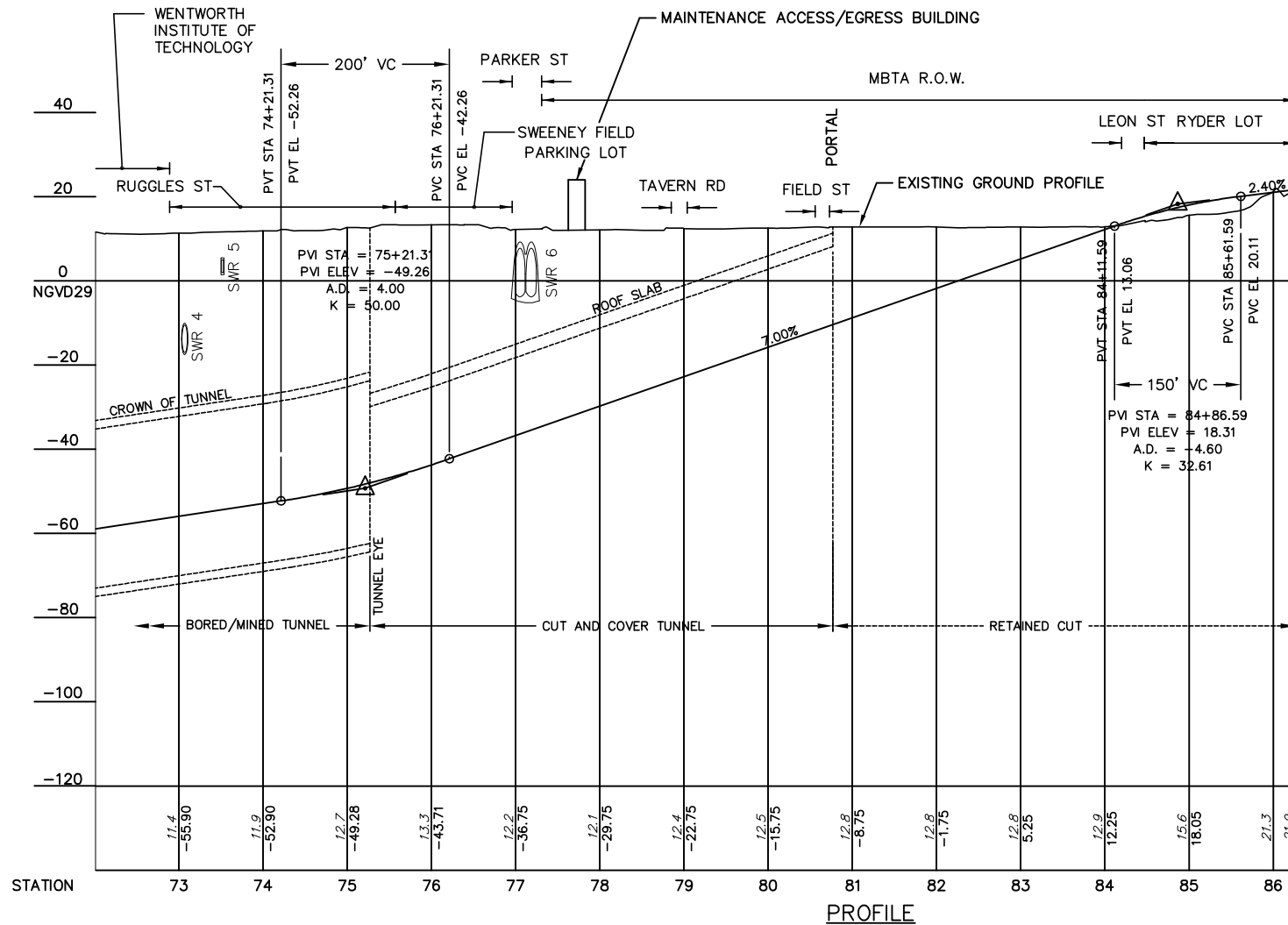
1. TOP OF ROCK SURFACE IS BELOW EL. -120. TOP OF ROCK SURFACE IS INFERRED FROM PRELIMINARY BEDROCK SURFACE CONTOURS (KAYE et al., 1970) AND AVAILABLE BORINGS FROM OTHER PROJECTS IN THE LONGWOOD MEDICAL AND ACADEMIC AREA. ELEVATION TO BE CONFIRMED FOLLOWING PROJECT-SPECIFIC SITE INVESTIGATION PROGRAM.
2. TOE ELEVATION OF RETAINING WALLS AND THE NEED FOR PERMANENT TIEBACKS WILL BE DETERMINED IN FUTURE PHASES OF DESIGN.
3. SEWER LOCATIONS ARE APPROXIMATE.
4. MAJOR UTILITIES AND SEWERS WILL BE PROTECTED DURING CONSTRUCTION.



SECTION A-A



SECTION B-B

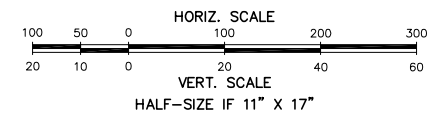


PROFILE

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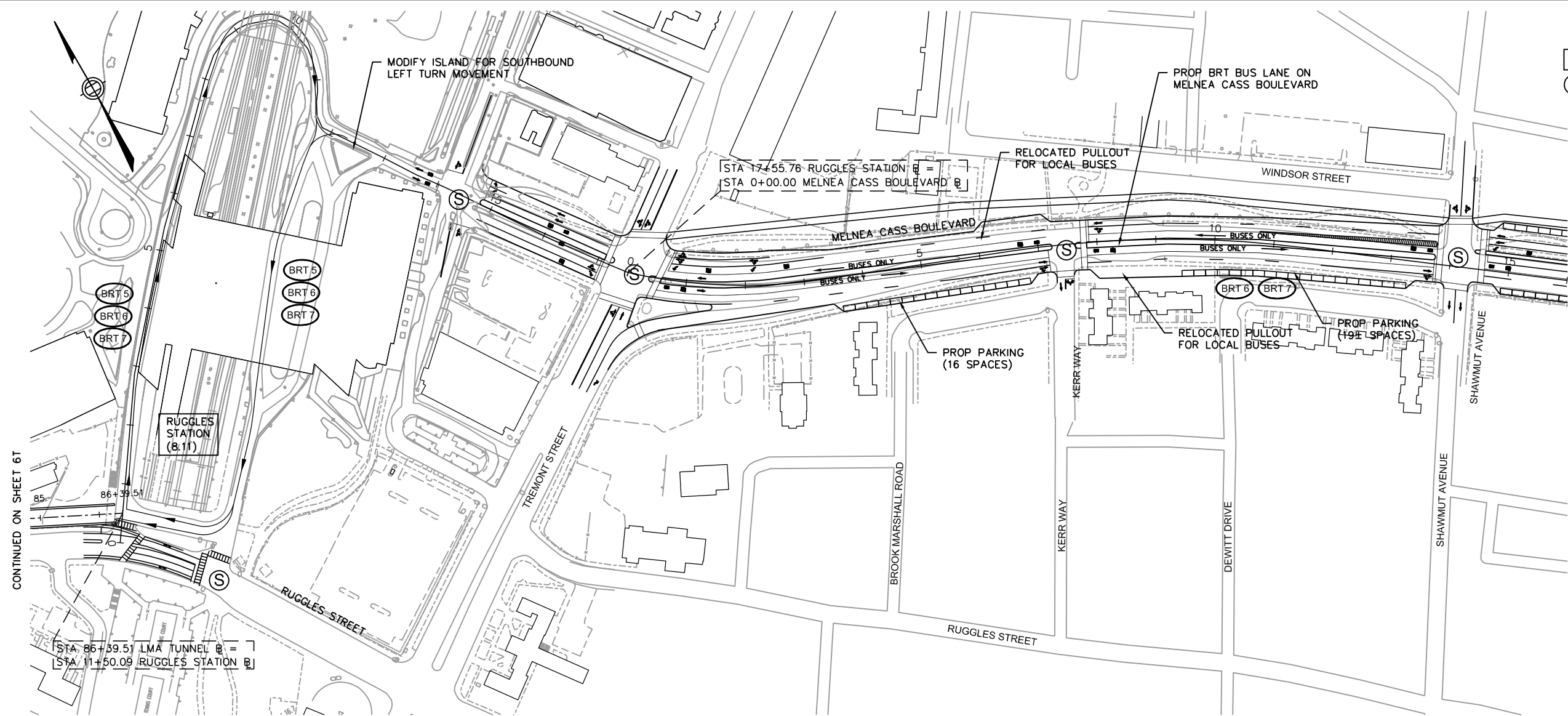
LEGEND:

- SWR 4: 72" I.D. MAIN DRAINAGE RELIEF SEWER, INV. EL. -17.0±
- SWR 5: 30"x36" SEWER, INV. EL. 2.0±
- SWR 6: TWIN 12'-6"x12'-0" STONY BROOK SEWER, INV. EL. -3.8±



|                    |  |                       |  |   |                                    |          |  |  |  |  |   |  |  |
|--------------------|--|-----------------------|--|---|------------------------------------|----------|--|--|--|--|---|--|--|
| DESIGNED BY<br>DMW |  | DATE<br>NOVEMBER 2008 |  |   | EXECUTIVE OFFICE OF TRANSPORTATION |          | THE URBAN RING PHASE 2 RDEIR/DEIS              |  | TITLE<br>URBAN RING PHASE 2 PLAN & PROFILE - FENWAY, BOSTON LMA TUNNEL STA 72+01 - STA 86+27 |  | SHEET NO.<br>6T                           |  |  |
| DRAWN BY<br>DJ     |  | SCALE<br>AS NOTED     |  |   | EarthTech                          |          | EARTH TECH 300 BAKER AVENUE, CONCORD, MA 01742 |  | CONTRACT NO.<br>97713  |  | DRAWING NO.<br>RDEIR-H2T-100-sht04_06.dwg |  |  |
| CHECKED BY<br>JD   |  | REVISION<br>A3        |  |   |                                    |          |  |  |  |  |   |  |  |
| APPROVED BY<br>ST  |  | DATE<br>NOV/08        |  | DESCRIPTION<br>UNDERGROUND STATION ADDED AT LANDMARK CENTER |                                    | APPROVED |  |  |  |  |   |  |  |





Ⓢ = PROPOSED SIGNAL  
 Ⓢ = UPGRADE SIGNAL

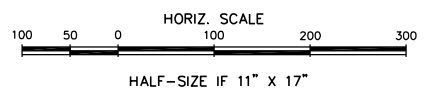
CONTINUED ON SHEET 6T

CONTINUED ON SHEET 31

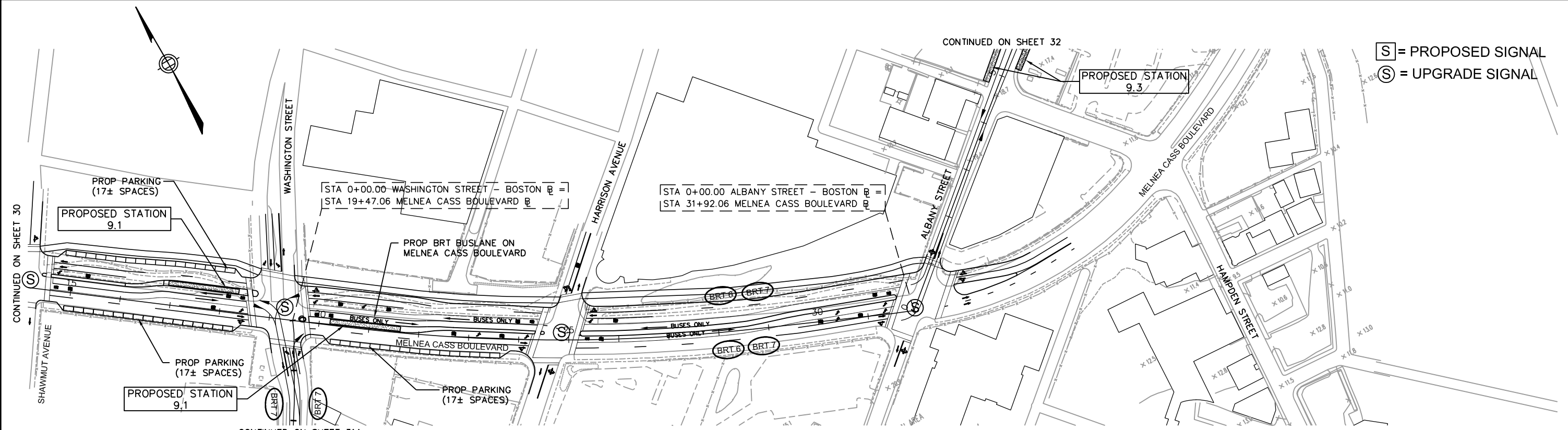
PLAN

NOTE: FOR RUGGLES STATION PLAN & TRACK PROFILE SEE SHEETS CRS-13 - CRS-15.

- NOTES**
- CURB LINE SHIFT TO THE SOUTH AND ADDITION OF ON-STREET PARKING IS AT REQUEST OF THE CITY OF BOSTON WHEREVER SHOWN.
  - BALANCE OF TRANSPORTATION EASEMENT FOR HARBOR TRAIL, SIDEWALK, AND OTHER ELEMENTS AS DETERMINED BY THE CITY OF BOSTON.
  - SECTIONS TAKEN AT LOCATIONS OF SMALLEST BALANCE OF EXISTING TRANSPORTATION EASEMENT.
  - SEE MELNEA CASS BLVD TYPICAL SECTION.



|          |  |                          |                       |   |                                   |   |                                   |
|----------|--|--------------------------|-----------------------|---|-----------------------------------|---|-----------------------------------|
|          |  | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION               | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN - MELNEA CASS BLVD, BOSTON<br>RUGGLES STATION TO SHAWMUT AVENUE<br>BUS RAPID TRANSIT ROUTES 6 & 7 | SHEET NO.<br>30                   |
|          |  | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |   |                                   |   |                                   |
|          |  | CHECKED BY<br>WPM/PSC/AS | REVISION              | EarthTech EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   | CONTRACT NO.<br>97713   | DRAWING NO.<br>97713-RDEIR-sht-30 |
|          |  | APPROVED BY<br>JAD       |                       |   |                                   |   |                                   |
| 1        | REVISED RUGGLS BASELINE AT TUNNEL PORTAL |                          | 12/01/08              |   |                                   |   |                                   |
| REVISION | DESCRIPTION                              | DATE                     | APPROVED              |   |                                   |   |                                   |



S = PROPOSED SIGNAL  
S = UPGRADE SIGNAL

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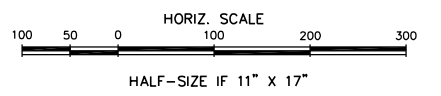
CONTINUED ON SHEET 32

CONTINUED ON SHEET 31A

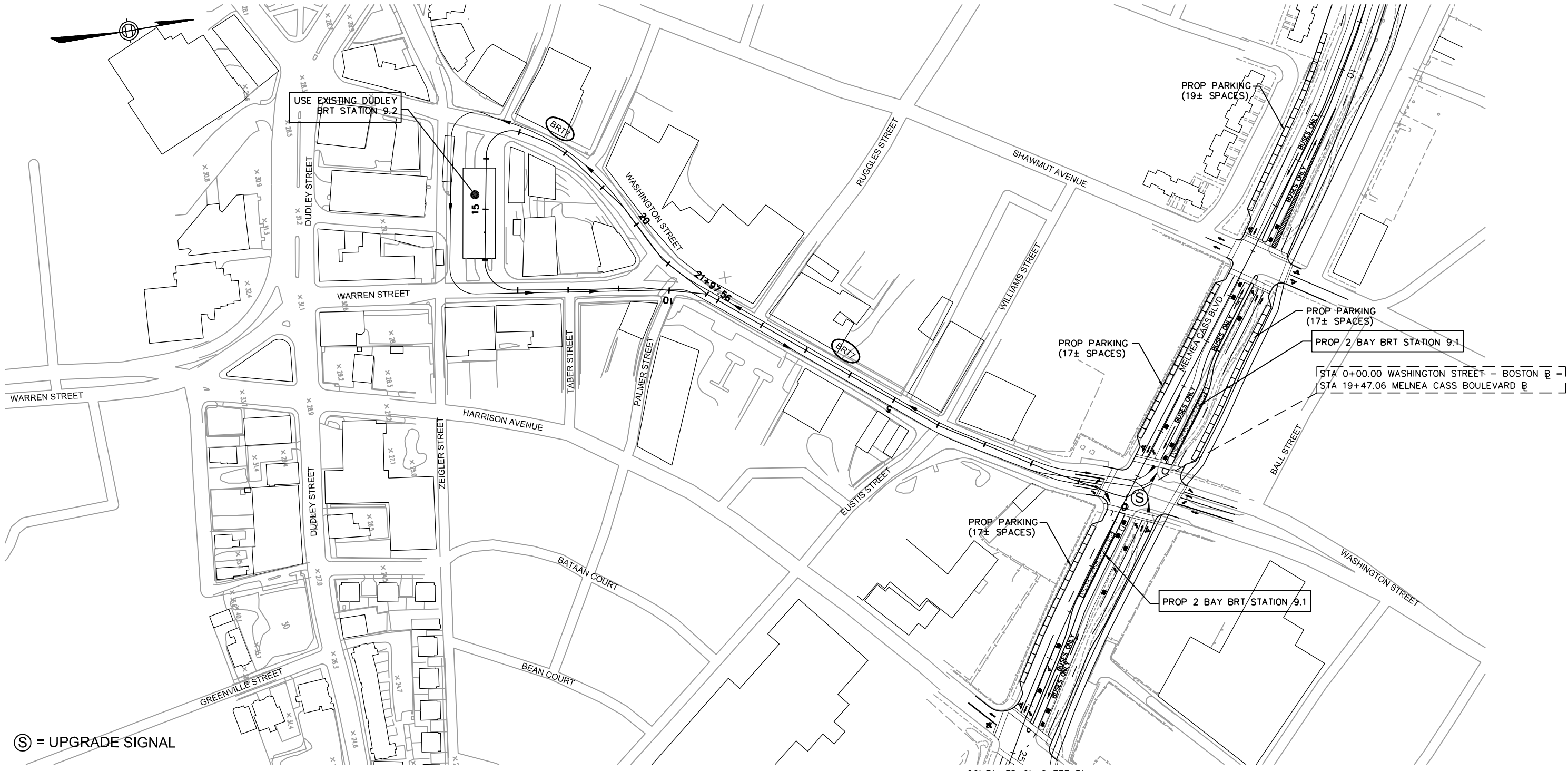
PLAN

- NOTES**
- CURB LINE SHIFT TO THE SOUTH AND ADDITION OF ON-STREET PARKING IS AT REQUEST OF THE CITY OF BOSTON WHEREVER SHOWN.
  - BALANCE OF TRANSPORTATION EASEMENT FOR HARBOR TRAIL, SIDEWALK, AND OTHER ELEMENTS AS DETERMINED BY THE CITY OF BOSTON.
  - SECTIONS TAKEN AT LOCATIONS OF SMALLEST BALANCE OF EXISTING TRANSPORTATION EASEMENT.

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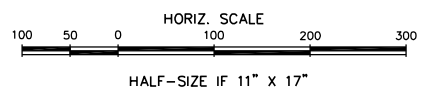


|          |                          |                       |  |  |   |  |                       |
|----------|--------------------------|-----------------------|--|--|---|--|-----------------------|
|          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION | <b>THE URBAN RING<br/>         PHASE 2<br/>         RDEIR/DEIS</b> | TITLE   | SHEET NO.<br>31  |                       |
|          | DRAWN BY<br>JAD          | SCALE<br>AS NOTED     |  |  | <br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | URBAN RING PHASE 2<br>PLAN - MELNEA CASS BLVD, BOSTON<br>SHAWMUT AVENUE TO ALBANY STREET<br>BUS RAPID TRANSIT ROUTES 6 & 7 | CONTRACT NO.<br>97713 |
|          | CHECKED BY<br>WPM/PSC/AS | REVISION              |  |  |   | DRAWING NO.<br>97713-RDEIR-sht-31  |                       |
| REVISION | APPROVED BY<br>JAD       | DATE                  |  |  |   | APPROVED   |                       |

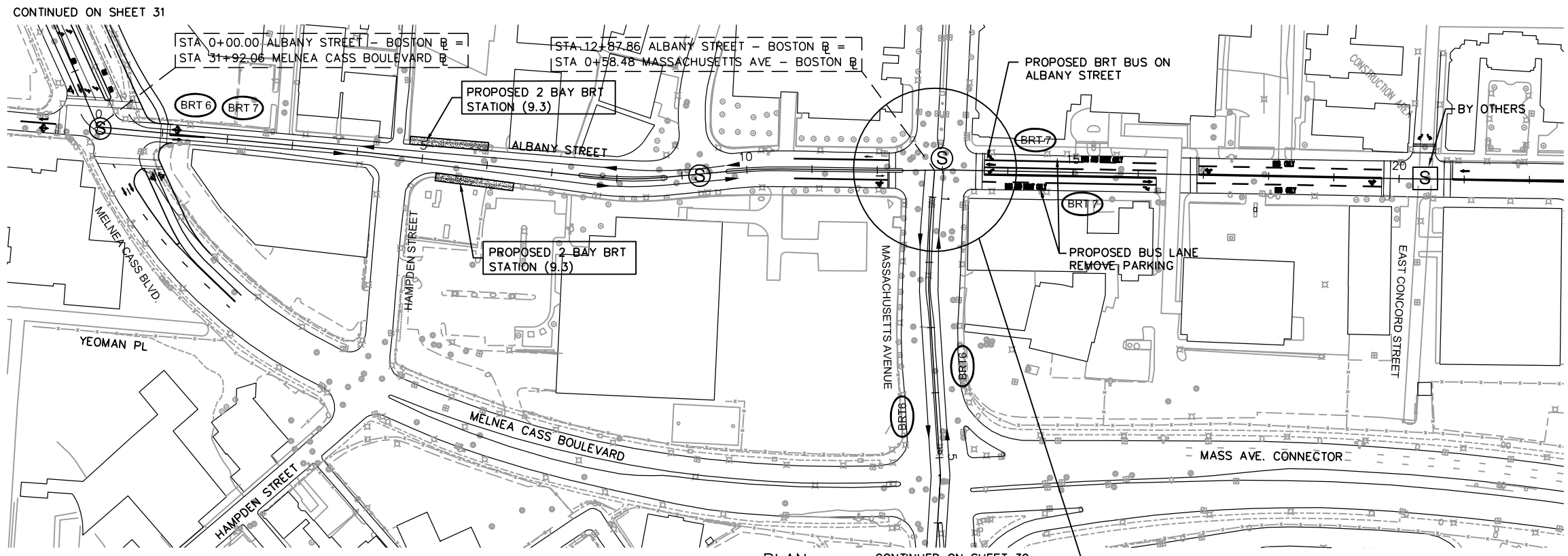


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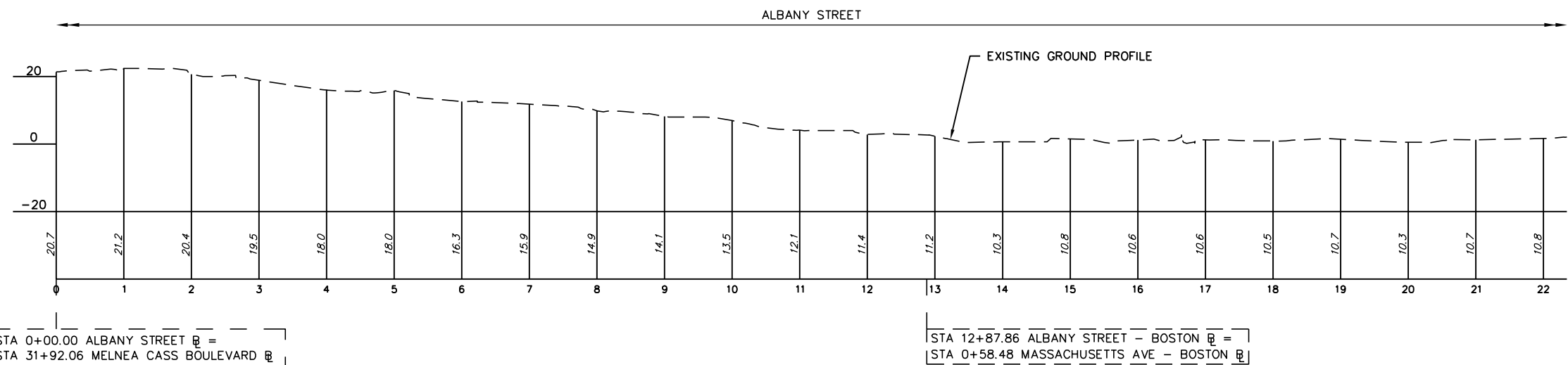


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|----------|-------------|------|----------|--------------------------|-----------------------|---|--|------------------------------------|------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <b>EXECUTIVE OFFICE OF TRANSPORTATION</b><br><br><b>EARTH TECH</b><br>300 BAKER AVENUE, CONCORD, MA 01742 | <b>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</b> | TITLE                              | SHEET NO.<br>31A |
|          |             |      |          | DRAWN BY<br>JAD          | SCALE<br>AS NOTED     |   |  | CONTRACT NO.<br>97713              |                  |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  | DRAWING NO.<br>97713-RDEIR-sht-31A |                  |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |                                    |                  |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |   |  |                                    |                  |



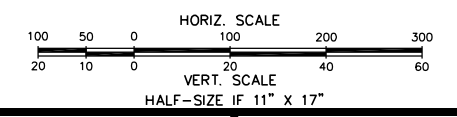
Ⓢ = PROPOSED SIGNAL

Ⓞ = EXISTING SIGNAL UPGRADED

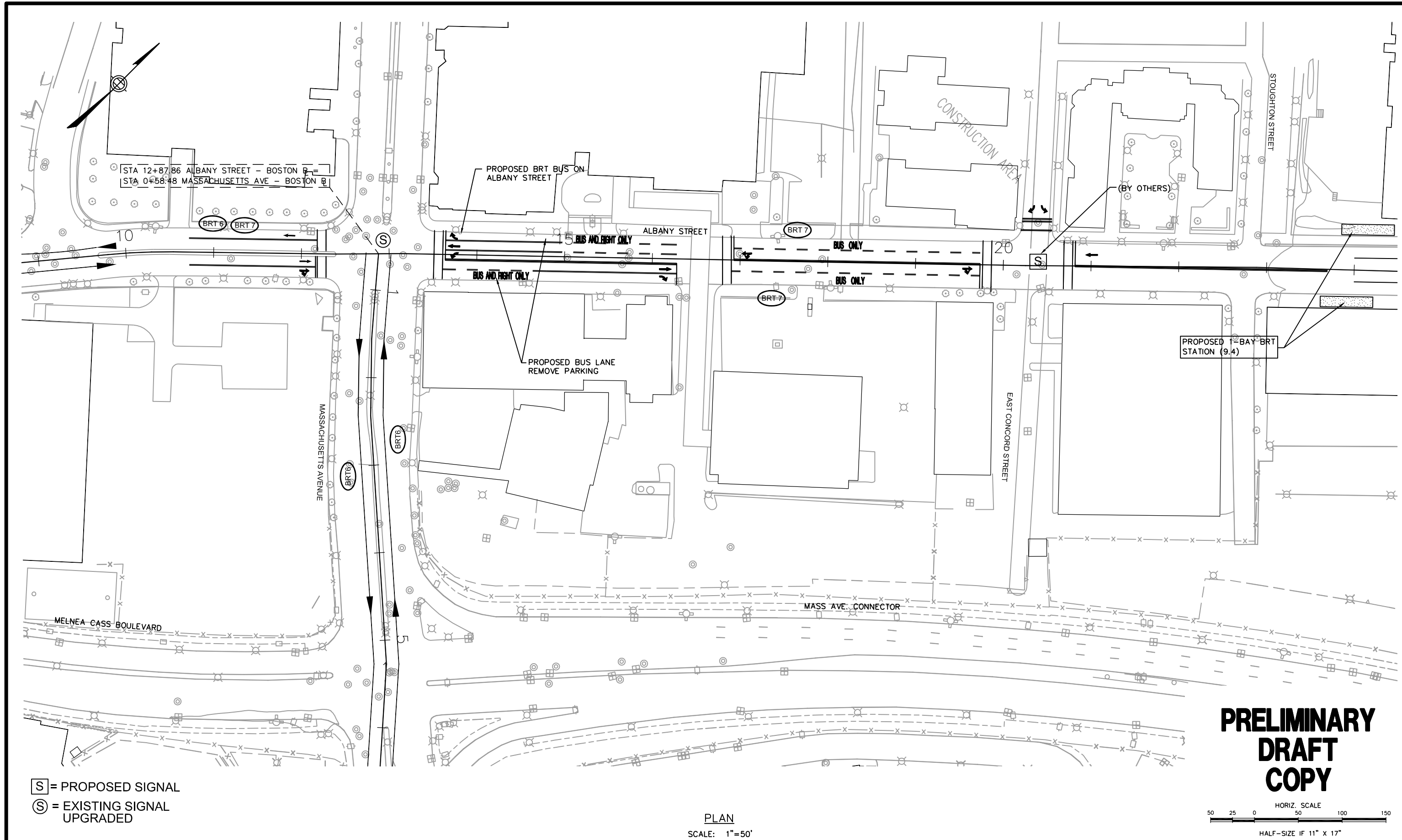


PROFILE

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COPY**



|                 |             |      |          |                    |  |   |                                   |  |                                |  |
|-----------------|-------------|------|----------|--------------------|--|---|-----------------------------------|--|--------------------------------|--|
| DESIGNED BY WPM |             |      |          | DATE NOVEMBER 2008 |  | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                   | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE URBAN RING PHASE 2 PLAN & PROFILE - ALBANY STREET, BOSTON MELNEA CASS BLVD TO EAST CONCORD STREET BUS RAPID TRANSIT ROUTES 6 & 7 | SHEET NO. 32                   |  |
| DRAWN BY JAD    |             |      |          | SCALE AS NOTED     |  |   |                                   |  | CONTRACT NO. 97713             |  |
| CHECKED BY WPM  |             |      |          | REVISION           |  | <b>EarthTech</b> EARTH TECH 300 BAKER AVENUE, CONCORD, MA 01742 |                                   |  | DRAWING NO. 97713-RDEIR-sht-32 |  |
| APPROVED BY WPM |             |      |          |                    |  |   |                                   |  |                                |  |
| REVISION        | DESCRIPTION | DATE | APPROVED |                    |  |   |                                   |  |                                |  |



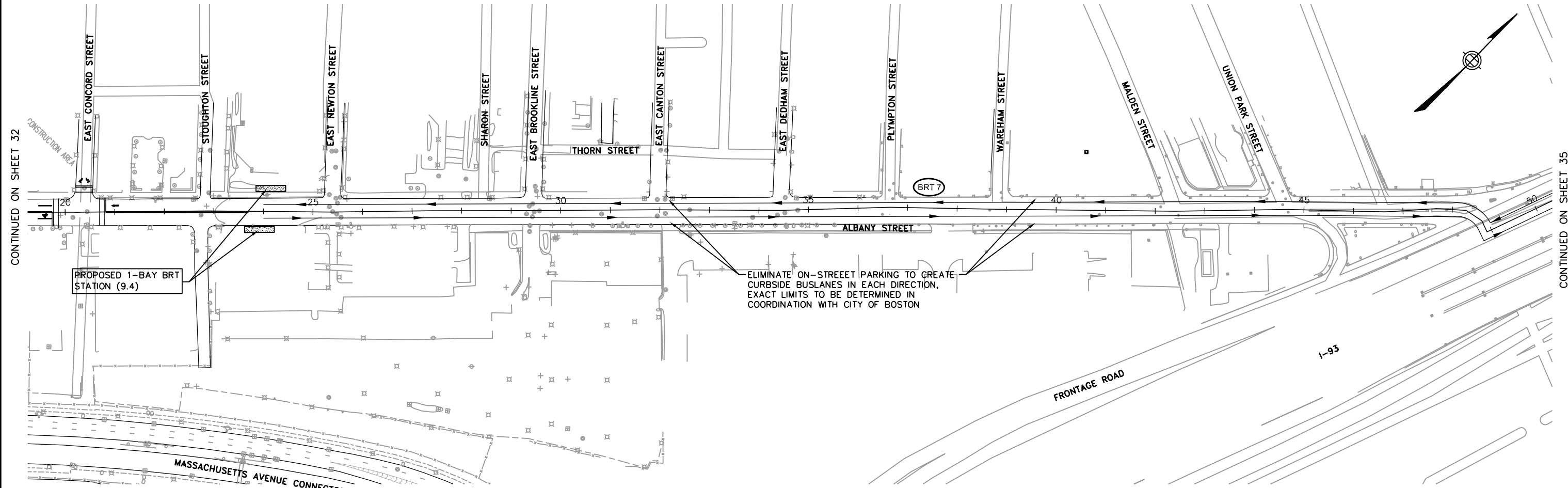
[S] = PROPOSED SIGNAL  
 [S] = EXISTING SIGNAL UPGRADED

PLAN  
 SCALE: 1"=50'

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COPY**

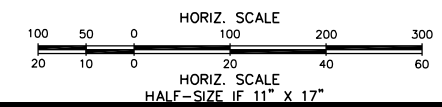
HORIZ. SCALE  
 50 25 0 50 100 150  
 HALF-SIZE IF 11" X 17"

|          |             |      |          |                          |                       |   |   |   |                                    |
|----------|-------------|------|----------|--------------------------|-----------------------|---|---|---|------------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 | <b>EXECUTIVE OFFICE OF TRANSPORTATION</b>         | <b>THE URBAN RING PHASE 2</b><br>RDEIR/DEIS | TITLE<br><br><b>URBAN RING PHASE 2</b><br><b>PLAN - ALBANY STREET/MASSACHUSETTS AVENUE, BOSTON</b><br><b>BUS RAPID TRANSIT ROUTES 6 &amp; 7</b> | SHEET NO.<br>32A                   |
|          |             |      |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |   |   |   | CONTRACT NO.<br>97713              |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |   |   | DRAWING NO.<br>97713-RDEIR-sht-32A |
|          |             |      |          | APPROVED BY<br>WPM       |                       |   |   |   |                                    |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |   |                                    |



PLAN

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| REVISION | DESCRIPTION | DATE | APPROVED |
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| DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |
| DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |
| CHECKED BY<br>WPM/PSC/AS | REVISION              |
| APPROVED BY<br>JAD       |                       |

**EOT** EXECUTIVE OFFICE OF TRANSPORTATION

**EarthTech** EARTH TECH  
300 BAKER AVENUE, CONCORD, MA 01742

TITLE  
**THE URBAN RING  
PHASE 2  
RDEIR/DEIS**

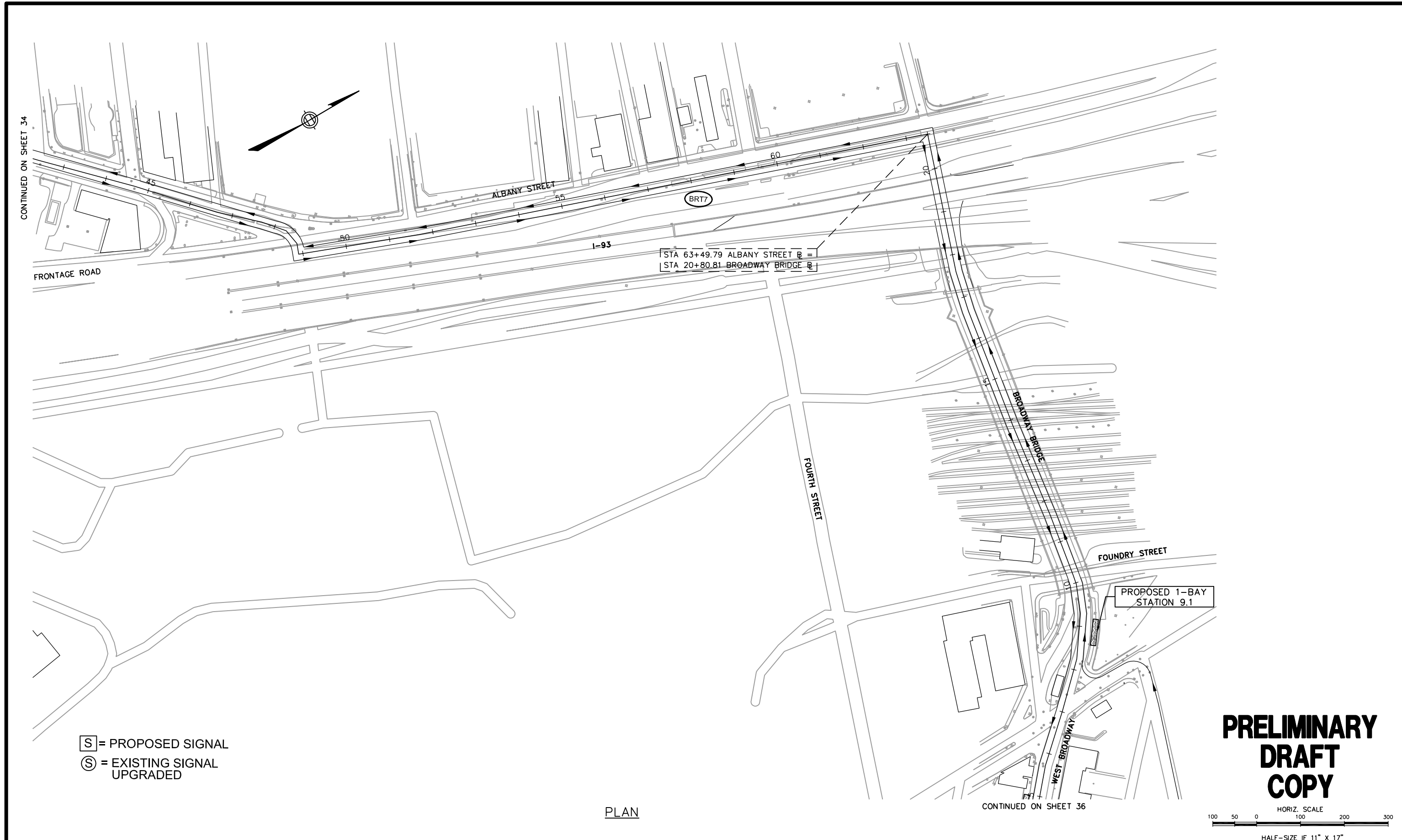
**URBAN RING PHASE 2  
PLAN - ALBANY STREET, BOSTON  
EAST CONCORD STREET TO FRONTAGE ROAD  
BUS RAPID TRANSIT ROUTE 7**

|                                   |
|-----------------------------------|
| SHEET NO.<br>34                   |
| CONTRACT NO.<br>97713             |
| DRAWING NO.<br>97713-RDEIR-sht-34 |

CONTINUED ON SHEET 32

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[S] = PROPOSED SIGNAL  
 [S] = EXISTING SIGNAL UPGRADED

| REVISION | DESCRIPTION | DATE | APPROVED |
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|             |            |          |               |
|-------------|------------|----------|---------------|
| DESIGNED BY | WPM        | DATE     | NOVEMBER 2008 |
| DRAWN BY    | JAD/JAB    | SCALE    | AS NOTED      |
| CHECKED BY  | WPM/PSC/AS | REVISION |               |
| APPROVED BY | JAD        |          |               |

**EOT** EXECUTIVE OFFICE OF TRANSPORTATION

**EarthTech** EARTH TECH  
 300 BAKER AVENUE, CONCORD, MA 01742

THE URBAN RING PHASE 2  
 RDEIR/DEIS

TITLE

URBAN RING PHASE 2  
 PLAN - ALBANY STREET, BROADWAY BRIDGE, BOSTON  
 FRONTAGE STREET TO FOUNDRY STREET  
 BUS RAPID TRANSIT ROUTE 7

|              |                    |
|--------------|--------------------|
| SHEET NO.    | 35                 |
| CONTRACT NO. | 97713              |
| DRAWING NO.  | 97713-RDEIR-sht-35 |

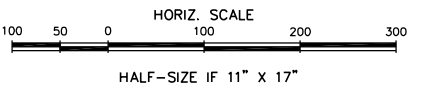


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PLAN

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COPY**



| REVISION | DESCRIPTION | DATE | APPROVED |
|----------|-------------|------|----------|
|          |             |      |          |
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|-------------|------------|
| DESIGNED BY | WPM        |
| DRAWN BY    | JAD/JAB    |
| CHECKED BY  | WPM/PSC/AS |
| APPROVED BY | JAD        |

|          |               |
|----------|---------------|
| DATE     | NOVEMBER 2008 |
| SCALE    | AS NOTED      |
| REVISION |               |



EXECUTIVE OFFICE OF TRANSPORTATION

**EarthTech**

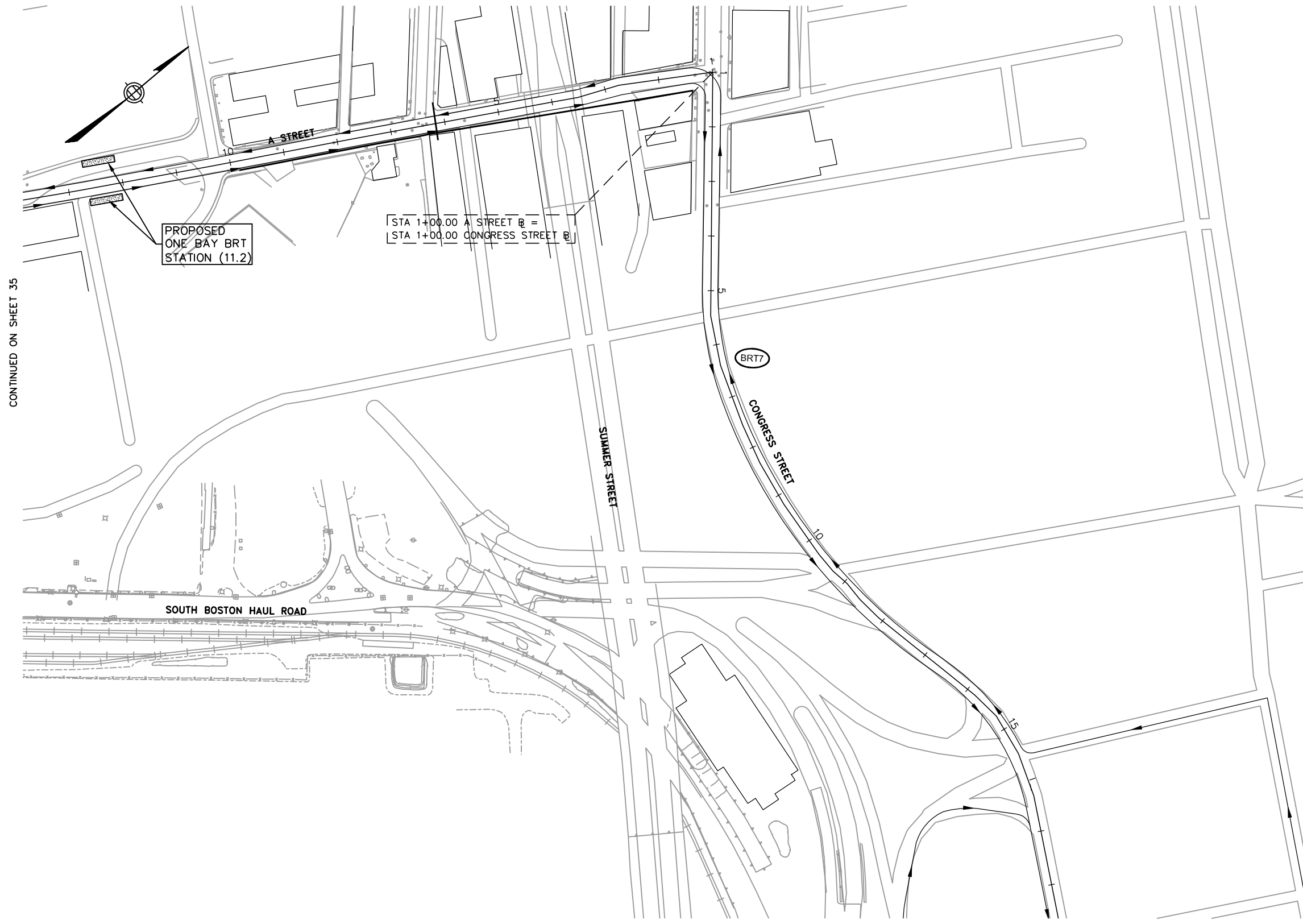
EARTH TECH  
300 BAKER AVENUE, CONCORD, MA 01742

THE URBAN RING  
PHASE 2  
RDEIR/DEIS

TITLE

URBAN RING PHASE 2  
PLAN - A STREET, BOSTON  
WEST BROADWAY TO WORMWOOD STREET  
BUS RAPID TRANSIT ROUTE 7

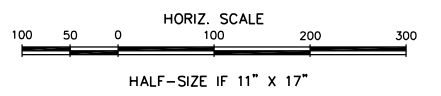
|              |                    |
|--------------|--------------------|
| SHEET NO.    | 36                 |
| CONTRACT NO. | 97713              |
| DRAWING NO.  | 97713-RDEIR-sht-36 |



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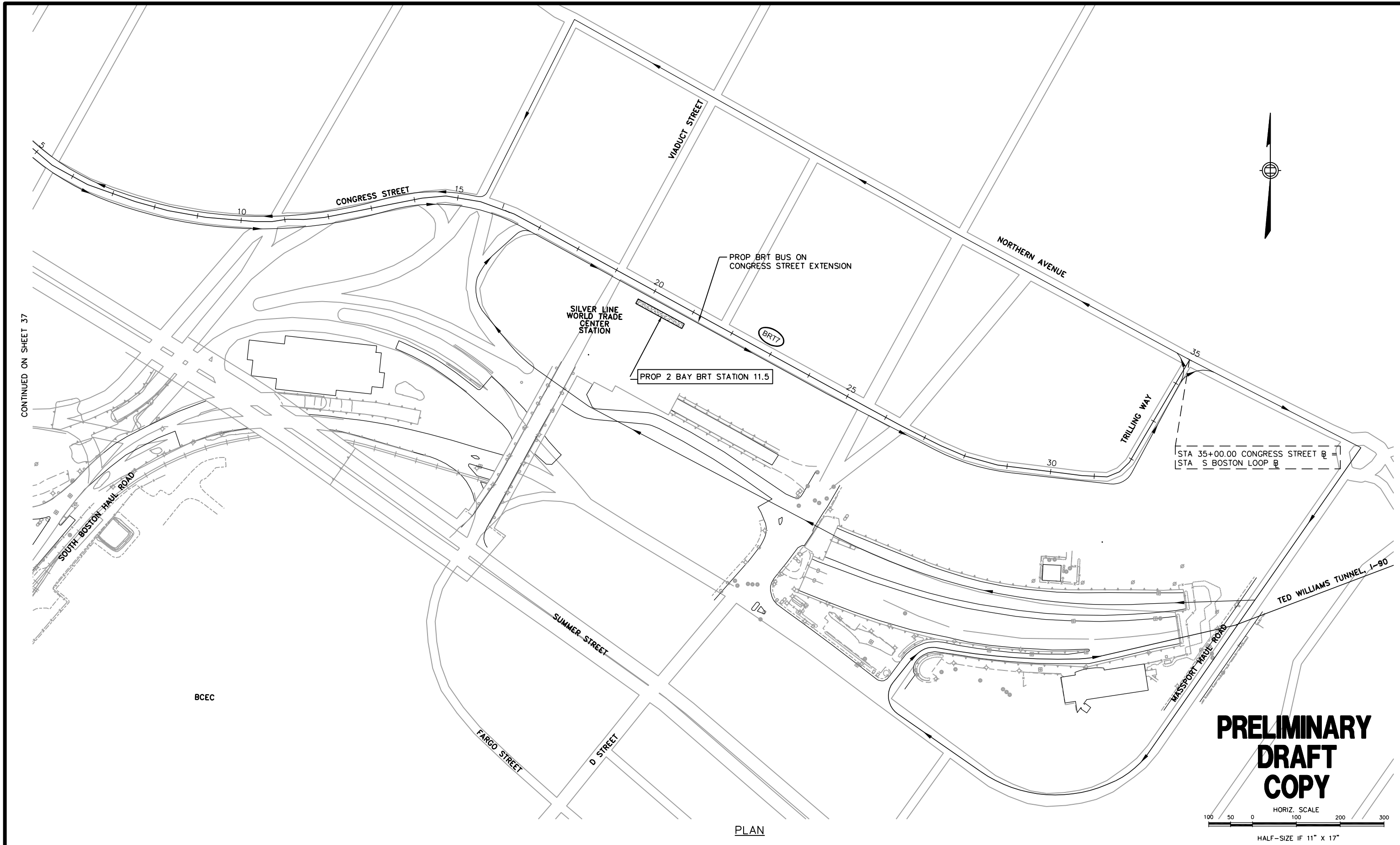
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COPY**



PLAN

|          |             |      |          |                          |                       |   |  |  |                                   |
|----------|-------------|------|----------|--------------------------|-----------------------|---|--|--|-----------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>OFFICE OF<br/>TRANSPORTATION</b> | <b>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</b> | TITLE<br><br><b>URBAN RING PHASE 2<br/>PLAN - A STREET &amp; CONGRESS STREET, BOSTON<br/>BUS RAPID TRANSIT ROUTE 7</b> | SHEET NO.<br>37                   |
|          |             |      |          | DRAWN BY<br>JAD          | SCALE<br>AS NOTED     |   |  |  | CONTRACT NO.<br>97713             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |  | DRAWING NO.<br>97713-RDEIR-sht-37 |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |  |                                   |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |   |  |  |                                   |

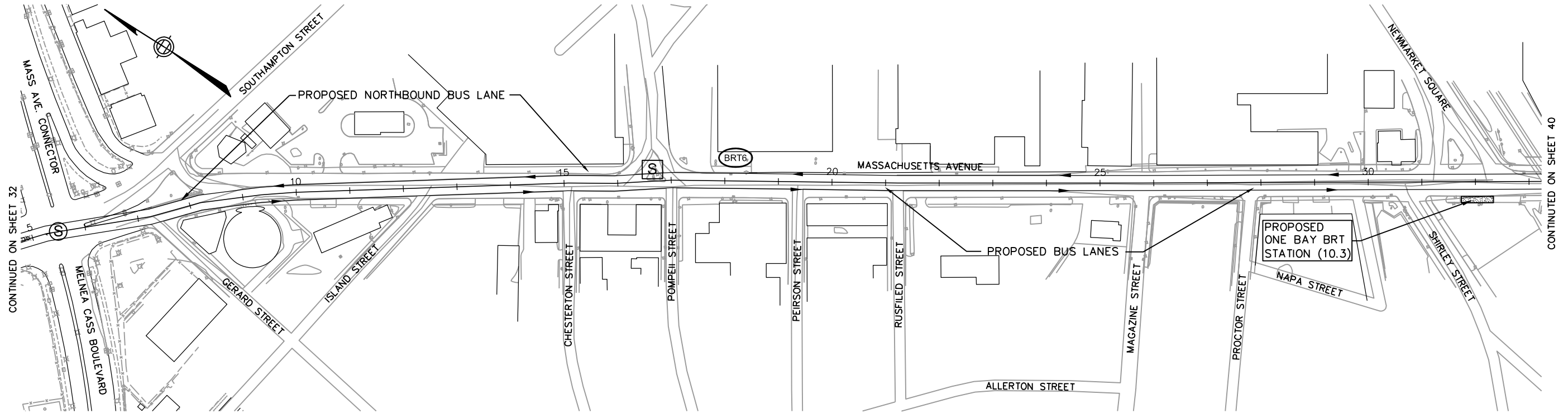


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**PRELIMINARY  
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COPY**

HORIZ. SCALE  
1" = 100'  
100 50 0 100 200 300  
HALF-SIZE IF 11" X 17"

|          |             |      |          |                          |                       |  |   |   |                                   |
|----------|-------------|------|----------|--------------------------|-----------------------|--|---|---|-----------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE OFFICE OF TRANSPORTATION</b>                | <b>THE URBAN RING PHASE 2</b><br>RDEIR/DEIS | TITLE<br><b>URBAN RING PHASE 2</b><br><b>PLAN - CONGRESS STREET, BOSTON</b><br><b>BUS RAPID TRANSIT ROUTE 7</b> | SHEET NO.<br>38                   |
|          |             |      |          | DRAWN BY<br>JAD          | SCALE<br>AS NOTED     |  |   |   | CONTRACT NO.<br>97713             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |  |   |   | DRAWING NO.<br>97713-RDEIR-sht-38 |
|          |             |      |          | APPROVED BY<br>JAD       |                       |  |   |   |                                   |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |  <b>EARTH TECH</b><br>300 BAKER AVENUE, CONCORD, MA 01742 |   |   |                                   |



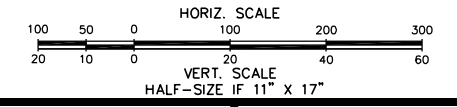
PLAN

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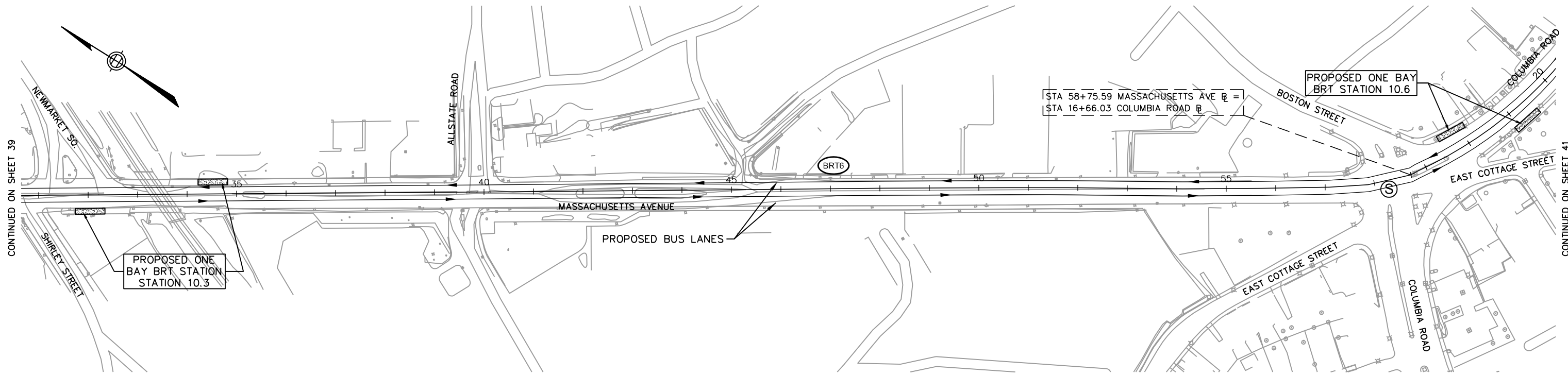
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- [S] = PROPOSED SIGNAL
- [S] = EXISTING SIGNAL UPGRADED

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|-----------------------|-------------|------|----------|--------------------|--|---|--|---|--------------------------------|--|
| DESIGNED BY WPM       |             |      |          | DATE NOVEMBER 2008 |  | <b>EXECUTIVE OFFICE OF TRANSPORTATION</b>         | <b>THE URBAN RING PHASE 2 RDEIR/DEIS</b> | TITLE<br>URBAN RING PHASE 2<br>PLAN - MASSACHUSETTS AVENUE, BOSTON<br>MELNEA CASS BLVD TO NEWMARKET SQUARE<br>BUS RAPID TRANSIT ROUTE 6 | SHEET NO. 39                   |  |
| DRAWN BY JAD/JAB      |             |      |          | SCALE AS NOTED     |  |   |  |   | CONTRACT NO. 97713             |  |
| CHECKED BY WPM/PSC/AS |             |      |          | REVISION           |  |   |  |   | DRAWING NO. 97713-RDEIR-sht-39 |  |
| APPROVED BY JAD       |             |      |          |                    |  |   |  |   |                                |  |
| REVISION              | DESCRIPTION | DATE | APPROVED |                    |  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |  |   |                                |  |



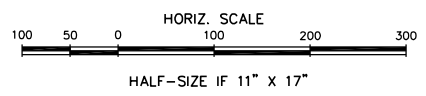
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PLAN

[S] = PROPOSED SIGNAL  
 [S] = EXISTING SIGNAL UPGRADED

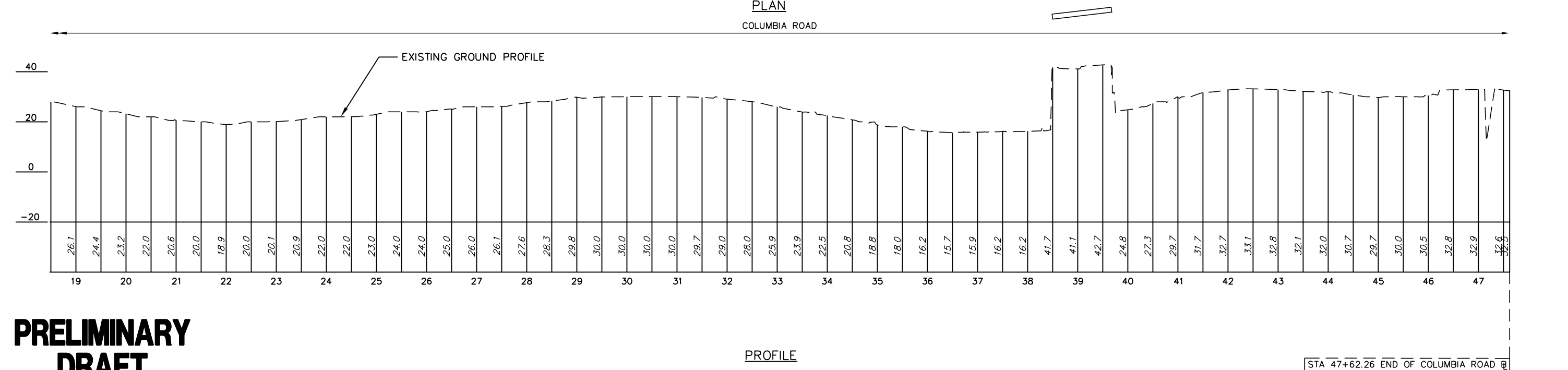
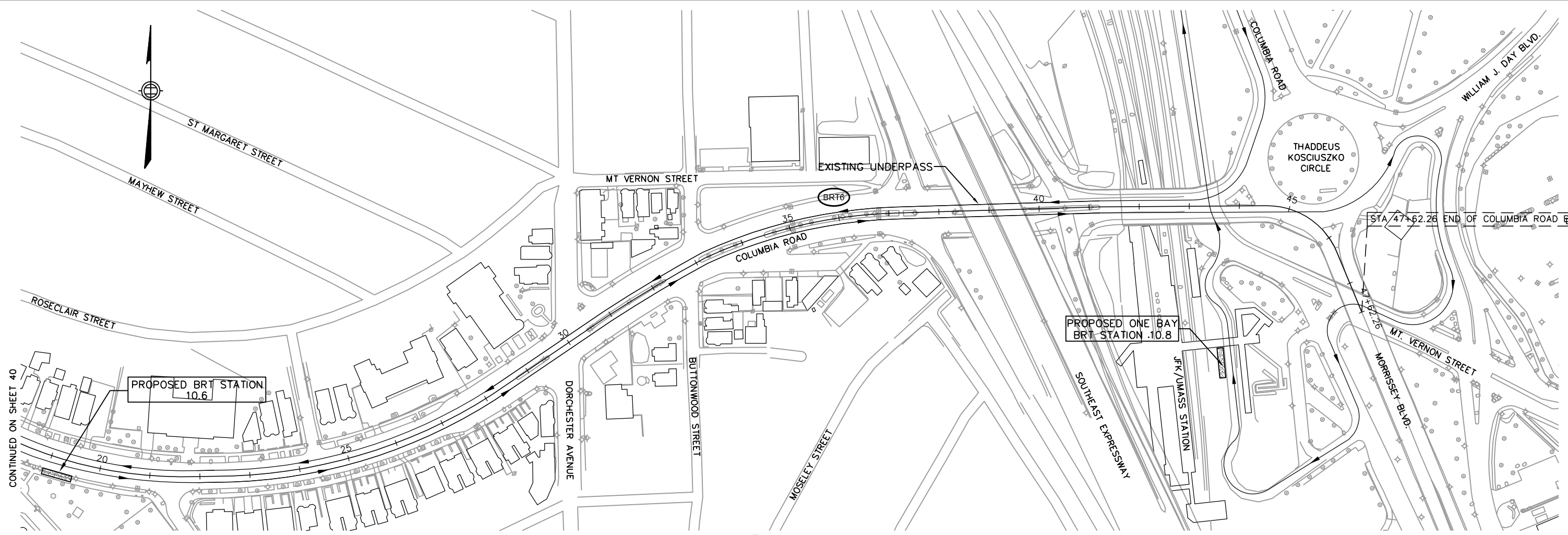
**PRELIMINARY  
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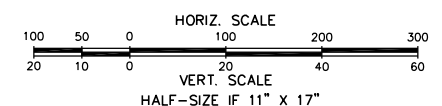
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|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE OFFICE OF TRANSPORTATION</b> | <b>THE URBAN RING PHASE 2 RDEIR/DEIS</b> | TITLE  | SHEET NO.<br>40                   |
|          |             |      |          | DRAWN BY<br>JAD/JAB      | SCALE<br>AS NOTED     |   |  | <b>URBAN RING PHASE 2<br/>         PLAN - MASSACHUSETTS AVENUE, BOSTON<br/>         NEWMARKET SQUARE TO EDWARD EVERETT SQUARE<br/>         BUS RAPID TRANSIT ROUTE 6</b> | CONTRACT NO.<br>97713             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |  | DRAWING NO.<br>97713-RDEIR-sht-40 |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD       |                       |   |  |  |                                   |

**EarthTech** EARTH TECH  
 300 BAKER AVENUE, CONCORD, MA 01742



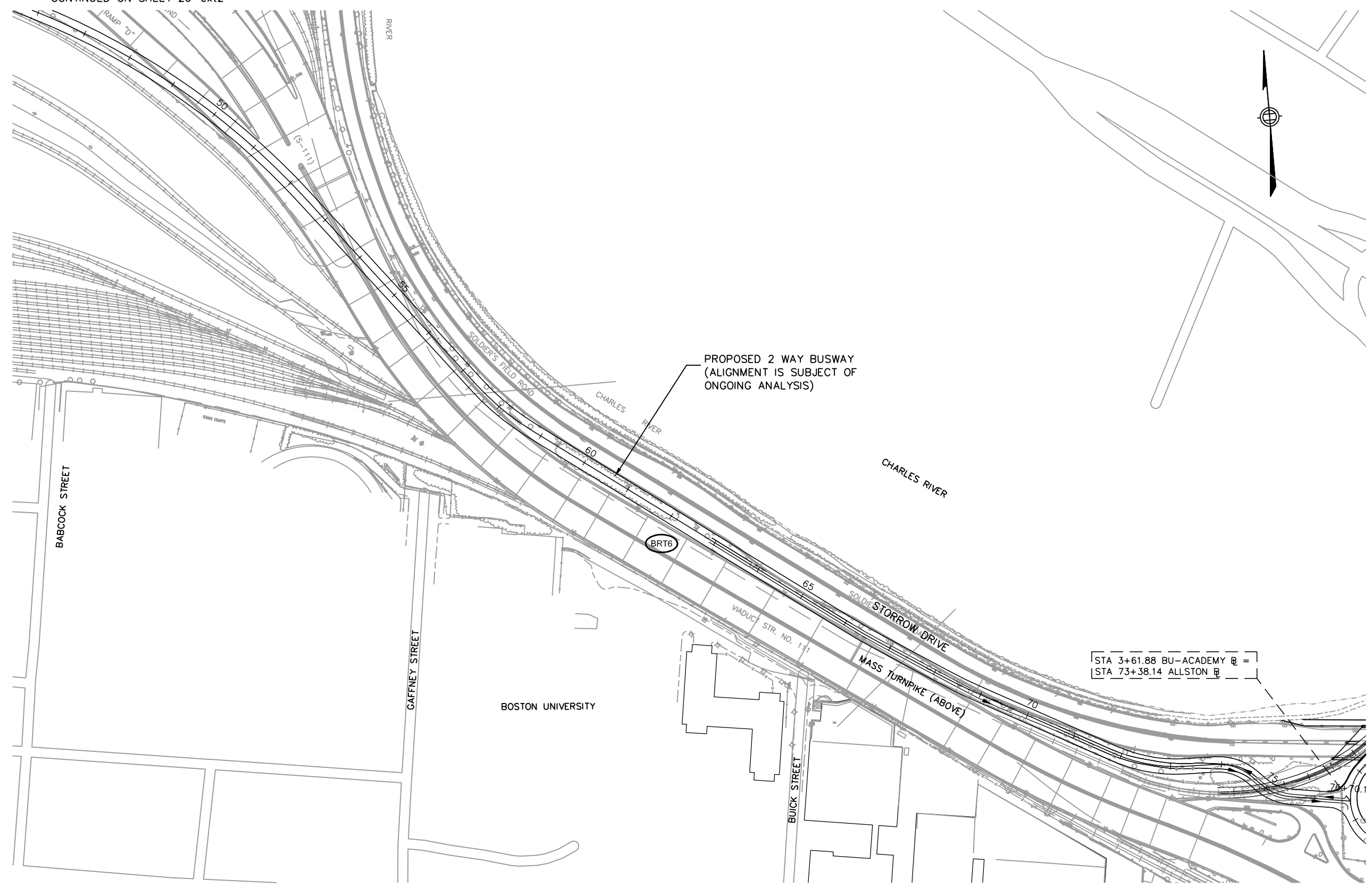


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|--------------------------|-------------|-----------------------|----------|--|-----------------------------------|---|-----------------------------------|
| DESIGNED BY<br>WPM       |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN & PROFILE - COLUMBIA ROAD, BOSTON<br>MASSACHUSETTS AVE TO THADDEUS KOSCIUSZKO CIRCLE<br>BUS RAPID TRANSIT ROUTE 6 | SHEET NO.<br>41                   |
| DRAWN BY<br>JAD          |             | SCALE<br>AS NOTED     |          |  |                                   |   |                                   |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |   | DRAWING NO.<br>97713-RDEIR-sht-41 |
| APPROVED BY<br>JAD       |             |                       |          |  |                                   |   |                                   |
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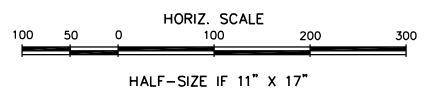
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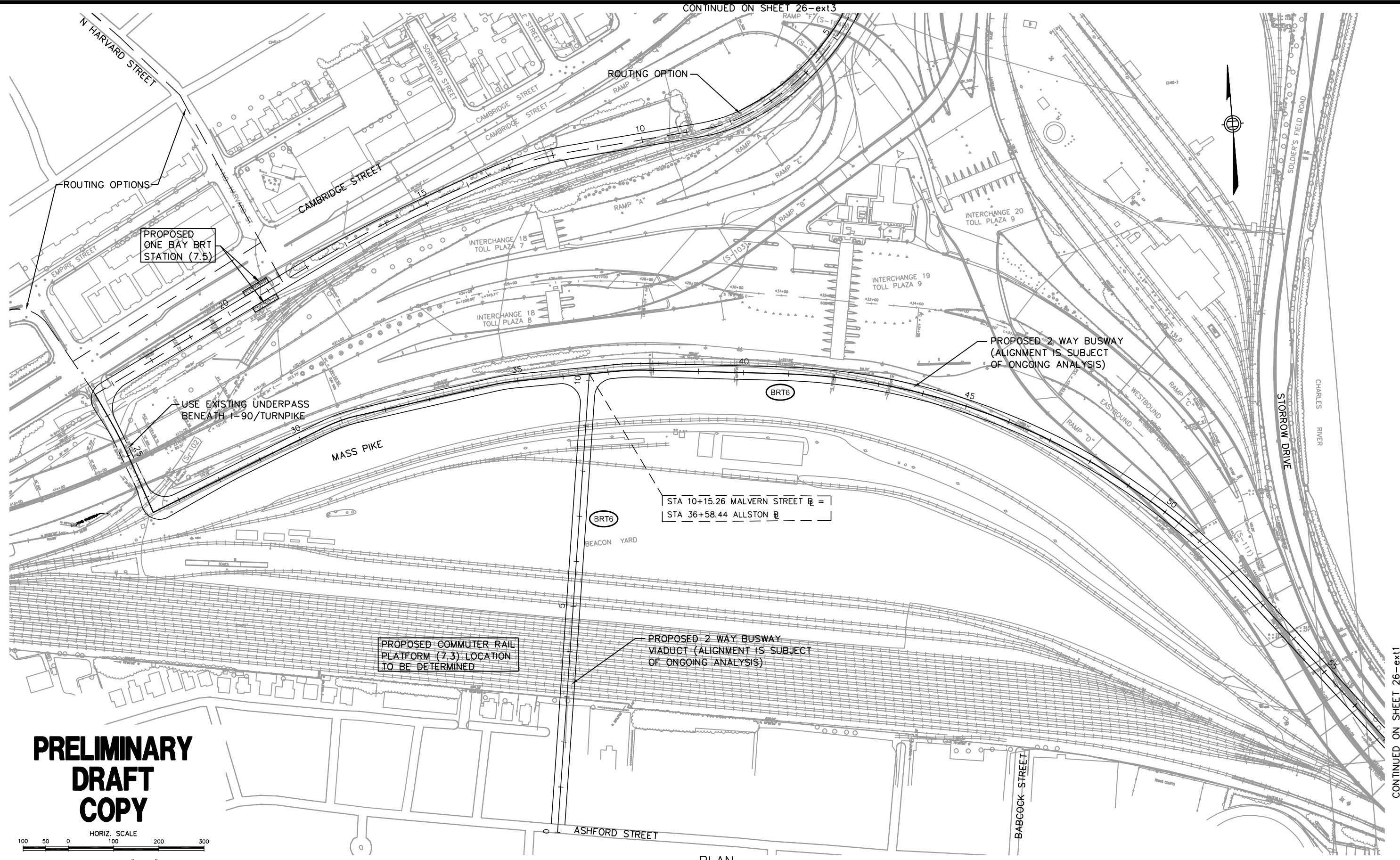
PLAN

CONTINUED ON SHEET 26

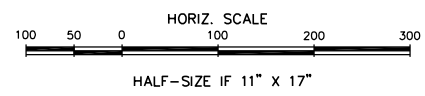
**PRELIMINARY  
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COPY**



|          |             |      |          |                          |                       |   |  |  |                                  |
|----------|-------------|------|----------|--------------------------|-----------------------|---|--|--|----------------------------------|
|          |             |      |          | DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>OFFICE OF<br/>TRANSPORTATION</b> | <b>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</b> | TITLE<br><br><b>URBAN RING PHASE 2<br/>PLAN - MASSACHUSETTS TURNPIKE, BOSTON<br/>BU BRIDGE TO BEACON PARK YARD<br/>BUS RAPID TRANSIT ROUTE 6</b> | SHEET NO.<br>26-ext1             |
|          |             |      |          | DRAWN BY<br>JAD          | SCALE<br>AS NOTED     |   |  |  | CONTRACT NO.<br>97713            |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |  | DRAWING NO.<br>RDEIR-sht-26-ext1 |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |  |                                  |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |  EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |  |  |                                  |



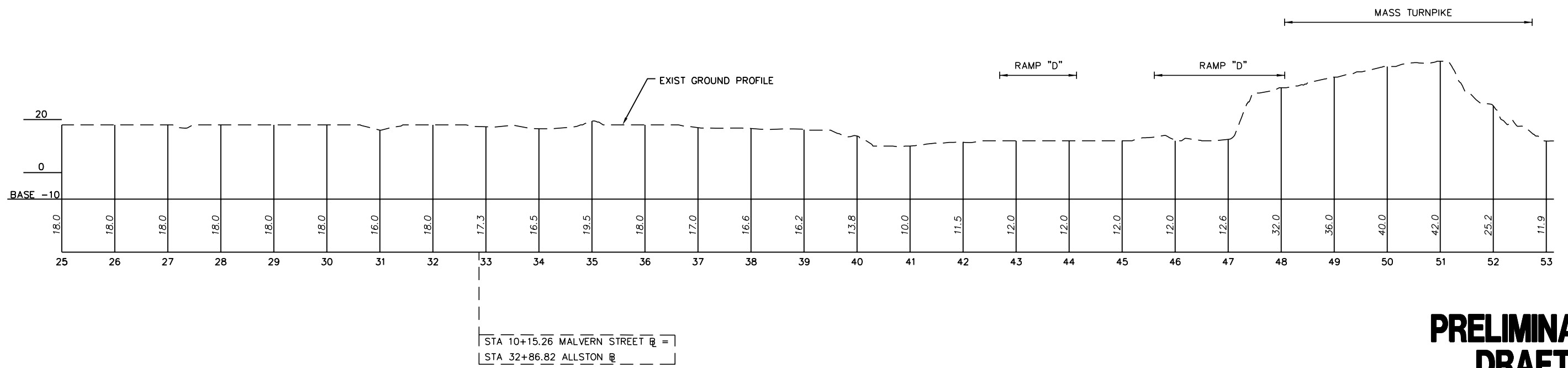
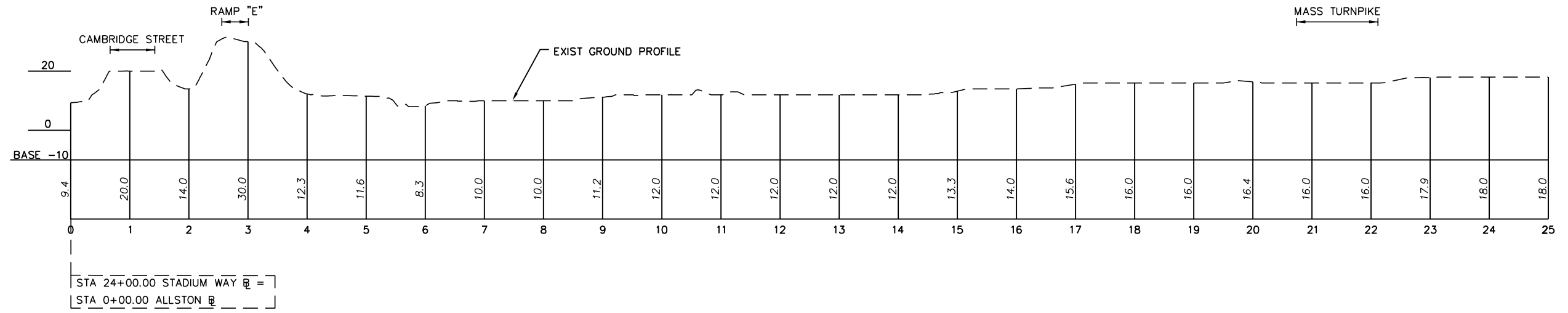
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PLAN

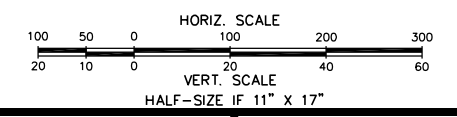
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|----------|-------------|------|----------|-------------|--------|----------|---------------|--|---|--------------|-------------------|
| REVISION | DESCRIPTION | DATE | APPROVED | DESIGNED BY | WPM    | DATE     | NOVEMBER 2008 |  EXECUTIVE OFFICE OF TRANSPORTATION<br>THE URBAN RING PHASE 2<br>RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PLAN - BEACON PARK YARD TO CAMBRIDGE STREET, BOSTON<br>BUS RAPID TRANSIT ROUTE 6 | SHEET NO.    | 26-ext2           |
|          |             |      |          | DRAWN BY    | JAD    | SCALE    | AS NOTED      |  |   | CONTRACT NO. | 97713             |
|          |             |      |          | CHECKED BY  | PSC/AS | REVISION |               |  EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742                          |   | DRAWING NO.  | RDEIR-sht-26-ext2 |
|          |             |      |          | APPROVED BY | JAD    |          |               |  |   |              |                   |

CONTINUED ON SHEET 26-ext1



PROFILE

**PRELIMINARY  
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COPY**



|                    |                       |  |                                   |  |                                    |
|--------------------|-----------------------|--|-----------------------------------|--|------------------------------------|
| DESIGNED BY<br>WPM | DATE<br>NOVEMBER 2008 | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>PROFILE - BABCOCK STREET TO CAMBRIDGE STREET, BOSTON<br>BUS RAPID TRANSIT ROUTE 6 | SHEET NO.<br>26-ext2-p             |
| DRAWN BY<br>JAD    | SCALE<br>AS NOTED     |  |                                   |  |                                    |
| CHECKED BY<br>PSC  | REVISION              | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |  | DRAWING NO.<br>RDEIR-sht-26-ext2-p |
| APPROVED BY<br>JAD |                       |  |                                   |  |                                    |
| REVISION           | DESCRIPTION           | DATE   | APPROVED                          |  |                                    |

CONTINUED ON SHEET 26-ext4



ROUTING OPTIONS

WESTERN AVENUE

PROPOSED ONE BAY BRT STATION (7.6)  
LOCATION TO BE DETERMINED

ROUTING OPTION

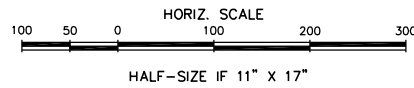
FUTURE STADIUM WAY  
(BY OTHERS)

STA 24+00.00 STADIUM WAY @ =  
STA 0+00.00 ALLSTON @

NOTE:  
1. BRT 6 ROUTING BETWEEN STATIONS 7.6 AND 7.7 TO BE DETERMINED IN COORDINATION WITH CITY OF BOSTON AND AREA STAKEHOLDERS

Ⓢ = EXISTING SIGNAL UPGRADED

**PRELIMINARY  
DRAFT  
COPY**



PLAN

CONTINUED ON SHEET 26-ext2

| REVISION | DESCRIPTION | DATE | APPROVED |
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|----------------------|-----------------------|
| DESIGNED BY<br>WPM   | DATE<br>NOVEMBER 2008 |
| DRAWN BY<br>JAD      | SCALE<br>AS NOTED     |
| CHECKED BY<br>PSC/AS | REVISION              |
| APPROVED BY<br>JAD   |                       |

**EOT** EXECUTIVE OFFICE OF TRANSPORTATION

**EarthTech** EARTH TECH  
300 BAKER AVENUE, CONCORD, MA 01742

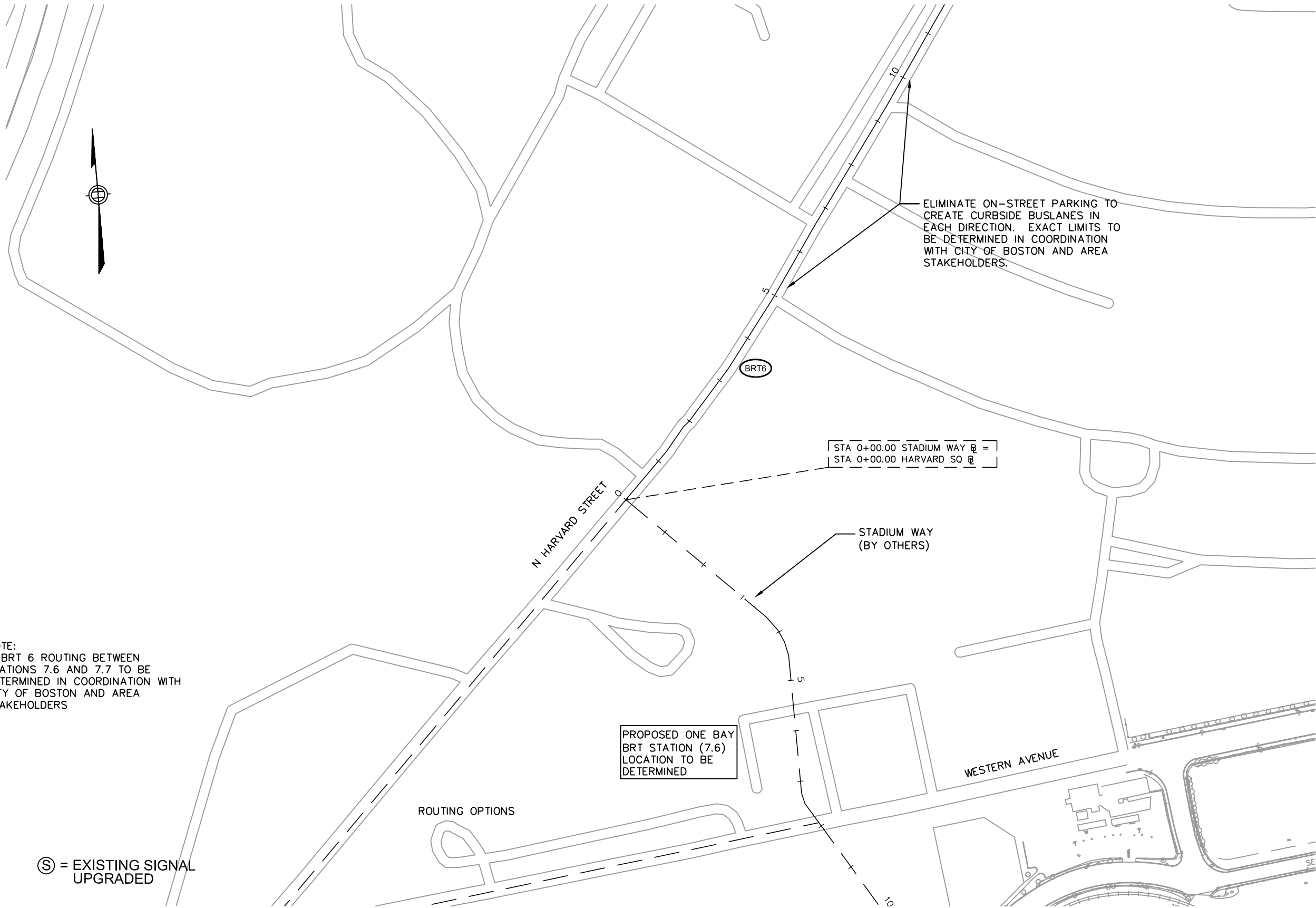
**THE URBAN RING PHASE 2**  
RDEIR/DEIS

TITLE

**URBAN RING PHASE 2**  
**PLAN - CAMBRIDGE STREET TO WESTERN AVENUE, BOSTON**  
**BUS RAPID TRANSIT ROUTE 6**

|                                  |
|----------------------------------|
| SHEET NO.<br>26-ext3             |
| CONTRACT NO.<br>97713            |
| DRAWING NO.<br>RDEIR-sht-26-ext3 |

CONTINUED ON SHEET 26-ext5



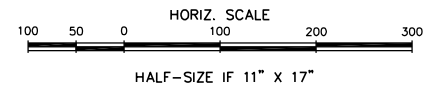
NOTE:  
1. BRT 6 ROUTING BETWEEN STATIONS 7.6 AND 7.7 TO BE DETERMINED IN COORDINATION WITH CITY OF BOSTON AND AREA STAKEHOLDERS

Ⓢ = EXISTING SIGNAL UPGRADED

PLAN

CONTINUED ON SHEET 26-ext3

**PRELIMINARY  
DRAFT  
COPY**



| REVISION | DESCRIPTION | DATE | APPROVED |
|----------|-------------|------|----------|
|          |             |      |          |
|          |             |      |          |
|          |             |      |          |

|                          |                       |
|--------------------------|-----------------------|
| DESIGNED BY<br>WPM       | DATE<br>NOVEMBER 2008 |
| DRAWN BY<br>JAD          | SCALE<br>AS NOTED     |
| CHECKED BY<br>WPM/PSC/AS | REVISION              |
| APPROVED BY<br>JAD       |                       |

**EOT** EXECUTIVE OFFICE OF TRANSPORTATION

**EarthTech** EARTH TECH  
300 BAKER AVENUE, CONCORD, MA 01742

TITLE

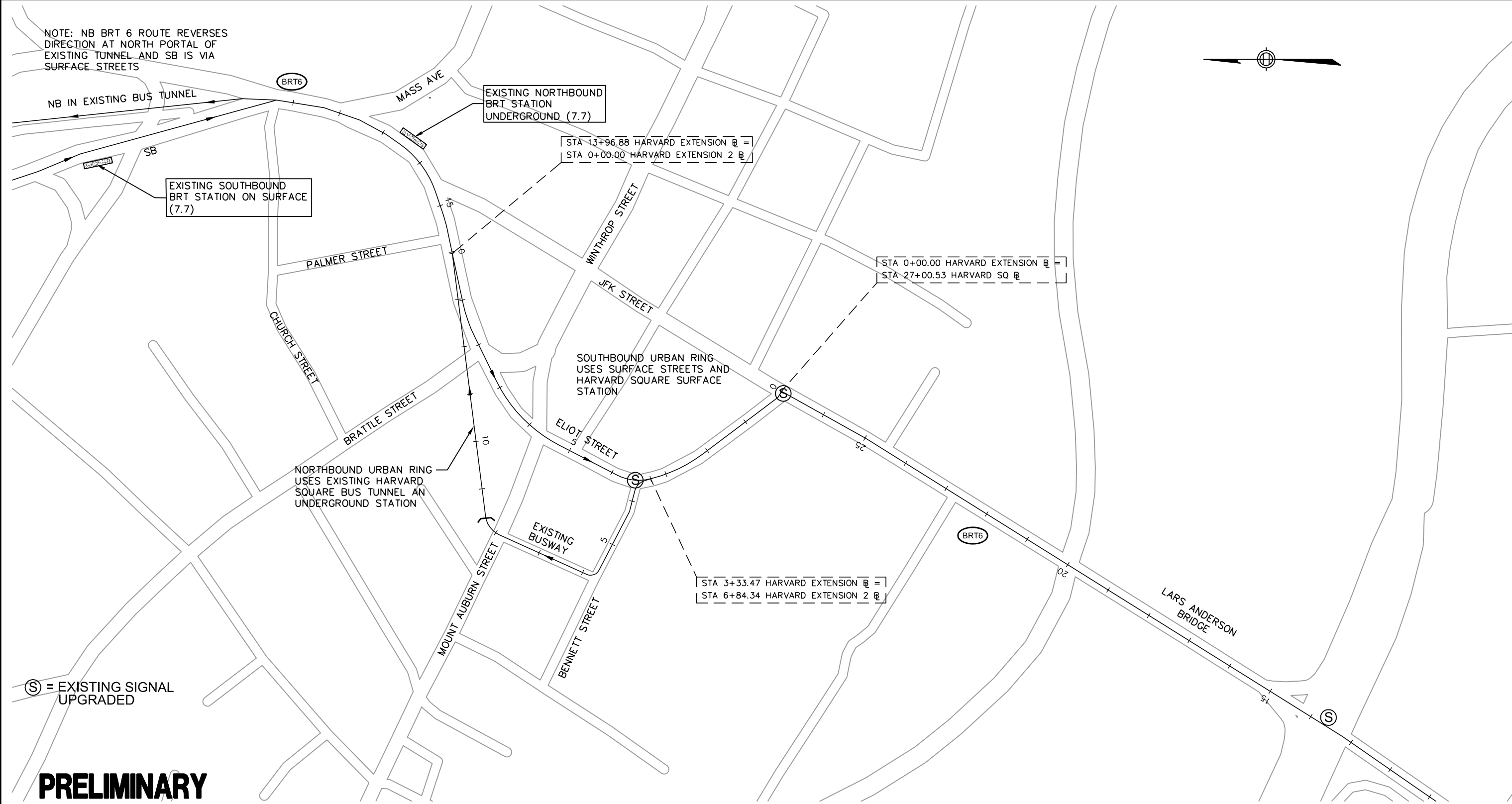
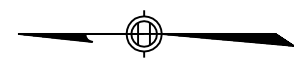
**THE URBAN RING  
PHASE 2  
RDEIR/DEIS**

URBAN RING PHASE 2  
PLAN - WESTERN AVENUE TO NORTH HARVARD STREET, BOSTON  
BUS RAPID TRANSIT ROUTE 6

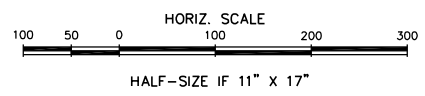
|                                  |
|----------------------------------|
| SHEET NO.<br>26-ext4             |
| CONTRACT NO.<br>97713            |
| DRAWING NO.<br>RDEIR-sht-26-ext4 |



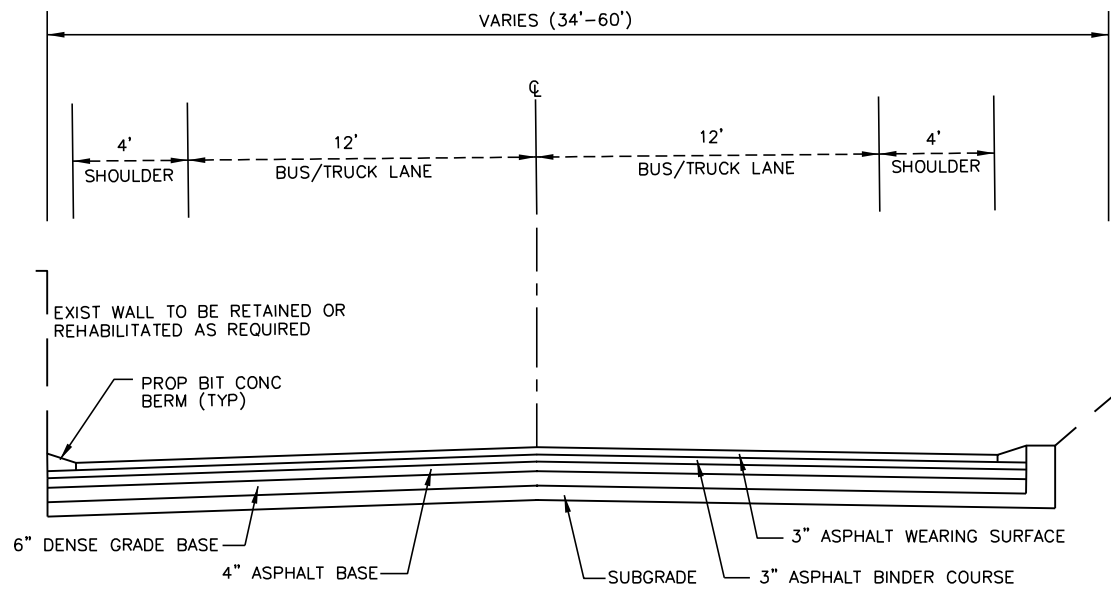
NOTE: NB BRT 6 ROUTE REVERSES DIRECTION AT NORTH PORTAL OF EXISTING TUNNEL AND SB IS VIA SURFACE STREETS



**PRELIMINARY  
DRAFT  
COPY**

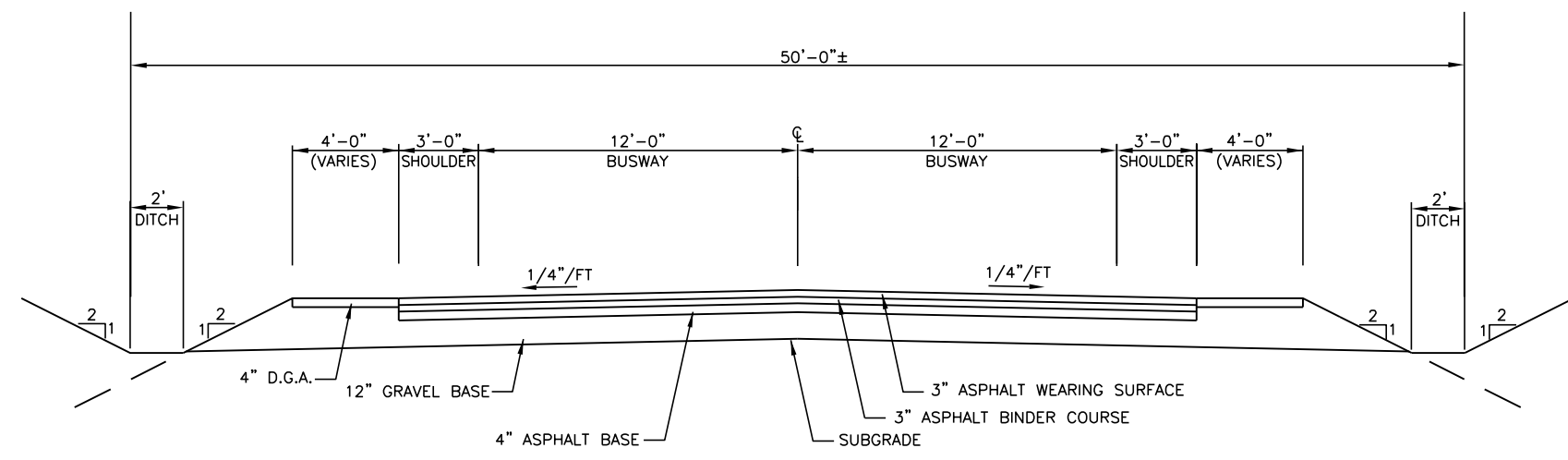
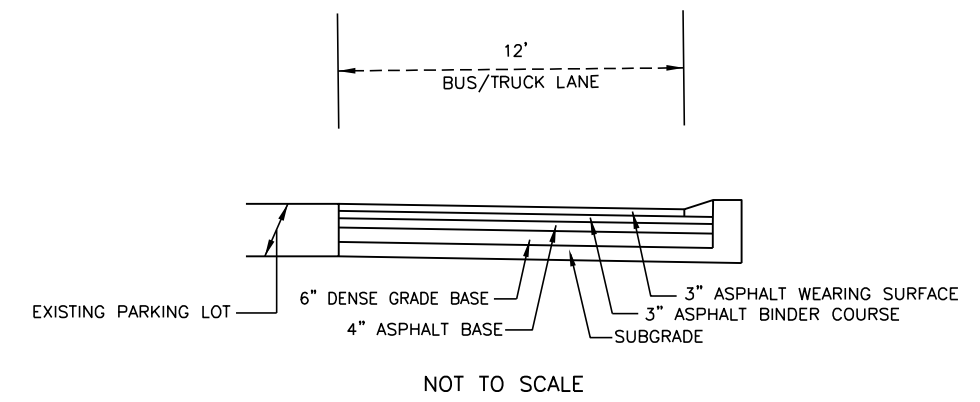


|                          |             |                       |          |  |                                      |  |                      |
|--------------------------|-------------|-----------------------|----------|--|--------------------------------------|--|----------------------|
| DESIGNED BY<br>WPM       |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b><br>EXECUTIVE OFFICE OF TRANSPORTATION               | THE URBAN RING PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>PLAN - JFK STREET, CAMBRIDGE<br>LARS ANDERSON BRIDGE TO HARVARD SQUARE<br>BUS RAPID TRANSIT ROUTE 6 | SHEET NO.<br>26-ext5 |
| DRAWN BY<br>JAD          |             | SCALE<br>AS NOTED     |          |  |                                      |  |                      |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              |          | EarthTech<br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                      | DRAWING NO.<br>RDEIR-sht-26-ext5   |                      |
| APPROVED BY<br>JAD       |             |                       |          |  |                                      |  |                      |
| REVISION                 | DESCRIPTION | DATE                  | APPROVED |  |                                      |  |                      |



- NOTE:** WORK ON THIS SECTION INCLUDES THE FOLLOWING:
- STORM DRAINAGE SYSTEM (2 CATCH BASIN/1 MANHOLE SPACED @ 250')
  - LIGHTING (1 20' LIGHT POLE AND LUMINAIRE SPACED AT 150 FEET)
  - TYPICAL SECTION IS FOR THE PURPOSE OF DEVELOPING PRELIMINARY CAPITAL COST INFORMATION AND IS NOT A FINAL DESIGN

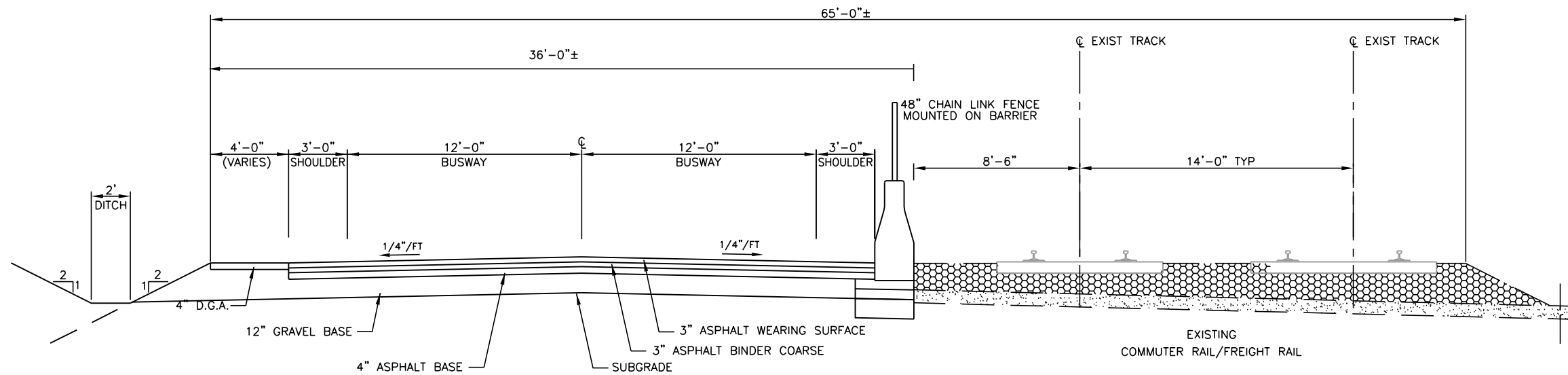
**EAST BOSTON**  
**BUSWAY TYPICAL SECTION**  
**AT-GRADE-EAST BOSTON HAUL ROAD**  
 EAST BOSTON HAUL ROAD @ STA 3+88.18 TO 13+00, 20+00 TO 49+00  
**EAST BOSTON**  
**LOGAN WEST GARAGE**  
 LOGAN AIRPORT B STA 0+00 TO 12+20  
 L  
 NOT TO SCALE



**BUSWAY TYPICAL SECTION**  
**AT-GRADE-ON EXISTING RAILROAD ROW**  
 BELLINGHAM TO SECOND STREET @ STA 18+14.31 TO 34+50  
 TELECOM CITY @ STA 10+00 TO 56+00  
 NOT TO SCALE

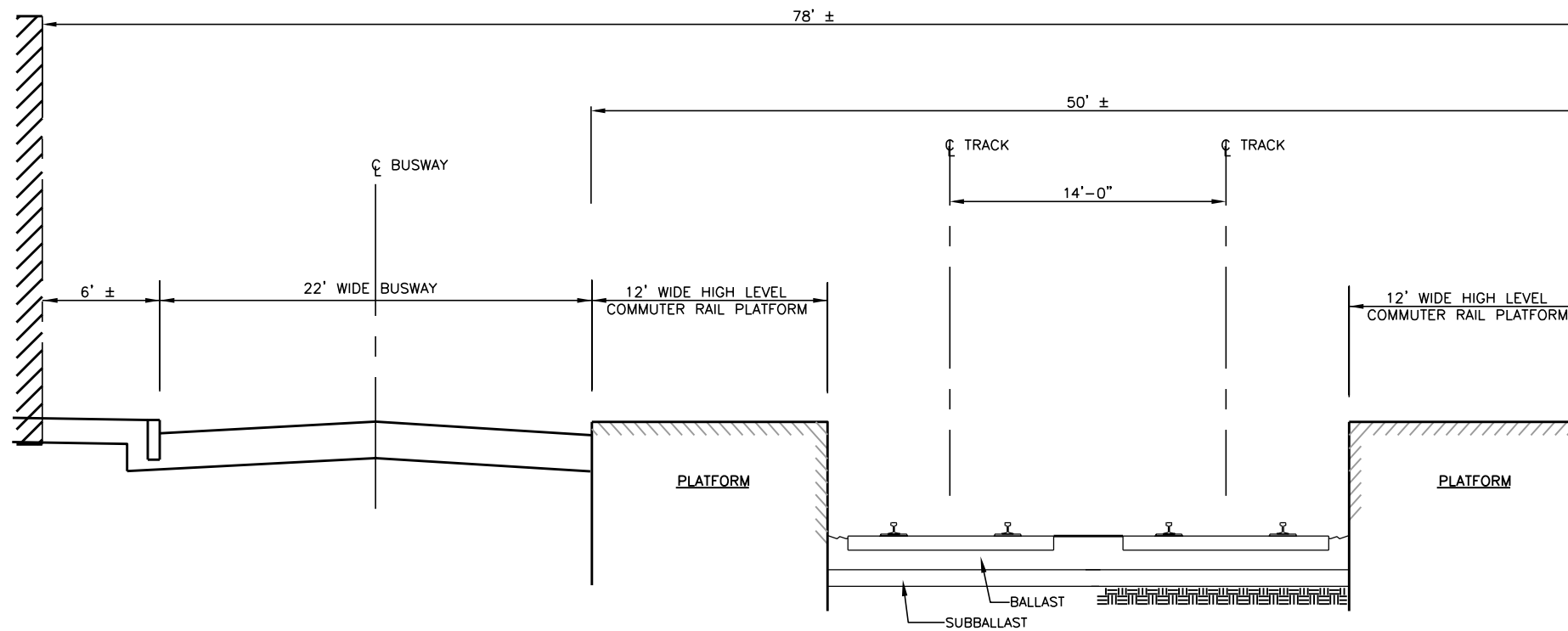
**PRELIMINARY**  
**DRAFT**  
**COPY**

|          |             |      |          |                          |                       |  |  |   |   |
|----------|-------------|------|----------|--------------------------|-----------------------|--|--|---|---|
|          |             |      |          | DESIGNED BY<br>JAD       | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE OFFICE OF TRANSPORTATION</b>                | <b>THE URBAN RING PHASE 2</b><br><b>RDEIR/DEIS</b> | TITLE<br><b>URBAN RING PHASE 2</b><br><b>BUSWAY TYPICAL SECTIONS</b><br><b>EAST BOSTON - AT-GRADE-EAST BOSTON HAUL ROAD</b><br><b>AT-GRADE-ON EXISTING RAILROAD ROW</b> | SHEET NO.<br>TYP-1                                |
|          |             |      |          | DRAWN BY<br>JGW          | SCALE<br>AS NOTED     |  |  |   | CONTRACT NO.<br>97713                             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |  <b>EARTH TECH</b><br>300 BAKER AVENUE, CONCORD, MA 01742 |  |   | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_1-13 |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD       |                       |  |  |   |   |



\* PROPOSED BUSWAY LOCATED TO THE EAST OF RAILROAD

**BUSWAY TYPICAL SECTION**  
**AT-GRADE-WITH EXISTING COMMUTER RAIL/FREIGHT RAIL**  
 BELLINGHAM STREET TO SECOND STREET @ STA 43+00 TO 80+60.03  
 ROCKPORT TO CHEMICAL WAY @ STA 1+00 TO 30+50 \*  
 NOT TO SCALE

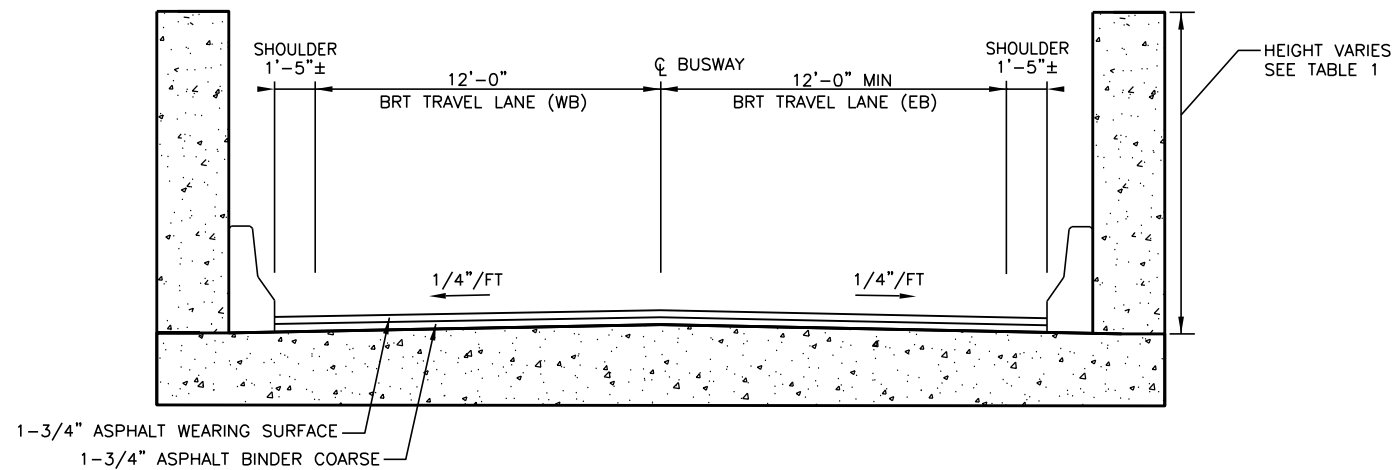


ALIGNMENT, PROFILE, SECTIONS, AND STATION LOCATIONS SHOWN ARE FOR DEVELOPING CONCEPT-LEVEL CAPITAL COST ESTIMATES ONLY. ACTUAL LOCATIONS/CONFIGURATIONS WILL BE DEVELOPED IN SUBSEQUENT ENVIRONMENTAL AND DESIGN PHASES.

**CHELSEA**  
**BUSWAY TYPICAL SECTION**  
**AT COMMUTER RAIL STATION**  
 BELLINGHAM STREET TO SECOND STREET @ STA 34+50 TO 43+00  
 NOT TO SCALE

**PRELIMINARY  
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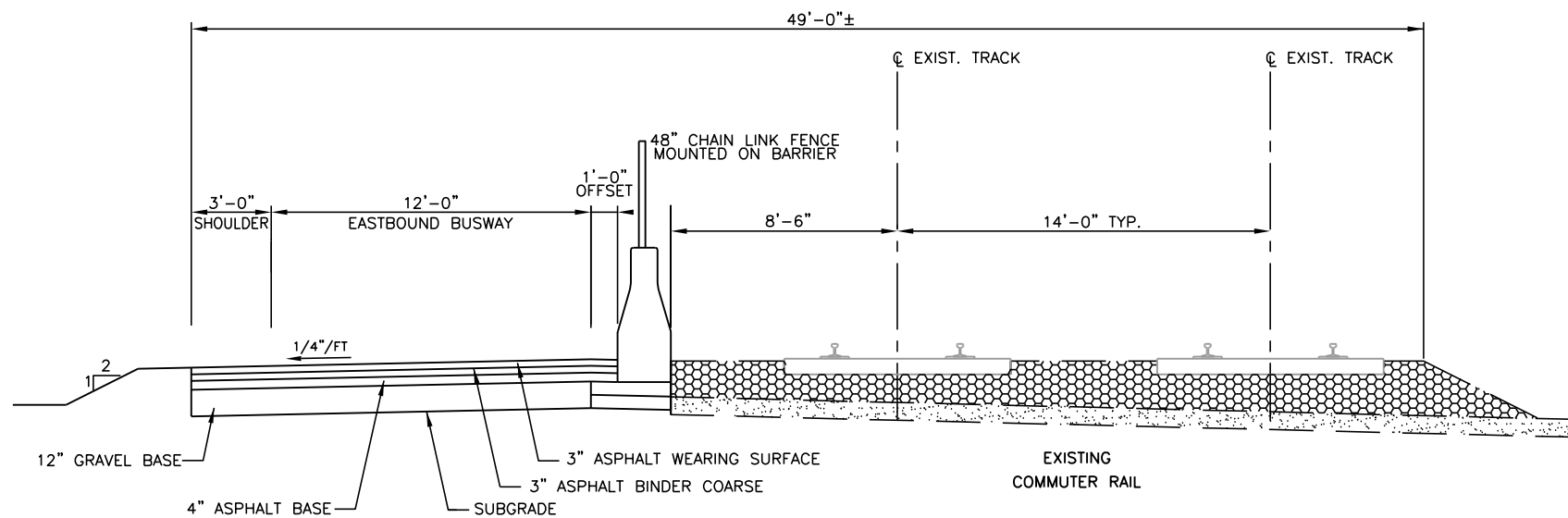
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| DESIGNED BY | JAD         | DATE     | NOVEMBER 2008 | <b>EXECUTIVE OFFICE OF TRANSPORTATION</b><br><b>THE URBAN RING PHASE 2 RDEIR/DEIS</b> | <b>TITLE</b><br>URBAN RING PHASE 2<br>BUSWAY TYPICAL SECTIONS<br>AT-GRADE-WITH EXISTING COMMUTER RAIL/FREIGHT RAIL<br>CHELSEA - AT COMMUTER RAIL STATION | SHEET NO.    | TYP-2                              |
| DRAWN BY    | JGW/JAD     | SCALE    | AS NOTED      |   |  | CONTRACT NO. | 97713                              |
| CHECKED BY  | WPM/PSC/AS  | REVISION |               |   |  | DRAWING NO.  | RDEIR-Typical-Busway-Sections_1-13 |
| APPROVED BY | JAD         |          |               |   |  |              |                                    |
| REVISION    | DESCRIPTION | DATE     | APPROVED      | <b>EARTH TECH</b><br>300 BAKER AVENUE, CONCORD, MA 01742                              |  |              |                                    |



| LOCATION | STATION                                 | HEIGHT                  |
|----------|---|-------------------------|
| EVERETT  | 35+60 TO 38+60, 42+80 TO 45+70          | VARIES FROM 4'± TO 20'± |
| EVERETT  | 70+25 TO 73+25, 75+25 TO 78+25          |                         |
| BOSTON   | 5+44.54 TO 6+00.27, 6+72.01 TO 10+00.00 |                         |

**EVERETT & BOSTON  
BUSWAY TYPICAL SECTION  
BOAT SECTION**

EVERETT/COMMUTER RAIL ENTERING STA 35+60 TO 38+60, EXISTING STA 42+80 TO 45+70,  
ENTERING STA 70+25 TO 73+25, EXISTING STA 75+25 TO 78+25  
BU-ACADEMY ENTERING STA 5+44.54 TO STA 6+00.27, EXISTING STA 6+72.01 TO 10+00.00 STA

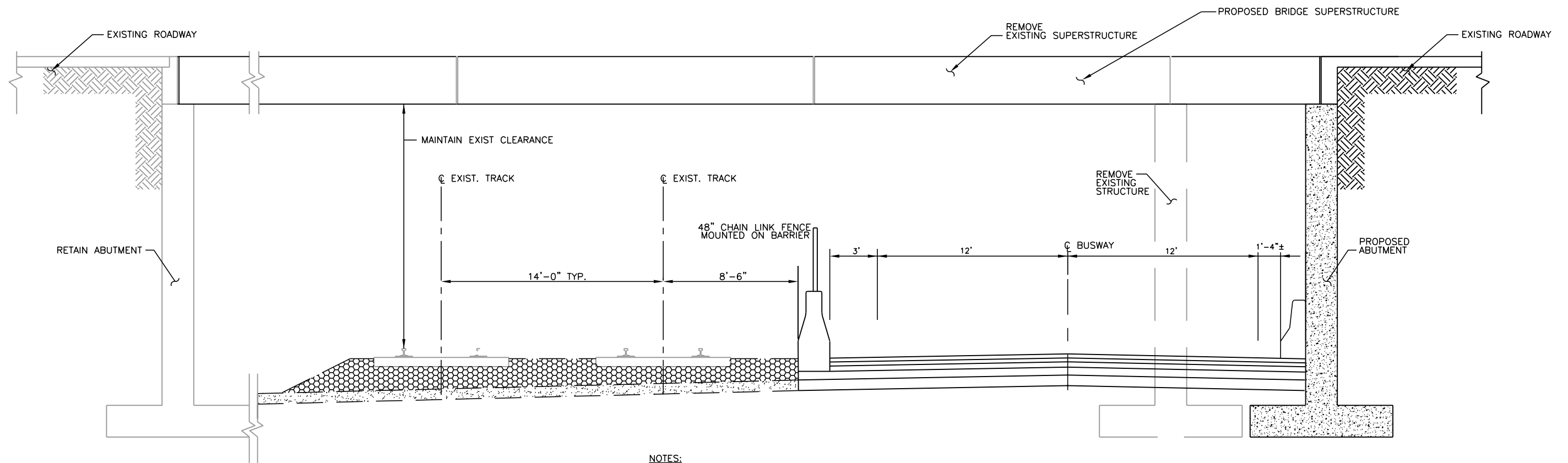


**COMMUTER RAIL  
BUSWAY TYPICAL SECTION  
AT-GRADE WITH EXISTING COMMUTER RAIL/FREIGHT RAIL**

EVERETT @ STA 55+50 TO 64+30  
GRAND JUNCTION RR B STA 21+00 TO 74+50  
NOT TO SCALE

**PRELIMINARY  
DRAFT  
COPY**

|             |             |          |               |   |  |  |              |                                    |
|-------------|-------------|----------|---------------|---|--|--|--------------|------------------------------------|
| DESIGNED BY | JAD         | DATE     | NOVEMBER 2008 | <b>EXECUTIVE OFFICE OF TRANSPORTATION</b><br><b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | <b>THE URBAN RING PHASE 2</b><br><b>PHASE 2</b><br><b>RDEIR/DEIS</b> | <b>TITLE</b><br>URBAN RING PHASE 2<br>BUSWAY TYPICAL SECTIONS<br>EVERETT - BOAT SECTION, BOSTON - BOAT SECTION<br>COMMUTER RAIL - AT GRADE WITH EXISTING<br>COMMUTER RAIL/FREIGHT RAIL | SHEET NO.    | TYP-3                              |
| DRAWN BY    | JGW/JAD     | SCALE    | AS NOTED      |   |  |  | CONTRACT NO. | 97713                              |
| CHECKED BY  | WPM/PSC/AS  | REVISION |               |   |  |  | DRAWING NO.  | RDEIR-Typical-Busway-Sections_1-13 |
| APPROVED BY | JAD         |          |               |   |  |  |              |                                    |
| REVISION    | DESCRIPTION | DATE     | APPROVED      |   |  |  |              |                                    |



**NOTES:**

1. PROPOSED BRIDGE SUPERSTRUCTURE TO BE BASED ON STRUCTURAL ANALYSIS AND VALUE ENGINEERING TO BE DEVELOPED IN SUBSEQUENT DESIGN PHASE.
2. SPAN LENGTH IS ASSUMED TO BE APPROXIMATELY 75'.
3. NOISE BARRIER NOT INCLUDED
4. FOUNDATION TYPE WILL DEPEND ON GEOTECHNICAL INFORMATION TO BE DEVELOPED IN SUBSEQUENT DESIGN PHASE.

ALIGNMENT, PROFILE, SECTIONS, AND STATION LOCATIONS SHOWN ARE FOR DEVELOPING CONCEPT-LEVEL CAPITAL COST ESTIMATES ONLY. ACTUAL LOCATIONS/CONFIGURATIONS WILL BE DEVELOPED IN SUBSEQUENT ENVIRONMENTAL AND DESIGN PHASES.

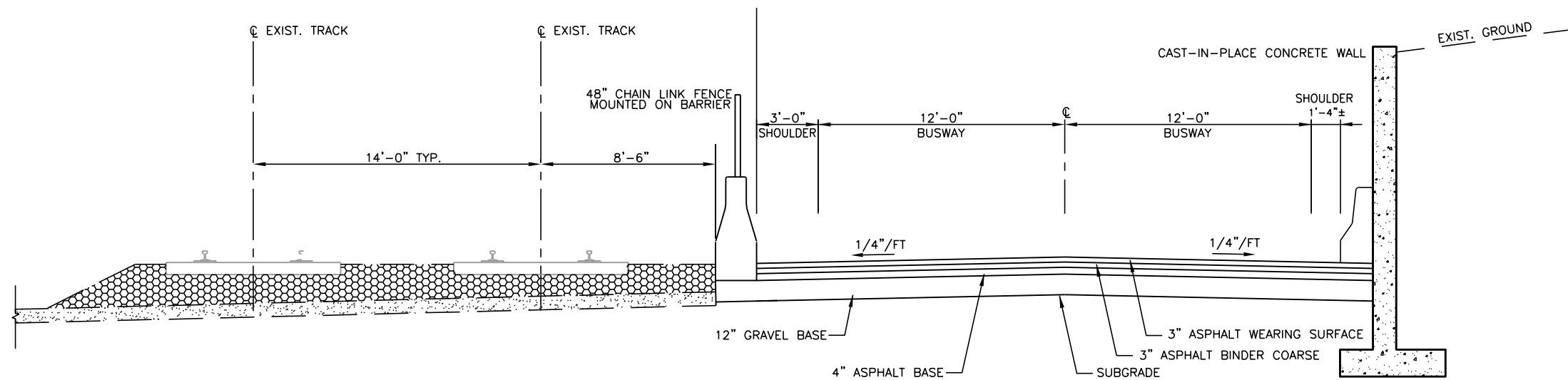
**EVERETT**  
**BUSWAY TYPICAL SECTION**  
**ROADWAY OVERPASS WIDENING SECTION J-J & K-K**

EVERETT @ STA 45+70 TO 46+50, 48+00 TO 48+60  
 NOT TO SCALE

**PRELIMINARY**  
**DRAFT**  
**COPY**

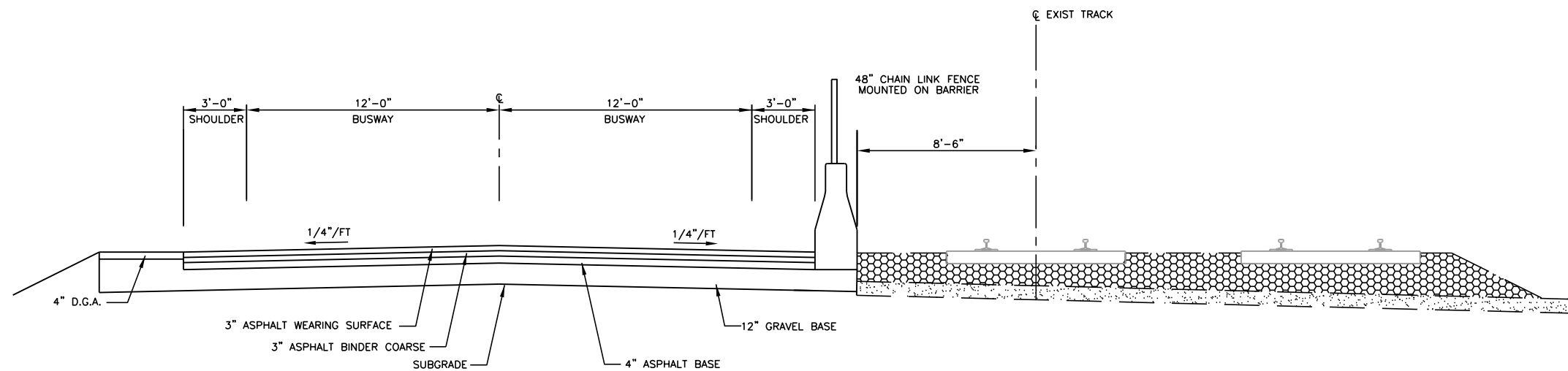
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|          |             |      |          | DESIGNED BY<br>JAD       | DATE<br>NOVEMBER 2008 | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>BUSWAY TYPICAL SECTIONS<br>EVERETT - ROADWAY OVERPASS WIDENING<br>SECTION J-J & K-K | SHEET NO.<br>TYP-4                                |
|          |             |      |          | DRAWN BY<br>JGW/JAD/JAB  | SCALE<br>AS NOTED     |  |   |  | CONTRACT NO.<br>97713                             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |  |   |  | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_1-13 |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD       |                       |  |   |  |   |

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**EVERETT  
BUSWAY TYPICAL SECTION  
AT RAILROAD ROW WITH RETAINING WALL ON ONE SIDE**

EVERETT @ STA 46+50 TO 48+00, 48+60 TO 54+00  
NOT TO SCALE



**EVERETT  
BUSWAY TYPICAL SECTION  
AT EXISTING RAILROAD ROW**

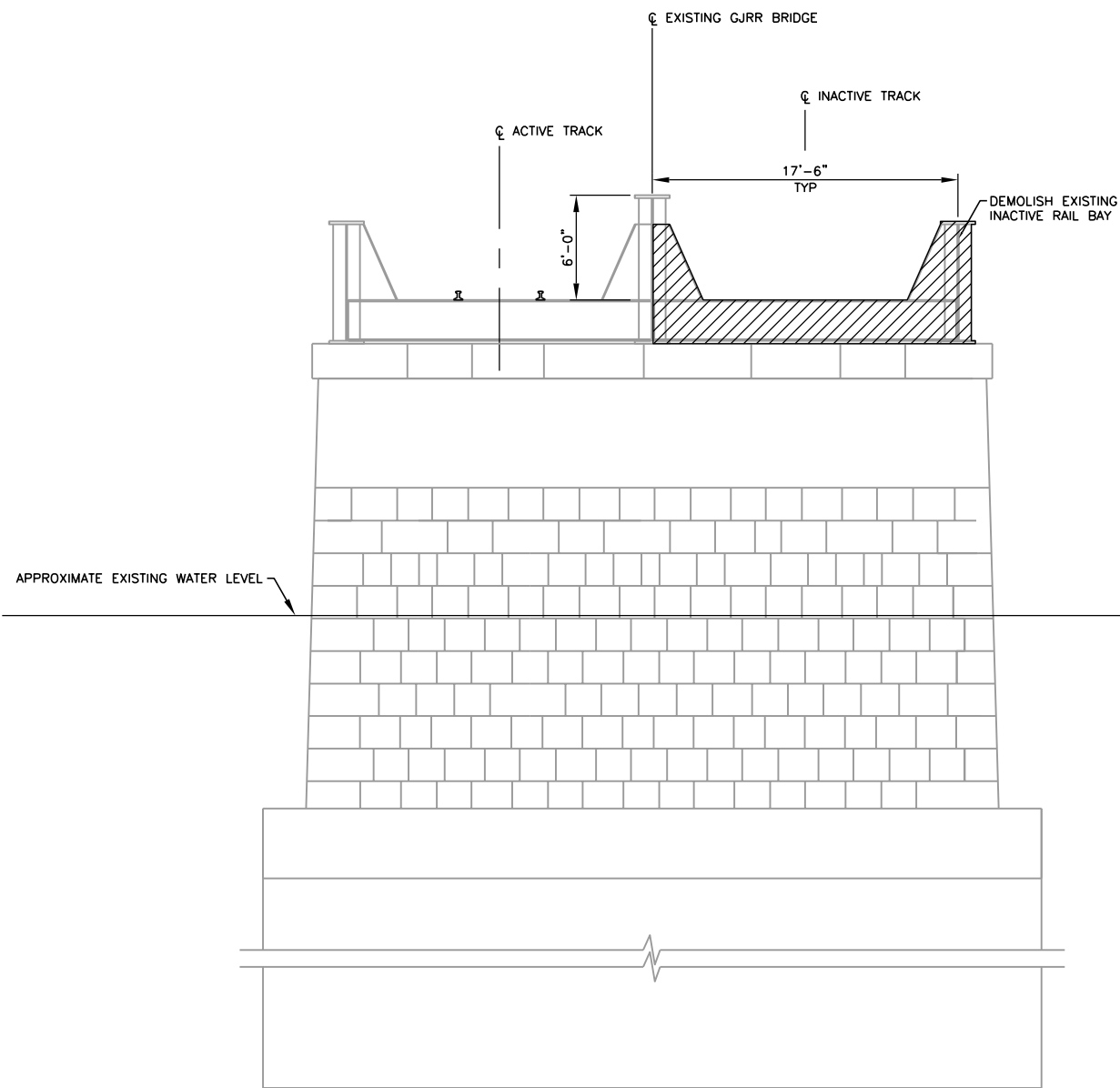
EVERETT @ STA 10+00 TO 35+60  
NOT TO SCALE

**PRELIMINARY  
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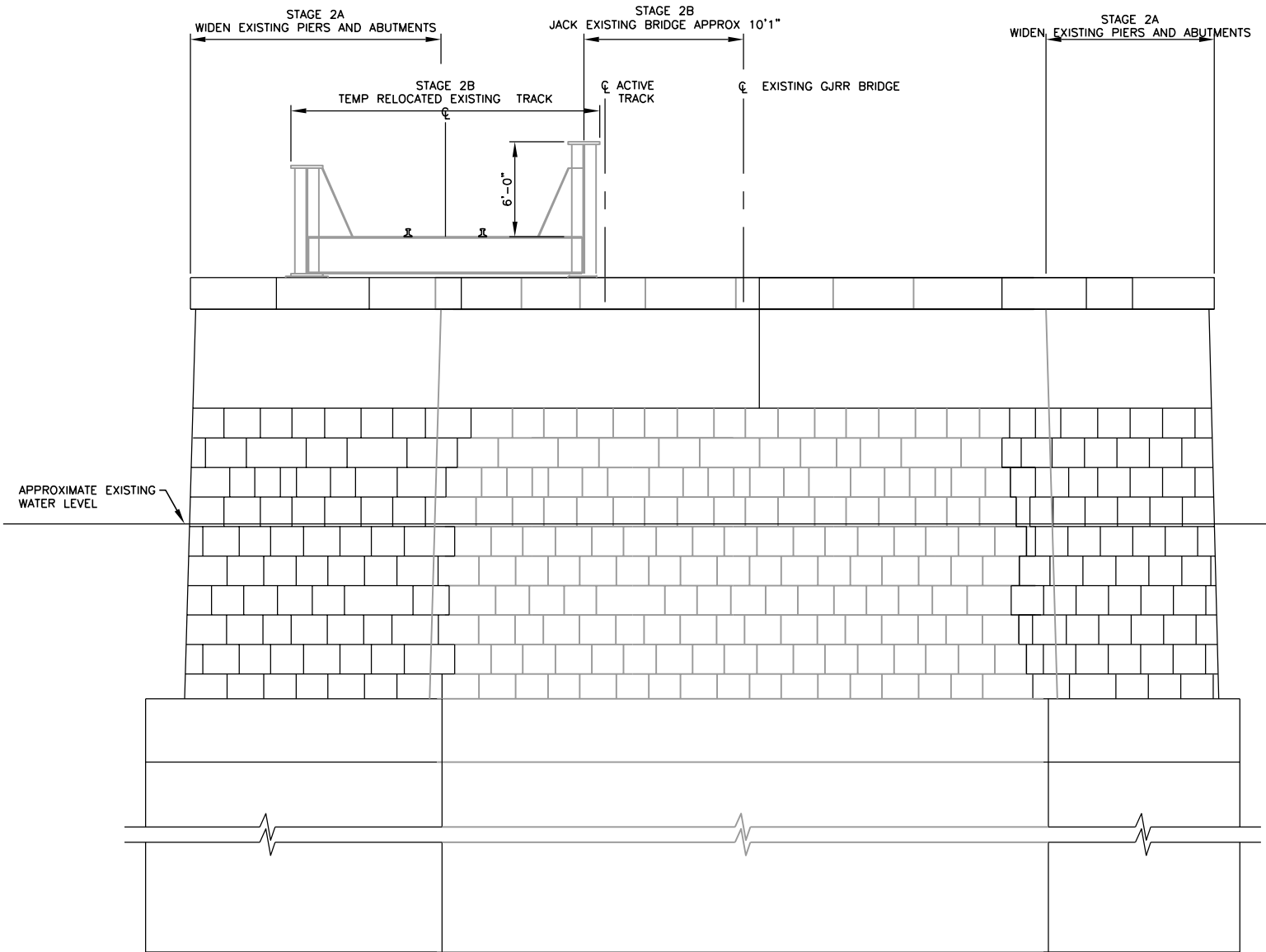
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|          |             |      |          | DESIGNED BY<br>JAD       | DATE<br>NOVEMBER 2008 | <b>EXECUTIVE<br/>OFFICE OF<br/>TRANSPORTATION</b> | <b>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</b> | TITLE<br><br><b>URBAN RING PHASE 2<br/>BUSWAY TYPICAL SECTIONS<br/>EVERETT - AT RAILROAD ROW WITH RETAINING WALL ON ONE SIDE<br/>EVERETT - AT EXISTING RAILROAD ROW</b> | SHEET NO.<br>TYP-5                                |
|          |             |      |          | DRAWN BY<br>JGW/JAD/JAB  | SCALE<br>AS NOTED     |   |  |   | CONTRACT NO.<br>97713                             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |   | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_1-13 |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |   |   |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |   |  |   |   |

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300 BAKER AVENUE, CONCORD, MA 01742





STAGE 1 – REMOVE UNUSED RAIL BAY



STAGE 2 – WIDEN EXISTING PIERS AND ABUTMENTS  
JACK EXISTING ACTIVE RAIL BAY

NOTES: 1. STAGING SHOWN IS CONCEPTUAL AND SUBJECT TO CHANGE BASED ON SUBSEQUENT PRELIMINARY ENGINEERING

CAMBRIDGE/BOSTON  
GRAND JUNCTION RAILROAD TRANSVERSE SECTION C-C  
(LOOKING WEST TOWARDS BOSTON)  
GJRR @ STA 0+00 TO 55+00

NOT TO SCALE

**PRELIMINARY  
DRAFT  
COPY**

| REVISION | DESCRIPTION | DATE | APPROVED |
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|          |             |      |          |

|             |         |
|-------------|---------|
| DESIGNED BY | JAD     |
| DRAWN BY    | JGW     |
| CHECKED BY  | WPM/RNH |
| APPROVED BY | JAD     |

|          |               |
|----------|---------------|
| DATE     | NOVEMBER 2008 |
| SCALE    | AS NOTED      |
| REVISION |               |

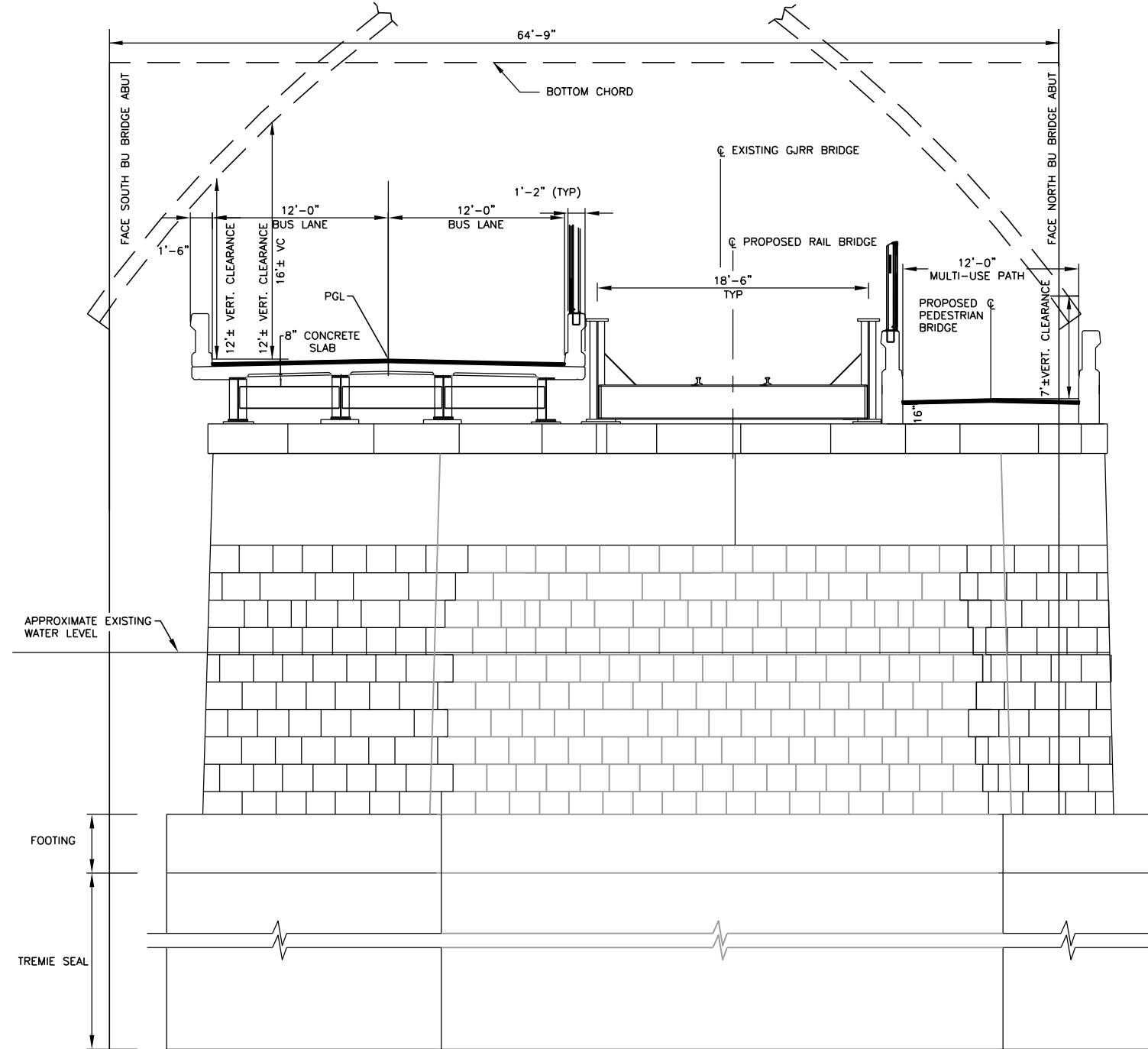
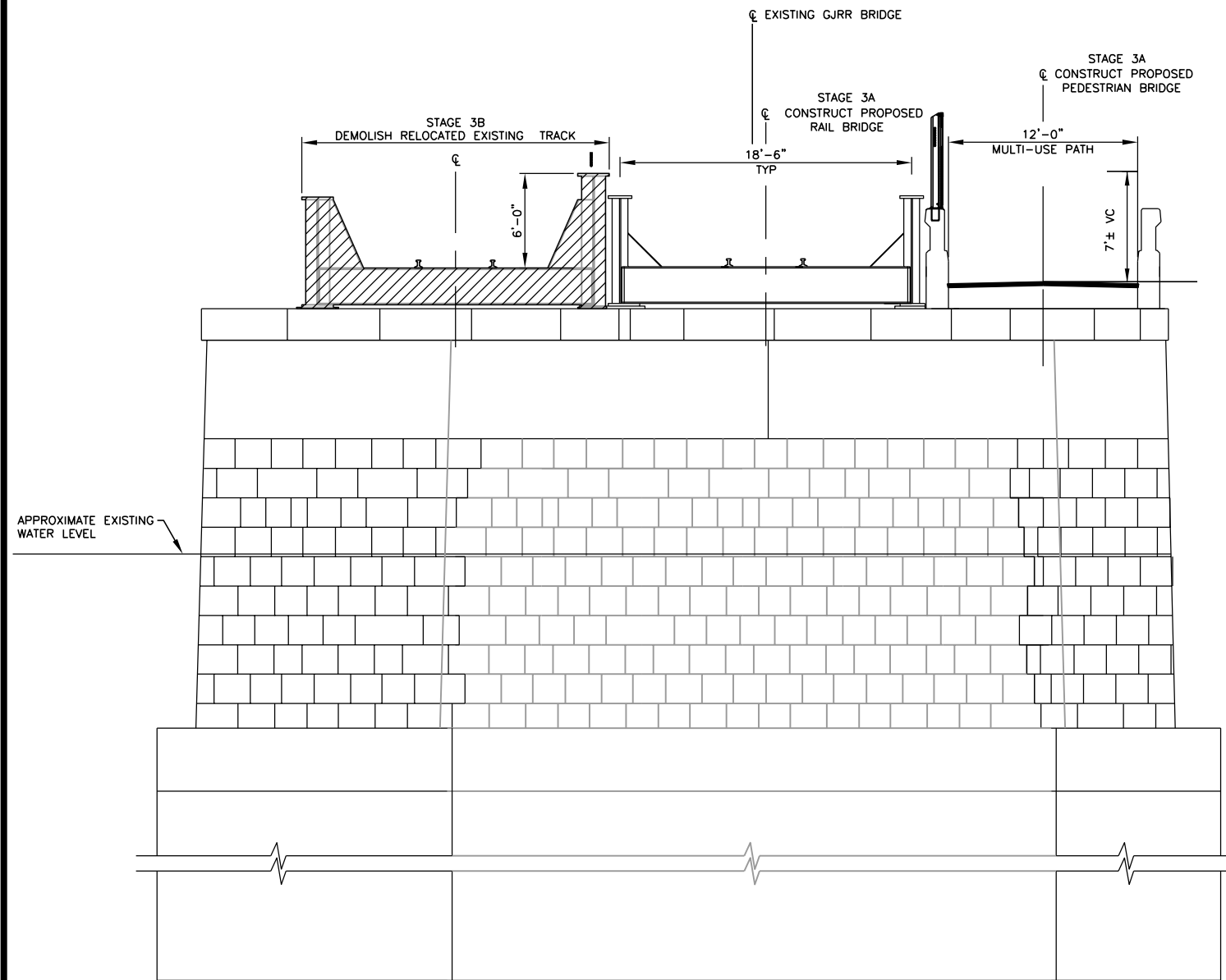


EXECUTIVE OFFICE OF TRANSPORTATION

THE URBAN RING PHASE 2 RDEIR/DEIS

TITLE  
URBAN RING PHASE 2  
BUSWAY TYPICAL SECTIONS  
CAMBRIDGE – GRAND JUNCTION RAILROAD TRANSVERSE SECTION  
STAGES 1 & 2 – (LOOKING WEST TOWARDS BOSTON)

|              |                                    |
|--------------|------------------------------------|
| SHEET NO.    | TYP-6                              |
| CONTRACT NO. | 97713                              |
| DRAWING NO.  | RDEIR-Typical-Busway-Sections_6-6A |



STAGE 3 – ADD NEW RAIL BRIDGE AND MULTI-USE PATH BRIDGE AND DEMOLISH RELOCATED EXISTING TRACK

CAMBRIDGE/BOSTON  
 GRAND JUNCTION RAILROAD TRANSVERSE SECTION C-C  
 (LOOKING WEST TOWARDS BOSTON)

STAGE 4 (FINAL)  
 CONSTRUCT NEW BUSWAY BRIDGE

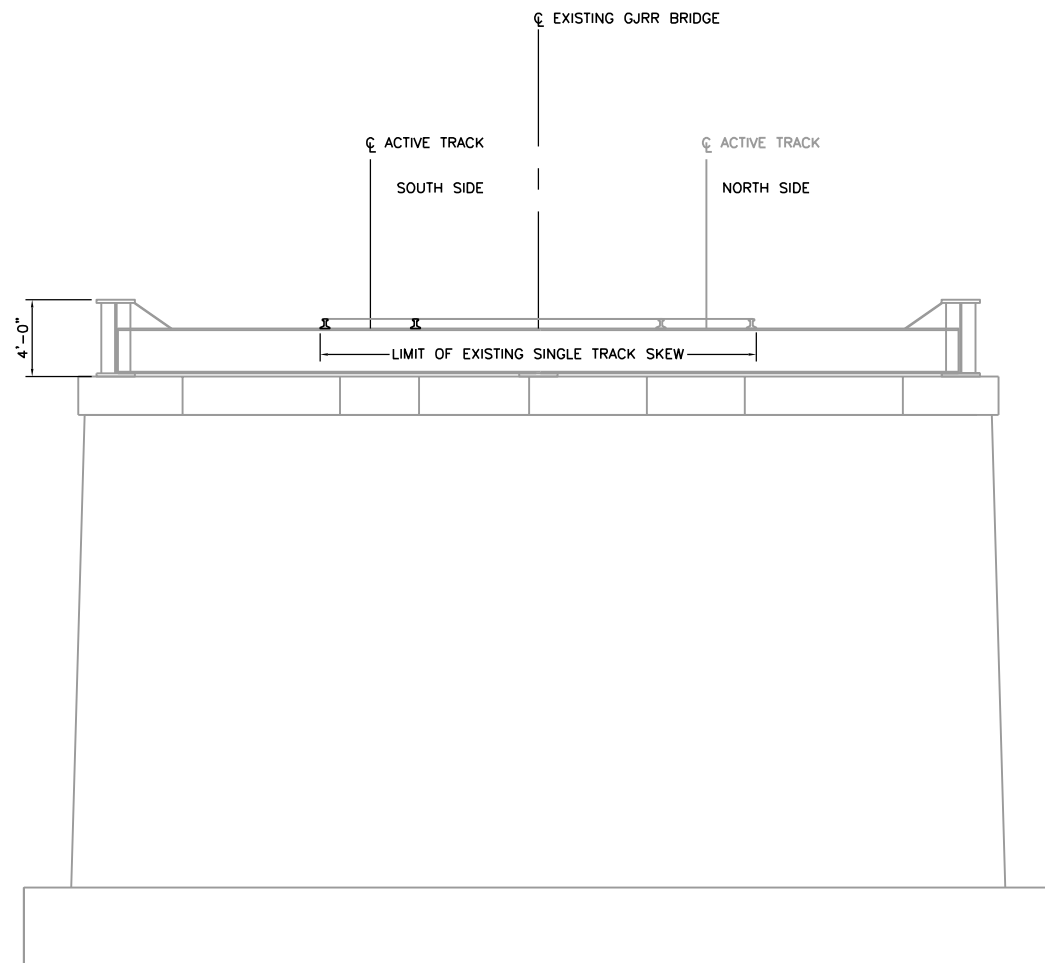
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GJRR @ STA 0+00 TO 55+00

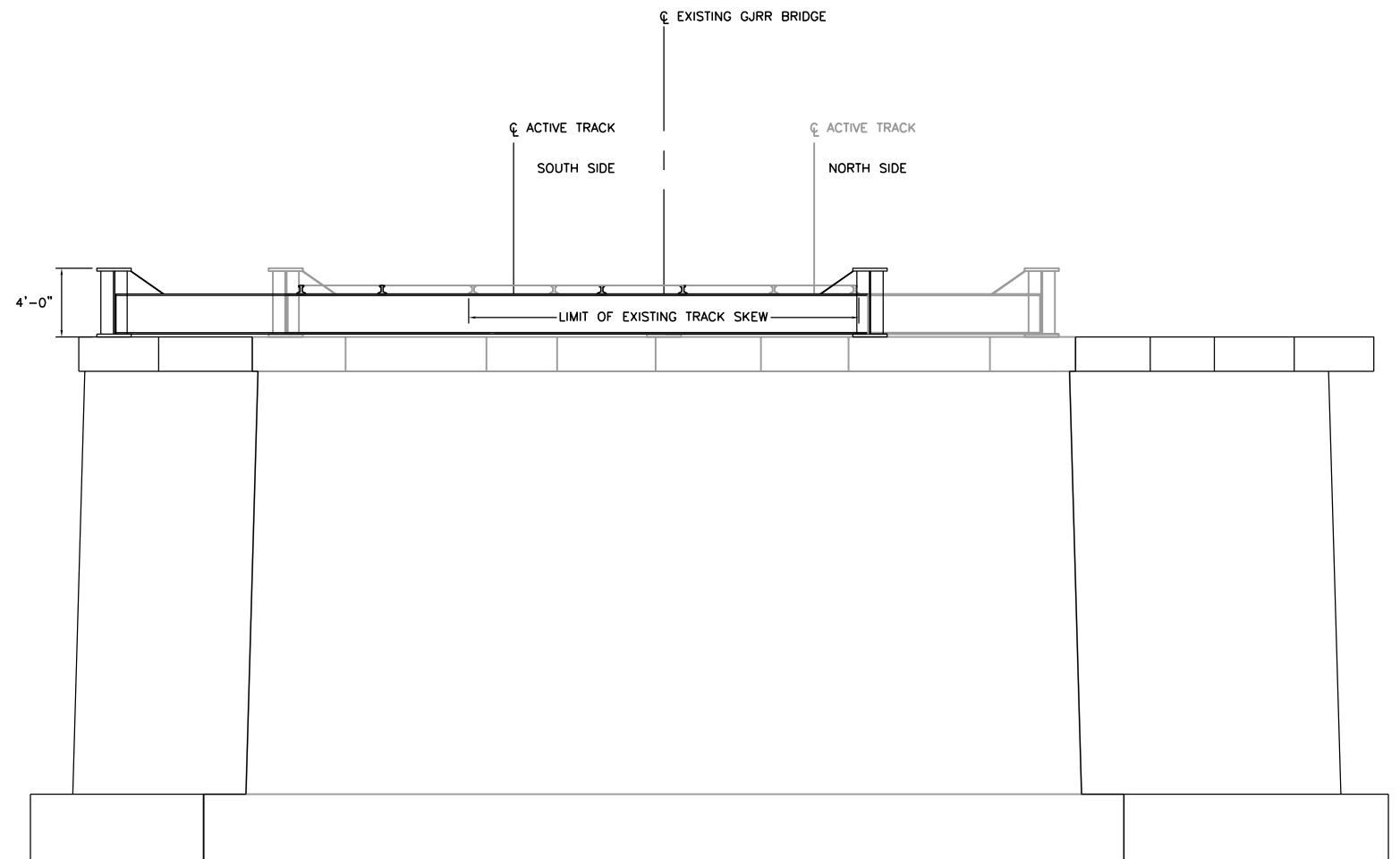
NOT TO SCALE

NOTES: 1. STAGING SHOWN IS CONCEPTUAL AND SUBJECT TO CHANGE BASED ON SUBSEQUENT PRELIMINARY ENGINEERING

|                       |                       |   |                                      |  |   |
|-----------------------|-----------------------|---|--------------------------------------|--|---|
| DESIGNED BY<br>JAD    | DATE<br>NOVEMBER 2008 | <b>EOT</b><br>EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2<br>RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>BUSWAY TYPICAL SECTIONS<br>CAMBRIDGE/BOSTON-GRAND JUNCTION RAILROAD<br>TRANSVERSE SECTION C-C<br>STAGES 3 & 4 (FINAL) - (LOOKING WEST TOWARDS BOSTON) | SHEET NO.<br>TYP-6A                               |
| DRAWN BY<br>JGW       | SCALE<br>AS NOTED     |   |                                      |  | CONTRACT NO.<br>97713                             |
| CHECKED BY<br>WPM/RNH | REVISION              | <b>EarthTech</b><br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                      |  | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_6-6A |
| APPROVED BY<br>JAD    |                       |   |                                      |  |   |
| REVISION              | DESCRIPTION           | DATE  | APPROVED                             |  |   |



STAGE 1 - EXISTING CONDITIONS (NO WORK)



STAGE 2A - WIDEN ABUTMENT  
STAGE 2B - SHIFT BRIDGE SUPERSTRUCTURE & TRACK

NOTES: 1. STAGING SHOWN IS CONCEPTUAL AND SUBJECT TO CHANGE BASED ON SUBSEQUENT PRELIMINARY ENGINEERING

BOSTON  
GRAND JUNCTION RAILROAD TRANSVERSE SECTION D-D  
AT STORROW DRIVE (LOOKING WEST TOWARDS BOSTON)

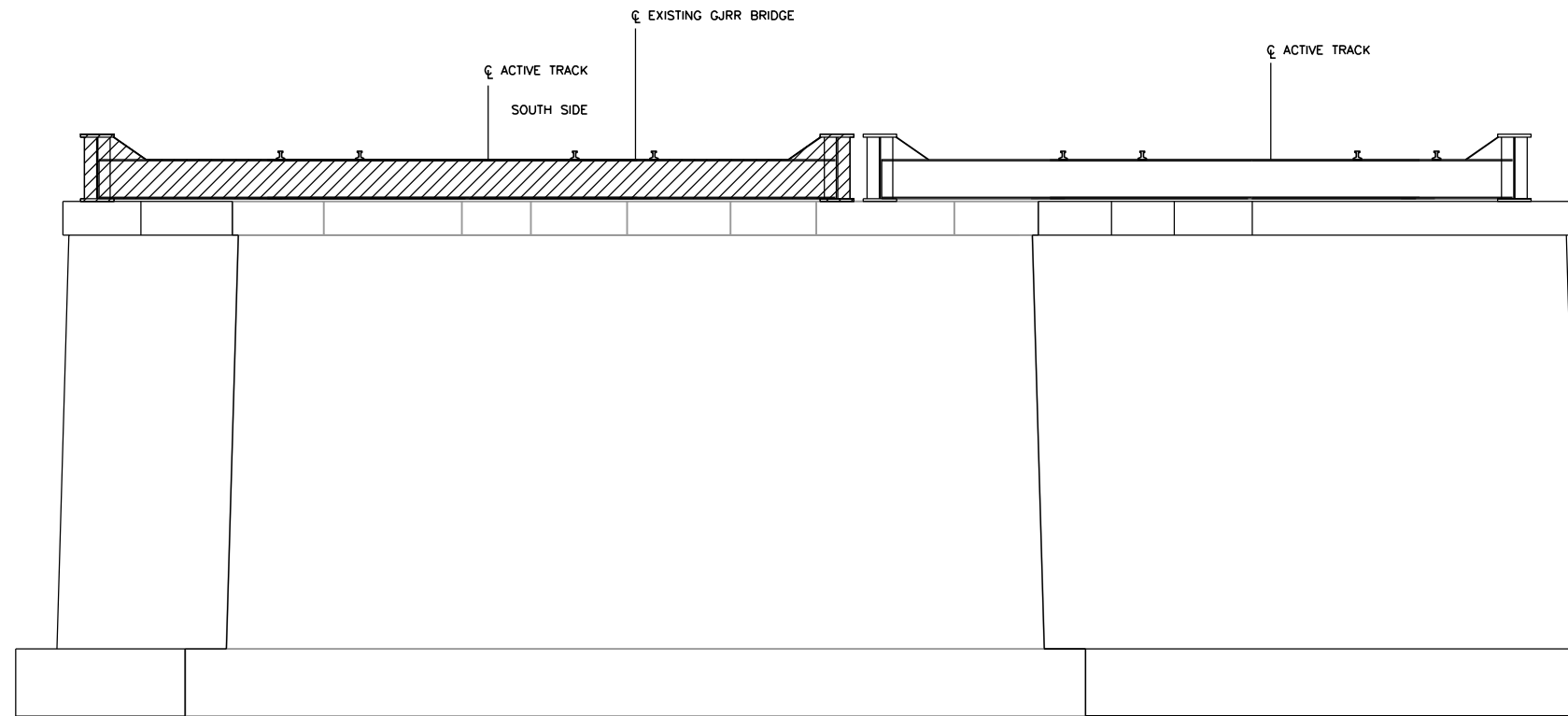
GJRR @ STA 1+92 TO 2+80

NOT TO SCALE

**PRELIMINARY  
DRAFT  
COPY**

|          |             |      |          |                       |                       |   |  |  |   |
|----------|-------------|------|----------|-----------------------|-----------------------|---|--|--|---|
|          |             |      |          | DESIGNED BY<br>JAD    | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>OFFICE OF<br/>TRANSPORTATION</b> | <b>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</b> | TITLE<br><br><b>URBAN RING PHASE 2<br/>BUSWAY TYPICAL SECTIONS<br/>BOSTON - GRAND JUNCTION RAILROAD TRANSVERSE SECTION D-D<br/>AT STORROW DRIVE<br/>STAGES 1 &amp; 2 - (LOOKING WEST TOWARDS BOSTON)</b> | SHEET NO.<br>TYP-6B                               |
|          |             |      |          | DRAWN BY<br>JGW       | SCALE<br>AS NOTED     |   |  |  | CONTRACT NO.<br>97713                             |
|          |             |      |          | CHECKED BY<br>WPM/RNH | REVISION              |   |  |  | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_6-6A |
|          |             |      |          | APPROVED BY<br>JAD    |                       |   |  |  |   |
| REVISION | DESCRIPTION | DATE | APPROVED |                       |                       |   |  |  |   |

**EarthTech** EARTH TECH  
300 BAKER AVENUE, CONCORD, MA 01742



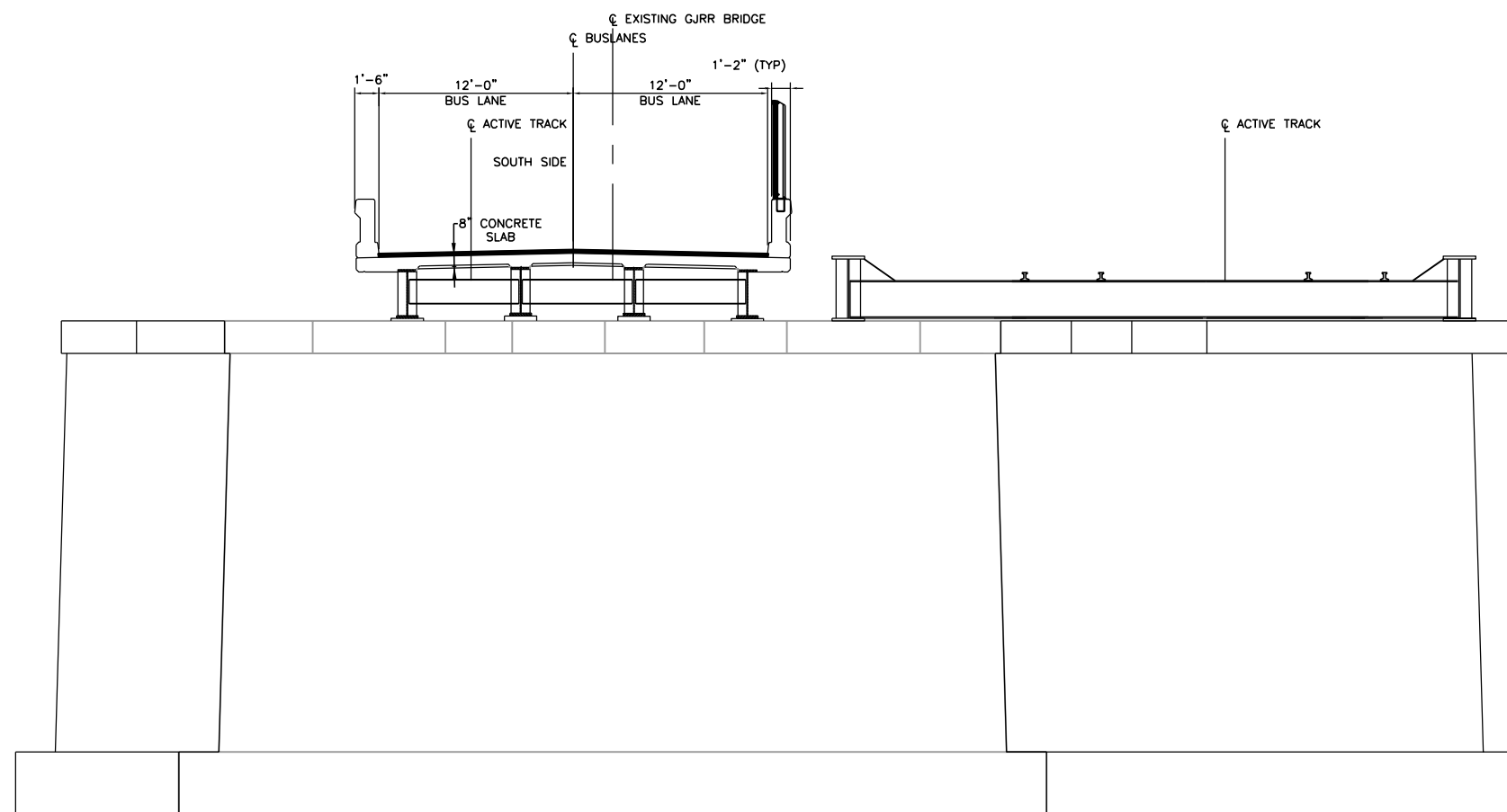
STAGE 3 - ADD NEW RAIL BRIDGE AND DEMOLISH RELOCATED EXISTING TRACK

BOSTON  
 GRAND JUNCTION RAILROAD TRANSVERSE SECTION D-D  
 AT STORROW DRIVE (LOOKING WEST TOWARDS BOSTON)

GJRR @ STA 1+92 TO 2+80

NOT TO SCALE

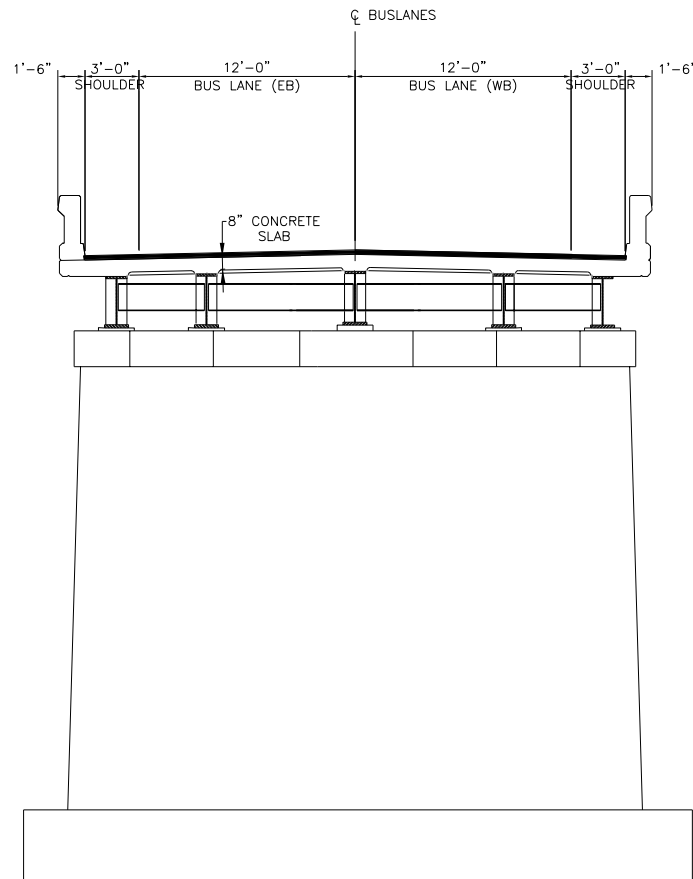
NOTES: 1. STAGING SHOWN IS CONCEPTUAL AND SUBJECT TO CHANGE BASED ON SUBSEQUENT PRELIMINARY ENGINEERING



STAGE 4 - FINAL CONSTRUCT NEW BUSWAY BRIDGE

**PRELIMINARY  
 DRAFT  
 COPY**

|          |             |      |          |                       |                       |   |  |   |   |
|----------|-------------|------|----------|-----------------------|-----------------------|---|--|---|---|
|          |             |      |          | DESIGNED BY<br>JAD    | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>       OFFICE OF<br/>       TRANSPORTATION</b> | <b>THE URBAN RING<br/>       PHASE 2<br/>       RDEIR/DEIS</b> | TITLE   | SHEET NO.   |
|          |             |      |          | DRAWN BY<br>JGW       | SCALE<br>AS NOTED     |   |  | BOSTON - GRAND JUNCTION RAILROAD TRANSVERSE SECTION D-D<br>AT STORROW DRIVE | TYP-6C  |
|          |             |      |          | CHECKED BY<br>WPM/RNH | REVISION              |   |  | STAGES 3 & 4 (FINAL) - (LOOKING WEST TOWARDS BOSTON)                        | CONTRACT NO.<br>97713                             |
|          |             |      |          | APPROVED BY<br>JAD    |                       |   |  |   | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_6-6A |
| REVISION | DESCRIPTION | DATE | APPROVED |                       |                       |  <b>EARTH TECH</b><br>300 BAKER AVENUE, CONCORD, MA 01742        |  |   |   |

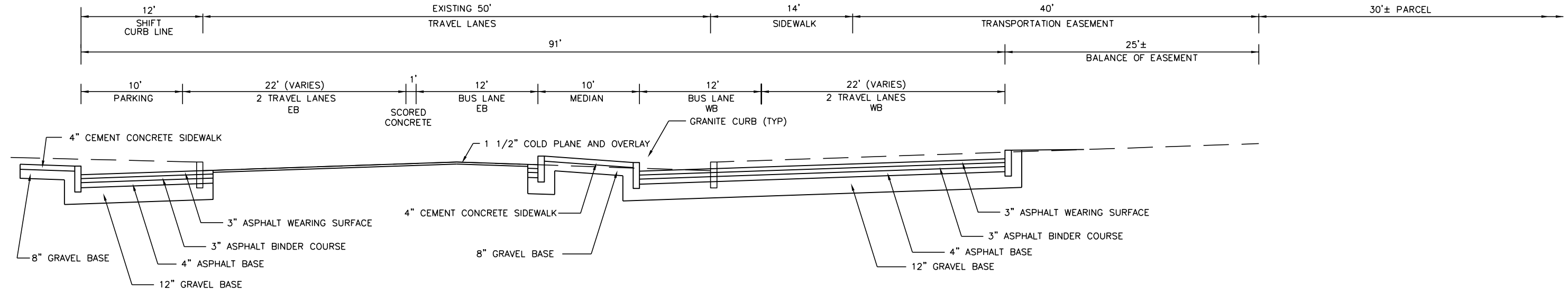


MEDFORD  
 MALDEN RIVER NEW BRIDGE SECTION G-G  
 (LOOKING WEST)  
 EVERETT @ STA 85+80 TO 88+80  
 NOT TO SCALE

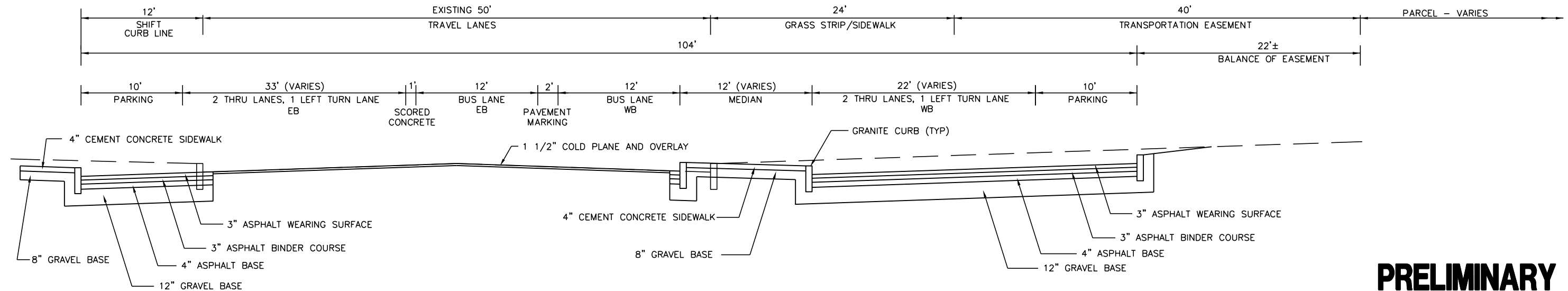
SOMERVILLE  
 INNER BELT NEW BRIDGE SECTION H-H  
 (LOOKING SOUTH)  
 INNER BELT ROAD @ STA 33+44.35 TO 33+84.35  
 NOT TO SCALE

**PRELIMINARY  
 DRAFT  
 COPY**

|          |             |      |          |                       |                       |                  |   |   |  |                       |
|----------|-------------|------|----------|-----------------------|-----------------------|------------------|---|---|--|-----------------------|
|          |             |      |          | DESIGNED BY<br>JAD    | DATE<br>NOVEMBER 2008 | <b>EOT</b>       | EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION          | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2<br>BUSWAY TYPICAL SECTIONS<br>MEDFORD - MALDEN RIVER NEW BRIDGE SECTION G-G<br>SOMERVILLE - INNER BELT ROAD BRIDGE SECTION H-H | SHEET NO.<br>TYP-6D   |
|          |             |      |          | DRAWN BY<br>JGW       | SCALE<br>AS NOTED     |                  |   |   |  | CONTRACT NO.<br>97713 |
|          |             |      |          | CHECKED BY<br>WPM/RNH | REVISION              |                  |   |   | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_6-6A  |                       |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD    |                       | <b>EarthTech</b> | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |  |                       |



**BOSTON**  
**BUSWAY TYPICAL SECTION - AT-GRADE-MELNEA CASS BOULEVARD (LOOKING WEST)**  
 MELNEA CASS BLVD @ STA 0+40 TO 14+00  
 NOT TO SCALE

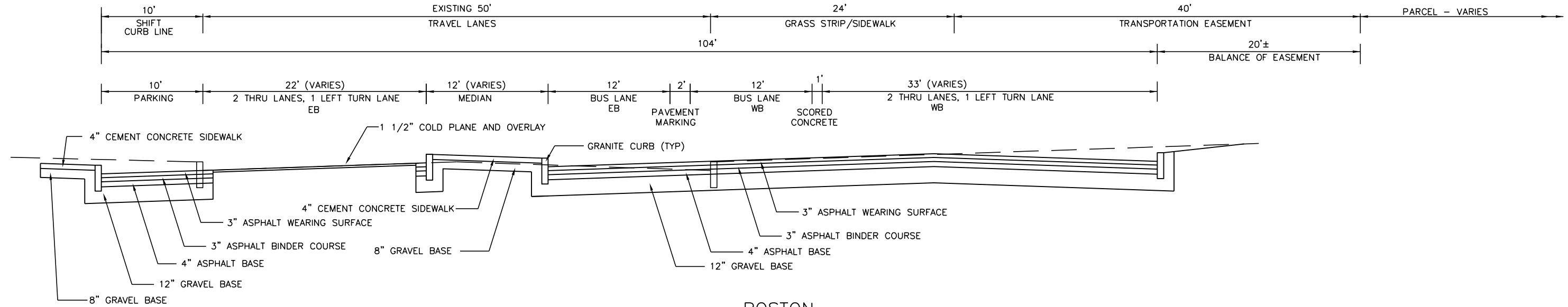


**BOSTON**  
**BUSWAY TYPICAL SECTION - AT-GRADE-MELNEA CASS BOULEVARD (LOOKING WEST)**  
 MELNEA CASS BLVD @ STA 14+30 TO 18+75  
 NOT TO SCALE

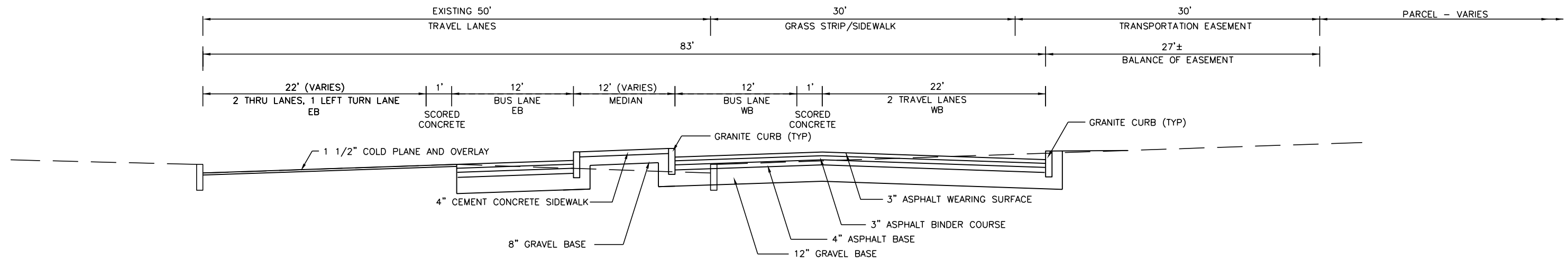
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| DESIGNED BY<br>JAD       |             | DATE<br>NOVEMBER 2008 |          | <b>EOT</b> EXECUTIVE OFFICE OF TRANSPORTATION                      | THE URBAN RING PHASE 2 RDEIR/DEIS | TITLE<br>URBAN RING PHASE 2 BUSWAY TYPICAL SECTIONS BOSTON - AT-GRADE-MELNEA CASS BOULEVARD (LOOKING WEST) (2) | SHEET NO.<br>TYP-7                                |
| DRAWN BY<br>JGW          |             | SCALE<br>AS NOTED     |          |  |                                   |  | CONTRACT NO.<br>97713                             |
| CHECKED BY<br>WPM/PSC/AS |             | REVISION              |          | <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |                                   |  | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_1-13 |
| APPROVED BY<br>JAD       |             |                       |          |  |                                   |  |   |
| REVISION                 | DESCRIPTION | DATE                  | APPROVED |  |                                   |  |   |





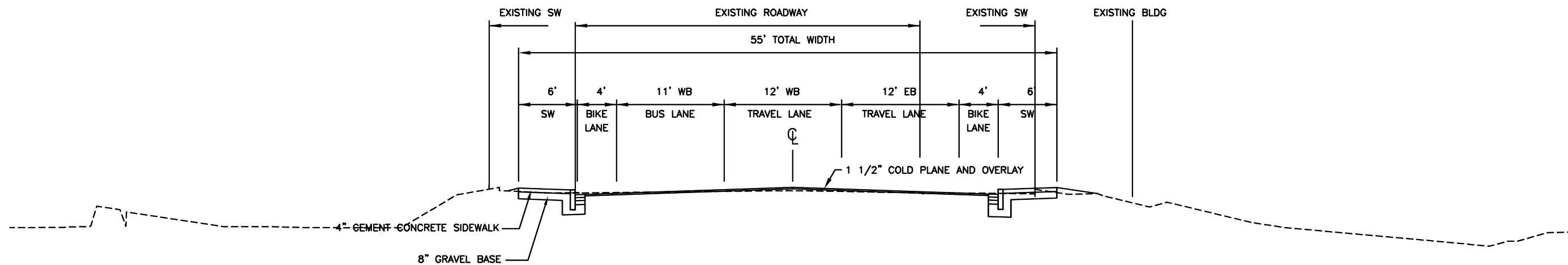
**BOSTON**  
**BUSWAY TYPICAL SECTION - AT GRADE-MELNEA CASS BOULEVARD (LOOKING WEST)**  
 MELNEA CASS BLVD @ STA 19+60 to 24+60  
 NOT TO SCALE



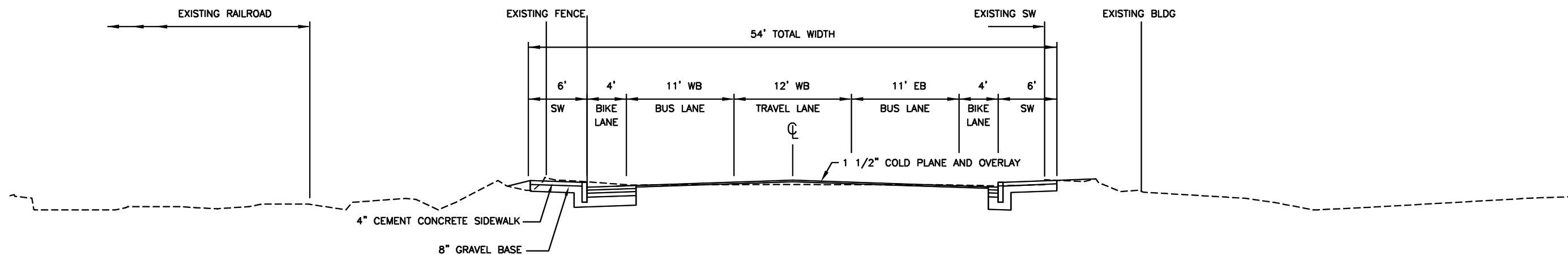
**BOSTON**  
**BUSWAY TYPICAL SECTION - AT GRADE-MELNEA CASS BOULEVARD (LOOKING WEST)**  
 MELNEA CASS BLVD @ STA 25+00 TO 31+90  
 NOT TO SCALE

**PRELIMINARY  
 DRAFT  
 COPY**

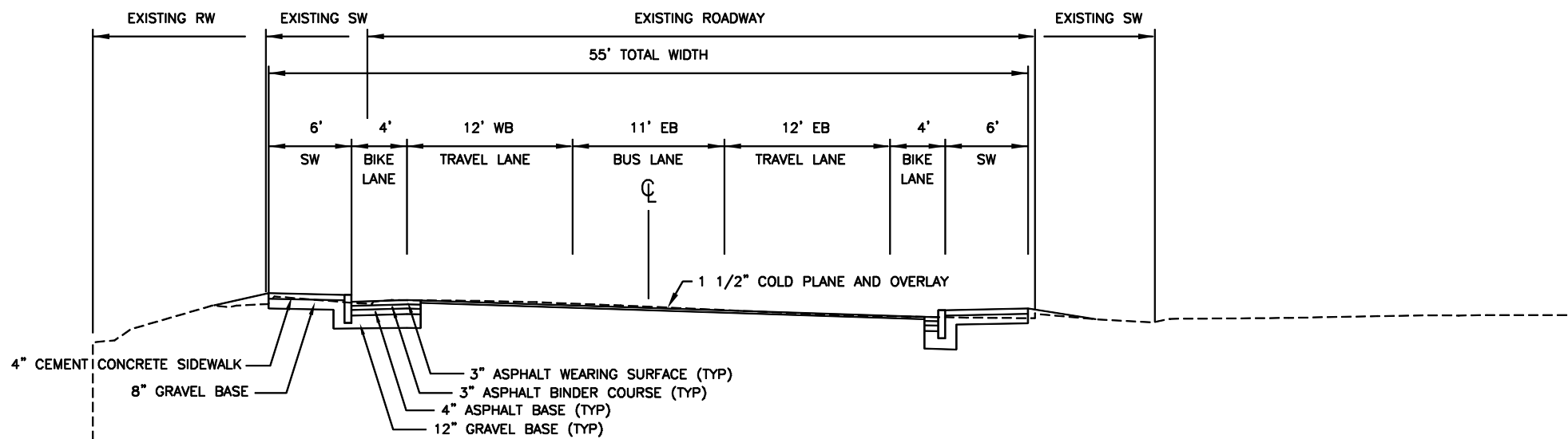
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| REVISION | DESCRIPTION | DATE | APPROVED | DESIGNED BY | JAD        | DATE     | NOVEMBER 2008 |  <b>EXECUTIVE OFFICE OF TRANSPORTATION</b><br><b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | <b>THE URBAN RING PHASE 2</b><br><b>RDEIR/DEIS</b> | TITLE        | URBAN RING PHASE 2<br>BUSWAY TYPICAL SECTIONS<br>BOSTON - AT-GRADE-MELNEA CASS BOULEVARD (LOOKING WEST) (2) | SHEET NO. | TYP-8 |
|          |             |      |          | DRAWN BY    | JGW        | SCALE    | AS NOTED      |   |  | CONTRACT NO. | 97713   |           |       |
|          |             |      |          | CHECKED BY  | WPM/PSC/AS | REVISION |               |   |  | DRAWING NO.  | RDEIR-Typical-Busway-Sections_1-13  |           |       |
|          |             |      |          | APPROVED BY | JAD        |          |               |   |  |              |   |           |       |



BUSWAY TYPICAL SECTION – MOUNTFORT STREET (LOOKING EAST)  
 MOUNTFORT STREET @ STA 0+00  
 NOT TO SCALE



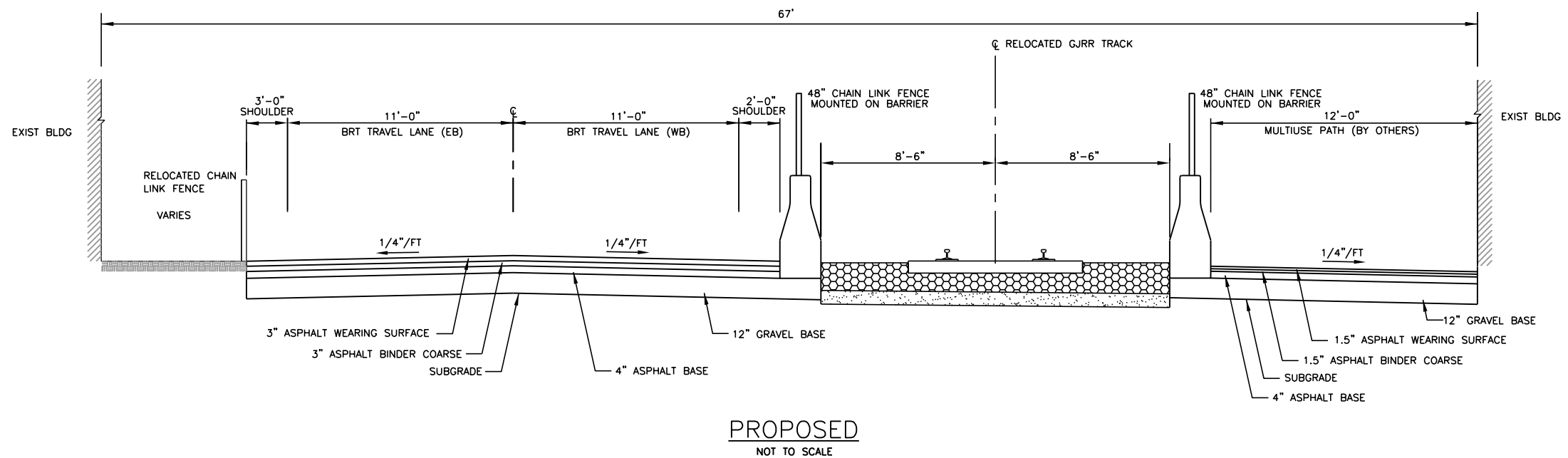
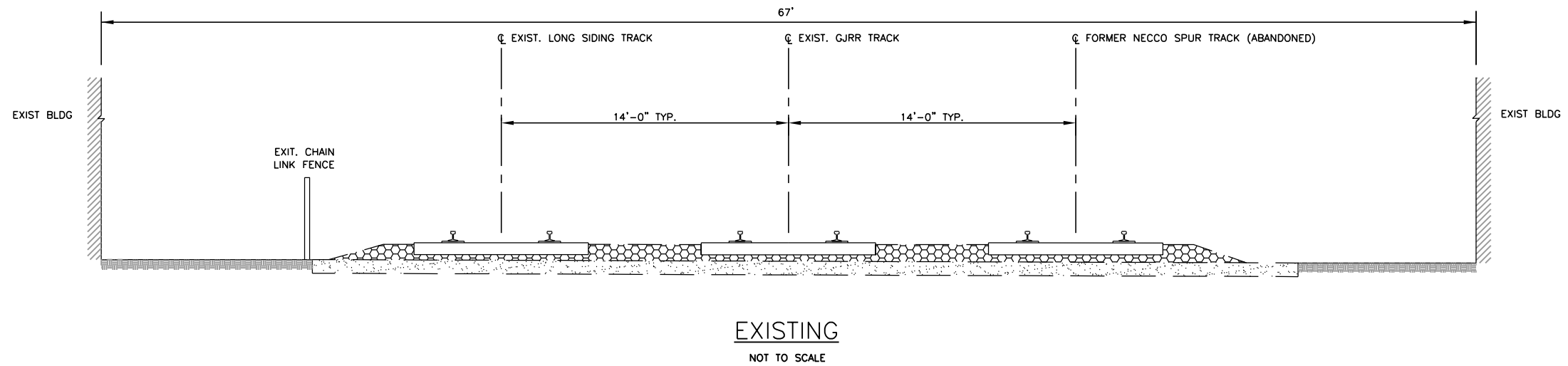
BUSWAY TYPICAL SECTION – MOUNTFORT STREET (LOOKING EAST)  
 MOUNTFORT STREET @ STA 4+00  
 NOT TO SCALE



BUSWAY TYPICAL SECTION – MOUNTFORT STREET (LOOKING EAST)  
 MOUNTFORT STREET @ STA 10+00  
 NOT TO SCALE

**PRELIMINARY  
 DRAFT  
 COPY**

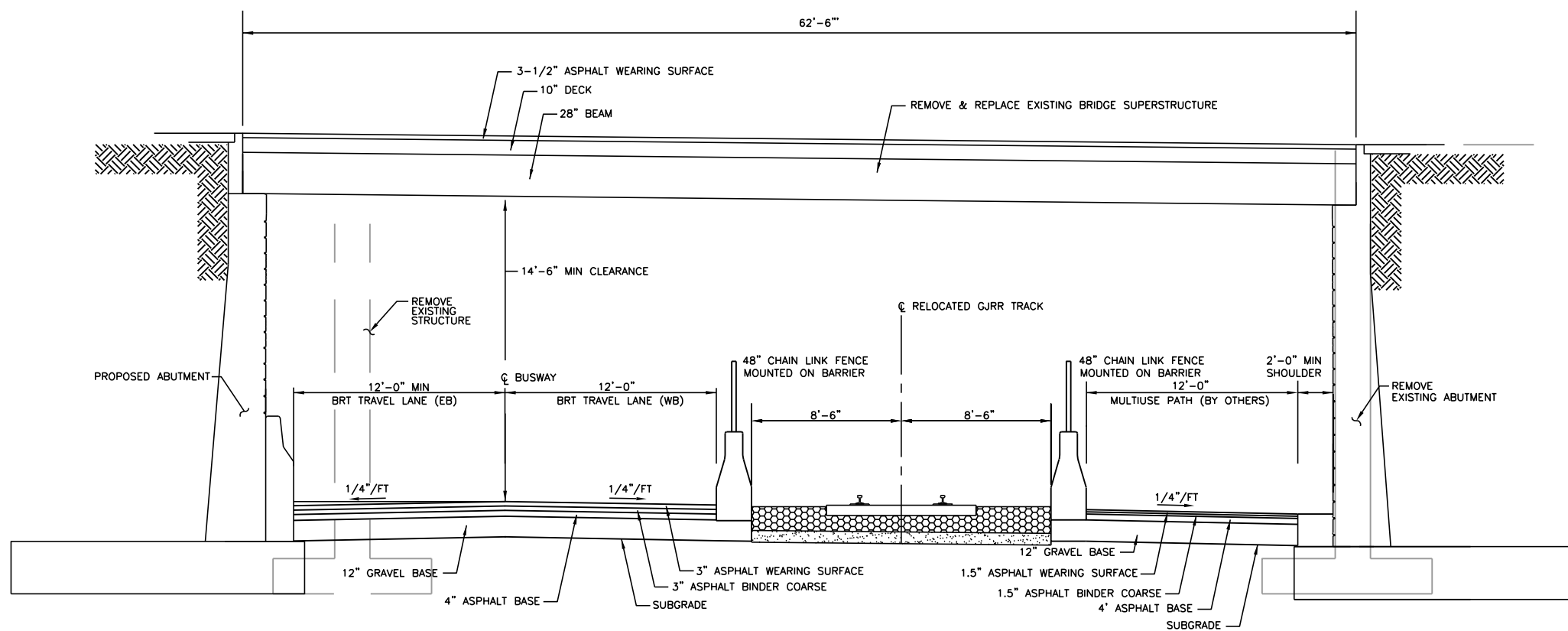
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|          |             |      |          | DESIGNED BY<br>JAD       | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>       OFFICE OF<br/>       TRANSPORTATION</b> | <b>THE URBAN RING<br/>       PHASE 2<br/>       RDEIR/DEIS</b> | TITLE | SHEET NO.<br>TYP-9<br>CONTRACT NO.<br>97713<br>DRAWING NO.<br>RDEIR-Typical-Busway-Sections_1-13 |
|          |             |      |          | DRAWN BY<br>JGW/JAB      | SCALE<br>AS NOTED     |   |  |       |  |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |       |  |
|          |             |      |          | APPROVED BY<br>JAD       |                       |   |  |       |  |
| REVISION | DESCRIPTION | DATE | APPROVED |                          |                       |   |  |       |  |



**CAMBRIDGE**  
BUSWAY TYPICAL SECTION A-A - GRAND JUNCTION RAILROAD (LOOKING WEST)  
STA 50+80

**PRELIMINARY  
DRAFT  
COPY**

|          |             |      |          |                          |                       |   |  |   |   |
|----------|-------------|------|----------|--------------------------|-----------------------|---|--|---|---|
|          |             |      |          | DESIGNED BY<br>JAD       | DATE<br>NOVEMBER 2008 | <br><b>EXECUTIVE<br/>OFFICE OF<br/>TRANSPORTATION</b> | <b>THE URBAN RING<br/>PHASE 2<br/>RDEIR/DEIS</b> | TITLE<br><br><b>URBAN RING PHASE 2<br/>BUSWAY TYPICAL SECTIONS<br/>CAMBRIDGE - SECTION A-A - GRAND JUNCTION RAILROAD -<br/>(LOOKING WEST) (2)</b> | SHEET NO.<br>TYP-10                               |
|          |             |      |          | DRAWN BY<br>JGW          | SCALE<br>AS NOTED     |   |  |   | CONTRACT NO.<br>97713                             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION              |   |  |   | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_1-13 |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD       |                       |   |  |   |   |



**NOTES:**

1. PROPOSED BRIDGE SUPERSTRUCTURE TO BE BASED ON STRUCTURAL ANALYSIS AND VALUE ENGINEERING.
2. SPAN LENGTH IS ASSUMED TO BE APPROXIMATELY 62' - 64'.
3. FOUNDATION TYPE WILL DEPEND ON GEOTECHNICAL INFORMATION

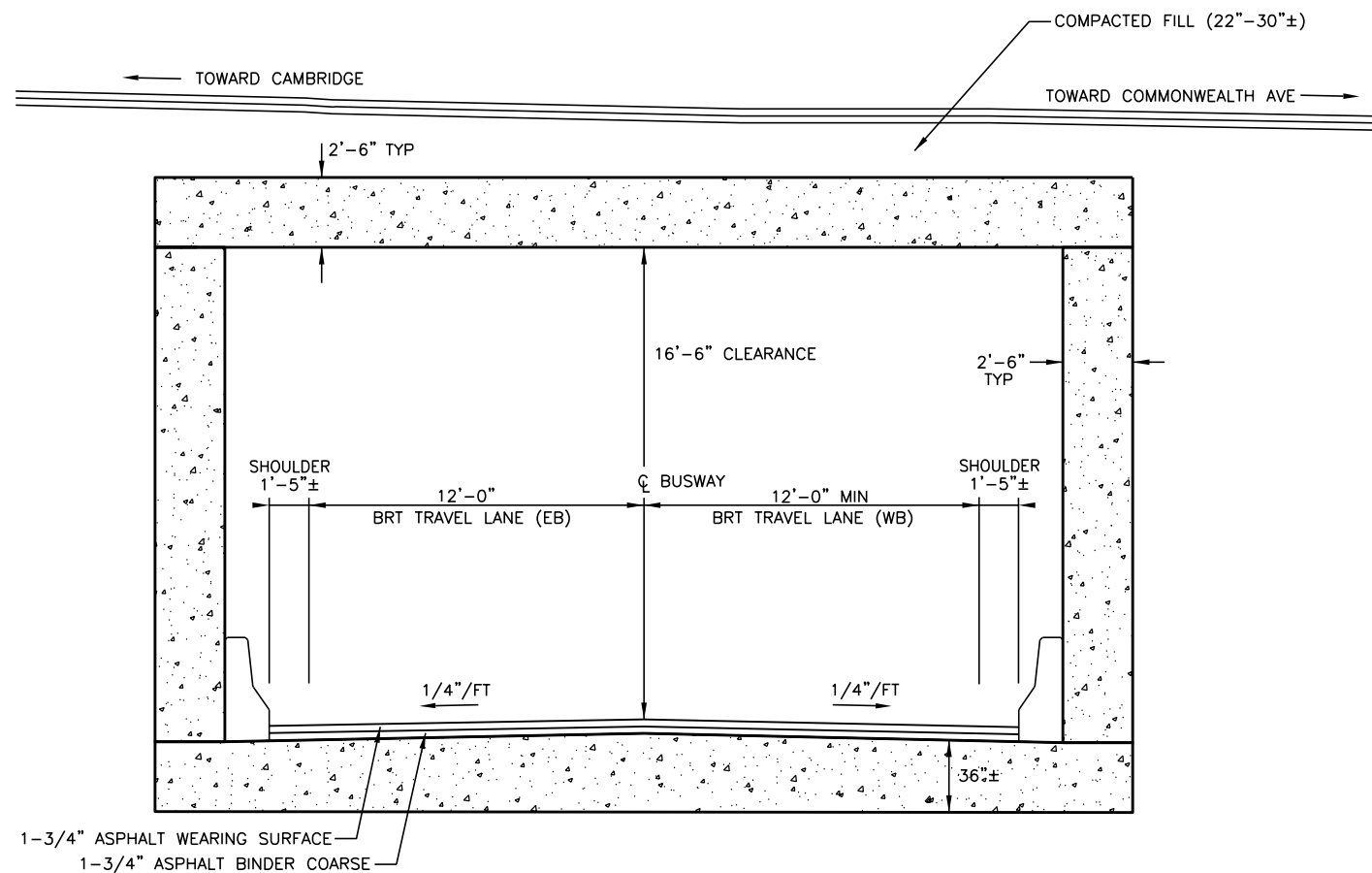
PLAN, PROFILE, SECTIONS, AND STATION LOCATIONS SHOWN ARE FOR DEVELOPING CONCEPT-LEVEL CAPITAL COST ESTIMATES ONLY. ACTUAL BRIDGE LOCATIONS/CONFIGURATIONS WILL BE DEVELOPED IN SUBSEQUENT DESIGN AND PERMITTING PHASES.

CAMBRIDGE  
BUSWAY TYPICAL SECTION B-B  
MODIFIED MEMORIAL DRIVE UNDERPASS  
(LOOKING WEST)

GJRR @ STA 61+26 TO 62+48  
NOT TO SCALE

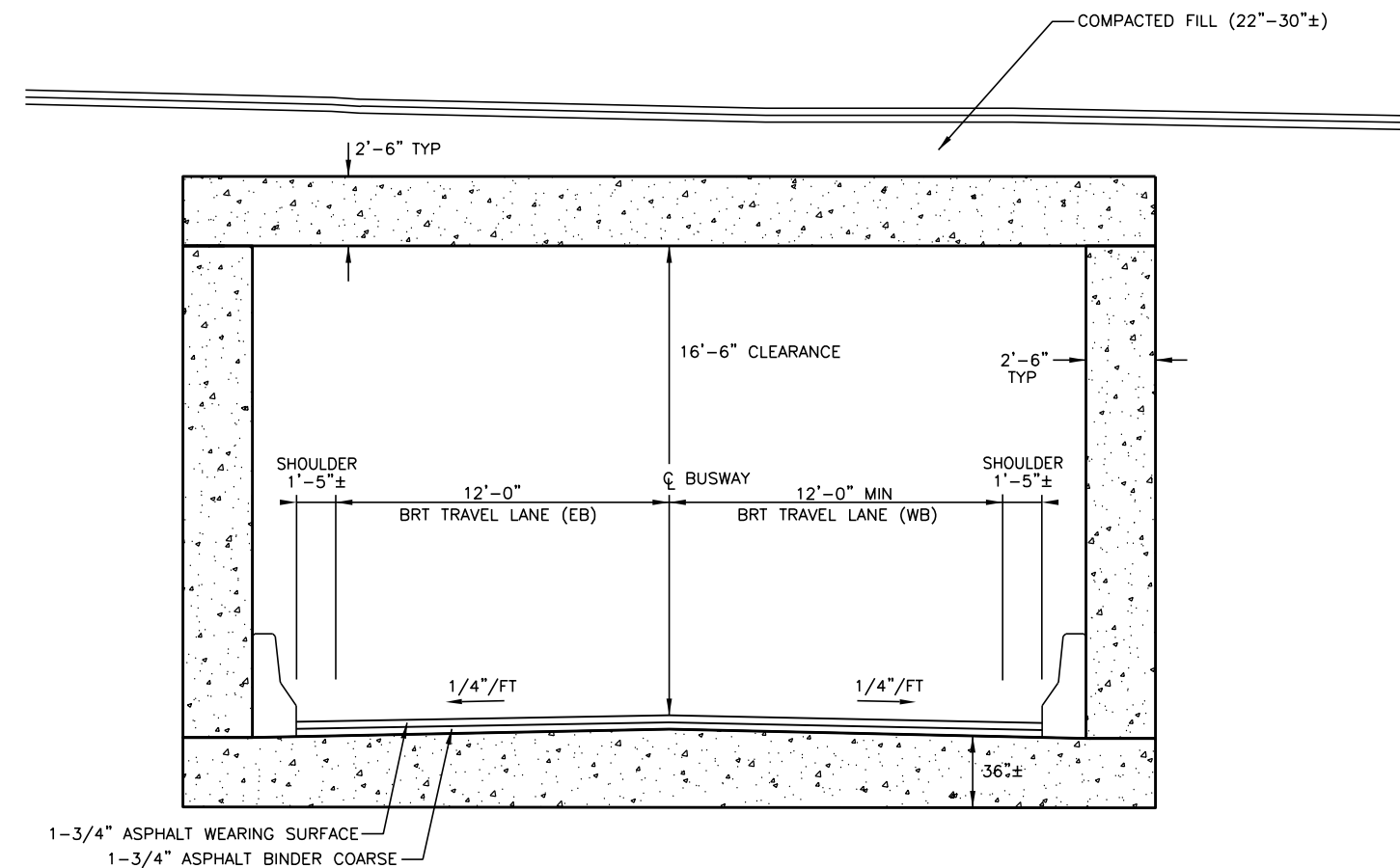
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COPY**

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|----------|-------------|------|----------|--------------------------|-----------------------|--|---|--|---|
|          |             |      |          | DESIGNED BY<br>JAD       | DATE<br>NOVEMBER 2008 | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS           | TITLE<br><br>URBAN RING PHASE 2<br>BUSWAY TYPICAL SECTION<br>CAMBRIDGE - MODIFIED MEMORIAL DRIVE<br>UNDERPASS SECTION B-B (LOOKING WEST) | SHEET NO.<br>TYP-11                               |
|          |             |      |          | DRAWN BY<br>JGW/JAD      | SCALE<br>AS NOTED     |  |   |  | CONTRACT NO.<br>97713                             |
|          |             |      |          | CHECKED BY<br>WPM/PSC/AS | REVISION<br>X         |  |   |  | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_1-13 |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD       |                       | <b>EarthTech</b>                                       | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |  |   |



**BOSTON**  
**BUSWAY TYPICAL SECTION**  
**NEW BOSTON UNIVERSITY BRIDGE UNDERPASS SECTION E-E**  
**(LOOKING EAST)**

BU-ACADEMY @ STA 6+00.27 TO STA 6+72.01  
 NOT TO SCALE



**EVERETT**  
**BUSWAY TYPICAL SECTION**  
**SANTILLI CIRCLE UNDERPASS SECTION L-L**  
**(LOOKING WEST)**

EVERETT @ STA 75+50 TO STA 78+00  
 NOT TO SCALE

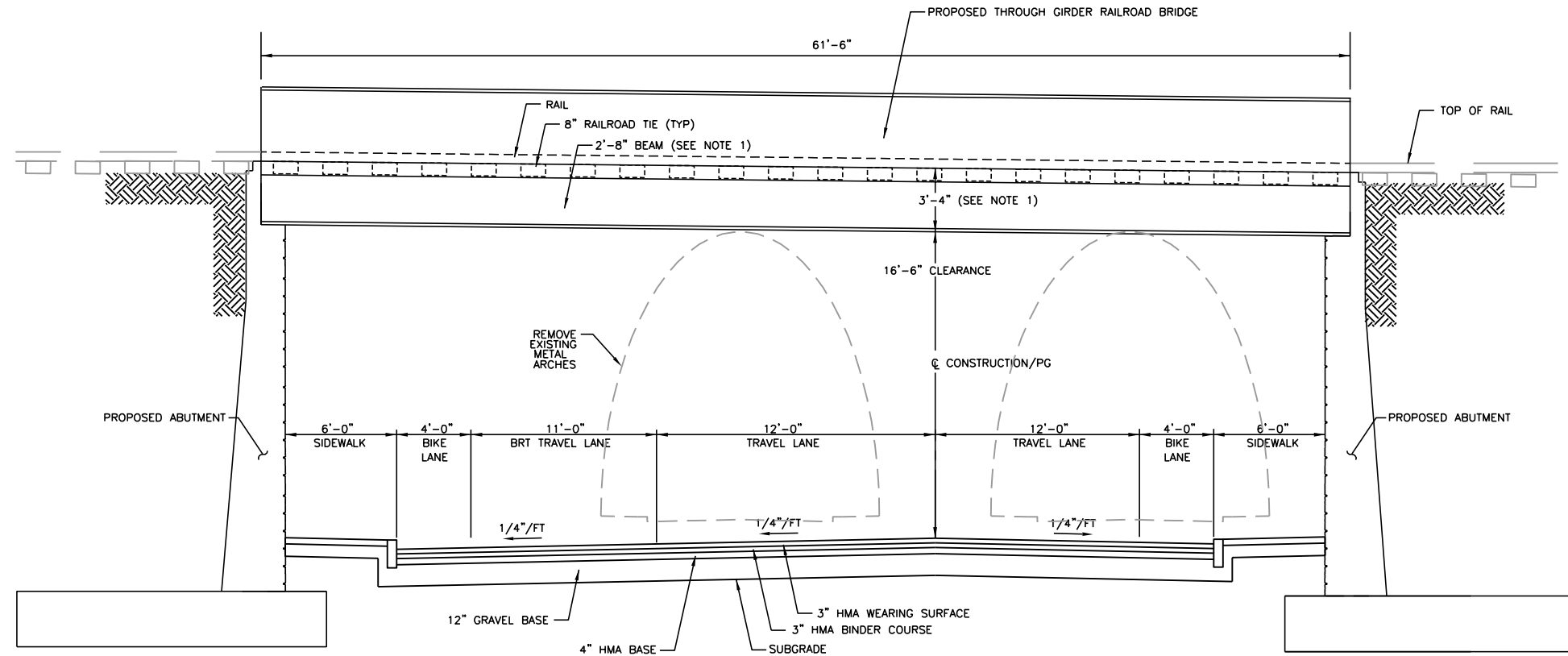
**EVERETT**  
**BUSWAY TYPICAL SECTION**  
**RAILROAD UNDERPASS SECTION F-F**  
**(LOOKING WEST)**

EVERETT @ STA 41+50 TO STA 42+70  
 NOT TO SCALE

PLAN, PROFILE, SECTIONS, AND STATION LOCATIONS SHOWN ARE FOR DEVELOPING CONCEPT-LEVEL CAPITAL COST ESTIMATES ONLY. ACTUAL BRIDGE LOCATIONS/CONFIGURATIONS WILL BE DEVELOPED IN SUBSEQUENT DESIGN AND PERMITTING PHASES.

**PRELIMINARY  
 DRAFT  
 COPY**

|             |             |          |               |  |  |  |              |                                    |
|-------------|-------------|----------|---------------|--|--|--|--------------|------------------------------------|
| DESIGNED BY | JAD         | DATE     | NOVEMBER 2008 | <b>EXECUTIVE OFFICE OF TRANSPORTATION</b>                | <b>THE URBAN RING PHASE 2</b><br><b>RDEIR/DEIS</b> | <b>TITLE</b><br><b>URBAN RING PHASE 2</b><br><b>BUSWAY TYPICAL SECTIONS</b><br><b>BOSTON - NEW BOSTON UNIVERSITY BRIDGE UNDERPASS SECTION E-E (LOOKING EAST)</b><br><b>EVERETT - UNDERPASS SECTIONS L-L &amp; F-F (LOOKING WEST)</b> | SHEET NO.    | TYP-12                             |
| DRAWN BY    | JAD/JAB     | SCALE    | AS NOTED      |  |  |  | CONTRACT NO. | 97713                              |
| CHECKED BY  | PSC/AS      | REVISION | X             |  |  |  | DRAWING NO.  | RDEIR-Typical-Busway-Sections_1-13 |
| APPROVED BY | JAD         |          |               |  |  |  |              |                                    |
| REVISION    | DESCRIPTION | DATE     | APPROVED      | <b>EARTH TECH</b><br>300 BAKER AVENUE, CONCORD, MA 01742 |  |  |              |                                    |



**NOTES:**

1. PROPOSED BRIDGE SUPERSTRUCTURE TO BE BASED ON STRUCTURAL ANALYSIS AND VALUE ENGINEERING TO BE DEVELOPED IN SUBSEQUENT DESIGN PHASE.
2. SPAN LENGTH SPAN LENGTH IS ASSUMED TO BE APPROXIMATELY 55'-60'
3. FOUNDATION TYPE WILL DEPEND ON GEOTECHNICAL INFORMATION TO BE DEVELOPED IN SUBSEQUENT DESIGN PHASE.

PLAN, PROFILE, SECTIONS, AND STATION LOCATIONS SHOWN ARE FOR DEVELOPING CONCEPT-LEVEL CAPITAL COST ESTIMATES ONLY. ACTUAL BRIDGE LOCATIONS/CONFIGURATIONS WILL BE DEVELOPED IN SUBSEQUENT DESIGN AND PERMITTING PHASES.

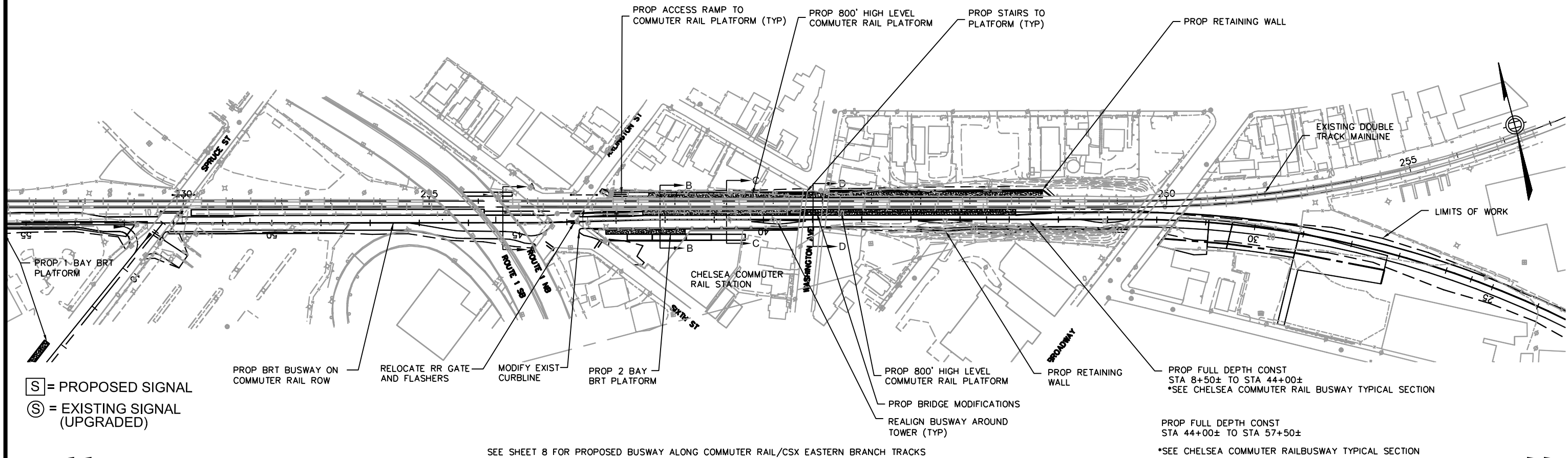
**SOMERVILLE**  
**BUSWAY TYPICAL SECTION**  
**BUSWAY UNDERPASS OF INNER BELT ROAD UNDER RAILROAD SECTION I-I**  
**(LOOKING SOUTH)**

COBBLE HILL @ STA 33+44.31 TO 33+84.38  
 ROADWAY RECONSTRUCTION - STA 31+00 TO 36+00  
 NOT TO SCALE

**PRELIMINARY**  
**DRAFT**  
**COPY**

|          |             |      |          |                      |                       |  |   |   |   |
|----------|-------------|------|----------|----------------------|-----------------------|--|---|---|---|
|          |             |      |          | DESIGNED BY<br>JAD   | DATE<br>NOVEMBER 2008 | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>BUSWAY TYPICAL SECTION<br>SOMERVILLE - BUSWAY UNDERPASS OF INNER BELT ROAD<br>UNDER RAILROAD (LOOKING SOUTH) | SHEET NO.<br>TYP-13                               |
|          |             |      |          | DRAWN BY<br>YC       | SCALE<br>AS NOTED     |  |   |   | CONTRACT NO.<br>97713                             |
|          |             |      |          | CHECKED BY<br>PSC/AS | REVISION<br>X         |  |   |   | DRAWING NO.<br>RDEIR-Typical-Busway-Sections_1-13 |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY<br>JAD   |                       |  |   |   |   |



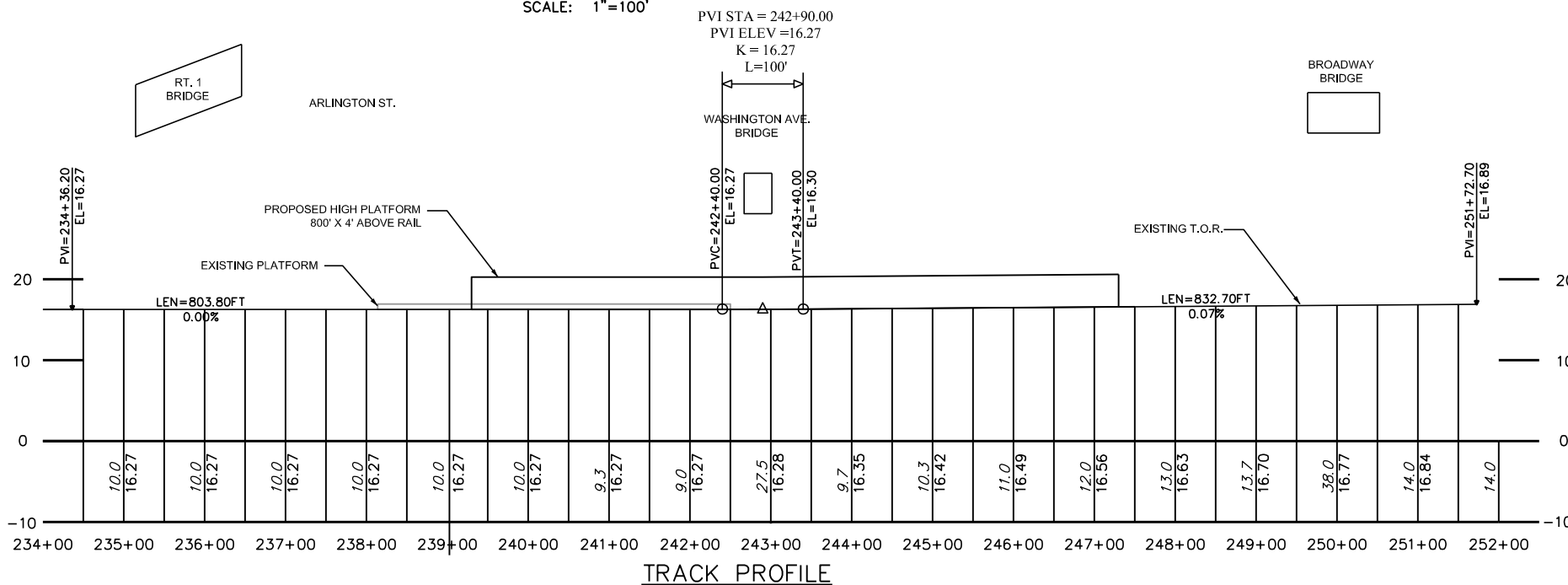


S = PROPOSED SIGNAL  
S = EXISTING SIGNAL (UPGRADED)

SEE SHEET 8 FOR PROPOSED BUSWAY ALONG COMMUTER RAIL/CSX EASTERN BRANCH TRACKS

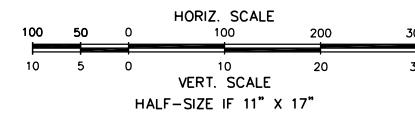
**PLAN**

SCALE: 1"=100'



**TRACK PROFILE**

**PRELIMINARY  
DRAFT  
COPY**

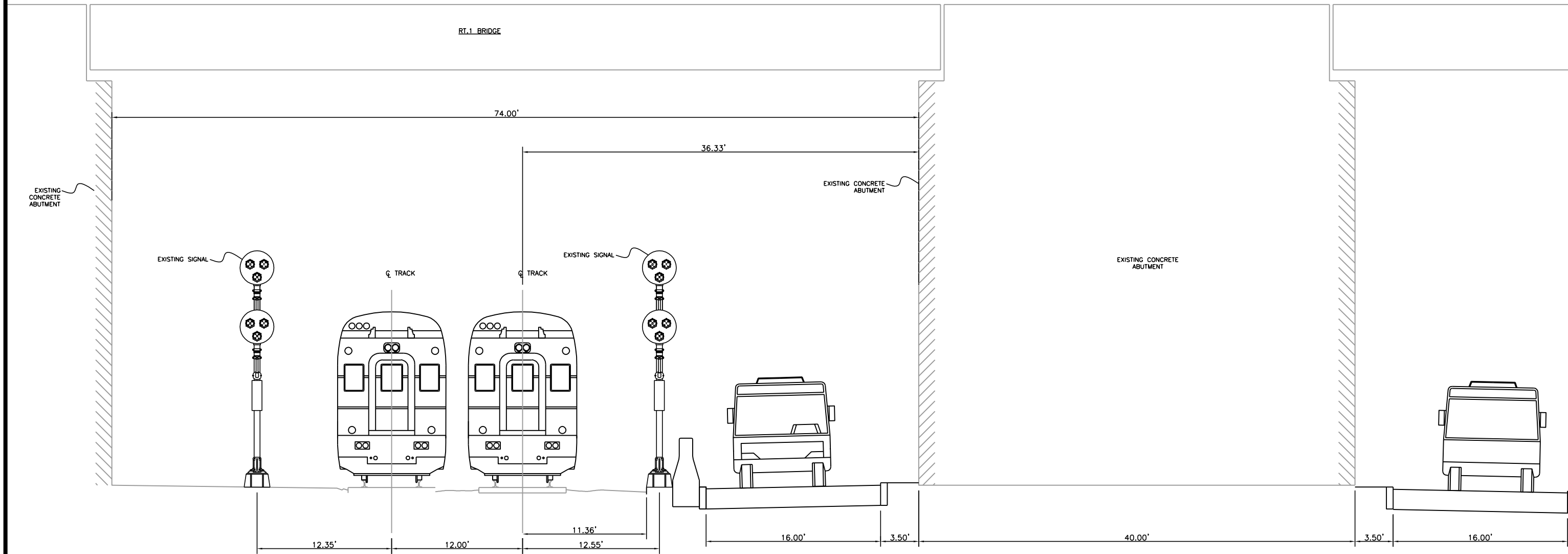


| REVISION | DESCRIPTION | DATE | APPROVED |
|----------|-------------|------|----------|
|          |             |      |          |
|          |             |      |          |
|          |             |      |          |

|             |               |
|-------------|---------------|
| DESIGNED BY | DATE          |
| DRAWN BY    | NOVEMBER 2008 |
| CHECKED BY  | SCALE         |
| APPROVED BY | AS NOTED      |
|             | REVISION      |

**EOT** EXECUTIVE OFFICE OF TRANSPORTATION  
**HNTB** HNTB Corporation  
**EarthTech** EARTH TECH  
 300 BAKER AVENUE, CONCORD, MA 01742

|  |                            |
|--|----------------------------|
| TITLE  | SHEET NO.                  |
| URBAN RING PHASE 2<br>TRACK PLAN & PROFILE - CHELSEA STATION | CRS-1                      |
|  | CONTRACT NO.               |
|  | 97713                      |
|  | DRAWING NO.                |
|  | 97713-RDEIR-sht-CRS-1thru5 |

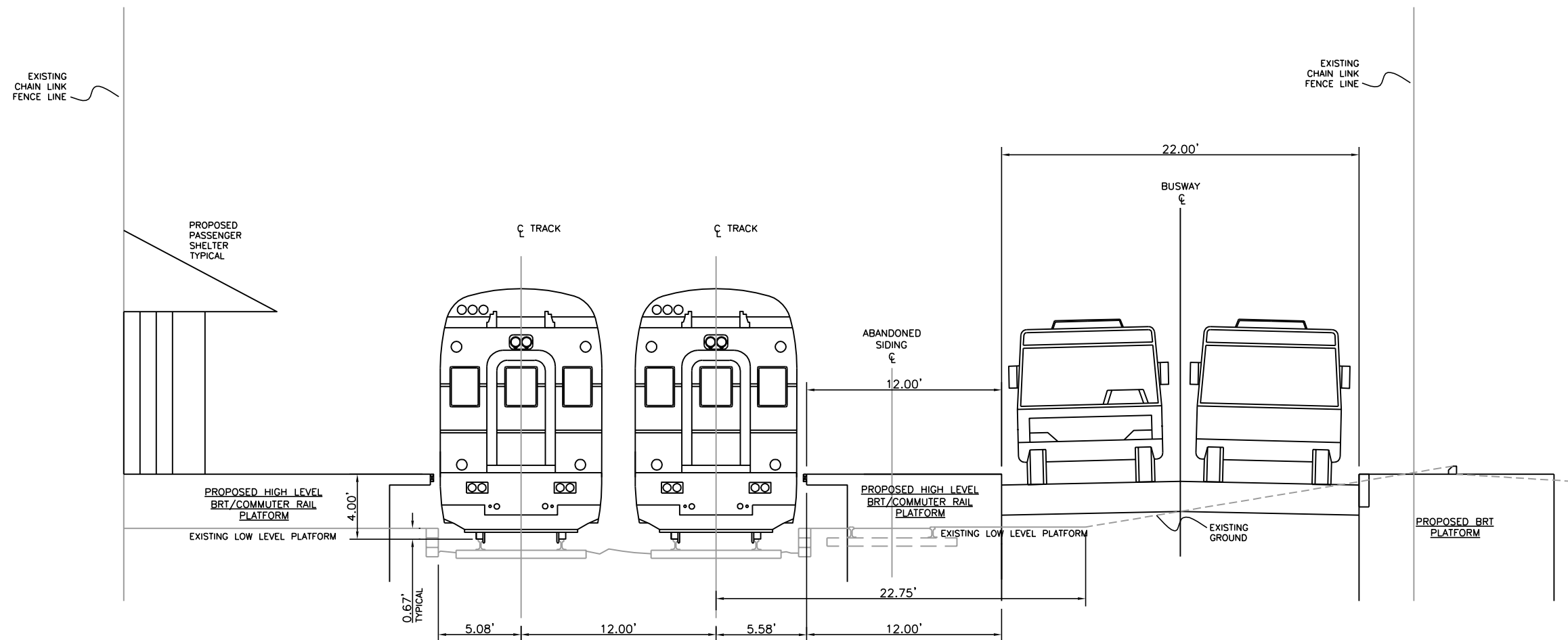


SECTION A-A  
 BRT W/ COMMUTER RAIL  
 AT EXISTING RT. 1 BRIDGE  
 NTS

**PRELIMINARY  
 DRAFT  
 COPY**

HALF-SIZE IF 11" X 17"

|          |             |      |          |             |               |  |  |       |   |              |
|----------|-------------|------|----------|-------------|---------------|--|--|-------|---|--------------|
|          |             |      |          | DESIGNED BY | DATE          | <br><b>EXECUTIVE<br/>       OFFICE OF<br/>       TRANSPORTATION</b> | <b>THE URBAN RING<br/>       PHASE 2<br/>       RDEIR/DEIS</b> | TITLE | URBAN RING PHASE 2<br>TRACK CROSS SECTION - CHELSEA STATION | SHEET NO.    |
|          |             |      |          | DRAWN BY    | NOVEMBER 2008 |  |  |       |   | CRS-2        |
|          |             |      |          | CHECKED BY  | AS NOTED      |  |  |       |   | CONTRACT NO. |
|          |             |      |          | APPROVED BY | REVISION      |  |  |       |   | 97713        |
| REVISION | DESCRIPTION | DATE | APPROVED |             |               | <br><b>EarthTech</b>  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742              |       | DRAWING NO.   |              |
|          |             |      |          |             |               |  |  |       | 97713-RDEIR-sht-CRS-1 thru 5                                |              |

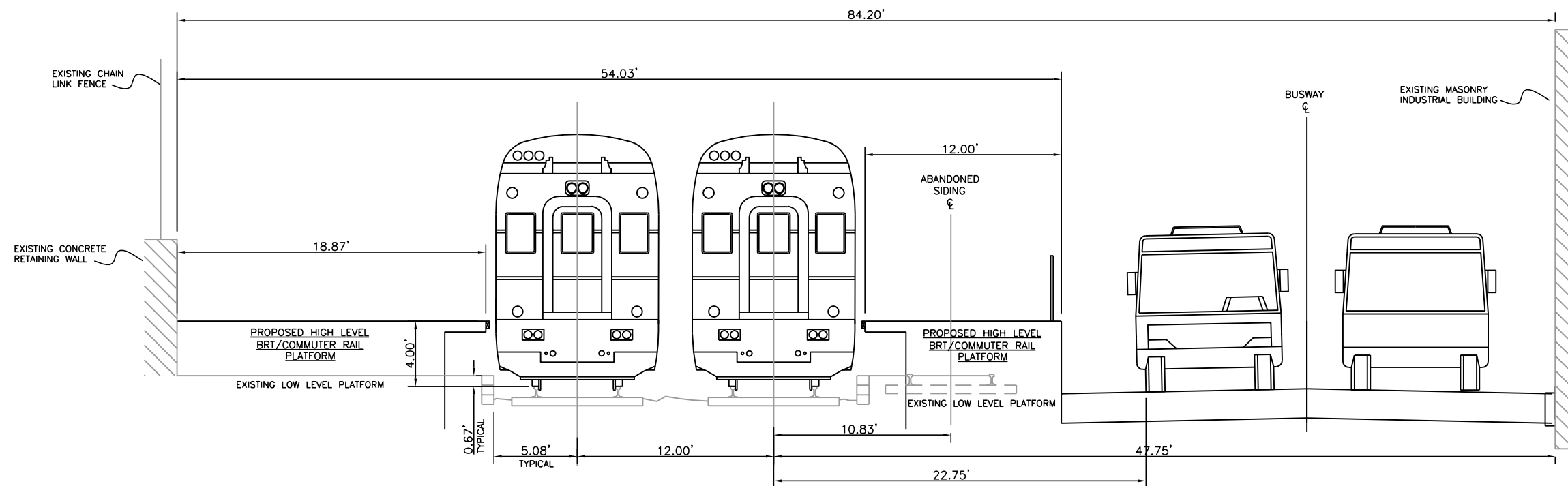


SECTION B-B  
 BRT AND COMMUTER RAIL  
 STATION  
 SCALE: 1"=4'

**PRELIMINARY  
 DRAFT  
 COPY**

HALF-SIZE IF 11" X 17"

|          |             |      |          |             |               |   |   |   |                            |
|----------|-------------|------|----------|-------------|---------------|---|---|---|----------------------------|
|          |             |      |          | DESIGNED BY | DATE          |  <b>EXECUTIVE OFFICE OF TRANSPORTATION</b> | <b>THE URBAN RING PHASE 2 RDEIR/DEIS</b>          | TITLE   | SHEET NO.                  |
|          |             |      |          | DRAWN BY    | NOVEMBER 2008 |   |   |   | CRS-3                      |
|          |             |      |          | CHECKED BY  | SCALE         |  <b>EarthTech</b>                          | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | URBAN RING PHASE 2<br>TRACK CROSS SECTION - CHELSEA STATION | CONTRACT NO.               |
|          |             |      |          | APPROVED BY | AS NOTED      |   |   |   | 97713                      |
| REVISION | DESCRIPTION | DATE | APPROVED |             | REVISION      |   |   |   | DRAWING NO.                |
|          |             |      |          |             |               |   |   |   | 97713-RDEIR-sht-CRS-1thru5 |

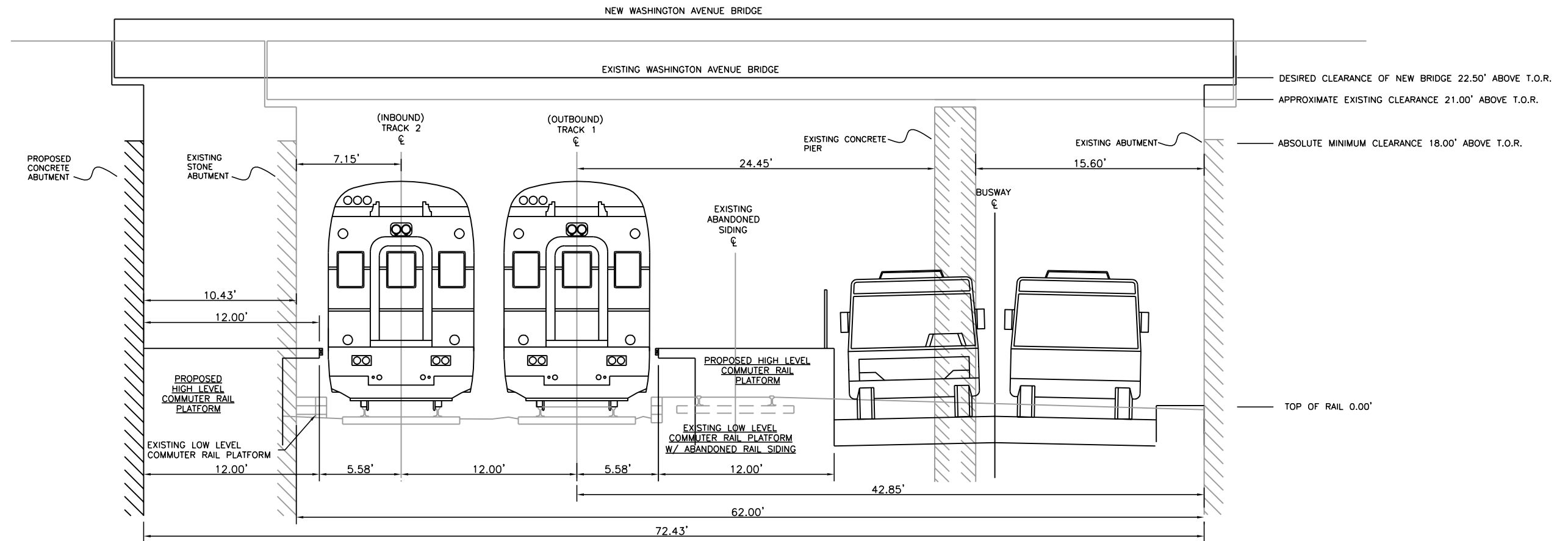


SECTION C-C  
 BRT W/ COMMUTER RAIL  
 AT EXISTING BUILDING  
 SCALE: 1"=4'

**PRELIMINARY  
 DRAFT  
 COPY**

HALF-SIZE IF 11" X 17"

|          |             |      |          |             |               |  |  |   |   |                            |
|----------|-------------|------|----------|-------------|---------------|--|--|---|---|----------------------------|
|          |             |      |          | DESIGNED BY | DATE          | <br><b>EXECUTIVE OFFICE OF TRANSPORTATION</b>   | <b>THE URBAN RING PHASE 2</b><br><b>RDEIR/DEIS</b> | TITLE   | URBAN RING PHASE 2<br>TRACK CROSS SECTION - CHELSEA STATION | SHEET NO.                  |
|          |             |      |          | DRAWN BY    | NOVEMBER 2008 |  |  |   |   | CRS-4                      |
|          |             |      |          | CHECKED BY  | SCALE         |  |  |   |   | CONTRACT NO.               |
|          |             |      |          | APPROVED BY | AS NOTED      |  |  |   |   | 97713                      |
| REVISION | DESCRIPTION | DATE | APPROVED | REVISION    |               | <br><b>HNTB Corporation</b><br><small>HNTB Corporation<br/>         300 Apollo Drive<br/>         Concord, MA 01742</small> | <b>EarthTech</b>                                   | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | DRAWING NO.   |                            |
|          |             |      |          |             |               |  |  |   |   | 97713-RDEIR-sht-CRS-1thru5 |

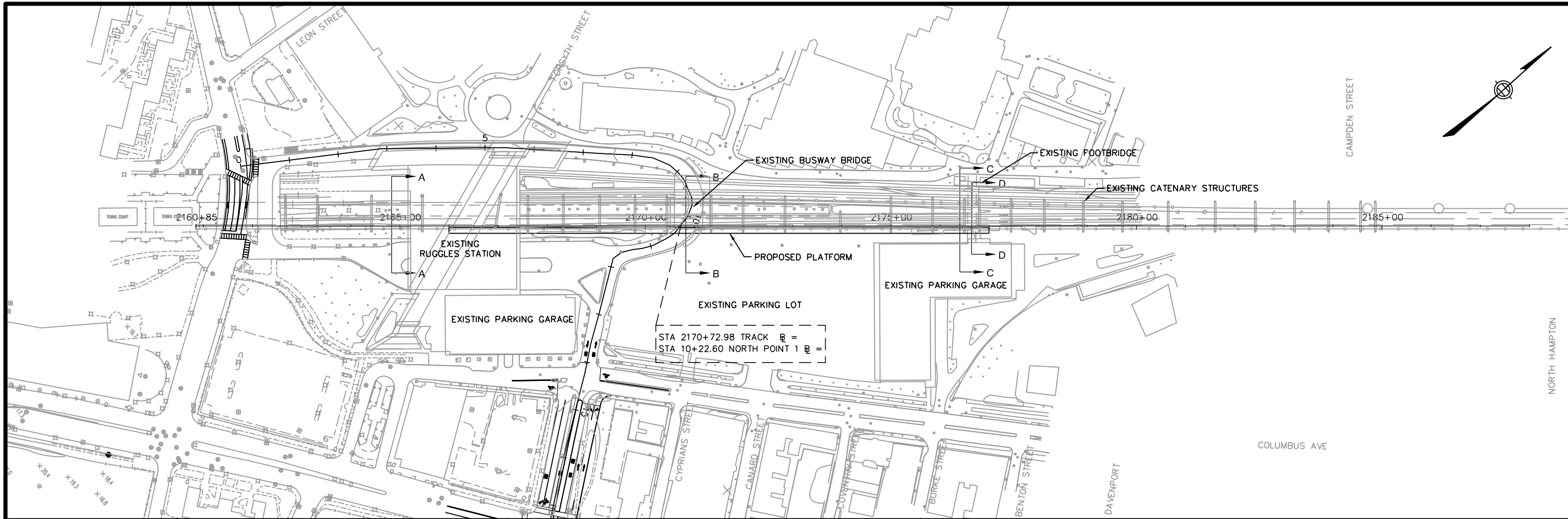


SECTION D-D  
 BRT W/ COMMUTER RAIL  
 AT EXISTING WASHINGTON AVE. BRIDGE  
 SCALE: 1"=4'

**PRELIMINARY  
 DRAFT  
 COPY**

HALF-SIZE IF 11" X 17"

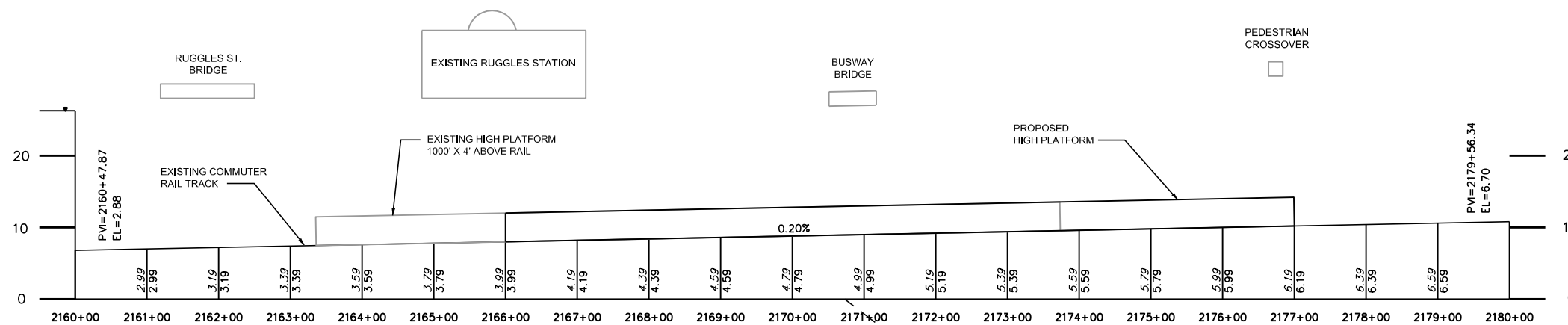
|          |             |      |          |             |               |  |  |   |                            |
|----------|-------------|------|----------|-------------|---------------|--|--|---|----------------------------|
|          |             |      |          | DESIGNED BY | DATE          | <br><b>EXECUTIVE<br/>       OFFICE OF<br/>       TRANSPORTATION</b> | <b>THE URBAN RING<br/>       PHASE 2<br/>       RDEIR/DEIS</b> | TITLE   | SHEET NO.                  |
|          |             |      |          | DRAWN BY    | NOVEMBER 2008 |  |  |   | CRS-5                      |
|          |             |      |          | CHECKED BY  | SCALE         | <br><b>EarthTech</b>  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742              | URBAN RING PHASE 2<br>TRACK CROSS SECTION - CHELSEA STATION | CONTRACT NO.               |
|          |             |      |          | APPROVED BY | AS NOTED      |  |  |   | 97713                      |
| REVISION | DESCRIPTION | DATE | APPROVED |             | REVISION      |  |  |   | DRAWING NO.                |
|          |             |      |          |             |               |  |  |   | 97713-RDEIR-sht-CRS-1thru5 |



STA 2170+72.98 TRACK  $\mathbb{E} =$   
 STA 10+22.60 NORTH POINT 1  $\mathbb{E} =$

**PLAN**

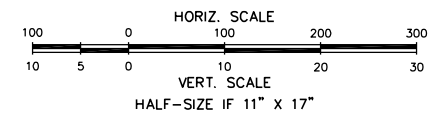
SEE SHEET 14C FOR PROPOSED BUSWAY



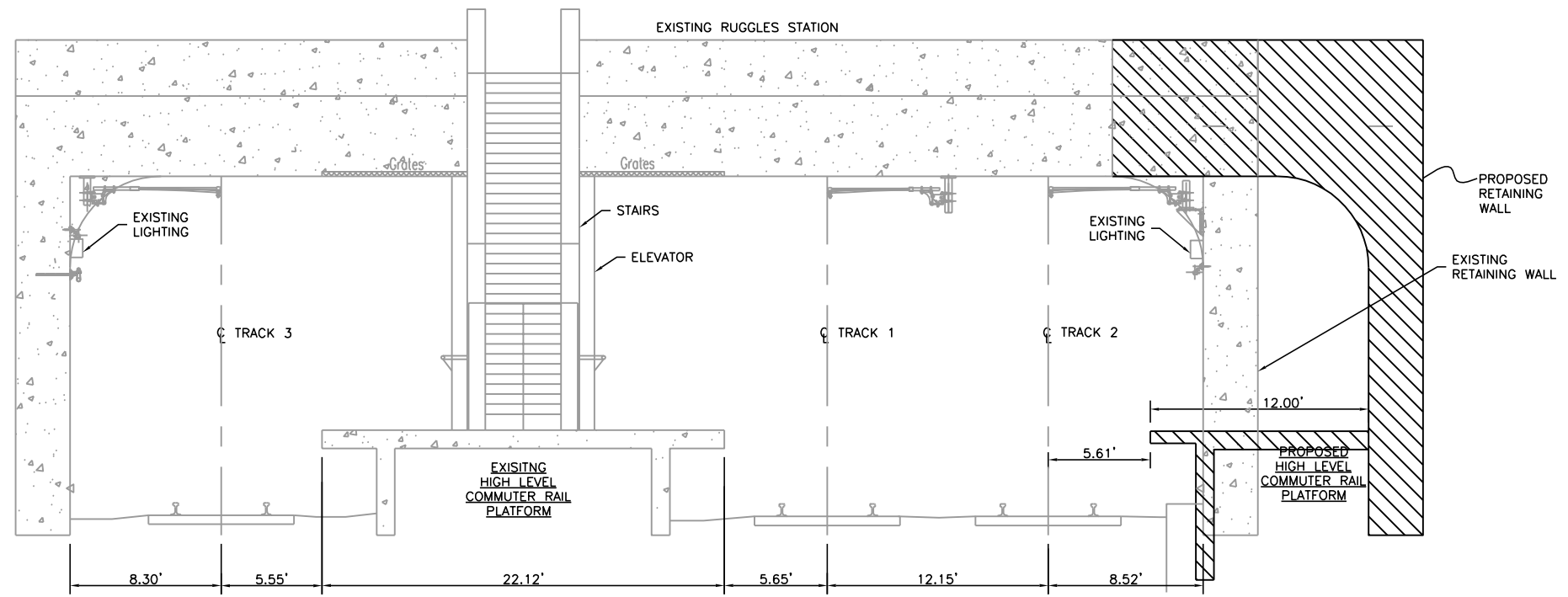
**TRACK PROFILE**

STA 2170+72.98 TRACK  $\mathbb{E} =$   
 STA 10+22.60 NORTH POINT 1  $\mathbb{E} =$

**PRELIMINARY  
DRAFT  
COPY**



|          |             |      |          |                    |                       |  |   |   |   |                       |
|----------|-------------|------|----------|--------------------|-----------------------|--|---|---|---|-----------------------|
|          |             |      |          | DESIGNED BY<br>GFK | DATE<br>NOVEMBER 2008 |  | EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION          | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>TRACK PLAN & PROFILE - RUGGLES STATION | SHEET NO.<br>CRS-6    |
|          |             |      |          | DRAWN BY<br>GFK    | SCALE<br>AS NOTED     |  |   |   |   | CONTRACT NO.<br>97713 |
|          |             |      |          | CHECKED BY         | REVISION              |  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |   | DRAWING NO.           |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY        |                       |  |   |   |   |                       |



SECTION A-A  
RUGGLES STATION  
STATION 226+2362

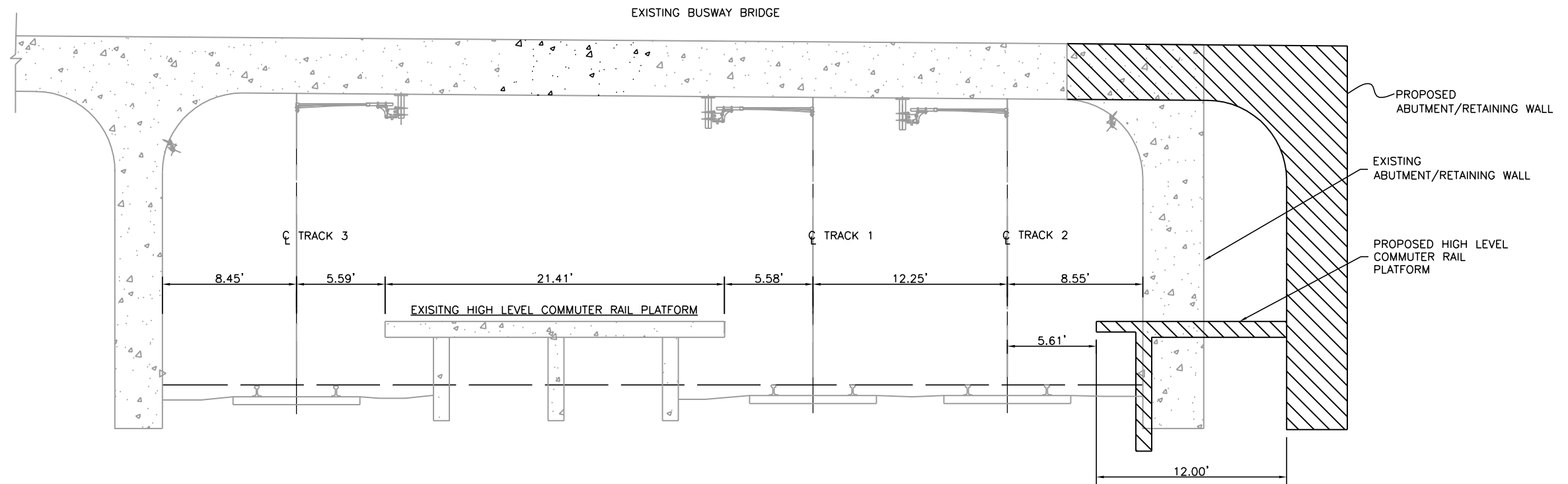
SCALE: 1"=4'

**PRELIMINARY  
DRAFT  
COPY**

HALF-SIZE IF 11" X 17"

|          |             |                    |                       |   |   |  |                       |
|----------|-------------|--------------------|-----------------------|---|---|--|-----------------------|
|          |             | DESIGNED BY<br>GFK | DATE<br>NOVEMBER 2008 | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION                | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE<br><br>URBAN RING PHASE 2<br>TRACK CROSS SECTION A-A - RUGGLES STATION | SHEET NO.<br>CRS-7    |
|          |             | DRAWN BY<br>GFK    | SCALE<br>AS NOTED     |   |   |  | CONTRACT NO.<br>97713 |
|          |             | CHECKED BY         | REVISION              | <b>EarthTech</b><br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |   |  | DRAWING NO.           |
| REVISION | DESCRIPTION | DATE               | APPROVED              |   |   |  |                       |



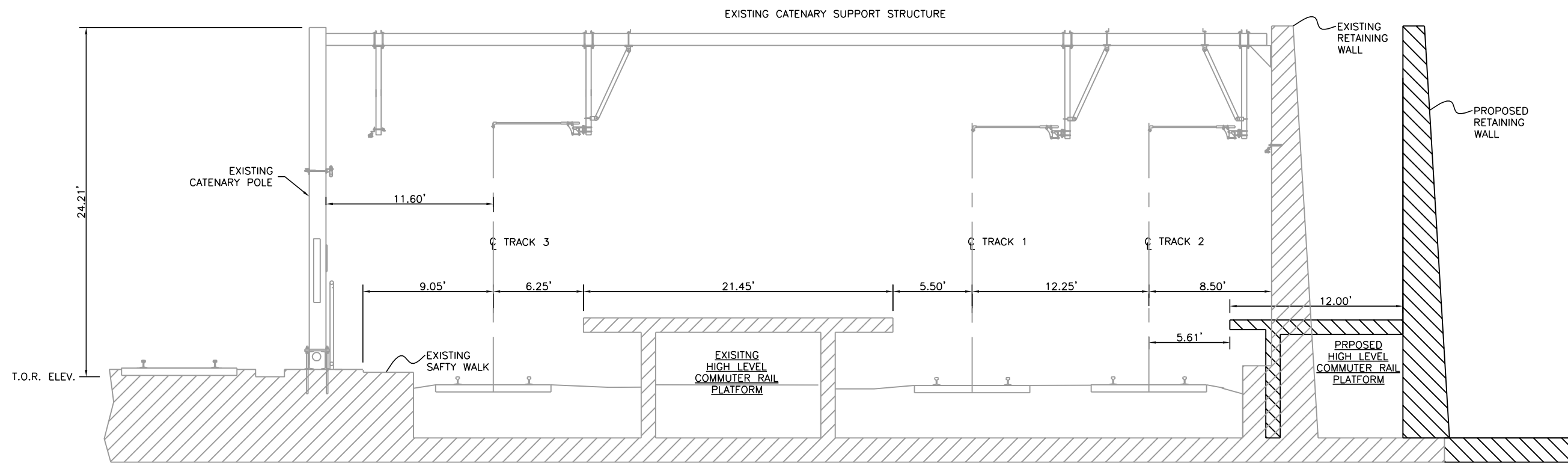


SECTION B-B  
 BUSWAY ACCESS BRIDGE  
 STATION 226+2857  
 SCALE: 1"=4'

**PRELIMINARY  
 DRAFT  
 COPY**

HALF-SIZE IF 11" X 17"

|          |             |      |          |                    |                       |   |  |   |                       |
|----------|-------------|------|----------|--------------------|-----------------------|---|--|---|-----------------------|
|          |             |      |          | DESIGNED BY<br>GFK | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>       OFFICE OF<br/>       TRANSPORTATION</b> | <b>THE URBAN RING<br/>       PHASE 2<br/>       RDEIR/DEIS</b> | TITLE<br><br><b>URBAN RING PHASE 2<br/>       TRACK CROSS SECTION B-B - RUGGLES STATION</b> | SHEET NO.<br>CRS-8    |
|          |             |      |          | DRAWN BY<br>GFK    | SCALE<br>AS NOTED     |   |  |   | CONTRACT NO.<br>97713 |
|          |             |      |          | CHECKED BY         | REVISION              |  <b>EarthTech</b>  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742              | DRAWING NO.   |                       |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY        |                       |   |  |   |                       |



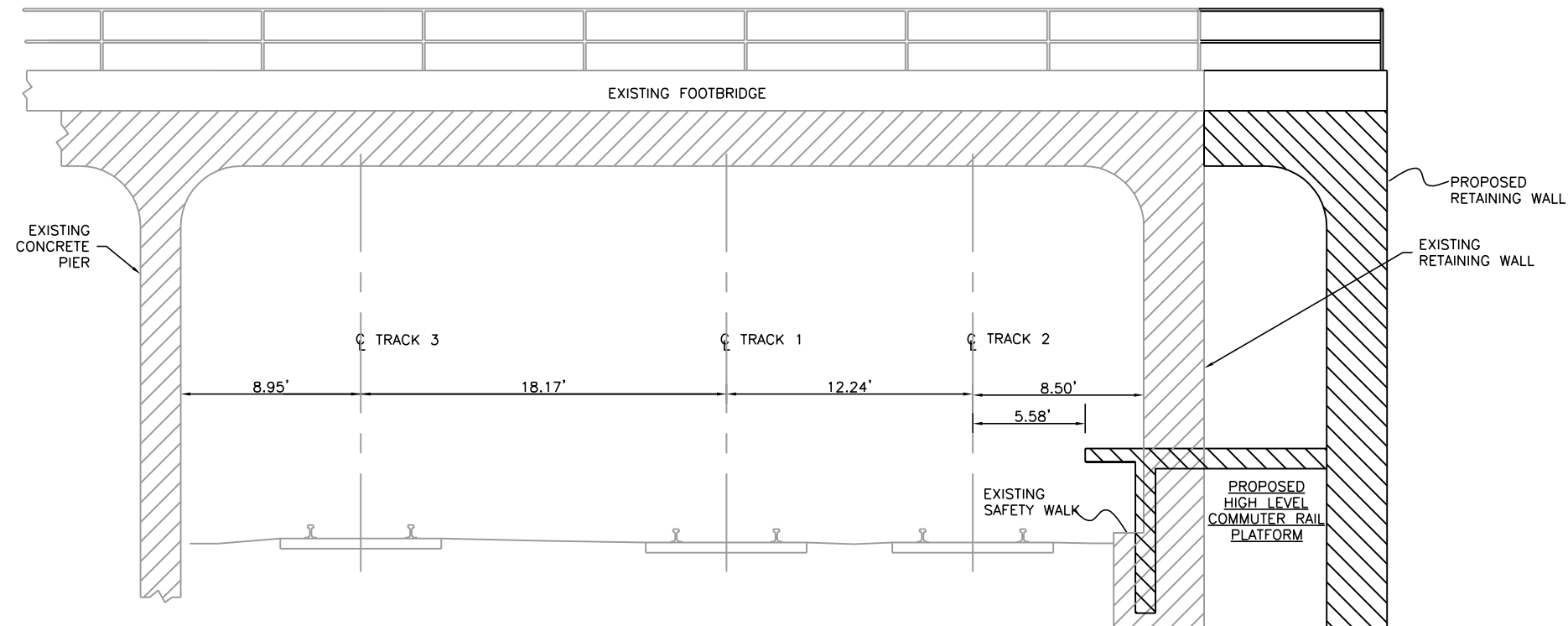
SECTION C-C  
 TYPICAL OVERHEAD CONTACT SYSTEM SUPPORT STRUCTURE  
 STATION 226+2827

SCALE: 1"=4'

**PRELIMINARY  
 DRAFT  
 COPY**

HALF-SIZE IF 11" X 17"

|                    |             |                       |          |  |  |  |                       |
|--------------------|-------------|-----------------------|----------|--|--|--|-----------------------|
| DESIGNED BY<br>GFK |             | DATE<br>NOVEMBER 2008 |          |  <b>EXECUTIVE OFFICE OF TRANSPORTATION</b>                          | <b>THE URBAN RING PHASE 2 RDEIR/DEIS</b> | TITLE<br><br>URBAN RING PHASE 2<br>TRACK CROSS SECTION C-C - RUGGLES STATION | SHEET NO.<br>CRS-9    |
| DRAWN BY<br>GFK    |             | SCALE<br>AS NOTED     |          |  |  |  | CONTRACT NO.<br>97713 |
| CHECKED BY         |             | REVISION              |          |  <b>EarthTech</b> EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | DRAWING NO.                              |  |                       |
| REVISION           | DESCRIPTION | DATE                  | APPROVED |  | APPROVED BY                              |  |                       |

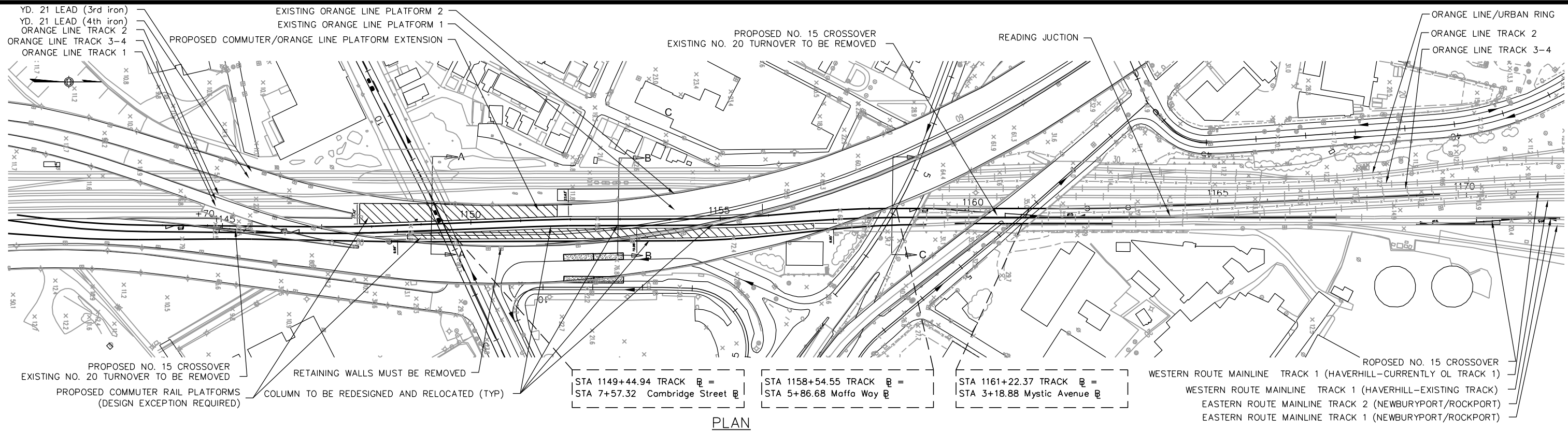


SECTION D-D  
 FOOTBRIDGE TO COLUMBUS PARKING GARAGE  
 STATION 226+3448  
 SCALE: 1"=4'

**PRELIMINARY  
 DRAFT  
 COPY**

HALF-SIZE IF 11" X 17"

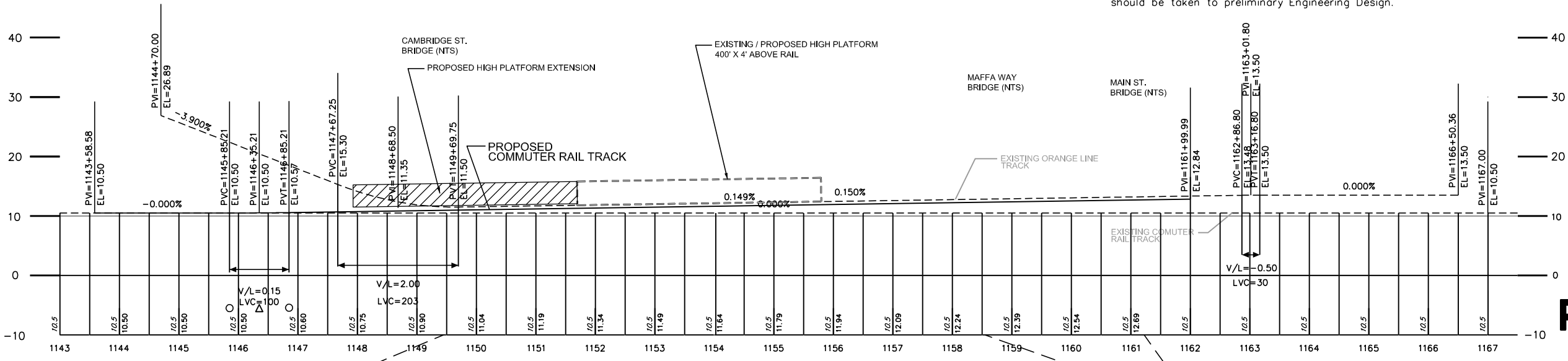
|          |             |      |          |                    |                       |   |  |  |                       |
|----------|-------------|------|----------|--------------------|-----------------------|---|--|--|-----------------------|
|          |             |      |          | DESIGNED BY<br>GFK | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>         OFFICE OF<br/>         TRANSPORTATION</b> | <b>THE URBAN RING<br/>         PHASE 2<br/>         RDEIR/DEIS</b> | TITLE<br><br><b>URBAN RING PHASE 2<br/>         TRACK CROSS SECTION D-D- RUGGLES STATION</b> | SHEET NO.<br>CRS-10   |
|          |             |      |          | DRAWN BY<br>GFK    | SCALE<br>AS NOTED     |   |  |  | CONTRACT NO.<br>97713 |
|          |             |      |          | CHECKED BY         | REVISION              |  <b>EarthTech</b>  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742                  | DRAWING NO.<br>97713-RDEIR-sht-CRS-6thru10   |                       |
| REVISION | DESCRIPTION | DATE | APPROVED | APPROVED BY        |                       |   |  |  |                       |



PLAN

- NOTES/ASSUMPTIONS
- Design Constrained by Reading Junction
  - Orange Line test track to utilized as 3rd commuter rail track.
  - Maximum Design velocity for through trains is 30 MPH. Commuter rail #20 turnouts to be replaced by #15 turnouts in order to fit physically, which results in speed restrictions operationally. Governing factor is #15 connections for proposed crossovers. During preliminary engineering # 20 crossovers shall be analyzed with detailed survey data.
  - The MBTA will allow and establish a multi-modal commuter rail orange line station platform at Sullivan Square. A substantial effort on passenger signage and customer service agents at the combined platform may be required.
  - Existing I-93 and Sullivan Square infrastructure will need to be redesigned and replaced. All proposed modifications should be outlined and detailed after survey and detailed base mapping is established in preliminary design phase.
  - The proposed new track on the easterly side of Sullivan Square Station can only accomodate moves to the east route. During the Preliminary Design Phase an operational study should be completed to determine if an additional crossover is required between the proposed track and the existing western route main line.
  - Conclusion: The addition of a third track at Sullivan Square appears feasible at the conceptual design level and should be taken to preliminary Engineering Design.

### SULLIVAN SQUARE PROPOSED

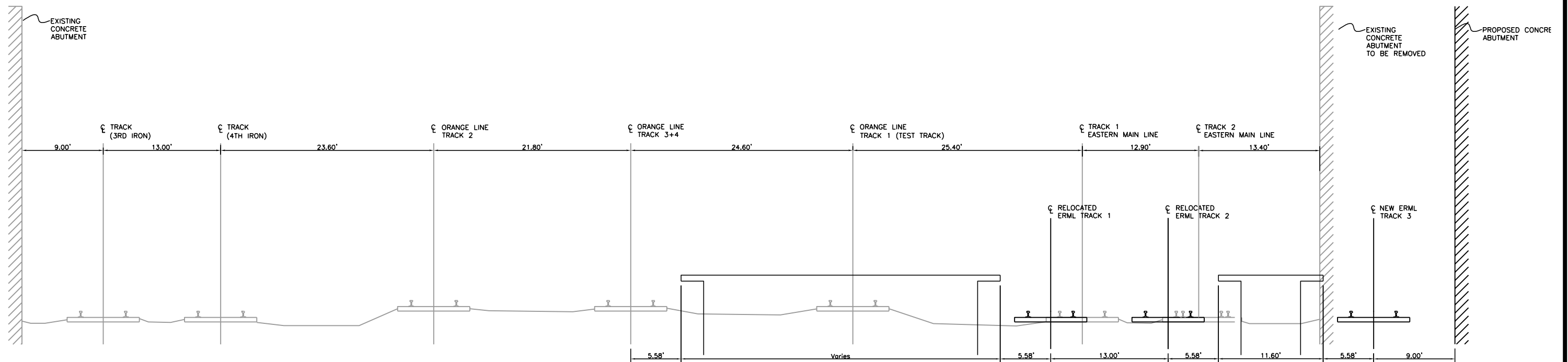


PROFILE

HORIZ SCALE: 1"=100'  
 VERTICAL SCALE: 1"=10'  
 HALF-SIZE IF 11" X 17"

**PRELIMINARY  
 DRAFT  
 COPY**

|                    |                          |                       |          |   |   |  |                                       |  |
|--------------------|--------------------------|-----------------------|----------|---|---|--|---------------------------------------|--|
| DESIGNED BY<br>GFK |                          | DATE<br>NOVEMBER 2008 |          | EXECUTIVE OFFICE OF TRANSPORTATION<br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 | TITLE<br><b>URBAN RING PHASE 2<br/>         TRACK PLAN &amp; PROFILE - SULLIVAN STATION</b> |  | SHEET NO.<br>CRS-11                   |  |
| DRAWN BY<br>GFK    |                          | SCALE<br>AS NOTED     |          |   | CONTRACT NO.<br>97713   |  | DRAWING NO.<br>97713-RDEIR-sht-CRS-11 |  |
| REV 1              | SULLIVAN SQUARE REDESIGN | NOV-08                | GFK      | APPROVED BY<br>AG   |   |  |                                       |  |
| REVISION           | DESCRIPTION              | DATE                  | APPROVED |   |   |  |                                       |  |



SECTION A-A  
 STA. 1149+25  
 COMMUTER RAIL  
 AT EXISTING CAMBRIDGE ST. BRIDGE

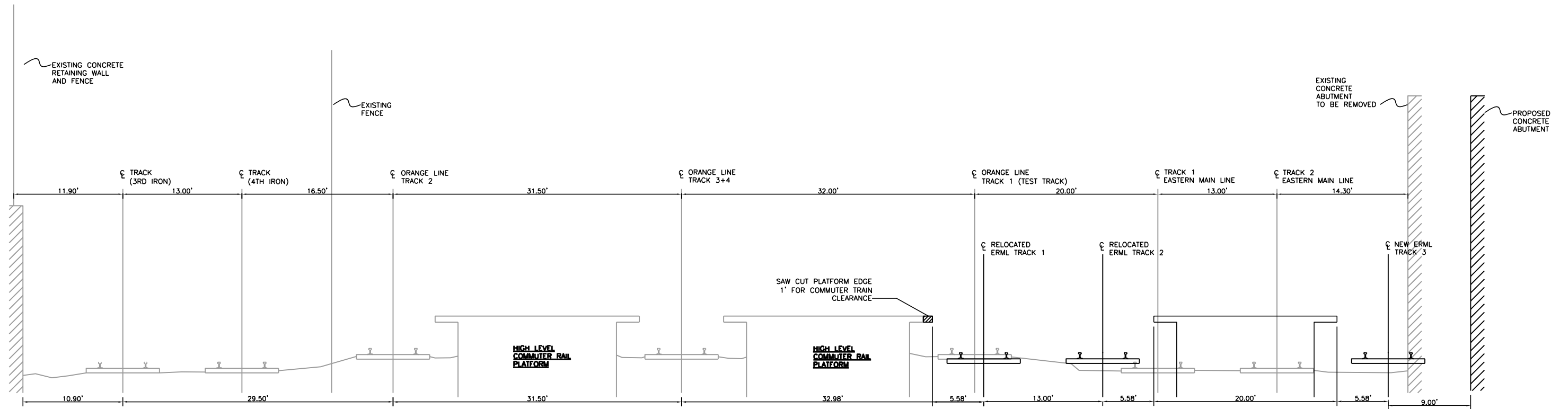
CROSS SECTION

NTS

HALF-SIZE IF 11" X 17"

**PRELIMINARY  
 DRAFT  
 COPY**

|          |                          |        |          |                    |                       |   |  |   |  |
|----------|--------------------------|--------|----------|--------------------|-----------------------|---|--|---|--|
|          |                          |        |          | DESIGNED BY<br>GFK | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE<br/>       OFFICE OF<br/>       TRANSPORTATION</b> | <b>THE URBAN RING<br/>       PHASE 2<br/>       RDEIR/DEIS</b> | TITLE<br><br><b>URBAN RING PHASE 2<br/>       CROSS SECTION A-A- SULLIVAN STATION</b> | SHEET NO.<br>CRS-12                      |
|          |                          |        |          | DRAWN BY<br>GFK    | SCALE<br>AS NOTED     |   |  |   | CONTRACT NO.<br>97713                    |
| REV 1    | SULLIVAN SQUARE REDESIGN | NOV-08 | GFK      | CHECKED BY<br>AG   | REVISION              |  <b>EarthTech</b>  | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742              |   | DRAWING NO.<br>97713-RDEIR-sht-CRS-12-17 |
| REVISION | DESCRIPTION              | DATE   | APPROVED | APPROVED BY<br>AG  |                       |   |  |   |  |



SECTION B-B  
 STA. 1153+00  
 COMMUTER RAIL  
 AT EXISTING PLATFORM

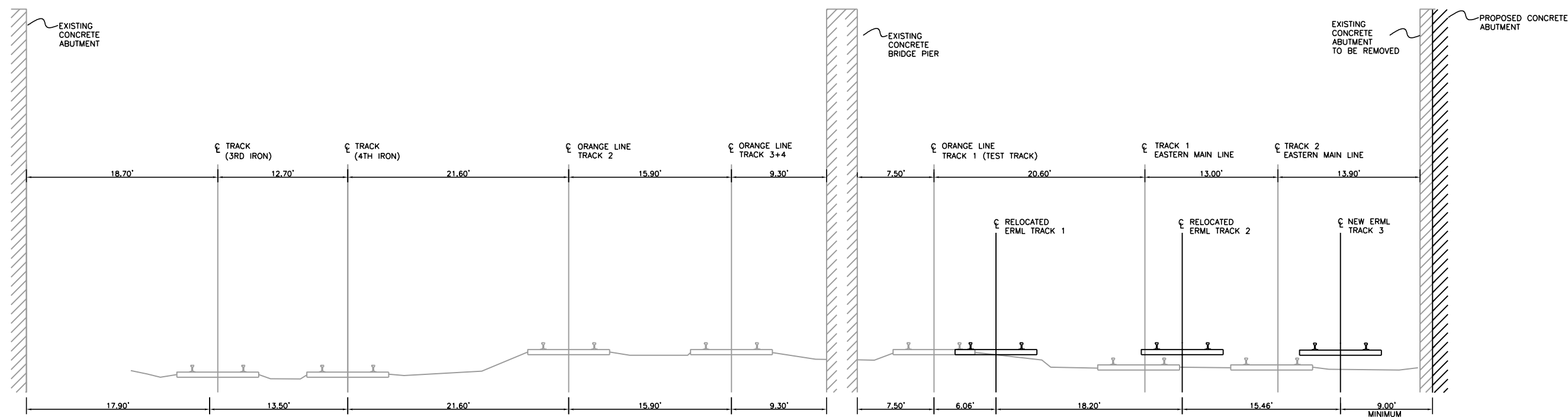
CROSS SECTION

NTS

HALF-SIZE IF 11" X 17"

**PRELIMINARY  
 DRAFT  
 COPY**

|          |                          |        |          |                    |                       |   |   |  |                     |
|----------|--------------------------|--------|----------|--------------------|-----------------------|---|---|--|---------------------|
|          |                          |        |          | DESIGNED BY<br>GFK | DATE<br>NOVEMBER 2008 | <br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS | TITLE                                    | SHEET NO.<br>CRS-13 |
|          |                          |        |          | DRAWN BY<br>GFK    | SCALE<br>AS NOTED     |   |   |  |                     |
| REV 1    | SULLIVAN SQUARE REDESIGN | NOV-08 | GFK      | CHECKED BY<br>AG   | REVISION              | EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742   |   | DRAWING NO.<br>97713-RDEIR-sht-CRS-12-17 |                     |
| REVISION | DESCRIPTION              | DATE   | APPROVED | APPROVED BY<br>AG  |                       |   |   |  |                     |



SECTION C-C  
 STA. 1158+50  
 COMMUTER RAIL  
 AT EXISTING  
 MAFFA WAY BRIDGE

CROSS SECTION

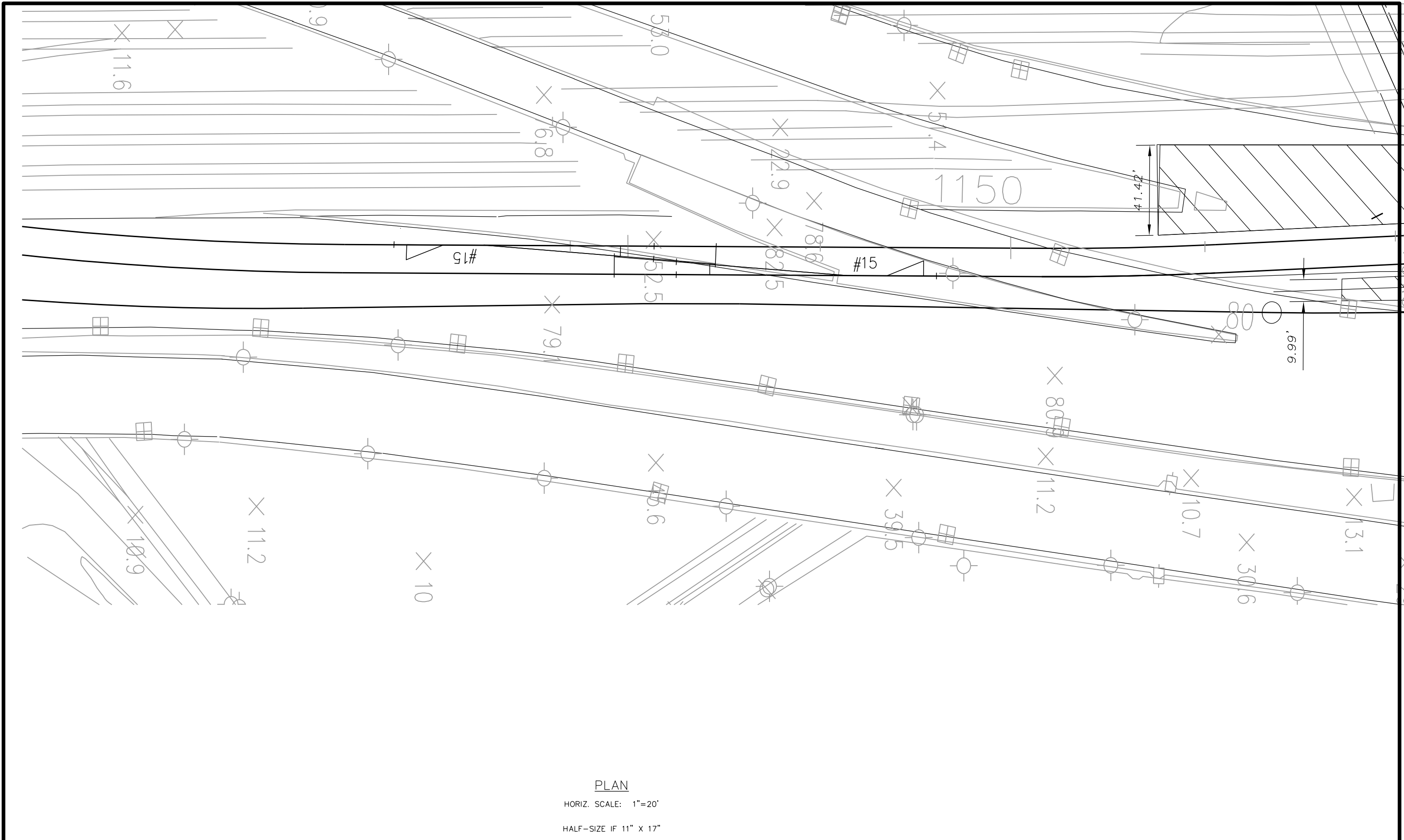
NTS

HALF-SIZE IF 11" X 17"

**PRELIMINARY  
 DRAFT  
 COPY**

|          |                          |                    |                       |  |   |  |  |
|----------|--------------------------|--------------------|-----------------------|--|---|--|--|
|          |                          | DESIGNED BY<br>GFK | DATE<br>NOVEMBER 2008 | <b>EOT</b><br>EXECUTIVE<br>OFFICE OF<br>TRANSPORTATION                   | THE URBAN RING<br>PHASE 2<br>RDEIR/DEIS                               | TITLE<br><br>URBAN RING PHASE 2<br>CROSS SECTION C-C- SULLIVAN STATION | SHEET NO.<br>CRS-14                      |
|          |                          | DRAWN BY<br>GFK    | SCALE<br>AS NOTED     |  |   |  | CONTRACT NO.<br>97713                    |
| REV 1    | SULLIVAN SQUARE REDESIGN | NOV-08             | GFK                   | <b>HNTB</b><br>HNTB Corporation<br>300 Apollo Drive<br>Concord, MA 01742 | <b>EarthTech</b><br>EARTH TECH<br>300 BAKER AVENUE, CONCORD, MA 01742 |  | DRAWING NO.<br>97713-RDEIR-sh1-CRS-12-17 |
| REVISION | DESCRIPTION              | DATE               | APPROVED              |  |   |  | APPROVED BY<br>AG                        |





PLAN

HORIZ. SCALE: 1"=20'

HALF-SIZE IF 11" X 17"

|          |                          |        |          |                    |                       |   |  |  |  |
|----------|--------------------------|--------|----------|--------------------|-----------------------|---|--|--|--|
|          |                          |        |          | DESIGNED BY<br>GFK | DATE<br>NOVEMBER 2008 |  <b>EXECUTIVE OFFICE OF TRANSPORTATION</b> | <b>THE URBAN RING PHASE 2 RDEIR/DEIS</b> | TITLE                                    | SHEET NO.<br>CRS-15  |
|          |                          |        |          | DRAWN BY<br>GFK    | SCALE<br>AS NOTED     |   |  |  |  <b>EarthTech</b> |
| REV 1    | SULLIVAN SQUARE REDESIGN | NOV-08 | GFK      | CHECKED BY<br>AG   | REVISION              |   |  | DRAWING NO.<br>97713-RDEIR-sht-CRS-12-17 |  |
| REVISION | DESCRIPTION              | DATE   | APPROVED | APPROVED BY<br>AG  |                       |   |  |  |  |

