METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

# CIVIL EAST CONSTRUCTION

## VOLUME 11B
## STATIONS

60% SUBMISSION
DATE : 09/28/15

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THE PROPOSED SOUTHWEST LRT PROJECT IS NOT FINAL BUT IS STILL UNDER ENVIRONMENTAL REVIEW AND THE PROJECT IS SUBJECT TO CHANGE. THESE PLANS ARE NOT FINAL.

THE COUNCIL, THROUGH THE DEVELOPMENT OF THESE PLANS, DOES NOT INTEND THAT THEY WILL PREJUDICE OR COMPROMISE ANY STATE OR FEDERAL ENVIRONMENTAL REVIEW OR OTHER LEGAL REQUIREMENTS. THESE PLANS DO NOT LIMIT THE PROJECT DESIGN ALTERNATIVES OR MITIGATIVE MEASURES THAT THE COUNCIL MAY UNDERTAKE IF THE PROPOSED SWLRT PROJECT PROCEEDS TO CONSTRUCTION.

THE COUNCIL WILL NOT TAKE FINAL ACTION ON THIS MATTER UNLESS THE COUNCIL PROCEEDS WITH THE PROJECT AFTER THE FTA'S RECORD OF DECISION AND THE COUNCIL'S DETERMINATION OF ADEQUACY.



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| CIVIL EAST | | | | | | CIVIL EAST | | | | | | CIVIL EAST | | | | | |
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| | | **VOLUME 11B - STATIONS** | | | | 64 | E4-PEN-ARC-PLN-122 | VC BRIDGE LEVEL PLAN | | | | 134 | E4-PEN-ELE-PLN-431 | COMMUNICATIONS VC PLATFORM LEVEL PLAN | | | |
| 1 | E0-STA-CVR-001 | COVER SHEET | | | | 65 | E4-PEN-ARC-PLN-125 | PEDESTRIAN BRIDGE BRIDGE LEVEL PLAN | | | | 135 | E4-PEN-ELE-PLN-432 | COMMUNICATIONS VC BRIDGE LEVEL PLAN | | | |
| 2 | E0-STA-IDX-001 | VOLUME INDEX OF PLAN SHEETS SHEET 1 | | | | 66 | E4-PEN-ARC-PLN-126 | PEDESTRIAN BRIDGE BRIDGE LEVEL PLAN | | | | 136 | E4-PEN-ELE-PLN-433 | COMMUNICATIONS VC PED WALKWAY PLAN (1 OF 2) | | | |
| 3 | E0-STA-IDX-002 | VOLUME INDEX OF PLAN SHEETS SHEET 2 | | | | 67 | E4-PEN-ARC-PLN-150 | ROOF PLANS | | | | 137 | E4-PEN-ELE-PLN-434 | COMMUNICATIONS VC PED WALKWAY PLAN (2 OF 2) | | | |
| 4 | E0-GEN-KEY-001 | GENERAL KEY MAP | | | | 68 | E4-PEN-ARC-PLN-160 | VC ROOF PLAN | | | | 138 | E4-PEN-ELE-PLN-461 | COMMUNICATIONS CONDUIT SCHEDULE (1 OF 2) | | | |
| 5 | E0-GEN-NTS-001 | GENERAL LEGEND AND ABBREVIATIONS SHEET 1 | | | | 69 | E4-PEN-ARC-PLN-165 | PEDESTRIAN BRIDGE ROOF PLAN | | | | 139 | E4-PEN-ELE-PLN-462 | COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2) | | | |
| 6 | E0-GEN-NTS-002 | GENERAL LEGEND AND ABBREVIATIONS SHEET 2 | | | | 70 | E4-PEN-ARC-PLN-166 | PEDESTRIAN BRIDGE ROOF PLAN | | | | | | | | | |
| 7 | E0-ARC-ABR-020 | ARCHITECTURAL ABBREVIATIONS, SYMBOLS, AND DRAWING CODES | | | | 71 | E4-PEN-ARC-RCP-180 | REFLECTED CEILING PLANS | | | | | | **VAN WHITE STATION** | | | |
| 8 | E0-STR-GEN-001 | STRUCTURAL GENERAL NOTES | | | | 72 | E4-PEN-ARC-RCP-185 | VC RCP PLATFORM LEVEL | | | | 140 | E4-VWT-ARC-COD-010 | CODE SUMMARY/ FINISH SCHEDULE | | | |
| 9 | E0-PLM-GEN-002 | PLUMBING SYMBOLS AND ABBREVIATIONS | | | | 73 | E4-PEN-ARC-RCP-186 | VC RCP BRIDGE LEVEL | | | | 141 | E4-VWT-ARC-PLN-101 | PLATFORM PLAN | | | |
| 10 | E0-PLM-DTL-002 | PLUMBING DETAILS AND SCHEDULES | | | | 74 | E4-PEN-ARC-RCP-187 | PEDESTRIAN BRIDGE RCP BRIDGE LEVEL | | | | 142 | E4-VWT-ARC-PLN-110 | WEST PARTIAL PLATFORM PLAN | | | |
| 11 | E0-MEC-GEN-002 | MECHANICAL SYMBOLS AND ABBREVIATIONS | | | | 75 | E4-PEN-ARC-RCP-188 | PEDESTRIAN BRIDGE RCP BRIDGE LEVEL | | | | 143 | E4-VWT-ARC-PLN-111 | MIDDLE PARTIAL PLATFORM PLAN | | | |
| 12 | E0-MEC-SCH-002 | MECHANICAL SCHEDULES | | | | 76 | E4-PEN-ARC-ELV-200 | ELEVATIONS | | | | 144 | E4-VWT-ARC-PLN-112 | EAST PARTIAL PLATFORM PLAN | | | |
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| | | | | | | 89 | E4-PEN-ARC-SCT-310 | VC LONGITUDINAL SECTION | | | | 157 | E4-VWT-ARC-ELV-211 | MIDDLE PARTIAL ELEVATIONS | | | |
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SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B STATIONS VOLUME INDEX OF PLAN SHEETS SHEET 1

DISCIPLINE: GENERAL

SHEET NAME: E0-STA-IDX - 001

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## CIVIL EAST

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| 228 | E4-ROY-ARC-PLN-151 | TRACK 2 - ROOF PLANS | | | |
| 229 | E4-ROY-ARC-RCP-180 | TRACK 1 - REFLECTED CEILING PLANS | | | |
| 230 | E4-ROY-ARC-RCP-181 | TRACK 2 - REFLECTED CEILING PLANS | | | |
| 231 | E4-ROY-ARC-ELV-200 | ELEVATIONS | | | |
| 232 | E4-ROY-ARC-ELV-210 | TRACK 1 - SOUTH PARTIAL ELEVATIONS | | | |
| 233 | E4-ROY-ARC-ELV-211 | TRACK 1 - MIDDLE PARTIAL ELEVATIONS | | | |
| 234 | E4-ROY-ARC-ELV-212 | TRACK 1 - NORTH PARTIAL ELEVATIONS | | | |
| 235 | E4-ROY-ARC-ELV-213 | TRACK 2 - SOUTH PARTIAL ELEVATIONS | | | |
| 236 | E4-ROY-ARC-ELV-214 | TRACK 2 - MIDDLE PARTIAL ELEVATIONS | | | |
| 237 | E4-ROY-ARC-ELV-215 | TRACK 2 - NORTH PARTIAL ELEVATIONS | | | |
| 238 | E4-ROY-ARC-SCT-300 | TYPICAL PLATFORM SECTION | | | |
| 239 | E4-ROY-STR-PLN-101 | PLATFORM PLAN | | | |
| 240 | E4-ROY-STR-PLN-110 | SOUTH PARTIAL FOUNDATION PLAN | | | |
| 241 | E4-ROY-STR-PLN-111 | MIDDLE PARTIAL FOUNDATION PLAN | | | |
| 242 | E4-ROY-STR-PLN-112 | NORTH PARTIAL FOUNDATION PLAN | | | |
| 243 | E4-ROY-STR-PLN-150 | TRACK 1 - ROOF FRAMING PLANS | | | |
| 244 | E4-ROY-STR-PLN-151 | TRACK 2 - ROOF FRAMING PLANS | | | |
| 245 | E4-ROY-STR-ELV-201 | ELEVATIONS – FRAMING | | | |
| 246 | E4-ROY-STR-ELV-210 | TRACK 1 - SOUTH PARTIAL ELEVATIONS – FRAMING | | | |
| 247 | E4-ROY-STR-ELV-211 | TRACK 1 - MIDDLE PARTIAL ELEVATIONS – FRAMING | | | |
| 248 | E4-ROY-STR-ELV-212 | TRACK 1 - NORTH PARTIAL ELEVATIONS – FRAMING | | | |
| 249 | E4-ROY-STR-ELV-213 | TRACK 2 - SOUTH PARTIAL ELEVATIONS – FRAMING | | | |
| 250 | E4-ROY-STR-ELV-214 | TRACK 2 - MIDDLE PARTIAL ELEVATIONS – FRAMING | | | |
| 251 | E4-ROY-STR-ELV-215 | TRACK 2 - NORTH PARTIAL ELEVATIONS -- FRAMING | | | |
| 252 | E4-ROY-STR-SCT-300 | TYPICAL PLATFORM SECTION | | | |
| 253 | E4-ROY-PLM-PLN-100 | SOUTH PARTIAL UNDERFLOOR PLUMBING PLAN | | | |
| 254 | E4-ROY-PLM-PLN-101 | MIDDLE PARTIAL UNDERFLOOR PLUMBING PLAN | | | |
| 255 | E4-ROY-PLM-PLN-102 | NORTH PARTIAL UNDERFLOOR PLUMBING PLAN | | | |
| 256 | E4-ROY-PLM-PLN-110 | SOUTH PARTIAL PLUMBING PLAN | | | |
| 257 | E4-ROY-PLM-PLN-111 | MIDDLE PARTIAL PLUMBING PLAN | | | |
| 258 | E4-ROY-PLM-PLN-112 | NORTH PARTIAL PLUMBING PLAN | | | |
| 259 | E4-ROY-ELE-PLN-301 | ELECTRICAL UNDERSLAB CONDUIT PLAN - TRACK 1 | | | |
| 260 | E4-ROY-ELE-PLN-302 | ELECTRICAL UNDERSLAB CONDUIT PLAN - TRACK 2 | | | |
| 261 | E4-ROY-ELE-PLN-303 | ELECTRICAL CANOPY PLAN - TRACK 1 SIDE | | | |
| 262 | E4-ROY-ELE-PLN-304 | ELECTRICAL CANOPY PLAN - TRACK 2 SIDE | | | |
| 263 | E4-ROY-ELE-PLN-411 | COMMUNICATIONS UNDERSLAB CONDUIT PLAN - TRACK 1 (1 OF 2) | | | |
| 264 | E4-ROY-ELE-PLN-412 | COMMUNICATIONS UNDERSLAB CONDUIT PLAN - TRACK 1 (2 OF 2) | | | |
| 265 | E4-ROY-ELE-PLN-413 | COMMUNICATIONS UNDERSLAB CONDUIT PLAN - TRACK 2 (1 OF 2) | | | |
| 266 | E4-ROY-ELE-PLN-414 | COMMUNICATIONS UNDERSLAB CONDUIT PLAN - TRACK 2 (2 OF 2) | | | |
| 267 | E4-ROY-ELE-PLN-421 | COMMUNICATIONS CANOPY PLAN - TRACK 1 SIDE | | | |
| 268 | E4-ROY-ELE-PLN-422 | COMMUNICATIONS CANOPY PLAN - TRACK 2 SIDE | | | |
| 269 | E4-ROY-ELE-PLN-461 | COMMUNICATIONS CONDUIT SCHEDULE (1 OF 2) | | | |
| 270 | E4-ROY-ELE-PLN-462 | COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2) | | | |
| 271 | STR-GEN-601 | VC TYPICAL STEEL CONNECTIONS | | | |
| 272 | STR-GEN-602 | VC TYPICAL STEEL CONNECTIONS | | | |
| 273 | STR-GEN-603 | VC TYPICAL FOUNDATION DETAILS | | | |

## CIVIL EAST

| SHT # | SHEET NAME | SHEET DESCRIPTION | STATION | STATION | REV |
|---|---|---|---|---|---|

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# STATIONS
# VOLUME INDEX OF PLAN SHEETS
# SHEET 2

DISCIPLINE: GENERAL

SHEET NAME: E0-STA-IDX - 002

SHEET 3 OF 273

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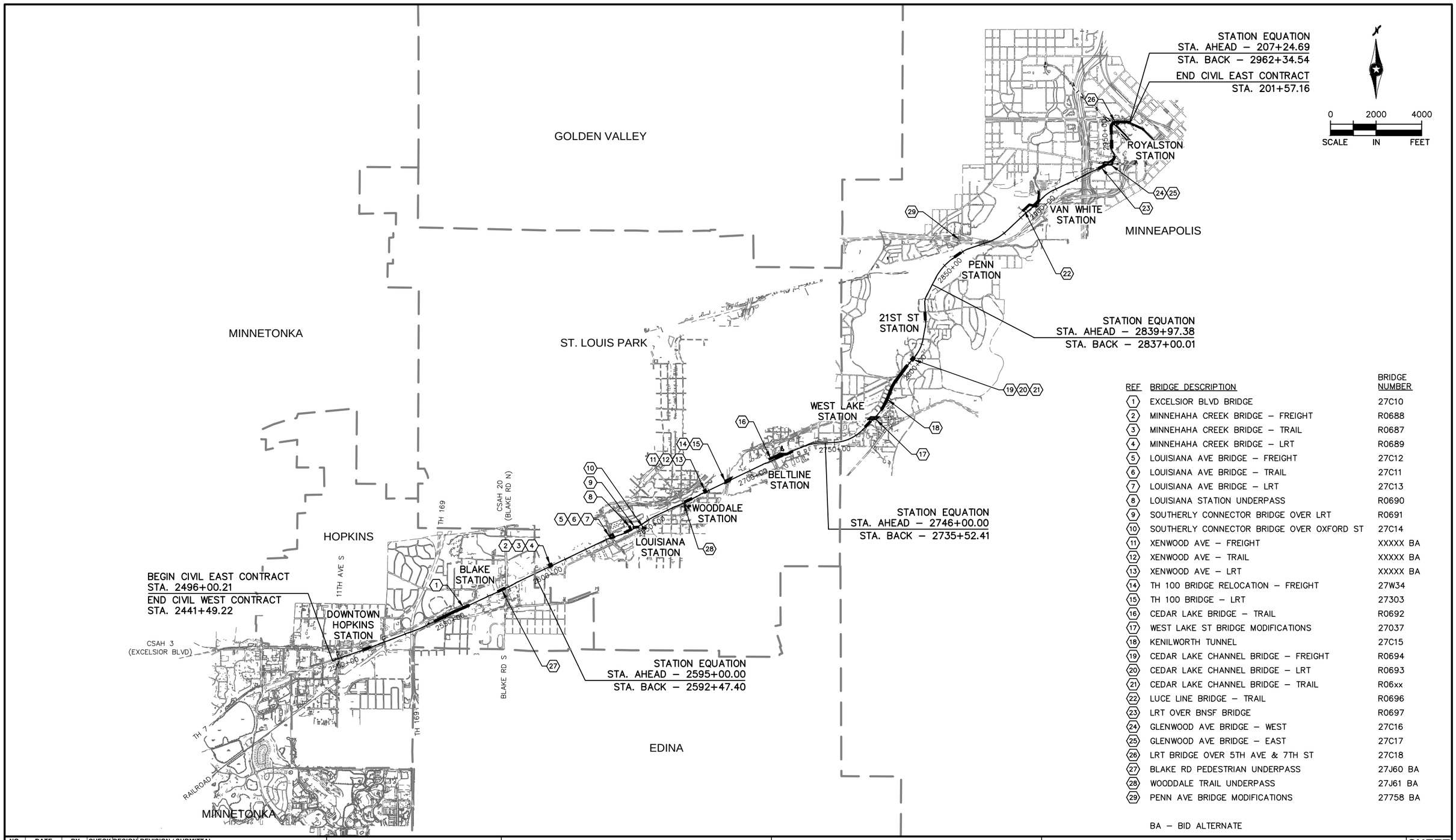


| REF | BRIDGE DESCRIPTION | BRIDGE NUMBER |
|---|---|---|
| 1 | EXCELSIOR BLVD BRIDGE | 27C10 |
| 2 | MINNEHAHA CREEK BRIDGE – FREIGHT | R0688 |
| 3 | MINNEHAHA CREEK BRIDGE – TRAIL | R0687 |
| 4 | MINNEHAHA CREEK BRIDGE – LRT | R0689 |
| 5 | LOUISIANA AVE BRIDGE – FREIGHT | 27C12 |
| 6 | LOUISIANA AVE BRIDGE – TRAIL | 27C11 |
| 7 | LOUISIANA AVE BRIDGE – LRT | 27C13 |
| 8 | LOUISIANA STATION UNDERPASS | R0690 |
| 9 | SOUTHERLY CONNECTOR BRIDGE OVER LRT | R0691 |
| 10 | SOUTHERLY CONNECTOR BRIDGE OVER OXFORD ST | 27C14 |
| 11 | XENWOOD AVE – FREIGHT | XXXXX BA |
| 12 | XENWOOD AVE – TRAIL | XXXXX BA |
| 13 | XENWOOD AVE – LRT | XXXXX BA |
| 14 | TH 100 BRIDGE RELOCATION – FREIGHT | 27W34 |
| 15 | TH 100 BRIDGE – LRT | 27303 |
| 16 | CEDAR LAKE BRIDGE – TRAIL | R0692 |
| 17 | WEST LAKE ST BRIDGE MODIFICATIONS | 27037 |
| 18 | KENILWORTH TUNNEL | 27C15 |
| 19 | CEDAR LAKE CHANNEL BRIDGE – FREIGHT | R0694 |
| 20 | CEDAR LAKE CHANNEL BRIDGE – LRT | R0693 |
| 21 | CEDAR LAKE CHANNEL BRIDGE – TRAIL | R06xx |
| 22 | LUCE LINE BRIDGE – TRAIL | R0696 |
| 23 | LRT OVER BNSF BRIDGE | R0697 |
| 24 | GLENWOOD AVE BRIDGE – WEST | 27C16 |
| 25 | GLENWOOD AVE BRIDGE – EAST | 27C17 |
| 26 | LRT BRIDGE OVER 5TH AVE & 7TH ST | 27C18 |
| 27 | BLAKE RD PEDESTRIAN UNDERPASS | 27J60 BA |
| 28 | WOODDALE TRAIL UNDERPASS | 27J61 BA |
| 29 | PENN AVE BRIDGE MODIFICATIONS | 27758 BA |

BA – BID ALTERNATE

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SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B GENERAL KEY MAP

DISCIPLINE: GENERAL

SHEET NAME: E0-GEN-KEY - 001

SHEET 4 OF 273

## TRACK LINETYPES

- ROADWAY ℄
- TRACK ℄ (LRT)
- TRACK ℄ (FRT)
- RETAINING WALL
- BALLAST CURB
- TUNNEL WALL
- FENCE
- EX ROW
- PROP ROW
- PROP TCE
- PROP PE
- FENCE / RAILING
- ID — ID — INTRUSION DETECTION

## CIVIL LINETYPES

- ROADWAY ℄
- TRACK ℄ (LRT)
- TRACK ℄ (FRT)
- RETAINING WALL
- BALLAST CURB
- TUNNEL WALL
- CONCRETE CURB AND GUTTER
- TRAIL
- SIDEWALK
- DRIVEWAY
- BRIDGE
- SAWCUT
- FENCE
- DELINEATED WETLAND
- WATER EDGE
- EX ROW
- PROP ROW
- PROP TCE
- PROP PE
- CROSSWALK
- STOP BAR
- MEDIAN NOSE

## TRACK SYMBOLS

- PROPOSED DIRECTIONAL LANE USE
- EXISTING DIRECTIONAL LANE USE
- PEDESTRIAN FLASHER
- AUTOMATIC GATE
- RAIL TURNOUT
- RAIL CROSSOVER (DOUBLE)
- RAIL CROSSOVER (SINGLE)
- POINT OF SWITCH (PS)
- OCS POLE FOUNDATION
- RAIL LUBRICATOR
- POINT OF INTERSECTION (PI) OF TURNOUT (TO)
- W2–200 RAILROAD CURVE NUMBER

NOTE:
ALL TURNOUTS AND CROSSOVERS TO BE EQUIPPED WITH POWER SWITCH MACHINES AND SWITCH HEATERS

## CIVIL SYMBOLS

- ACCESSIBLE PEDESTRIAN CURB RAMP (DESIGN VARIES)
- PROPOSED DIRECTIONAL LANE USE
- EXISTING DIRECTIONAL LANE USE
- AUTOMATIC GATE
- HANDICAP PARKING STALL
- TACTILE WARNING STRIP
- TPSS BUILDING (TPSS–SW###)
- SIGNAL OR INTERMEDIATE OR PLATFORM OR XING OR TUNNEL HOUSE OR ANY COMBINATION OF THESE

## SURVEY NOTES

1. THE HORIZONTAL DATUM OF THIS MAP IS BASED ON THE HENNEPIN COUNTY COORDINATE SYSTEM WHICH IS RELATED TO THE MINNESOTA STATE PLANE COORDINATE SYSTEM NAD 83 (2007) ADJUSTMENT SOUTH ZONE.
2. THE PLANIMETRIC FEATURES SHOWN ON THIS MAP ARE AS PREPARED BY AERO–METRIC, INC. FROM AERIAL DATA AND IMAGERY COLLECTED IN APRIL 2012, AS SUPPLEMENTED BY FIELD SURVEYS COMPLETED BY MFRA, INC.
3. HORIZONTAL POSITIONAL ACCURACY: USING THE NATIONAL STANDARD FOR SPATIAL DATA ACCURACY, THE DATA SET TESTED 0.14 FEET HORIZONTAL ACCURACY AT A 95% CONFIDENCE LEVEL.
4. VERTICAL POSITIONAL ACCURACY: USING THE NATIONAL STANDARD FOR SPATIAL DATA ACCURACY, THE DATA SET TESTED 0.10 FEET VERTICAL ACCURACY AT 95% CONFIDENCE LEVEL.

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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**GENERAL**
**LEGEND AND ABBREVIATIONS**
**SHEET 1**

DISCIPLINE: GENERAL

SHEET NAME: E0-GEN-NTS - 001

SHEET 5 OF 273

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# ABBREVIATIONS

| | |
|---|---|
| AD | ALGEBRAIC DIFFERENCE |
| AVE | AVENUE |
| BGN | BEGIN |
| BP | BEGINNING POINT |
| BVCE | BEGINNING VERTICAL CURVE ELEVATION |
| BVCS | BEGINNING VERTICAL CURVE STATION |
| BLVD | BOULEVARD |
| BNSF | BURLINGTON NORTHERN SANTA FE RAILWAY |
| C&G | CURB AND GUTTER |
| ℄ | CENTERLINE |
| CIR | CIRCLE |
| CP | CANADIAN PACIFIC |
| CPRAIL | CANADIAN PACIFIC RAILWAY |
| CS | CURVE TO SPIRAL |
| CSAH | COUNTY STATE AID HIGHWAY |
| D&U | DRAINAGE AND UTILITY |
| DF | DIRECT FIXATION |
| DR | DRIVE |
| DTL | DETAIL |
| DWY | DRIVEWAY |
| E | EAST |
| Ea | ACTUAL SUPERELEVATION (INCHES) |
| EB | EAST BOUND |
| EL or ELEV | ELEVATION |
| EP | END POINT |
| ESMT | EASEMENT |
| Eu | UNBALANCED SUPERELEVATION (INCHES) |
| EVCE | ENDING VERTICAL CURVE ELEVATION |
| EVCS | ENDING VERTICAL CURVE STATION |
| EX | EXISTING |
| HCRRA | HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY |
| LH | LEFT HAND |
| LN | LANE |
| LRT | LIGHT RAIL TRANSIT |
| $L_c$ | CURVE LENGTH (FEET) |
| $L_s$ | SPIRAL LENGTH (FEET) |
| MIN | MINIMUM |
| MPH | MILES PER HOUR |
| MPLS | CITY OF MINNEAPOLIS |
| MPRB | MINNEAPOLIS PARK AND RECREATION BOARD |
| N | NORTH |
| NB | NORTH BOUND |
| NIC | NOT IN CONTRACT |
| NO | NUMBER |
| OMF | OPERATIONS AND MAINTENANCE FACILITY |
| OCS | OVERHEAD CONTACT SYSTEM |
| OH | OVERHEAD |
| PC | POINT OF CURVE |
| PE | PERMANENT EASEMENT |
| PITO | POINT OF INTERSECTION OF TURNOUT |
| PKWY | PARKWAY |
| POT | POINT ON TANGENT |
| PROP | PROPOSED |
| PS | POINT OF SWITCH |
| PT | POINT OF TANGENT |
| PVI | POINT OF VERTICAL INTERSECTION |
| R | RADIUS (FEET) |
| RD | ROAD |
| RL | RAIL LUBRICATOR |
| r | RATE OF CHANGE VERTICAL CURVE |
| RH | RIGHT HAND |
| ROW | RIGHT OF WAY |
| S | SOUTH |
| SB | SOUTH BOUND |
| SC | SPIRAL TO CURVE |
| SIG-COMM | SIGNAL COMMUNICATION |
| ST | STREET |
| ST | SPIRAL TO TANGENT |
| STA | STATION |
| TCE | TEMPORARY CONSTRUCTION EASEMENT |
| TH | TRUNK HIGHWAY |
| THRU | THROUGH |
| TOR | TOP OF RAIL |
| TPSS | TRACTION POWER SUBSTATION |
| TRK | TRACK |
| TS | TANGENT TO SPIRAL |
| TYP | TYPICAL |
| UG | UNDERGROUND |
| V | DESIGN VELOCITY (MPH) |
| VC | VERTICAL CURVE |
| W | WEST |
| WB | WEST BOUND |

# TRAIL INDEX

| ABBREVIATED NAME | FULL NAME / LOCATION |
|---|---|
| TRAIL 1 | UNDER RED CIRCLE DR, LRT, AND YELLOW CIRCLE DR |
| TRAIL 2 | FROM TRAIL 1 TO GREEN CIRCLE DR |
| TRAIL 3 | OPUS STATION ACCESS FROM BREN RD E |
| TRAIL 4 | FROM BREN RD W TO TRAIL 5 |
| TRAIL 5 | FROM OPUS STATION TO GREEN CIRCLE DR |
| TRAIL 6 | FROM TRAIL 5 TO SMETANA RD |
| CEDAR LAKE TRAIL | CEDAR LAKE LRT REGIONAL TRAIL/FROM SHADY OAK STATION TO 11TH AVE |
| CEDAR LAKE TRAIL | CEDAR LAKE LRT REGIONAL TRAIL/WEST OF EXCELSIOR |
| CEDAR LAKE TRAIL | CEDAR LAKE LRT REGIONAL LRT TRAIL/BETWEEN EXCELSIOR AND KENILWORTH TRAIL CONNECTION |
| MIDTOWN GREENWAY | MIDTOWN GREENWAY/EAST OF KENILWORTH TRAIL CONNECTION |
| TRAIL A | KENILWORTH TRAIL (SECONDARY)/BETWEEN CEDAR-ISLES CHANNEL AND 21ST STREET STATION |
| TRAIL B | KENILWORTH TRAIL (SECONDARY)/BETWEEN 21ST STREET STATION AND PENN STATION |
| TRAIL B | CEDAR LAKE TRAIL (SECONDARY)/EAST OF PENN STATION |
| TRAIL C | 10' CONNECTOR TRAIL FROM CEDAR LAKE LRT REGIONAL TRAIL TO TYLER AVE. |
| TRAIL D | 10' CONNECTOR TRAIL/BELTLINE STATION TO CEDAR LAKE LRT REGIONAL TRAIL |
| KENILWORTH TRAIL | KENILWORTH TRAIL (MAIN)/W LAKE ST TO PENN STATION |
| CEDAR LAKE TRAIL | CEDAR LAKE TRAIL (MAIN)/PENN STATION TO TH 394 |
| TRAIL E | KENILWORTH TRAIL (SECONDARY)/EAST OF W LAKE ST |
| TRAIL F | KENILWORTH TRAIL (SECONDARY)/WEST OF CEDAR LAKE PKWY |
| TRAIL G | KENILWORTH TRAIL (SECONDARY)/WEST OF PENN STATION |
| TRAIL G | CEDAR LAKE TRAIL (SECONDARY)/EAST OF PENN STATION |
| TRAIL H | 10' CONNECTOR TRAIL/EAST OF PENN STATION TO KENWOOD PKWY |
| TRAIL I | NOT USED |
| CEDAR LAKE TRAIL | CEDAR LAKE TRAIL (MAIN)/AT-GRADE CROSSING AT PENN STATION |
| TRAIL J | CEDAR LAKE TRAIL (SECONDARY)/NORTHWEST OF PENN STATION |
| TRAIL K | CEDAR LAKE TRAIL (SECONDARY)/NORTHWEST OF PENN STATION |
| TRAIL L | CEDAR LAKE TRAIL (SECONDARY)/EAST OF PENN STATION |
| TRAIL M | NOT USED |
| TRAIL N | 8' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO EDGEBROOOK DRIVE |
| TRAIL O | 8' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO W LAKE STREET |
| TRAIL P | 8' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO LOUISIANA AVE |
| TRAIL Q | 10' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO TH 7 SERVICE ROAD |
| TRAIL R | 20' CONNECTOR TRAIL FROM VAN WHITE STATION TO CEDAR LAKE TRAIL |
| TRAIL S | NOT USED |
| TRAIL T | 8' CONNECTOR TRAIL FROM VAN WHITE STATION TO VAN WHITE MEMORIAL BLVD |
| TRAIL U | 10' TRAIL PARALLEL TO CEDAR LAKE PKWY |
| LUCE LINE TRAIL | LUCE LINE REGIONAL TRAIL/ON BRIDGE OVER LIGHT RAIL |
| TRAIL V | CONNECTOR TRAIL TO LUCE LINE REGIONAL TRAIL WEST OF LIGHT RAIL |
| TRAIL W | CONNECTOR TRAIL TO LUCE LINE REGIONAL TRAIL WEST OF LIGHT RAIL |

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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**GENERAL**
**LEGEND AND ABBREVIATIONS**
**SHEET 2**

DISCIPLINE: GENERAL

SHEET NAME: E0-GEN-NTS - 002

SHEET 6 OF 273

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# ABBREVIATIONS

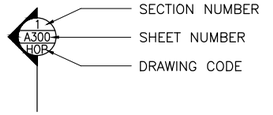
| | |
|---|---|
| @ | AT |
| ℄ | BASELINE |
| ℄ | CENTERLINE |
| Ø | DIAMETER |
| ℄ | PLATE |
| # | POUND/ NUMBER |
| A/C | AIR CONDITIONING |
| ACS | ACCESS |
| AD | AREA DRAIN |
| ADA | AMERICANS WITH DISABILITIES ACT |
| ADDL | ADDITIONAL |
| ADJ | ADJACENT |
| AESS | ARCHITECTURALLY EXPOSED STRUCT STL |
| AFF | ABOVE FINISH FLOOR |
| ALUM | ALUMINUM |
| ANC | ANCILLARY |
| ANOD | ANODIZED |
| ANT | ANTENNA(E) |
| APPROX | APPROXIMATE |
| ARCH | ARCHITECT(URAL) |
| ATS | AUTOMATIC TRANSFER SWITCH |
| AVE | AVENUE |
| AWM | ARCHITECTURAL WOVEN MESH |
| BATT | BATTERY |
| BD | BOARD |
| BL | BASELINE |
| BLDG | BUILDING |
| BLKG | BLOCK(ING) |
| BLVD | BOULEVARD |
| BM | BENCH MARK |
| BNDRY | BOUNDARY |
| B.O. | BASE OF/ BOTTOM OF |
| BRK | BRICK |
| BTW | BETWEEN |
| CAB | CABINET |
| CAR | COUNCIL AUTHORIZED REPRESENTATIVE |
| CCTV | CCTV CAMERA |
| CEM | CEMENT(ITIOUS) |
| CI | CAST IRON |
| CIP | CAST IN PLACE |
| CJ | CONTROL JOINT |
| CL | CENTERLINE |
| CLG | CEILING |
| CLR | CLEAR |
| CMU | CONCRETE MASONARY UNIT |
| CO | COUNTY |
| COL | COLUMN |
| COMM | COMMUNICATION(S) |
| CONC | CONCRETE |
| CONST | CONSTANT |
| CONSTR JT | CONSTRUCTION JOINT |
| CONT | CONTINUE(OUS) |
| COORD | COORDINATE |
| CSK | COUNTERSUNK |
| CT | CERAMIC TILE |
| CTG | COATING |
| D | DEEP |
| DEC | DECORATIVE |
| DIA | DIAMETER |
| DIM(S) | DIMENSION(S) |
| DIP | DUCTILE IRON PIPE |
| DIR | DIRECTIVE |
| DISP | DISPLAY |
| DIV | DIVISION |
| DN | DOWN |
| DR | DOOR |
| DRN | DRAIN |
| DTL | DETAIL |
| DWG | DRAWING |
| E | EAST |
| EA | EACH |
| EF | EACH FACE |
| EJ | EXPANSION JOINT |
| EL | ELEVATION |
| ELEC | ELECTRIC(AL) |
| ELEV | ELEVATOR/ ELEVATION |
| EMR | ELEVATOR MACHINE ROOM |
| ENCL | ENCLOSURE |
| ENGR(ING) | ENGINEER(ING) |
| ENT | ENTRANCE/ ENTRY |
| EP | EDEN PRAIRIE |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| ETL | EMERGENCY TELEPHONE |
| EXIST | EXISTING |
| EXT | EXTERIOR |
| FC | FACE |
| FCO | FLOOR CLEANOUT |
| FF | FINISHED FLOOR |
| FIN | FINISH |
| FIXT | FIXTURE |
| FL | FLOOR |
| FLASH | FLASHING |
| FLUOR | FLUORESCENT |
| FO | FACE/ FRONT OF |
| FRP | FIBERGLASS REINFORCED PANEL |
| FT | FOOT/ FEET |
| FTG | FOOTING |
| FUTR | FUTURE |
| GA | GAUGE |
| GALV | GALVANIZED |
| GC | GENERAL CONTRACTOR |
| GL | GLASS/ GLAZING |
| GPM | GALLONS PER MINUTE |
| GR | GRADE |
| GS | GROUND SURFACE |
| GYP | GYPSUM |
| H | HIGH |
| HH | HAND HOLE |
| HSS | HOLLOW STRUCTURAL SECTION |
| HT | HEIGHT |
| HDWR | HARDWARE |
| HM | HOLLOW METAL |
| HORIZ | HORIZONTAL |
| HP | HIGH PERFORMANCE |
| HOP | HOPKINS |
| HR | HOUR |
| HTR | HEATER |
| HVAC | HEATING, VENTLATION AND AIR CONDITIONING |
| ID | IDENTIFICATION/INSIDE DIAMETER |
| IN | INCH(ES) |
| INCL | INCLUDING |
| INF | INFILL |
| INSUL | INSULATION |
| INT | INTERIOR |
| INV | INVERT |
| J-BOX | JUNCTION BOX |
| JT | JOINT |
| LDR | LEADER |
| LG | LONG |
| LLH | LONG LEG HORIZONTAL |
| LLV | LONG LEG VERTICAL |
| LOC | LOCATION |
| LVR(S) | LOUVER(S) |
| MACH | MACHINE |
| MAINT | MAINTENANCE |
| MAS | MASONRY |
| MAT | MATERIAL |
| MAX | MAXIMUM |
| MCP | METAL CEILING PANEL |
| MECH | MECHANICAL |
| MED | MEDIUM |
| MEMB | MEMBRANE |
| MFR | MANUFACTURER(ED) |
| MH | MANHOLE |
| MID | MIDDLE |
| MIN | MINIMUM |
| MIR | MIRROR |
| MISC | MISCELLANEOUS |
| MN | MINNESOTA |
| MN/DOT | MINNESOTA DEPARTMENT OF TRANSPORTATION |
| MO | MASONRY OPENING |
| MPLS | MINNEAPOLIS |
| MT | METRO TRANSIT |
| MTD | MOUNT(ED) |
| MTKA | MINNETONKA |
| MTL | METAL |
| N/A | NOT APPLICABLE |
| N | NORTH |
| NIC | NOT IN CONTRACT |
| NO | NUMBER |
| NOM | NOMINAL |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| OCS | OVERHEAD CONTACT SYSTEM |
| OH | OVERHEAD |
| OMF | OPERATIONS AND MAINTENANCE FACILITY |
| OPER | OPERABLE |
| OPNG | OPENING |
| OPP | OPPOSITE |
| PA | PUBLIC ADDRESS |
| PART | PARTIAL |
| PERP | PERPENDICULAR |
| PL | PLATE |
| PLBG | PLUMBING |
| PLWD | PLYWOOD |
| PNL(S) | PANEL(S) |
| PRCST/PC | PRECAST |
| PRE-FAB | PRE-FABRICATED |
| PSI | POUND PER SQUARE INCH |
| PT | POINT |
| PTD | PAINT(ED) |
| PVC | POLYVINYL CHLORIDE |
| PROP | PROPOSED/PROPERTY |
| QTY | QUANTITY(IES) |
| R | REVEAL |
| RAD | RADIUS |
| RD | ROOF DRAIN |
| REF | REFERENCE |
| REINF | REINFORCE(MENT)(ING) |
| REQD | REQUIRED |
| REQS | REQUIREMENTS |
| REV | REVISE (REVISION) |
| RM | ROOM |
| RO | ROUGH OPENING |
| ROW | RIGHT-OF-WAY |
| RVS | REVERSE |
| RWL | RAIN WATER LEADER |
| S | SOUTH |
| SCHED | SCHEDULE |
| SCC | STATION COMMUNICATION CABINET |
| SEC | STATION ELECTRICAL CABINET |
| SF | SQUARE FEET |
| SHTHG | SHEATHING |
| SIG | SIGNAL |
| SIM | SIMILAR |
| SLP | ST. LOUIS PARK |
| SLNT | SEALANT |
| SHT | SHEET |
| SK | SKYLIGHT |
| SPEC | SPECIFICATION |
| SPKR | SPEAKER |
| SPO | SOUTHWEST PROJECT OFFICE |
| SQ | SQUARE |
| SS | STAINLESS STEEL |
| ST | STREET |
| STA | STATION |
| STD | STANDARD |
| STL | STEEL |
| STOR | STORAGE |
| STRUCT | STRUCTURE(AL) |
| SUSP | SUSPENDED |
| SVV | STORED VALUE VALIDATOR |
| SWLRT | SOUTHWEST CORRIDOR LIGHT RAIL TRANSIT |
| SYS | SYSTEM |
| T | TREAD |
| TEMP | TEMPORARY |
| T/E | TRACTION/ELECTRIC |
| TH | THICK(NESS) |
| THRES | THRESHOLD |
| THRU | THROUGH |
| T.O. | TOP OF |
| TOW | TOP OF WALL |
| TPSS | TRACTION POWER SUBSTATION |
| TUNN | TUNNEL |
| TVM | TICKET VENDING MACHINE |
| TYP | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| VERT | VERTICAL |
| VMS | VARIABLE MESSAGE SIGN |
| VS | VENT SHAFT |
| W/ | WITH |
| W/O | WITHOUT |
| W | WEST/WIDTH |
| WCO | WALL CLEANOUT |
| WP | WORKING POINT |
| WD | WOOD |
| WDW | WINDOW |

# DRAWING CODES

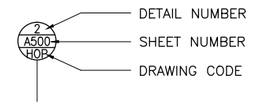
| | |
|---|---|
| HOP | DOWNTOWN HOPKINS STATION |
| BLK | BLAKE STATION |
| LOU | LOUISIANA STATION |
| WDL | WOODDALE STATION |
| BLT | BELTLINE STATION |
| WST | WEST LAKE STATION |
| 21S | 21ST STREET STATION |
| PEN | PENN STATION |
| VWT | VAN WHITE STATION |
| ROY | ROYALSTON STATION |

# SYMBOLS


ELEVATION NUMBER
SHEET NUMBER
DRAWING CODE




SECTION NUMBER
SHEET NUMBER
DRAWING CODE




DETAIL NUMBER
SHEET NUMBER
DRAWING CODE

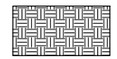

COLUMN GRID


WINDOW TYPE


CONSTRUCTION TYPE

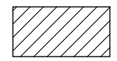

METAL RAIL TYPE


PANEL TYPE

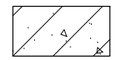


EARTH

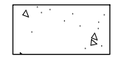
SAND



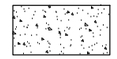
BRICK



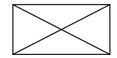
PRECAST CONCRETE



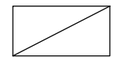
CAST IN PLACE CONCRETE



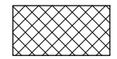
ARCHITECTURAL OR DECORATIVE CONCRETE



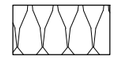
WOOD FRAMING



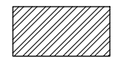
WOOD BLOCKING



RIGID INSULATION



BATT INSULATION



METAL/STEEL

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**STATIONS**
**ARCHITECTURAL ABBREVIATIONS, SYMBOLS, AND DRAWING CODES**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E0-ARC-ABR-020

SHEET 7 OF 273

Sep, 21 2015 10:35 am v:\3400_ADC\CAD\OVERALL\PLAN SHEETS\ARCHITECTURE\E0-ARC-ABR-020.dwg By: MurphySP

## 1. CODES AND SPECIFICATIONS

1. 2015 MINNESOTA STATE BUILDING CODE.
2. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC-360-10).
3. AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-11).
4. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" ASCE 7-10.

## 2. GENERAL

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, ELEVATIONS AND DIMENSIONS. CHANGES REQUIRED DUE TO EXISTING CONDITIONS SHALL BE SUBJECT TO A/E APPROVAL PRIOR TO ANY CONSTRUCTION.
2. CONTRACTOR SHALL SUBMIT ALL REQUIRED SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION OR DELIVERY OF MATERIALS TO THE SITE.
3. NOTES, TYPICAL DETAILS AND SCHEDULES APPLY TO ALL STRUCTURAL WORK UNLESS NOTED OTHERWISE. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF A SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS.
4. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS, CIVIL, ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS AND SPECIFICATIONS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE C.A.R. PRIOR TO PERFORMING WORK.
5. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE ENGINEER'S PRESENCE OR REVIEW OF WORK DOES NOT INCLUDE THE ADEQUACY OF THE CONTRACTOR'S MEANS OR METHODS OF CONSTRUCTION.
6. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SUPPORT, BRACING, SHORING, ETC. OF BOTH EXISTING AND NEW CONSTRUCTION, INCLUDING UTILITIES, AS WILL BE REQUIRED FOR THE SAFE INSTALLATION OF NEW CONSTRUCTION AND THE COMPLETE PROTECTION OF PUBLIC, WORKMEN AND PROPERTY. TOTAL RESPONSIBILITY IN THIS REGARD SHALL REST WITH THE CONTRACTOR.

## 3. FOUNDATION

1. PLATFORMS AND VC STRUCTURES SHALL BE PLACED ON SELECT GRANULAR MATERIAL OR OTHER FOUNDATION SYSTEMS AS OUTLINED IN THE PROJECT GEOTECHNICAL REPORTS.
2. MINIMUM FROST DEPTH AND FOOTING DEPTH SHALL BE 5'-0" FEET BELOW FINISHED GRADE FOR UNHEATED STRUCTURES.
3. PILE SUPPORTED FOOTINGS SHALL BE SUPPORTED BY 12" CIP PILES OR MICROPILES AS SHOWN ON THE PLANS.

## 4. CONCRETE

1. ALL CONCRETE SHALL CONFORM TO CURRENT EDITION OF THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318-11.
2. CONCRETE FOR FOOTINGS, PIERS, WALLS BEAMS AND SLAB ON GRADE SHALL BE STONE CONCRETE AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
3. CONSTRUCTION JOINTS SHALL BE PROVIDED AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.
4. SIZE OF CONCRETE PLACEMENT SHALL NOT EXCEED THE FOLLOWING, UNLESS OTHERWISE NOTED: SLABS ON GRADE: PLACE IN LONG STRIPS AS SHOWN ON THE DRAWINGS. WALL SECTIONS: 40'-0" IN LENGTH BUT NOT FURTHER THAN 15 FEET FROM ANY CORNERS.
5. SURFACE OF ALL CONSTRUCTION JOINTS SHALL BE ROUGHENED BEFORE CONCRETE SETS. CONCRETE SURFACE SHALL BE PREPARED BEFORE A NEW POUR AS SPECIFIED IN THE "ACI MANUAL OF CONCRETE INSPECTION" SP-2.
6. SLEEVES, MECHANICAL OPENINGS, CONDUITS, PIPES, RECESSES, DEPRESSIONS, CURBS AND ALL EMBEDDED ITEMS SHALL BE PROVIDED FOR AS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND AS REQUIRED BY EQUIPMENT MANUFACTURERS. MINIMUM CONCRETE BETWEEN SLEEVES SHALL BE 6 INCHES.
7. NOT ALL ITEMS EMBEDDED IN CONCRETE ARE INDICATED ON THE STRUCTURAL DRAWINGS. SEE ARCHITECTURAL WITH MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS.
8. CONCRETE FLOORS SHALL BE CONSTRUCTED TO THE FLATNESS TOLLERANCES INDICATED IN SPECIFICATIONS.

## 5. REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL CONFORM TO THE CURRENT ASTM SPECIFICATIONS A-615 GRADE 60 UNLESS OTHERWISE NOTED ON THE DRAWINGS. REINFORCING STEEL, EXCEPT FOR FOOTING REINFORCEMENT, SHALL BE EPOXY COATED.
2. REINFORCEMENT DETAILS SHALL CONFORM TO THE MANUAL OF STANDARDS FOR DETAILING OF CONCRETE REINFORCEMENT ACI 315.
3. REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
4. ALL BARS SHALL BE CONTINUOUS UNLESS NOTED OTHERWISE. BARS SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED IF NECESSARY AND HOOKED AT DISCONTINUOUS ENDS.
5. ALL STEEL WELDED FABRIC SHALL CONFORM TO ASTM A-185, WITH MINIMUM ULTIMATE TENSILE STRENGTH OF 70,000 PSI.
6. REINFORCING BARS SHALL BE SECURELY HELD IN PROPER POSITION WHILE PLACING CONCRETE. REBAR SPLICE LENGTH SHALL CONFORM TO THE LATEST EDITION OF BUILDING CODE REQUIREMENTS, FOR REINFORCED CONCRETE, ACI 318. SPLICE ALL REBARS AWAY FROM THE TENSION ZONE. TOP BARS SHALL BE SPLICED AT MIDSPANS AND BOTTOM BARS OVER SUPPORTS U.O.N.
7. REINFORCEMENT IN ALL SLABS-ON-GRADE SHALL NOT BE CONTINUOUS THROUGH EXPANSION AND ISOLATION JOINTS. AT THE CONTRACTION OR CONSTRUCTION JOINTS ONLY ALTERNATE BARS SHALL BE CONTINUOUS.
8. ALL REINFORCEMENT INCLUDING WELDED WIRE MESH IN SLABS ON GRADE SHALL BE SUPPORTED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR PLACING OF CONCRETE. SUPPORT REINFORCEMENT ON CONCRETE BLOCKS 4" SQUARE HAVING COMPRESSIVE STRENGTH EQUAL TO THAT OF THE SLAB. PROVIDE WELDED WIRE MESH IN FLAT SHEETS ONLY.
9. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVES, ETC. AS REQUIRED BY ALL TRADES, BEFORE THE CONCRETE IS POURED, THE CONTRACTOR SHALL CONSULT MECHANICAL AND ELECTRICAL DRAWINGS, AS WELL AS THE STRUCTURAL DRAWINGS FOR THR LOCATION, NUMBER, AND SIZE OF ALL OPENINGS, SLEEVES, ETC. HOWEVER, OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE INSTALLED ONLY AFTER APPROVAL BY THE STRUCTURAL ENGINEER IS OBTAINED.

## 6. STRUCTURAL STEEL

1. UNLESS OTHERWISE NOTED, STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
   i. WIDE FLANGES, A.S.T.M. 992
   ii. CHANNELS, A.S.T.M. A-36
   iii. STRUCTURAL TUBES, A.S.T.M. A-500 (Gr. B)
   iv. PLATES, A.S.T.M. A-36
2. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATION FOR DESIGN.
3. ANCHOR RODS SHALL CONFORM TO A.S.T.M. A-307.
4. TEMPLATES SHALL BE PROVIDED FOR ALL ANCHOR RODS CAST IN PLACE.
5. HIGH STRENGTH BOLTS SHALL CONFORM TO A.S.T.M. A-325. NON-HIGH STRENGTH BOLTS SHALL CONFORM TO A.S.T.M. A-307. WASHERS SHALL CONFORM TO A.S.T.M. F-436 AND NUTS TO A.S.T.M. A-583.
6. ALL AVAILABLE STRENGTHS FOR BOLTS SHALL BE THOSE GIVEN IN THE AISC SPECIFICATIONS.
7. STRUCTURAL STEEL CONNECTIONS SHALL BE OF THE TYPES SHOWN ON THE DRAWINGS AND SHALL BE DESIGNED FOR THE CAPACITIES AND REQUIREMENTS SHOWN. CONTRACTOR SHALL SUBMIT TO A/E FOR APPROVAL, DESIGN CALCULATIONS AND DETAILS OF ALL CONNECTIONS, REPAIRED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MN.
8. A MINIMUM OF TWO (2) BOLTS SHALL BE PROVIDED IN EACH CONNECTION.
9. ALL STEEL SURFACES NOT SHOP PRIMED SHALL BE FIELD PRIMED OR TOUCHED-UP PRIMED. EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
10. GALVANIZING WHEN REQUIRED AS CALLED ON PLANS SHALL BE HOT-DIP GALVANIZNING IN ACCORDANCE WITH A.S.T.M. A-123 & A-155.
11. CONTRACTOR SHALL SUBMIT, FOR REVIEW, STRUCTURAL STEEL SHOP DRAWINGS PREPARED BY AN AISC CERTIFIED FABRICATOR.

## 7. WELDING

1. WELDING OF STRUCTURAL STEEL SHALL CONFORM TO THE STRUCTURAL WELDING CODE AWS D1.1. ELECTRODES SHALL BE E70XX, LOW HYDROGEN.
2. ALL FILLET WELD SIZES NOT SHOWN ON THE DRAWING SHALL NOT BE LESS THAN THE MINIMUM SIZE AS PER AISC SPECIFICATIONS.
3. ALL WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER AND SHALL BE SUBJECT TO QUALITY CONTROL INSPECTION AS REQUIRED BY THE STATE OF MINNESOTA BUILDING CODE.

## 8. GROUT

1. UNLESS OTHERWISE NOTED ON THE DRAWINGS, GROUT SHALL BE CEMENTITIOUS GROUT CONFORMING TO SPECIFICATIONS.
2. FOR ANCHOR BOLTS AND DOWELS, USE EPOXY GROUT, SUCH AS MASTER BUILDERS, INC. BRUTEM AB OR EQUAL.
3. GROUT SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTRUCTIONS.

## 9. DESIGN LOADS

1.

| | STATION PLATFORMS | | VIRTICAL CIRCULATION | | PEDESTRIAN SKYWALK | |
|---|---|---|---|---|---|---|
| | PLATFORM | ROOF | LANDINGS | ROOF | DECK | ROOF |
| LIVE LOAD (PSF) | 125 | 35 | 125 | 20 | 90 | 20 |
| SNOW LOAD (PSF) | – | 35 | – | 42 | – | 35 |
| STRUCTURE DEAD LOAD (PSF) | VARIES | S.W. | 140 | S.W. | 140 | S.W. |
| SUPERIMPOSED DEAD LOAD (PSF) | – | 10 | 5 | 10 | 5 | 10 |

NOTE: STEEL SELF WEIGHT WILL BE CALCULATED IN STRUCTURAL ANALYSIS PROGRAM

PLATFORMS

2. ROOF SNOW LOAD:
   GROUND SNOW LOAD: Pg = 50 PSF
   SNOW EXPOSURE FACTOR: Ce = 0.9
   SNOW IMPORTANCE FACTOR: I = 1.0
   THERMAL FACTOR: Ct = 1.2
   FLAT ROOF SNOW LOAD: Pf = 35 PSF
   SNOW DRIFT HAS BEEN CONSIDERED WHERE APPLICABLE.
3. WIND LOADS:
   RISK CATEGORY: II
   ULTIMATE DESIGN WIND SPEED: 115 MPH
   WIND EXPOSURE CATEGORY: B
   INTERNAL PRESSURE COEFFICIENT: 0.18
   COMPONENTS & CLADDING MINIMUM PRESSURE: 20 PSF
4. SEISMIC LOADS:
   SEISMIC USE GROUP 1
   SPECTRAL RESPONSE COEFFICIENTS:
   $S_{DS}$ = 0.064g, $S_{D1}$ = .0438g
   SITE CLASS: D
   BASIC SEISMIC-FORCE-RESISTING SYSTEM:
   ORDINARY STEEL MOMENT FRAMES
   DESIGN BASE SHEAR: 0.018W
   SEISMIC DESIGN CATEGORY A
   MODIFICATION FACTOR, R = 3.5
5. DEFLECTION CRITERIA:
   ALLOWABLE DESIGN FLOOR DEFLECTIONS ARE AS FOLLOWS:
   DL+LL = L/240
   LL = L/360 TYPICAL
   LL+SDL = L/600 OR 3/8" CMU SUPPORTING SPANDREL BEAMS
6. BUILDING ALLOWABLE LATERAL DRIFT = L/400

VIRTICAL CIRCULATION

2. ROOF SNOW LOAD:
   GROUND SNOW LOAD: Pg = 50 PSF
   SNOW EXPOSURE FACTOR: Ce = 1.0
   SNOW IMPORTANCE FACTOR: I = 1.0
   THERMAL FACTOR: Ct = 1.2
   FLAT ROOF SNOW LOAD: Pf = 42 PSF
   SNOW DRIFT HAS BEEN CONSIDERED WHERE APPLICABLE.
3. WIND LOADS:
   RISK CATEGORY: II
   BASIC DESIGN WIND SPEED: 115 MPH
   WIND EXPOSURE CATEGORY: C
   INTERNAL PRESSURE COEFFICIENT: 0.18
   COMPONENTS & CLADDING MINIMUM PRESSURE: 20 PSF
4. SEISMIC LOADS:
   SEISMIC USE GROUP 1
   SPECTRAL RESPONSE COEFFICIENTS:
   $S_{DS}$ = 0.064g, $S_{D1}$ = .0438g
   SITE CLASS: D
   BASIC SEISMIC-FORCE-RESISTING SYSTEM:
   ORDINARY STEEL MOMENT FRAMES
   DESIGN BASE SHEAR: 0.02W
   SEISMIC DESIGN CATEGORY A
   MODIFICATION FACTOR, R = 3.5
5. DEFLECTION CRITERIA:
   ALLOWABLE DESIGN FLOOR DEFLECTIONS ARE AS FOLLOWS:
   DL+LL = L/240
   LL = L/360 TYPICAL
   LL+SDL = L/600 OR 3/8" CMU SUPPORTING SPANDREL BEAMS
6. BUILDING ALLOWABLE LATERAL DRIFT = L/400

PENN STATION PEDESTRIAN BRIDGE

2. ROOF SNOW LOAD:
   GROUND SNOW LOAD: Pg = 50 PSF
   SNOW EXPOSURE FACTOR: Ce = 1.0
   SNOW IMPORTANCE FACTOR: I = 1.0
   THERMAL FACTOR: Ct = 1.2
   FLAT ROOF SNOW LOAD: Pf = 42 PSF
   SNOW DRIFT HAS BEEN CONSIDERED WHERE APPLICABLE.
3. WIND LOADS:
   RISK CATEGORY: II
   BASIC DESIGN WIND SPEED: 115 MPH
   WIND EXPOSURE CATEGORY: C
   INTERNAL PRESSURE COEFFICIENT: 0.18
   COMPONENTS & CLADDING MINIMUM PRESSURE: 20 PSF
4. SEISMIC LOADS:
   SEISMIC USE GROUP 1
   SPECTRAL RESPONSE COEFFICIENTS:
   $S_{DS}$ = 0.064g, $S_{D1}$ = .0438g
   SITE CLASS: D
   BASIC SEISMIC-FORCE-RESISTING SYSTEM:
   ORDINARY STEEL MOMENT FRAMES
   DESIGN BASE SHEAR: 0.018W
   SEISMIC DESIGN CATEGORY A
   MODIFICATION FACTOR, R = 3.5
5. DEFLECTION CRITERIA:
   ALLOWABLE DESIGN FLOOR DEFLECTIONS ARE AS FOLLOWS:
   DL+LL = L/240
   LL = L/360 TYPICAL
   LL+SDL = L/600 OR 3/8" CMU SUPPORTING SPANDREL BEAMS
6. BUILDING ALLOWABLE LATERAL DRIFT = L/400

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AECOM

60% SUBMISSION - 9/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# STATIONS
# STRUCTURAL GENERAL NOTES

SHEET 8 OF 273

DISCIPLINE: STRUCTURES

SHEET NAME: E0-STR-GEN-001

## PIPING SYMBOLS

| | |
|---|---|
| F | FIRE PROTECTION WATER SERVICE |
| FS | FIRE SPRINKLER |
| SW | SANITARY WASTE (BELOW GRADE) |
| SW | SANITARY WASTE (ABOVE GRADE) |
| SD | STORM DRAIN (BELOW GRADE) |
| RWL | RAINWATER CONDUCTOR/LEADER OR STORM DRAIN (ABOVE GRADE) |
| CD | CONDENSATE DRAIN |
| D | DRAIN |
| PD | PUMPED DRAIN |
| V | ABOVE FLOOR VENT |
| V | VENT |
| DW | DOMESTIC WATER |
| CW | COLD WATER |
| HW | HOT WATER |
| RCW | RECIRCULATING HOT WATER |
| TW | TEMPERED WATER |
| RLL | REFRIGERANT LIQUID |
| RSL | REFRIGERANT SUCTION |
| RHG | REFRIGERANT HOT GAS |

## VALVES FITTINGS APPURTENANCES

- UNION
- SHUT OFF VALVE
- GATE VALVE
- OUTSIDE STEM YOKE VALVE
- CHECK VALVE
- BALANCING VALVE
- SOLENOID VALVE
- 2 WAY CONTROL VALVE
- 3 WAY CONTROL VALVE
- THERMOSTATIC MIXING VALVE
- PRESSURE REGULATING VALVE
- WATER REGULATING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- TEMPERATURE PRESSURE RELIEF VALVE
- BACKFLOW PREVENTER
- REDUCED PRESSURE BACKFLOW PREVENTER
- PIPE ANCHOR
- PIPE GUIDE
- FLOW MEASURING STATION
- STRAINER
- FLEXIBLE PIPE CONNECTOR
- SHOCK ABSORBER

- PRESSURE GAUGE
- THERMOMETER
- FLOOR SINK
- AREA DRAIN, FLOOR DRAIN, ROOF DRAIN
- CEILING WALL CLEANOUT
- FLOOR CLEANOUT
- CAPPED PIPE
- DIRECTION OF FLOW
- TOP TAKE OFF
- RISER
- BOTTOM TAKE OFF
- PIPE DROP
- PIPE RISE
- TRENCH DRAIN

## CODE MANUALS AND STANDARDS AS THEY APPLY

1. AMERICAN NATIONAL STANDARD INSTITUTE (ANSI);
2. AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE);
3. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME);
4. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS;
5. CITY CODES;
6. COUNTY ORDINANCES;
7. INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) STANDARDS;
8. INTERNATIONAL BUILDING CODE (IBC) PUBLICATIONS;
9. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE), ADDITIONAL ELECTRICAL SAFETY CODE (NESC) STANDARDS;
10. INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO);
11. MINNESOTA STATE BUILDING CODE (MSBC);
12. MINNESOTA PLUMBING CODE 2012;
13. MINNESOTA MECHANICAL CODE 2015;
14. MINNESOTA ENERGY CODE 2015;
15. NATIONAL ELECTRICAL CODE (NEC);
16. NATIONAL ELECTRICAL MANUFACTURES ASSOCIATIONS (NEMA) STANDARDS;
17. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) PUBLICATIONS

## ABBREVIATIONS

| | | | | | |
|---|---|---|---|---|---|
| ABV | ABOVE | FT | FOOT OR FEET | S | SOUTH |
| AC | AIR CONDITIONING | FUT | FUTURE | SP | SUMP PUMP |
| ACU | AIR CONDITIONING UNIT | GA | GAUGE GAGE | SPLY | SUPPLY |
| AFC | ABOVE FINISHED CEILING | GEN | GENERAL | SPEC | SPECIFICATION |
| AFF | ABOVE FINISHED FLOOR | GFCI | GROUND-FAULT CIRCUIT INTERRUPTER | SQ | SQUARE |
| AHU | AIR HANDLING UNIT | GPM | GALLONS PER MINUTE | SS | STAINLESS STEEL |
| APPROX | APPROXIMATE | GR | GRADE GROUND | ST | SUMP TANK |
| ARCH | ARCHITECT ARCHITECTURAL | H | HIGH, HEIGHT | STD | STANDARD |
| BFF | BELOW FINISHED FLOOR | HC | HEATING COIL | SYS | SYSTEM |
| BFV | BUTTERFLY VALVE | HORIZ | HORIZONTAL | T | THERMOSTAT |
| BG | BELOW GRADE | ID | INSIDE DIMENSION | TD | TEMPERATURE DIFF AND TRENCH DRAIN |
| BHP | BRAKE HORSEPOWER | IBS | IN BEAM SPACE | TEMP | TEMPERATURE |
| BEL, BLW | BELOW | IJS | IN JOIST SPACE | XFR | TRANSFER |
| BOD | BOTTOM OF DUCT ELEVATION A F F | I E | INVERT ELEVATION | THRU | THROUGH |
| BOP | BOTTOM OF PIPE ELEVATION A F F | L AV | LAVATORY | TO | TAKE OFF, TOP OF |
| BOT | BOTTOM | L B | POUND | TOD | TOP OF DUCT ELEVATION A F F |
| CA | COMPRESSED AIR | LF | LINEAL FEET | TOP | TOP OF PIPE ELEVATION A F F |
| CC | COOLING COIL | LG | LONG OR LENGTH | T & P | TEMPERATURE AND PRESSURE |
| CFH | CUBIC FEET PER HOUR | MAX | MAXIMUM | T STAT | THERMOSTAT |
| CFM | CUBIC FEET PER MINUTE | MBH | 1000 BTU PER HOUR | TYP | TYPICAL |
| CI | CAST IRON | MFG | MANUFACTURER | U F | UNDERFLOOR |
| CL | CENTER LINE | MIN | MINIMUM | UG | UNDERGROUND |
| CLG | CEILING | MS | MOP SINK | UR | URINAL |
| CPRSR | COMPRESSOR | MTR | MOTORIZED, MOTOR | V | VENT |
| COND | CONDENSATE | N | NORTH | VERT | VERTICAL |
| CONN | CONNECTION | NO. | NUMBER | VFD | VARIABLE FREQUENCY DRIVE |
| CONSTR | CONSTRUCTION | NTS | NOT TO SCALE | VTR | VENT THUR ROOF |
| CONT | CONTINUED, CONTINUOUS | OA | OUTSIDE AIR | W | WEST |
| CONTR | CONTRACTOR | O.C. | ON CENTER | WC | WATER CLOSET |
| COOL | COOLING | OD | OUTSIDE DIMENSION | WH | WALL HYDRANT |
| CU | CONDENSING UNIT | OPNG | OPENING | WT | WEIGHT |
| CW | COLD WATER | ORD | OVERFLOW ROOF DRAIN | W/ | WITH |
| DR | DRAIN | P | PUMP, PUMPED | W /O | WITHOUT |
| DT | DRIP TRAP | PD | PRESSURE DIFFERENCE | | |
| DEMO | DEMOLITION | PRV | PRESSURE REGULATING VALVE | | |
| D | DIAMETER | PSI | POUNDS PER SQUARE INCH | | |
| DN | DOWN | PSIG | PSI GAUGE | | |
| E | EAST | PVC | POLYVINYL CHLORIDE | | |
| EA | EACH | RA | RETURN AIR | | |
| ELEC | ELECTRIC | RAD | RADIATOR, RADIUS | | |
| EL | ELEVATION | RCVR | RECEIVER | | |
| ENCL | ENCLOSURE | RET | RETURN | | |
| EWH | ELECTRIC WATER HEATER | RD | ROOF DRAIN | | |
| EXP T | EXPANSION TANK | RECIRC | RECIRCULATING | | |
| EXP | EXPANSION | REQD | REQUIRED | | |
| EXST | EXISTING | RHW | RECIRCULATING HOT WATER | | |
| FD | FLOOR DRAIN | RL | REFRIGERANT LIQUID | | |
| F.F. EL | FINISHED FLOOR ELEVATION | RND | ROUND | | |
| FLR | FLOOR | RPM | REVOLUTIONS PER MINUTE | | |
| FPM | FEET PER MINUTE | RWL | RAIN WATER LEADER | | |
| FRP | FIBERGLASS REINFORCED PIPE | | | | |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

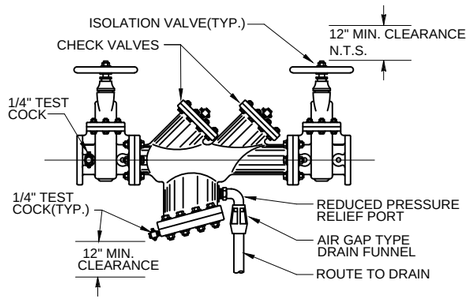
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# STATIONS
# PLUMBING SYMBOLS AND ABBREVIATIONS

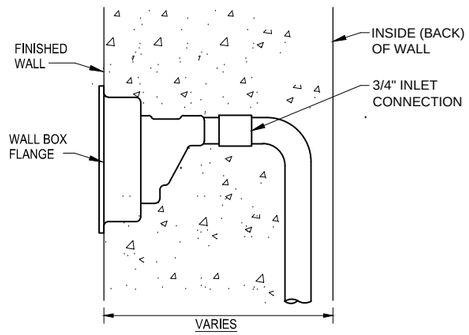
DISCIPLINE: PLUMBING

SHEET NAME: E0-PLM-GEN-002

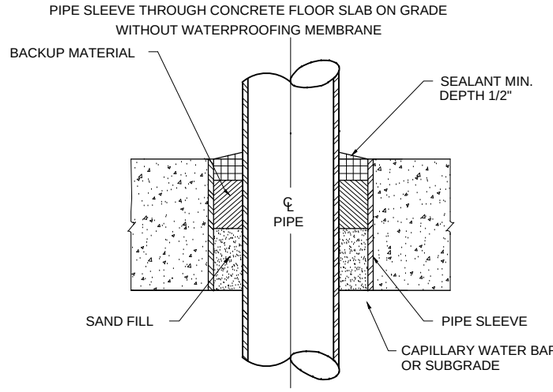
SHEET 9 OF 273




1 BACKFLOW PREVENTER DETAIL
N.T.S.




2 FREEZEPROOF WALL HYDRANT
N.T.S.




3 PIPE SLEEVE THROUGH CONCRETE FLOOR SLAB ON GRADE
N.T.S.

## DRAINAGE FIXTURE UNITS

| | LAV | TOILET | MOP SINK | FD | URINAL |
|---|---|---|---|---|---|
| QUANTITY | 1 | 1 | 1 | 1 | 1 |
| D.F.U. | 1 | 6 | 3 | 4 | 6 |
| TOTAL D.F.U. | 1 | 6 | 3 | 4 | 6 |

TOTAL DRAINAGE FIXTURE UNITS: 20 D.F.U.

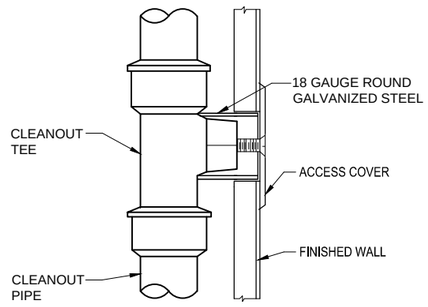
## SUPPLY FIXTURE UNITS

| | LAV | TOILET | MOP SINK | WH | URINAL |
|---|---|---|---|---|---|
| QUANTITY | 1 | 1 | 1 | 1 | 1 |
| FIXTURE UNIT | 1.5 1.5 | 10 | 1.5 1.5 | 5 | 6 |
| TOTAL FIXTURE UNITS | 1 | 10 | 1 | 5 | 6 |

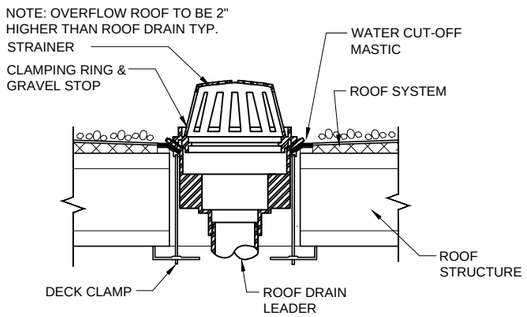
TOTAL DEMAND: CW = 23 F.U. ; HW = 3 F.U.

## ELECTRIC POINT OF USE WATER HEATER

| UNIT NO. | LOCATION | MANUFACTURER MODEL NO. | WATTS | TANK GAL. | ELECTRICAL | | FULL LOAD AMPS | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | | | | | VOLTS | PH | | |
| EWH-1 | RESTROOM | RHEEM, EGSP2 | 2000 | 6 | 120 | 1 | 16.7 | 5 GAL ACCEPTABLE |
| | | | | | | | | |




4 WALL CLEANOUT
N.T.S.




5 ROOF DRAIN DETAIL
N.T.S.

## AREA AND ROOF DRAIN SCHEDULE

| TAG | DRAIN SIZE | STRAINER MATERIAL | LOCATION | BASIS OF DESIGN | REMARKS |
|---|---|---|---|---|---|
| RD | VARIES | BRONZE | ROOF | JAY R SMITH MODEL 1310 | |
| OFD | VARIES | BRONZE | ROOF | JAY R SMITH MODEL 1310 | |
| TD-1 | 4" | STAINLESS STEEL | PLATFORM | JAY R SMITH MODEL 9814 | 6" WIDE, PRECAST POLYMER CONCRETE TRENCH. PROVIDE WITH HEEL PROOF GRATES. |
| AD-1 | 4" | NICKEL BRONZE | VARIOUS | JAY R SMITH MODEL 2010 | ROUND NICKEL BRONZE STRAINER |
| | | | | | |

| DIA. OF STORM DRAIN, INCHES | DRAINAGE AREA |
|---|---|
| 3 | 822 |
| 4 | 1,880 |
| 5 | 3,340 |
| 6 | 5,350 |
| 8 | 11,500 |
| 10 | 20,700 |

## PLUMBING FIXTURE SCHEDULE

| TAG | TYPE | WASTE | VENT | CW | HW | BASIS OF DESIGN | REMARKS |
|---|---|---|---|---|---|---|---|
| WH-1 | WALL HYDRANT | -- | -- | ¾" | -- | WOODFORD MODEL B65 | |
| LAV-1 | LAVATORY | 11/2" | 11/2" | ¾" | ¾" | AMERICAN STANDARD - LUCERNE | WALL HUNG; AMERICAN STANDARD RELIANT FAUCET |
| MS-1 | MOP SINK | 3" | 11/2" | ¾" | ¾" | MUSTEE MODEL 62M | FLOOR MOUNT, 24x24x8 1/4"; CHICAGO FAUCET 835-CP |
| WC-1 | WATER CLOSET | 4" | 2" | 1 1/4" | -- | AMERICAN STANDARD - AFWALL | WALL HUNG; SLOAN 110-111 FLUSHOMETER |
| UR-1 | URINAL | 2" | 11/2" | ¾" | -- | AMERICAN STANDARD - TRIMBROOK | WALL HUNG; SLOAN ROYAL 186 FLUSHOMETER |
| FD-1 | FLOOR DRAIN | 3" | 11/2" | -- | -- | JAY R SMITH 2010 | ROUND NICKEL BRONZE STRAINER |
| -- | TRAP PRIMER | -- | -- | -- | -- | JAY R SMITH 2699 | |
| -- | STANDPIPE | 3" | 11/2" | -- | -- | | 6" PIPE; 24" LONG CONNECTED TO 3" TRAP AND DRAIN |

## SUMP TANK

BASED ON: ZOELLER

| ITEM NO. | LOCATION | SERVING | TYPE | BASIN MATERIAL | SIZE | | INLETS | | | OUTLETS | | | COVER MATERIAL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | DIA. IN. | DEPTH IN. | NO. | SIZE IN. | ABV. BOT. IN. | NO. | SIZE IN. | ABV. BOT. IN. | | |
| ST-1 | OUTSIDE ELEVATOR PIT | ELEV PIT DRAINAGE | PREFABRICATED | FIBERGLASS | 24 | 84 | 1 | 4 | 21 | 1 | 2 | X | NON-CORROSIVE | PROVIDE WITH 12-INCH EXTENSION ZOELLER AND A-PAK II ALARM SYSTEM ZOELLER MODEL 10-0126. |
| ST-2 | OUTSIDE ELEVATOR PIT | ELEV PIT DRAINAGE | PREFABRICATED | FIBERGLASS | 24 | 84 | 1 | 4 | 21 | 1 | 2 | X | NON-CORROSIVE | PROVIDE WITH 12-INCH EXTENSION ZOELLER AND A-PAK II ALARM SYSTEM ZOELLER MODEL 10-0126. |

## SUMP PUMP

BASED ON: ZOELLER

| ITEM NO. | LOCATION | SERVING | MODEL | TYPE | PUMP | | | MOTOR | | | SUMP | SIZE | | INLETS | | | OUTLETS | | | COVER MATERIAL | ACCESSORIES | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | GPM EACH | DISCH. HD FT | DISCH. SIZE IN | HP | RPM | ELECTRICAL CHARACTERISITCS | BASIN MATERIAL | DIA. IN. | DEPTH IN. | NO. | SIZE IN. | ABV. BOT. IN. | NO. | SIZE IN. | ABV. BOT. IN. | | | |
| SP-1 | ELEVATOR SUMP | ELEV PIT DRAINAGE | 4186 | SIMPLEX | 50 | 25 | 2 | 1 1/2 | 3450 | 230/3/60 | FIBERGLASS | 24 | 84 | 1 | 4 | 21 | 1 | 2 | X | STEEL | (4) 10-0225 FLOATS, HIGH WATER ALARM MODEL 10-0092 CONTROL PANEL | (2) ELECTRICAL CIRCUITS |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# STATIONS
# PLUMBING DETAILS AND SCHEDULES

DISCIPLINE: PLUMBING

SHEET NAME: E0-PLM-DTL-002

SHEET 10 OF 273

## DUCTWORK SYMBOLS

- FD — FIRE DAMPER
- FSD — COMBINATION SMOKE FIRE DAMPER
- SUPPLY DUCT UP
- RETURN OR EXHAUST DUCT UP
- SUPPLY DUCT DOWN
- RETURN OR EXHAUST DUCT DOWN
- M — MOTORIZED DAMPER
- B — BACKDRAFT DAMPER
- OPPOSED BLADE
- PARALLEL BLADE
- VOLUME DAMPER
- SUPPLY AIR DIFFUSER
- RETURN OR EXHAUST AIR GRILLE
- 10ø — ROUND DUCT
- 10 12 — RECTANGULAR DUCT FIRST FIG IS SIDE SHOWN
- MANUAL BALANCING DAMPER
- FLEXIBLE DUCT CONNECTION
- AP — ACCESS PANEL SIZE AS REQUIRED
- SQUARE TURN DUCT ELBOW WITH TURNING VANES
- RADIUS DUCT ELBOW WITH RADIUS 1 5 X WIDTH OF SIDE SHOWN
- CONICAL BRANCH TAKE OFF CONNECTION
- 45 D ENTRY BRANCH TAKE OFF CONNECTION WITH FILLER PIECES AT CORNERS
- RIGID SHEET METAL BRANCH DUCT WITH FLEXIBLE AIR DUCT EXTENSION TO DIFFUSER
- TRANSITION 20 D MAXIMUM ANGLE
- ACOUSTICALLY LINED DUCT

## DIFFUSER DESIGNATION CODE

D
24x24
1000

- INDICATES DIFFUSER OR GRILLE TYPE
- INDICATES NECK SIZE DIAMETER IN INCHES OR SQUARE DIFFUSER SIZE IN INCHES
- INDICATES CFM

## GENERAL SYMBOLS

- 3 — NUMBERED NOTE
- KEY NOTE
- 103 — ROOM NUMBER
- 1 — REVISION NO 1
- ø — DIAMETER OR ROUND
- @ — AT
- ∠ — ANGLE

## CONTROL SYMBOLS

- T — THERMOSTAT OR TEMPERATURE SENSOR
- H — HUMIDISTAT OR HUMIDITY SENSOR
- S — TEMPERATURE SENSOR
- CO — CARBON MONOXIDE SENSOR
- $ — TIMER SWITCH
- SP — STATIC PRESSURE SENSOR

## CODE MANUALS AND STANDARDS AS THEY APPLY

1. AMERICAN NATIONAL STANDARD INSTITUTE (ANSI);
2. AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE);
3. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME);
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10. INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO);
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12. MINNESOTA PLUMBING CODE 2012;
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15. NATIONAL ELECTRICAL CODE (NEC);
16. NATIONAL ELECTRICAL MANUFACTURES ASSOCIATIONS (NEMA) STANDARDS;
17. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) PUBLICATIONS

## DESIGN CONDITIONS

| DESIGN AREA | DESIGN TEMPERATURE (DEGREE F) | | | |
|---|---|---|---|---|
| | SUMMER | | WINTER | |
| | DB | WB | DB | WB |
| INDOOR | 75 | XX | 68 | XX |
| AMBIENT | 108 | 88 | -40 | XX |
| | | | | |

## ABBREVIATIONS

| | |
|---|---|
| ABV | ABOVE |
| AC | AIR CONDITIONING |
| ACU | AIR CONDITIONING UNIT |
| AFC | ABOVE FINISHED CEILING |
| AFF | ABOVE FINISHED FLOOR |
| AHU | AIR HANDLING UNIT |
| AP | ACCESS PANEL |
| APPROX | APPROXIMATE |
| ARCH | ARCHITECT ARCHITECTURAL |
| AS | AIR SEPARATOR |
| BD | BLOWDOWN |
| BFF | BELOW FINISHED FLOOR |
| BFV | BUTTERFLY VALVE |
| BG | BELOW GRADE |
| BHP | BRAKE HORSEPOWER |
| BEL, BLW | BELOW |
| BOD | BOTTOM OF DUCT ELEVATION A F F |
| BOP | BOTTOM OF PIPE ELEVATION A F F |
| BOT | BOTTOM |
| BTU | BRITISH THERMAL UNIT |
| BTUH | BTU PER HOUR |
| CA | COMPRESSED AIR |
| CC | COOLING COIL |
| CLG DIFF | CEILING DIFFUSER |
| CFH | CUBIC FEET PER HOUR |
| CFM | CUBIC FEET PER MINUTE |
| CI | CAST IRON |
| CL | CENTER LINE |
| CLG | CEILING |
| CPRSR | COMPRESSOR |
| COND | CONDENSATE |
| CONN | CONNECTION |
| CONSTR | CONSTRUCTION |
| CONT | CONTINUED, CONTINUOUS |
| CONTR | CONTRACTOR |
| COOL | COOLING |
| CU | CONDENSING UNIT |
| CUH | CABINET UNIT HEATER |
| DIFF | DIFFUSER |
| DR | DRAIN |
| DT | DRIP TRAP |
| DEMO | DEMOLITION |
| D | DIAMETER |
| DMPR | DAMPER |
| DN | DOWN |
| E | EAST |
| EA | EACH |
| EAT | ENTERING AIR TEMPERATURE |
| EF | EXHAUST FAN |
| ELEC | ELECTRIC |
| EL | ELEVATION |
| EUH | ELECTRIC UNIT HEATER |
| ENCL | ENCLOSURE |
| EXH RG | EXHAUST REGISTER |
| ESP | EXTERNAL STATIC PRESSURE |
| EXP T | EXPANSION TANK |
| EXH | EXHAUST |
| EXP | EXPANSION |
| EXST | EXISTING |
| FA | FREE AREA |
| FDMPR | FIRE DAMPER |
| F.F. EL | FINISHED FLOOR ELEVATION |
| FLR | FLOOR |
| FPM | FEET PER MINUTE |
| FRP | FIBERGLASS REINFORCED PIPE |
| FT | FOOT OR FEET |
| FUT | FUTURE |
| GA | GAUGE GAGE |
| GEN | GENERAL |
| GFCI | GROUND-FAULT CIRCUIT INTERRUPTER |
| GPM | GALLONS PER MINUTE |
| GR | GRADE GROUND |
| GRL | GRILLE |
| GV | GRAVITY VENT |
| H | HIGH, HEIGHT |
| HC | HEATING COIL |
| HD GR | HEAVY DUTY GRILLE |
| RHG | REFRIGERANT HOT GAS |
| HORIZ | HORIZONTAL |
| HTR | HEATER |
| H STAT | HUMIDISTAT |
| HVAC | HEAT VENTILLATION & AIR CONDITIONER |
| ID | INSIDE DIMENSION |
| IBS | IN BEAM SPACE |
| IJS | IN JOIST SPACE |
| I E | INVERT ELEVATION |
| RL | REFRIGERANT LIQUID |
| LAT | LEAVING AIR TEMPERATURE |
| L AV | LAVATORY |
| L B | POUND |
| L D | LINEAR DIFFUSER |
| LF | LINEAL FEET |
| LG | LONG OR LENGTH |
| LSD | LINEAR SLOT DIFFUSER |
| MAU | MAKE UP AIR UNIT |
| MAX | MAXIMUM |
| MBH | 1000 BTU PER HOUR |
| MFG | MANUFACTURER |
| MIN | MINIMUM |
| MTR | MOTORIZED, MOTOR |
| N | NORTH |
| NO. | NUMBER |
| NTS | NOT TO SCALE |
| OA | OUTSIDE AIR |
| O.C. | ON CENTER |
| OD | OUTSIDE DIMENSION |
| OPNG | OPENING |
| ORD | OVERFLOW ROOF DRAIN |
| P | PUMP, PUMPED |
| PD | PRESSURE DIFFERENCE |
| PRV | POWER ROOF VENTILATOR |
| PRV | PRESSURE REGULATING VALVE |
| PSI | POUNDS PER SQUARE INCH |
| PSIG | PSI GAUGE |
| PVC | POLYVINYL CHLORIDE |
| RA | RETURN AIR |
| RAD | RADIATOR, RADIUS |
| RCP | REFLECTED CEILING PLAN |
| RCVR | RECEIVER |
| RET | RETURN |
| RD | ROOF DRAIN |
| RECIRC | RECIRCULATING |
| REQD | REQUIRED |
| RH | RELATIVE HUMIDITY |
| RHW | RECIRCULATING HOT WATER |
| RND | ROUND |
| RPM | REVOLUTIONS PER MINUTE |
| RTU | ROOFTOP UNIT |
| S | SOUTH |
| SA | SUPPLY AIR |
| SAD | SUPPLY AIR DUCT |
| SD | SLOT DIFFUSER |
| SF | SUPPLY FAN |
| SPLY | SUPPLY |
| SP | STATIC PRESSURE |
| SPEC | SPECIFICATION |
| SQ | SQUARE |
| SS | STAINLESS STEEL |
| STD | STANDARD |
| SYS | SYSTEM |
| T | THERMOSTAT, TEMPERATURE DIFF |
| TD | TEMPERATURE DIFF |
| TEMP | TEMPERATURE |
| XFR | TRANSFER |
| THRU | THROUGH |
| TO | TAKE OFF, TOP OF |
| TOD | TOP OF DUCT ELEVATION A F F |
| TOP | TOP OF PIPE ELEVATION A F F |
| T & P | TEMPERATURE AND PRESSURE |
| T STAT | THERMOSTAT |
| TST PR | TOTAL STATIC PRESSURE |
| TYP | TYPICAL |
| U F | UNDERFLOOR |
| UH | UNIT HEATER |
| UG | UNDERGROUND |
| VERT | VERTICAL |
| VFD | VARIABLE FREQUENCY DRIVE |
| W | WEST |
| WT | WEIGHT |
| W/ | WITH |
| W /O | WITHOUT |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST — Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# STATIONS
# MECHANICAL SYMBOLS AND ABBREVIATIONS

DISCIPLINE: MECHANICAL

SHEET NAME: E0-MEC-GEN-002

SHEET 11 OF 273

## AIR CONDITIONING UNIT

| UNIT NO | SERVES | MFR. | MODEL NO | SUPPLY CFM | OUTSIDE AIR CFM | TSP. INCHES WG | ESP. INCHES WG | SUPPLY FAN | | SUPPLY MOTOR | | DX COOLING | | | | | | | | ELECTRIC HEATING | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | BHP | HP | ELECTRICAL | RPM | REFRIG. TYPE | TOTAL MBH | SENS. MBH | E.A.T. DB | E.A.T. WB | L.A.T. DB | L.A.T. WB | FILTERS | TYPE | KW | WEIGHT (LB.) | NOTES: |
| ACU -1VW | HOIST WAY | CARRIER | 42BHE162D4L61516DE | 1500 | XX | .91 | .5 | .55 | .75 | 208 V | 1086 | 410A | 62.85 | 35.13 | 75 | 67 | 53.6 | 53.3 | PLEATED | N/A | N/A | 293 | 1,2,5 |
| ACU -2VW | EMR | CARRIER | 40GV | 471 | XX | XX | .5 | XX | XX | 208 V | XX | 410A | XX | XX | XX | XX | XX | XX | XX | XX | XX | 26.4 | 1,2,5 |
| ACU -3VW | AMENITY | CARRIER | FV4C | 1000 | XX | XX | .5 | XX | .5 | 208 V | XX | 410A | 29.76 | 11.49 | 75 | 72 | 64.36 | 63.9 | XX | N/A | 15 | 150 | 1,2,5 |
| ACU -1P | HOIST WAY | CARRIER | 42BHE162D4L61516DE | 1500 | XX | .91 | .5 | .55 | .75 | 208 V | 1086 | 410A | 62.85 | 35.13 | 75 | 67 | 53.6 | 53.3 | PLEATED | N/A | N/A | 293 | 1,2,5 |
| ACU -2P | EMR | CARRIER | 40GV | 471 | XX | XX | .5 | XX | XX | 208 V | XX | 410A | XX | XX | XX | XX | XX | XX | XX | N/A | N/A | 26.4 | 1,2,5 |
| | | | | | | | | | | | | | | | | | | | | | | | |

NOTES:
1. HUNG FROM DECK WITH VIBRATION ISOLATION.
2. FUSED DISCONNECT BY DIV 16
3. X
4. XX
5. FILTERS MUST BE EASILY ACCESSIBLE

## INTAKE / RELIEF HOODS

| UNIT NO. | LOCATION | SERVES | MODEL NO. | FUNCTION | AIRFLOW CFM | THROAT DIM. INCHES | STATIC PRESS. " W.G. | THROAT VELOCITY F.P.M. | DAMPER TYPE | WEIGHT (LB.) | ACCESSORIES | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | HOISTWAY | HOISTWAY | WRH | RELIEF | N/A | 24 X 20 | X | 500 | CONTROL | 98 | ROOF CURB, ACTUATOR, OPEN/CLOSE INDICATOR | FIRE FIGHTER KEYED SMOKE EXHAUST |
| X | HOISTWAY | HOISTWAY | WRH | RELIEF | N/A | 24 X 20 | X | 500 | CONTROL | 98 | ROOF CURB, ACTUATOR, OPEN/CLOSE INDICATOR | FIRE FIGHTER KEYED SMOKE EXHAUST |
| | | | | | | | | | | | | |

## AIR CONDITIONING CONDENSER

| UNIT NO. | LOCATION | MFR/MODEL NO. | CAPACITY | | REFRIGERANT TYPE | AMB. TEMP. °F | SUCT. TEMP. °F | COND. FAN HP | MINIMUM CIRCUIT AMPACITY | AIR FLOW CFM | ELECTRICAL | | WEIGHT (LB.) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOTAL MBH | NOM. TONS | | | | | | | VOLTS | PH | | |
| CU -1VW | UNDER STAIR | CARRIER 24AHA448A005 | XX | 4 | R-410a | XX | XX | XX | XX | N/A | 208 | 3 | 213 | 1,3,4 |
| CU -2VW | HUNG UNDER STAIR | CARRIER 38GVC | 18 | XX | R-410a | XX | XX | XX | XX | N/A | 208 | 3 | 112.2 | 1,2,3 |
| CU -3VW | AMENITY ROOF | CARRIER 24AHA | XX | 2.5 | R-410a | XX | XX | XX | XX | N/A | 208 | 3 | 213 | 1,3,4 |
| CU -1P | UNDER STAIR | 24AHA448A005 | XX | 4 | R-410a | XX | XX | XX | XX | N/A | 208 | 3 | 213 | 1,3,4 |
| CU -2P | HUNG UNDER STAIR | CARRIER 38GVC | | | R-410a | XX | XX | XX | XX | N/A | 208 | 3 | 112.2 | 1,2,3 |
| | | | | | | | | | | | | | | |

NOTES:
1. STAND ALONE FUSED DISCONNECT BY DIVISION 16
2. MOUNT ABOVE TRANSFORMER.
3. HORIZONTAL CONFIGURATION
4. MOUNTED ON 4-INCH HOUSEKEEPING PAD

## EXHAUST FANS

| FAN NO. | LOCATION | SERVES | MANUFACTURER MODEL NO | CFM | TOTAL STATIC PRESS | FAN RPM | OUTLET VELOCITY | TYPE | DRIVE | BHP | HP | ELECTRICAL | | WEIGHT (LB.) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | VOLTS | PH | | |
| EX -1VW | BRIDGE LOBBY | BRIDGE LOBBY | COOK 60SQN-B | 150 | .5 | 1919 | XX | INLINE | BELT | XX | 1/4 | 115 | 1 | 50 | 1,2 |
| EX -2VW | PLATFORM LOBBY | PLATFORM LOBBY | COOK 60SQN-B | 100 | .5 | 1625 | XX | INLINE | BELT | XX | 1/4 | 115 | 1 | 50 | 1,2 |
| EX -1P | LOBBY-BRIDGE LVL | LOBBY-BRIDGE LVL | 60SQN-B | 150 | .5 | 1919 | XX | INLINE | BELT | XX | 1/4 | 115 | 1 | 50 | 1,2 |
| EX -2P | LOBBY-PLTFM LVL | LOBBY-PLTFM LVL | 60SQN-B | 100 | .5 | 1625 | XX | INLINE | BELT | XX | 1/4 | 115 | 1 | 50 | 1,2 |
| | | | | | | | | | | | | | | | |

NOTES:
1. STAND ALONE FUSED DISCONNECT BY DIVISION 16
2. MOUNTED FROM DECK
3. XX

## ENERGY RECOVERY VENTILATORS

| UNIT NO. | LOCATION | SERVING | TYPE | MODEL NO. * | OUT. AIR TEMP. F° | | EXH. AIR TEMP. F° | | % EFFECTIVENESS | | | AIRFLOW CFM | PRESS. DROP " W.G. | NO. OF MOTORS | H.P. EACH | BLOWER DRIVE | ELECTRICAL | | FILTER TYPE | WEIGHT (LB.) | ACCESSORIES | INTER-LOCK WITH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | ENT. | LVG. | ENT. | LVG. | SENSIBLE | WINTER ENTHALPIC | SUMMER ENTHALPIC | | | | | | VOLTS | PH. | | | | | |
| ERV -1VW | DRIVER AMENITY | DRIVER AMENITY | STATIC PLATE | EV200 | -40 | 43.5 | 68 | X | 77 | 72 | 58 | 180 | .3 | 1 | .1 | X | 120 | 1 | MERV 8 | 70 | X | X | X |
| | | | | | | | | | | | | | | | | | | | | | | | |

## GRILLE, REGISTER & DIFFUSER SCHEDULE

| MARK | MANUFACTURER | MODEL | TYPE | BORDER | SIZE | NECK SIZE | USE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A-VW | TITUS | 355R | GRILLE | N/A | SEE DWG | N/A | RETURN | |
| B-VW | TITUS | 355R | GRILLE | N/A | SEE DWG | N/A | RETURN | ALUMINUM |
| C-VW | TITUS | TMS | DIFFUSER | N/A | SEE DWG | N/A | SUPPLY | |
| D-VW | TITUS | XX | REGISTER | N/A | SEE DWG | N/A | SUPPLY | |
| A-P | TITUS | 355R | GRILLE | N/A | SEE DWG | N/A | RETURN | |
| D-P | TITUS | XX | GRILLE | N/A | SEE DWG | N/A | SUPPLY | |
| | | | | | | | | |

## CONDENSATE PUMPS

| ITEM NO. | DESCRIPTION | LOCATION | MANUFACTURER | MODEL | FLUID | GPM EACH | TOTAL HD FT | MOTOR HP | RPM | TYPE | VOLTS/PH | WEIGHT (LB.) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CP-1VW | XX | LOBBY | DIVERSITECH | IQP120 | WATER | 1.6 | XX | XX | XX | XX | 120/XX | 5.43 | |
| CP-2VW | XX | AMENITY | DIVERSITECH | IQP120 | WATER | 1.6 | XX | XX | XX | XX | 120/XX | 5.43 | |
| CP-1P | XX | LOBBY | DIVERSITECH | IQP120 | WATER | 1.6 | XX | XX | XX | XX | 120/X | 5.43 | |
| | | | | | | | XX | XX | XX | XX | | | |

## ELECTRIC HEATERS

| UNIT NO. | LOCATION | SERVICE | TYPE | ELECTRICAL DATA | | | | WEIGHT (LB.) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | VOLTS | PHASE | AMPS | KW | | |
| EUH -1VW | EMR | X | UNIT HEATER | 208 | 1 | 14.5 | 3 | 24 | 1,2,3 |
| EWH -1VW | AMENITY | X | WALL HEATER | 208 | 1 | 4.8 | 1 | 10 | X |
| EDH -1VW | AMENITY | X | DUCT HEATER | 208 | 1 | XX | 4 | XX | X |
| EUH -1P | EMR | X | UNIT HEATER | 208 | 1 | 14.5 | 3 | 24 | 1,2,3 |

NOTES:
1. STAND ALONE FUSED DISCONNECT BY DIVISION 16
2. UNIT HEATER HUNG AT X FT AFF
3. HORIZONTAL CONFIGURATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

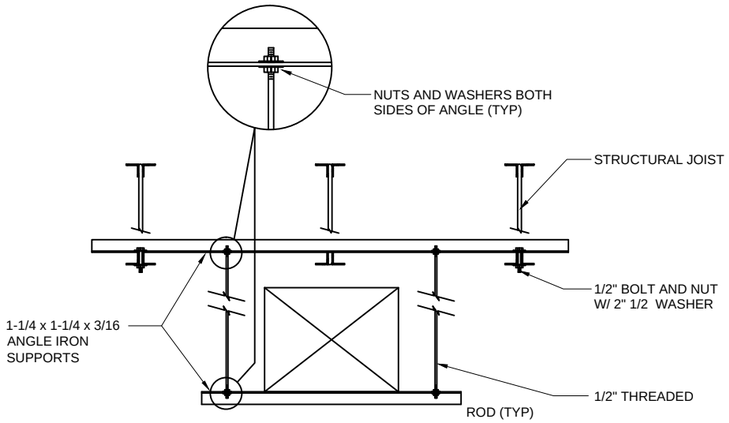
60% SUBMISSION - 09/28/15

CIVIL EAST - VOLUME 11B
STATIONS
MECHANICAL SCHEDULES

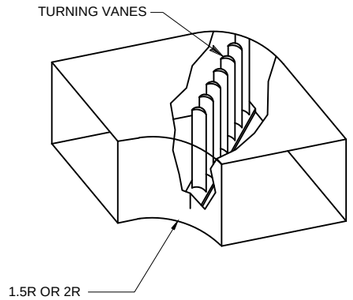
DISCIPLINE: MECHANICAL

SHEET NAME: E0-MEC-SCH-002

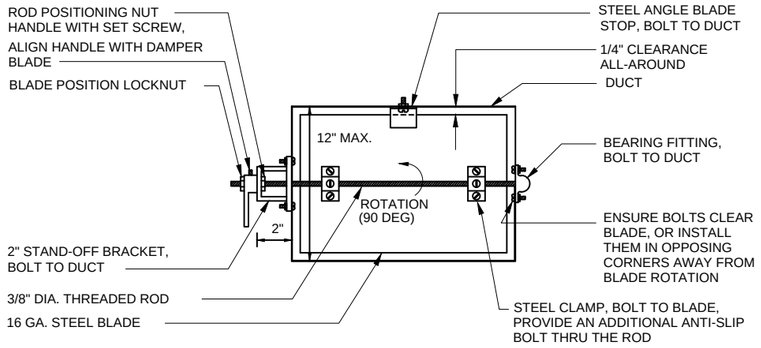
SHEET 12 OF 273




## 1 DUCT HANGER DETAIL
N.T.S.

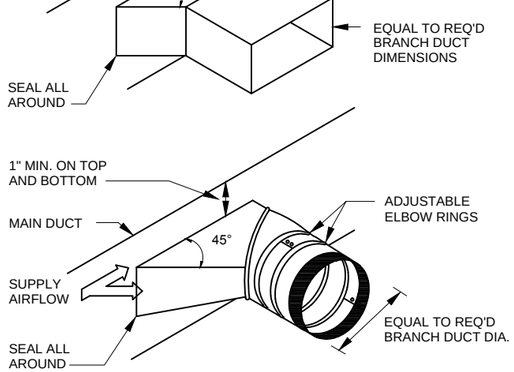



## 2 TYPICAL ELBOW DETAIL
N.T.S.

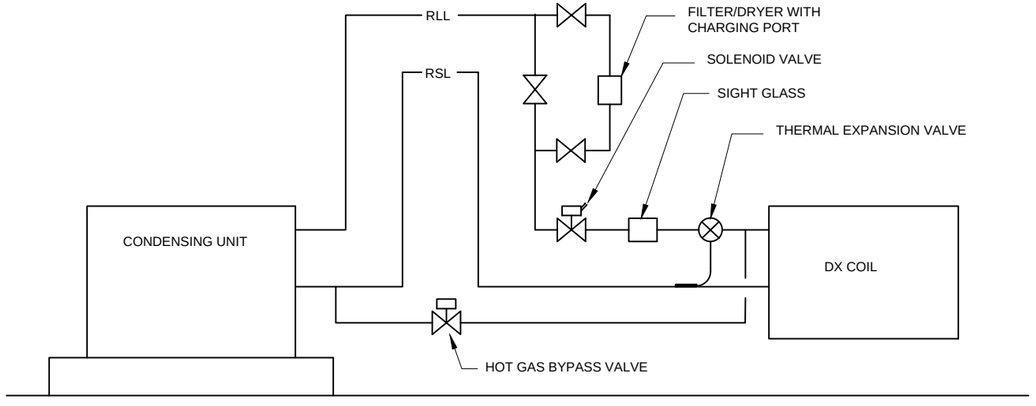



NOTES:
1. DAMPERS FOR ROUND DUCTS SHALL BE SIMILAR TO THE DAMPER SHOWN ABOVE.
2. ENSURE THAT FULL 90° DAMPER BLADE MOVEMENT IS UNOBSTRUCTED.
3. FOR DUCT HEIGHTS MORE THAN 12", PROVIDE FACTORY-FABRICATED OPPOSED BLADE DAMPERS

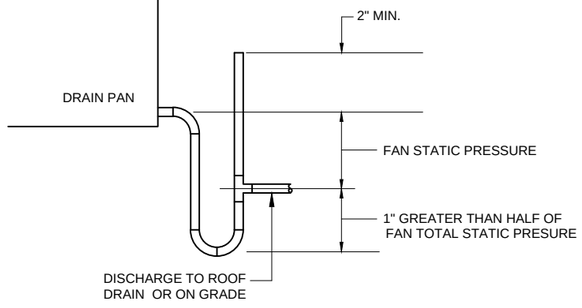
## 3 MANUAL DAMPER (ADJUSTABLE SINGLE-BLADE BALANCING TYPE)
N.T.S.




## 4 TYPICAL BRANCH TAKE-OFF FITTING
N.T.S.




## 5 REFRIGERANT SCHEMATIC
N.T.S.




NOTE:
1. DRAIN LINE SHALL BE INSULATED.
2. DRAIN LINE SHALL PENETRATE THE ROOF LINE OR SLAB WITHIN THE CONFINEMENT OF THE HVAC EQUIPMENT CURB OR PAD.

## 6 CONDENSATE DRAIN TRAP DETAIL
N.T.S.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM · LV ENGINEERING • LLC CERTIFIED WOMEN'S BUSINESS ENTERPRISE

**60% SUBMISSION - 09/28/15**

METROPOLITAN COUNCIL · SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# STATIONS
# MECHANICAL DETAILS

DISCIPLINE: MECHANICAL

SHEET NAME: E0-MEC-DTL-002

SHEET 13 OF 273

| ONELINE OR CONTROL DIAGRAM | PLAN | DESCRIPTION |
|---|---|---|
| FRAME / TRIP | CB | LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED |
| * | * | COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED:<br>* FVR - FULL VOLTAGE REVERSING<br>RVNR - REDUCED VOLTAGE NON-REVERSING<br>2S1W - TWO SPEED, ONE WINDING<br>2S2W - TWO SPEED, TWO WINDING |
| * | * | NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE AMPERE RATING NOTED IF OTHER THAN 30A |
| * * | * F | FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, AMPERE RATING AND FUSE SIZE AS NOTED AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING EXAMPLE 15 |
| | P 2 | MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER<br>"P" INDICATES WITH PILOT LIGHT<br>"2" INDICATES TWO POLE |
| 480V △<br>TO<br>120/208Y<br>30 KVA<br>K-* | T | TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED. UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 13. ALL OTHER DRY TYPE TRANSFORMERS SHALL HAVE A K-4 RATING. ISOLATION TRANSFORMERS SHALL HAVE A K-20 RATING |
| * A TO 5 | — | CURRENT TRANSFORMER<br>* QUANTITY<br>A = PRIMARY AMPERES |
| * V TO 120 | — | POTENTIAL TRANSFORMER<br>* QUANTITY<br>V = PRIMARY VOLTAGE |
| | G | GENERATOR RECEPTACLE OR GENERATOR, RATINGS AND CONNECTIONS AS NOTED |
| 100A MTS<br>N S | — | MANUAL TRANSFER SWITCH NO. 1 (MTS-1) "N" INDICATES NORMAL SOURCE "S" INDICATES STANDBY SOURCE 100A INDICATES CONTINUOUS CURRENT RATING |
| 5KW | E | UNIT HEATER - ELECTRIC HEATING COIL AND FAN |
| — | U | UNIT HEATER - STEAM OR WATER HEATING COIL AND FAN |
| 5 | M | MOTOR, NUMERAL INDICATES HORSEPOWER |
| * | — | SPECIAL CAPACITOR<br>* SC - SURGE CAPACITOR<br>PF - POWER FACTOR CORRECTION CAPACITOR |
| | — | PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED |
| | — | PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN |

| ONELINE OR CONTROL DIAGRAM | PLAN | DESCRIPTION |
|---|---|---|
| | — | CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED |
| | — | CONDUCTORS ELECTRICALLY CONNECTED |
| DM | — | DAMPER MOTOR |
| | — | PILOT LIGHT, COLOR AS NOTED<br>R - RED<br>G - GREEN<br>B - BLUE<br>W - WHITE<br>A - AMBER |
| PTT<br>OR | — | PILOT LIGHT, PUSH-TO-TEST TYPE, COLOR AS NOTED ABOVE |
| LA | — | LIGHTNING ARRESTER |
| | | GROUND OR GROUND ROD |
| 30A | — | FUSE, AMPERE RATING AS NOTED |
| — | | HEAT TRACE CABLE |
| | | STRIP HEATER OR HEATING ELEMENT |
| | — | CONTACT, NORMALLY OPEN (NO) |
| | — | CONTACT, NORMALLY CLOSED (NC) |
| CR # | — | CONTROL RELAY COIL, NUMBER AS INDICATED |
| TD | — | TIME DELAY RELAY<br>RANGE AS NOTED<br>SETPOINT AS NOTED TDE-TIME DELAY AFTER ENERGIZATION-ON DELAY TDD-TIME DELAY AFTER DE-ENERGIZATION-OFF DELAY<br><br>NOTC-NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED<br><br>NCTO-NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED<br><br>NOTO-NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED<br><br>NCTC-NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED |
| | TS OR<br>T OR * | TEMPERATURE SWITCH OR THERMOSTAT<br><br>NORMALLY OPEN, CLOSES ON RISING TEMPERATURE<br><br>NORMALLY OPEN, CLOSES ON DROPPING TEMPERATURE<br><br>NORMALLY CLOSED, OPENS ON RISING TEMPERATURE<br><br>NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE |
| | — | INDICATES LIMITS OF EQUIPMENT OR WIRING ENCLOSURE |

## ELECTRICAL ABBREVIATIONS

| | |
|---|---|
| AC | ALTERNATING CURRENT |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| A,AMP | AMPERE |
| AUTO | AUTOMATIC |
| AUX | AUXILIARY |
| AWG | AMERICAN WIRE GAUGE |
| C | CONDUIT |
| CAR | COUNCIL AUTHORIZED REPRESENTATIVE |
| CB | CIRCUIT BREAKER |
| CKT | CIRCUIT |
| CPT | CONTROL POWER TRANSFORMER |
| CR | CONTROL RELAY |
| CS | CONTROL SWITCH |
| CT | CURRENT TRANSFORMER |
| CU | COPPER |
| DC | DIRECT CURRENT |
| DI | DOOR INTERLOCK |
| DN | DOWN |
| EC | EMPTY CONDUIT |
| ELEC | ELECTRICAL |
| ELEV | ELEVATION |
| EM | EMERGENCY |
| FBO | FURNISHED BY OTHERS |
| FO | FIBER OPTIC |
| FU | FUSE |
| GCP | GENERATOR CONTROL PANEL |
| GEC | GROUNDING ELECTRODE CONDUCTOR |
| GEN | GENERATOR |
| G,GRD | GROUND |
| GF | GROUND FAULT INTERRUPTER |
| GRS | GALVANIZED RIGID STEEL |
| HH | HANDHOLE |
| HPB | HEATER PUSH BUTTON |
| HT | HEIGHT |
| HTR | HEATER |
| HZ | HERTZ |
| INST | INSTANTANEOUS |
| KSK | KIOSK |
| LA | LIGHTNING ARRESTER |
| LGTS | LIGHTS |
| LP | LIGHTING PANEL |
| MCC | MOTOR CONTROL CENTER |
| MFR | MANUFACTURER |
| MH | MANHOLE |
| MTG | MOUNTING |
| MTD | MOUNTED |
| MTS | MANUAL TRANSFER SWITCH |
| NC | NORMALLY CLOSED |
| NO | NORMALLY OPEN OR NUMBER |
| NOM | NOMINAL |
| NTS | NOT TO SCALE |
| OL | OVERLOAD |
| PH | PHASE |
| P,POL | POLE |
| PR | PAIR |
| PT | POTENTIAL TRANSFORMER |
| PVC | POLYVINYL CHLORIDE |
| QTY | QUANTITY |
| REC | RECEPTACLE |
| SC | SURGE CAPACITOR |
| SCR | STATION COMMUNICATIONS ROOM |
| SEC | SECONDS OR SECONDARY |
| SER | STATION ELECTRICAL ROOM |
| SH | SHIELDED OR SHEET |
| SN | SOLID NEUTRAL |
| SS | STAINLESS STEEL |

## ELEC ABBREVIATIONS CONT.

| | |
|---|---|
| SW | SWITCH |
| SWGR | SWITCHGEAR |
| TC | TIME DELAY ON CLOSING |
| TEL | TELEPHONE |
| TO | TIME DELAY ON OPENING |
| TVM | TICKET VENDING MACHINE |
| TW | TWISTED |
| TYP | TYPICAL |
| UG | UNDERGROUND |
| V | VOLTS |
| W | WIRE |
| WP | WEATHERPROOF |
| XFMR | TRANSFORMER |

NOTES

1. HOMERUNS SHOWN CONCEALED SHALL BE INDICATIVE OF ENTIRE CIRCUIT INSTALLATION. THE SAME SHALL APPLY FOR HOMERUNS SHOWN EXPOSED. REFER TO SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
2. CONDUIT AND WIRE (NOT SHOWN) FOR FIXTURES, SWITCHES AND/OR RECEPTACLES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AND SHALL BE:
   - 2.1. 1" (MIN.) CONDUIT RUN
   - 2.2. EXPOSED IN UNFINISHED AREAS.
   - 2.3. CONCEALED ABOVE HUNG CEILINGS AND IN WALLS IN FINISHED AREAS.
   - 2.4. NO. 12 COPPER (MIN.) TYPE "THWN/THHN" NO. OF WIRES REQUIRED.
3. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE CAR MAY BE MADE BY THE CONTRACTOR TO ACCOMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
4. SWITCHES SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. RECEPTACLES SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED, EXCEPT RECEPTACLES IN OFFICES OR AREAS WITH HUNG CEILINGS, WHICH SHALL BE MOUNTED 1'-6" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

# CIVIL EAST VOLUME 11B
# ELECTRICAL
# SYMBOLS AND ABBREVIATIONS
# 1 OF 2

DISCIPLINE: ELECTRICAL

SHEET NAME: E0-ELE-GEN-001

SHEET 14 OF 273

| SYMBOL | DESCRIPTION |
|---|---|
| A 3 b | LED, COMPACT FLUORESCENT OR H.I.D. TYPE LUMINAIRE<br>"A" - LUMINAIRE TYPE<br>"b" - CONTROLLED BY SWITCH "b"<br>"3" - CIRCUIT NUMBER |
| A 3 b | LED OR FLUORESCENT TYPE LUMINAIRE, NOTATIONS SAME AS ABOVE |
| A 3 b | WALL OUTLET AND LED, COMPACT FLUORESCENT OR H.I.D. TYPE LUMINAIRE, NOTATIONS SAME AS ABOVE |
| A | EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS<br>"A" - LUMINAIRE TYPE |
| | CEILING MOUNTED EXIT SIGN |
| | WALL OUTLET EXIT SIGN. ARROW INDICATES DIRECTION OF EGRESS |
| E | REMOTE EMERGENCY CEILING LUMINAIRE |
| E | REMOTE EMERGENCY WALL LUMINAIRE |
| A 1 | POLE MOUNTED LUMINAIRE<br>"A" - LUMINAIRE TYPE<br>"1" - CIRCUIT NUMBER |
| | BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR INSTALLED EXPOSED. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS. |
| | BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR INSTALLED CONCEALED. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS. |
| | BRANCH CIRCUIT CONDUIT INSTALLED EXPOSED TURNING UP. CONDUIT TO CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS. |
| | BRANCH CIRCUIT CONDUIT INSTALLED EXPOSED TURNING DOWN. CONDUIT TO CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS. |
| | BRANCH CIRCUIT CONDUIT INSTALLED CONCEALED TURNING UP. CONDUIT TO CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS. |
| | BRANCH CIRCUIT CONDUIT INSTALLED CONCEALED TURNING DOWN. CONDUIT TO CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS. |
| | CONDUIT STUBBED OUT AND CAPPED |
| 2(3"C., 3#3/0 & 1#2 GRD.) | DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR |
| | FLEXIBLE METAL CONDUIT "WHIP" FOR RECESSED LIGHTING FIXTURES AND LIQUID TIGHT MOTOR CONNECTIONS |

| SYMBOL | DESCRIPTION |
|---|---|
| 1,3 LP-1 | HOMERUN, CIRCUITS 1 AND 3 RUN TO PANEL LP-1 |
| BU-1 | HOMERUN TO EMERGENCY BATTERY UNIT BU-1 |
| TM | HOMERUN TO TELEPHONE BACKBOARD |
| 2-2/C#16TS | DENOTES A QUANTITY OF TWO INSTRUMENT CABLES. EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED. |
| 2-3/C#16TS | SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED. |
| 3(4"C) | THREE 4-INCH CONDUITS |
| | "T" FITTING IN CONDUIT |
| $b | SINGLE POLE SWITCH<br>"b" INDICATES SWITCHLEG SHALL CONTROL LIGHT FIXTURES WITH "b" DESIGNATION |
| $M | SINGLE POLE, DOUBLE THROW MOMENTARY CONTACT SWITCH, CENTER OFF |
| $P | SINGLE POLE SWITCH AND PILOT LIGHT |
| D | DIMMER LIGHTING CONTROL SWITCH |
| C | LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED |
| TM | TIME SWITCH |
| OR LP-** LP-** | LIGHTING PANELBOARD |
| OR DP-** DP-** | DISTRIBUTION PANELBOARD |
| * 4 | DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W<br>* C - MOUNTED ABOVE COUNTER-TOP<br>GF - GROUND FAULT INTERRUPTER TYPE<br>WP - WEATHERPROOF<br>T - TRANSIENT VOLTAGE SURGE SUPPRESSOR<br>4 - CIRCUIT NUMBER |
| | 20A, 240V, 2P, 3W, RECEPTACLE |
| J J | JUNCTION BOX |
| P | PULL BOX |
| OS | OCCUPANCY SENSOR |
| PC | PHOTOCELL |
| HH | HANDHOLE |

| SYMBOL | DESCRIPTION |
|---|---|
| DAMP | INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 12 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A DAMP LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED. |
| WET | INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED. |
| CORROSIVE | INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR CORROSION RESISTANT CONSTRUCTION SUITABLE FOR USE IN A CORROSIVE LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED. |
| **FIRE ALARM SYSTEMS** | |
| R/C 200 | FIRE ALARM HEAT DETECTOR 135°F FIXED TEMPERATURE UNLESS OTHERWISE NOTED. "200" DENOTES 200°F TYPE, "R" DENOTES FIXED TEMPERATURE RATE-OF-RISE TYPE. |
| I | FIRE ALARM SMOKE DETECTOR PHOTOCELL TYPE UNLESS OTHERWISE NOTED. "I" DENOTES IONIZATION TYPE. |
| | FIRE ALARM DUCT SMOKE DETECTOR |
| FACP | FIRE ALARM CONTROL PANEL |
| FA | REMOTE FIRE ALARM ANNUNCIATOR PANEL |
| F | FIRE ALARM MASTER BOX |
| F | FIRE ALARM HORN, MOUNT UP 7'-6" |
| F | FIRE ALARM STROBE, MOUNT UP 6'-8" |
| F | FIRE ALARM HORN AND STROBE LIGHT COMBINATION, MOUNT UP 6'-8" |
| | FIRE ALARM MANUAL PULL STATION, MOUNT UP 4'-0" |
| F | FIRE ALARM BELL |
| S FB | WEATHERPROOF HI-INTENSITY FIRE ALARM STROBE LIGHT |

| SYMBOL | DESCRIPTION |
|---|---|
| **COMMUNICATIONS SYSTEMS** | |
| K | TELEPHONE HANDSET, DESK TYPE<br>K = KEY SYSTEM |
| K | TELEPHONE HANDSET, WALL TYPE<br>K = KEY SYSTEM |
| | PAGE/PARTY TELEPHONE HANDSET, DESK TYPE |
| | PAGE/PARTY TELEPHONE HANDSET, WALL TYPE (MOUNT UP 4'-6") |
| S H1,H2 W | PAGING SPEAKER, WALL MOUNTED "H1, H2" DENOTES HORN TYPE "W" DENOTES WIDE ANGLE TYPE |
| H S | PAGING SPEAKER, WALL MOUNTED, BI-DIRECTIONAL<br>H = HORN TYPE |
| S | PAGING SPEAKER, FLUSH MOUNTED CEILING TYPE |
| S | PAGING SPEAKER, SURFACE MOUNTED CEILING TYPE |
| VC | REMOTE WALL MOUNTED VOLUME CONTROL FOR CEILING SPEAKER (MOUNT UP 5'-0") |
| A | PAGING SPEAKER AMPLIFIER ASSEMBLY |
| TM | TELEPHONE CABINET OR BACKBOARD AS NOTED |
| P | DATA INPUT/OUTPUT CABLE OUTLET<br>"P" DENOTES PROCESS COMPUTER SYSTEM |
| **SECURITY SYSTEMS** | |
| SA | SECURITY ALARM PANEL |
| DS | SECURITY ALARM DOOR SWITCH |
| K | SECURITY ALARM KEY PAD |
| R | SECURITY SYSTEM CARD ACCESS READER |
| | SECURITY ALARM MOTION DETECTOR |
| CCTV | CLOSED CIRCUIT TV CAMERA |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# ELECTRICAL
# SYMBOLS AND ABBREVIATIONS
# 2 OF 2

DISCIPLINE: ELECTRICAL

SHEET NAME: E0-ELE-GEN-002

SHEET 15 OF 273

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| TYPE | DESCRIPTION | MANUFACTURER | HOUSING | OPTICS | VOLTAGE | LAMP TYPE | DRIVER | MOUNTING | FINISH |
|---|---|---|---|---|---|---|---|---|---|
| A | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-3-75LA-4853-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE III DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 8753 LUMENS | 530mA | 20' POLE | BLACK |
| B | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-4-55LA-3253-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 5823 LUMENS | 530mA | 20' POLE | BLACK |
| C | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-2-55LA-3253-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE II DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 5994 LUMENS | 530mA | 15' POLE | BLACK |
| D | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-4-75LA-4853-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 8646 LUMENS | 530mA | 20' POLE | BLACK |
| E | SINGLE HEAD UTILITY POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM EC-1-2-100LA-4853-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE II DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED, COOL WHITE, 11896 LUMENS | 530mA | 20' POLE | BLACK |
| F | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-4-160LA-481A-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 14955 LUMENS | 1050mA | 20' POLE | BLACK |
| G1 | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-4-100LA-6453-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 11558 LUMENS | 530mA | 20' POLE | BLACK |
| G2 | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-4-100LA-6453-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 11558 LUMENS | 530mA | 15' POLE | BLACK |
| H | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-2-70LA-3270-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE II DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 7385 LUMENS | 700mA | 15' POLE | BLACK |
| I | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-4-70LA-3270-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 7293 LUMENS | 700mA | 15' POLE | BLACK |
| J | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-3-100LA-6453-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE III DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 11700 LUMENS | 530mA | 20' POLE | BLACK |
| K | TWIN HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-2@90-4-100LA-6453-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 11558 LUMENS EACH | 530mA | 20' POLE | BLACK |
| L | TWIN HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-2@180-4-160LA-481A-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 14955 LUMENS EACH | 1050mA | 20' POLE | BLACK |
| M | WALLPACK LUMINAIRE | LITHONIA TWH LED TWHLED-30C-1000-4K-T3M-MVOLT-PE-DBLXD | DIE CAST ALUMINUM HOUSING HAS AN IMPACT-RESISTANT, TEMPERED GLASS LENS THAT IS FULLY GASKETED. ZINK-INFUSED SUPER DURABLE TGIC THERMOSET POWDER COAT FINISH. | TYPE III MEDIUM DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 6391 LUMENS | 1000mA | SURFACE | BLACK |

1 LUMINAIRE SCHEDULE

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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ELECTRICAL**
**LUMINAIRE SCHEDULE**
**1 OF 3**

DISCIPLINE: ELECTRICAL

SHEET NAME: E0-ELE-SCH-501

SHEET 16 OF 273

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| TYPE | DESCRIPTION | MANUFACTURER | HOUSING | OPTICS | VOLTAGE | LAMP TYPE | DRIVER | MOUNTING | FINISH |
|---|---|---|---|---|---|---|---|---|---|
| N | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-5-160LA-481A-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE V DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 14465 LUMENS | 1050mA | 20' POLE | BLACK |
| O | POST TOP POLE MOUNTED LUMINAIRE | HOLOPHANE PTUE-70-4K-AS-P3-B-S | CAST ALUMINUM HOUSING, ASYMMETRIC POLYCARBONATE REFRACTOR, GASKETED, 4000K, SPIKE FINIAL, SLIPFITTER, 120-277V | TYPE V DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 5183 LUMENS | 350mA | 15' POLE | BLACK |
| P | NOT USED | | | | | | | | BLACK |
| Q | POST TOP POLE MOUNTED LUMINAIRE | HOLOPHANE PTUE-70-4K-AS-P3-B-S | CAST ALUMINUM HOUSING, ASYMMETRIC POLYCARBONATE REFRACTOR, GASKETED, 4000K, SPIKE FINIAL, SLIPFITTER, 120-277V | TYPE II DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 5427 LUMENS | 530mA | 15' POLE | BLACK |
| R | POST TOP POLE MOUNTED LUMINAIRE | HOLOPHANE PTUE-70-4K-AS-P3-B-S | CAST ALUMINUM HOUSING, ASYMMETRIC POLYCARBONATE REFRACTOR, GASKETED, 4000K, SPIKE FINIAL, SLIPFITTER, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 5736 LUMENS | 530mA | 15' POLE | BLACK |
| S | TWIN HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-2@90-4-55LA-3253-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE IV DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 5823 LUMENS EACH | 530mA | 15' POLE | BLACK |
| T | TWIN HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-2@90-2-55LA-3253-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE II DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 5994 LUMENS EACH | 530mA | 15' POLE | BLACK |
| U | SINGLE HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-1-105LA-4870-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE V DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 10494 LUMENS | 700mA | 20' POLE | BLACK |
| V | SINGLE HEAD POLE MOUNTED LUMINAIRE | | | TYPE II DISTRIBUTION | SEE PANELBOARD SCHEDULE | 250W HIGH PRESSURE SODIUM | N/A | 20' POLE | BLACK |
| W | TWIN HEAD POLE MOUNTED LUMINAIRE | PHILIPS GARDCO ECOFORM ECF-2@90-3-70LA-3270-CW-UNV-BLP- | ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V | TYPE III DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED/COOL WHITE, 7576 LUMENS | 700mA | 15' POLE | BLACK |
| Y | WALLPACK LUMINAIRE | | | UP AND DOWN DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED | | WALL | BLACK |
| Z | WALLPACK LUMINAIRE | | | DOWN DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED | | WALL | BLACK |
| A1 | RECESSED CAN LUMINAIRE | | | WIDE DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED | | RECESSED | WHITE TRIM |

1 LUMINAIRE SCHEDULE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
ELECTRICAL
LUMINAIRE SCHEDULE
2 OF 3

DISCIPLINE: ELECTRICAL

SHEET NAME: E0-ELE-SCH-502

SHEET 17 OF 273

| TYPE | DESCRIPTION | MANUFACTURER | HOUSING | OPTICS | VOLTAGE | LAMP TYPE | DRIVER | MOUNTING | FINISH |
|---|---|---|---|---|---|---|---|---|---|
| B1 | WALLPACK LUMINAIRE | | | UP AND DOWN DISTRIBUTION | SEE PANELBOARD SCHEDULE | LED | | WALL | ALUMINUM |
| C1 | LINEAR LUMINAIRE | | | N/A | SEE PANELBOARD SCHEDULE | LED | | SURFACE | WHITE |
| D1 | LINEAR LUMINAIRE | | | N/A | SEE PANELBOARD SCHEDULE | LED | | RECESSED | WHITE TRIM |
| E1 | 2X2 LUMINAIRE | | | N/A | SEE PANELBOARD SCHEDULE | LED | | RECESSED | WHITE TRIM |
| F1 | HANDRAIL LED | WAGNER LUMENRAIL LED LULS40K20120TS-12 | | N/A | SEE PANELBOARD SCHEDULE | LED | | HANDRAIL | N/A |

## 1 LUMINAIRE SCHEDULE

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METROPOLITAN COUNCIL

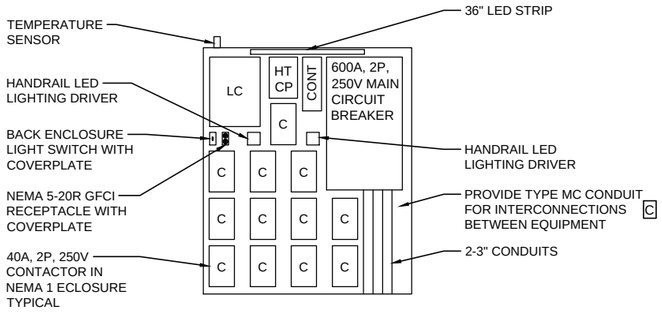
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ELECTRICAL**
**LUMINAIRE SCHEDULE**
**3 OF 3**

DISCIPLINE: ELECTRICAL

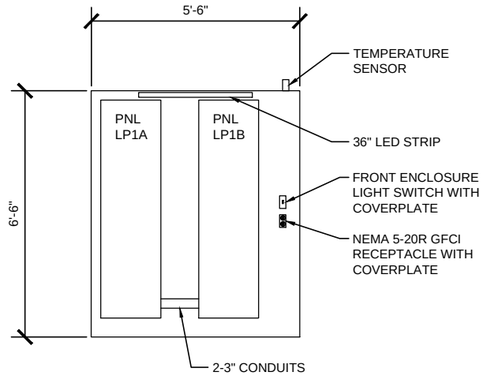
SHEET NAME: E0-ELE-SCH-503

SHEET 18 OF 273



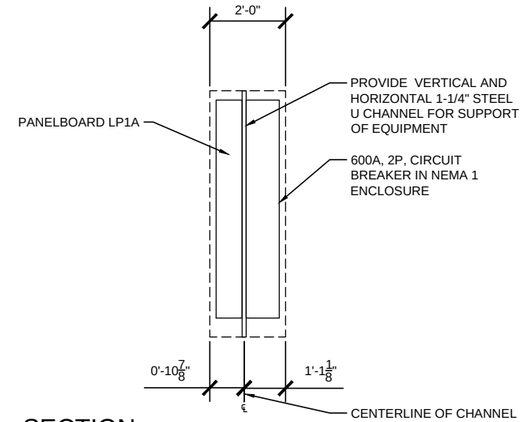

1 BACK ELEVATION

SCALE: N.T.S.



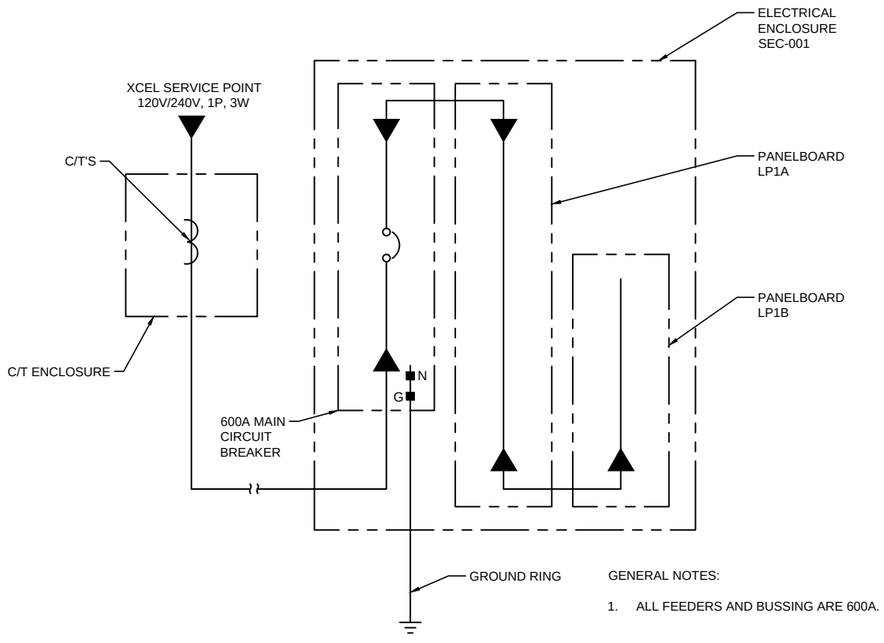

2 FRONT ELEVATION

SCALE: N.T.S.




3 SECTION

SCALE: N.T.S.




GENERAL NOTES:

1. ALL FEEDERS AND BUSSING ARE 600A.

4 ELECTRICAL SERVICE ONE LINE DIAGRAM

SCALE: N.T.S.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ELECTRICAL**
**DETAILS**
**1 OF 4**

DISCIPLINE: ELECTRICAL

SHEET NAME: E0-ELE-DTL-603

SHEET 19 OF 273

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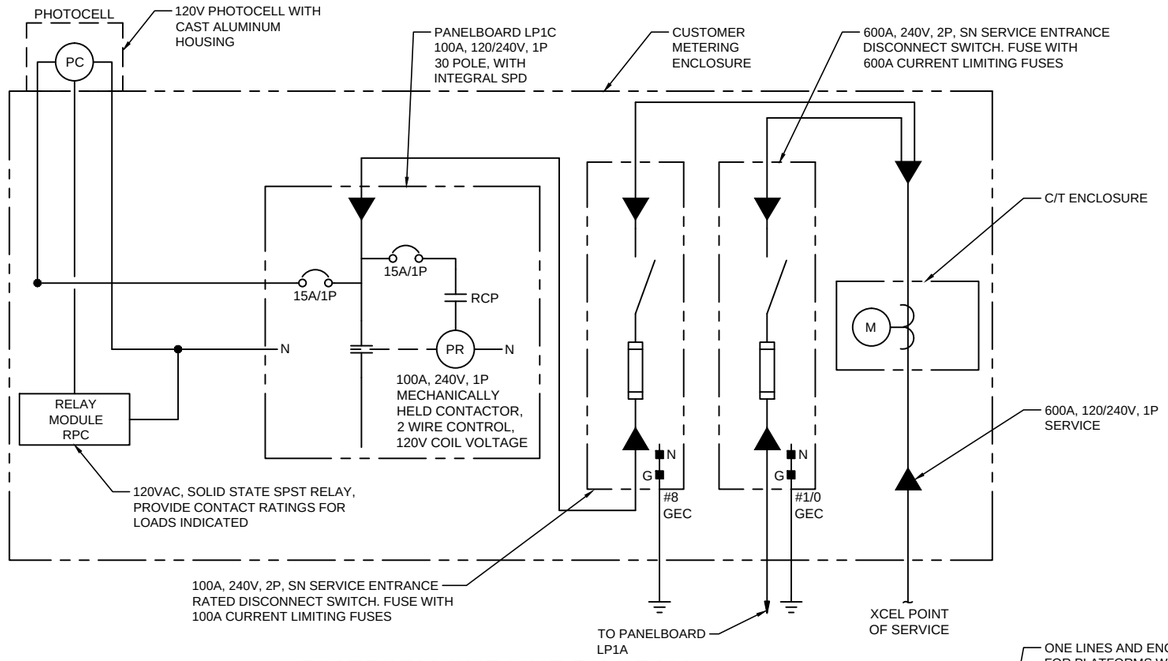
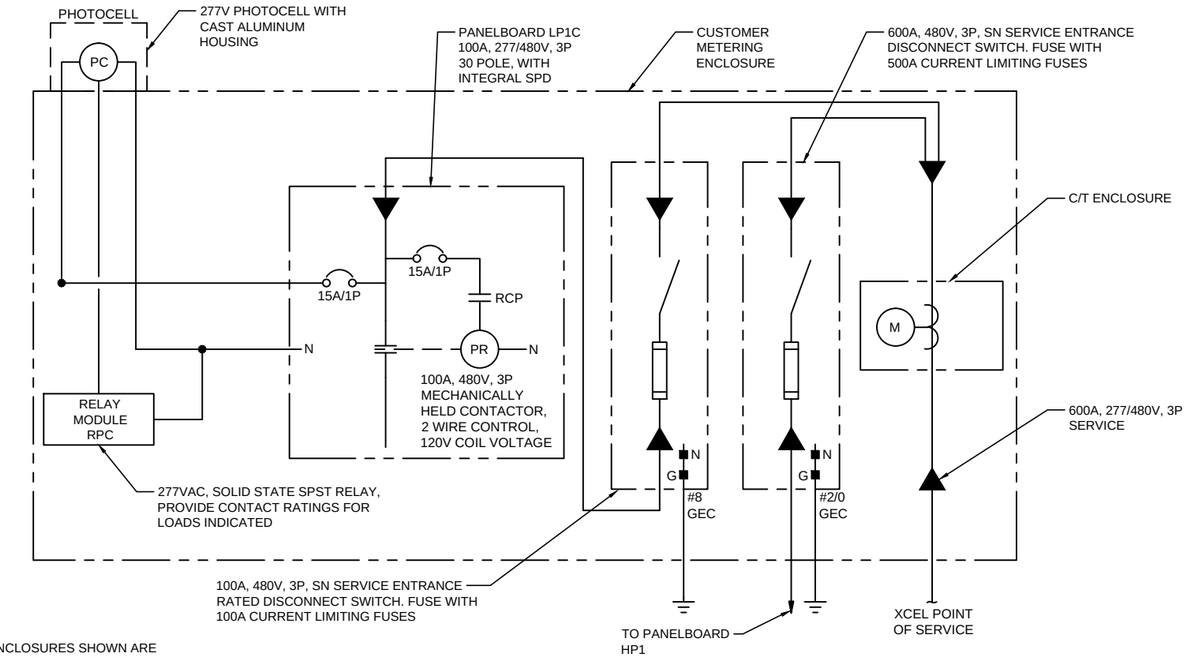
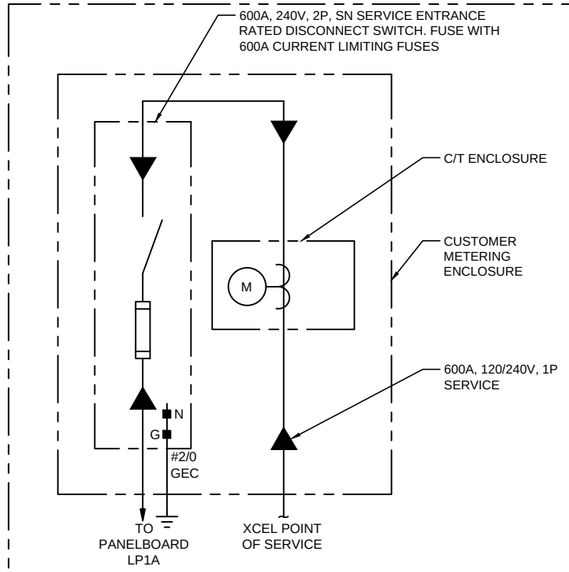



1 PLATFORM ONE LINE DIAGRAM
SCALE: N.T.S.
120/240V, 1P SERVICE

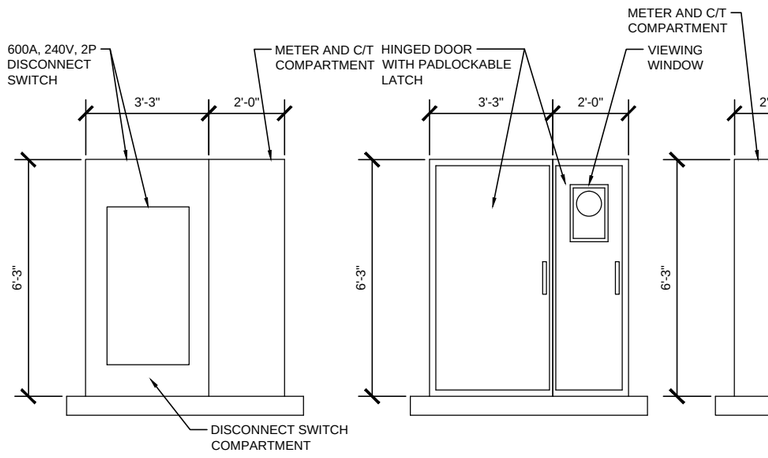



2 PLATFORM ONE LINE DIAGRAM
SCALE: N.T.S.
277/480V, 3P SERVICE

ONE LINES AND ENCLOSURES SHOWN ARE FOR PLATFORMS WITH PARK AND RIDES UNLESS NOTED OTHERWISE




3 PLATFORM SERVICE ONE LINE DIAGRAM
SCALE: N.T.S.



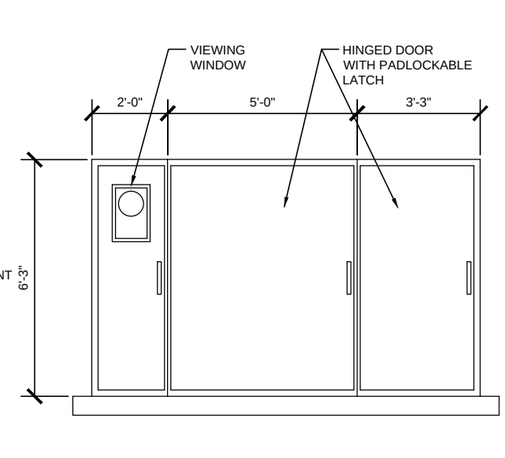

NOTE: CUSTOMER METERING ENCLOSURES ARE FREE STANDING NEMA 3R, 12GA, 316L STAINLESS STEEL ENCLOSURE. ENCLOSURE IS 2' DEEP. ON 6" CONCRETE SLAB. PAD SHALL EXTEND 3" OUT FROM ALL SIDES OF THE ENCLOSURE.

4 CUSTOMER METERING ENCLOSURE DETAIL
SCALE: N.T.S.




NOTE: CUSTOMER METERING ENCLOSURES ARE FREE STANDING NEMA 3R, 12GA, 316L STAINLESS STEEL ENCLOSURE. ENCLOSURE IS 2' DEEP. ON 6" CONCRETE SLAB. PAD SHALL EXTEND 3" OUT FROM ALL SIDES OF THE ENCLOSURE.

5 CUSTOMER METERING ENCLOSURE DETAIL
SCALE: N.T.S.

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METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

60% SUBMISSION - 09/28/15

**CIVIL EAST - VOLUME 11B**
**ELECTRICAL**
**DETAILS**
**2 OF 4**

DISCIPLINE: ELECTRICAL
SHEET NAME: E0-ELE-DTL-604

SHEET 20 OF 273

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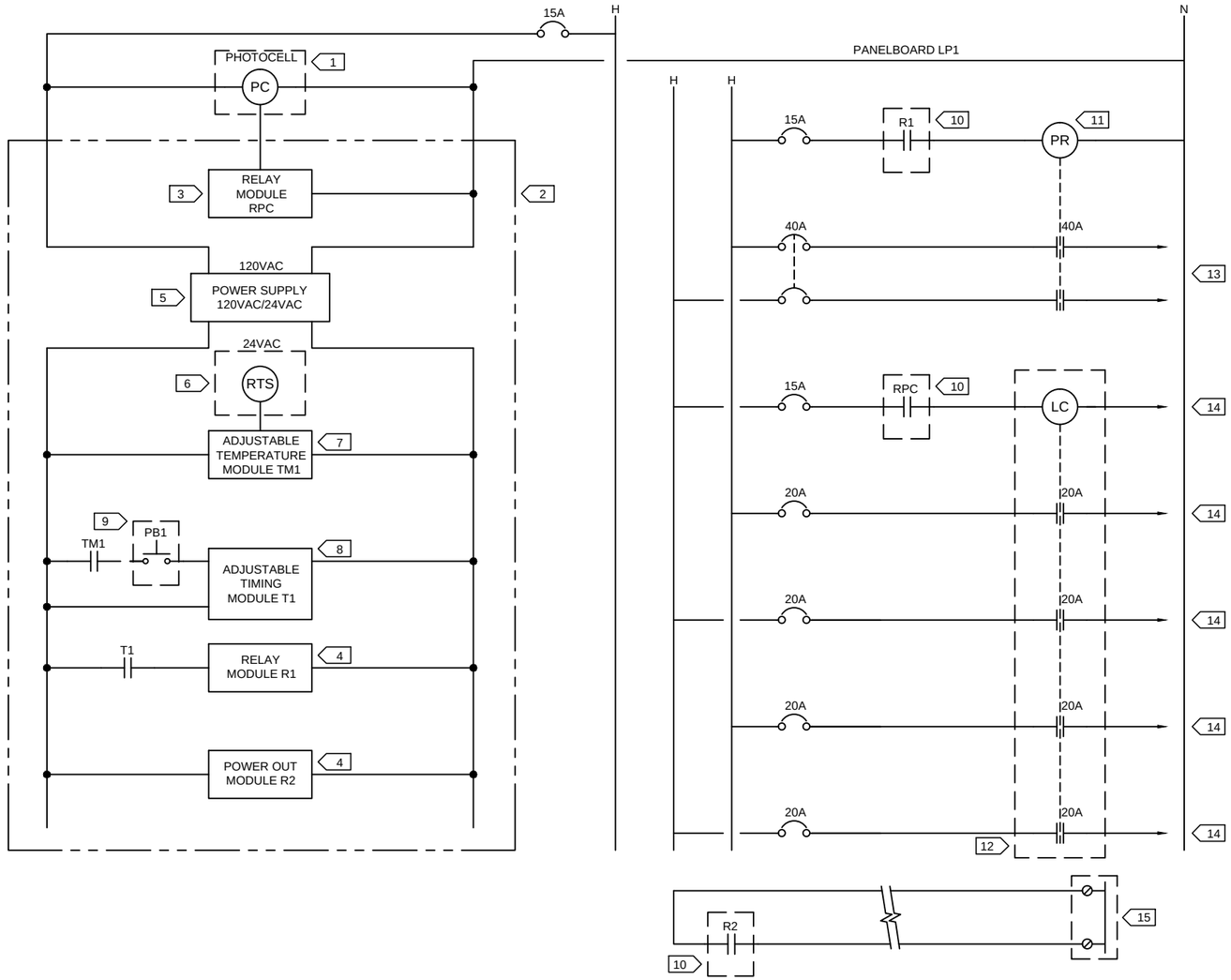


KEYNOTES:

1. PHOTOCELL WITH CAST ALUMINUM HOUSING, REMOTE MOUNT AT LOCATION WITH MINIMAL NIGHT LIGHTING.
2. DIN RAIL MOUNTED MODULES. LOCATED IN THE ELECTRICAL ENCLOSURE.
3. SOLID STATE SPST RELAY, 120VAC INPUT/OUTPUT. PROVIDE CONTACT RATINGS FOR LOADS INDICATED.
4. SOLID STATE SPST RELAY, 24VAC INPUT/OUTPUT. PROVIDE CONTACT RATINGS FOR LOADS INDICATED.
5. SOLID STATE POWER SUPPLY, 120VAC IN 24VAC OUT.
6. HERMETICALLY SEALED TEMPERATURE SENSOR. MOUNT ON TOP OF ENCLOSURE. PROVIDE PROTECTIVE METAL HOUSING.
7. SOLID STATE ADJUSTABLE TEMPERATURE MODULE. PROVIDE WITH BRACKET AND SOCKET FOR DIN RAIL MOUNTING.
8. SOLID STATE, DELAYED TIME, TIMER. PROVIDE TOTAL OF 12 TIMERS.
9. 16MM 5/8" ANTI-VANDAL MOMENTARY STAINLESS STEEL METAL PUSH BUTTON SWITCH WITH SCREW TERMINALS. MOUNT IN PASSENGER SHELTER COLUMN WITH STAINLESS STEEL COVERPLATE. PROVIDE TOTAL OF 12 PUSH BUTTONS AND COVERPLATES.
10. CONTACTS LOCATED AT DIN RAIL MOUNTED RELAY MODULES.
11. 40A, 2P, 250V MECHANICALLY HELD, LATCHING TYPE, 2 WIRE CONTROL, NEMA 1 ENCLOSURE, PANEL MOUNTED CONTACTOR. PROVIDE TOTAL OF 12 CONTACTORS.
12. 20A, 4 POLE, 250V MECHANICALLY HELD, LATCHING TYPE, 2 WIRE CONTROL, NEMA 1 ENCLOSURE, PANEL MOUNTED LIGHTING CONTACTOR.
13. TO RADIANT HEATERS.
14. TO LUMINAIRES.
15. TO SCADA TERMINALS ON PLC. LOCATED IN COMMUNICATIONS CABINET SCC-001, VERIFY TERMINALS.

## 1 PLATFORM CONTROL WIRING DETAIL

SCALE: N.T.S.

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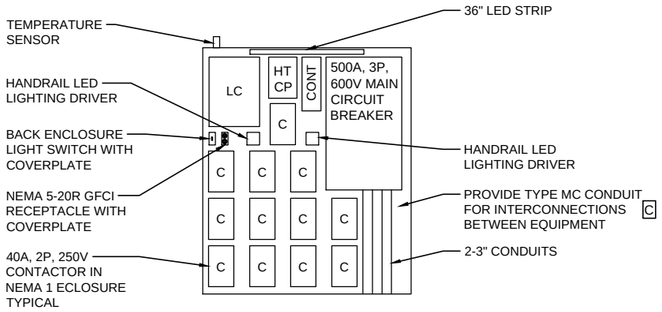
SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ELECTRICAL**
**DETAILS**
**3 OF 4**

DISCIPLINE: ELECTRICAL

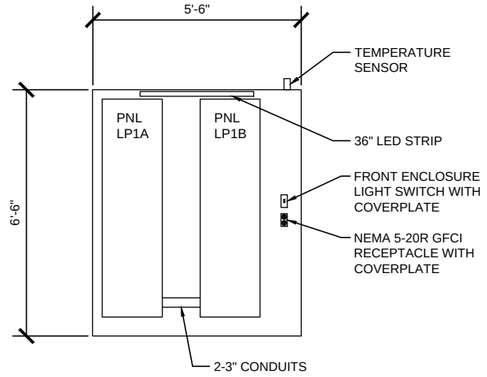
SHEET NAME: E0-ELE-DTL-605

SHEET 21 OF 273



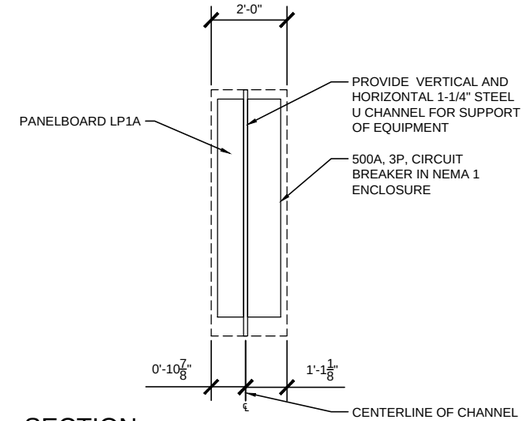

1 BACK ELEVATION

SCALE: N.T.S.



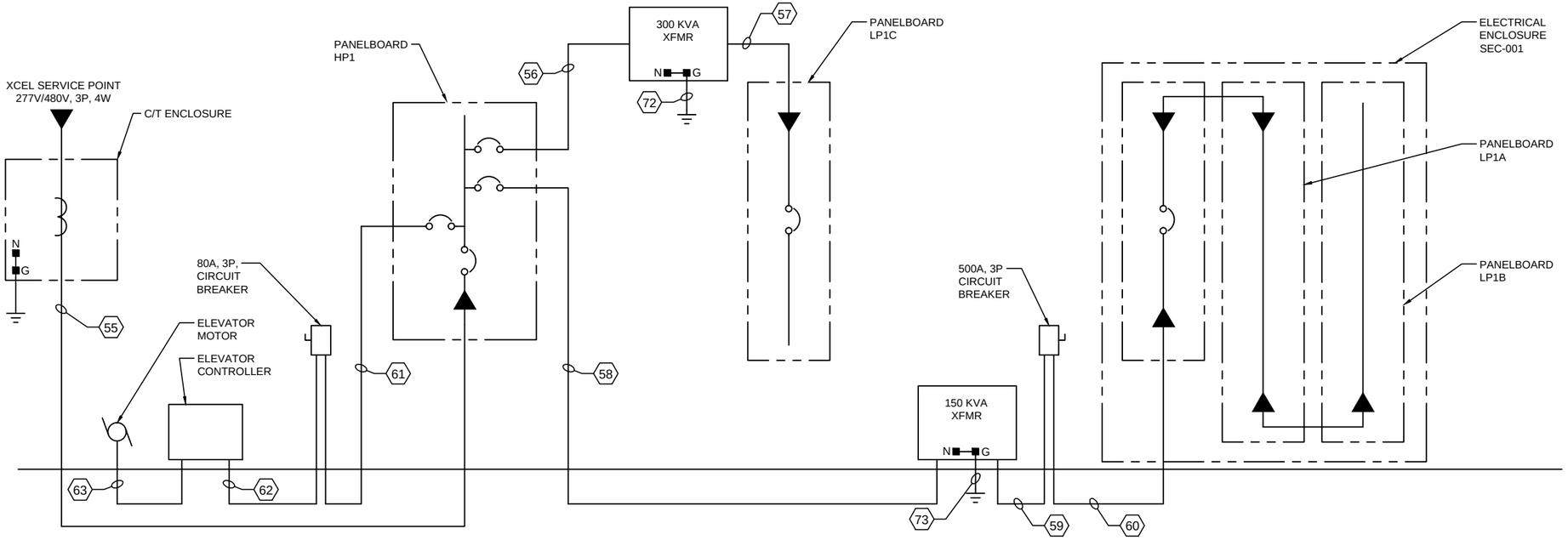

2 FRONT ELEVATION

SCALE: N.T.S.




3 SECTION

SCALE: N.T.S.




4 ELECTRICAL SERVICE ONE LINE DIAGRAM

SCALE: N.T.S.

GENERAL NOTES:

1. SEE PANELBOARD SCHEDULES ON SHEET 502 FOR PANELBOARD VOLTAGE, AMPACITY AND PHASE.
2. SEE VAN WHITE CONDUIT AND WIRE SCHEDULE ON SHEET 501 FOR CONDUIT AND WIRE SIZES FOR TAGS INDICATED.

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Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ELECTRICAL**
**DETAILS**
**4 OF 4**

DISCIPLINE: ELECTRICAL

SHEET NAME: E0-ELE-DTL-606

SHEET 22 OF 273

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# CODE SUMMARY - CENTER PLATFORM
# 21ST STREET STATION

## CODE REFERENCES

| | |
|---|---|
| MINNESOTA STATE BUILDING CODE | 2015 |
| NFPA 130 – STANDARD FOR FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS | 2014 |

IBC REVIEW

A. DESCRIPTION
LOCATION: MINNEAPOLIS, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF A PLATFORM 270' LONG BY 21'–4" ACCESSED BY A SLOPED WALK AT EACH END OF PLATFORM. PLATFORM IS OPEN TO EXTERIOR ON ALL FOUR SIDES.

TYPICAL PLATFORM AREA: 5760 SQUARE FEET (GROSS AREA)
5416 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA AT PLATFORM: = 2928 SQUARE FEET
732 SQUARE FEET (1 @ 36'–0" X 20'–4") SOUTH CANOPY
732 SQUARE FEET (1 @ 36'–0" X 20'–4") MIDDLE CANOPY
732 SQUARE FEET (1 @ 36'–0" X 20'–4") MIDDLE CANOPY
732 SQUARE FEET (1 @ 36'–0" X 20'–4") NORTH CANOPY

B. OCCUPANCY CLASSIFICATION (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3
(15 S.F. PER PERSON)

C. OCCUPANCY SEPARATIONS

NONE ARE REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. IBC EXITING SUMMARY

NO. OF OCCUPANTS = 5420 S.F. / 15 S.F./OCC = 361
REQUIRED EGRESS WIDTH = 361 X 0.2 = 72" (PER 1005.3.2)
WIDTH PROVIDED = 2 RAMPS AT 145" = 290"
2 MEANS OF EGRESS PROVIDED

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

## PLATFORM COLOR AND FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

PLATFORM COLOR AND FINISH SCHEDULE

| TYPE | STATION | STRUCTURAL STEEL PAINT COLOR | PLATFORM CONC COLOR | PLATFORM CONC FINISH | CONC WALL COLOR | CONC WALL FINISH | RAILING INFILL MATERIAL | ALUM WDW FRAME FINISH | EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH | ALUM COMP CANOPY SOFFIT AND FASCIA COLOR | ARCH WOVEN MESH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CENTER | 21ST STREET STATION | PPG 513–7 COFFEE BEAN | CEMSTONE MENDOTA BUFF | TBD | CEMSTONE MENDOTA BUFF | TBD | SS CABLE | LIGHT BRONZE ANODIZED | HUNTER DOUGLAS WOODWRIGHT 8443 GREY BARNWOOD CEDAR | ALUCOBOND GLADE GREEN COOL | TBD |

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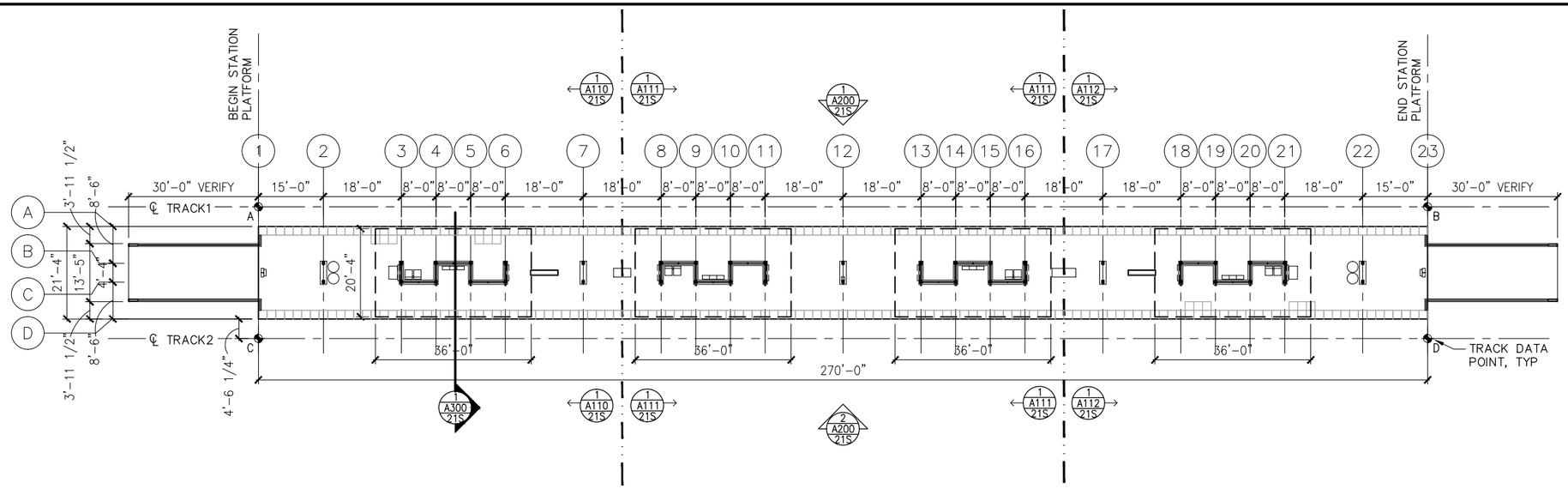
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**CODE SUMMARY / FINISH SCHEDULE**

DISCIPLINE: ARCHITECTURE

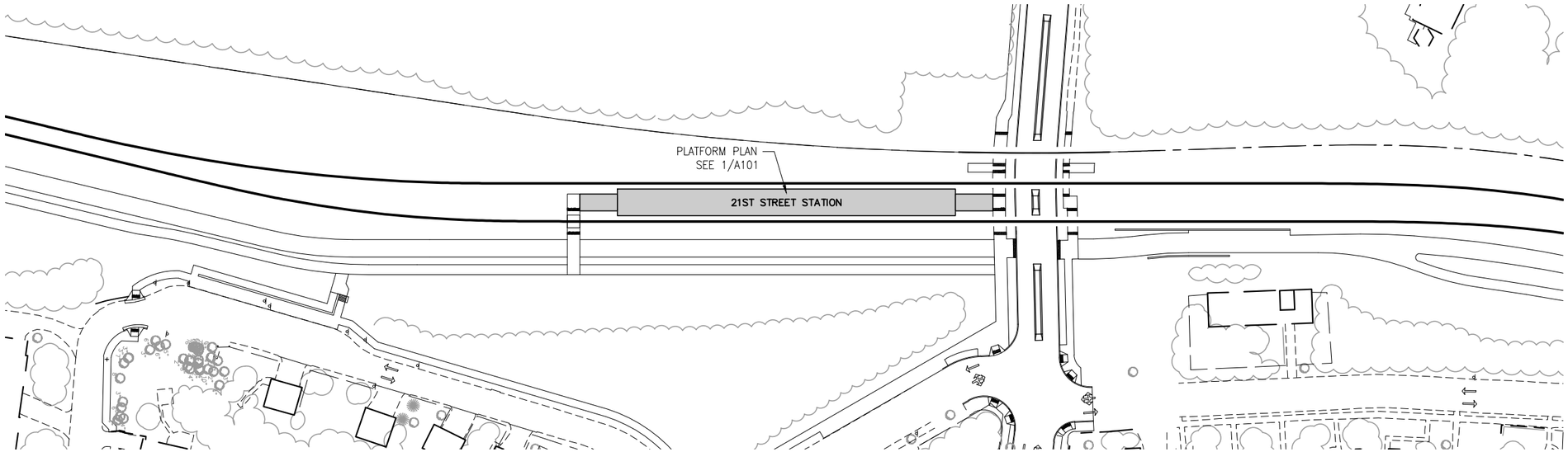
SHEET NAME: E3-21S-ARC-COD-010

SHEET 23 OF 273




1 PLATFORM PLAN
SCALE: 1"=30'

0 7.5 15 30
SCALE




2 STATION AREA PLAN
SCALE: 1"=100'

0 25 50 100
SCALE

## TRACK DATA

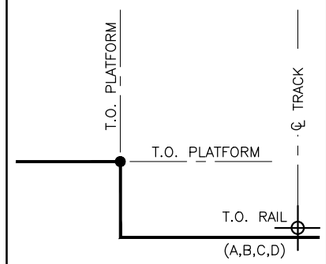
ELEV 100'-0" (LOCATION ON PLAN)

**TRACK 1 EL 100'-0"=** XXX.XX (PT 'A')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| A | XXX.XX | XXXX+XX.XX | |
| B | XXX.XX | XXXX+XX.XX | |
| | | | |

**TRACK 2 EL 100'-0"=** XXX.XX (PT 'C')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| C | XXX.XX | XXXX+XX.XX | |
| D | XXX.XX | XXXX+XX.XX | |
| | | | |




SECTION DIAGRAM AT PLATFORM EDGE

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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-PLN-101

SHEET 24 OF 273

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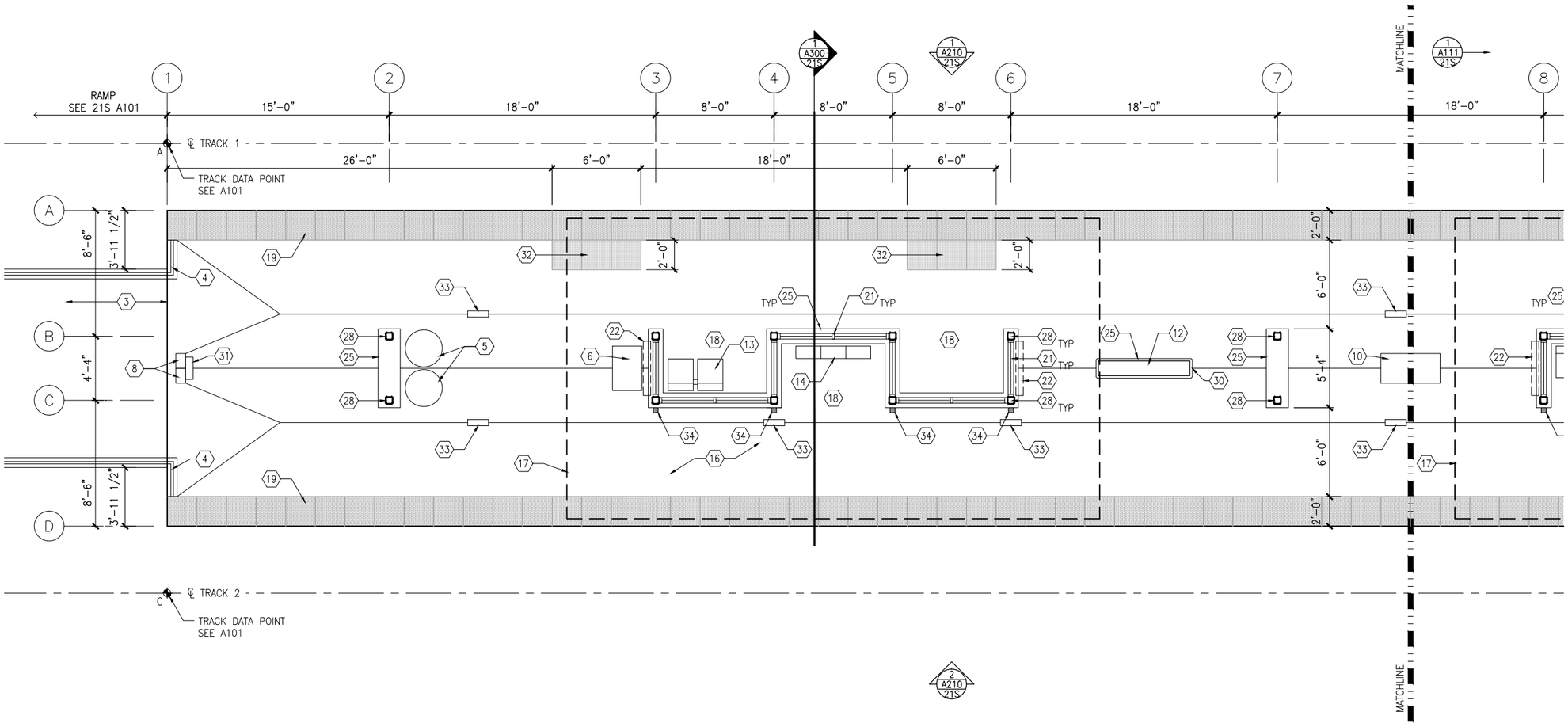
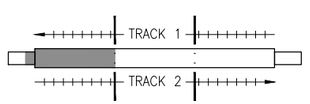



1 SOUTH PARTIAL PLATFORM PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**SOUTH PARTIAL PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-PLN-110

SHEET 25 OF 273

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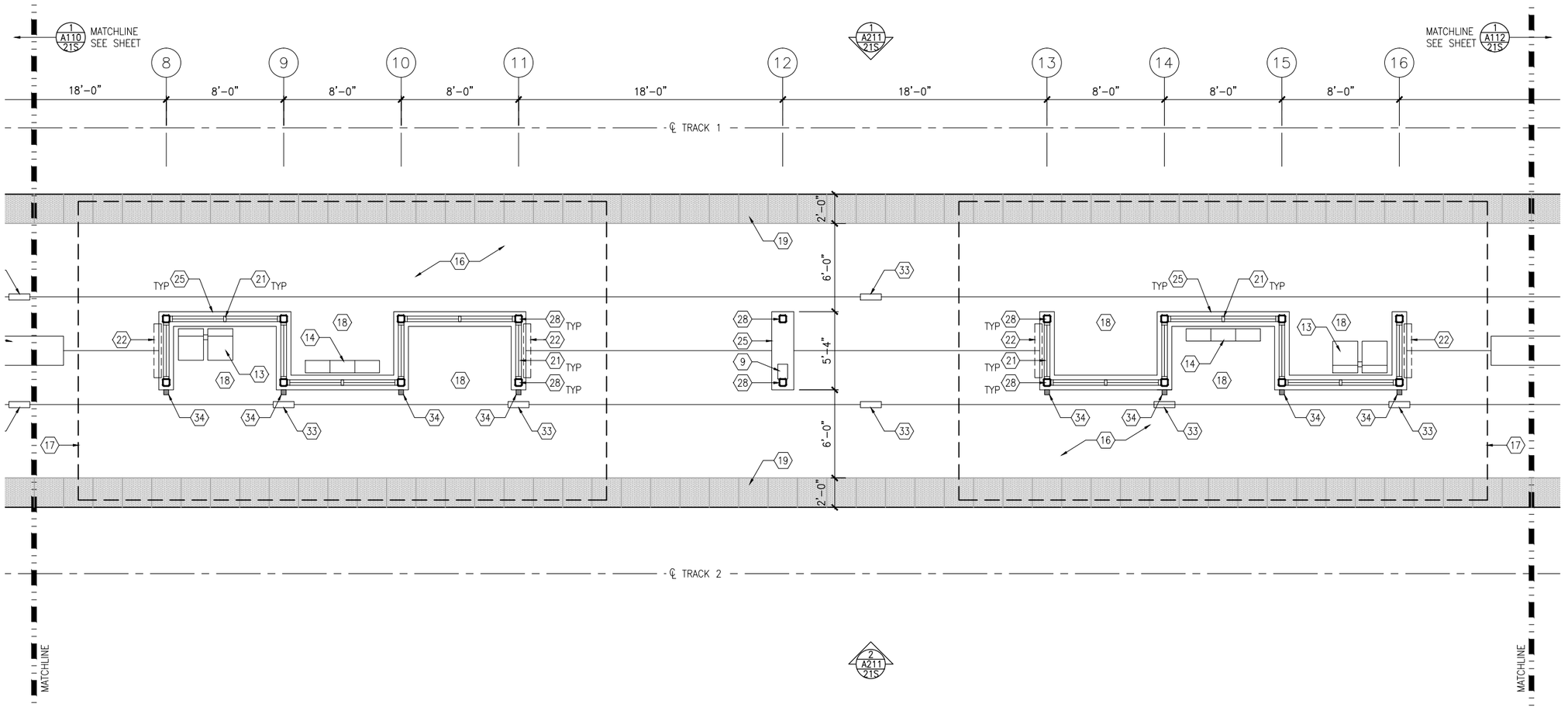
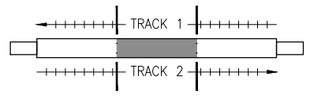



1 MIDDLE PARTIAL PLATFORM PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
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29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**MIDDLE PARTIAL PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-PLN-111

SHEET 26 OF 273

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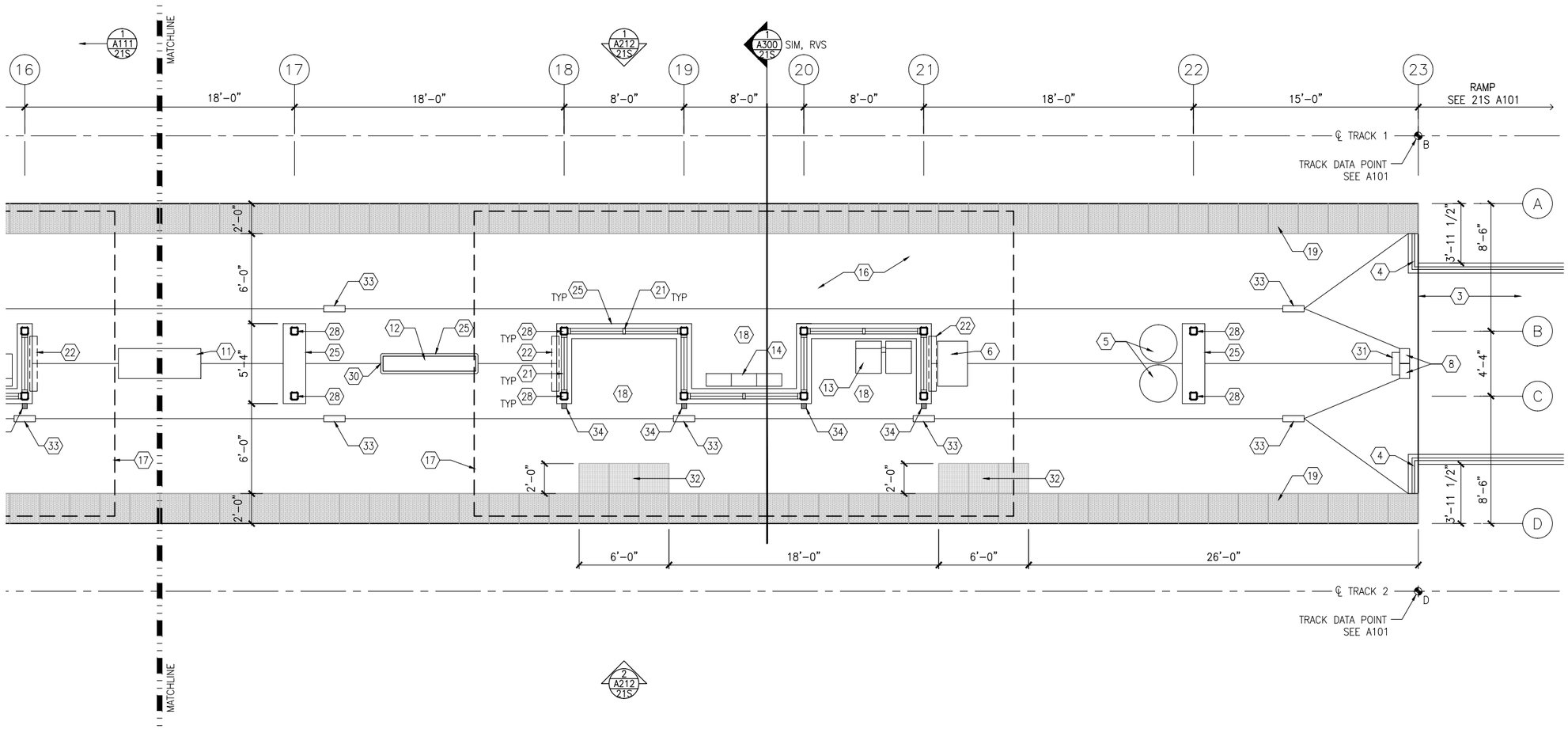
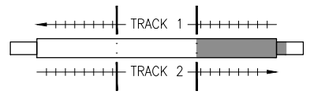



## 1 NORTH PARTIAL PLATFORM PLAN

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

0 2 4 8
SCALE




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
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14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
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29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

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SOUTHWEST Green Line LRT Extension

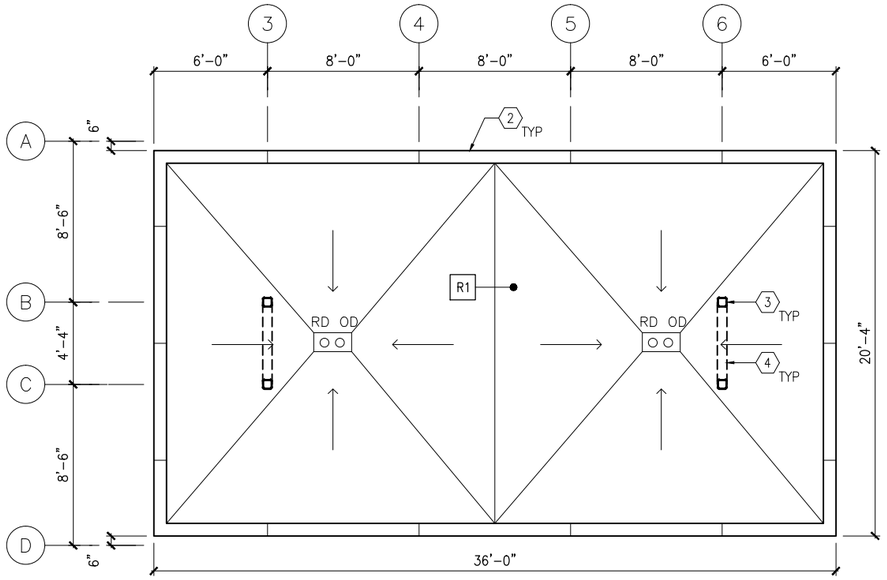
# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# NORTH PARTIAL PLATFORM PLAN

DISCIPLINE: ARCHITECTURE

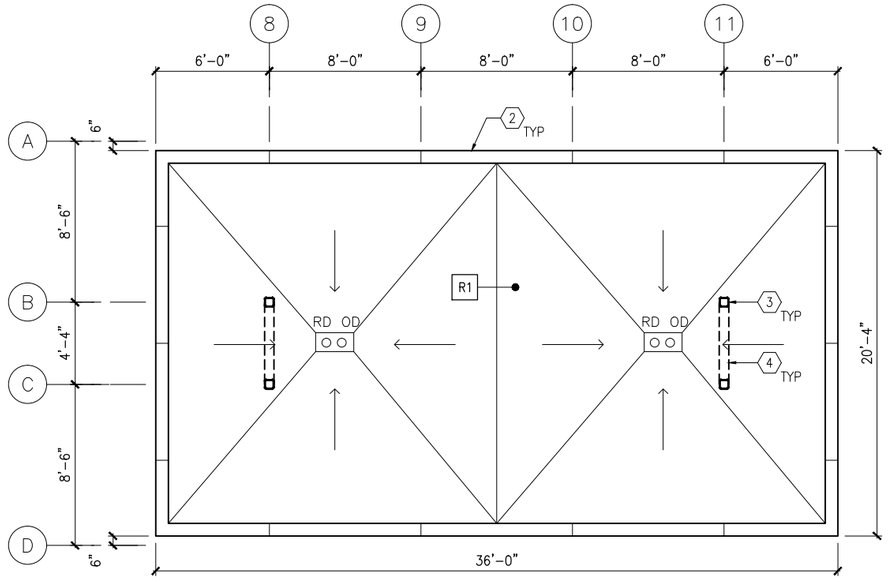
SHEET NAME: E3-21S-ARC-PLN-112

SHEET 27 OF 273

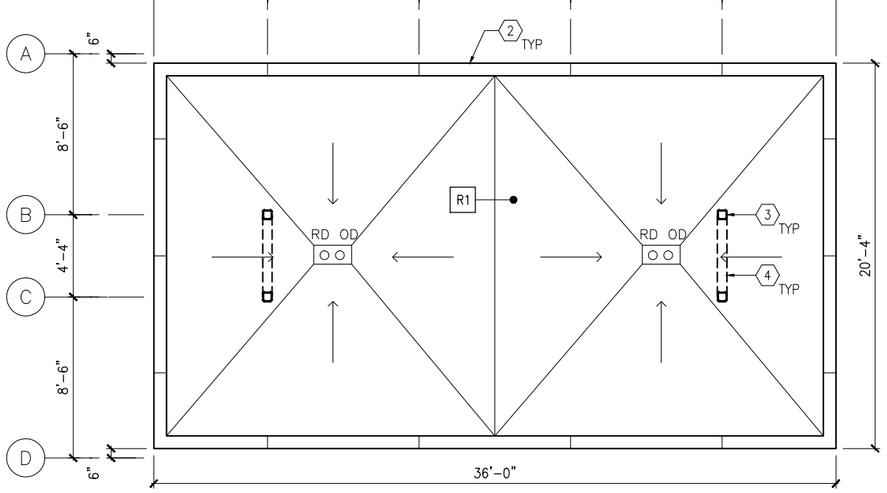
Sep. 21 2015 08:47 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ARCH\21ST STREET STATION\E3-21S-ARC-PLN-112.dwg By: V-IyerN



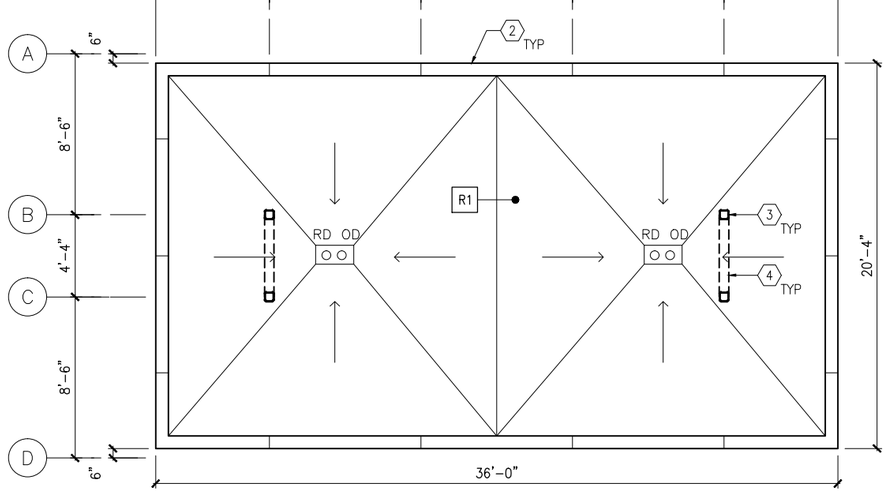

1 ROOF PLAN – SOUTH CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




2 ROOF PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




3 ROOF PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




4 ROOF PLAN – NORTH CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE-FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

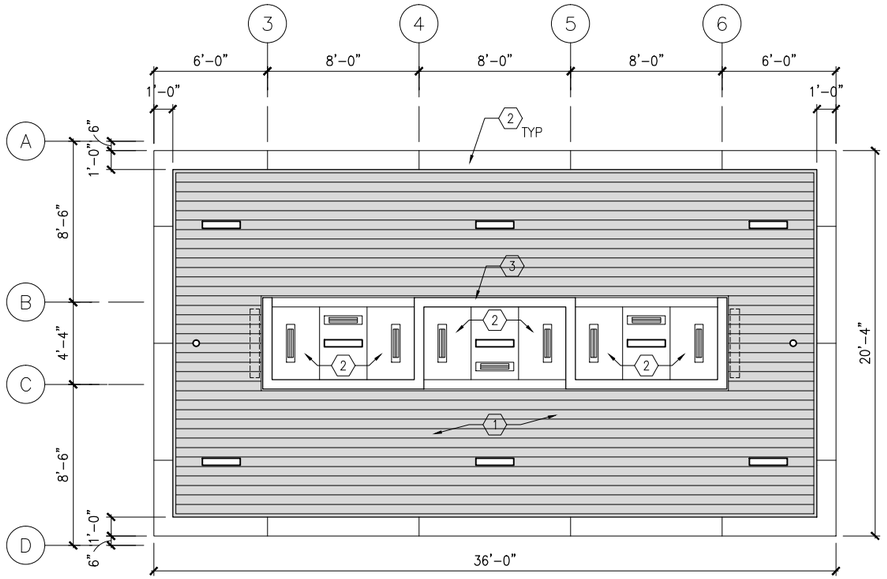
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**ROOF PLANS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-PLN-150

SHEET 28 OF 273

Sep. 21 2015 08:47 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ARCH\21ST STREET STATION\E3-21S-ARC-PLN-150 .dwg By: V-IyerN

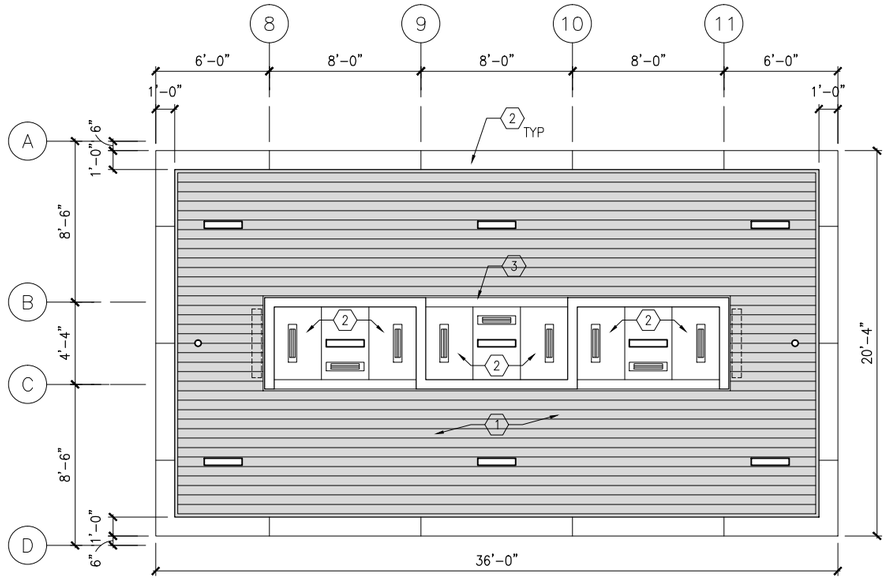



1 REFLECTED CEILING PLAN – SOUTH CANOPY

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

0 2 4 8

SCALE

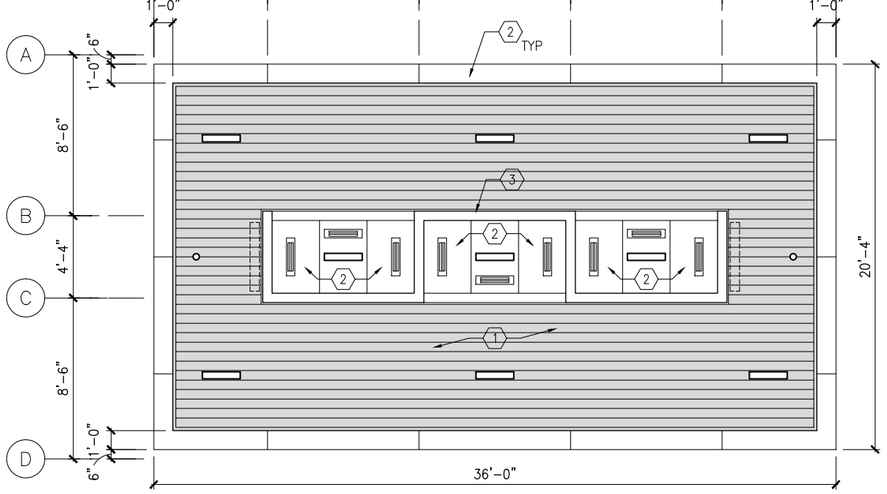



2 REFLECTED CEILING PLAN – MIDDLE CANOPY

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

0 2 4 8

SCALE

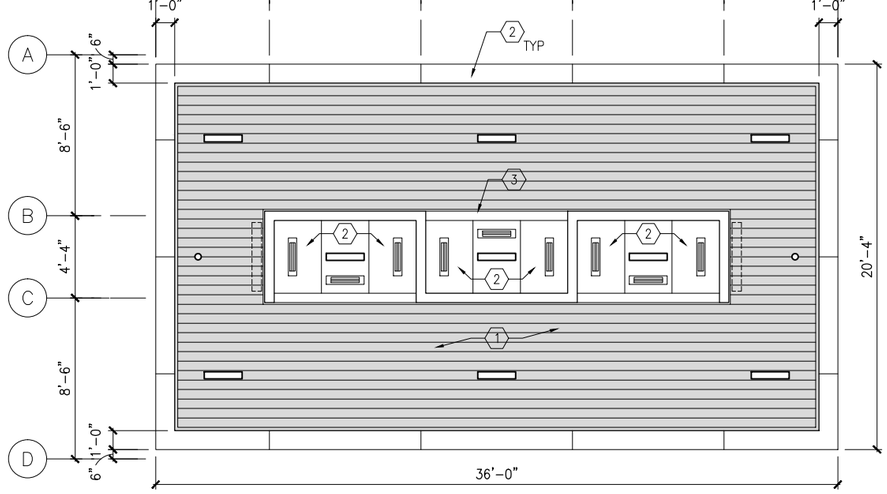



3 REFLECTED CEILING PLAN – MIDDLE CANOPY

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

0 2 4 8

SCALE




4 REFLECTED CEILING PLAN – NORTH CANOPY

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

0 2 4 8

SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- S SPEAKER
- M MICROPHONE
- C SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

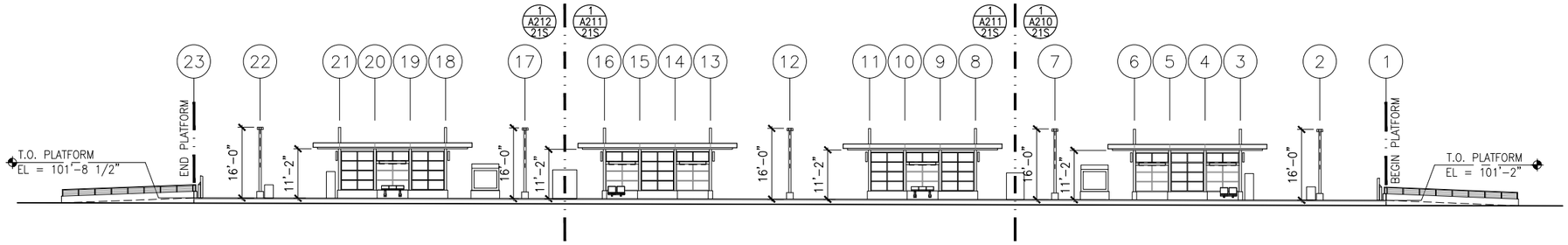
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# REFLECTED CEILING PLANS

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-RCP-180

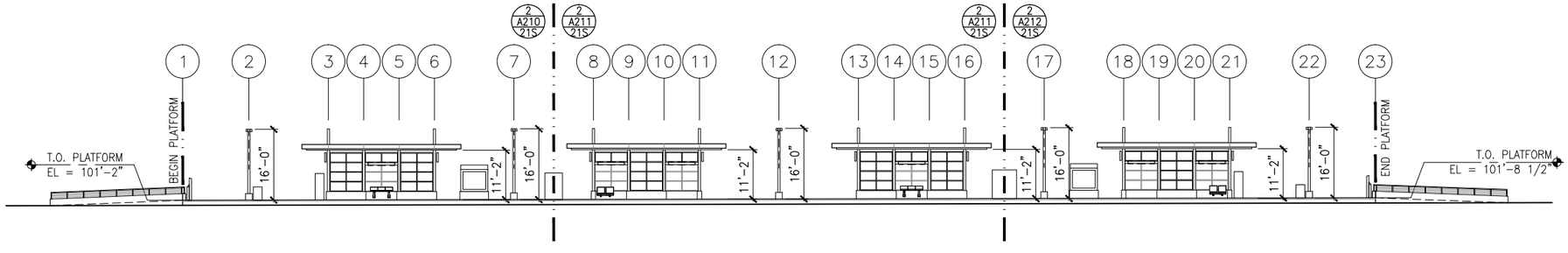
SHEET 29 OF 273




1 TRACK 1 ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE

(0.20% SLOPE)*




2 TRACK 2 ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE

(0.20% SLOPE)*

*VERIFY W/ TRACK PROFILE, ADJUST ELEVATIONS ACCORDINGLY

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

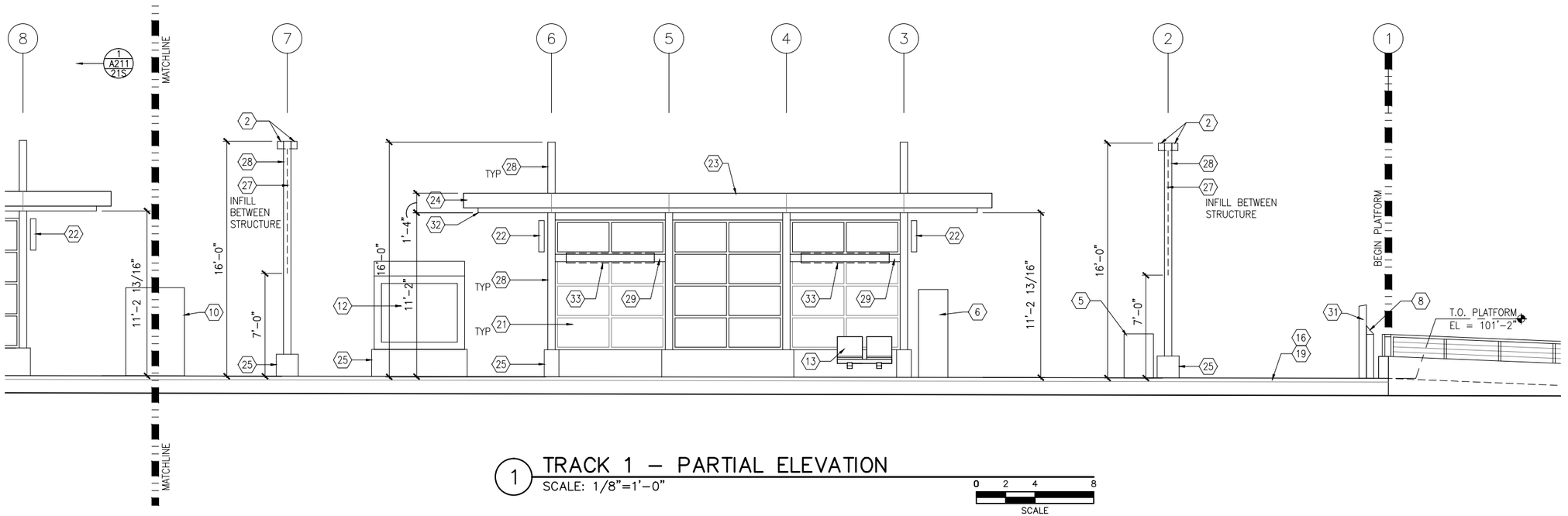
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-ELV-200

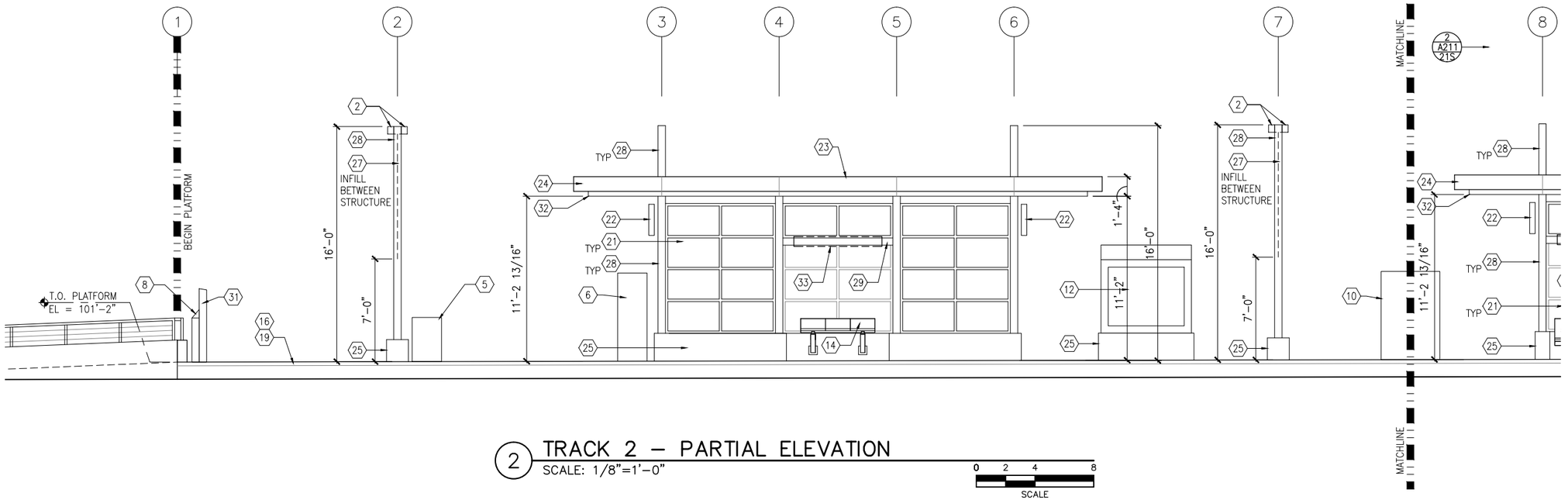
SHEET 30 OF 273

Sep. 21 2015 08:48 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ARCH\21ST STREET STATION\E3-21S-ARC-ELV-200.DWG By: V-IyerN




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

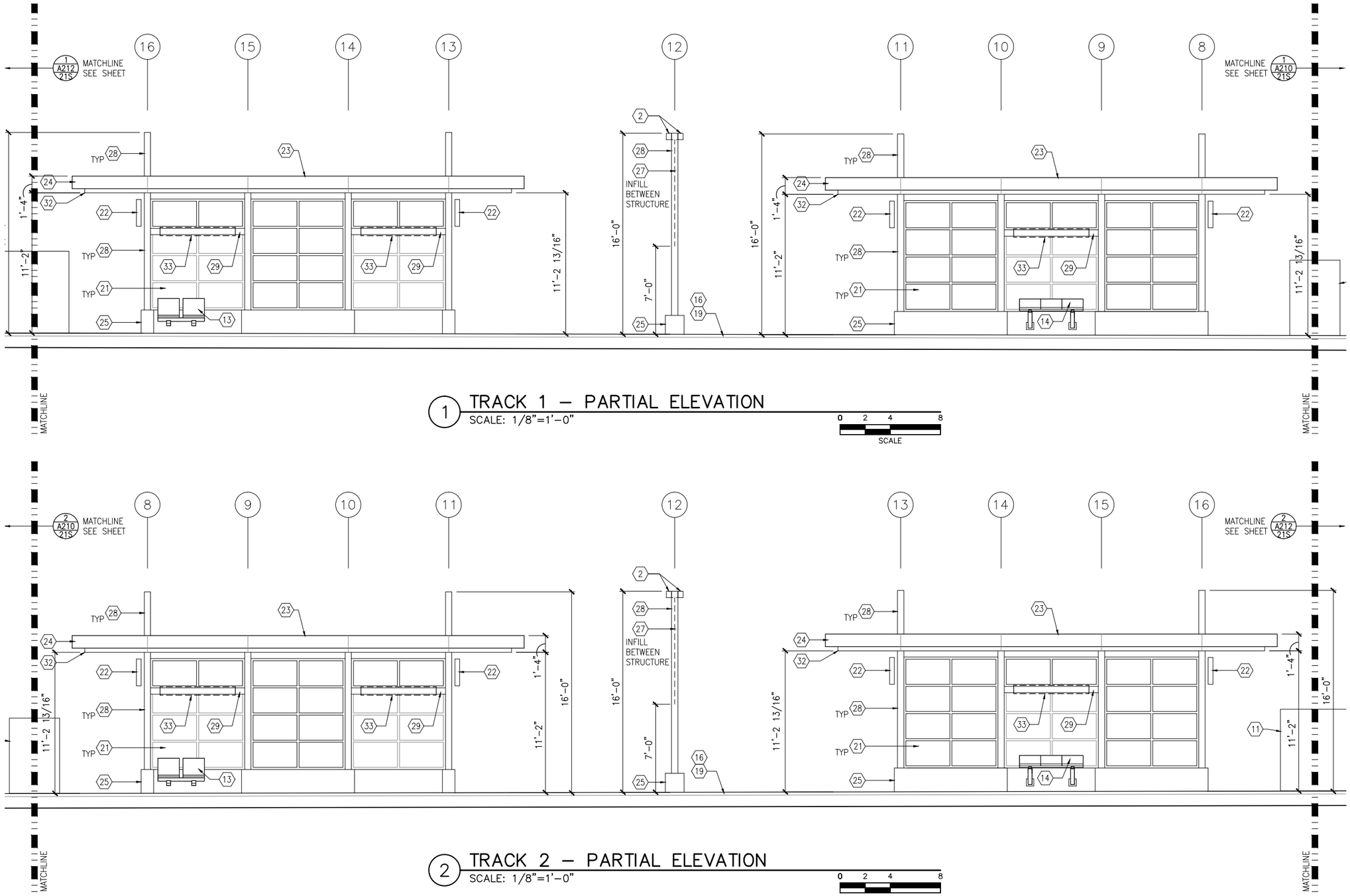
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**SOUTH PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-ELV-210

SHEET 31 OF 273

Sep. 21 2015 08:49 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ARCH\21ST STREET STATION\E3-21S-ARC-ELV-210.dwg By: V-IyerN




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

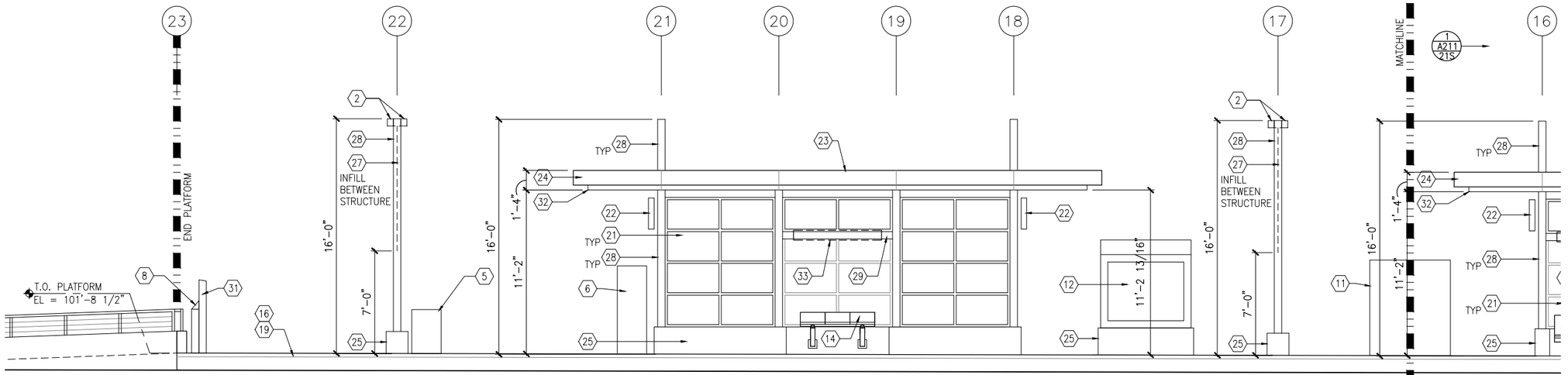
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**MIDDLE PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-ELV-211

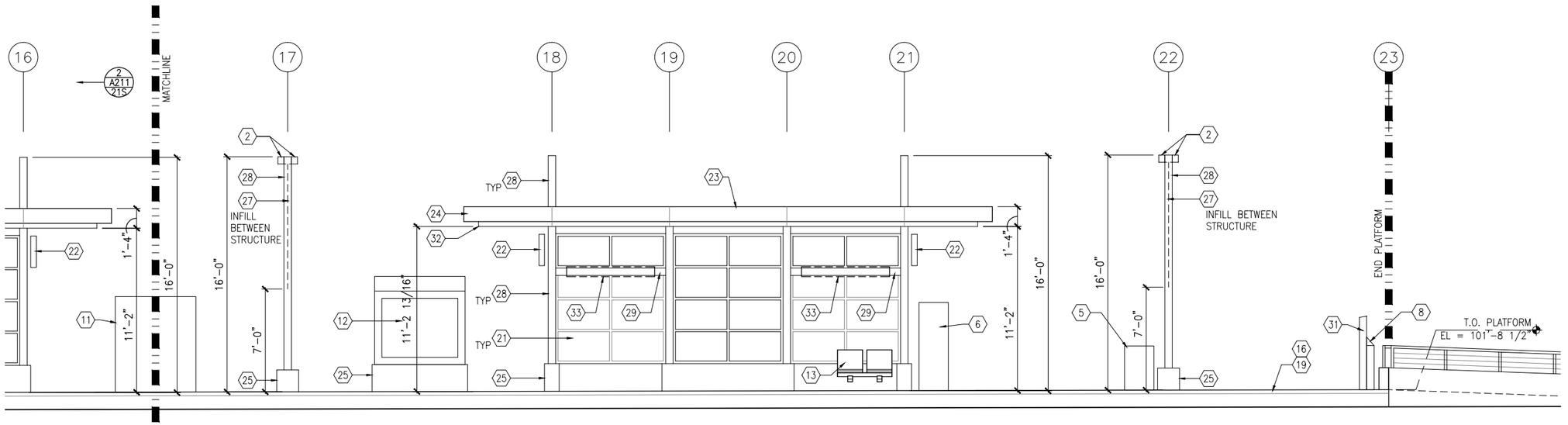
SHEET 32 OF 273

Sep. 21 2015 08:49 am v:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ARCH\21ST STREET STATION\E3-21S-ARC-ELV-211.dwg By: V-IyerN




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

SCALE 0 2 4 8




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

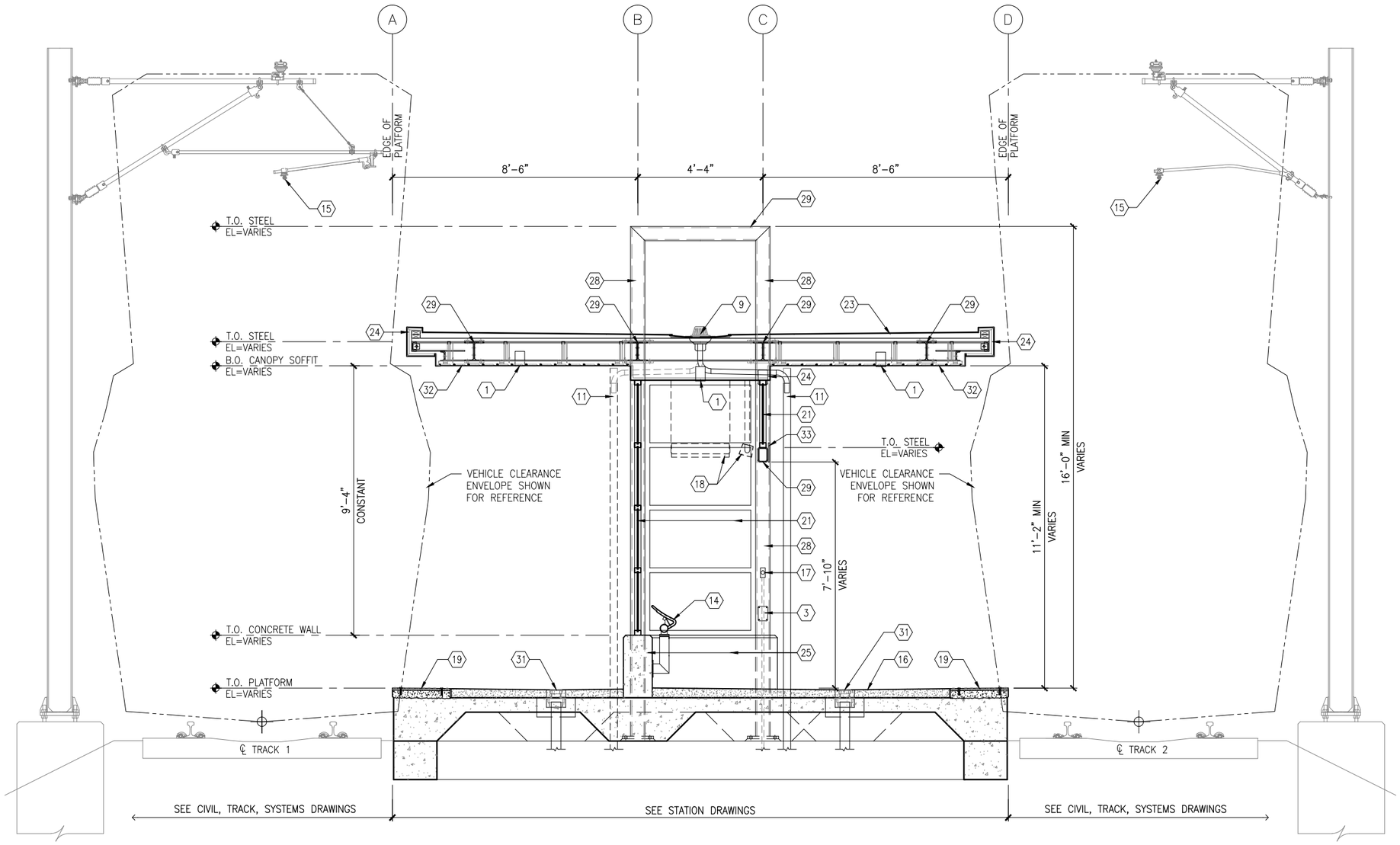
# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# NORTH PARTIAL ELEVATIONS

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-ELV-212

SHEET 33 OF 273

Sep. 21 2015 08:50 am v:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ARCH\21ST STREET STATION\E3-21S-ARC-ELV-212 .dwg By: V-IyerN




1 TYPICAL PLATFORM SECTION
SCALE: 1/4"=1'-0"

0 1 2 4
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. LIGHT RECESSED IN SOFFIT
2. LIGHT MOUNTED TO STRUCTURE
3. HAND HOLE IN STEEL STRUCTURE
4. HAND RAIL
5. SECURITY CAMERA
6. TICKET VENDING MACHINE
7. EMERGENCY TELEPHONE LIGHT
8. EMERGENCY CALL BOX
9. ROOF DRAIN
10. PRE-FINISHED METAL GUTTER
11. PRE-FINISHED METAL DOWNSPOUT
12. PRE-FINISHED METAL SCUPPER
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. HEATER PUSH BUTTON CONTROLS
18. INFRARED HEATER
19. DETECTABLE WARNING PAVER AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. AREA DRAIN
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. PC CONC WALKWAY – SEE STRUCT
35. PC CONC STAIR – SEE STRUCT
36. PC CONC WALL PANEL
37. SECONDARY STEEL FRAMING – SEE STRUCTURAL
38. COMPOSITE ALUM PANEL

## LEGEND

- CIP CONCRETE
- ARCHITECTURAL CONCRETE
- R– ROOF TYPE – SEE A150

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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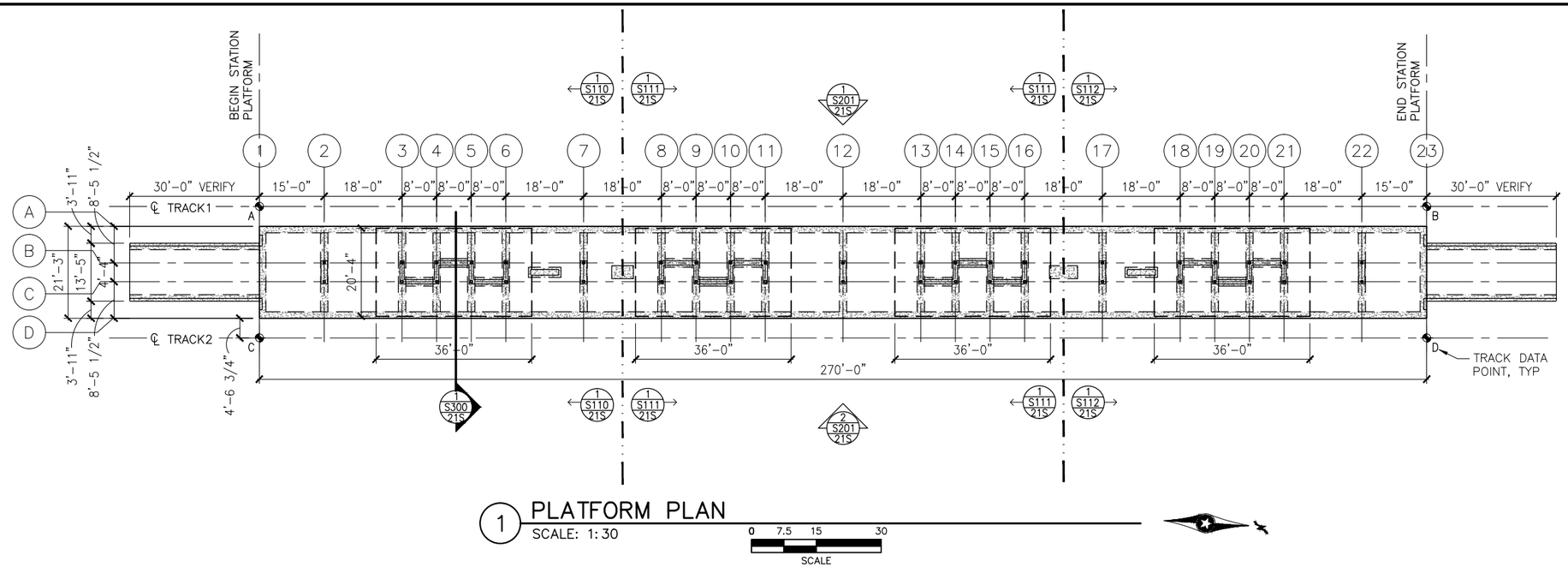
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# TYPICAL PLATFORM SECTION

DISCIPLINE: ARCHITECTURE

SHEET NAME: E3-21S-ARC-SCT-300

SHEET 34 OF 273




1 PLATFORM PLAN
SCALE: 1:30

SCALE 0 7.5 15 30

## TRACK DATA

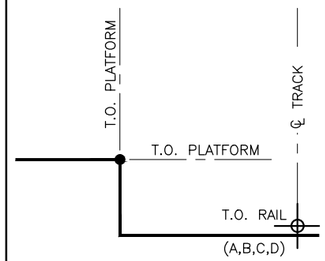
℄ ELEV 100'-0" (LOCATION ON PLAN)

**TRACK 1 EL 100'-0"=** XXX.XX (PT 'A')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| A | XXX.XX | XXXX+XX.XX | |
| B | XXX.XX | XXXX+XX.XX | |
| | | | |

**TRACK 2 EL 100'-0"=** XXX.XX (PT 'C')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| C | XXX.XX | XXXX+XX.XX | |
| D | XXX.XX | XXXX+XX.XX | |
| | | | |




SECTION DIAGRAM AT PLATFORM EDGE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

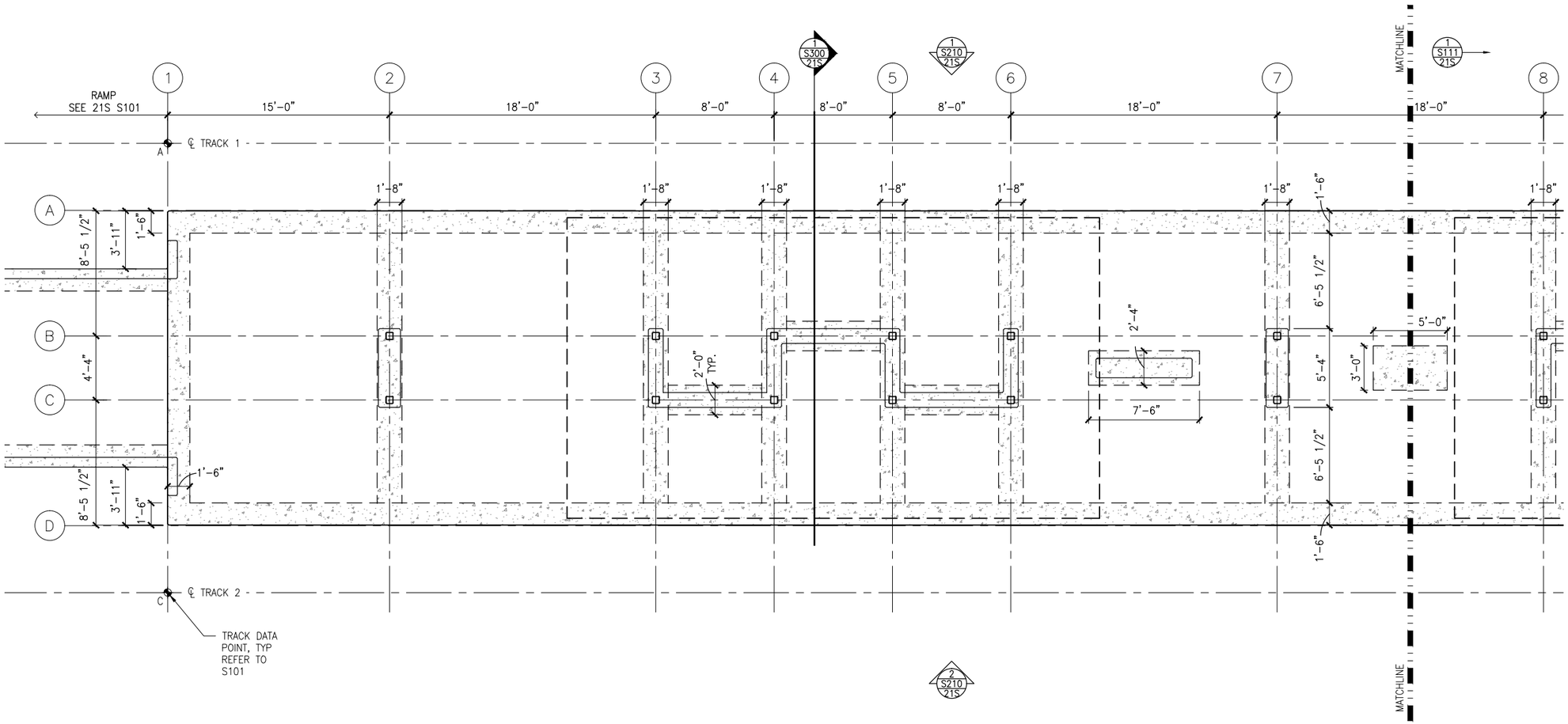
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**PLATFORM PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E3-21S-STR-PLN-101

SHEET 35 OF 273

Sep. 21 2015 09:45 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-PLN-101.dwg By: pepins




1 SOUTH PARTIAL FOUNDATION PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 9/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

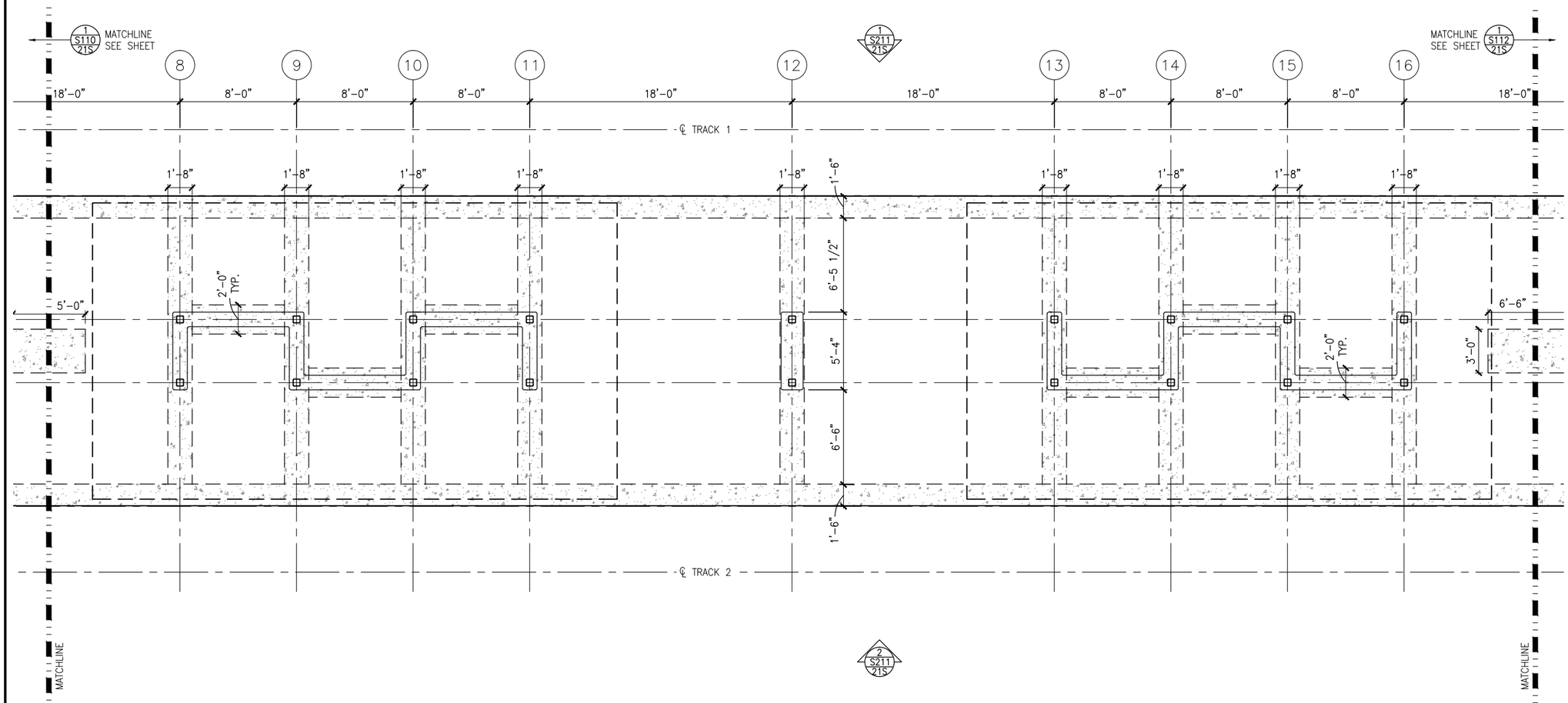
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**SOUTH PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E3-21S-STR-PLN-110

SHEET 36 OF 273

Sep. 21 2015 09:46 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-PLN-110.dwg By: pepins




1 MIDDLE PARTIAL FOUNDATION PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

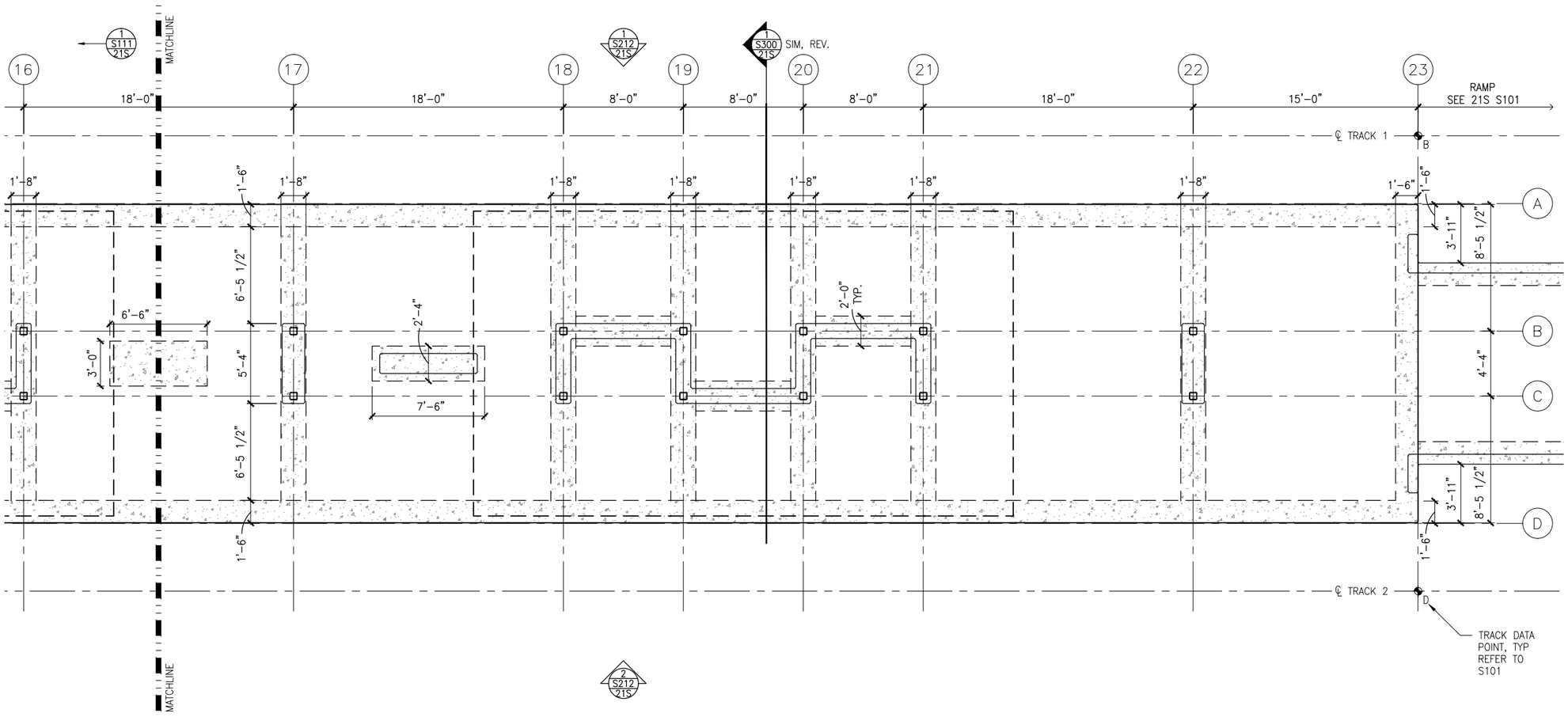
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**MIDDLE PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E3-21S-STR-PLN-111

SHEET 37 OF 273

Sep. 21 2015 09:47 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-PLN-111.dwg By: pepins




1 NORTH PARTIAL FOUNDATION PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

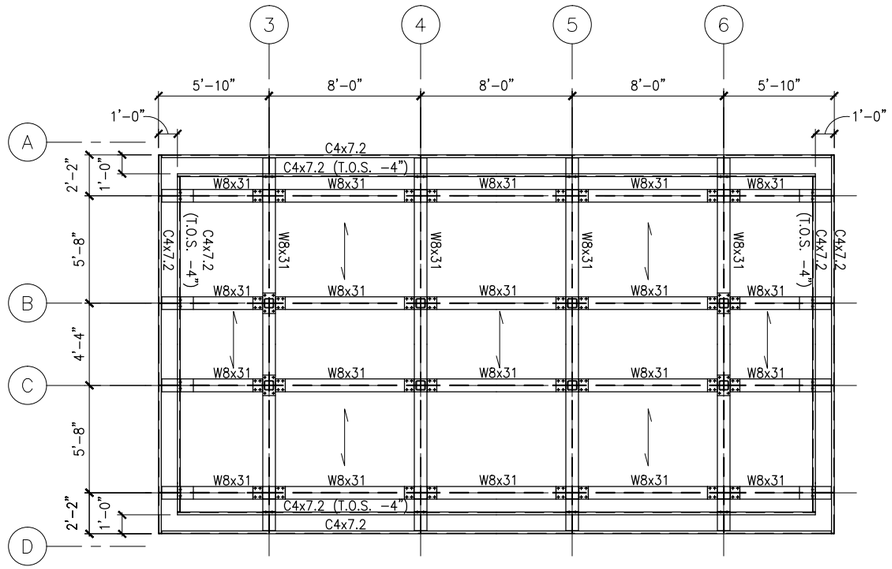
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**NORTH PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

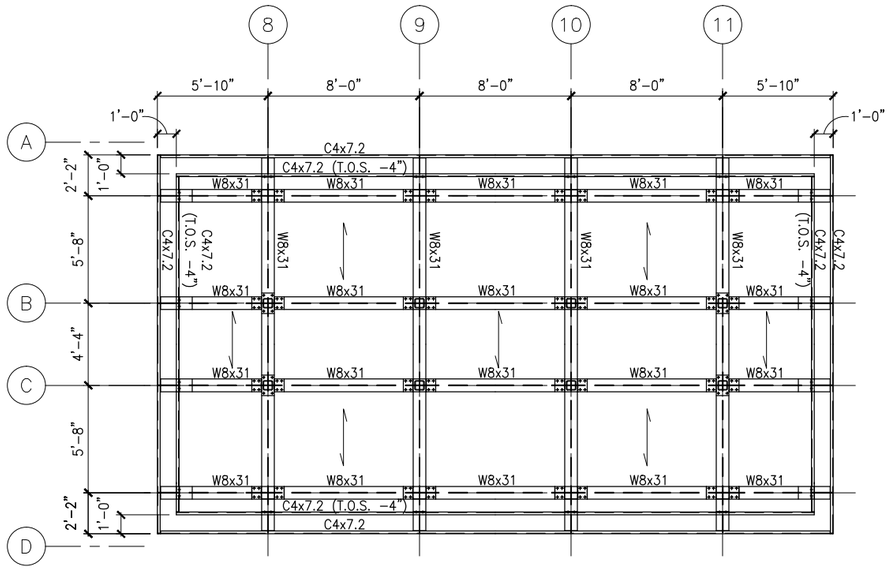
SHEET NAME: E3-21S-STR-PLN-112

SHEET 38 OF 273

Sep. 21 2015 09:48 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-PLN-112.dwg By: pepins

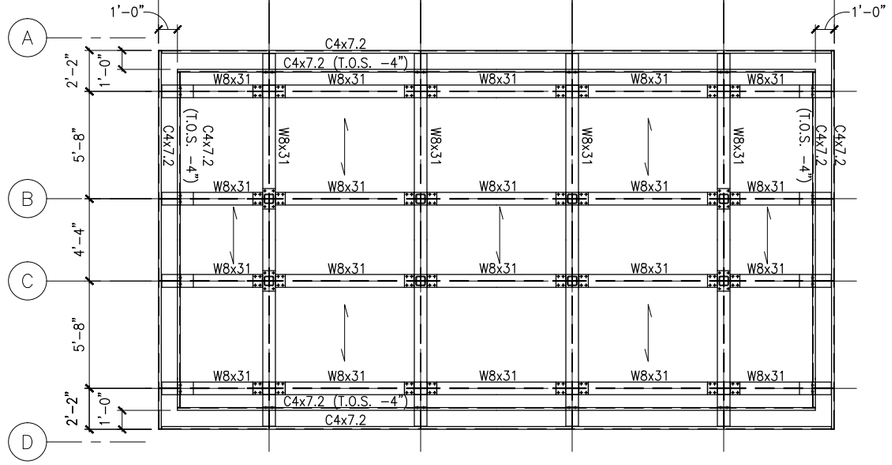



1 FRAMING PLAN – SOUTH CANOPY
SCALE: 1/8"=1'-0"



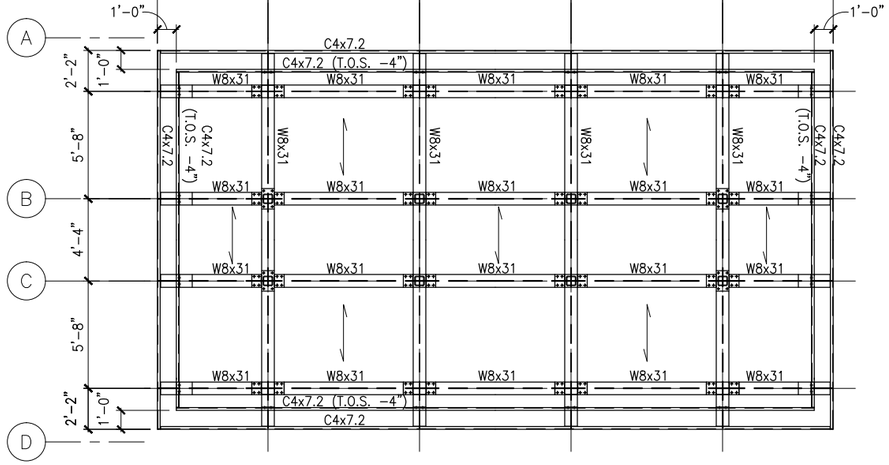

2 FRAMING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




3 FRAMING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




4 FRAMING PLAN – NORTH CANOPY
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

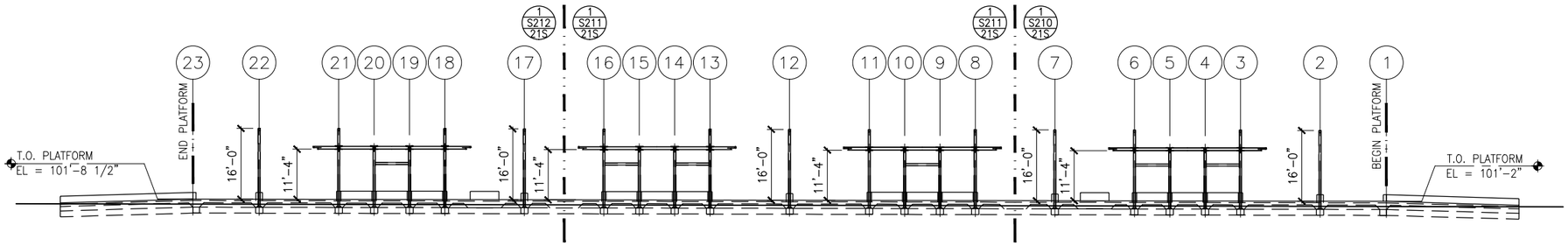
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**ROOF FRAMING PLANS**

DISCIPLINE: STRUCTURES

SHEET NAME: E3-21S-STR-PLN-150

SHEET 39 OF 273

Sep, 21 2015 09:49 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-PLN-150.dwg By: pepins



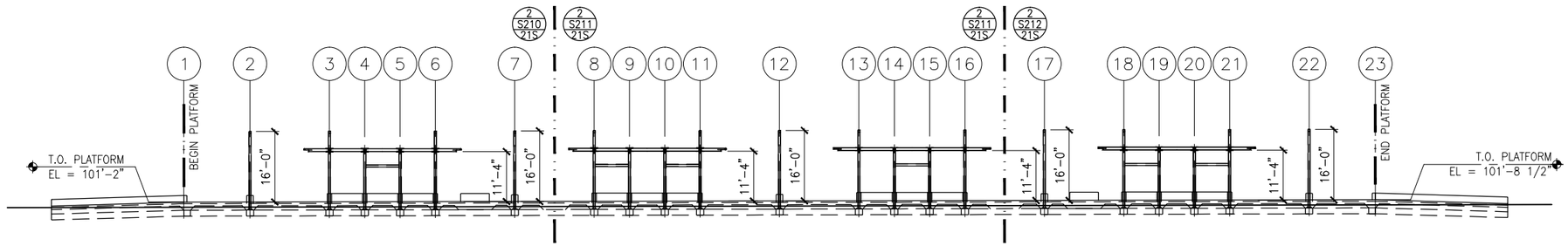

## 1 TRACK 1 ELEVATION – FRAMING

SCALE: 1:30

0 7.5 15 30

SCALE

(0.20% SLOPE)*




## 2 TRACK 2 ELEVATION – FRAMING

SCALE: 1:30

0 7.5 15 30

SCALE

(0.20% SLOPE)*

*VERIFY W/ TRACK PROFILE, ADJUST ELEVATIONS ACCORDINGLY

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

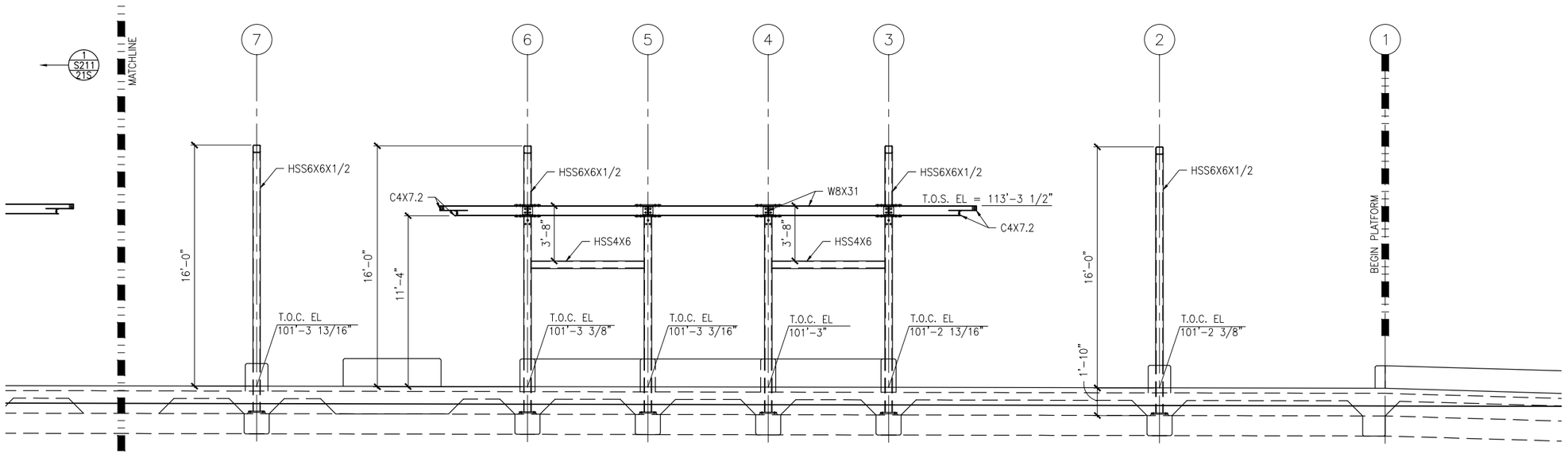
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E3-21S-STR-ELV-201

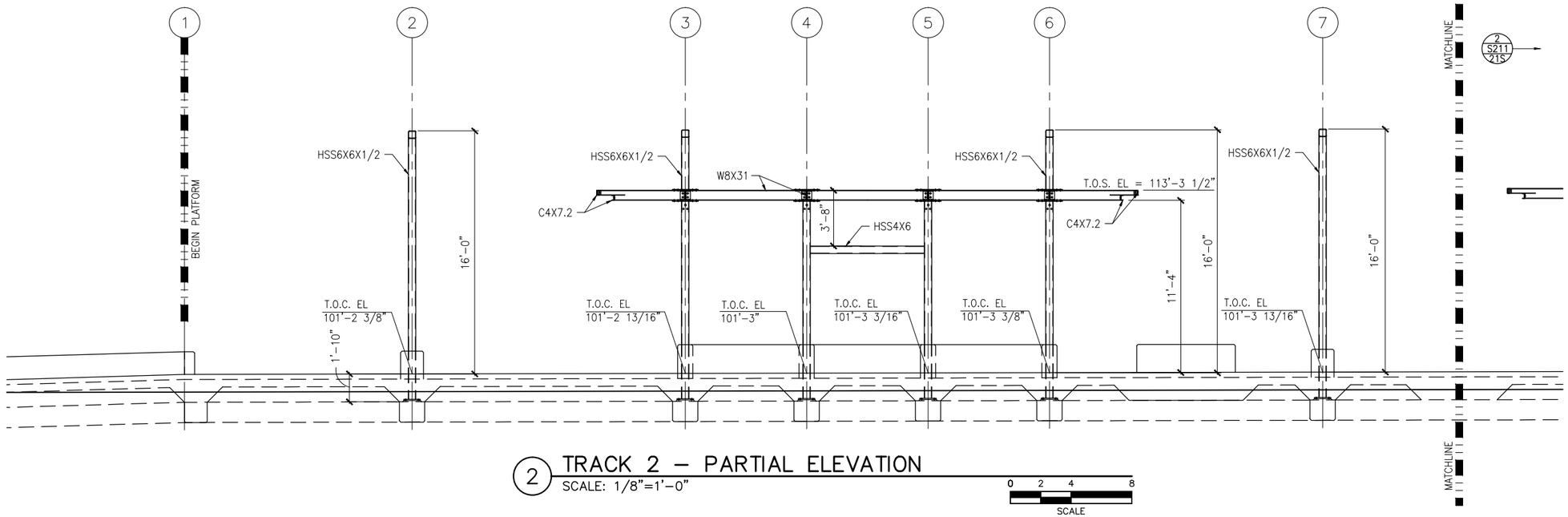
SHEET 40 OF 273

Sep. 21 2015 09:49 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-E




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

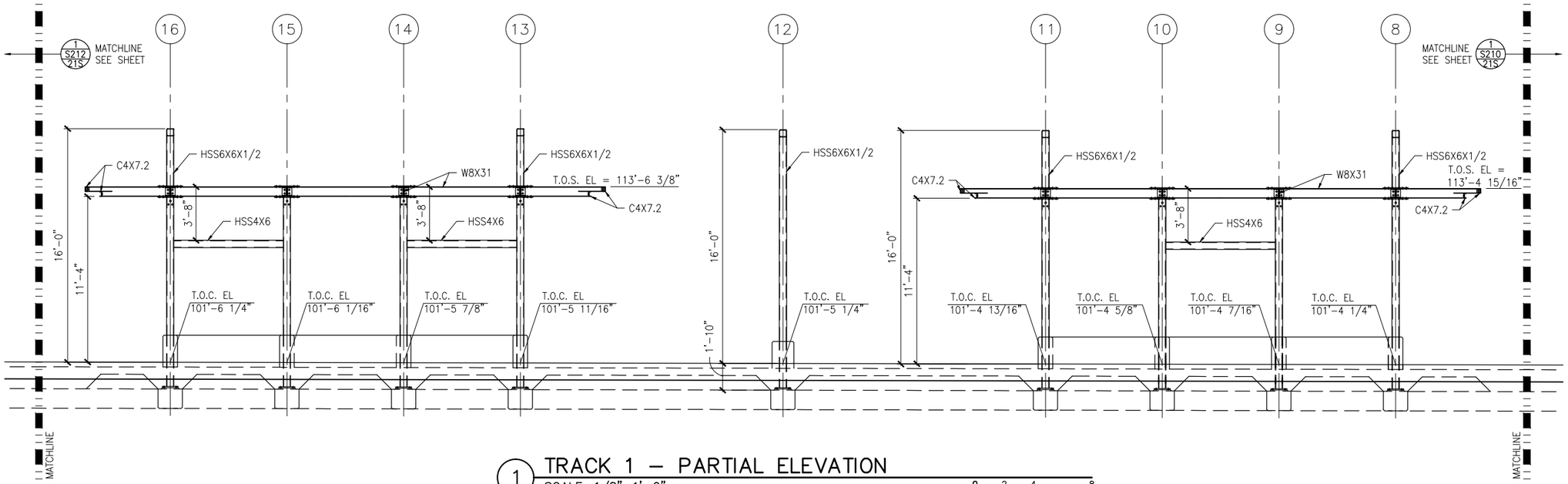
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**SOUTH PARTIAL ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E3-21S-STR-ELV-210

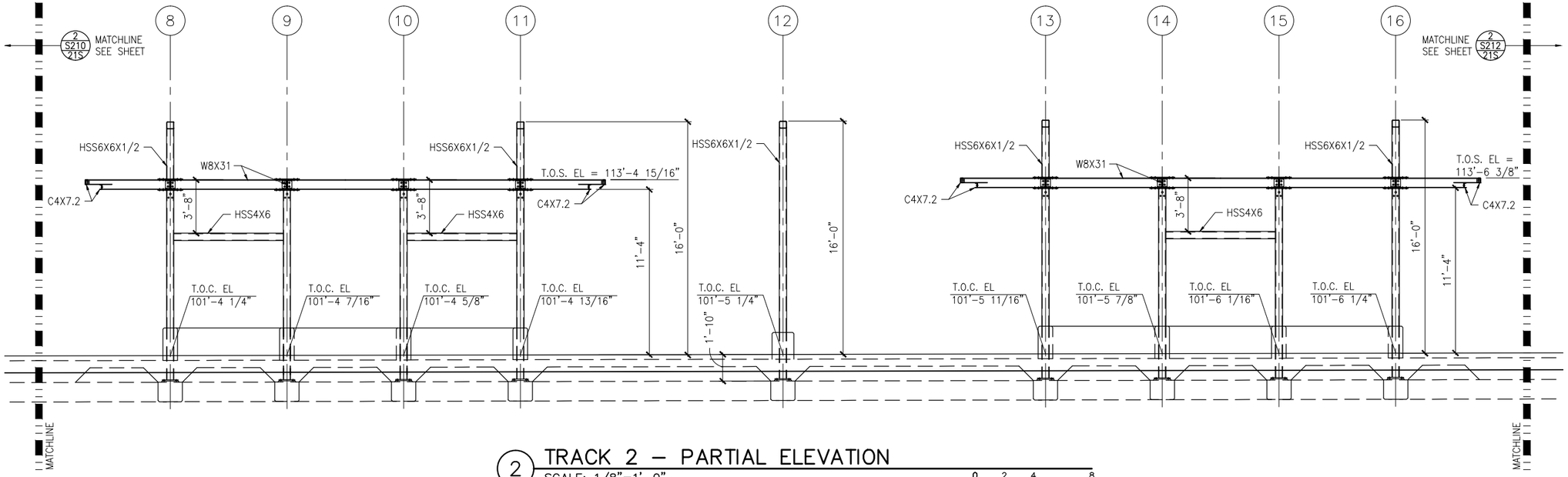
SHEET 41 OF 273

Sep. 21 2015 09:50 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-ELV-210.dwg By: pepins




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

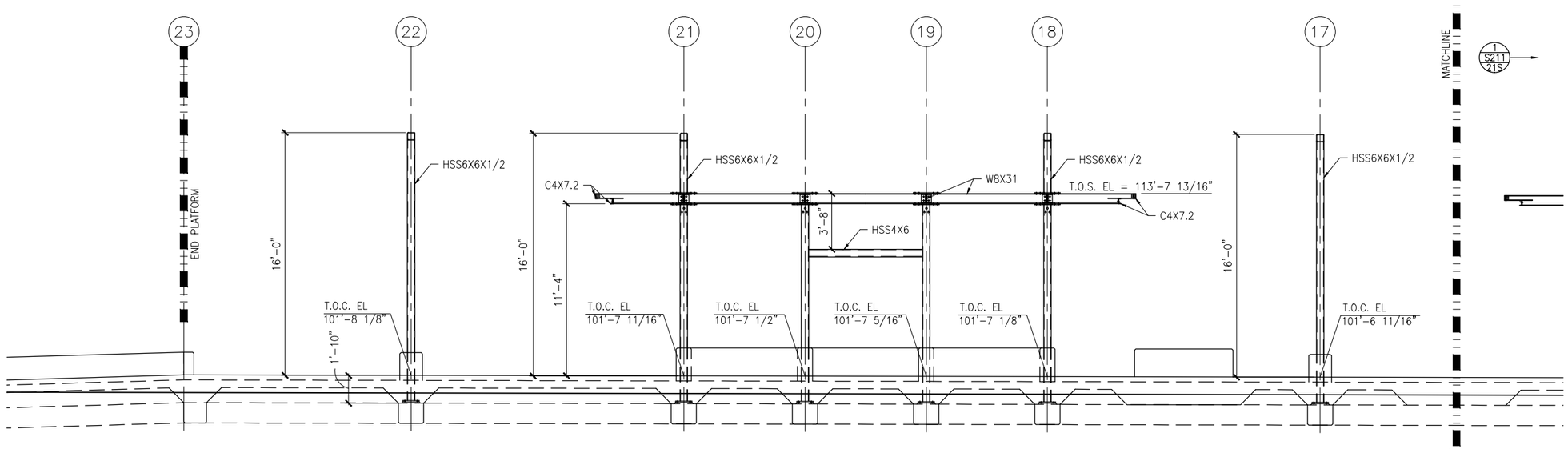
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**MIDDLE PARTIAL ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E3-21S-STR-ELV-211

SHEET 42 OF 273

Sep. 21 2015 09:51 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-ELV-211.dwg By: pepins




1 TRACK 1 – PARTIAL ELEVATION
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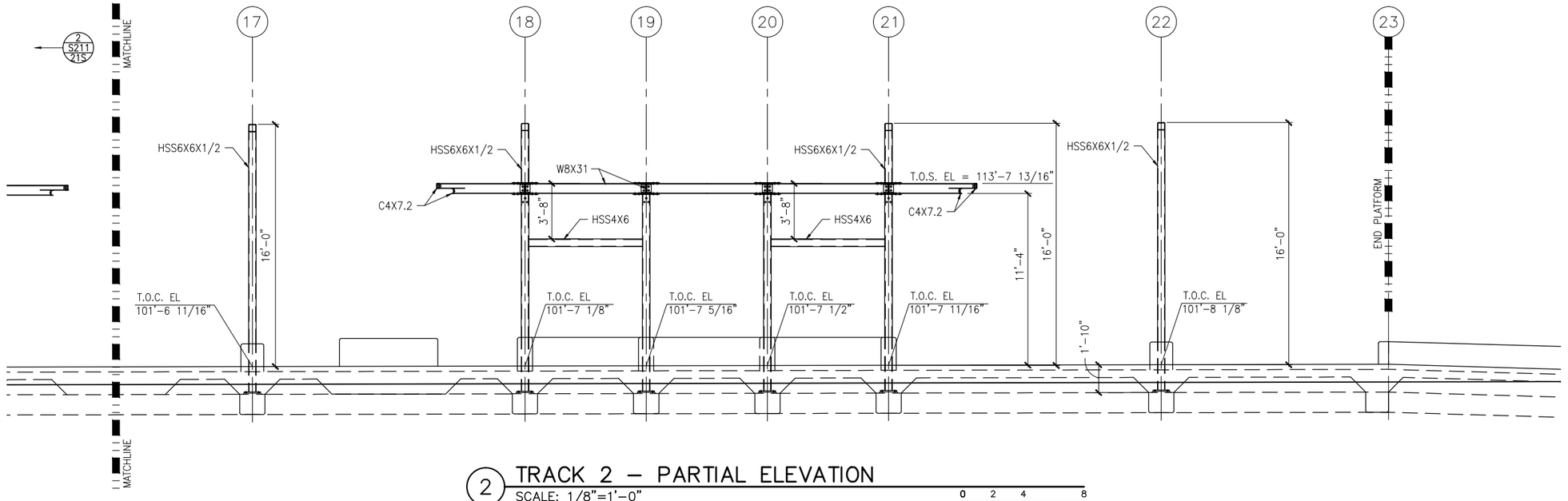
0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

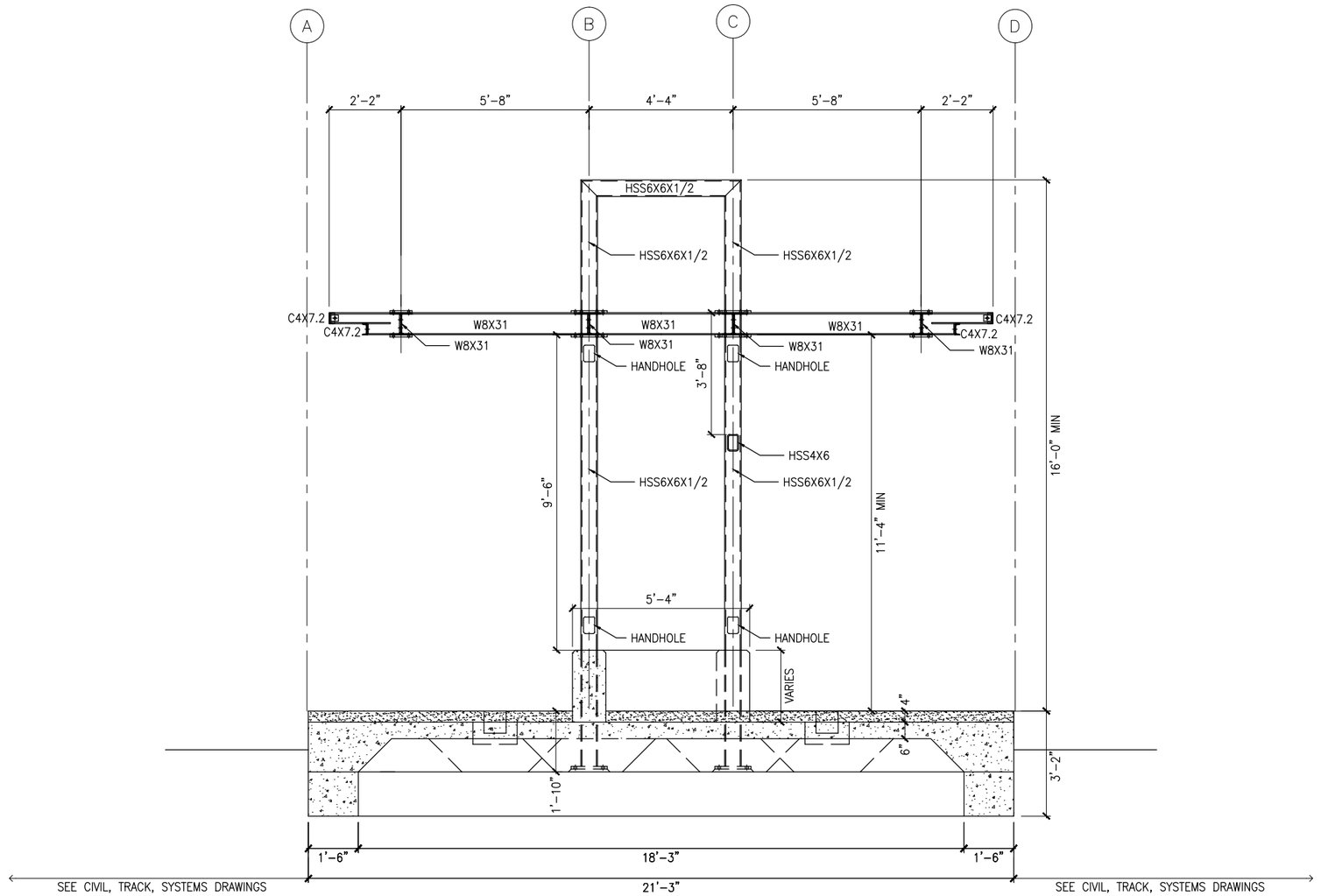
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**NORTH PARTIAL ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E3-21S-STR-ELV-212

SHEET 43 OF 273

Sep. 21 2015 09:51 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-ELV-212.dwg By: pepins




1 TYPICAL PLATFORM SECTION

SCALE:1/4"=1'-0"

0 1 2 4

SCALE

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

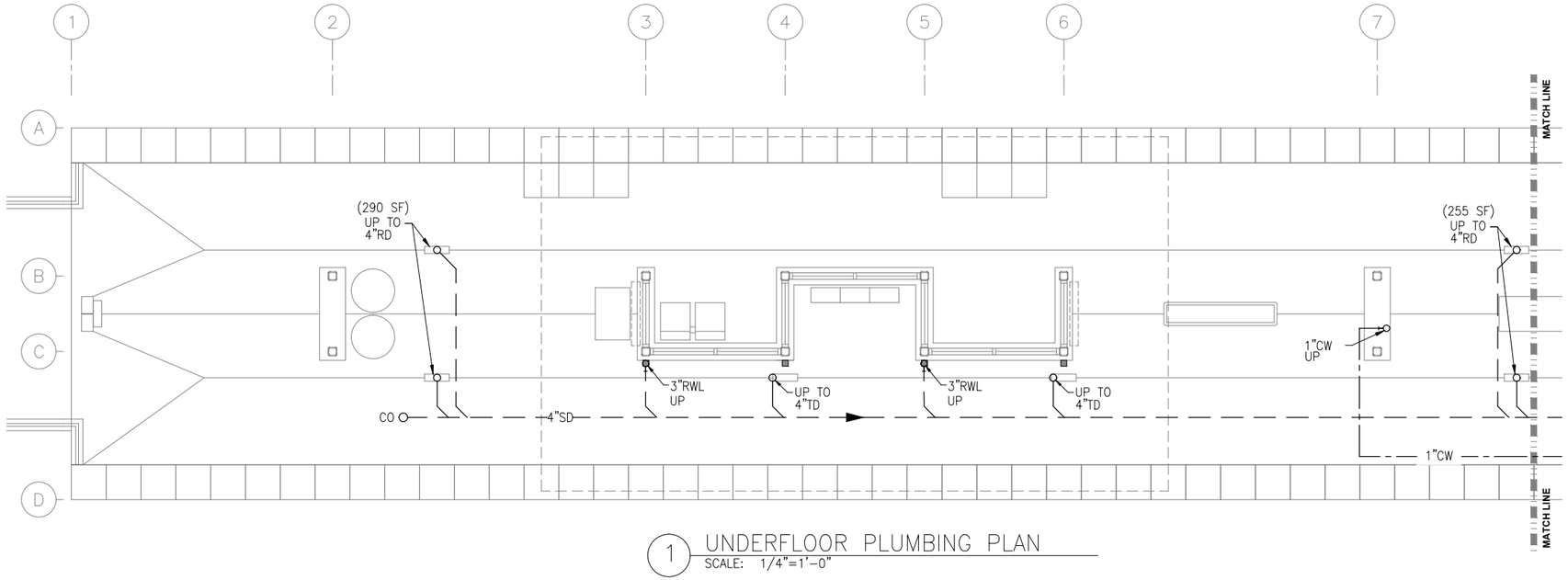
**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**TYPICAL PLATFORM SECTION**

DISCIPLINE: STRUCTURES

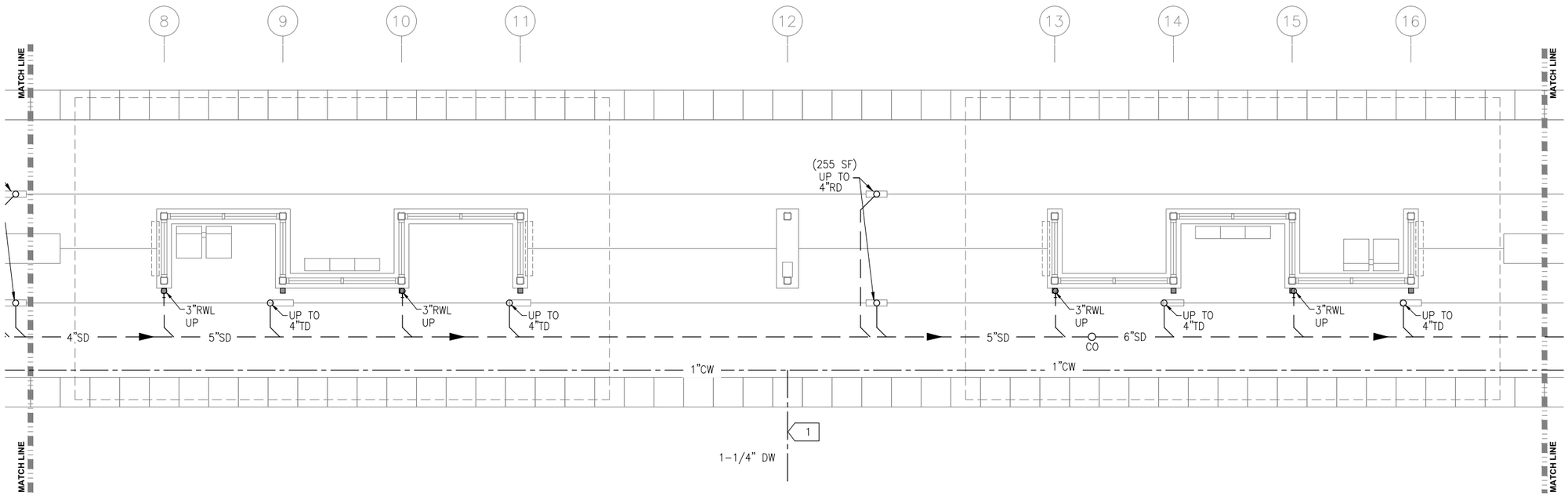
SHEET NAME: E3-21S-STR-SCT-300

SHEET 44 OF 273

Sep. 21 2015 09:52 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\21st_Street\CAD\STR\E3-21S-STR-SCT-300.dwg By: pepins




1 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"




2 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

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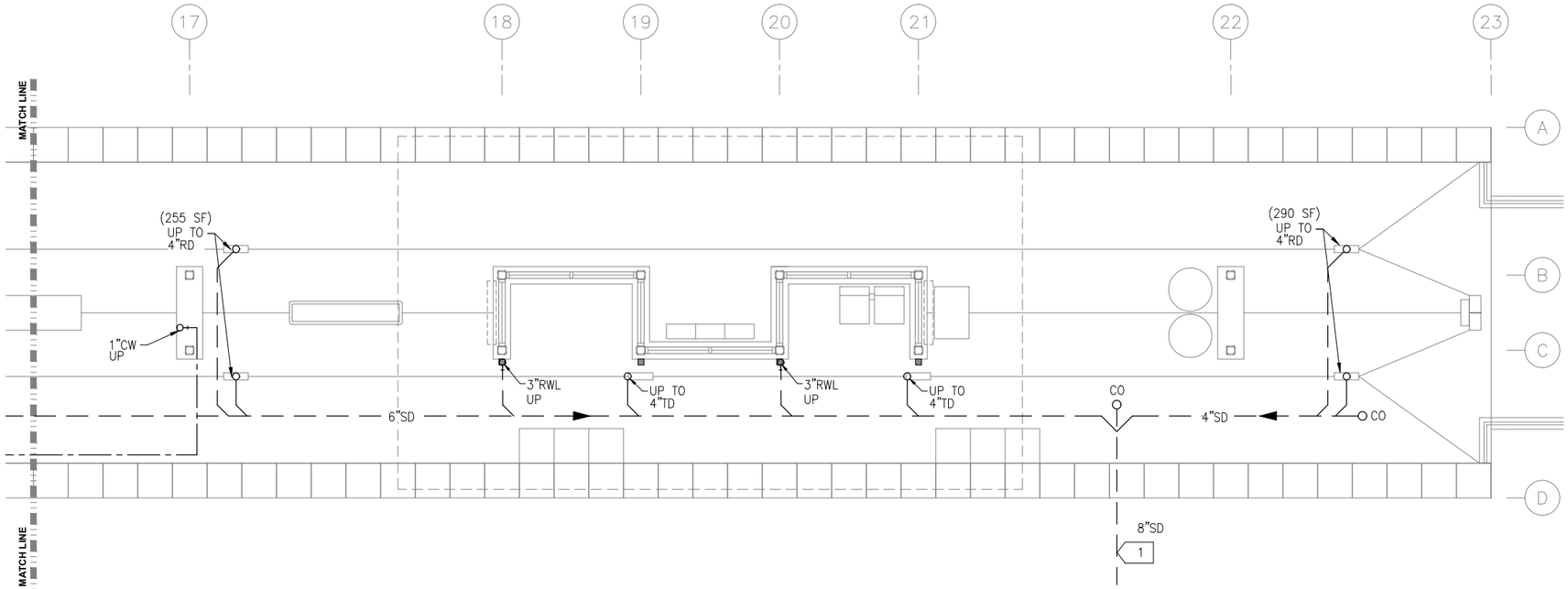
METROPOLITAN COUNCIL
SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**SOUTH AND MIDDLE PARTIAL**
**UNDERFLOOR PLUMBING PLAN**

DISCIPLINE: PLUMBING
SHEET NAME: E3-21S-PLM-PLN-100

SHEET 45 OF 273

Sep. 21 2015 02:08 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\MECHANICAL\21ST STREET STA\E3-21S-PLM-PLN-100.dwg By: craig




1 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

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METROPOLITAN COUNCIL SOUTHWEST Green Line LRT Extension

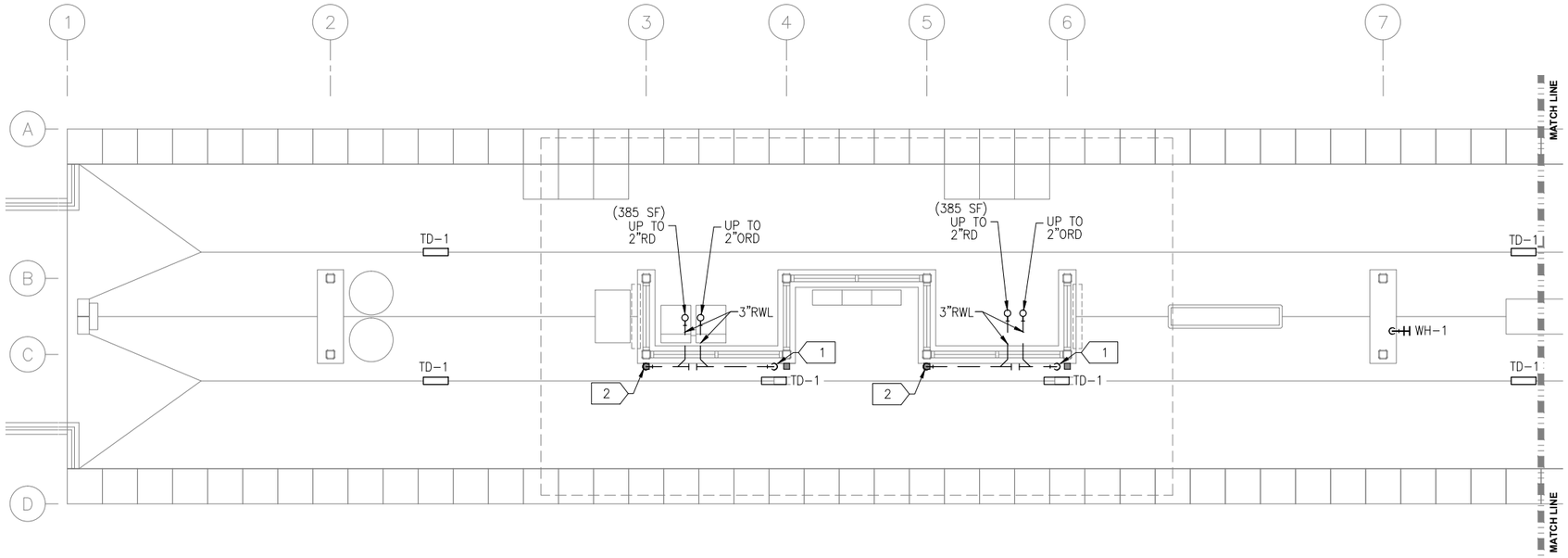
CIVIL EAST - VOLUME 11B
21ST STREET STATION
NORTH PARTIAL UNDERFLOOR
PLUMBING PLAN

DISCIPLINE: PLUMBING

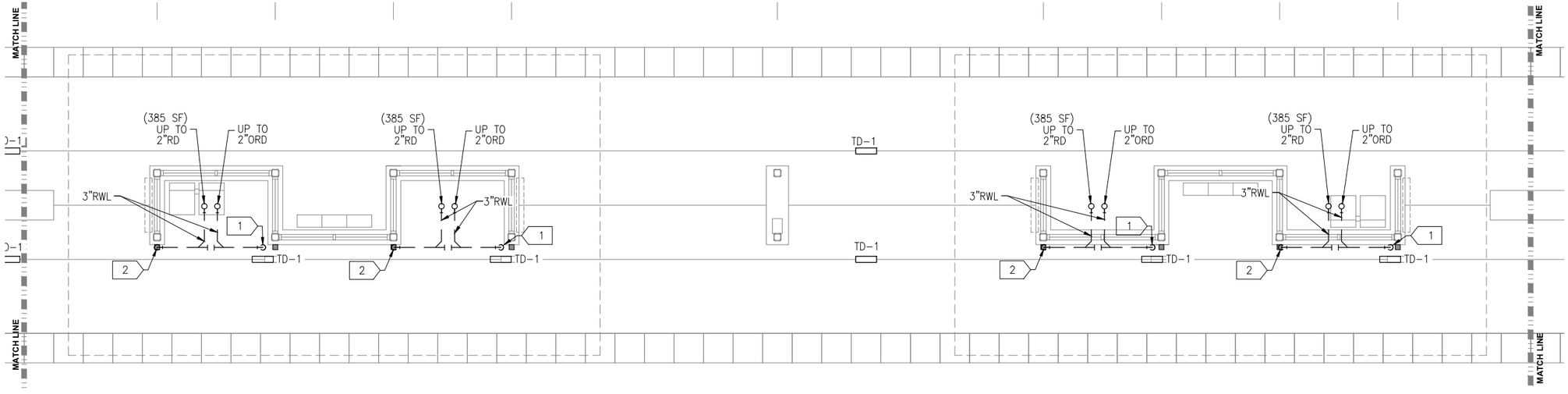
SHEET NAME: E3-21S-PLM-PLN-101

SHEET 46 OF 273

Sep. 21 2015 02:07 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\MECHANICAL\21ST STREET STATION\E3-21S-PLM-PLN-101.dwg By: craig




1 PLUMBING PLAN
SCALE: 1/4"=1'-0"




2 PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES

1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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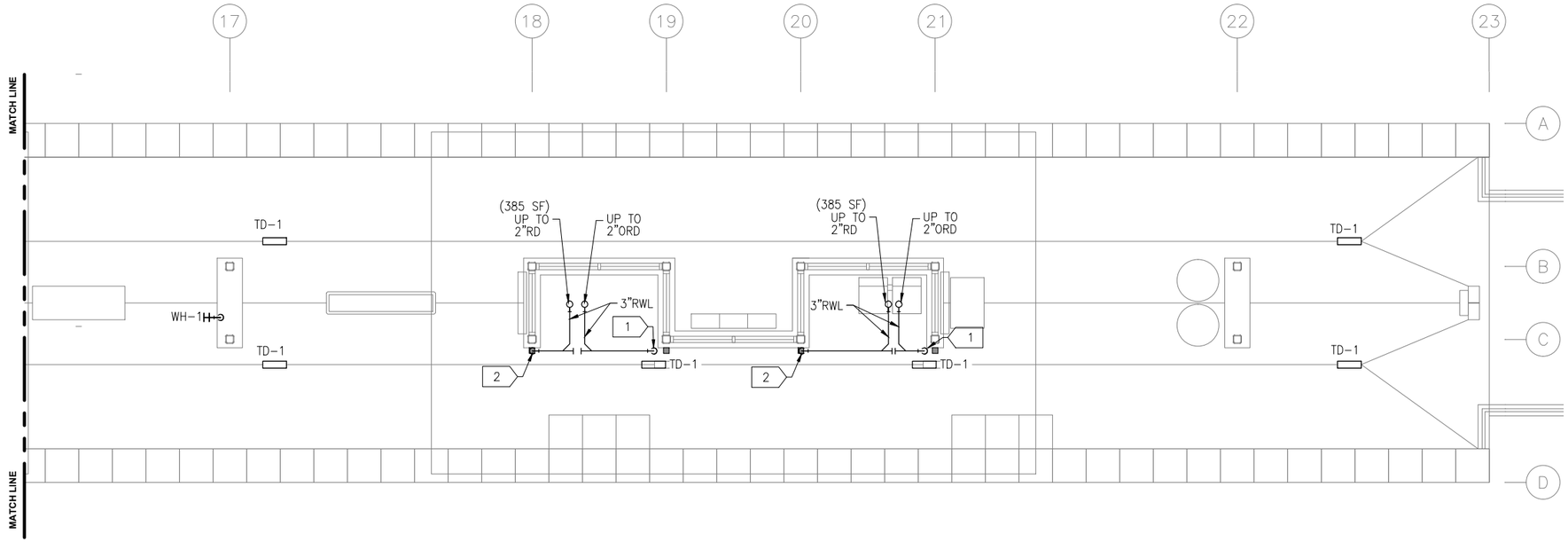
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# SOUTH AND MIDDLE PARTIAL
# PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E3-21S-PLM-PLN-110

SHEET 47 OF 273




1 PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES

1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

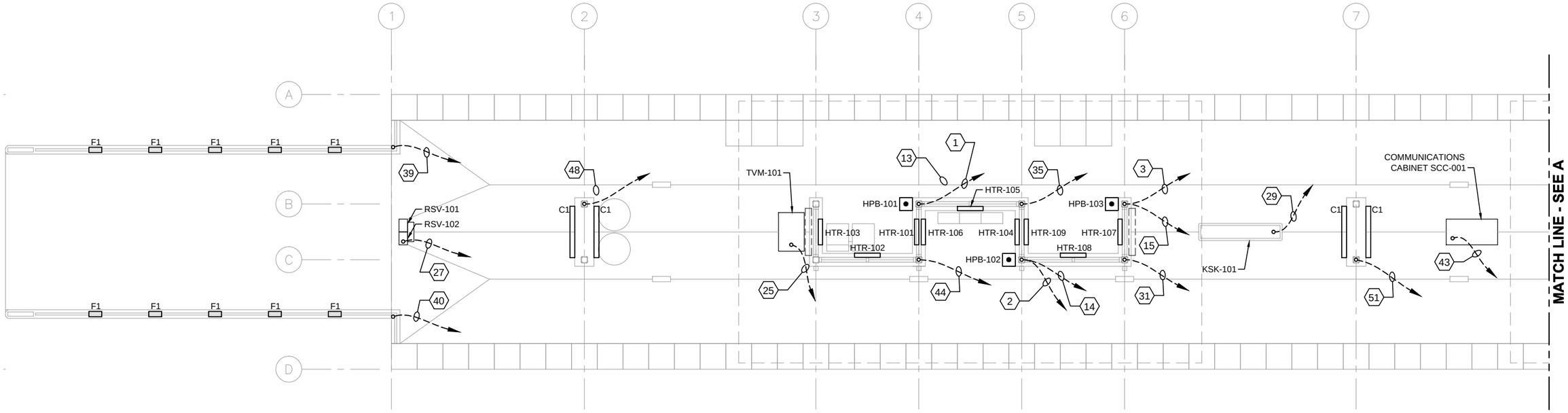
# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# NORTH PARTIAL PLUMBING PLAN AND RISER DIAGRAMS

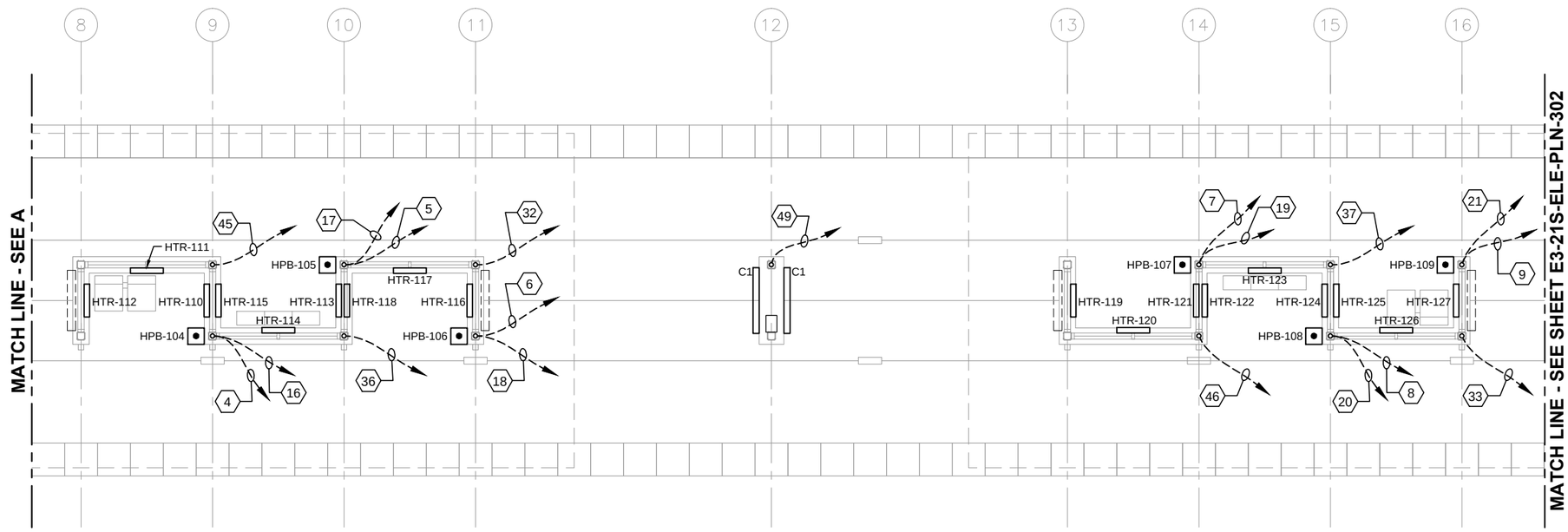
DISCIPLINE: PLUMBING

SHEET NAME: E3-21S-PLM-PLN-111

SHEET 48 OF 273

Sep. 21 2015 02:06 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\MECHANICAL\21ST STREET STATION\E3-21S-PLM-PLN-111.dwg By: craig




1 PLATFORM PLAN

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

GENERAL NOTES:

1. ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
2. AT CONDUIT STUB-UPS TRANSITION TO 1/2" LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.

KEYNOTES:

1.

0 2 4 8

HORIZONTAL SCALE IN FEET

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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

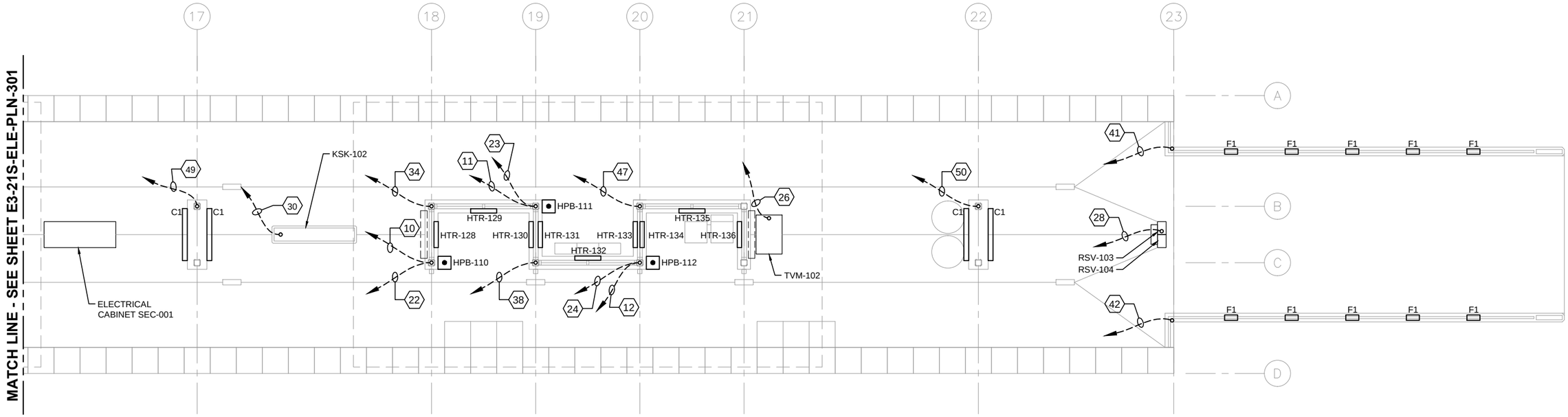
# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# ELECTRICAL
# UNDERSLAB CONDUIT PLAN (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E3-21S-ELE-PLN-301

SHEET 49 OF 273

Sep. 25 2015 11:58 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ELECTRICAL\E3-21S-ELE-PLN-301.dwg By: V-Begejd




## 1 PLATFORM PLAN

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

GENERAL NOTES:

1. ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
2. AT CONDUIT STUB-UPS TRANSITION TO 1/2" LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.

KEYNOTES:

1.

HORIZONTAL SCALE IN FEET
0 2 4 8

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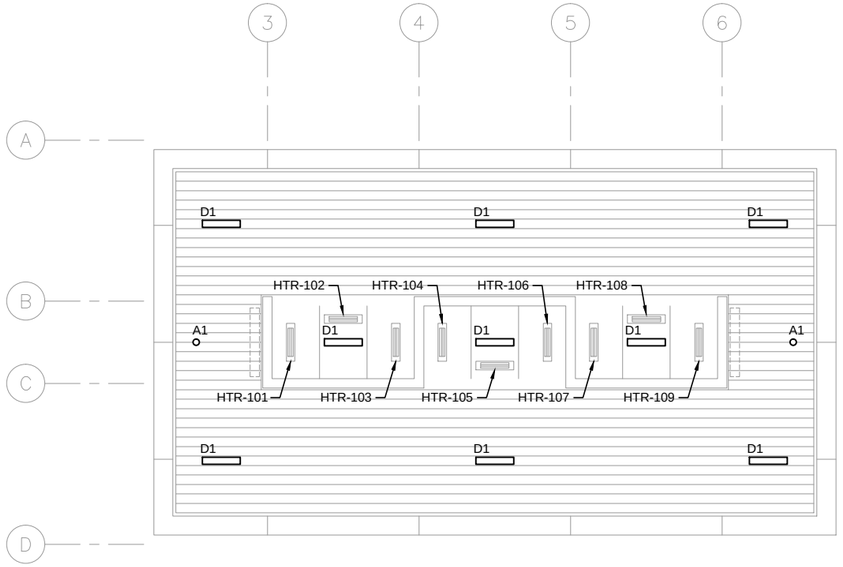
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**ELECTRICAL**
**UNDERSLAB CONDUIT PLAN (2 OF 2)**

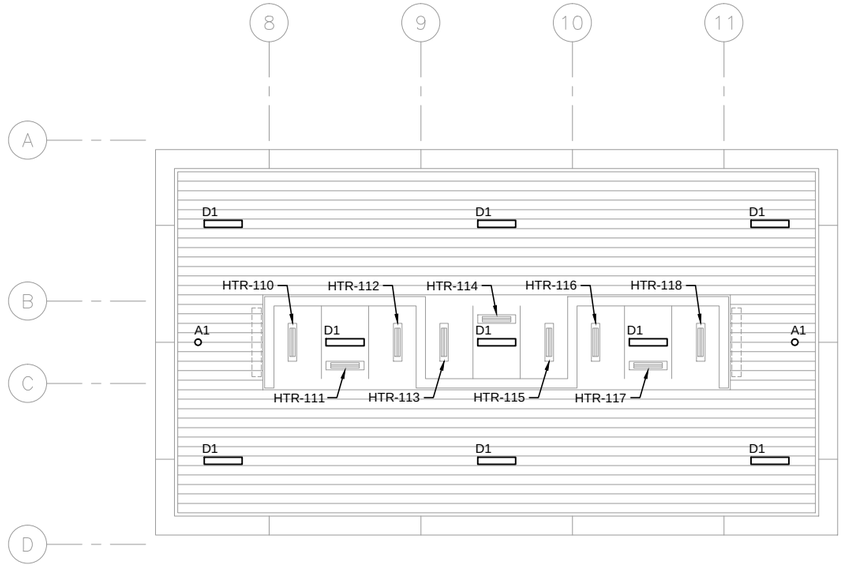
DISCIPLINE: ELECTRICAL
SHEET NAME: E3-21S-ELE-PLN-302

SHEET 50 OF 273

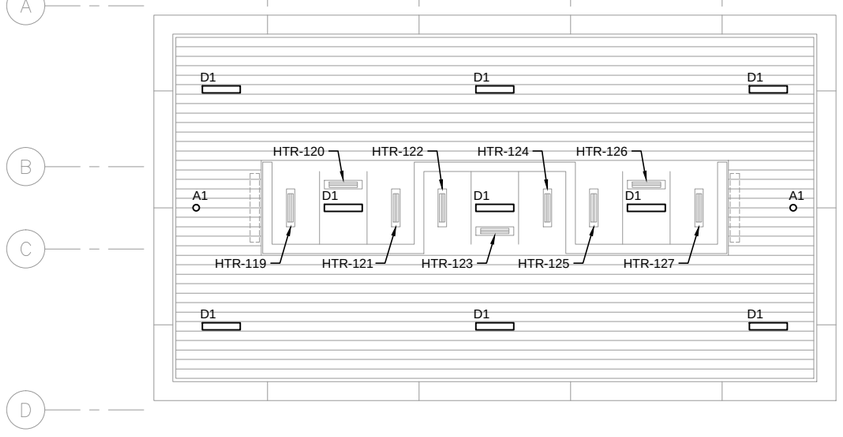
Sep. 25 2015 10:47 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ELECTRICAL\E3-21S-ELE-PLN-302.dwg By: V-BegeJB



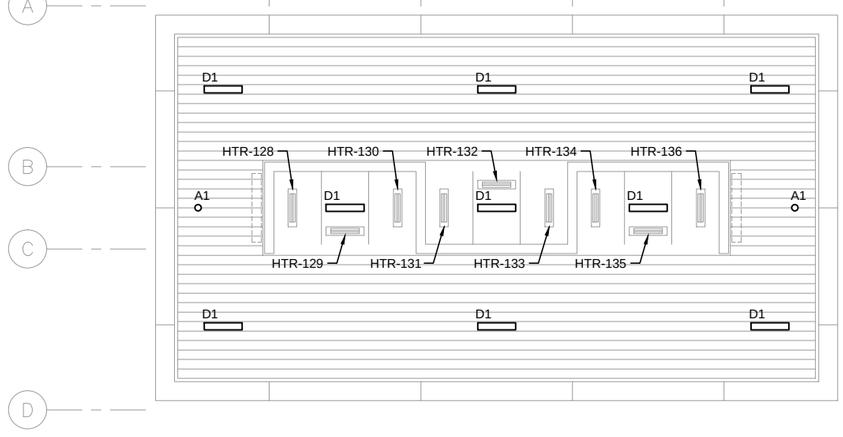

1 CANOPY PLAN – WEST END
SCALE: 1/8"=1'–0"




2 CANOPY PLAN – WEST MIDDLE
SCALE: 1/8"=1'–0"




3 CANOPY PLAN – EAST MIDDLE
SCALE: 1/8"=1'–0"




4 CANOPY PLAN – EAST END
SCALE: 1/8"=1'–0"

GENERAL NOTES:

1. PROVIDE HEAT TRACE IN GUTTERS, DOWN SPOUTS AND RAIN CONDUCTORS.

KEYNOTES:

1.

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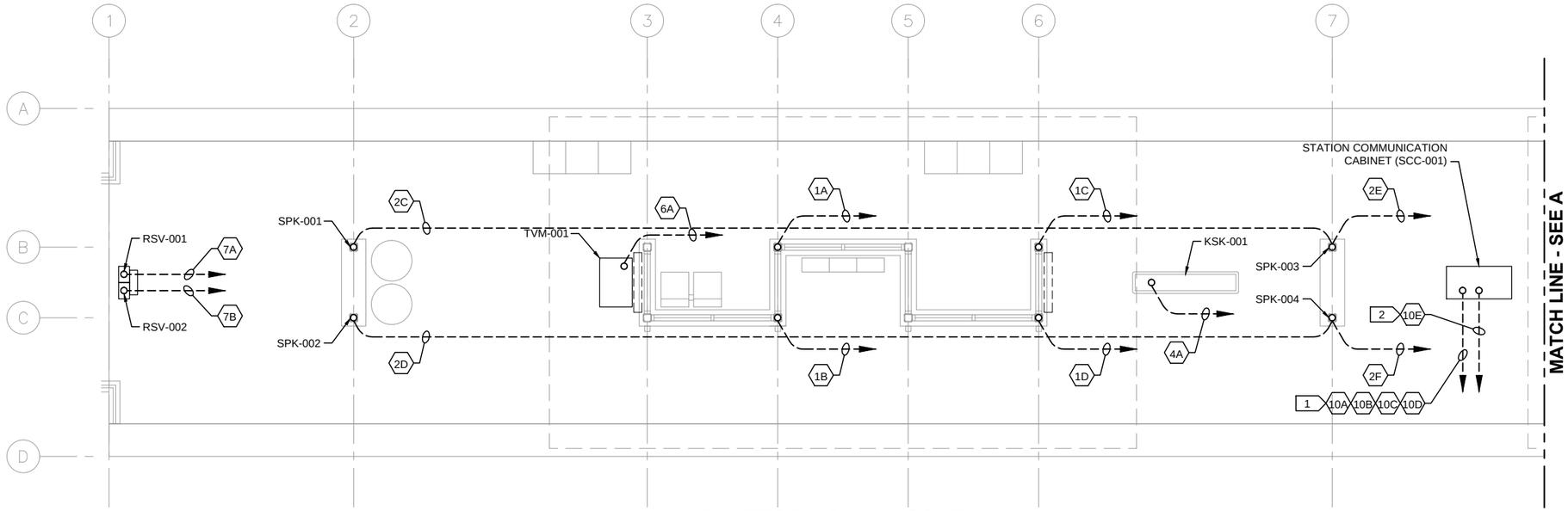
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**ELECTRICAL**
**CANOPY PLAN**

DISCIPLINE: ELECTRICAL
SHEET NAME: E3-21S-ELE-PLN-303

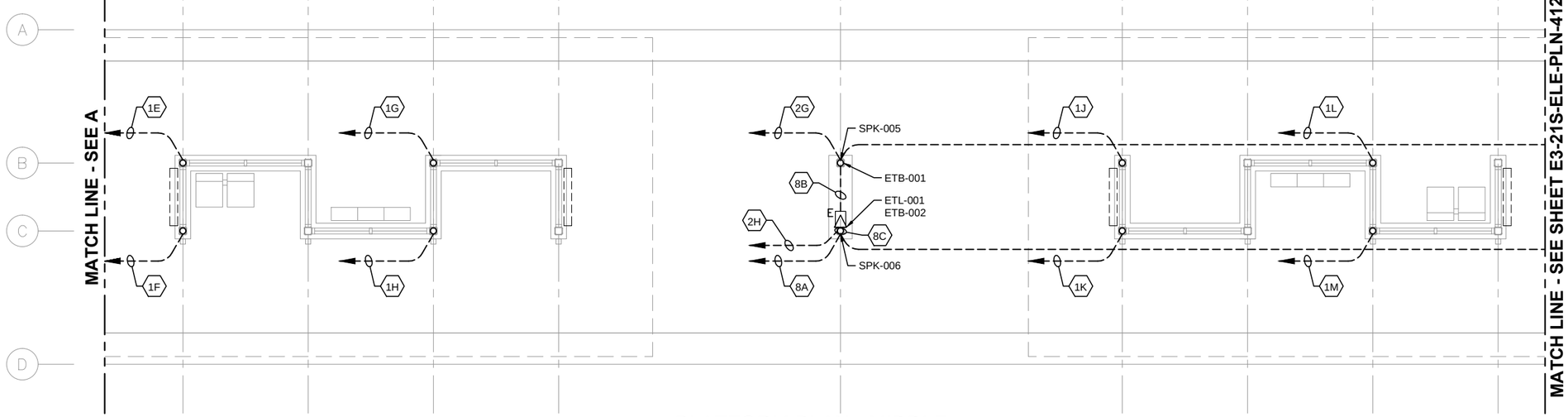
SHEET 51 OF 273

Sep, 25 2015 09:51 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ELECTRICAL\E3-21S-ELE-PLN-303.dwg By: FergTK




1 PLATFORM PLAN - SOUTH

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




2 PLATFORM PLAN - MIDDLE

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1. COMMUNICATIONS CONDUITS TO/FROM STATION SIGNAL-COMMUNICATIONS HOUSE.
2. CONDUIT TO/FROM STATION-COMMUNICATIONS HOUSE FOR UPS POWER FEED TO SCC-001.

0 2 4 8

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SOUTHWEST
Green Line LRT Extension

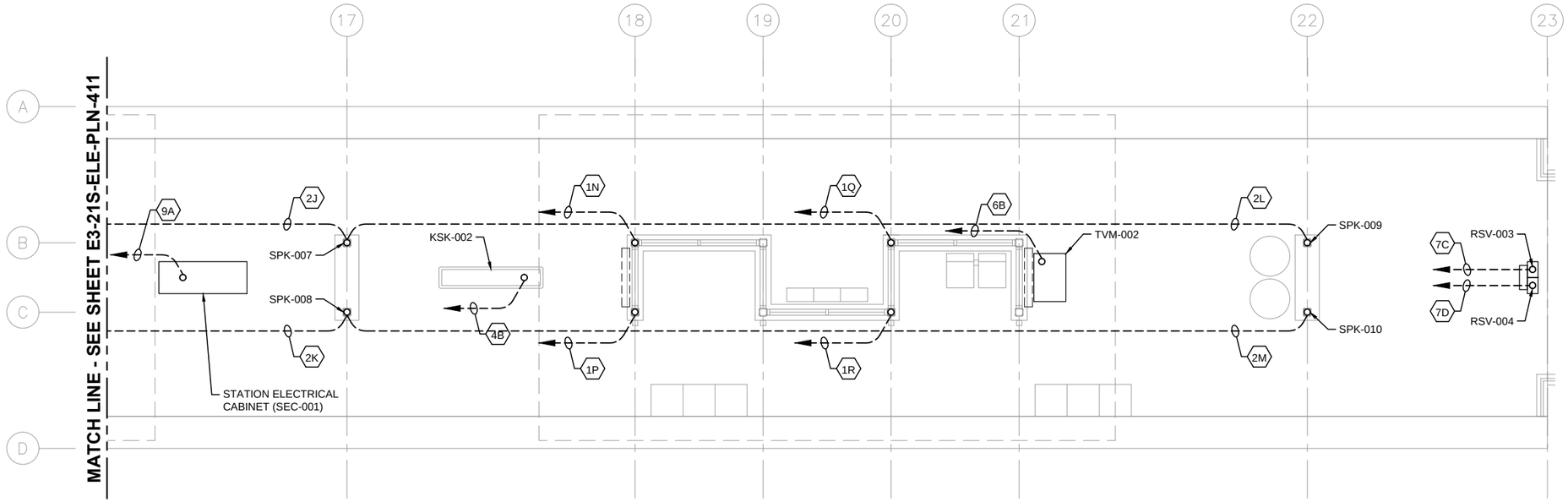
# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# COMMUNICATIONS
# UNDERSLAB CONDUIT PLAN (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E3-21S-ELE-PLN-411

SHEET 52 OF 273

Sep. 25 2015 09:51 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ELECTRICAL\E3-21S-ELE-PLN-411.dwg By: FergTK




## 1 PLATFORM PLAN - NORTH

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1.

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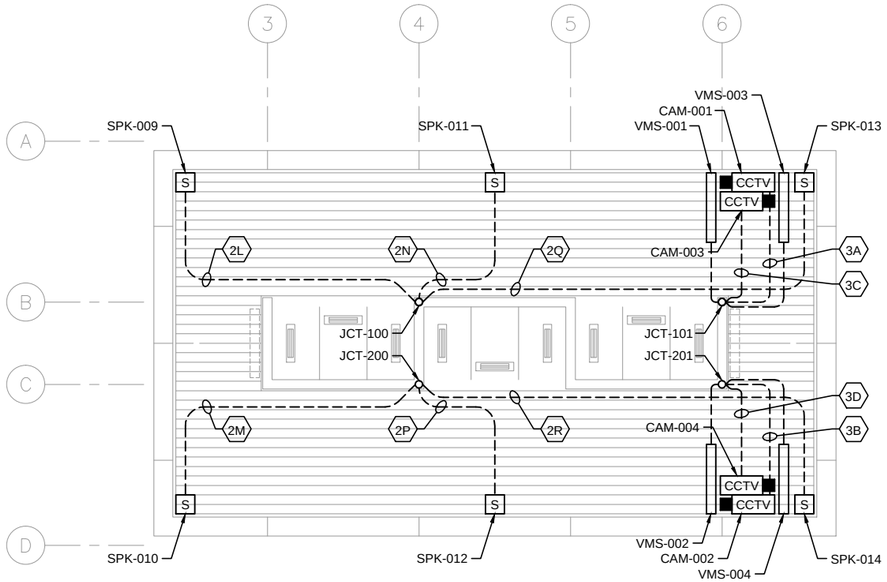
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# COMMUNICATIONS
# UNDERSLAB CONDUIT PLAN (2 OF 2)

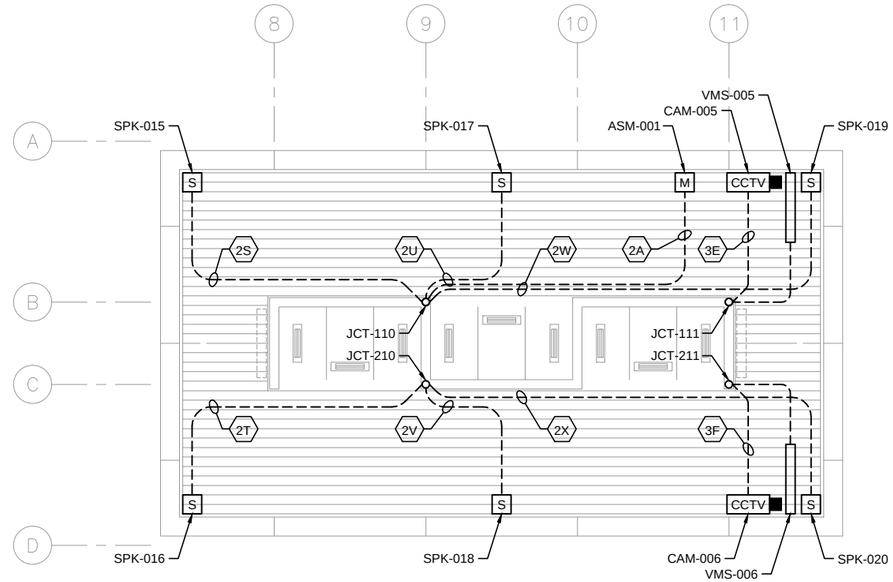
DISCIPLINE: ELECTRICAL
SHEET NAME: E3-21S-ELE-PLN-412

SHEET 53 OF 273

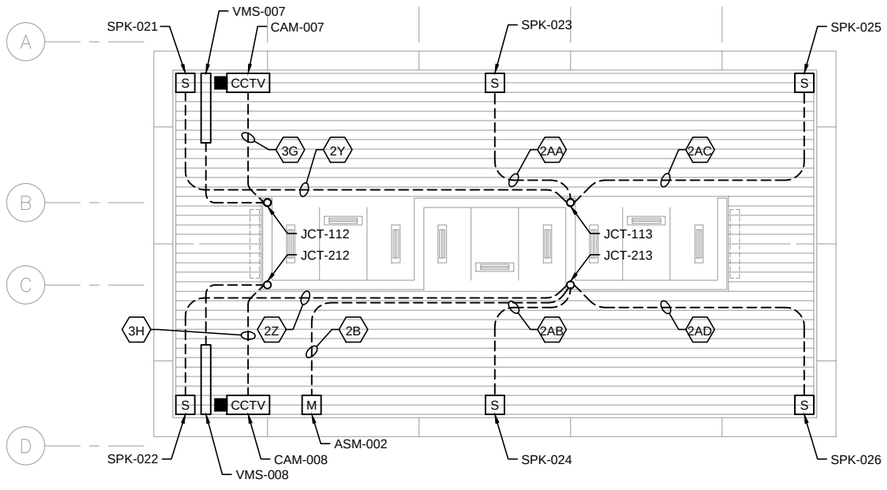
Sep. 25 2015 09:51 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ELECTRICAL\E3-21S-ELE-PLN-412.dwg By: FergTK



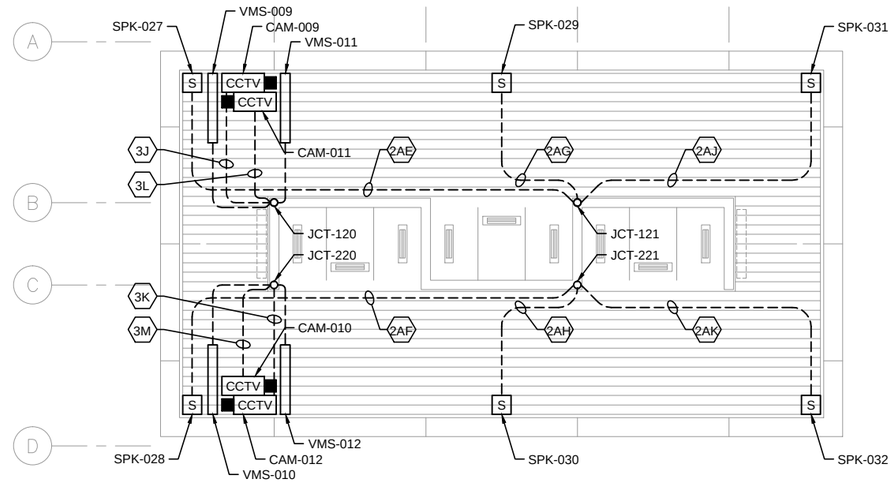

1 CANOPY PLAN – WEST END
SCALE: 1/8"=1'–0"




2 CANOPY PLAN – WEST MIDDLE
SCALE: 1/8"=1'–0"




3 CANOPY PLAN – EAST MIDDLE
SCALE: 1/8"=1'–0"




4 CANOPY PLAN – EAST END
SCALE: 1/8"=1'–0"

GENERAL NOTES:

1.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

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METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**21ST STREET STATION**
**COMMUNICATIONS**
**CANOPY PLAN**

DISCIPLINE: ELECTRICAL
SHEET NAME: E3-21S-ELE-PLN-421

SHEET 54 OF 273

Sep, 25 2015 09:52 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ELECTRICAL\E3-21S-ELE-PLN-421.dwg By: FergTK

| CONDUIT NO. | DEVICE ID | DESCRIPTION/USE | FROM | TO | CONDUIT SIZE |
|---|---|---|---|---|---|
| 10A | 21S -CON-0001 | S/C HOUSE TO SCC-001 | S/C MANHOLE | 21S -SCC-001 | 3" |
| 10B | 21S -CON-0002 | S/C HOUSE TO SCC-001 | S/C MANHOLE | 21S -SCC-001 | 3" |
| 10C | 21S -CON-0003 | S/C HOUSE TO SCC-001 | S/C MANHOLE | 21S -SCC-001 | 3" |
| 10D | 21S -CON-0004 | S/C HOUSE TO SCC-001 | S/C MANHOLE | 21S -SCC-001 | 3" |
| 10E | 21S -CON-0005 | UPS POWER FEED: SCH TO SCC | 21S -SCH-001 | 21S -SCC-001 | 3" |
| 1A | 21S -CON-0101 | SCC TO JUNCTION 100 | 21S -SCC-001 | 21S -JCT-100 | 2" |
| 1B | 21S -CON-0102 | SCC TO JUNCTION 200 | 21S -SCC-001 | 21S -JCT-200 | 2" |
| 1C | 21S -CON-0103 | SCC TO JUNCTION 101 | 21S -SCC-001 | 21S -JCT-101 | 2" |
| 1D | 21S -CON-0104 | SCC TO JUNCTION 201 | 21S -SCC-001 | 21S -JCT-201 | 2" |
| 1E | 21S -CON-0105 | SCC TO JUNCTION 110 | 21S -SCC-001 | 21S -JCT-110 | 2" |
| 1F | 21S -CON-0106 | SCC TO JUNCTION 210 | 21S -SCC-001 | 21S -JCT-210 | 2" |
| 1G | 21S -CON-0107 | SCC TO JUNCTION 111 | 21S -SCC-001 | 21S -JCT-111 | 2" |
| 1H | 21S -CON-0107 | SCC TO JUNCTION 211 | 21S -SCC-001 | 21S -JCT-211 | 2" |
| 1J | 21S -CON-0108 | SCC TO JUNCTION 112 | 21S -SCC-001 | 21S -JCT-112 | 2" |
| 1K | 21S -CON-0109 | SCC TO JUNCTION 212 | 21S -SCC-001 | 21S -JCT-212 | 2" |
| 1L | 21S -CON-0110 | SCC TO JUNCTION 113 | 21S -SCC-001 | 21S -JCT-113 | 2" |
| 1M | 21S -CON-0110 | SCC TO JUNCTION 213 | 21S -SCC-001 | 21S -JCT-213 | 2" |
| 1N | 21S -CON-0111 | SCC TO JUNCTION 120 | 21S -SCC-001 | 21S -JCT-120 | 2" |
| 1P | 21S -CON-0112 | SCC TO JUNCTION 220 | 21S -SCC-001 | 21S -JCT-220 | 2" |
| 1Q | 21S -CON-0113 | SCC TO JUNCTION 121 | 21S -SCC-001 | 21S -JCT-121 | 2" |
| 1R | 21S -CON-0114 | SCC TO JUNCTION 221 | 21S -SCC-001 | 21S -JCT-221 | 2" |
| 2A | 21S -CON-0201 | MICROPHONE 1 - NOISE SENSING | 21S -JCT-111 | 21S -ASM-001 | 1" |
| 2B | 21S -CON-0202 | MICROPHONE 2 - NOISE SENSING | 21S -JCT-211 | 21S -ASM-002 | 1" |
| 2C | 21S -CON-0203 | SPEAKER 1 - POLE | 21S -SPK-003 | 21S -SPK-001 | 1-1/2" |
| 2D | 21S -CON-0204 | SPEAKER 2 - POLE | 21S -SPK-004 | 21S -SPK-002 | 1-1/2" |
| 2E | 21S -CON-0205 | SPEAKER 3 - POLE | 21S -SCC-001 | 21S -SPK-003 | 1-1/2" |
| 2F | 21S -CON-0206 | SPEAKER 4 - POLE | 21S -SCC-001 | 21S -SPK-004 | 1-1/2" |
| 2G | 21S -CON-0207 | SPEAKER 5 - POLE | 21S -SCC-001 | 21S -SPK-005 | 1-1/2" |
| 2H | 21S -CON-0208 | SPEAKER 6 - POLE | 21S -SCC-001 | 21S -SPK-006 | 1-1/2" |
| 2J | 21S -CON-0209 | SPEAKER 7 - POLE | 21S -SPK-005 | 21S -SPK-007 | 1-1/2" |
| 2K | 21S -CON-0210 | SPEAKER 8 - POLE | 21S -SPK-006 | 21S -SPK-008 | 1-1/2" |
| 2L | 21S -CON-0211 | SPEAKER 9 - POLE | 21S -SPK-007 | 21S -SPK-009 | 1-1/2" |
| 2M | 21S -CON-0212 | SPEAKER 10 - POLE | 21S -SPK-008 | 21S -SPK-010 | 1-1/2" |
| 2N | 21S -CON-0213 | SPEAKER 11 - CANOPY | 21S -JCT-100 | 21S -SPK-011 | 1" |
| 2P | 21S -CON-0214 | SPEAKER 12 - CANOPY | 21S -JCT-200 | 21S -SPK-012 | 1" |
| 2Q | 21S -CON-0215 | SPEAKER 13 - CANOPY | 21S -JCT-100 | 21S -SPK-013 | 1" |
| 2R | 21S -CON-0216 | SPEAKER 14 - CANOPY | 21S -JCT-200 | 21S -SPK-014 | 1" |
| 2S | 21S -CON-0217 | SPEAKER 15 - CANOPY | 21S -JCT-100 | 21S -SPK-015 | 1" |
| 2T | 21S -CON-0218 | SPEAKER 16 - CANOPY | 21S -JCT-200 | 21S -SPK-016 | 1" |
| 2U | 21S -CON-0219 | SPEAKER 17 - CANOPY | 21S -JCT-110 | 21S -SPK-017 | 1" |
| 2V | 21S -CON-0220 | SPEAKER 18 - CANOPY | 21S -JCT-210 | 21S -SPK-018 | 1" |
| 2W | 21S -CON-0221 | SPEAKER 19 - CANOPY | 21S -JCT-110 | 21S -SPK-019 | 1" |
| 2X | 21S -CON-0222 | SPEAKER 20 - CANOPY | 21S -JCT-210 | 21S -SPK-020 | 1" |
| 2Y | 21S -CON-0223 | SPEAKER 21 - CANOPY | 21S -JCT-110 | 21S -SPK-021 | 1" |
| 2Z | 21S -CON-0224 | SPEAKER 22 - CANOPY | 21S -JCT-210 | 21S -SPK-022 | 1" |
| 2AA | 21S -CON-0225 | SPEAKER 23 - CANOPY | 21S -JCT-112 | 21S -SPK-023 | 1" |
| 2AB | 21S -CON-0226 | SPEAKER 24 - CANOPY | 21S -JCT-212 | 21S -SPK-024 | 1" |

1 COMMUNICATIONS CONDUIT SCHEDULE



| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# 21ST STREET STATION
# COMMUNICATIONS
# CONDUIT SCHEDULE (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E3-21S-ELE-SCH-461

| CONDUIT NO. | DEVICE ID | DESCRIPTION/USE | FROM | TO | CONDUIT SIZE |
|---|---|---|---|---|---|
| 2AC | 21S -CON-0227 | SPEAKER 25 - CANOPY | 21S -JCT-112 | 21S -SPK-025 | 1" |
| 2AD | 21S -CON-0228 | SPEAKER 26 - CANOPY | 21S -JCT-212 | 21S -SPK-026 | 1" |
| 2AE | 21S -CON-0229 | SPEAKER 27 - CANOPY | 21S -JCT-112 | 21S -SPK-027 | 1" |
| 2AF | 21S -CON-0230 | SPEAKER 28 - CANOPY | 21S -JCT-212 | 21S -SPK-028 | 1" |
| 2AG | 21S -CON-0231 | SPEAKER 29 - CANOPY | 21S -JCT-121 | 21S -SPK-029 | 1" |
| 2AH | 21S -CON-0232 | SPEAKER 30 - CANOPY | 21S -JCT-221 | 21S -SPK-030 | 1" |
| 2AJ | 21S -CON-0233 | SPEAKER 31 - CANOPY | 21S -JCT-121 | 21S -SPK-031 | 1" |
| 2AK | 21S -CON-0234 | SPEAKER 32 - CANOPY | 21S -JCT-221 | 21S -SPK-032 | 1" |
| 2AL | 21S -CON-0235 | SPEAKER 33 - CANOPY | 21S -JCT-121 | 21S -SPK-033 | 1" |
| 2AM | 21S -CON-0236 | SPEAKER 34 - CANOPY | 21S -JCT-221 | 21S -SPK-034 | 1" |
| 3A | 21S -CON-0301 | CAMERA 1 | 21S -JCT-101 | 21S CAM-001 | 1" |
| 3B | 21S -CON-0302 | CAMERA 2 | 21S -JCT-201 | 21S CAM-002 | 1" |
| 3C | 21S -CON-0303 | CAMERA 3 | 21S -JCT-101 | 21S CAM-003 | 1" |
| 3D | 21S -CON-0304 | CAMERA 4 | 21S -JCT-201 | 21S CAM-004 | 1" |
| 3E | 21S -CON-0305 | CAMERA 5 | 21S -JCT-111 | 21S CAM-005 | 1" |
| 3F | 21S -CON-0306 | CAMERA 6 | 21S -JCT-211 | 21S CAM-006 | 1" |
| 3G | 21S -CON-0307 | CAMERA 7 | 21S -JCT-112 | 21S CAM-007 | 1" |
| 3H | 21S -CON-0308 | CAMERA 8 | 21S -JCT-212 | 21S CAM-008 | 1" |
| 3J | 21S -CON-0309 | CAMERA 9 | 21S -JCT-120 | 21S CAM-009 | 1" |
| 3K | 21S -CON-0310 | CAMERA 10 | 21S -JCT-220 | 21S CAM-010 | 1" |
| 3L | 21S -CON-0311 | CAMERA 11 | 21S -JCT-120 | 21S CAM-011 | 1" |
| 3M | 21S -CON-0312 | CAMERA 12 | 21S -JCT-220 | 21S CAM-012 | 1" |
| 4A | 21S -CON-0401 | KIOSK 1 (F) | 21S -SCC-001 | 21S -KSK-001 | 2" |
| 4B | 21S -CON-0402 | KIOSK 2 (F) | 21S -SCC-001 | 21S -KSK-002 | 2" |
| 5A | 21S -CON-0501 | VMS 1 | 21S -JCT-101 | 21S -VMS-001 | 1" |
| 5B | 21S -CON-0502 | VMS 2 | 21S -JCT-201 | 21S -VMS-002 | 1" |
| 5C | 21S -CON-0503 | VMS 3 | 21S -JCT-101 | 21S -VMS-003 | 1" |
| 5D | 21S -CON-0504 | VMS 4 | 21S -JCT-201 | 21S -VMS-004 | 1" |
| 5E | 21S -CON-0505 | VMS 5 | 21S -JCT-111 | 21S -VMS-005 | 1" |
| 5F | 21S -CON-0506 | VMS 6 | 21S -JCT-211 | 21S -VMS-006 | 1" |
| 5G | 21S -CON-0507 | VMS 7 | 21S -JCT-111 | 21S -VMS-007 | 1" |
| 5H | 21S -CON-0508 | VMS 8 | 21S -JCT-211 | 21S -VMS-008 | 1" |
| 5J | 21S -CON-0509 | VMS 9 | 21S -JCT-120 | 21S -VMS-009 | 1" |
| 5K | 21S -CON-0510 | VMS 10 | 21S -JCT-220 | 21S -VMS-010 | 1" |
| 5L | 21S -CON-0511 | VMS 11 | 21S -JCT-120 | 21S -VMS-011 | 1" |
| 5M | 21S -CON-0512 | VMS 12 | 21S -JCT-220 | 21S -VMS-012 | 1" |
| 6A | 21S -CON-0601 | TVM 1 | 21S -SCC-001 | 21S -TVM-001 | 2" |
| 6B | 21S -CON-0602 | TVM 2 | 21S -SCC-001 | 21S -TVM-002 | 2" |
| 7A | 21S -CON-0701 | VALIDATOR 1 | 21S -SCC-001 | 21S -RSV-001 | 1-1/2" |
| 7B | 21S -CON-0702 | VALIDATOR 2 | 21S -SCC-001 | 21S -RSV-002 | 1-1/2" |
| 7C | 21S -CON-0703 | VALIDATOR 3 | 21S -SCC-001 | 21S -RSV-003 | 1-1/2" |
| 7D | 21S -CON-0704 | VALIDATOR 4 | 21S -SCC-001 | 21S -RSV-004 | 1-1/2" |
| 8A | 21S -CON-0801 | EMERGENCY TELEPHONE 1 - PHONE | 21S -SCC-001 | 21S -ETL-001 | 1-1/2" |
| 8B | 21S -CON-0802 | EMERGENCY TELEPHONE 1 - BEACON LIGHT 1 | 21S -ETL-001 | 21S -ETB-001 | 1" |
| 8C | 21S -CON-0803 | EMERGENCY TELEPHONE 1 - BEACON LIGHT 2 | 21S -ETL-001 | 21S -ETB-002 | 1" |
| 9A | 21S -CON-0901 | STATION ELECTRICAL CABINET | 21S -SCC-001 | 21S -SEC-001 | 2" |

1 COMMUNICATIONS CONDUIT SCHEDULE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11
21ST STREET STATION
COMMUNICATIONS
CONDUIT SCHEDULE (2 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E3-21S-ELE-SCH-462

SHEET 56 OF 273

Sep. 25 2015 09:52 am V:\3400_ADC\CAD\SEGMENT E3\PLAN SHEETS\ELECTRICAL\E3-21S-ELE-SCH-462.dwg By: FergTK

# CODE SUMMARY - CENTER PLATFORM
# PENN STATION

## CODE REFERENCES

| | |
|---|---|
| MINNESOTA STATE BUILDING CODE | 2015 |
| NFPA 130 – STANDARD FOR FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS | 2014 |

IBC REVIEW

A. DESCRIPTION
LOCATION: MINNEAPOLIS, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF A PLATFORM 270' LONG BY 21'–4" ACCESSED BY A SLOPED WALK AT EACH END OF PLATFORM. PLATFORM IS OPEN TO EXTERIOR ON ALL FOUR SIDES.

THE STATION IS LOCATED WITHIN AN EXISTING RAILROAD CORRIDOR. A PASSENGER ELEVATOR AND OPEN STAIR (VERTICAL CIRCULATION) ARE PROVIDED FOR PEDESTRIAN STATION ACCESS FROM PENN AVENUE NORTH.

TYPICAL PLATFORM AREA: 5760 SQUARE FEET (GROSS AREA)
5416 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA AT PLATFORM: = 2928 SQUARE FEET
732 SQUARE FEET (1 @ 36'–0" X 20'–4") WEST CANOPY
732 SQUARE FEET (1 @ 36'–0" X 20'–4") MIDDLE CANOPY
732 SQUARE FEET (1 @ 36'–0" X 20'–4") MIDDLE CANOPY
732 SQUARE FEET (1 @ 36'–0" X 20'–4") EAST CANOPY

B. OCCUPANCY CLASSIFICATION (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3
(15 S.F. PER PERSON)

C. OCCUPANCY SEPARATIONS

NONE ARE REQUIRED.
ELEVATOR HOIST WAY DOES NOT PENETRATE FLOOR/CEILING OR ROOF/CEILING ASSEMBLIES – NO RATING REQUIRED
ELEVATOR MACHINE ROOM DOES NOT ABUT, OR OPEN TO, THE ELEVATOR HOIST WAY – NO RATING REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. IBC EXITING SUMMARY

NO. OF OCCUPANTS = 5420 S.F. / 15 S.F./OCC = 361
REQUIRED EGRESS WIDTH = 361 X 0.2 = 72" (PER 1005.3.2)
WIDTH PROVIDED = 2 RAMPS AT 145" = 290"
2 MEANS OF EGRESS PROVIDED
THE VERTICAL CIRCULATION IS NOT CONSIDERED A MEANS OF EGRESS FROM THE STATION, AND IT IS CONSIDERED UNOCCUPIED

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

## PLATFORM COLOR AND FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

PLATFORM COLOR AND FINISH SCHEDULE

| TYPE | STATION | STRUCTURAL STEEL PAINT COLOR | PLATFORM CONC COLOR | PLATFORM CONC FINISH | CONC WALL COLOR | CONC WALL FINISH | RAILING INFILL MATERIAL | ALUM WDW FRAME FINISH | EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH | ALUM COMP CANOPY SOFFIT AND FASCIA COLOR | ARCH WOVEN MESH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CENTER | PENN STATION | PPG 513–7 COFFEE BEAN | CEMSTONE MENDOTA BUFF | TBD | CEMSTONE MENDOTA BUFF | TBD | SS CABLE | LIGHT BRONZE ANODIZED | HUNTER DOUGLAS WOODWRIGHT 8449 WINDJAMMER TEAK | ALUCOBOND NATURAL RUSTED METAL | TBD |

VERTICAL CIRCULATION COLOR AND FINISH SCHEDULE

| PRECAST WALL COLOR | PRECAST FLOOR COLOR | STRUCTURAL STEEL PAINT COLOR | PLATFORM CONC COLOR | PLATFORM CONC FINISH | CONC WALL COLOR | CONC WALL FINISH | ARCH WOVEN MESH | ALUM WDW FRAME FINISH | EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH | ALUM COMP CANOPY SOFFIT AND FASCIA COLOR | TRANSLUCENT PLASTIC PANEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TBD | TBD | PPG 513–7 COFFEE BEAN | CEMSTONE MENDOTA BUFF | TBD | CEMSTONE MENDOTA BUFF | TBD | GKD OMEGA DIVERGENCE | LIGHT BRONZE ANODIZED | HUNTER DOUGLAS WOODWRIGHT 8449 WINDJAMMER TEAK | ALUCOBOND NATURAL RUSTED METAL | 3FORM KODA XT BLUE B–02 |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

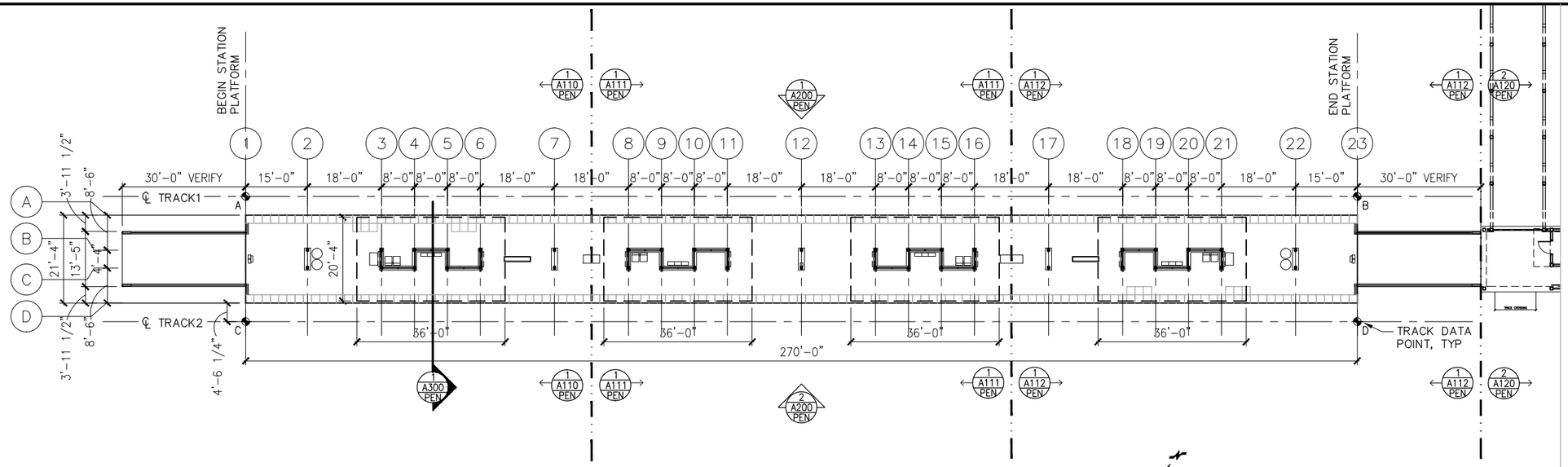
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**CODE SUMMARY / FINISH SCHEDULE**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-COD-010

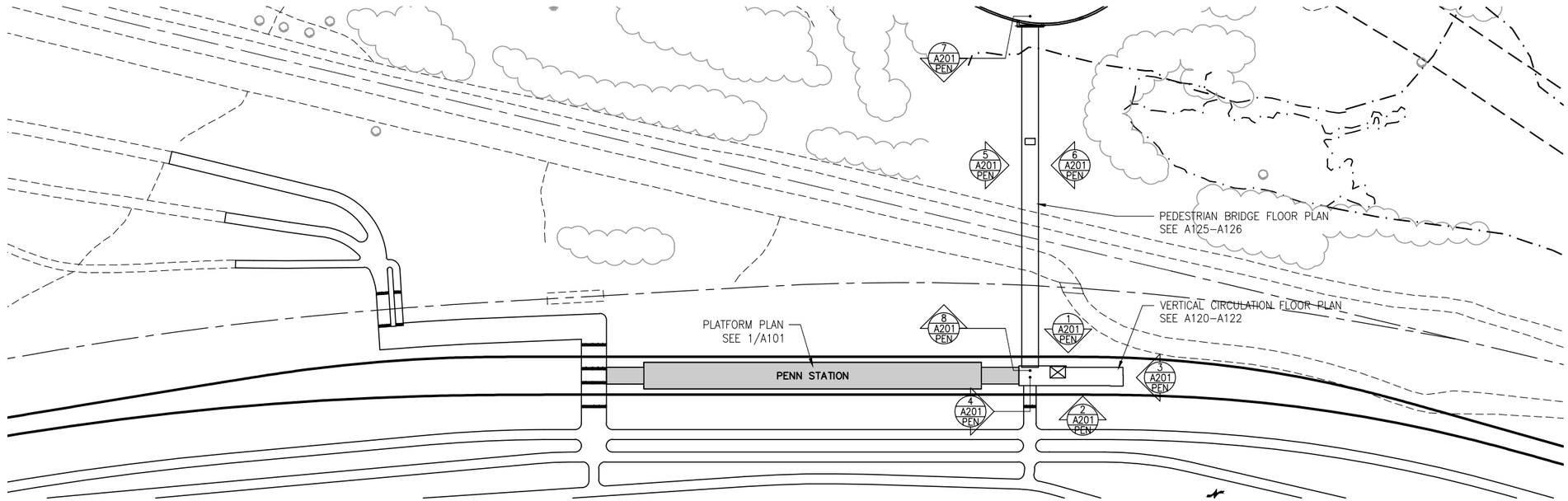
SHEET 57 OF 273

Sep. 25 2015 10:19 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-COD-010.dwg By: MurphySP




1 PLATFORM PLAN
SCALE: 1"=30'

SCALE 0 7.5 15 30




2 STATION AREA PLAN
SCALE: 1"=100'

SCALE 0 25 50 100

## TRACK DATA

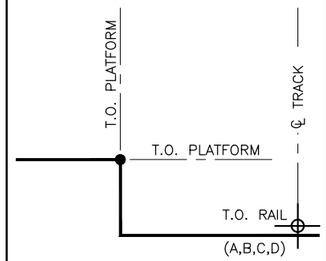
ELEV 100'-0" (LOCATION ON PLAN)

**TRACK 1 EL 100'-0"=** XXX.XX (PT 'A')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| A | XXX.XX | XXXX+XX.XX | |
| B | XXX.XX | XXXX+XX.XX | |
| | | | |

**TRACK 2 EL 100'-0"=** XXX.XX (PT 'C')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| C | XXX.XX | XXXX+XX.XX | |
| D | XXX.XX | XXXX+XX.XX | |
| | | | |




SECTION DIAGRAM AT PLATFORM EDGE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

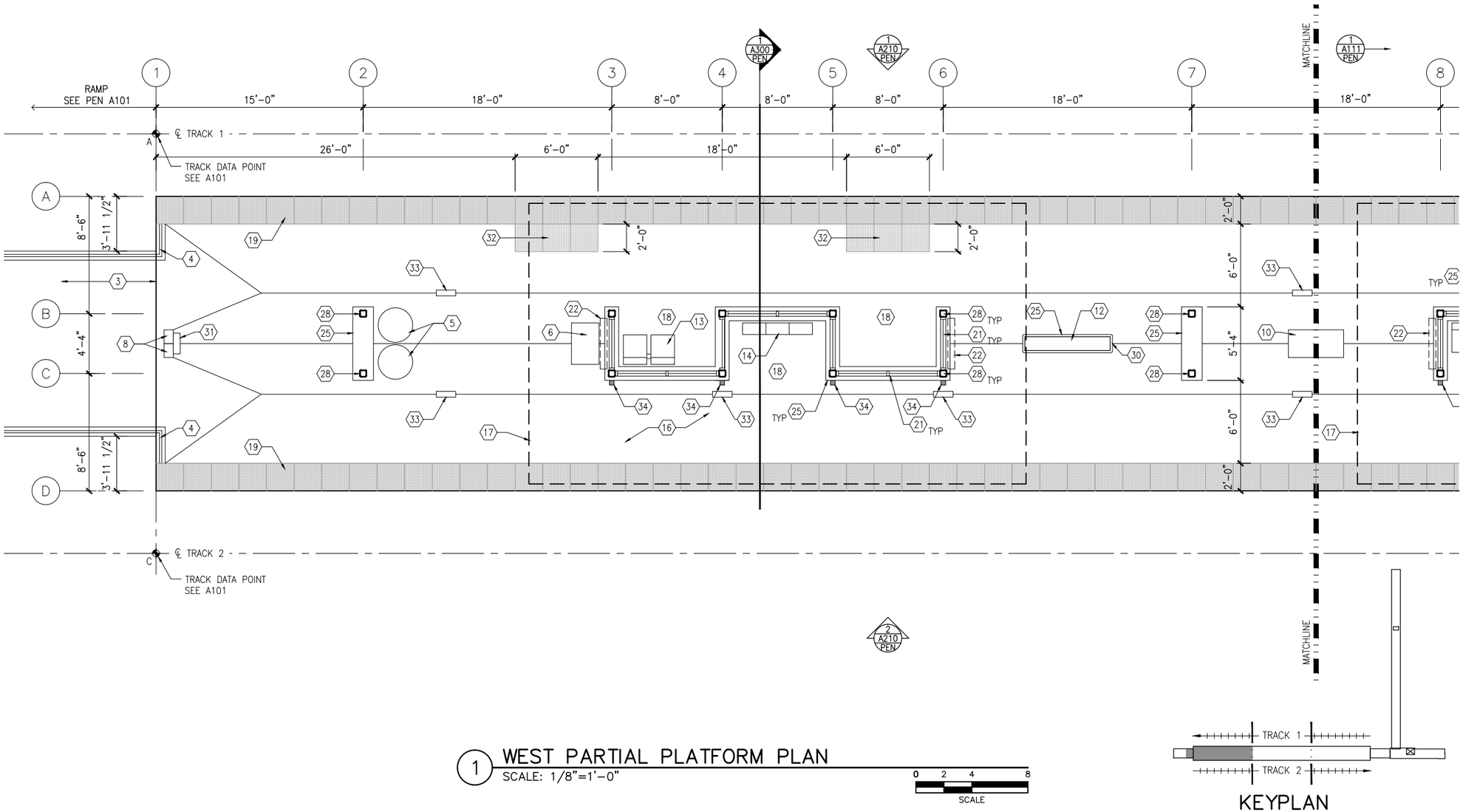
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-PLN-101

SHEET 58 OF 273

Sep. 21 2015 11:56 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-PLN-101.DWG By: MurphySP




1 WEST PARTIAL PLATFORM PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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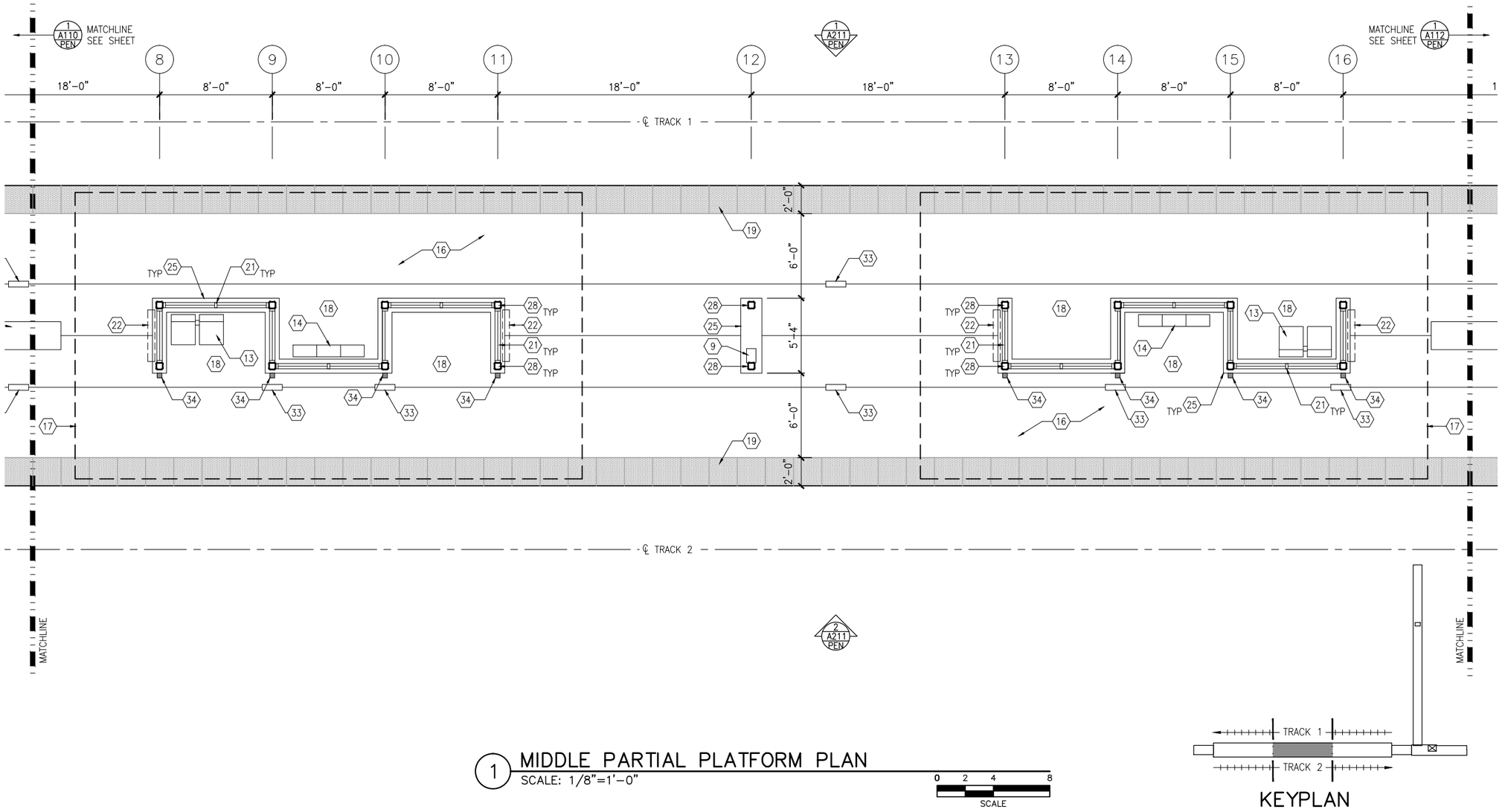
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**WEST PARTIAL PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-PLN-110

SHEET 59 OF 273




1 MIDDLE PARTIAL PLATFORM PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**MIDDLE PARTIAL PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-PLN-111

SHEET 60 OF 273

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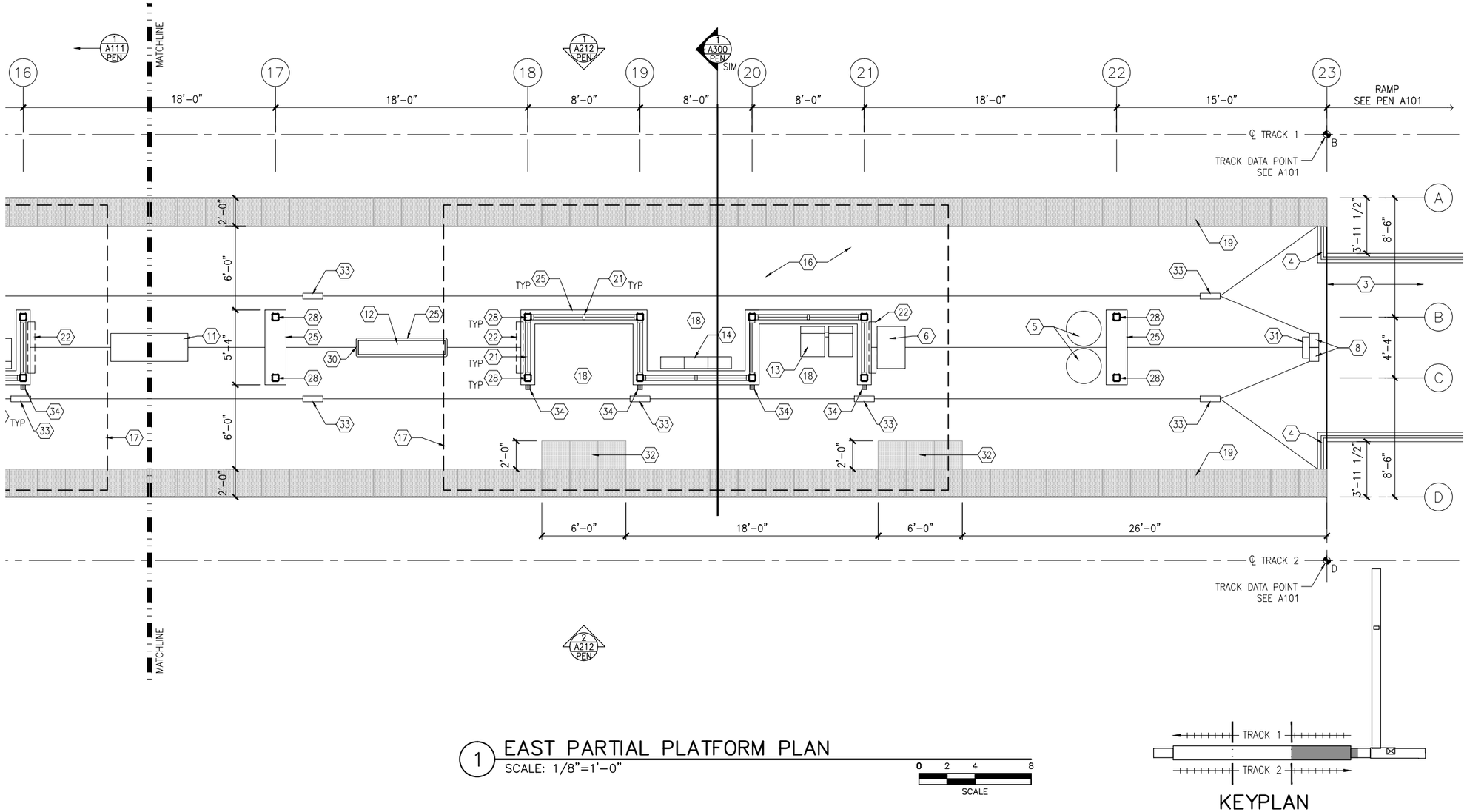


1 EAST PARTIAL PLATFORM PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

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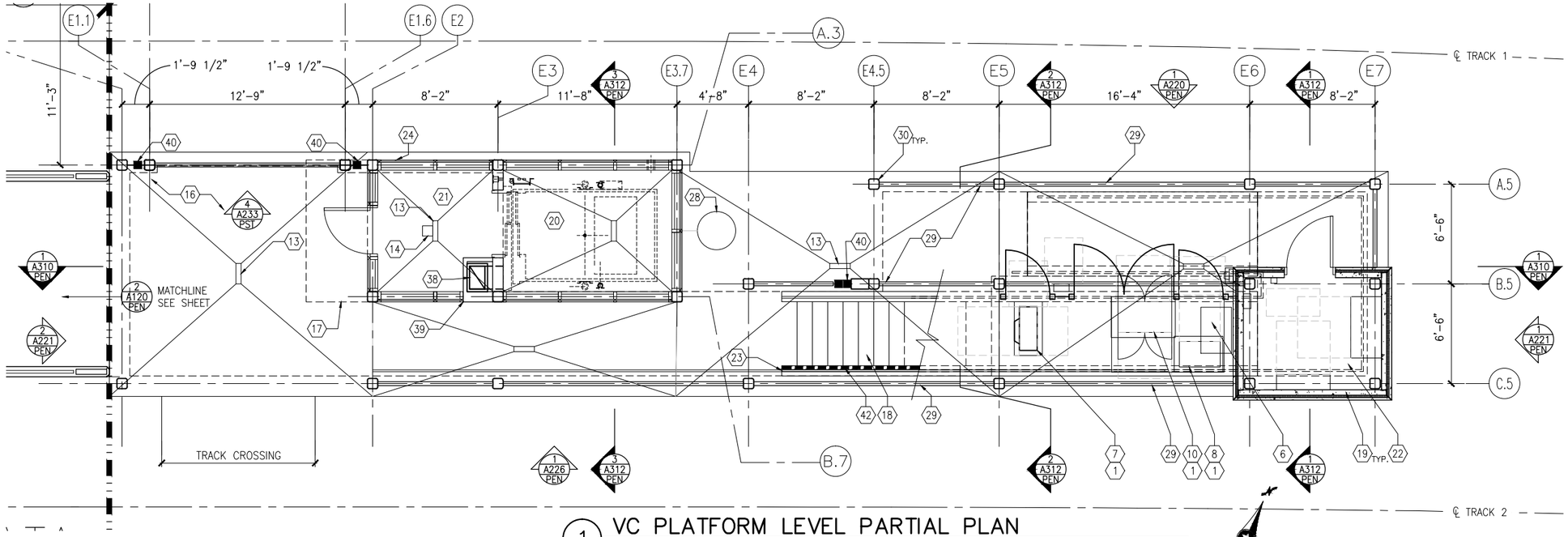
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**EAST PARTIAL PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-PLN-112

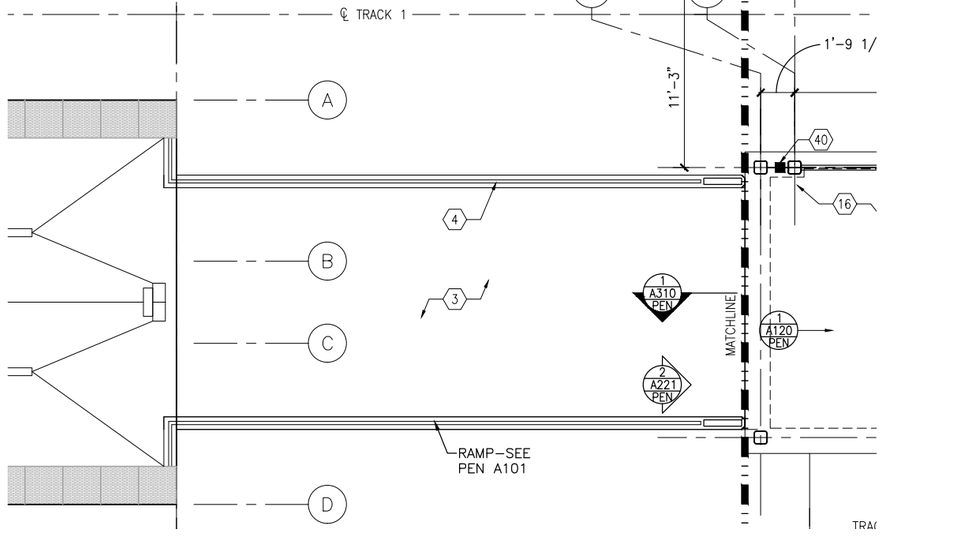
SHEET 61 OF 273




## 1 VC PLATFORM LEVEL PARTIAL PLAN

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

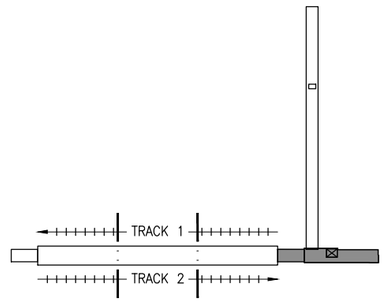
0 2 4 8
SCALE




## 2 VC PLATFORM LEVEL PARTIAL PLAN

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

0 2 4 8
SCALE




KEYPLAN

## SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. CONCRETE HOUSEKEEPING PAD
2. RAINWATER LEADER – SEE PLUMB
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. CONDENSING UNIT – SEE MECH
8. TRANSFORMER – SEE ELEC
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. CMU WALL
13. AREA DRAIN
14. SNOW MELT SYSTEM
15. PRCST CONC WALKWAY
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. PRCST CONC STAIR – SEE STRUCT
19. PRCST CONC WALL PANEL–SEE STRUCT
20. ELEVATOR
21. ELEVATOR VESTIBULE / LOBBY
22. ELEVATOR EQUIPMENT ROOM
23. GUARD RAIL
24. ALUM & GLASS FRAMING SYSTEM
25. VARIABLE MESSAGE SIGN
26. METAL SOFFIT AND FASCIA
27. GUARD RAIL
28. SUMP PIT
29. ARCHITECTURAL WOVEN MESH
30. STEEL COLUMN – SEE STRUCTURAL
31. STEEL BEAM – SEE STRUCTURAL
32. CONNECTION WALL HYDRANT
33. EXPANSION JOINT
34. EXISTING CRASH BARRIER
35. CRASH BARRIER/GUARD RAIL
36. EXISTING BARRIER / SIDEWALK
37. ROOF BELOW – SEE ROOF PLAN
38. CHASE – SEE MECH FOR DUCT WORK
39. COMPOSITE ALUM WALL PANEL
40. PRE-FINISHED METAL DOWNSPOUT
41. LIGHT MOUNTED TO STRUCTURE
42. BIKE RAIL MOUNTED TO STAIR

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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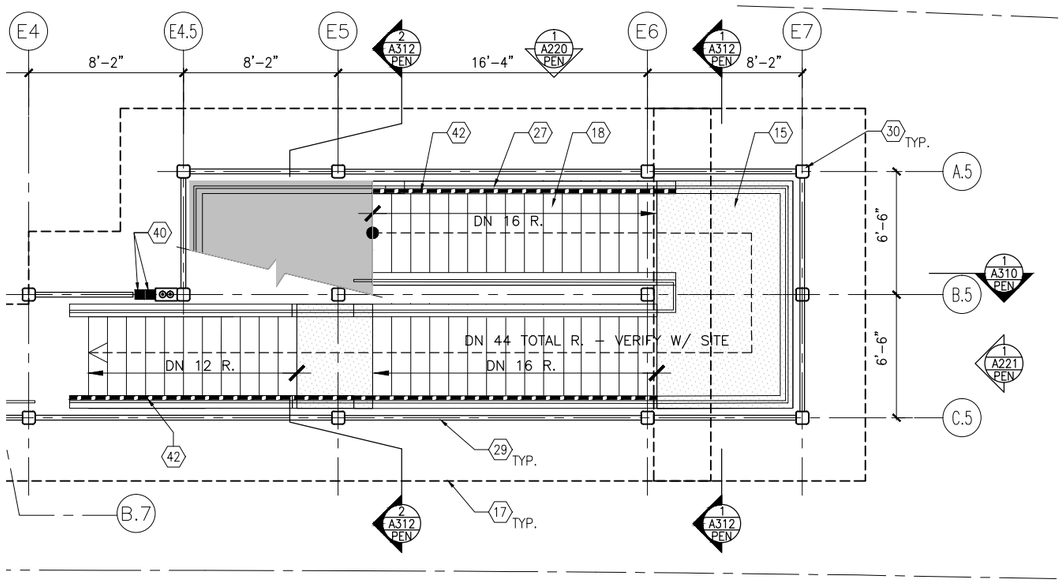
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC PLATFORM LEVEL PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-PLN-120

SHEET 62 OF 273




1 VC INTERMEDIATE LEVEL PLAN
SCALE:1/8"-1'-0"

0 2 4 8
SCALE

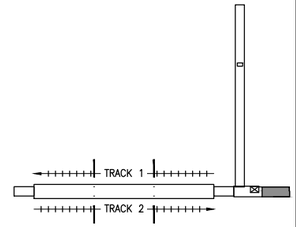
## SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES - ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. CONCRETE HOUSEKEEPING PAD
2. RAINWATER LEADER - SEE PLUMB
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. CONDENSING UNIT - SEE MECH
8. TRANSFORMER - SEE ELEC
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. CMU WALL
13. AREA DRAIN
14. SNOW MELT SYSTEM
15. PRCST CONC WALKWAY
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. PRCST CONC STAIR - SEE STRUCT
19. PRCST CONC WALL PANEL-SEE STRUCT
20. ELEVATOR
21. ELEVATOR VESTIBULE / LOBBY
22. ELEVATOR EQUIPMENT ROOM
23. GUARD RAIL
24. ALUM & GLASS FRAMING SYSTEM
25. VARIABLE MESSAGE SIGN
26. METAL SOFFIT AND FASCIA
27. GUARD RAIL
28. SUMP PIT
29. ARCHITECTURAL WOVEN MESH
30. STEEL COLUMN - SEE STRUCTURAL
31. STEEL BEAM - SEE STRUCTURAL
32. CONNECTION WALL HYDRANT
33. EXPANSION JOINT
34. EXISTING CRASH BARRIER
35. CRASH BARRIER/GUARD RAIL
36. EXISTING BARRIER / SIDEWALK
37. ROOF BELOW - SEE ROOF PLAN
38. CHASE - SEE MECH FOR DUCT WORK
39. COMPOSITE ALUM WALL PANEL
40. PRE-FINISHED METAL DOWNSPOUT
41. LIGHT MOUNTED TO STRUCTURE
42. BIKE RAIL MOUNTED TO STAIR




KEYPLAN

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

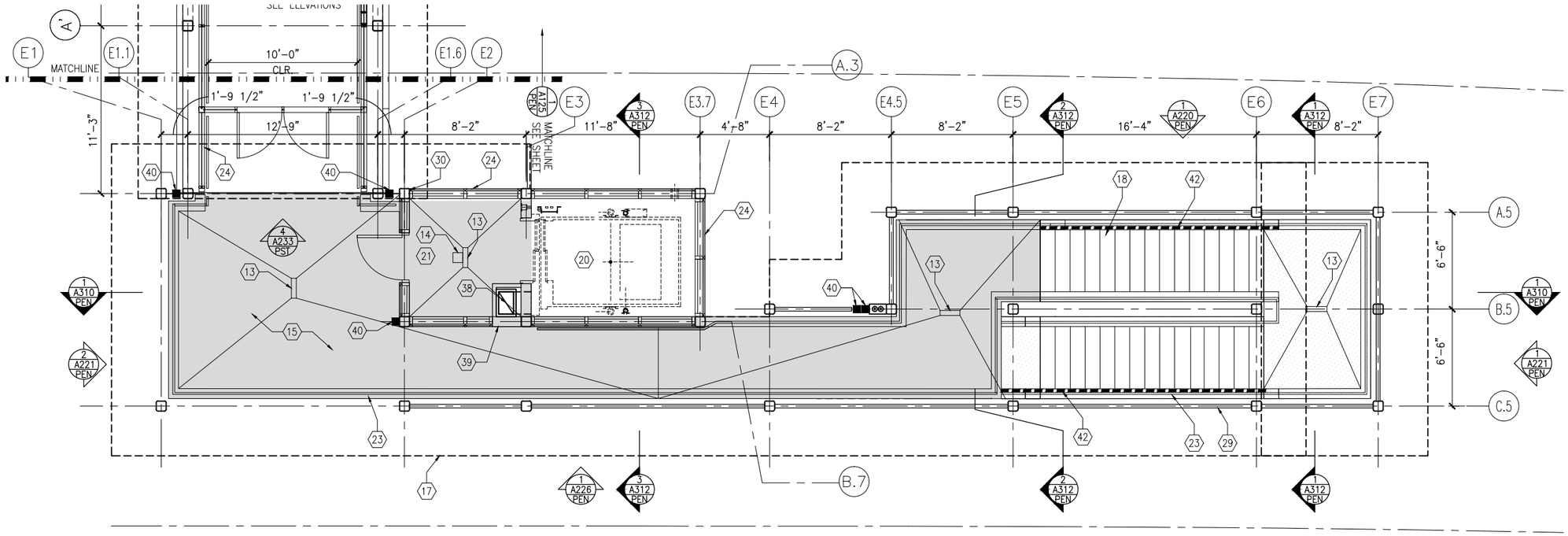
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# VC INTERMEDIATE LEVEL PLAN

DISCIPLINE: ARCHITECTURE

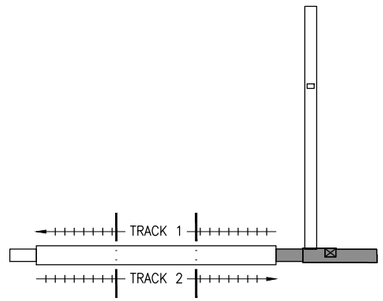
SHEET NAME: E4-PEN-ARC-PLN-121

SHEET 63 OF 273




1 VC BRIDGE LEVEL PLAN
SCALE:1/8"=1'-0"

0 2 4 8
SCALE




KEYPLAN

## SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. CONCRETE HOUSEKEEPING PAD
2. RAINWATER LEADER – SEE PLUMB
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. CONDENSING UNIT – SEE MECH
8. TRANSFORMER – SEE ELEC
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. CMU WALL
13. AREA DRAIN
14. SNOW MELT SYSTEM
15. PRCST CONC WALKWAY
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. PRCST CONC STAIR – SEE STRUCT
19. PRCST CONC WALL PANEL–SEE STRUCT
20. ELEVATOR
21. ELEVATOR VESTIBULE / LOBBY
22. ELEVATOR EQUIPMENT ROOM
23. GUARD RAIL
24. ALUM & GLASS FRAMING SYSTEM
25. VARIABLE MESSAGE SIGN
26. METAL SOFFIT AND FASCIA
27. GUARD RAIL
28. SUMP PIT
29. ARCHITECTURAL WOVEN MESH
30. STEEL COLUMN – SEE STRUCTURAL
31. STEEL BEAM – SEE STRUCTURAL
32. CONNECTION WALL HYDRANT
33. EXPANSION JOINT
34. EXISTING CRASH BARRIER
35. CRASH BARRIER/GUARD RAIL
36. EXISTING BARRIER / SIDEWALK
37. ROOF BELOW – SEE ROOF PLAN
38. CHASE – SEE MECH FOR DUCT WORK
39. COMPOSITE ALUM WALL PANEL
40. PRE–FINISHED METAL DOWNSPOUT
41. LIGHT MOUNTED TO STRUCTURE
42. BIKE RAIL MOUNTED TO STAIR

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

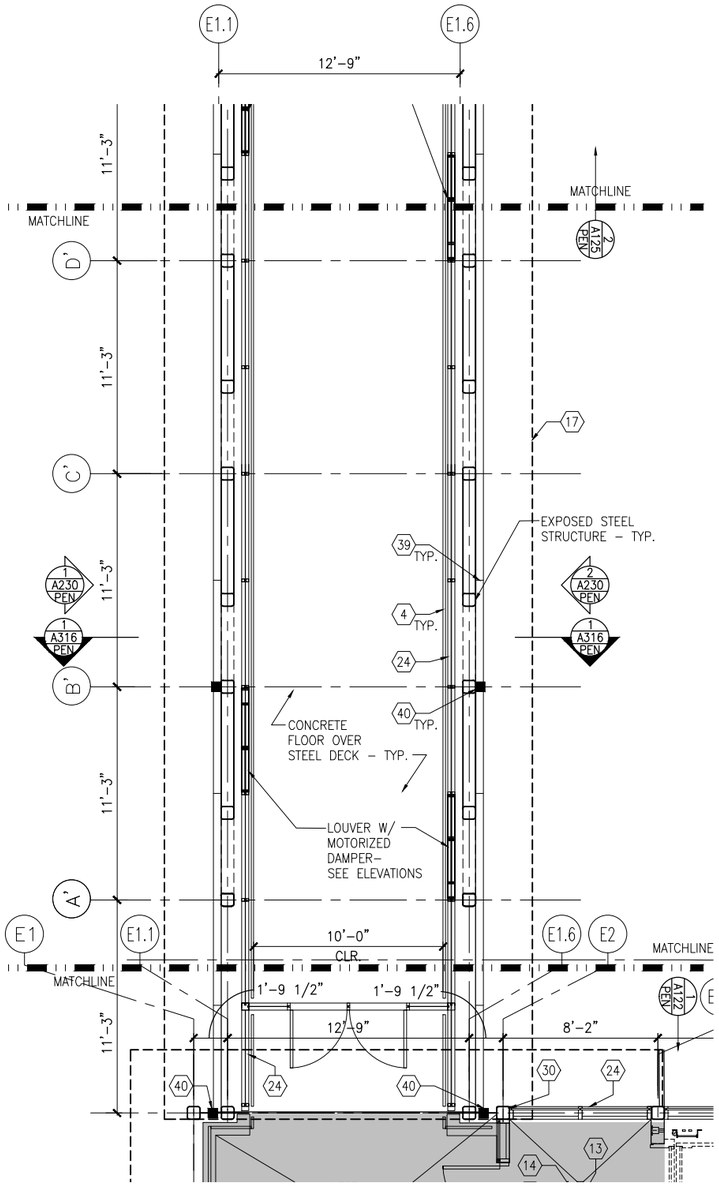
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC BRIDGE LEVEL PLAN**

DISCIPLINE: ARCHITECTURE

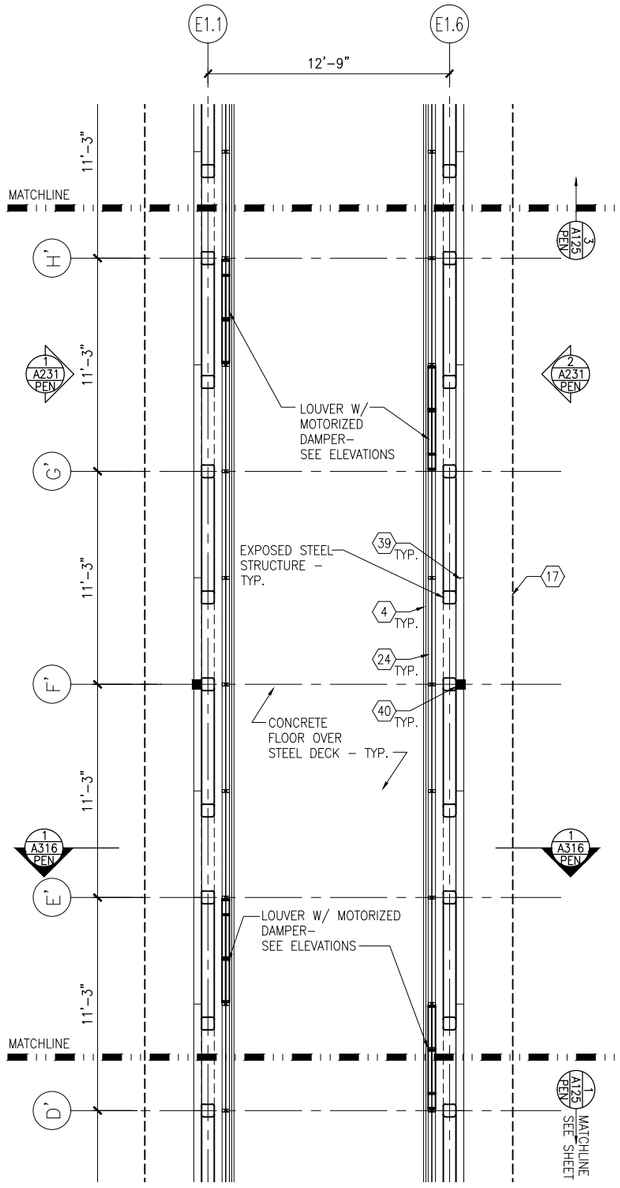
SHEET NAME: E4-PEN-ARC-PLN-122

SHEET 64 OF 273

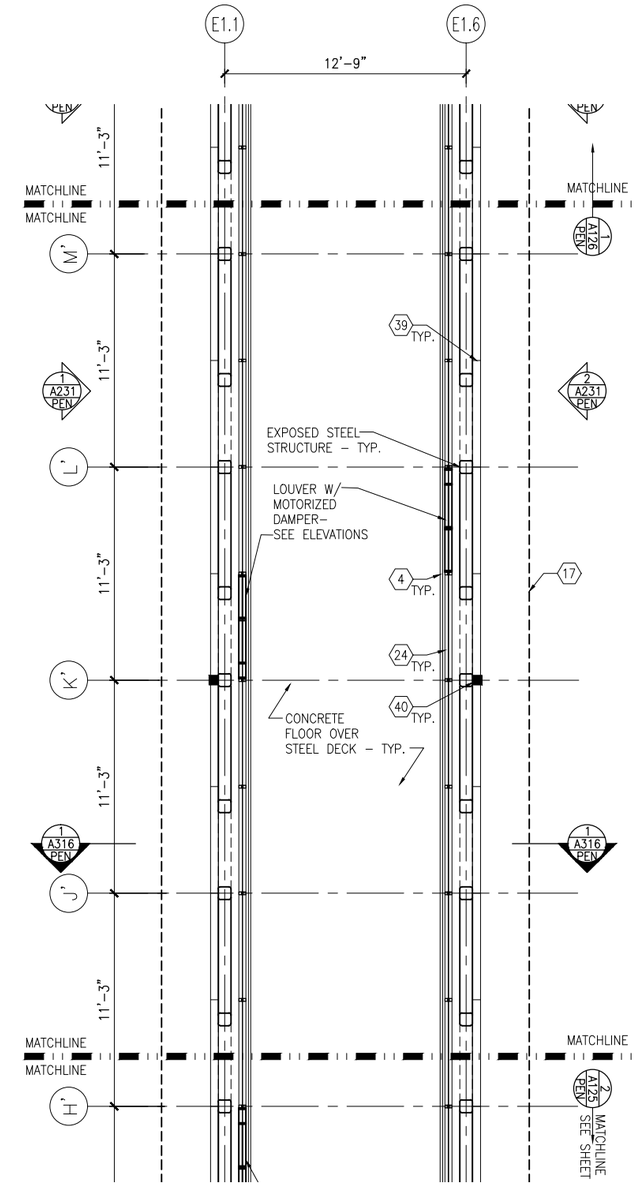
Sep. 21 2015 12:00 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-PLN-122.dwg By: MurphySP




1 PB BRIDGE LEVEL PLAN PART 1
SCALE:1/8"=1'-0"




2 PB BRIDGE LEVEL PLAN PART 2
SCALE:1/8"=1'-0"




3 PB BRIDGE LEVEL PLAN PART 3
SCALE:1/8"=1'-0"

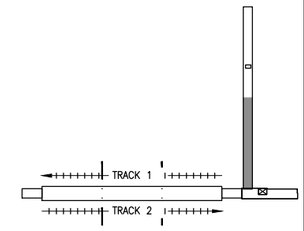
## SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. CONCRETE HOUSEKEEPING PAD
2. RAINWATER LEADER – SEE PLUMB
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. CONDENSING UNIT – SEE MECH
8. TRANSFORMER – SEE ELEC
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. CMU WALL
13. AREA DRAIN
14. SNOW MELT SYSTEM
15. PRCST CONC WALKWAY
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. PRCST CONC STAIR – SEE STRUCT
19. PRCST CONC WALL PANEL–SEE STRUCT
20. ELEVATOR
21. ELEVATOR VESTIBULE / LOBBY
22. ELEVATOR EQUIPMENT ROOM
23. GUARD RAIL
24. ALUM & GLASS FRAMING SYSTEM
25. VARIABLE MESSAGE SIGN
26. METAL SOFFIT AND FASCIA
27. GUARD RAIL
28. SUMP PIT
29. ARCHITECTURAL WOVEN MESH
30. STEEL COLUMN – SEE STRUCTURAL
31. STEEL BEAM – SEE STRUCTURAL
32. CONNECTION WALL HYDRANT
33. EXPANSION JOINT
34. EXISTING CRASH BARRIER
35. CRASH BARRIER/GUARD RAIL
36. EXISTING BARRIER / SIDEWALK
37. ROOF BELOW – SEE ROOF PLAN
38. CHASE – SEE MECH FOR DUCT WORK
39. COMPOSITE ALUM WALL PANEL
40. PRE-FINISHED METAL DOWNSPOUT
41. LIGHT MOUNTED TO STRUCTURE
42. BIKE RAIL MOUNTED TO STAIR




KEYPLAN

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

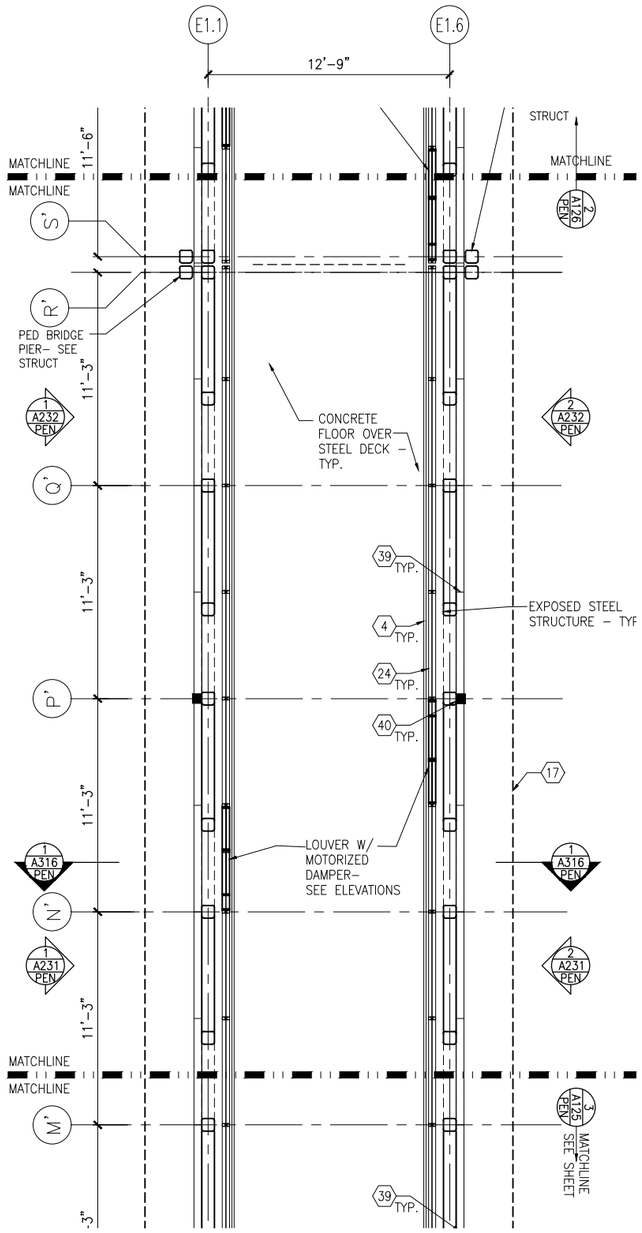
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE**
**BRIDGE LEVEL PLAN**

DISCIPLINE: ARCHITECTURE

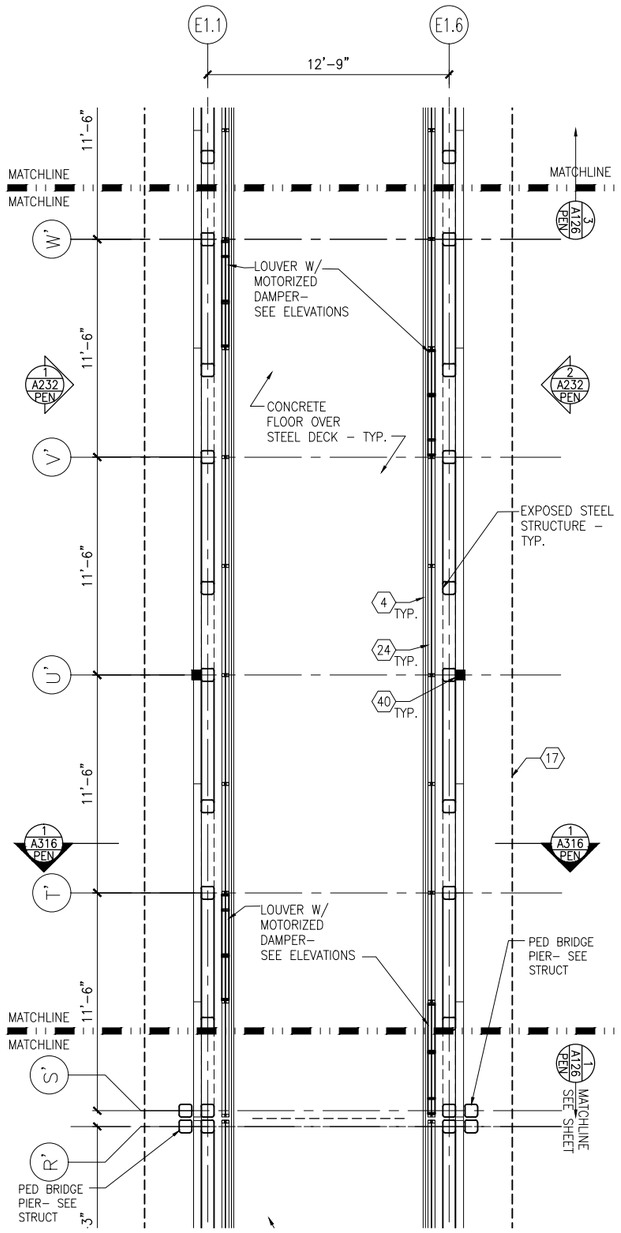
SHEET NAME: E4-PEN-ARC-PLN-125

SHEET 65 OF 273

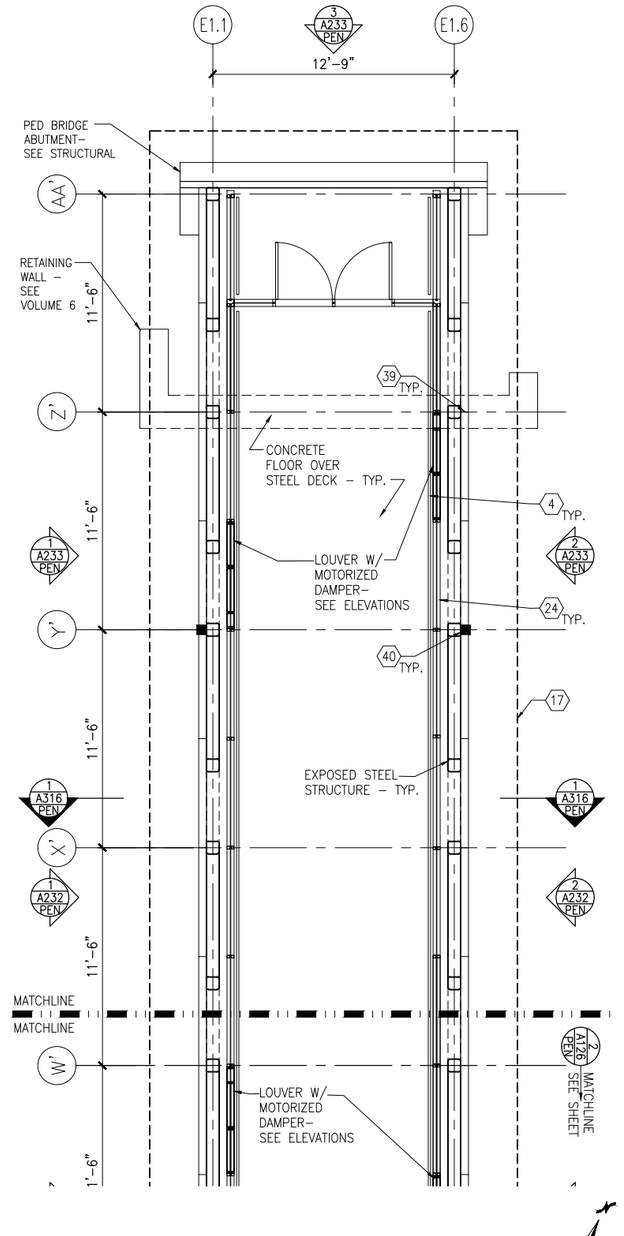
Sep. 21 2015 12:01 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-PLN-125.dwg By: MurphySP




1 PB BRIDGE LEVEL PLAN PART 4
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




2 PB BRIDGE LEVEL PLAN PART 5
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




3 PB BRIDGE LEVEL PLAN PART 6
SCALE:1/8"=1'-0"
0 2 4 8
SCALE

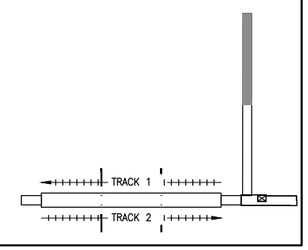
## SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. CONCRETE HOUSEKEEPING PAD
2. RAINWATER LEADER – SEE PLUMB
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. CONDENSING UNIT – SEE MECH
8. TRANSFORMER – SEE ELEC
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. CMU WALL
13. AREA DRAIN
14. SNOW MELT SYSTEM
15. PRCST CONC WALKWAY
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. PRCST CONC STAIR – SEE STRUCT
19. PRCST CONC WALL PANEL–SEE STRUCT
20. ELEVATOR
21. ELEVATOR VESTIBULE / LOBBY
22. ELEVATOR EQUIPMENT ROOM
23. GUARD RAIL
24. ALUM & GLASS FRAMING SYSTEM
25. VARIABLE MESSAGE SIGN
26. METAL SOFFIT AND FASCIA
27. GUARD RAIL
28. SUMP PIT
29. ARCHITECTURAL WOVEN MESH
30. STEEL COLUMN – SEE STRUCTURAL
31. STEEL BEAM – SEE STRUCTURAL
32. CONNECTION WALL HYDRANT
33. EXPANSION JOINT
34. EXISTING CRASH BARRIER
35. CRASH BARRIER/GUARD RAIL
36. EXISTING BARRIER / SIDEWALK
37. ROOF BELOW – SEE ROOF PLAN
38. CHASE – SEE MECH FOR DUCT WORK
39. COMPOSITE ALUM WALL PANEL
40. PRE-FINISHED METAL DOWNSPOUT
41. LIGHT MOUNTED TO STRUCTURE
42. BIKE RAIL MOUNTED TO STAIR




KEYPLAN

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

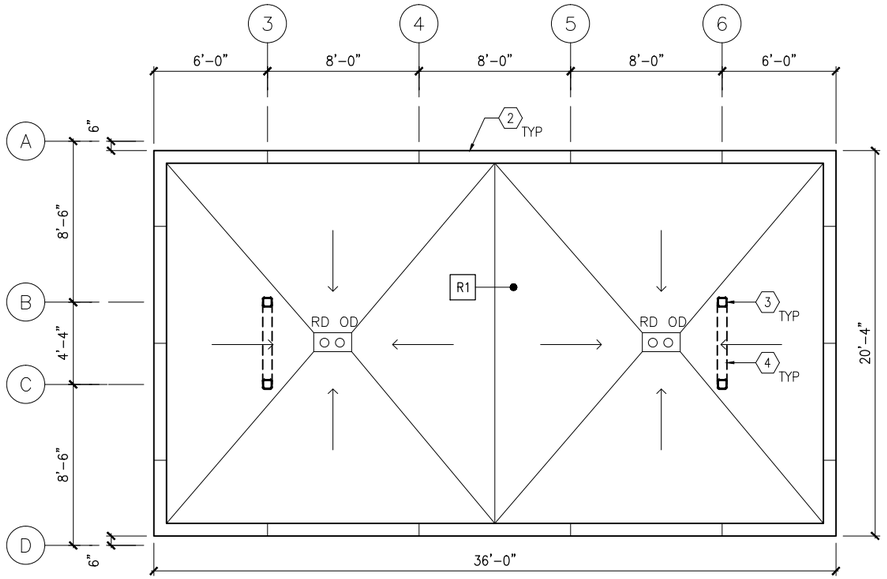
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE**
**BRIDGE LEVEL PLAN**

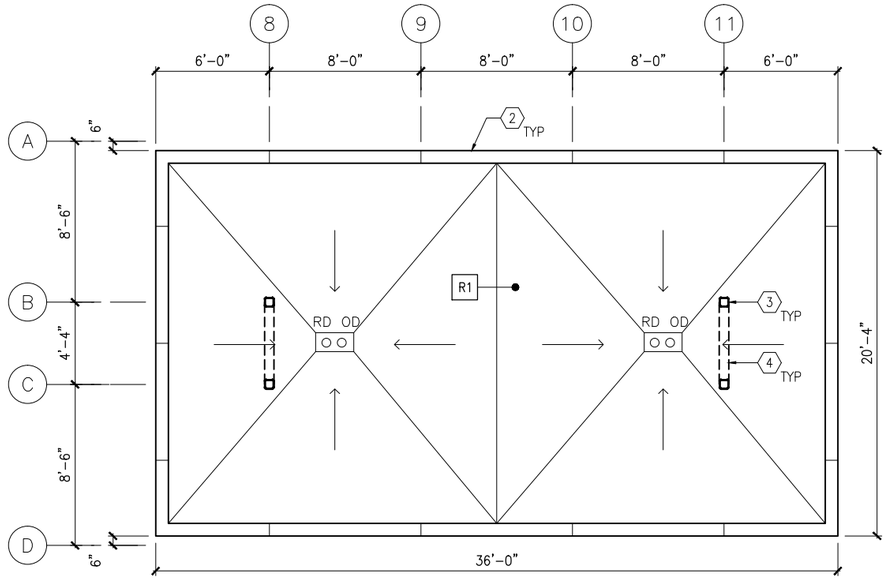
DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-PLN-126

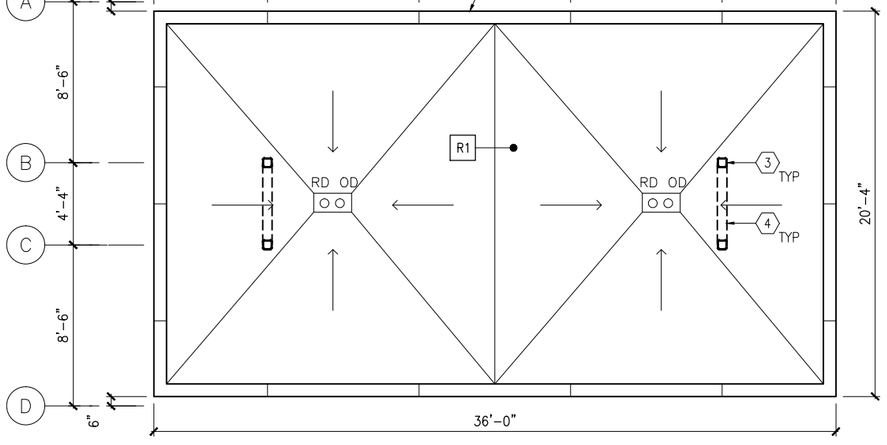
SHEET 66 OF 273



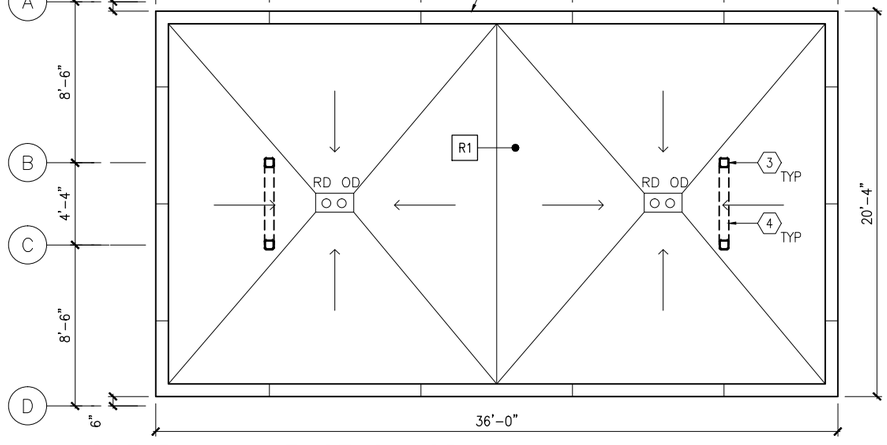

1 ROOF PLAN – WEST CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




2 ROOF PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




3 ROOF PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




4 ROOF PLAN – EAST CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE-FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

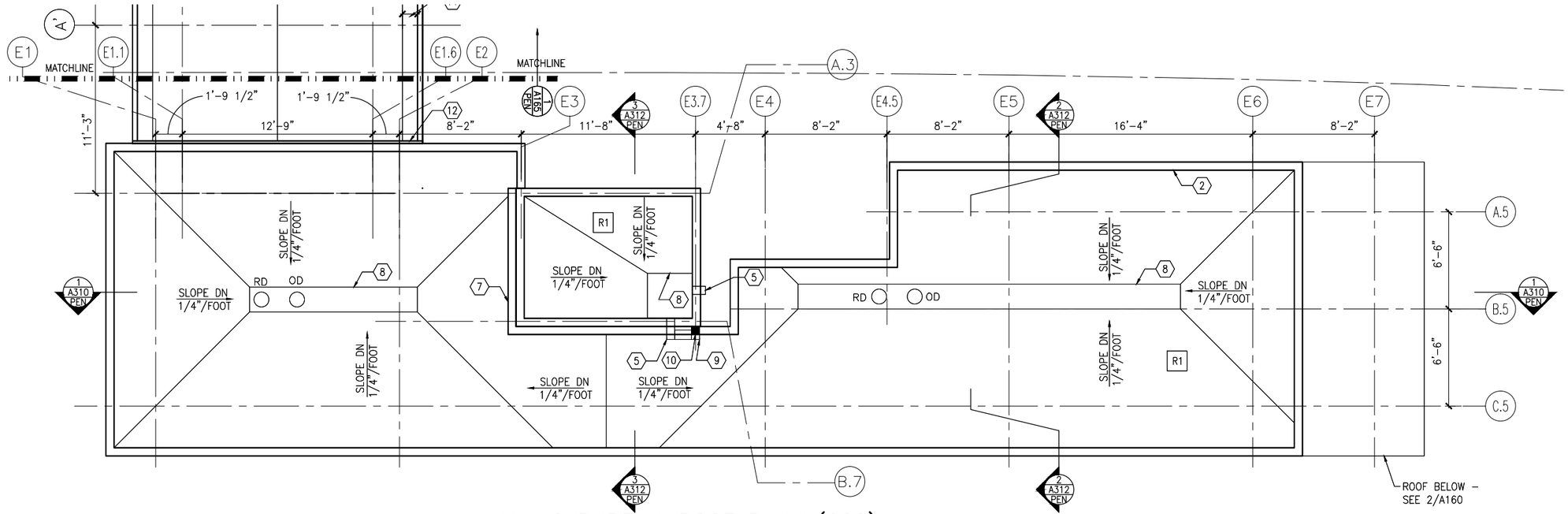
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**ROOF PLANS**

DISCIPLINE: ARCHITECTURE

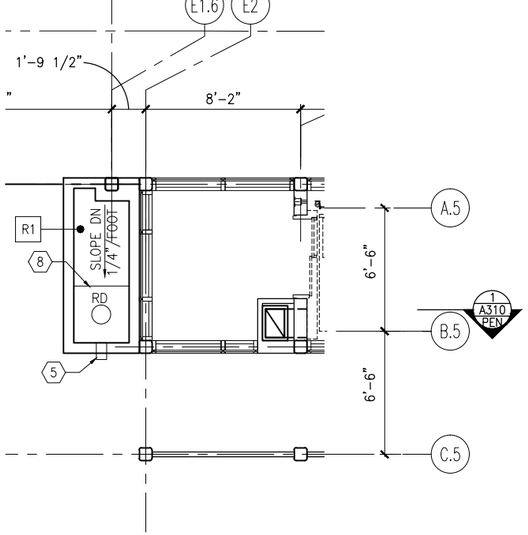
SHEET NAME: E4-PEN-ARC-PLN-150

SHEET 67 OF 273

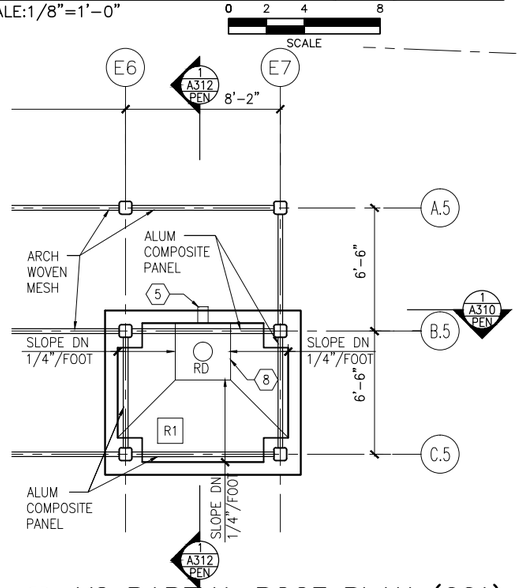
Sep, 21 2015 12:02 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-PLN-150.dwg By: MurphySP



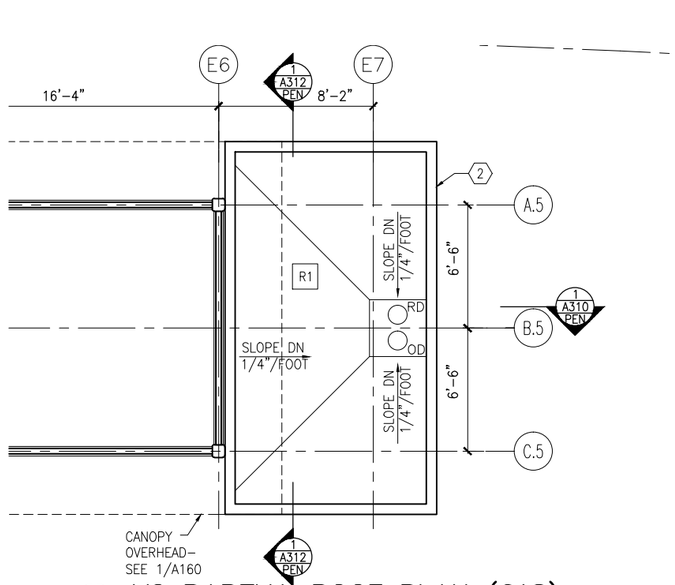

1 VC PARTIAL ROOF PLAN (002)
SCALE:1/8"=1'-0"




4 VC PARTIAL ROOF PLAN (001)
SCALE:1/8"=1'-0"




3 VC PARTIAL ROOF PLAN (001)
SCALE:1/8"=1'-0"




2 VC PARTIAL ROOF PLAN (018)
SCALE:1/8"=1'-0"

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE-FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

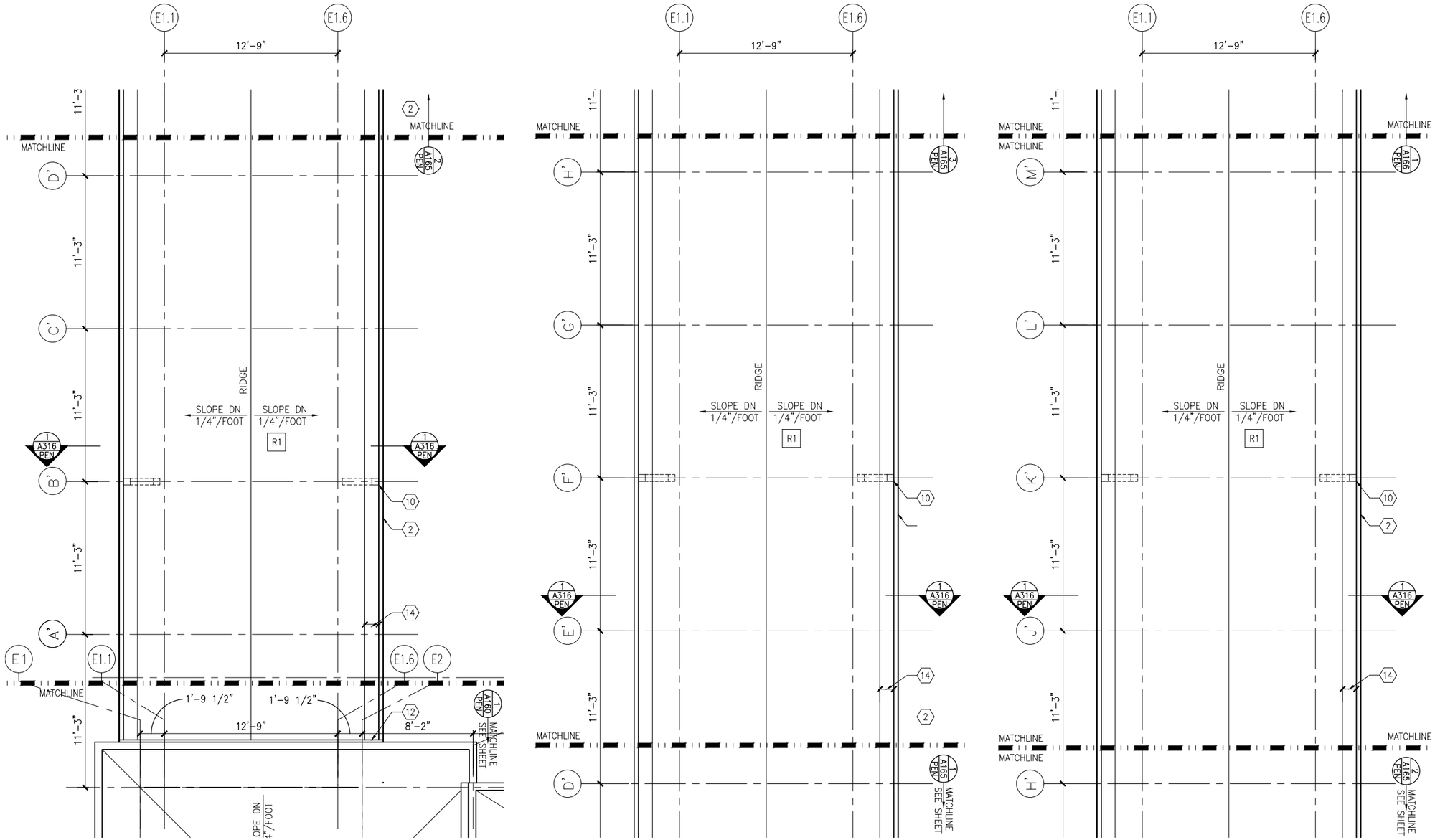
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC ROOF PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-PLN-160

SHEET 68 OF 273

Sep. 21 2015 12:03 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-PLN-160.dwg By: MurphySP




1 PED BRIDGE ROOF PLAN PART 1
SCALE:1/8"=1'-0"

2 PED BRIDGE ROOF PLAN PART 2
SCALE:1/8"=1'-0"

3 PED BRIDGE ROOF PLAN PART 3
SCALE:1/8"=1'-0"

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE-FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

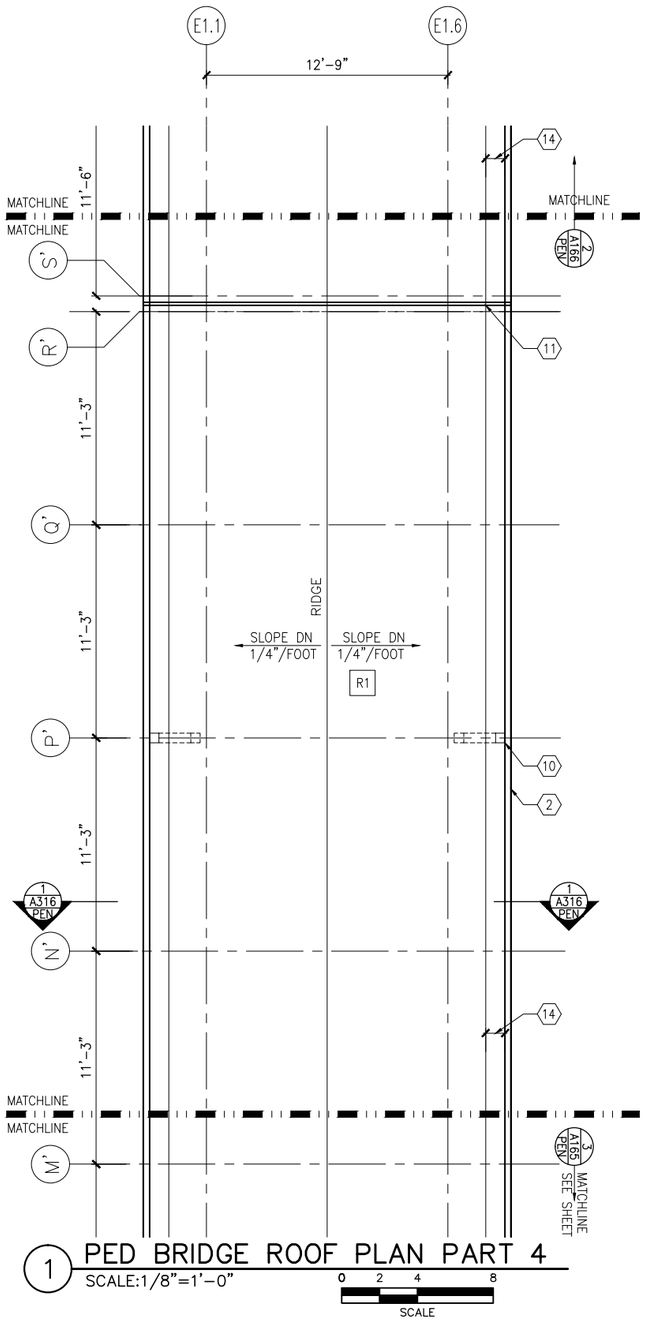
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE**
**ROOF PLAN**

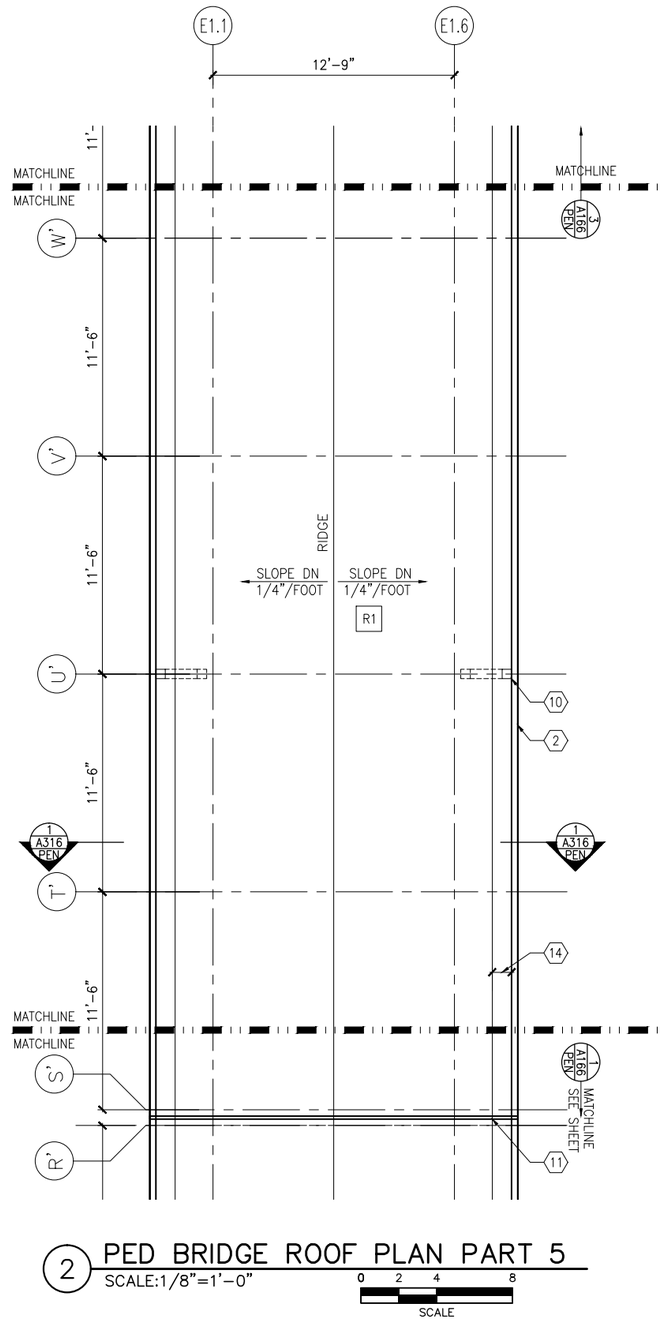
DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-PLN-165

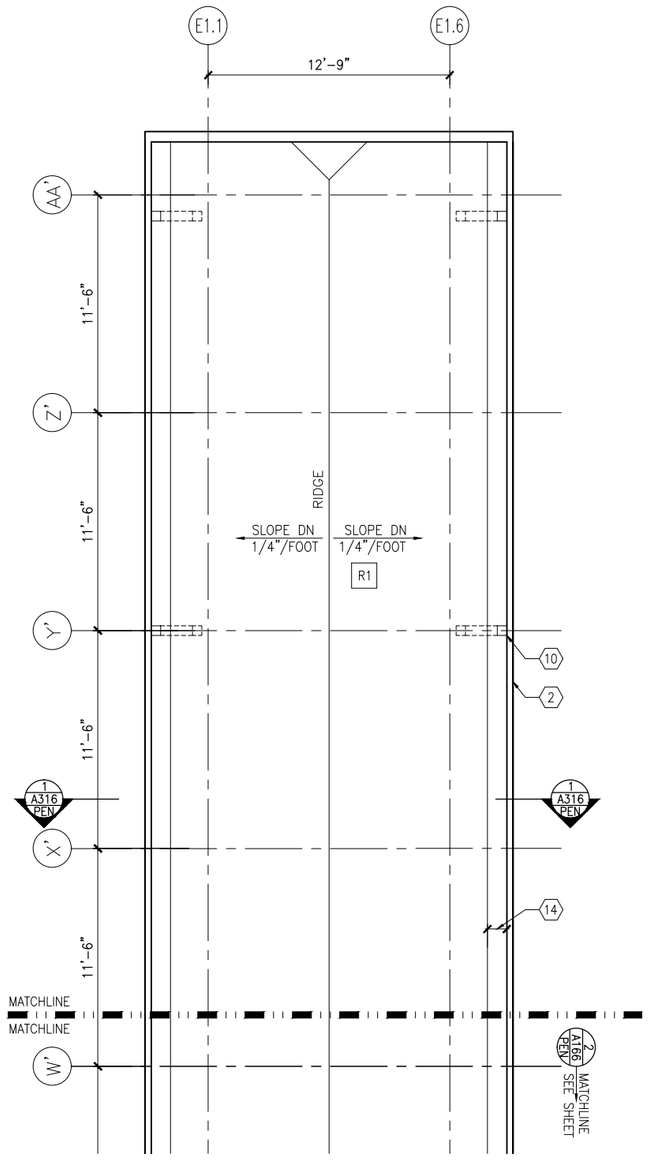
SHEET 69 OF 273




1 PED BRIDGE ROOF PLAN PART 4
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




2 PED BRIDGE ROOF PLAN PART 5
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




3 PED BRIDGE ROOF PLAN PART 6
SCALE:1/8"=1'-0"
0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE-FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

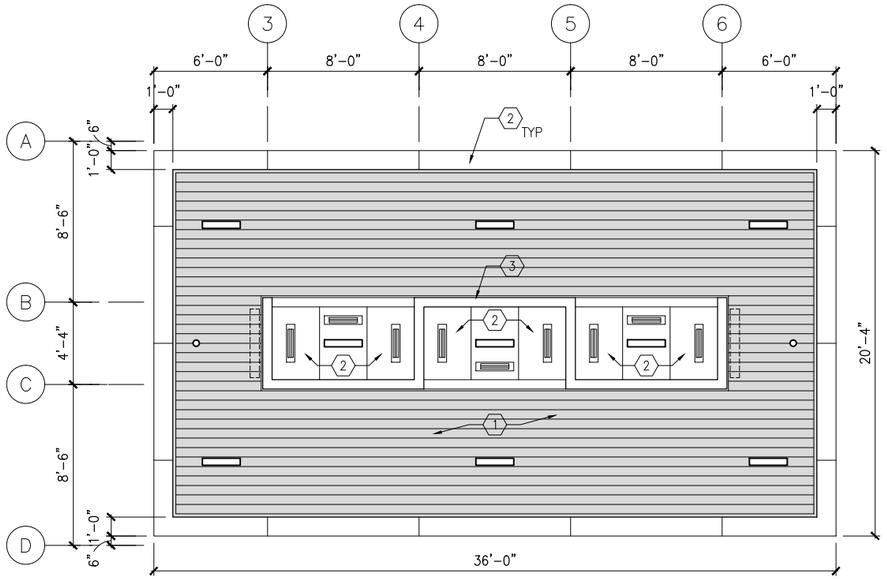
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE**
**ROOF PLAN**

DISCIPLINE: ARCHITECTURE

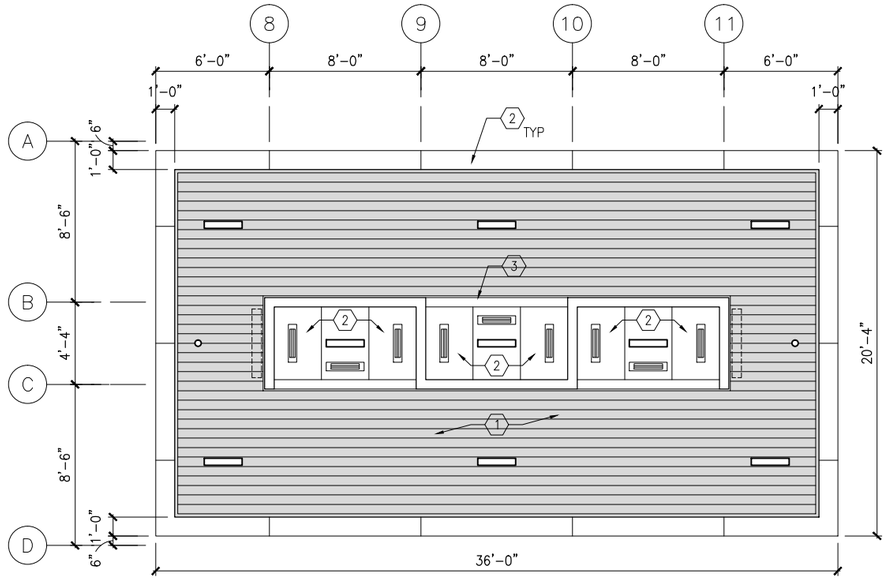
SHEET NAME: E4-PEN-ARC-PLN-166

SHEET 70 OF 273

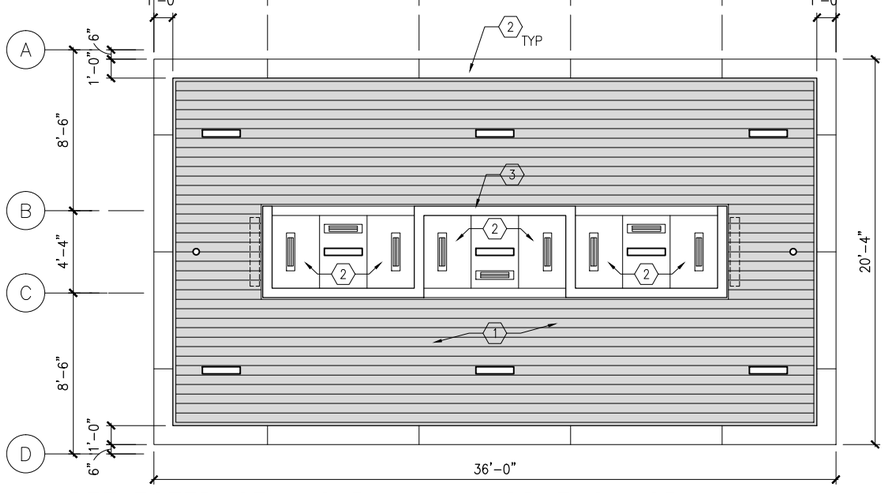
Sep. 21 2015 12:04 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-PLN-166.dwg By: MurphySP



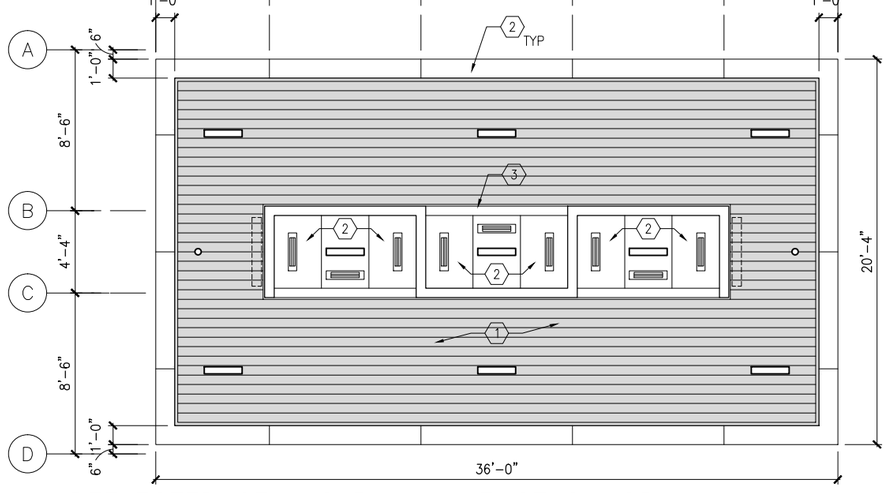

1 REFLECTED CEILING PLAN – WEST CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




2 REFLECTED CEILING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




3 REFLECTED CEILING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




4 REFLECTED CEILING PLAN – EAST CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- S SPEAKER
- M MICROPHONE
- C SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

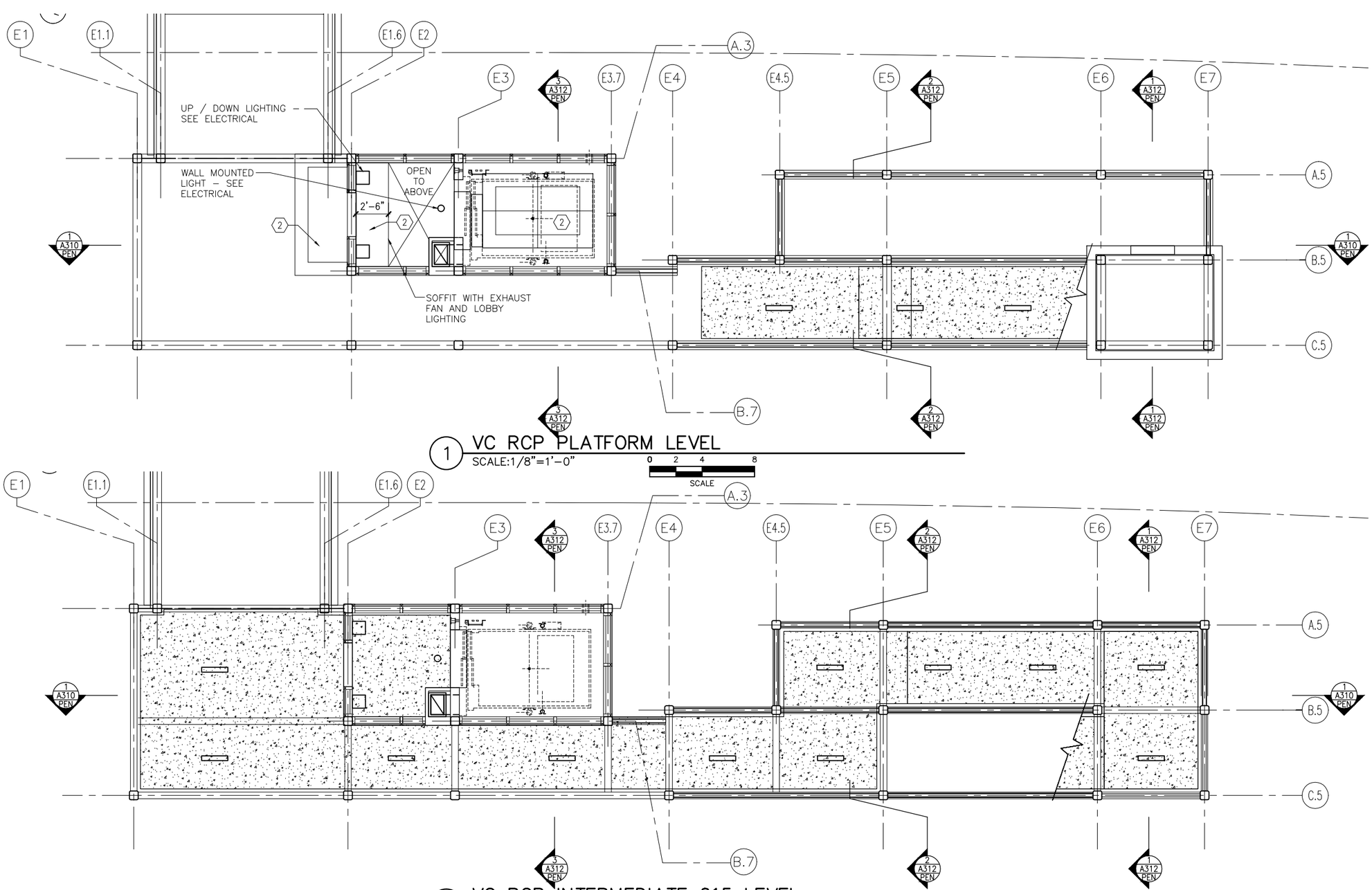
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# REFLECTED CEILING PLANS

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-RCP-180

SHEET 71 OF 273




1 VC RCP PLATFORM LEVEL
SCALE:1/8"=1'-0"

0 2 4 8
SCALE




2 VC RCP INTERMEDIATE 015 LEVEL
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- [S] SPEAKER
- [M] MICROPHONE
- [C] SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

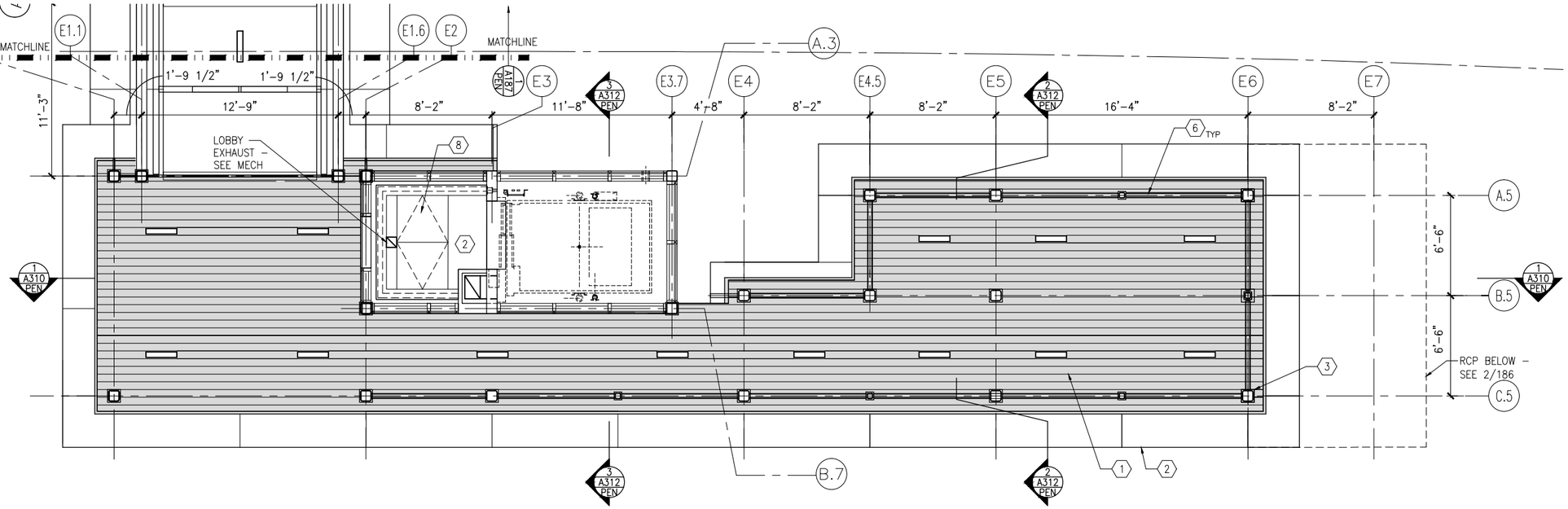
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC RCP PLATFORM LEVEL**

DISCIPLINE: ARCHITECTURE

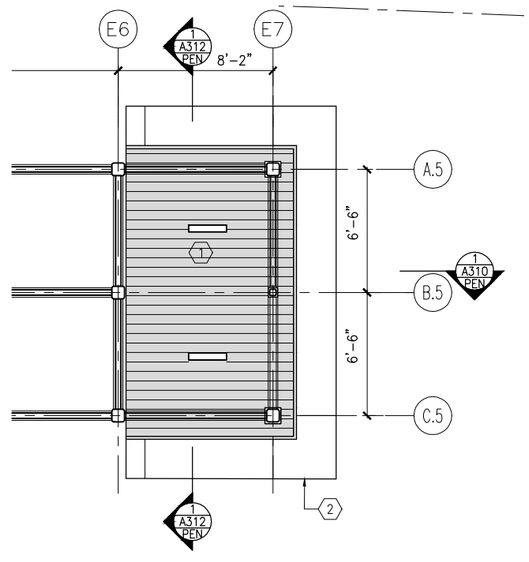
SHEET NAME: E4-PEN-ARC-RCP-185

SHEET 72 OF 273




1 VC RCP BRIDGE LEVEL
SCALE:1/8"=1'-0"

0 2 4 8
SCALE




2 VC RCP INTERMEDIATE 017 LEVEL
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- S SPEAKER
- M MICROPHONE
- C SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

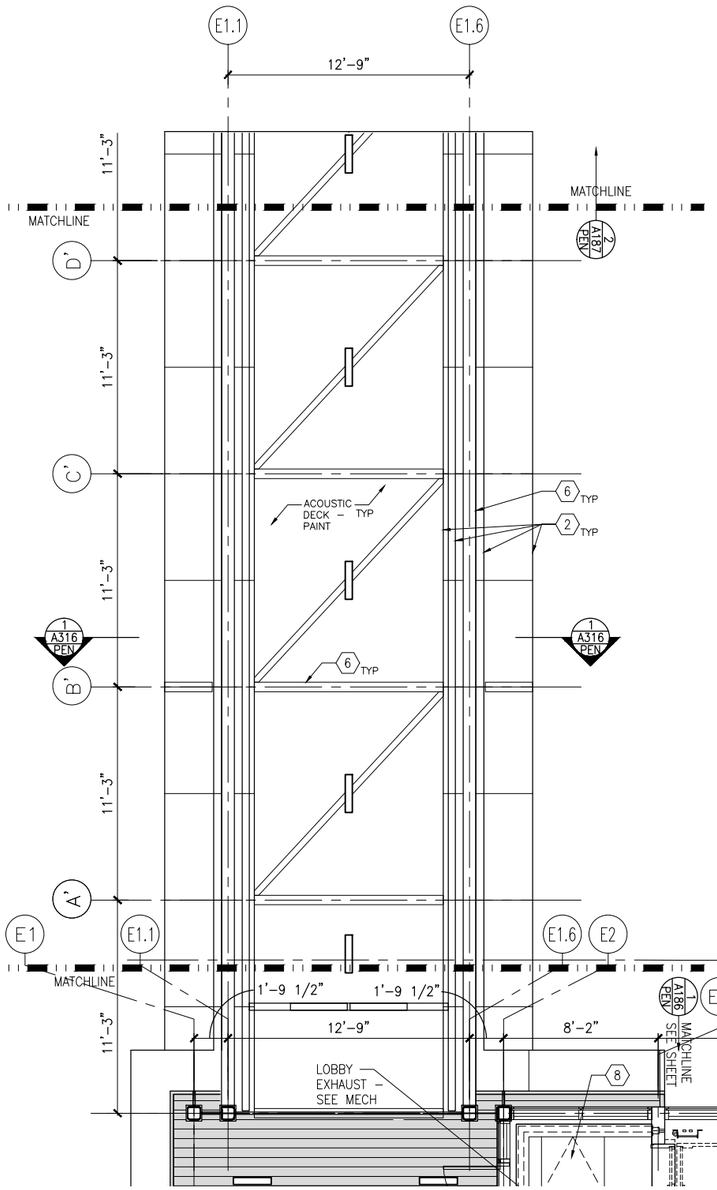
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# VC RCP BRIDGE LEVEL

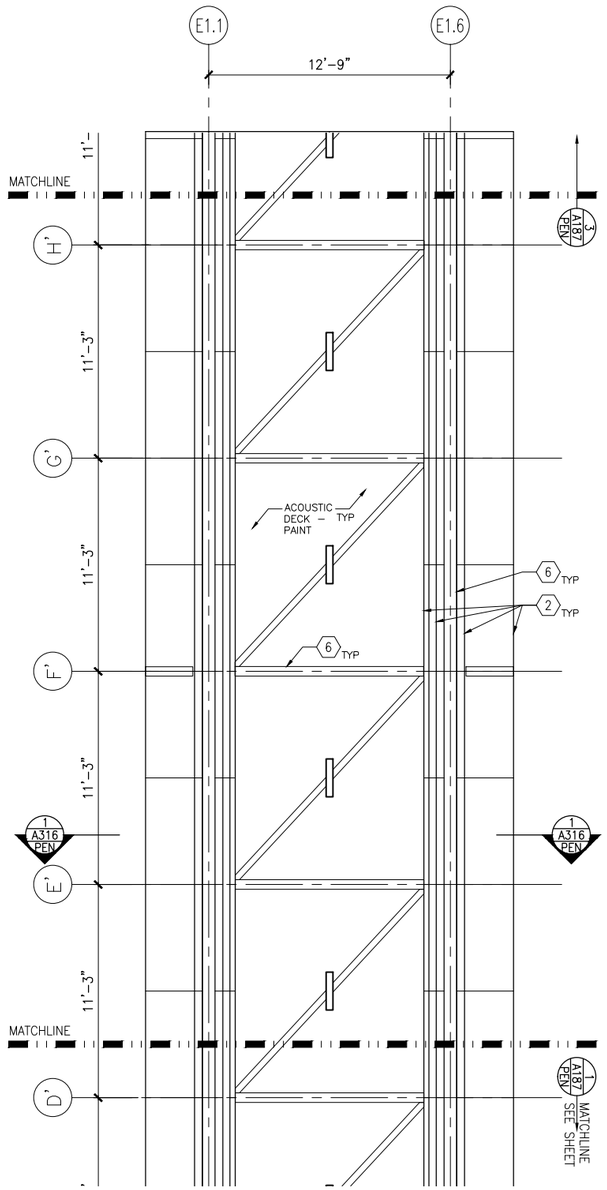
DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-RCP-186

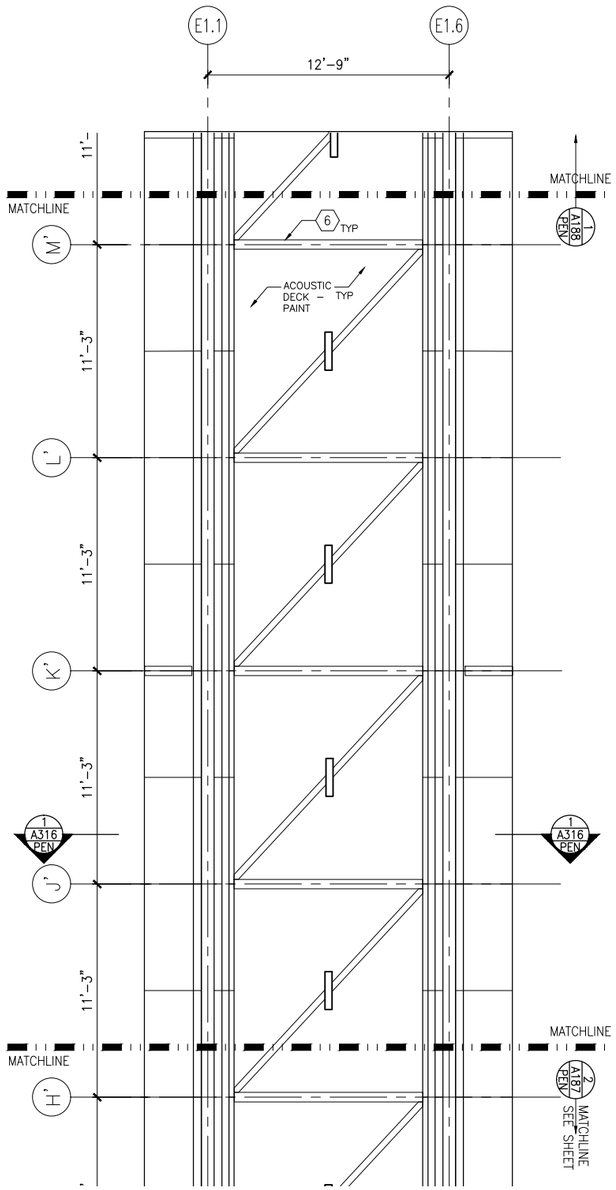
SHEET 73 OF 273




1 PB RCP BRIDGE LEVEL PART 1
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




2 PB RCP BRIDGE LEVEL PART 2
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




3 PB RCP BRIDGE LEVEL PART 3
SCALE:1/8"=1'-0"
0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- S SPEAKER
- M MICROPHONE
- C SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

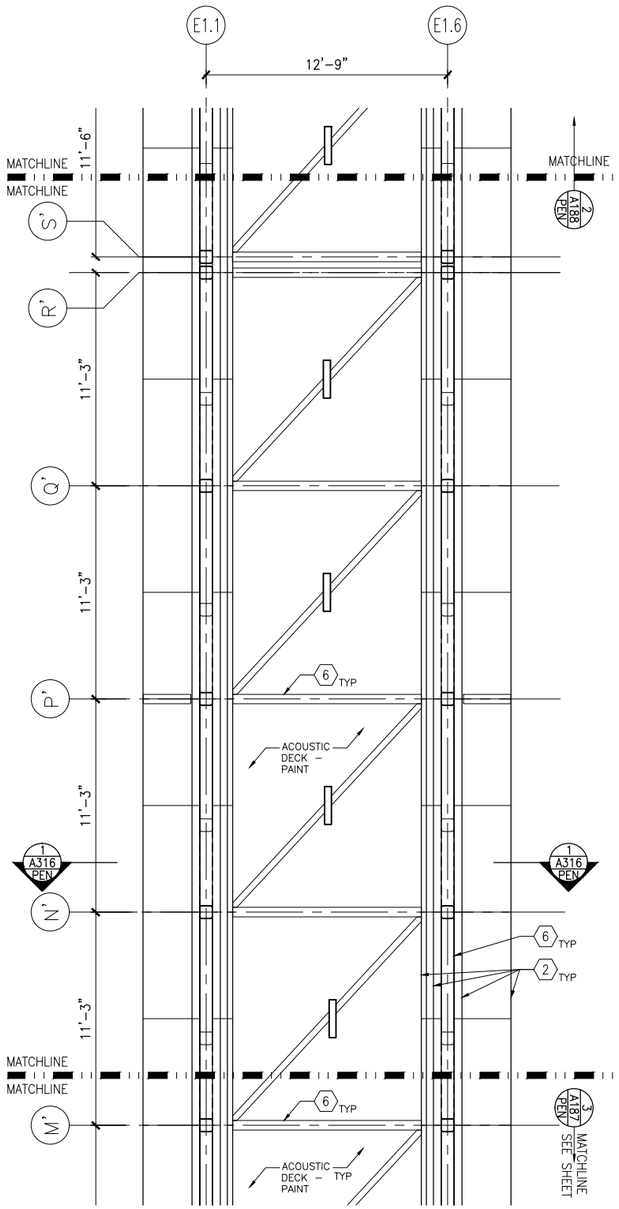
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE RCP**
**BRIDGE LEVEL**

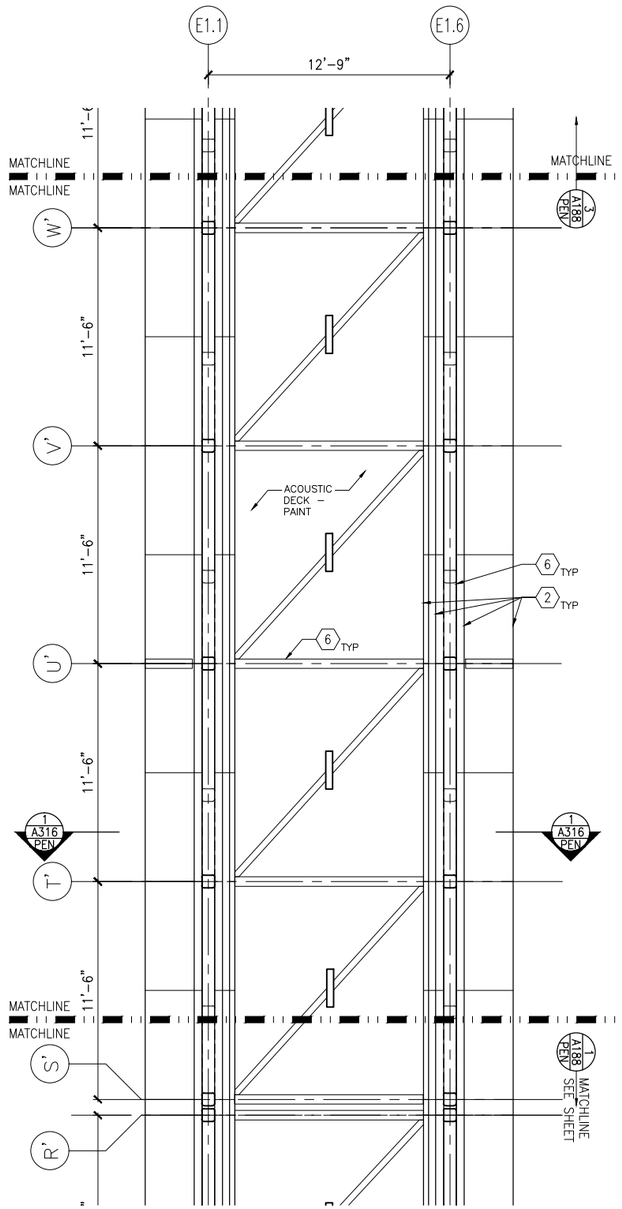
DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-RCP-187

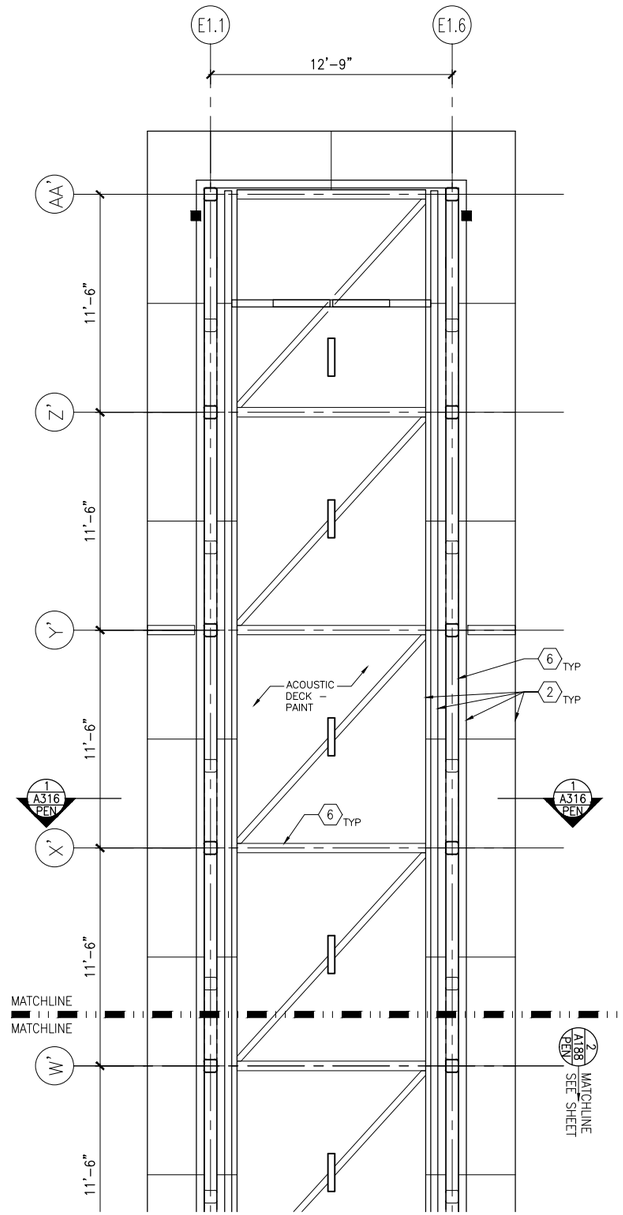
SHEET 74 OF 273




1 PB RCP BRIDGE LEVEL PART 4
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




2 PB RCP BRIDGE LEVEL PART 5
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




3 PB RCP BRIDGE LEVEL PART 6
SCALE:1/8"=1'-0"
0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- [S] SPEAKER
- [M] MICROPHONE
- [C] SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

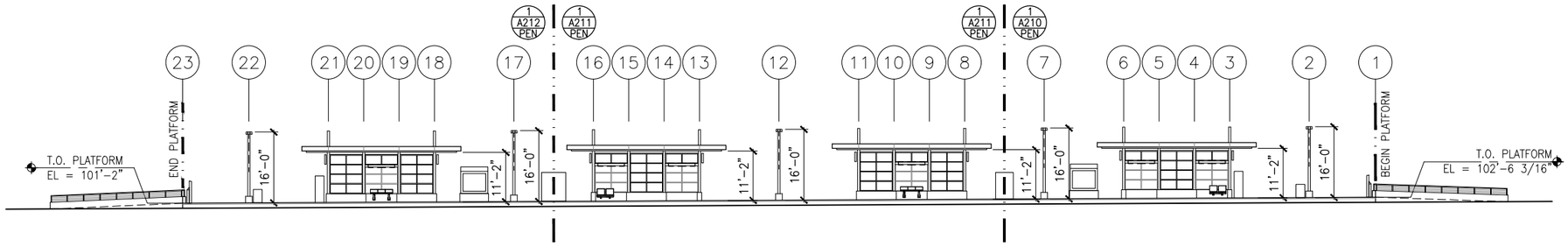
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE RCP**
**BRIDGE LEVEL**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-RCP-188

SHEET 75 OF 273

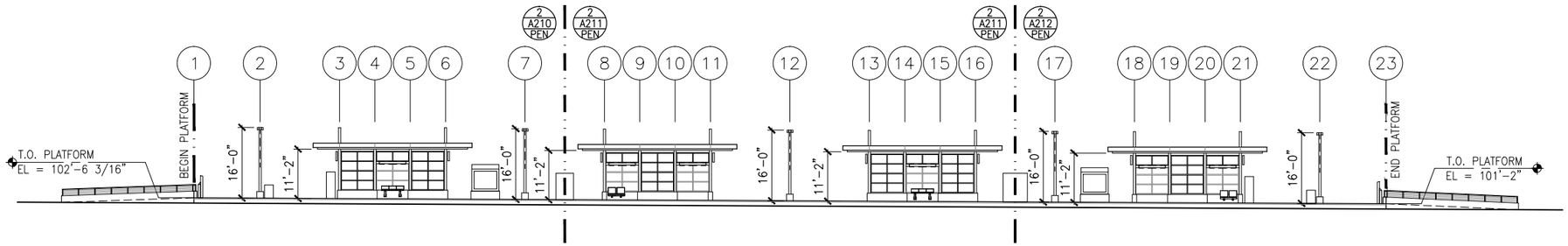
Sep, 21 2015 12:07 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-RCP-188.dwg By: MurphySP




1 TRACK 1 ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE

(-0.50% SLOPE)*




2 TRACK 2 ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE

(-0.50% SLOPE)*

*VERIFY W/ TRACK PROFILE, ADJUST ELEVATIONS ACCORDINGLY

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

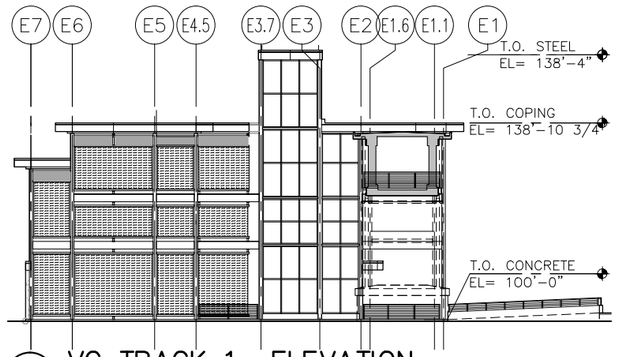
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**ELEVATIONS**

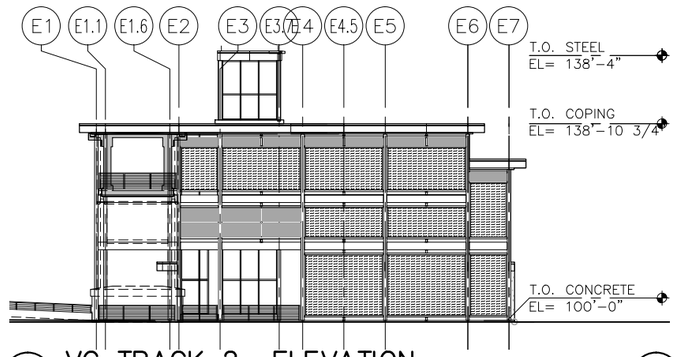
DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-ELV-200

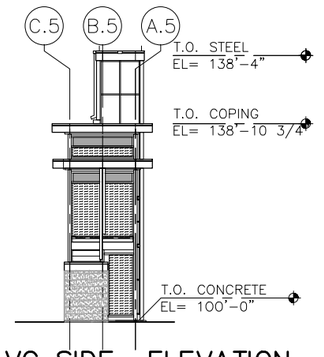
SHEET 76 OF 273



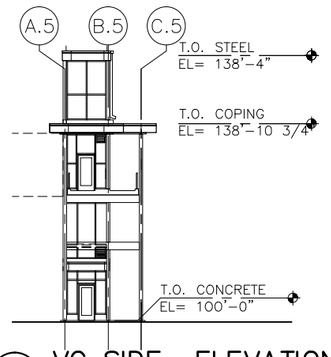

1 VC TRACK 1 ELEVATION
SCALE: 1"=30'




2 VC TRACK 2 ELEVATION
SCALE: 1"=30'



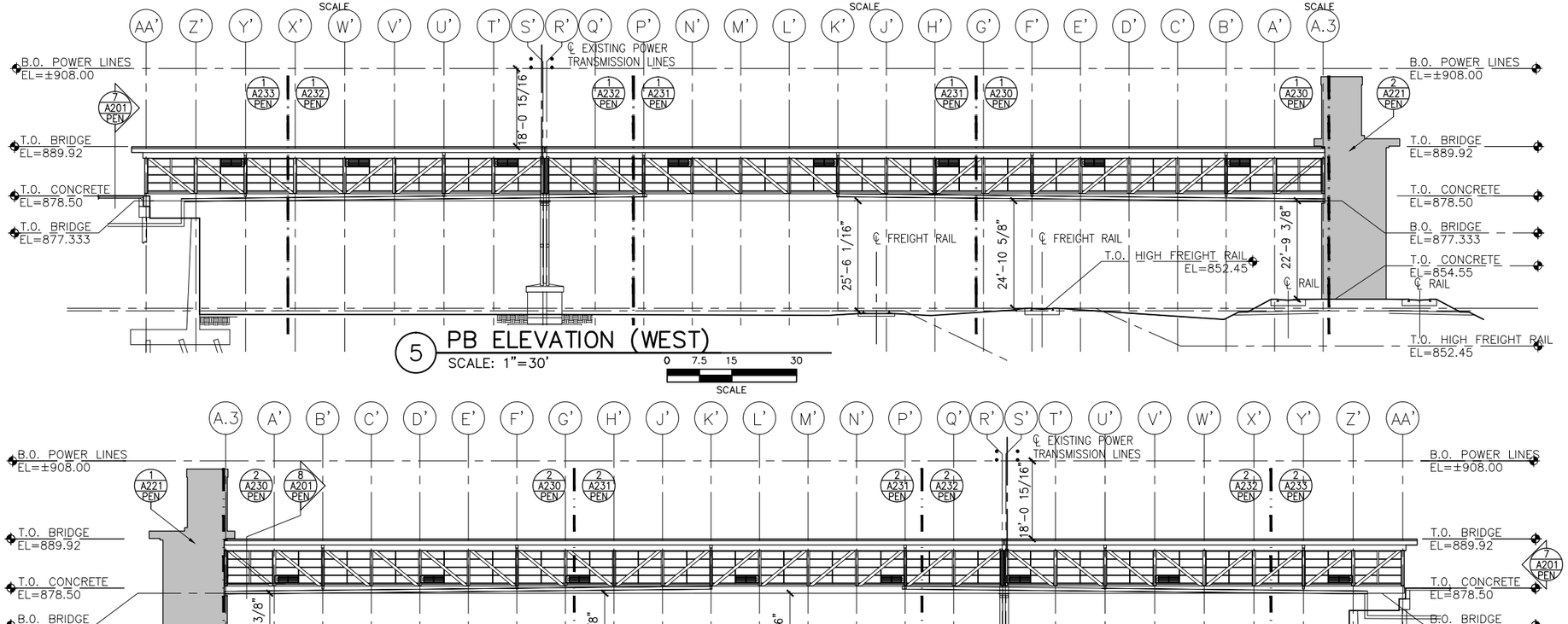

3 VC SIDE ELEVATION
SCALE: 1"=30'




4 VC SIDE ELEVATION
SCALE: 1"=30'

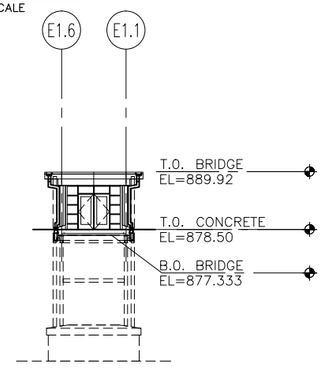
## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

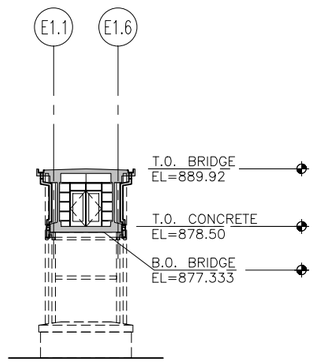



5 PB ELEVATION (WEST)
SCALE: 1"=30'

6 PB ELEVATION (EAST)
SCALE: 1"=30'




7 PB SIDE ELEVATION (NORTH)
SCALE: 1"=30'




8 PB SIDE SECTION (SOUTH)
SCALE: 1"=30'

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

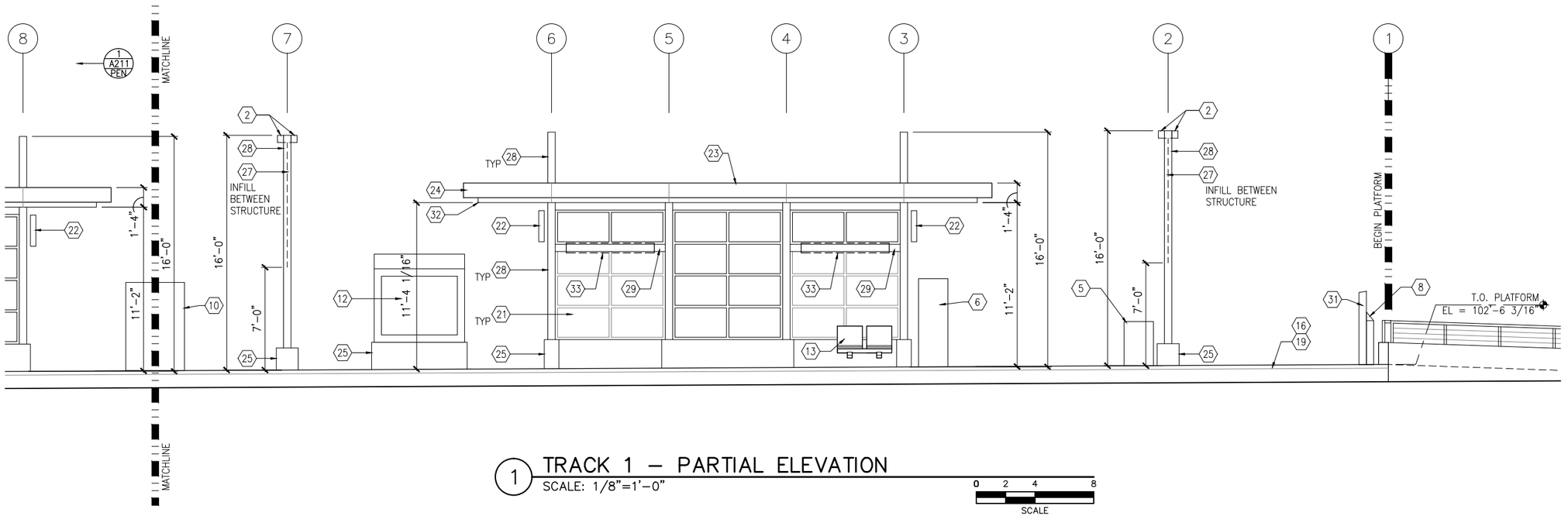
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-ELV-201

SHEET 77 OF 273

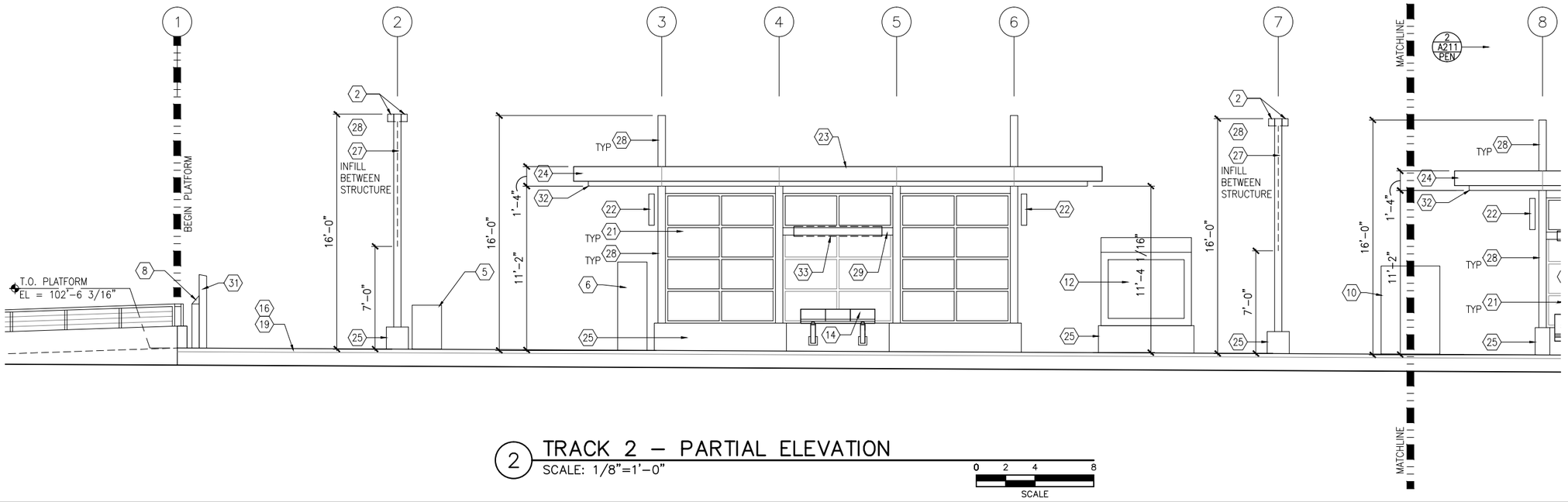
Sep. 21 2015 01:02 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-ELV-201.dwg By: V-MccarrTP




1 TRACK 1 – PARTIAL ELEVATION

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

SCALE 0 2 4 8




2 TRACK 2 – PARTIAL ELEVATION

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

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

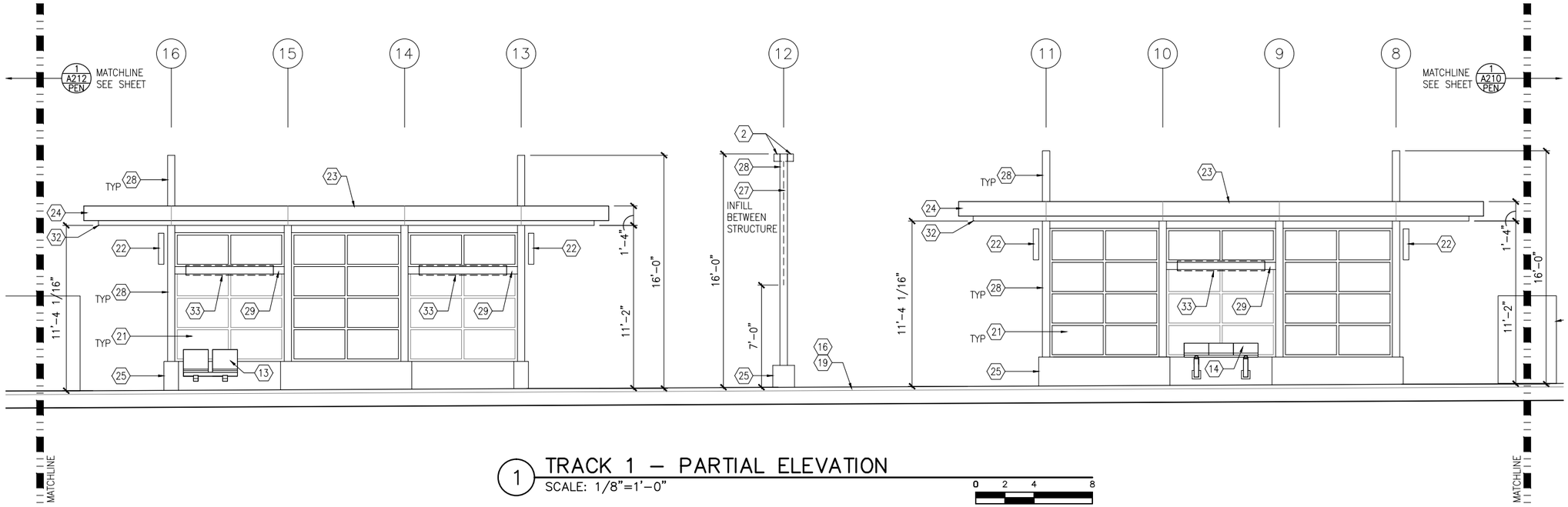
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**WEST PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

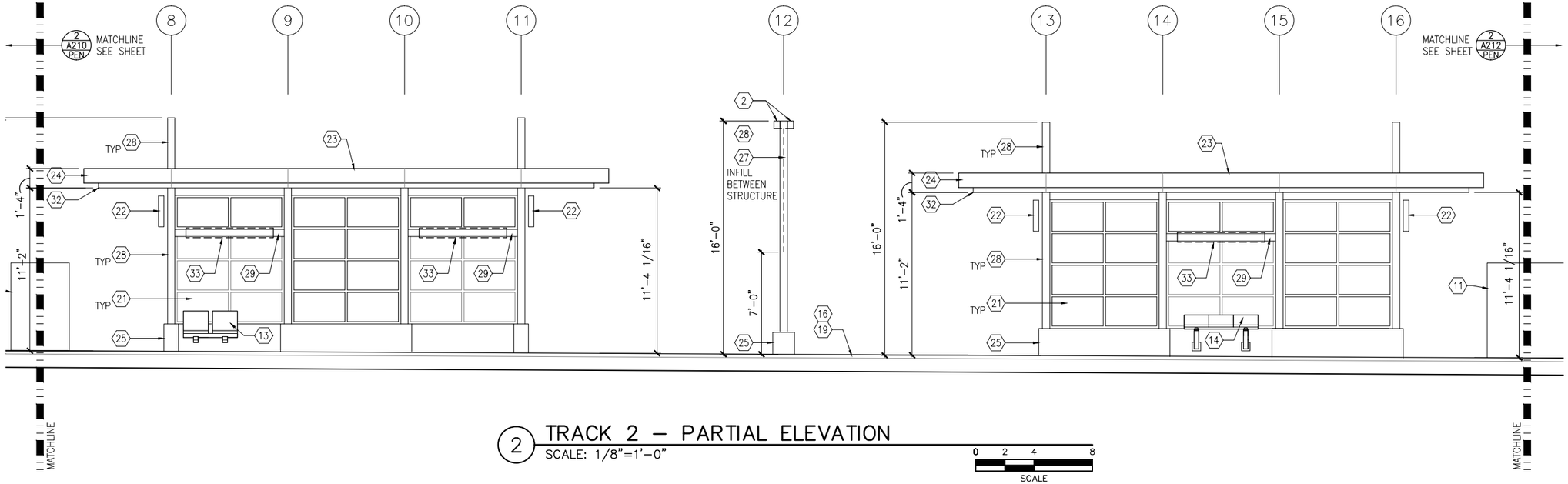
SHEET NAME: E4-PEN-ARC-ELV-210

SHEET 78 OF 273




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

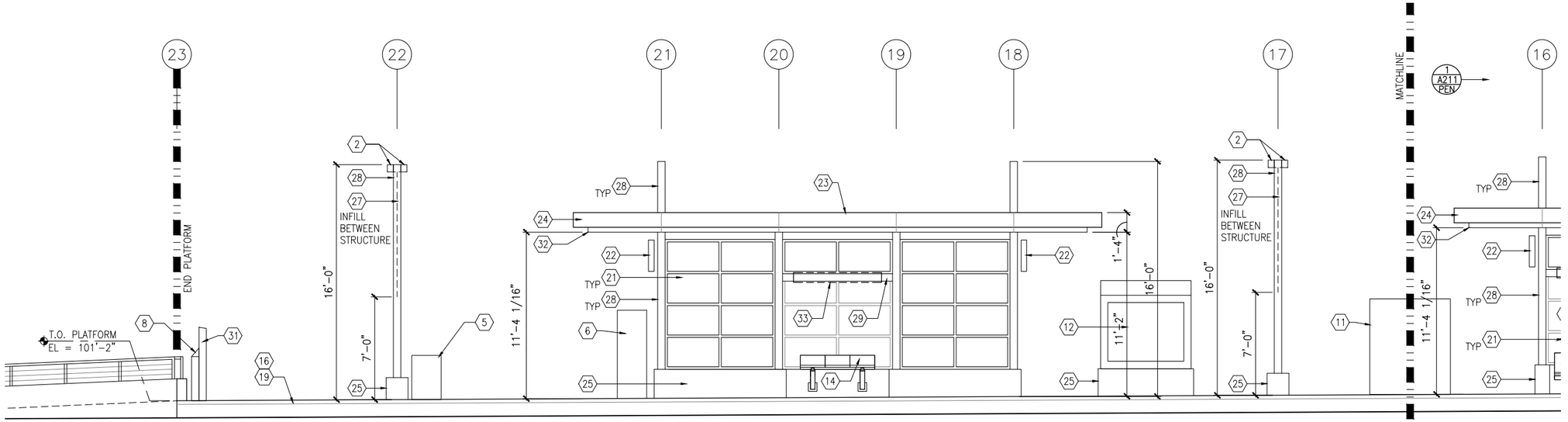
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**MIDDLE PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

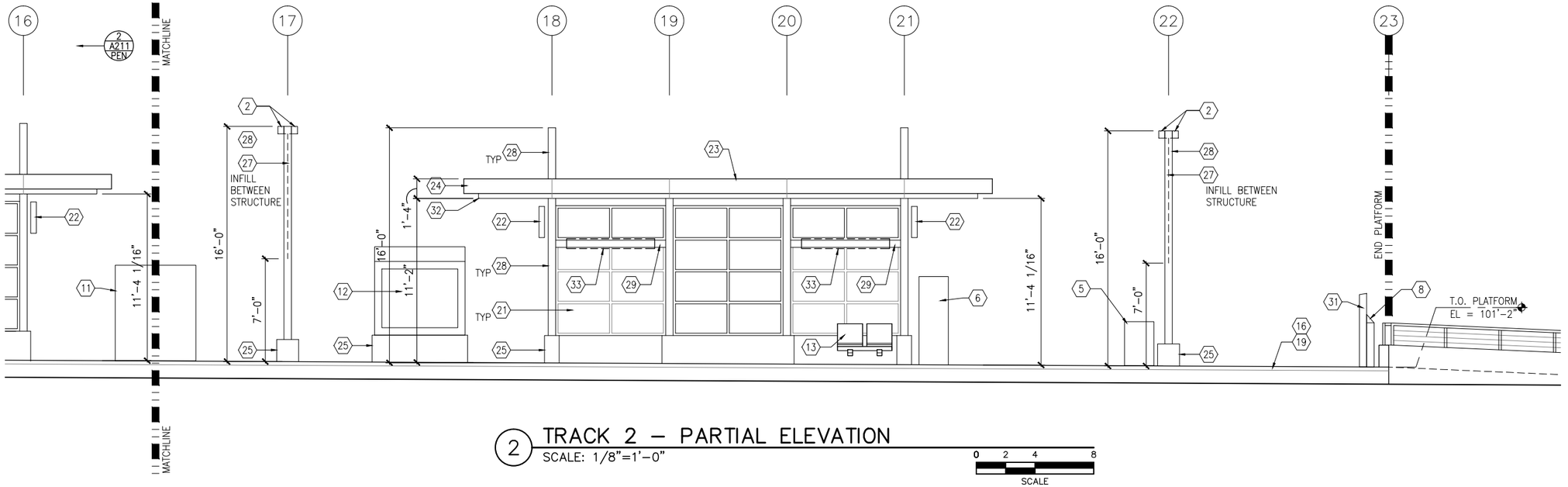
SHEET NAME: E4-PEN-ARC-ELV-211

SHEET 79 OF 273




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
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7. FUTURE TICKET VENDING MACHINE
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29. STEEL BEAM – SEE STRUCTURAL
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33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

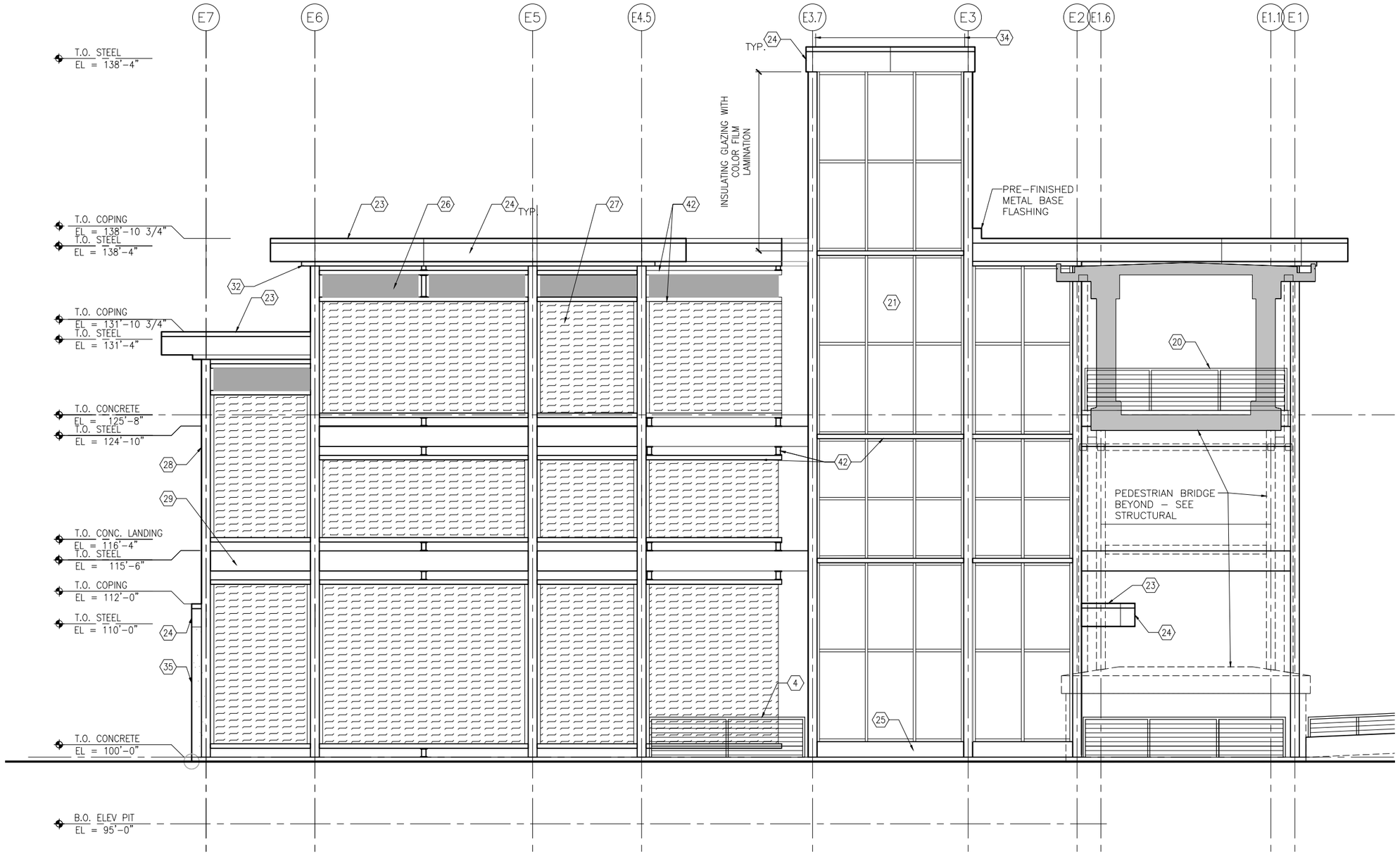
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# EAST PARTIAL ELEVATIONS

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-ELV-212

SHEET 80 OF 273




1 VC TRACK 1 ELEVATION
SCALE:1/8"=1'-0"

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

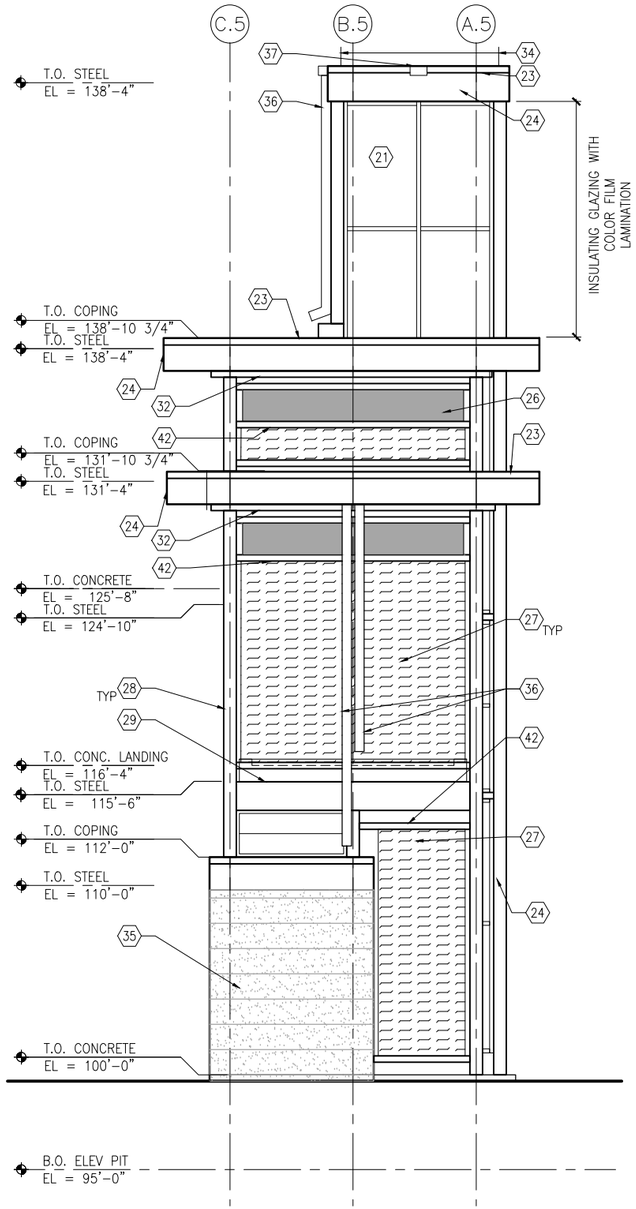
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC TRACK 1 ELEVATION**

DISCIPLINE: ARCHITECTURE

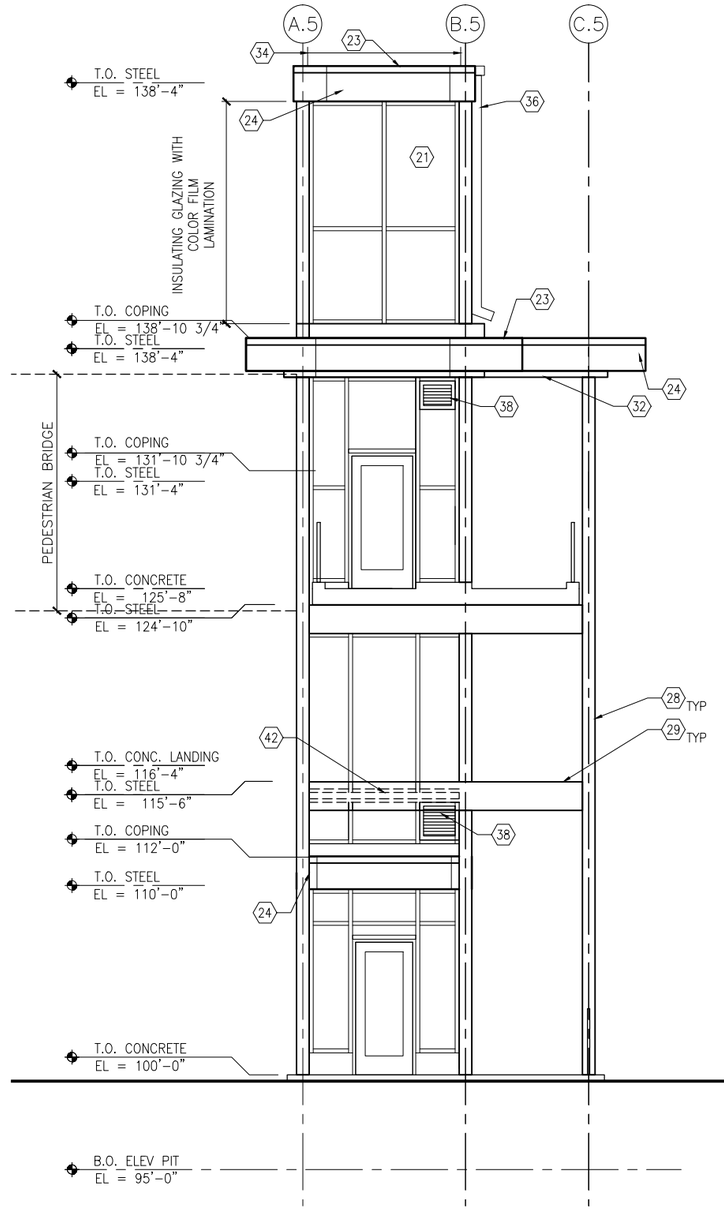
SHEET NAME: E4-PEN-ARC-ELV-220

SHEET 81 OF 273




1 VC SIDE ELEVATIONS
SCALE:1/8"=1'-0"

0 2 4 8
SCALE




2 VC SIDE ELEVATIONS
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
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43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

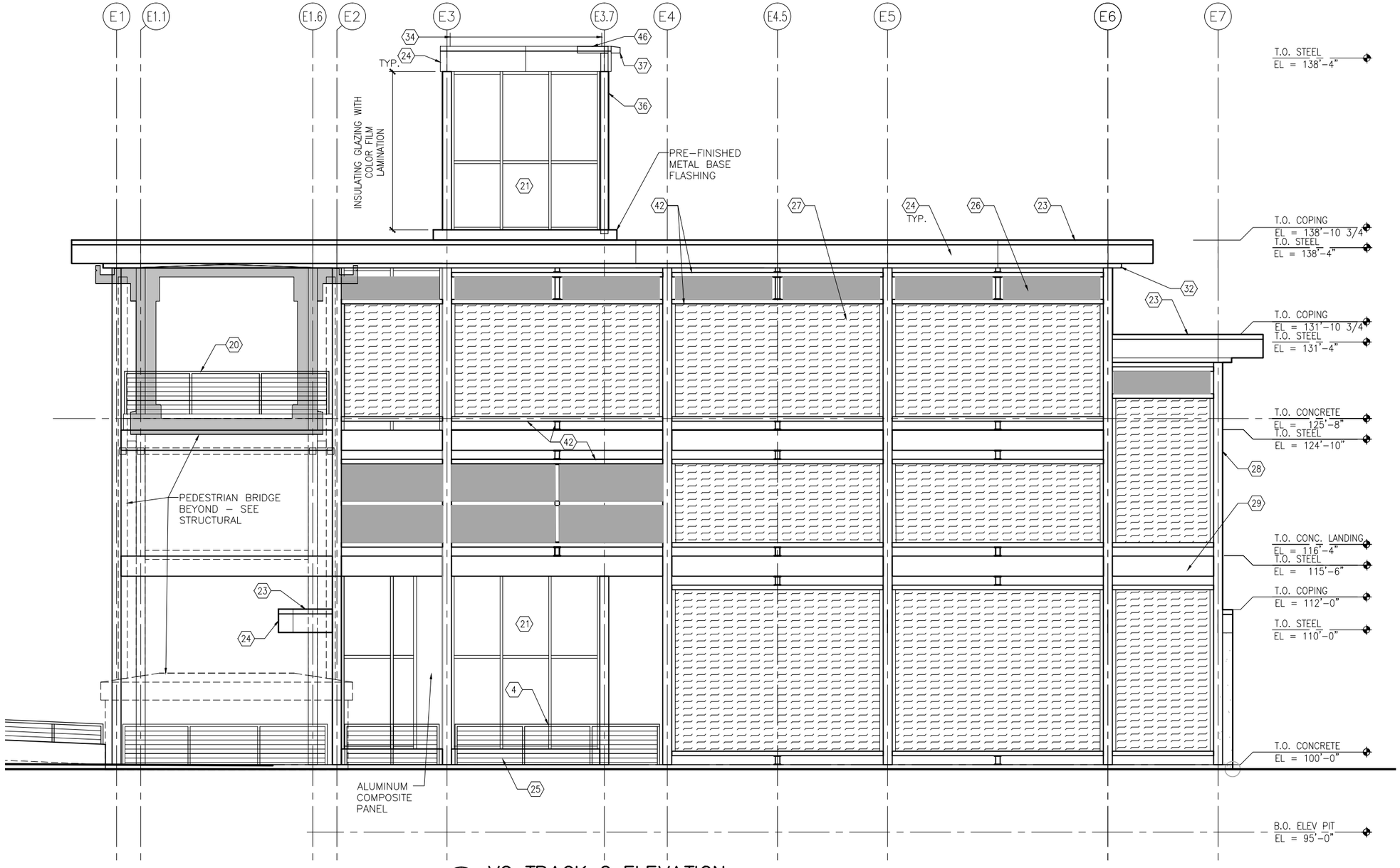
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC SIDE ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-ELV-221

SHEET 82 OF 273




1 VC TRACK 2 ELEVATION
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
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18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
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20. GUARD RAIL AND SAFETY SCREEN
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22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
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24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
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32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

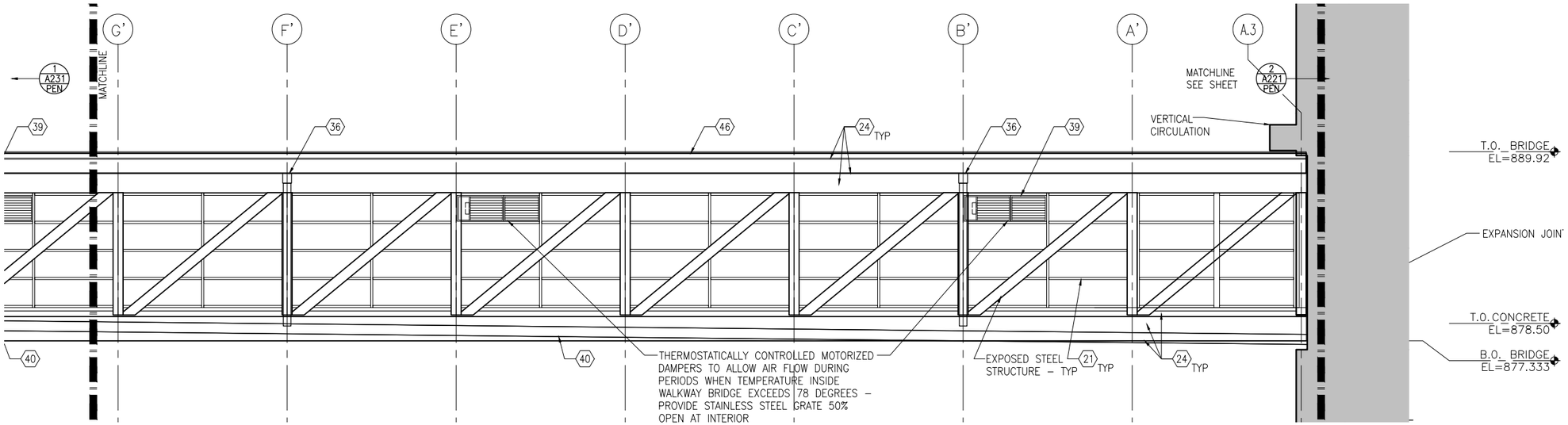
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC TRACK 2 ELEVATION**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-ELV-226

SHEET 83 OF 273

Sep. 21 2015 12:11 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-ELV-226.dwg By: MurphySP

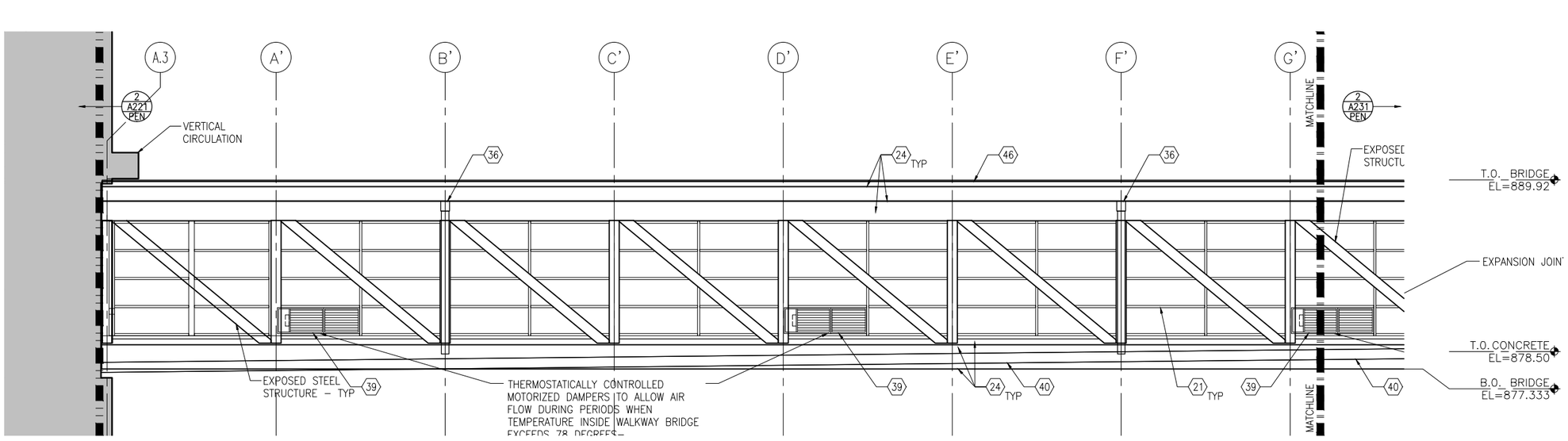



1 PB SOUTH PARTIAL ELEVATION (WEST)

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

0 2 4 8

SCALE




2 PB SOUTH PARTIAL ELEVATION (EAST)

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

0 2 4 8

SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES - (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
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43. DOOR - SEE DOOR SCHEDULE
44. PC CONC WALKWAY - SEE STRUCT
45. PC CONC STAIR - SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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METROPOLITAN COUNCIL

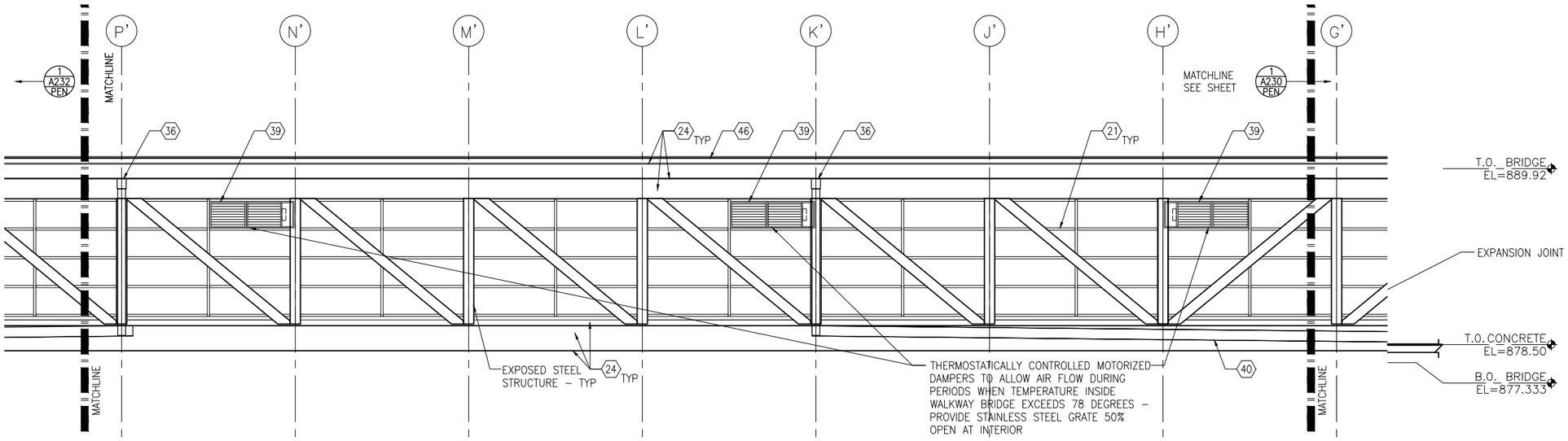
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE SOUTH**
**PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-ELV-230

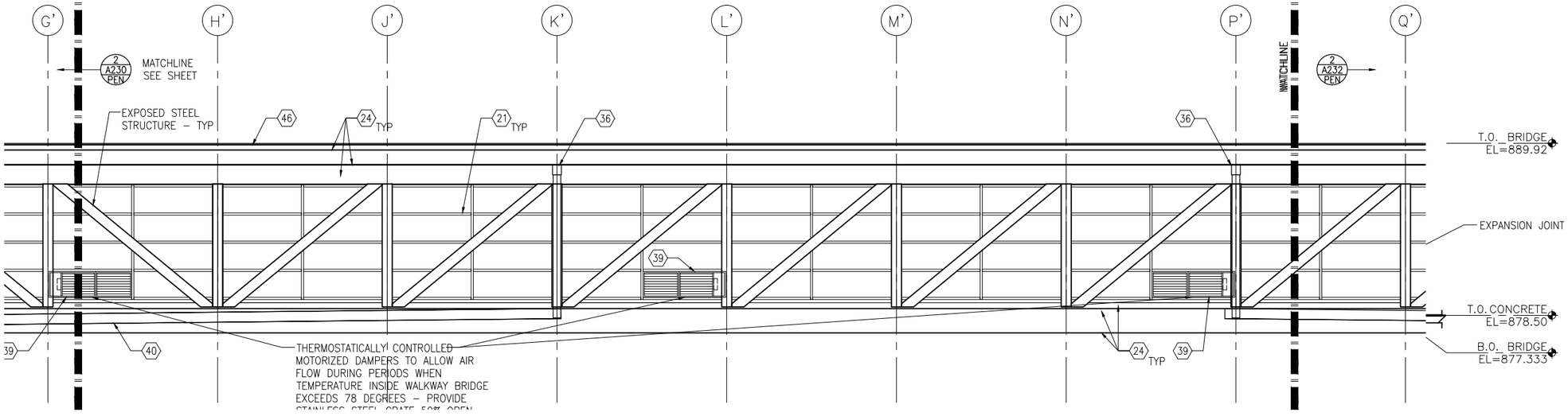
SHEET 84 OF 273




## 1 PB MIDDLE PARTIAL ELEVATION (WEST)

SCALE:1/8" = 1'–0"

0 2 4 8
SCALE




## 2 PB MIDDLE PARTIAL ELEVATION (EAST)

SCALE:1/8" = 1'–0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

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37. PRE–FIN. METAL SCUPPER
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44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE–FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

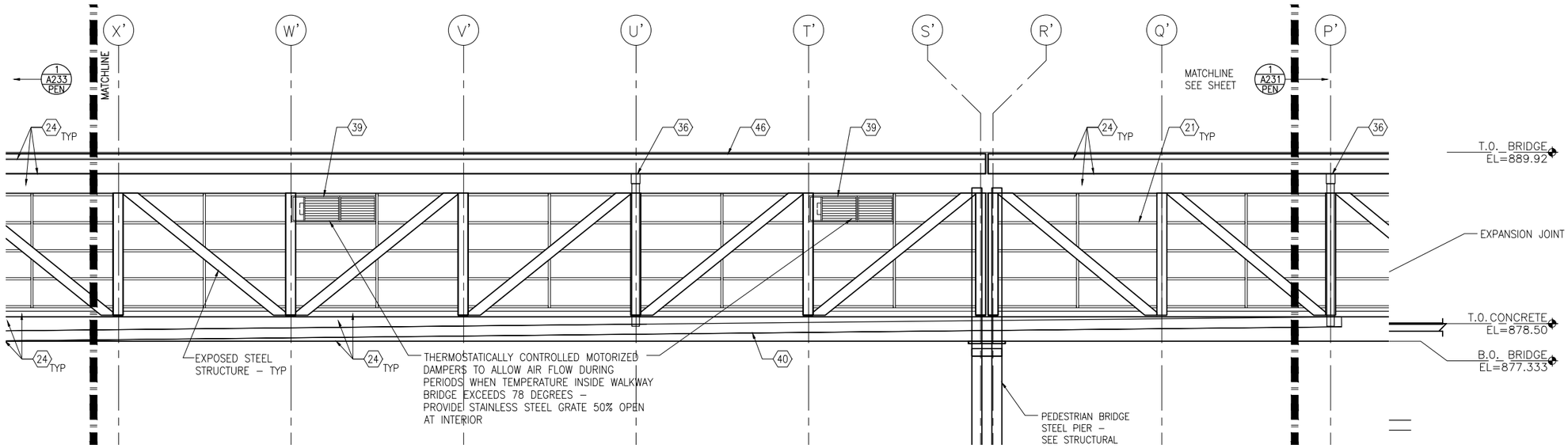
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE MIDDLE**
**PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-ELV-231

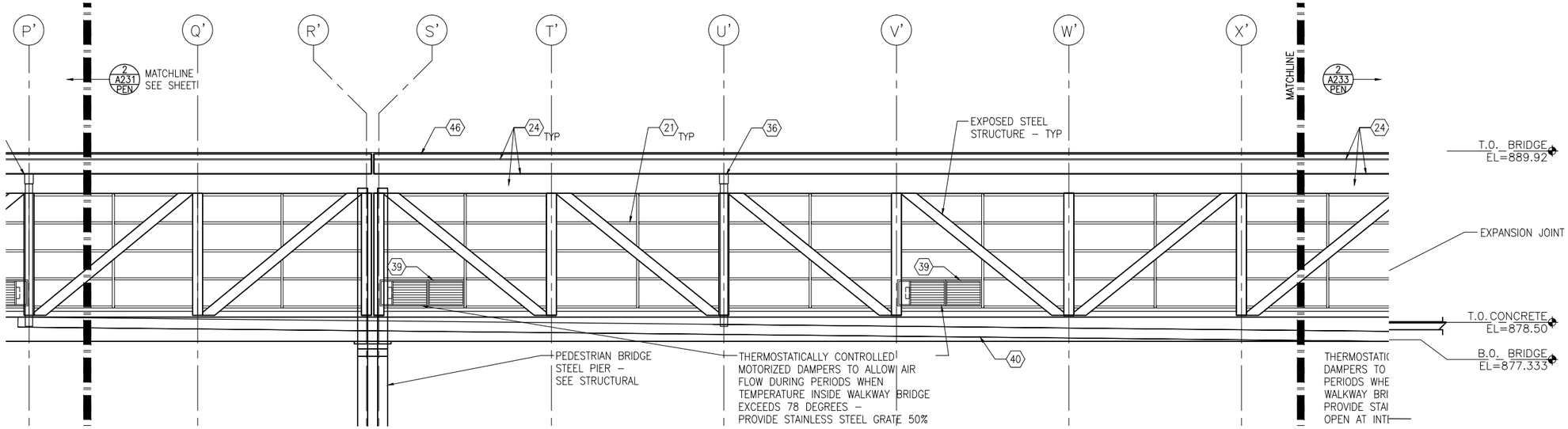
SHEET 85 OF 273




## 1 PB NORTH PARTIAL ELEVATION (WEST)

SCALE:1/8" = 1'–0"

0 2 4 8
SCALE




## 2 PB NORTH PARTIAL ELEVATION (EAST)

SCALE:1/8" = 1'–0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

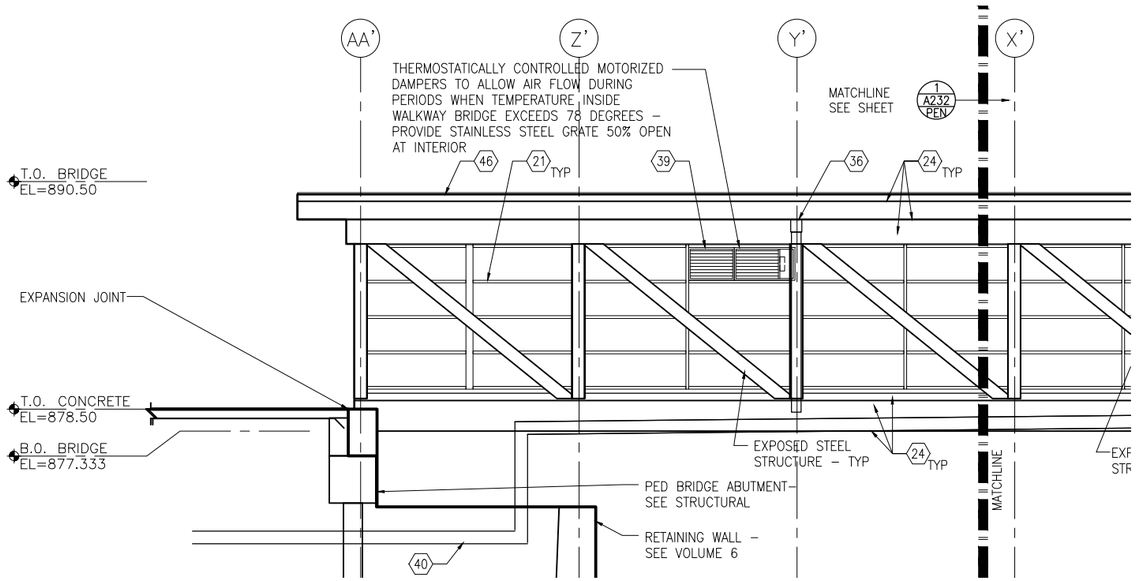
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE NORTH**
**PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-ELV-232

SHEET 86 OF 273

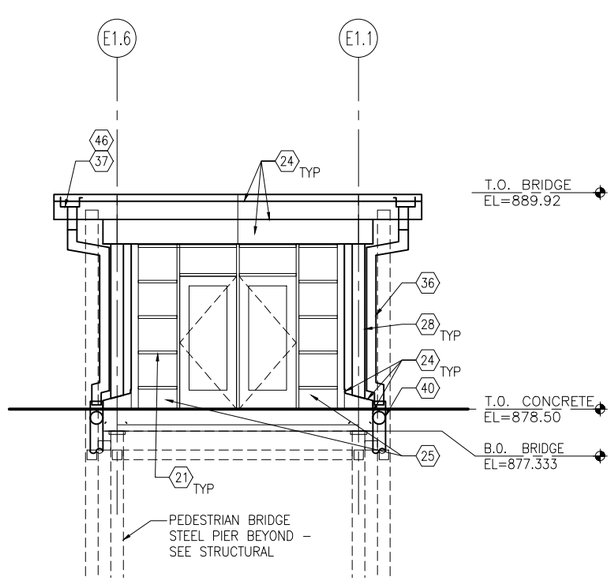
Sep. 21 2015 12:14 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-ELV-232.dwg By: MurphySP




## 1 PB NORTH PARTIAL ELEVATION (WEST)

SCALE:1/8" = 1'–0"

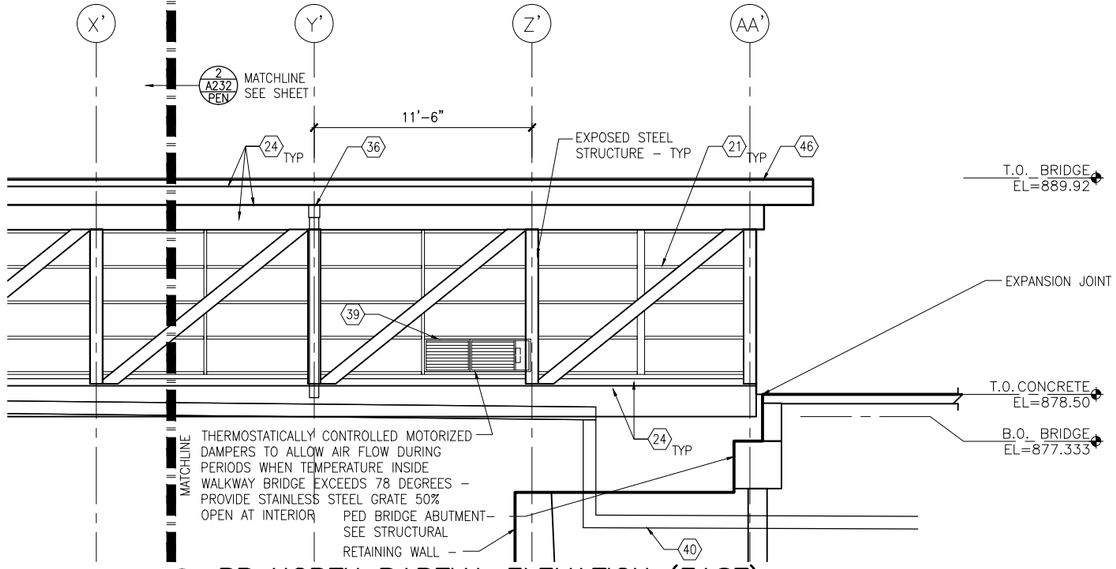
0 2 4 8 SCALE




## 3 PB NORTH SIDE ELEVATION

SCALE: 1/8" = 1'–0"

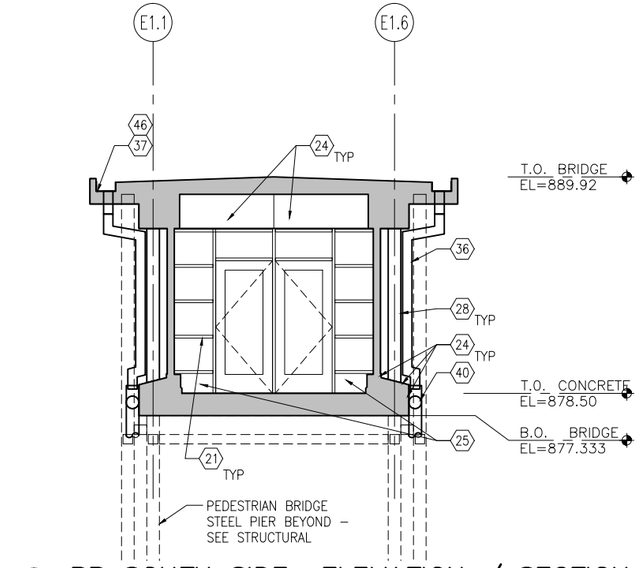
0 2 4 8 SCALE




## 2 PB NORTH PARTIAL ELEVATION (EAST)

SCALE:1/8" = 1'–0"

0 2 4 8 SCALE




## 4 PB SOUTH SIDE ELEVATION / SECTION

SCALE: 1/8" = 1'–0"

0 2 4 8 SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE–FINISHED METAL DOWNSPOUT
37. PRE–FIN. METAL SCUPPER
38. PRE–FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE–FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

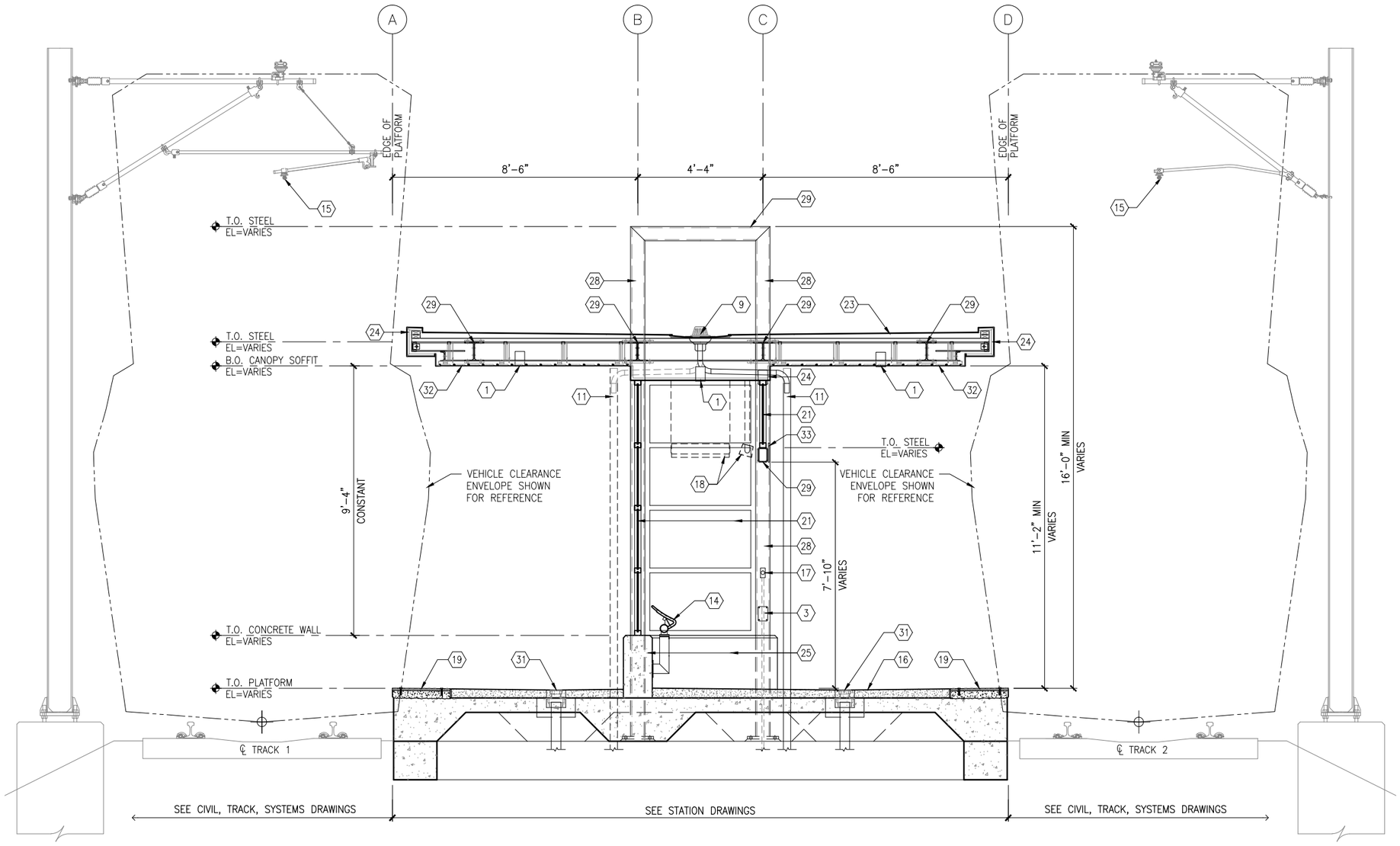
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE**
**SIDE ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-ELV-233

SHEET 87 OF 273

Sep, 21 2015 12:15 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-ELV-233.dwg By: MurphySP




1 TYPICAL PLATFORM SECTION
SCALE: 1/4"=1'-0"

0 1 2 4
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. LIGHT RECESSED IN SOFFIT
2. LIGHT MOUNTED TO STRUCTURE
3. HAND HOLE IN STEEL STRUCTURE
4. HAND RAIL
5. SECURITY CAMERA
6. TICKET VENDING MACHINE
7. EMERGENCY TELEPHONE LIGHT
8. EMERGENCY CALL BOX
9. ROOF DRAIN
10. PRE-FINISHED METAL GUTTER
11. PRE-FINISHED METAL DOWNSPOUT
12. PRE-FINISHED METAL SCUPPER
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. HEATER PUSH BUTTON CONTROLS
18. INFRARED HEATER
19. DETECTABLE WARNING PAVER AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
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29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. AREA DRAIN
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. PC CONC WALKWAY – SEE STRUCT
35. PC CONC STAIR – SEE STRUCT
36. PC CONC WALL PANEL
37. SECONDARY STEEL FRAMING – SEE STRUCTURAL
38. COMPOSITE ALUM PANEL

## LEGEND

- CIP CONCRETE
- ARCHITECTURAL CONCRETE
- R- ROOF TYPE – SEE A150

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

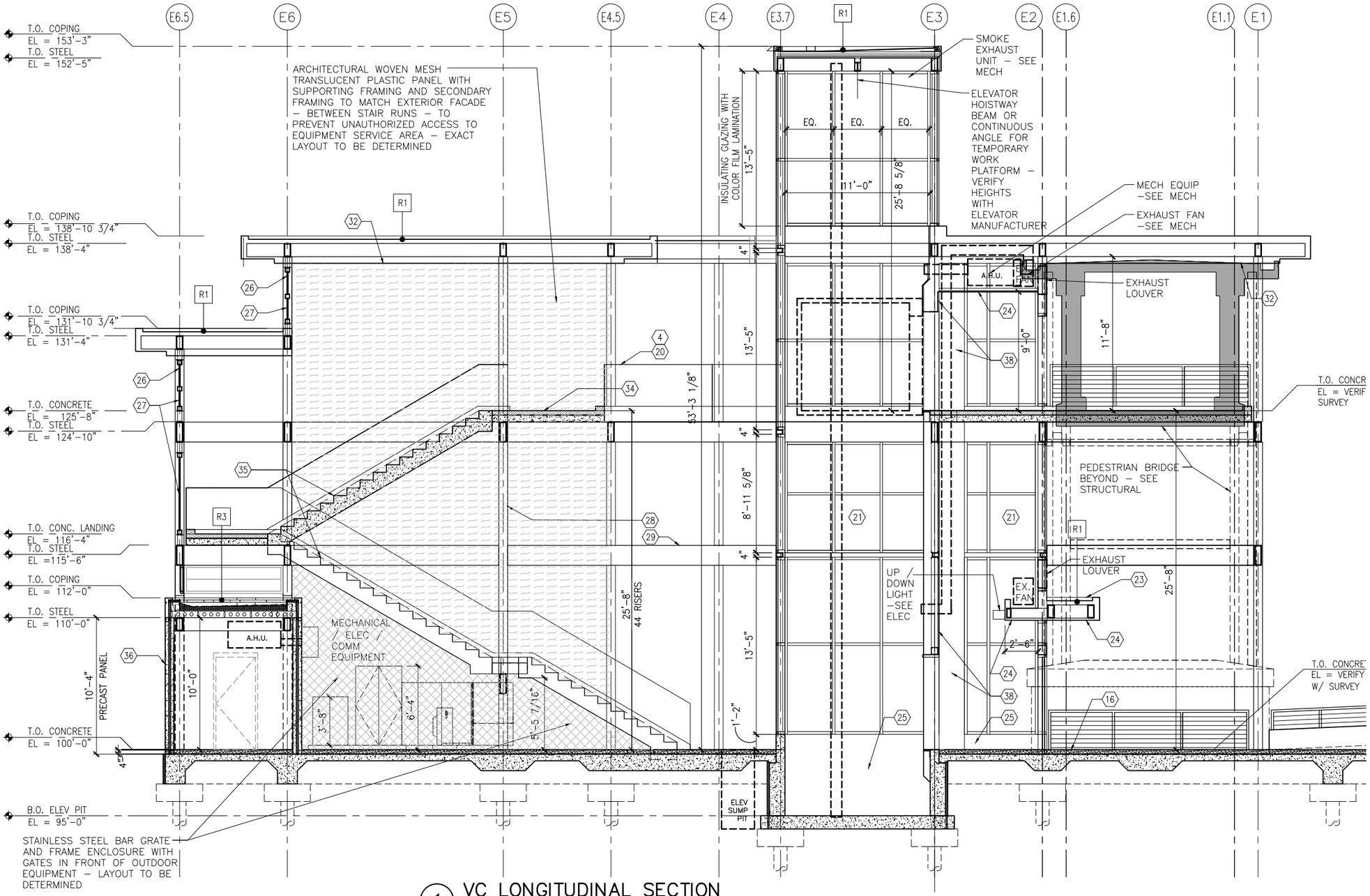
# CIVIL EAST - VOLUME 11B
# PENN STATION
# TYPICAL PLATFORM SECTION

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-SCT-300

SHEET 88 OF 273

Sep. 21 2015 12:16 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-SCT-300.dwg By: MurphySP




1 VC LONGITUDINAL SECTION
SCALE: 1/8" = 1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. LIGHT RECESSED IN SOFFIT
2. LIGHT MOUNTED TO STRUCTURE
3. HAND HOLE IN STEEL STRUCTURE
4. HAND RAIL
5. SECURITY CAMERA
6. TICKET VENDING MACHINE
7. EMERGENCY TELEPHONE LIGHT
8. EMERGENCY CALL BOX
9. ROOF DRAIN
10. PRE–FINISHED METAL GUTTER
11. PRE–FINISHED METAL DOWNSPOUT
12. PRE–FINISHED METAL SCUPPER
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. HEATER PUSH BUTTON CONTROLS
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33. STATION SIGNAGE
34. PC CONC WALKWAY – SEE STRUCT
35. PC CONC STAIR – SEE STRUCT
36. PC CONC WALL PANEL
37. SECONDARY STEEL FRAMING – SEE STRUCTURAL
38. COMPOSITE ALUM PANEL

## LEGEND

- CIP CONCRETE
- ARCHITECTURAL CONCRETE
- R– ROOF TYPE – SEE A150

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

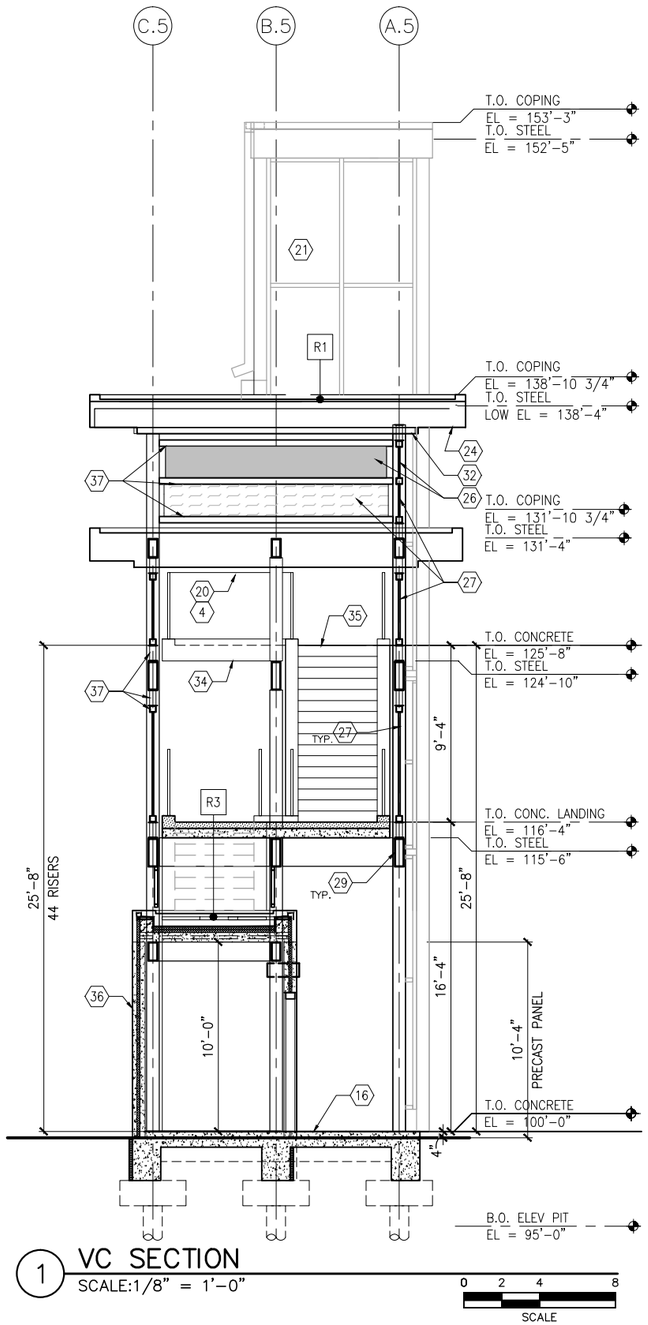
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC LONGITUDINAL SECTION**

DISCIPLINE: ARCHITECTURE

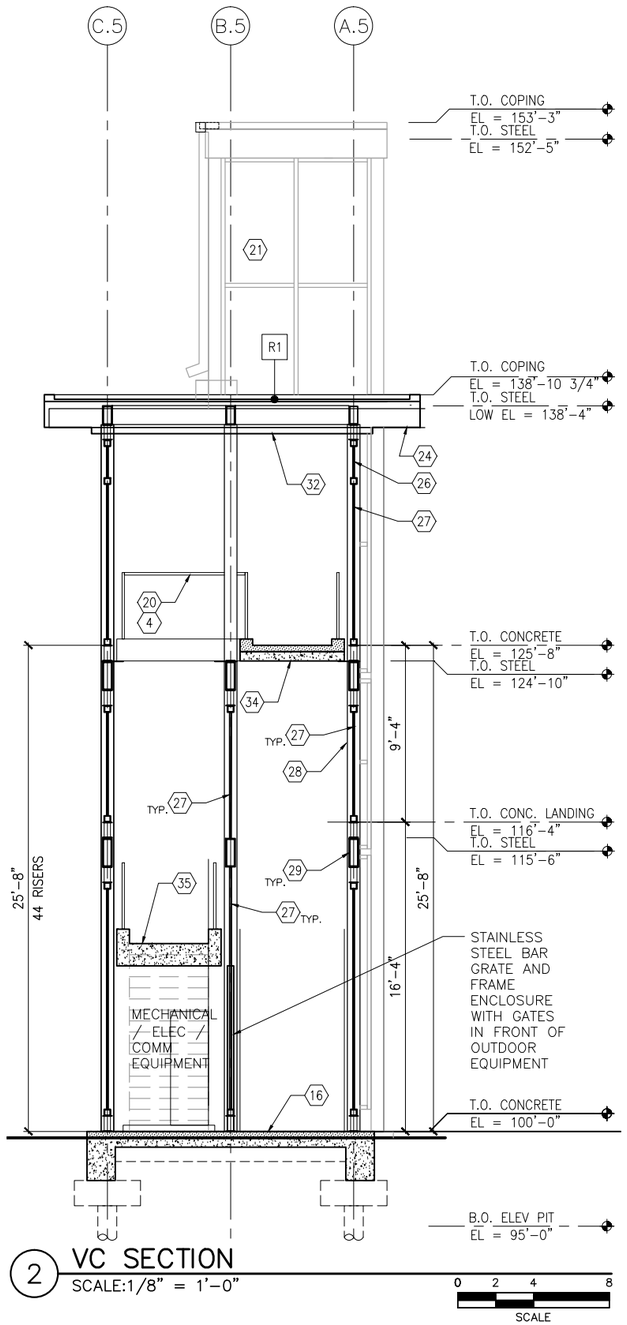
SHEET NAME: E4-PEN-ARC-SCT-310

SHEET 89 OF 273




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

0 2 4 8
SCALE




2 VC SECTION
SCALE:1/8" = 1'-0"

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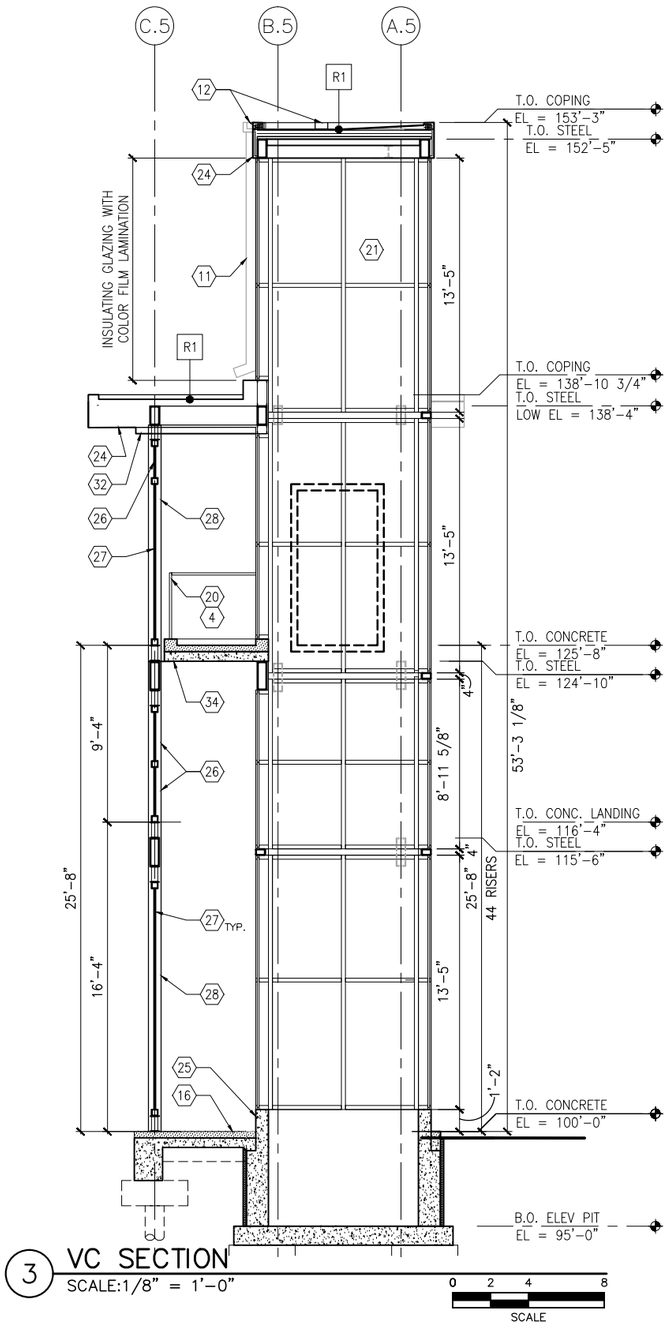
SCALE




3 VC SECTION
SCALE:1/8" = 1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
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## KEY NOTES – ⟨#⟩

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8. EMERGENCY CALL BOX
9. ROOF DRAIN
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34. PC CONC WALKWAY – SEE STRUCT
35. PC CONC STAIR – SEE STRUCT
36. PC CONC WALL PANEL
37. SECONDARY STEEL FRAMING – SEE STRUCTURAL
38. COMPOSITE ALUM PANEL

## LEGEND

- CIP CONCRETE
- ARCHITECTURAL CONCRETE
- R– ROOF TYPE – SEE A150

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

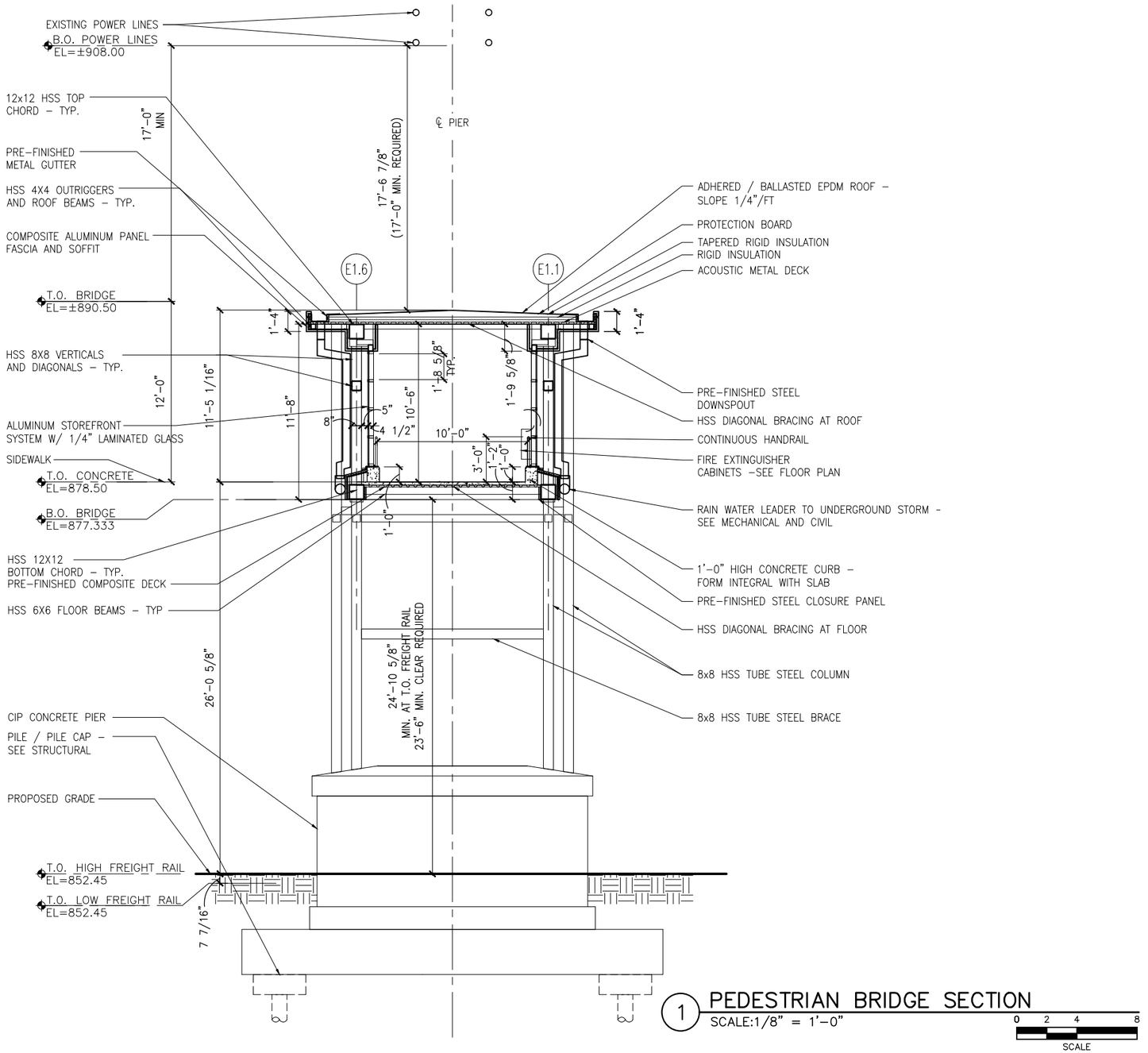
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC SECTIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-SCT-312

SHEET 90 OF 273




1 PEDESTRIAN BRIDGE SECTION
SCALE:1/8" = 1'–0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

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8. EMERGENCY CALL BOX
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11. PRE–FINISHED METAL DOWNSPOUT
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33. STATION SIGNAGE
34. PC CONC WALKWAY – SEE STRUCT
35. PC CONC STAIR – SEE STRUCT
36. PC CONC WALL PANEL
37. SECONDARY STEEL FRAMING – SEE STRUCTURAL
38. COMPOSITE ALUM PANEL

## LEGEND

- CIP CONCRETE
- ARCHITECTURAL CONCRETE
- R– ROOF TYPE – SEE A150

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

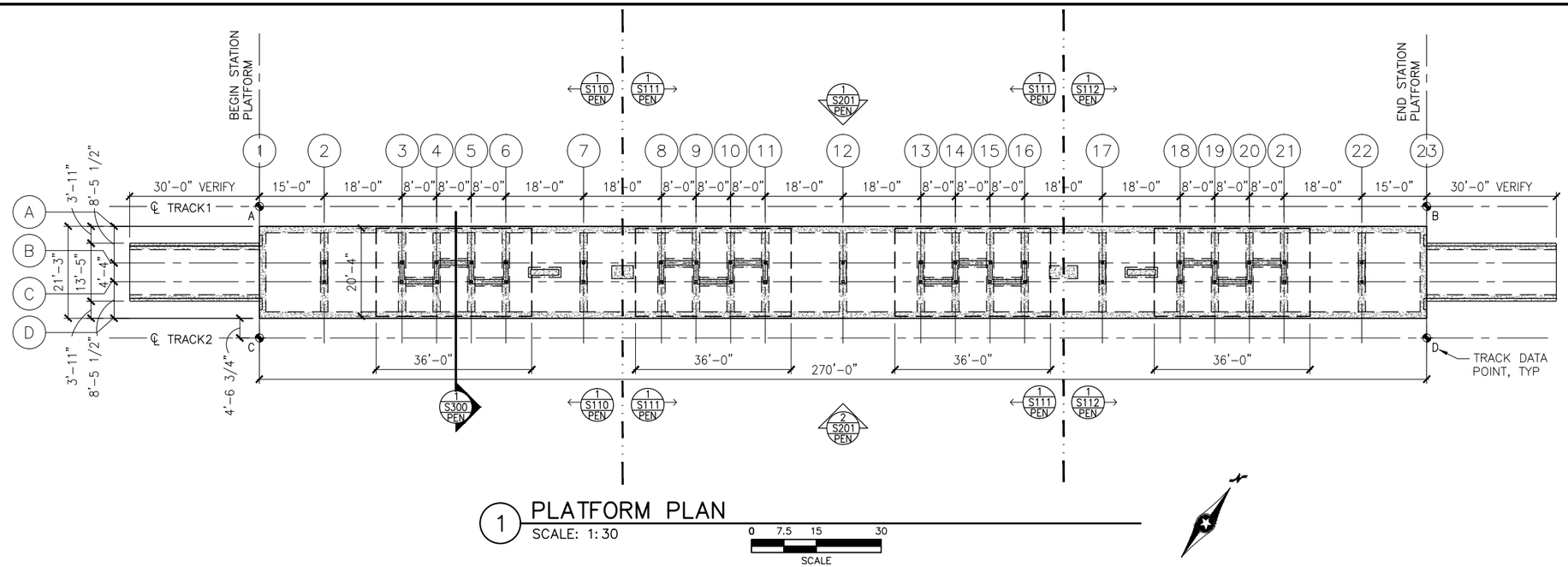
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE SECTIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-PEN-ARC-SCT-316

SHEET 91 OF 273

Sep. 21 2015 12:18 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\PENN STATION\E4-PEN-ARC-SCT-316.dwg By: MurphySP




1 PLATFORM PLAN

SCALE: 1:30

0 7.5 15 30

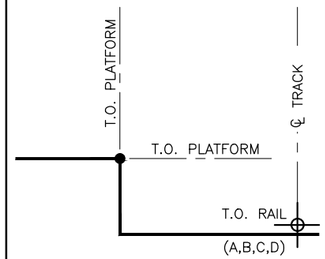
SCALE

## TRACK DATA

ELEV 100'-0" (LOCATION ON PLAN)

| TRACK 1 EL 100'-0"= | | | XXX.XX (PT 'A') |
|---|---|---|---|
| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
| | | | |
| A | XXX.XX | XXXX+XX.XX | |
| B | XXX.XX | XXXX+XX.XX | |
| | | | |

| TRACK 2 EL 100'-0"= | | | XXX.XX (PT 'C') |
|---|---|---|---|
| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
| | | | |
| C | XXX.XX | XXXX+XX.XX | |
| D | XXX.XX | XXXX+XX.XX | |
| | | | |




SECTION DIAGRAM AT PLATFORM EDGE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM

60% SUBMISSION - 9/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

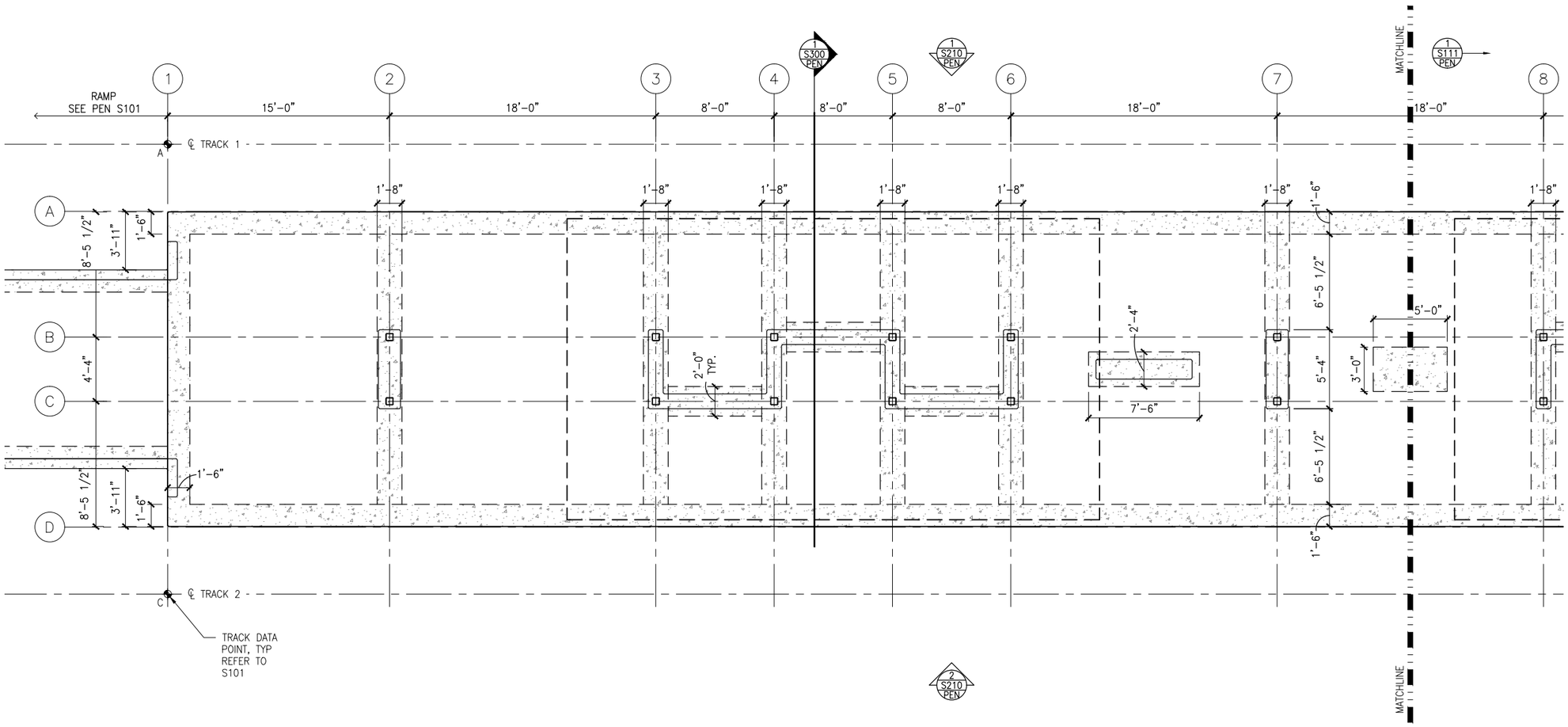
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PLATFORM PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-PLN-101

SHEET 92 OF 273

Sep. 21 2015 09:55 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-PLN-101.dwg By: pepins




1 WEST PARTIAL FOUNDATION PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

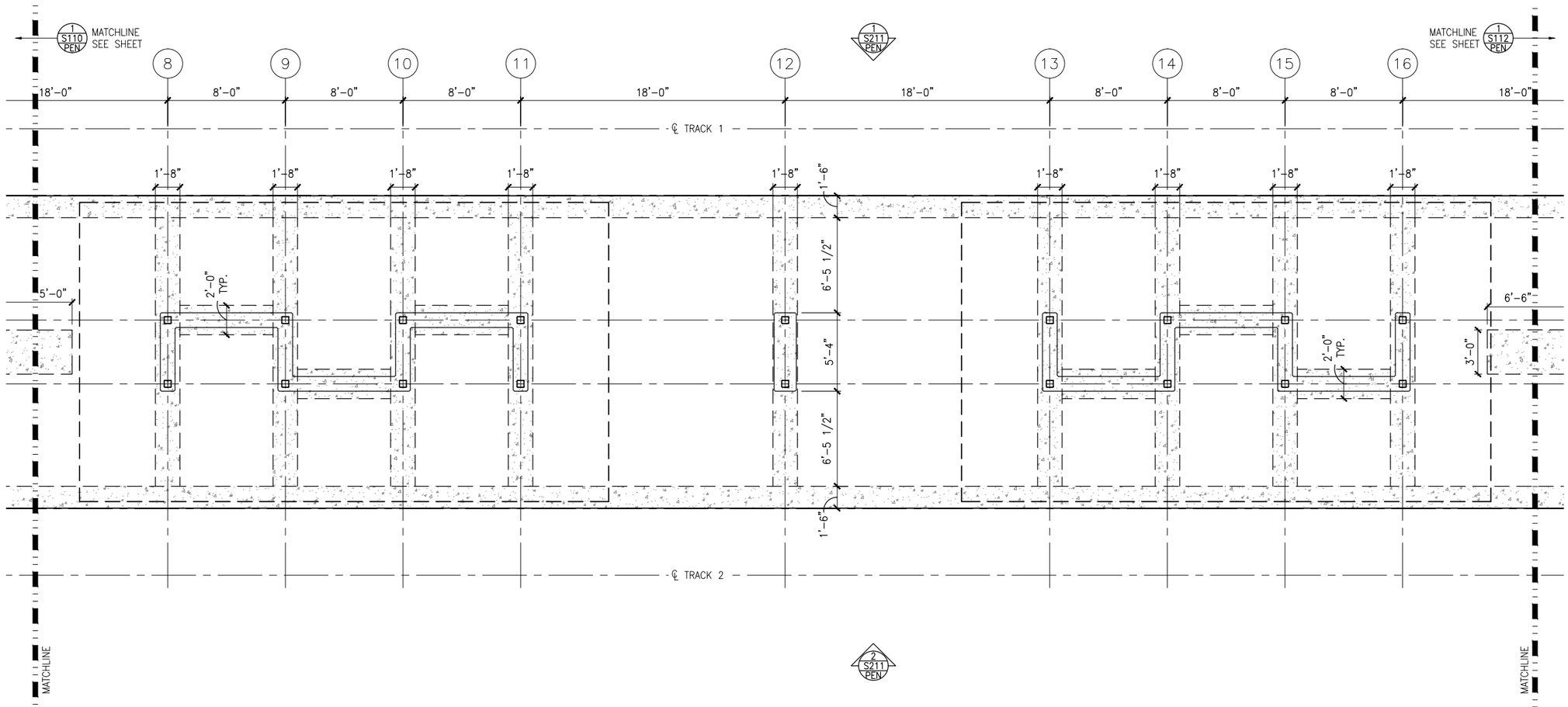
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**WEST PARTIAL FOUNDATION PLAN**

SHEET 93 OF 273

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-PLN-110

Sep. 21 2015 09:55 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-PLN-110.dwg By: pepins




1 MIDDLE PARTIAL FOUNDATION PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

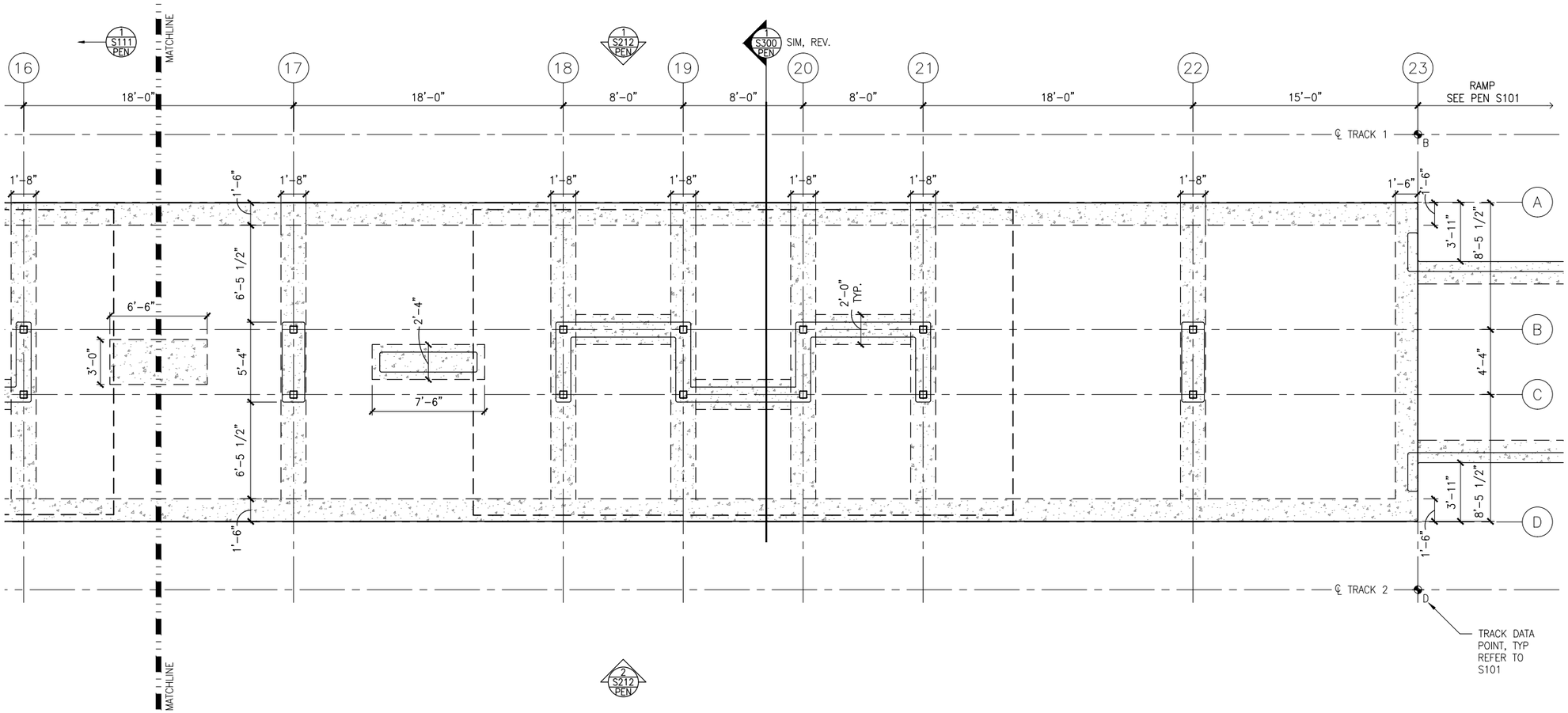
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**MIDDLE PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-PLN-111

SHEET 94 OF 273

Sep. 21 2015 09:56 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-PLN-111.dwg By: pepins




1 EAST PARTIAL FOUNDATION PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

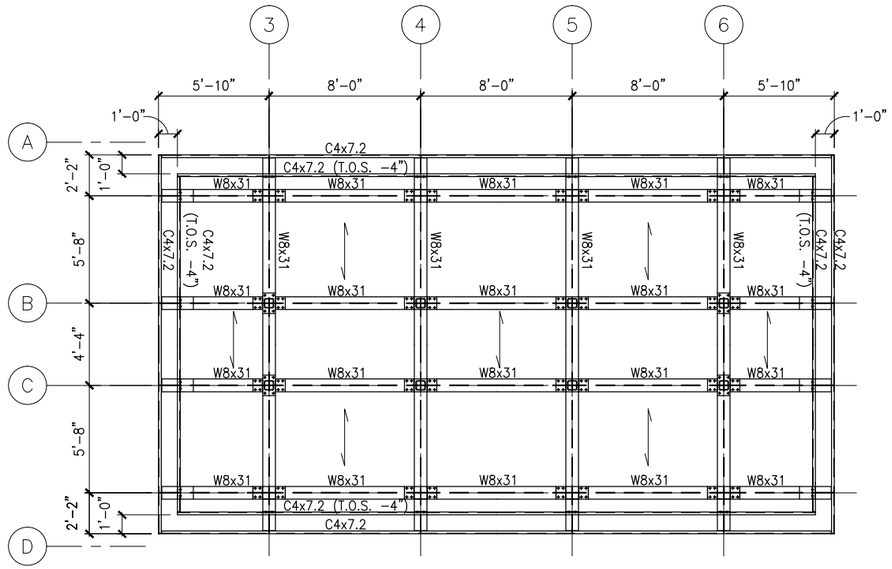
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**EAST PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

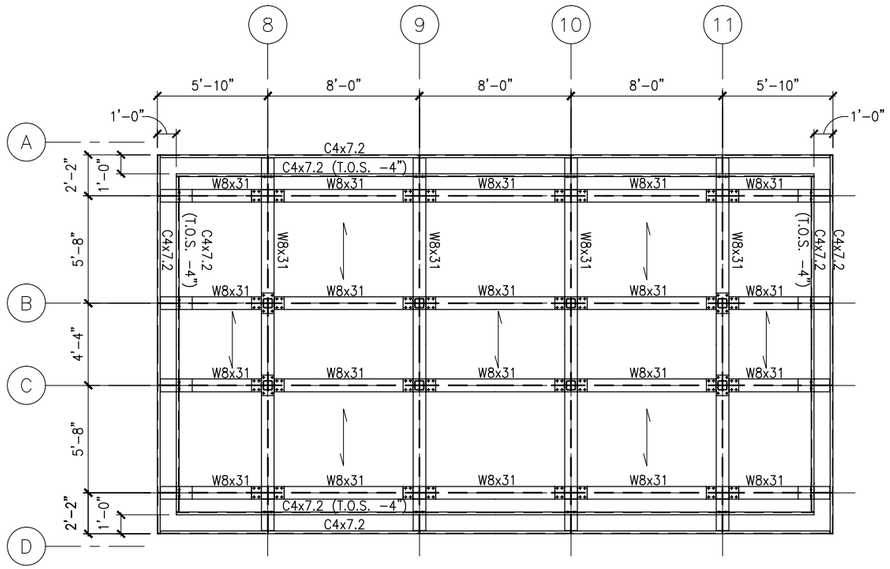
SHEET NAME: E4-PEN-STR-PLN-112

SHEET 95 OF 273

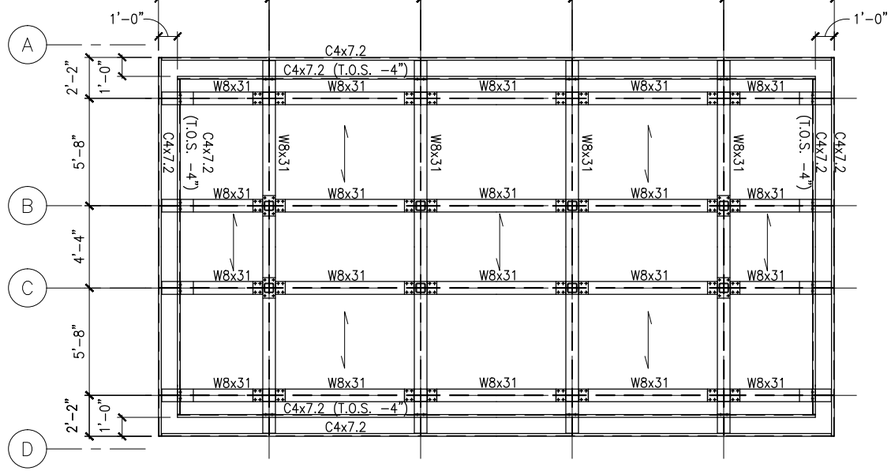
Sep. 21 2015 09:56 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-PLN-112.dwg By: pepins



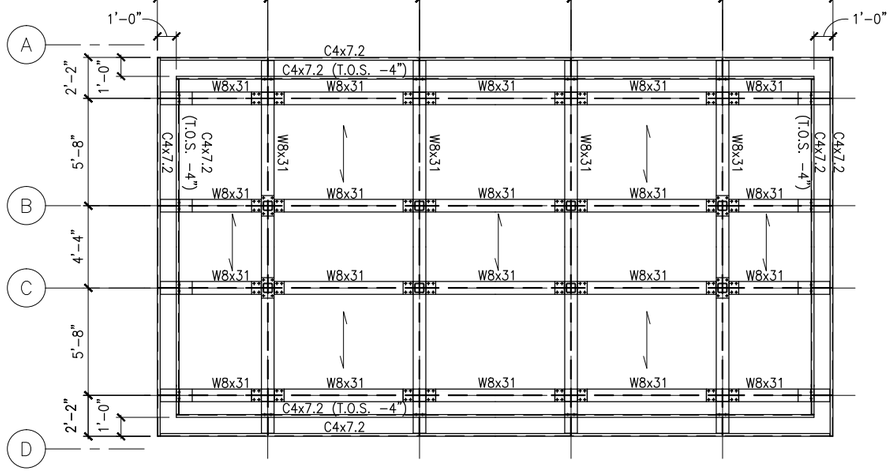

1 FRAMING PLAN – WEST CANOPY
SCALE: 1/8"=1'-0"




2 FRAMING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"




3 FRAMING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"




4 FRAMING PLAN – EAST CANOPY
SCALE: 1/8"=1'-0"

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

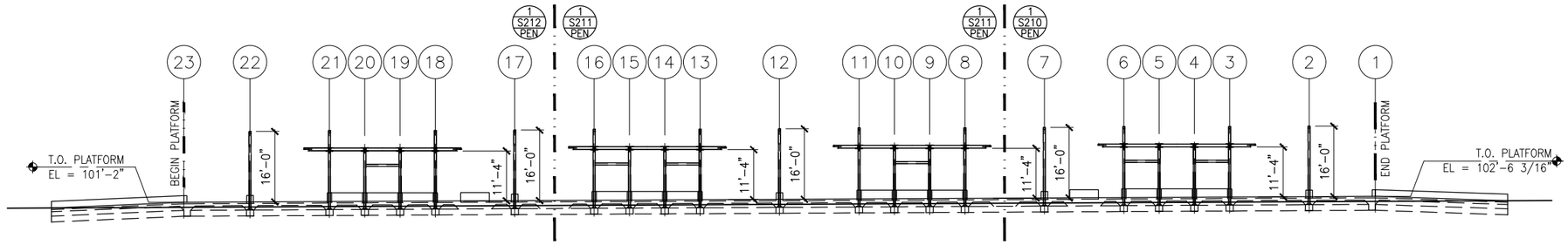
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**ROOF FRAMING PLANS**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-PLN-150

SHEET 96 OF 273

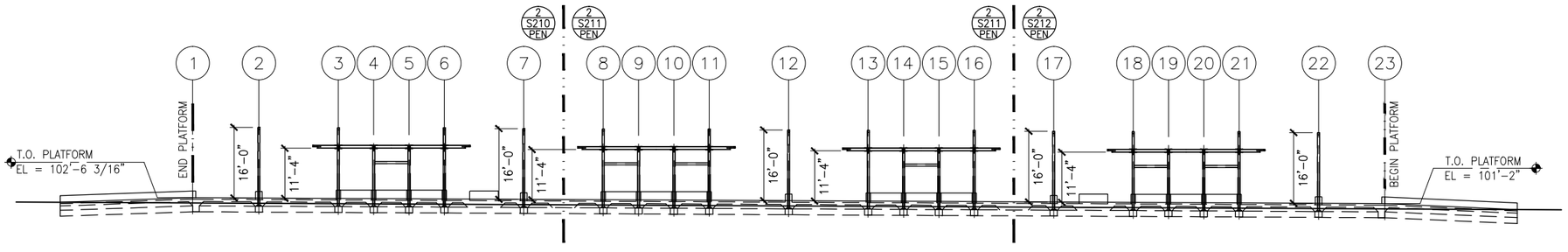
Sep. 21 2015 09:57 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-PLN-150.dwg By: pepins




## 1 TRACK 1 ELEVATION – FRAMING

SCALE: 1:30 (–0.50% SLOPE)*

0 7.5 15 30
SCALE




## 2 TRACK 2 ELEVATION – FRAMING

SCALE: 1:30 (–0.50% SLOPE)*

0 7.5 15 30
SCALE

*VERIFY W/ TRACK PROFILE, ADJUST ELEVATIONS ACCORDINGLY

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

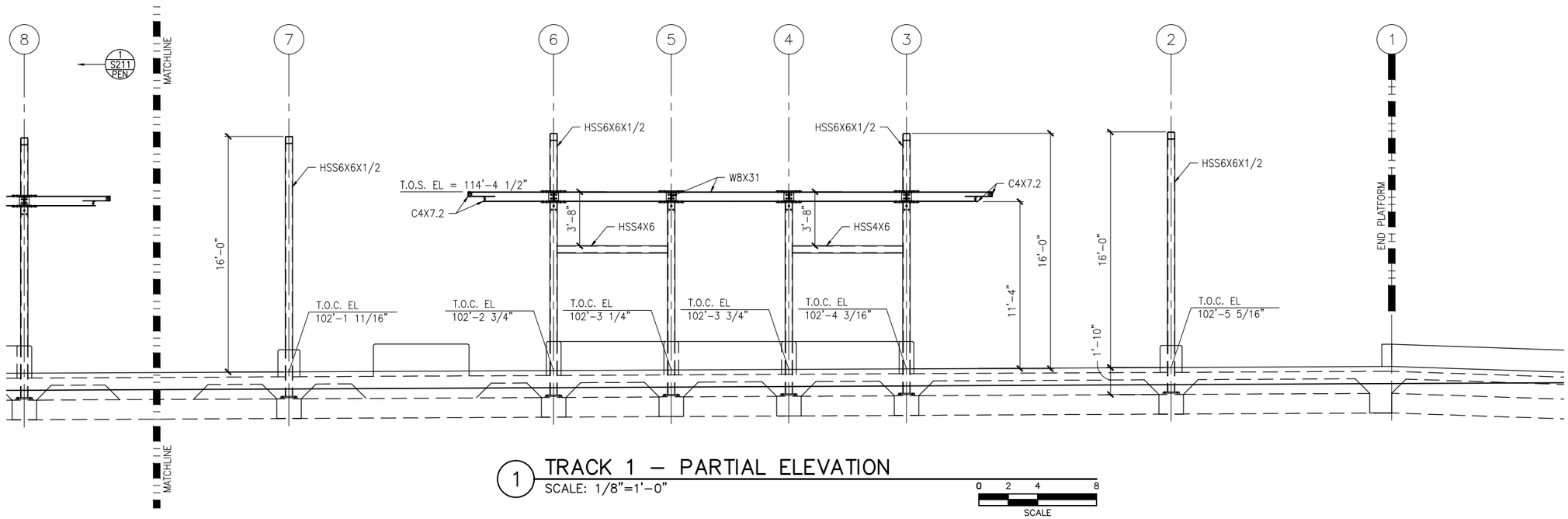
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-ELV-201

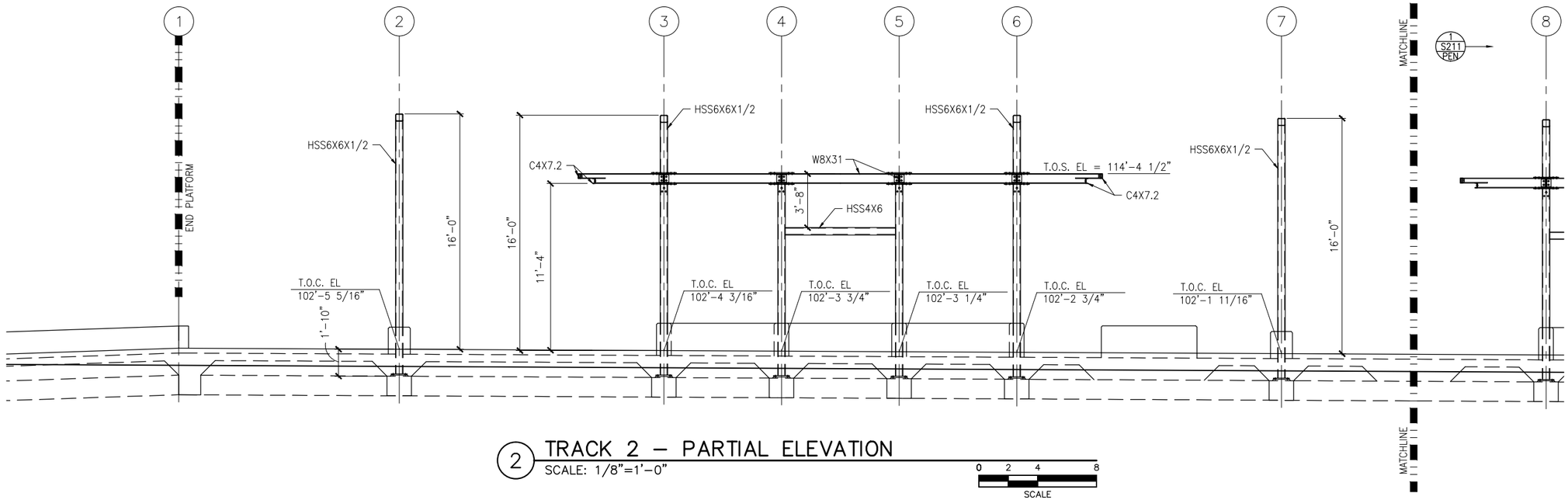
SHEET 97 OF 273

Sep. 21 2015 09:57 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-ELV-201.dwg By: pepins




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

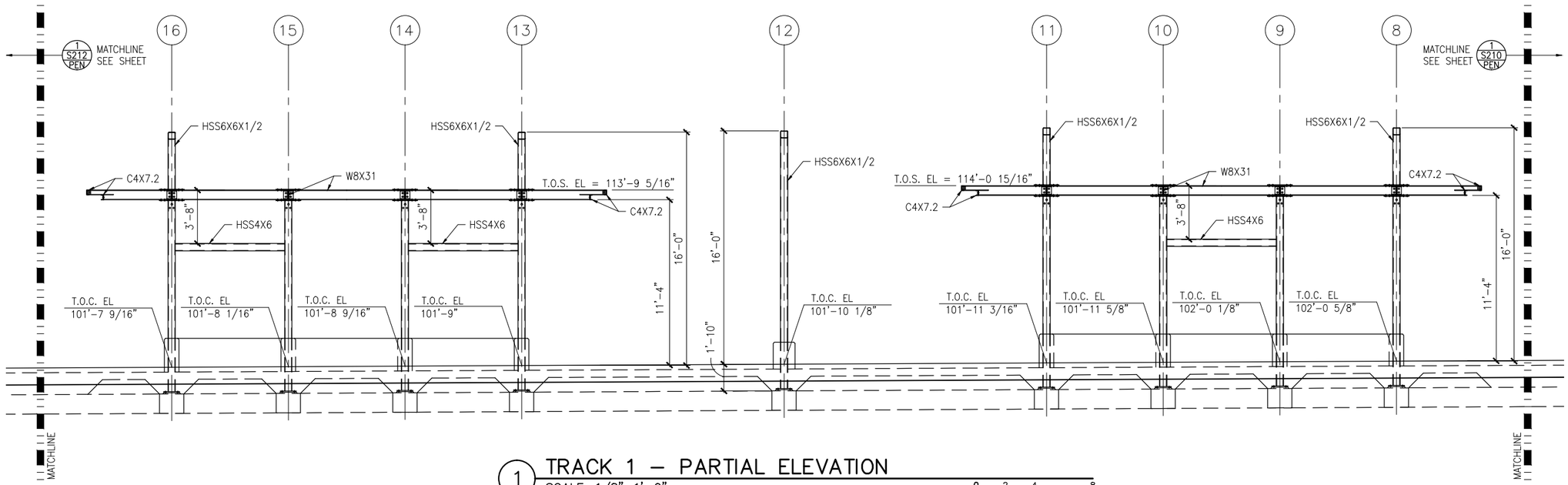
# CIVIL EAST - VOLUME 11B
# PENN STATION
# WEST PARTIAL ELEVATIONS -- FRAMING

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-ELV-210

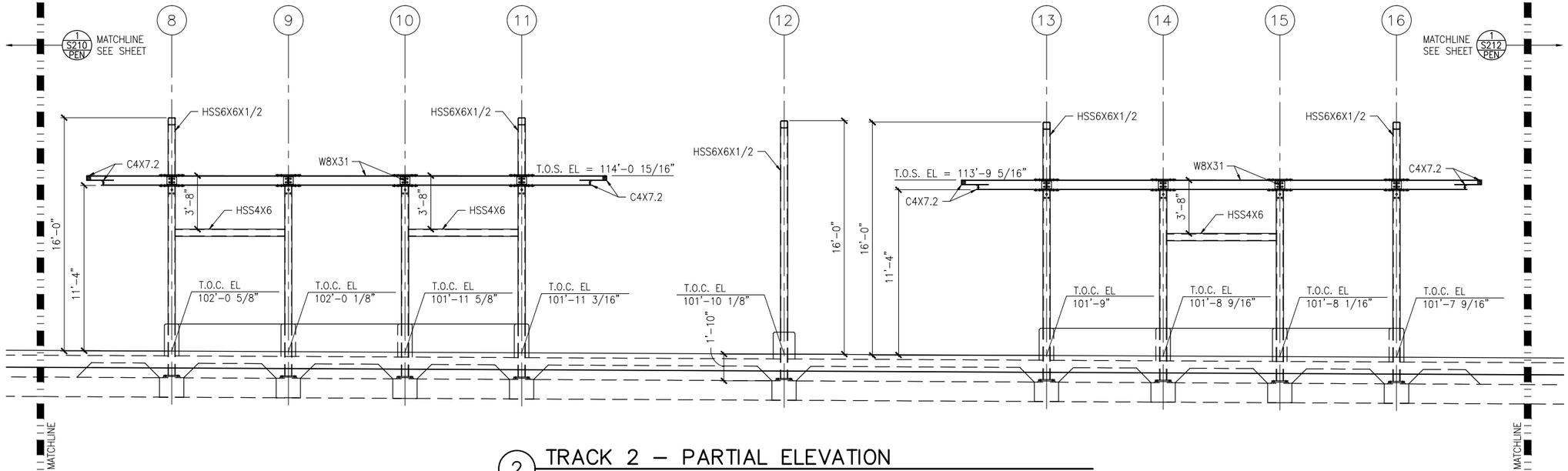
SHEET 98 OF 273

Sep. 21 2015 09:58 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-ELV-210.dwg By: pepins




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

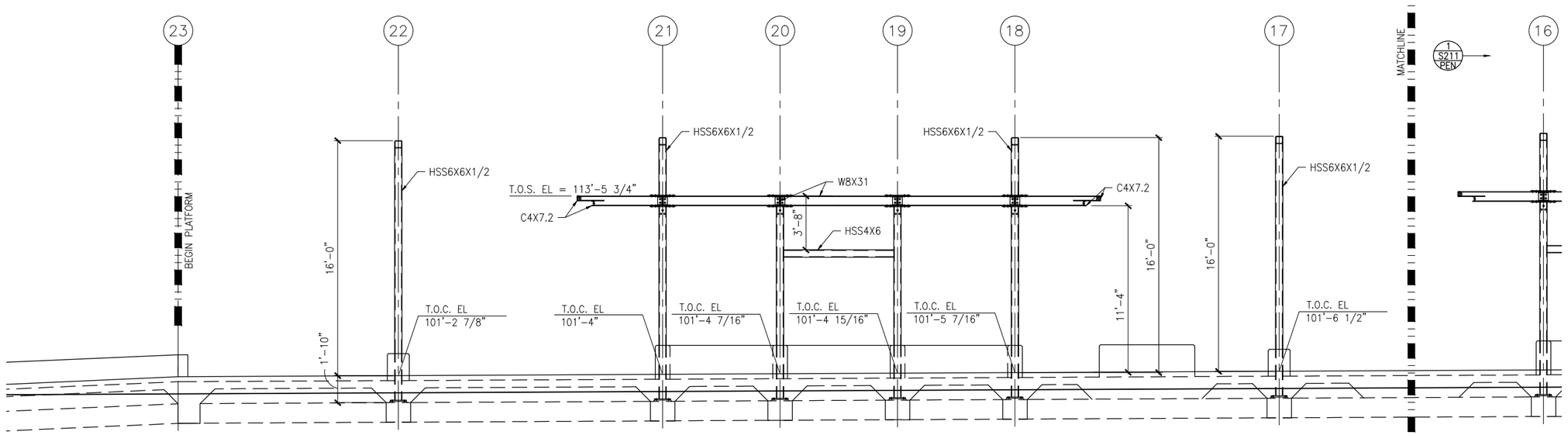
# CIVIL EAST - VOLUME 11B
# PENN STATION
# MIDDLE PARTIAL ELEVATIONS -- FRAMING

SHEET 99 OF 273

DISCIPLINE: STRUCTURES

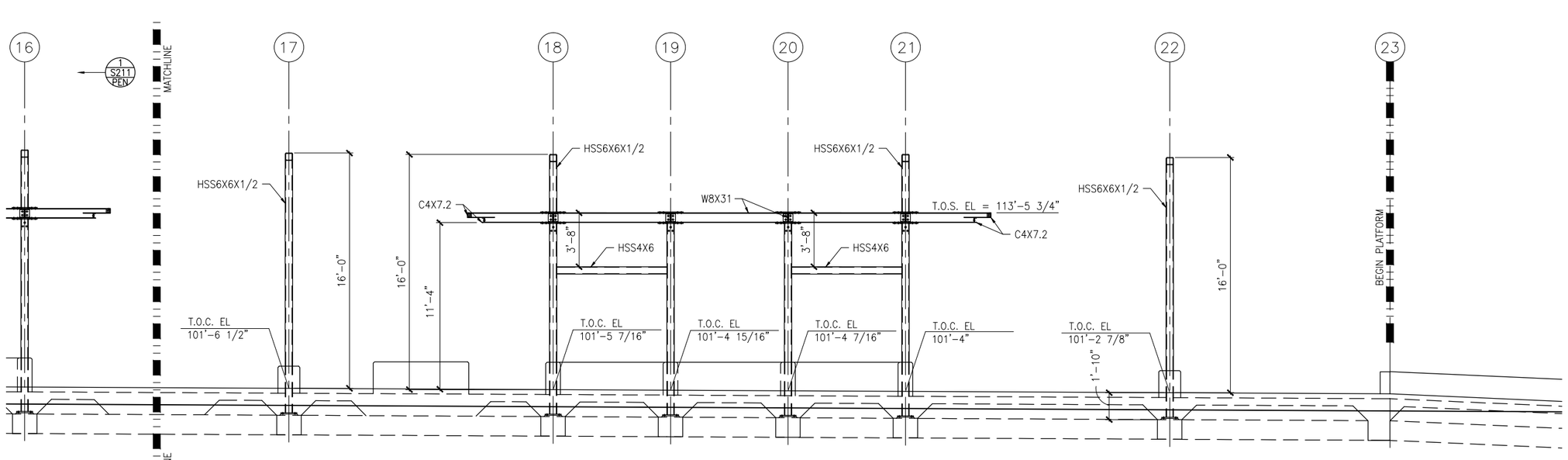
SHEET NAME: E4-PEN-STR-ELV-211

Sep. 21 2015 09:58 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-ELV-211.dwg By: pepins




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

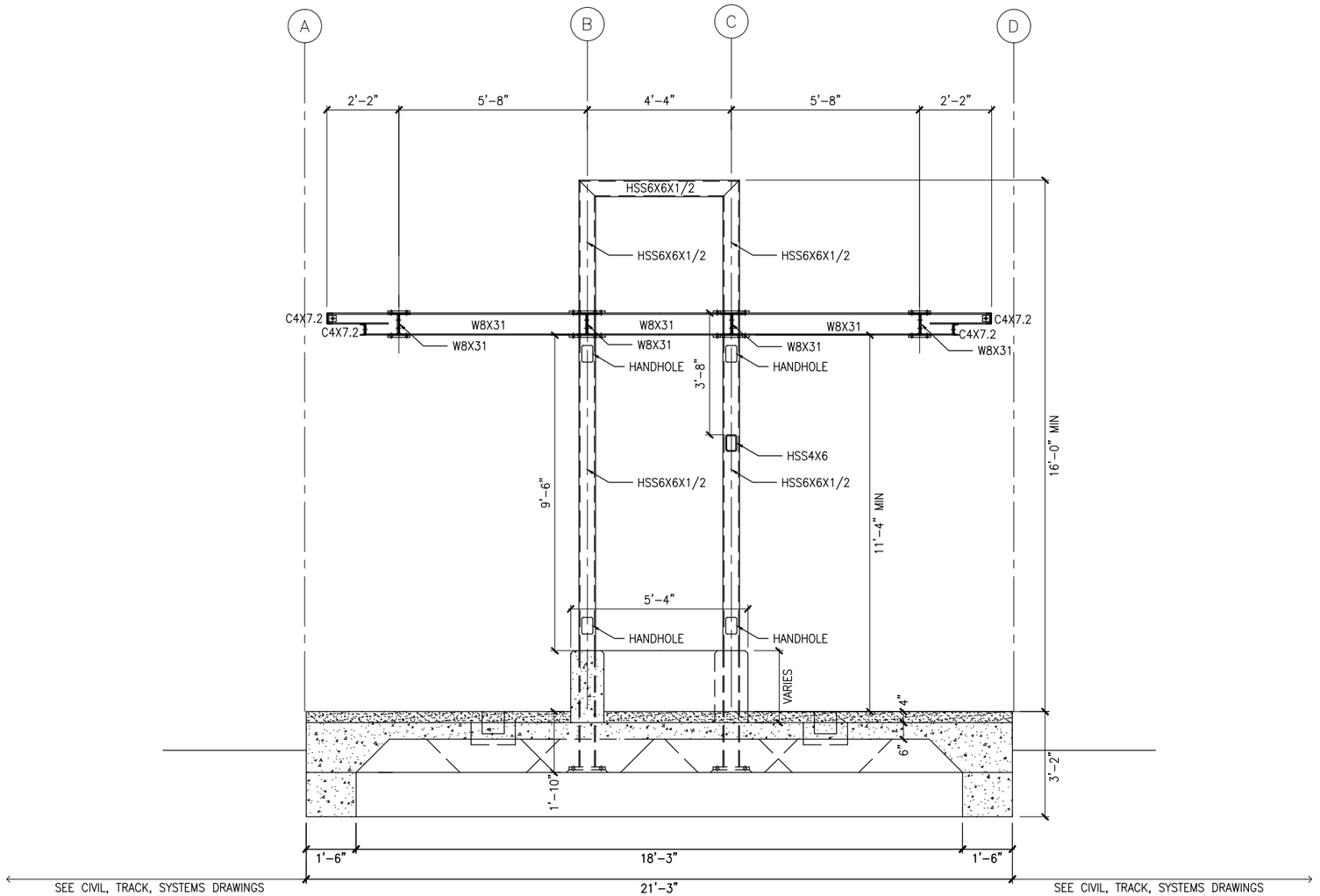
# CIVIL EAST - VOLUME 11B
# PENN STATION
# EAST PARTIAL ELEVATIONS -- FRAMING

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-ELV-212

SHEET 100 OF 273

Sep. 21 2015 09:59 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-ELV-212.dwg By: pepins




1 TYPICAL PLATFORM SECTION

SCALE:1/4"=1'-0"

0 1 2 4

SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**TYPICAL PLATFORM SECTION**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-SCT-300

SHEET 101 OF 273

Sep. 21 2015 09:59 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Penn\CAD\STR\E4-PEN-STR-SCT-300.dwg By: pepins

## GENERAL NOTES:

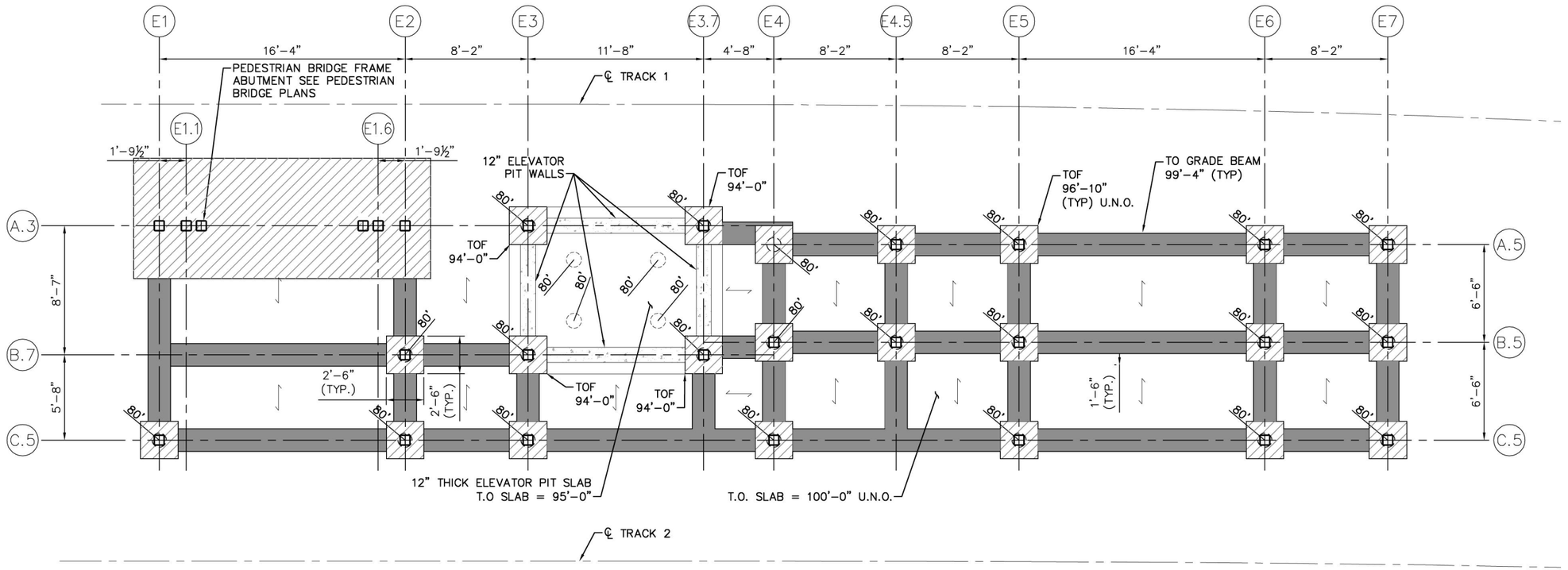
1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.

## FOUNDATION NOTES:

1. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES RELATING TO THE FOUNDATION PLAN SHALL GOVERN.
2. FOUNDATIONS SHALL BE CENTERED ON COLUMN GRID LINES, EG COLUMNS, WALLS, ETC. UNLESS NOTED OTHERWISE.
3. ALL FOUNDATION WORK RELATING TO THE INSTALLATION OF REBAR SHALL BE OBSERVED AND APPROVED BY THE ENGINEER.
4. WHERE SHOWN, BUT NOT SPECIFICALLY NOTED, PROVIDE STANDARD ACI 90° OR 180° HOOKS, AS APPLICABLE, TO REBAR.
5. FOUNDATION DESIGN IS BASED ON INFORMATION AND RECOMMENDATIONS PROVIDED BY AMERICAN ENGINEERING TESTING IN THEIR PRELIMINARY REPORT OF GEOTECHNICAL EXPLORATION AND REVIEW REPORT NO. 01-05697.01 DATED 8/19/2014.
6. PERCHED GROUNDWATER MAY BE ENCOUNTERED WITHIN FOUNDATION EXCAVATION. REMOVE WATER TO FACILITATE FOUNDATION CONSTRUCTION.
7. SEE STR-GEN-603 FOR FOUNDATION DETAILS.

## LEGEND:

- TOF 96'-10" — DENOTES TOP OF FOOTING ELEVATION AT 96'-10"
- 80' — 12" CIP STEEL PILE 80' LENGTH
- STEEL TUBE COLUMN – SEE FRAMING PLAN
- CAST IN PLACE CONCRETE PILE CAP 2'-6"L X 2'-6"W X 2'-6"D
- CAST IN PLACE CONCRETE GRADE BEAM 'VARIES'L X 1'-6"W X 2'-6"D
- 6" SLAB-ON-GRADE WITH #4 @ 9" O.C. LONGITUDINAL & TRANSVERSE REINFORCEMENT PLACED AT MID-DEPTH
- ELEVATION 100'-0" = SEE ARCHITECTURAL TRACK ELEVATION AT CENTER OF PEDESTRIAN CROSSING.




1 VC FOUNDATION PLAN
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

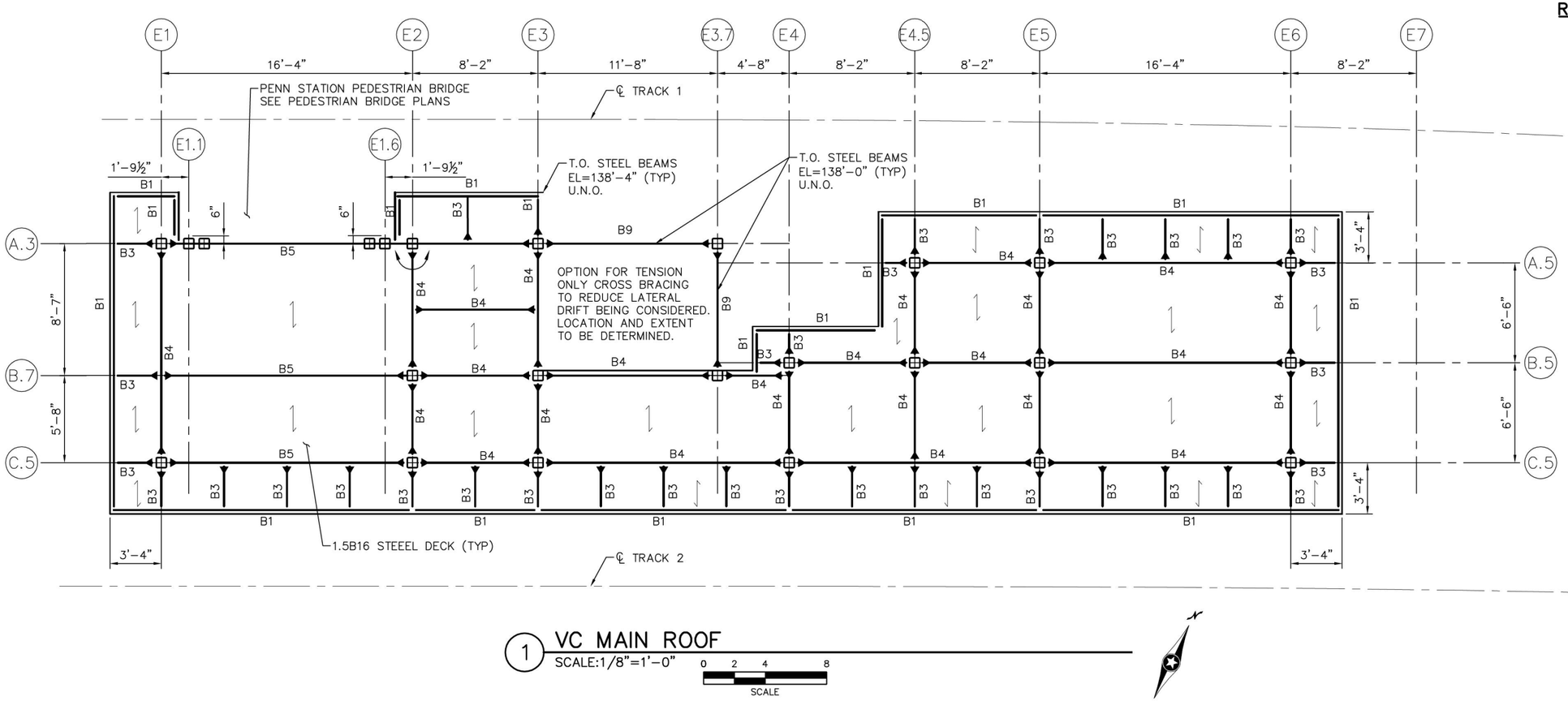
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC**
**FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-PLN-401

SHEET 102 OF 273

Sep. 21 2015 01:30 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\PEN-STATION\92 E4-PEN-STR-PLN-401.dwg By: scott.shepard




1 VC MAIN ROOF
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL NOTES:

1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## ROOF PLAN NOTES

1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
2. ⟵ INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK.
3. MOMENT CONNECTIONS ARE DENOTED THUS (▶—) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
4. ⌒ INDICATES BEAM IS CONTINUOUS OVER COLUMN.
5. ☐ DENOTES HSS8X8X5/8 COLUMN
6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.

| BEAM SCHEDULE | |
|---|---|
| MARK | SIZE |
| B1 | C12x20.7 |
| B2 | W8x18 |
| B3 | W12x16 |
| B4 | HSS12x6x¼ |
| B5 | HSS12x6x½ |
| B6 | HSS18x6x5/16 |
| B7 | HSS18x6x½ |
| B8 | HSS16x8x½ |
| B9 | HSS6x4x5/16 |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

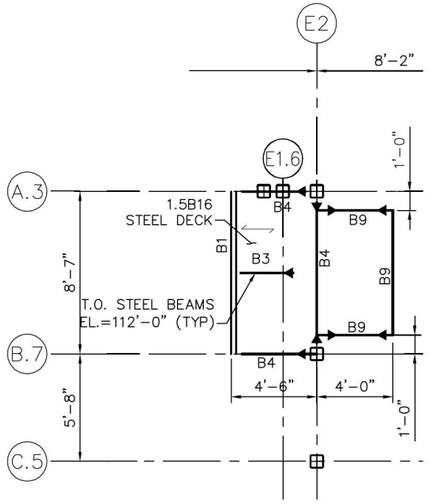
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# VC MAIN ROOF
# FRAMING PLAN

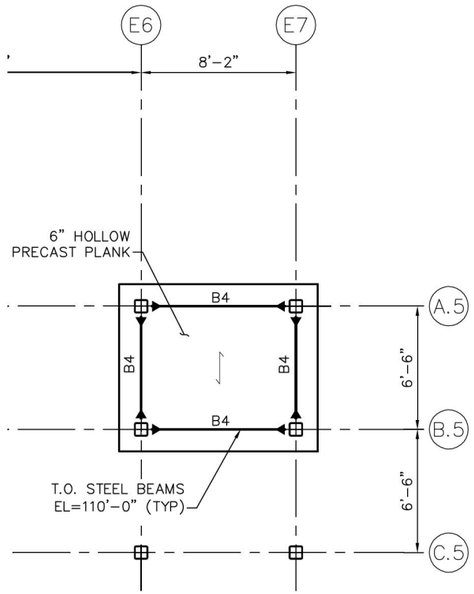
DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-PLN-411

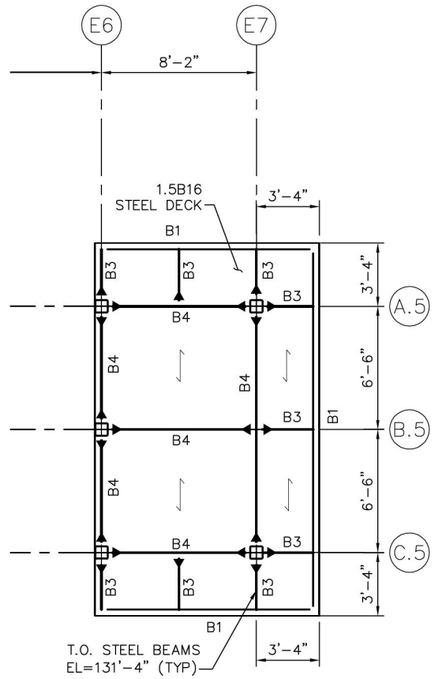
SHEET 103 OF 273



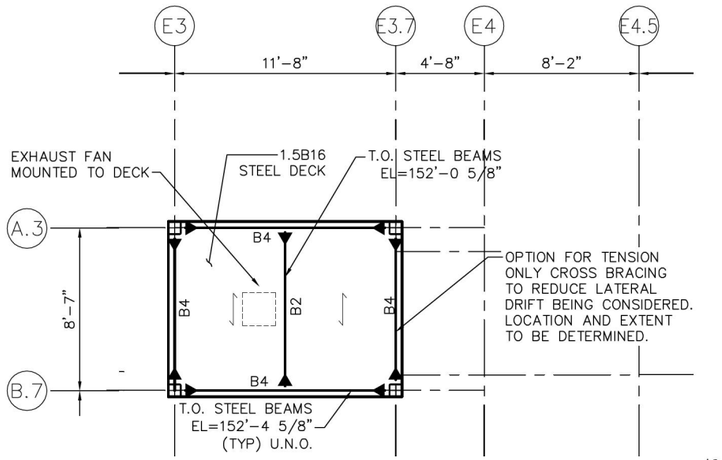

2 VC ELEVATOR LOBBY ENTRANCE ROOF
SCALE:1/8"=1'-0"




3 VC DRIVER AMENITY ROOF
SCALE:1/8"=1'-0"




4 VC REAR STAIR LANDING ROOF
SCALE:1/8"=1'-0"




1 VC ELEVATOR CORE ROOF
SCALE:1/8"=1'-0"

## GENERAL NOTES:

1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## ROOF PLAN NOTES

1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
2. ⟵⟶ INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK UNLESS OTHERWISE NOTED.
3. MOMENT CONNECTIONS ARE DENOTED THUS (▶—) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
4. ⌒ INDICATES BEAM IS CONTINUOUS OVER COLUMN.
5. □ DENOTES HSS8X8X5/8 COLUMN
6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.

| BEAM SCHEDULE | |
|---|---|
| MARK | SIZE |
| B1 | C12x20.7 |
| B2 | W8x18 |
| B3 | W12x16 |
| B4 | HSS12x6x¼ |
| B5 | HSS12x6x½ |
| B6 | HSS18x6x5/16 |
| B7 | HSS18x8x½ |
| B8 | HSS16x8x½ |
| B9 | HSS6x4x5/16 |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% PLAN - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# VC PARTIAL ROOF FRAMING PLAN

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-PLN-412

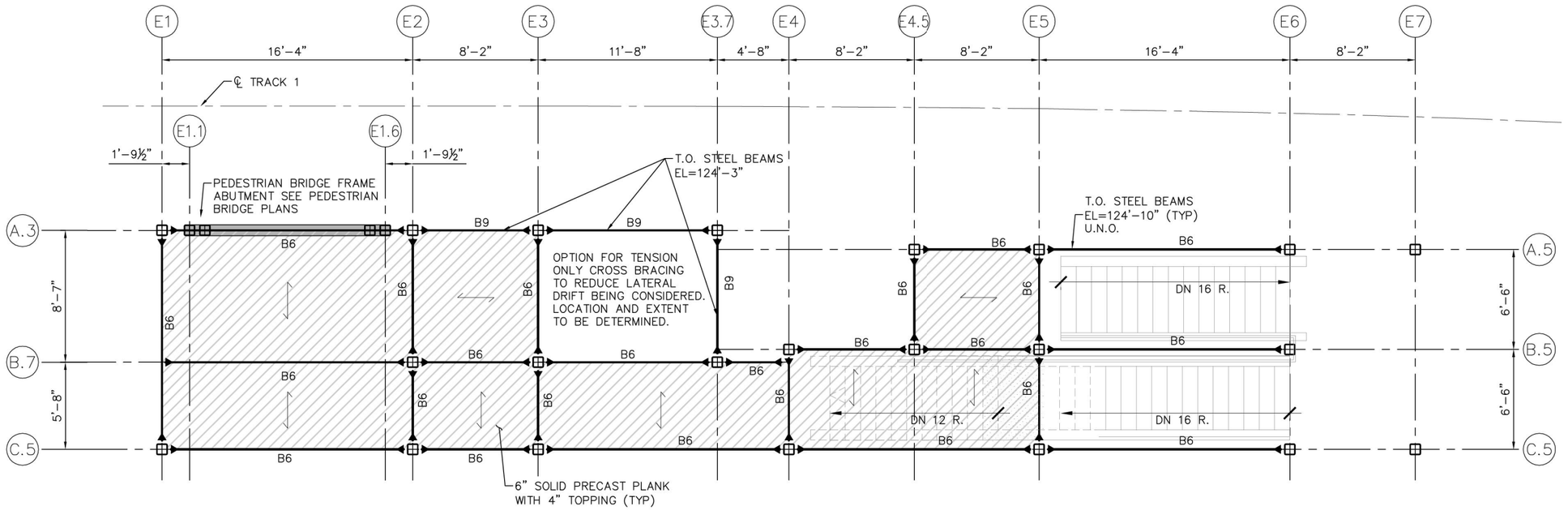
SHEET 104 OF 273

## GENERAL NOTES:

1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## SKYWALK LEVEL PLAN NOTES

1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
2. ⟵ INDICATES SPAN DIRECTION OF 6" PRECAST PLANK DECK WITH 4" TOPPING.
3. MOMENT CONNECTIONS ARE DENOTED THUS (▶—) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
4. ⌒ INDICATES BEAM IS CONTINUOUS OVER COLUMN.
5. □ DENOTES HSS8X8X5/8 TUBE STEEL COLUMN.
6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.




1 VC SKYWALK LEVEL
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| BEAM SCHEDULE | |
|---|---|
| MARK | SIZE |
| B1 | C12x20.7 |
| B2 | W8x18 |
| B3 | W12x16 |
| B4 | HSS12x6x¼ |
| B5 | HSS12x6x½ |
| B6 | HSS18x6x5/16 |
| B7 | HSS18x6x½ |
| B8 | HSS16x8x½ |
| B9 | HSS6x4x5/16 |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
PENN STATION
VC BRIDGE LEVEL
FRAMING PLAN

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-PLN-413

SHEET 105 OF 273

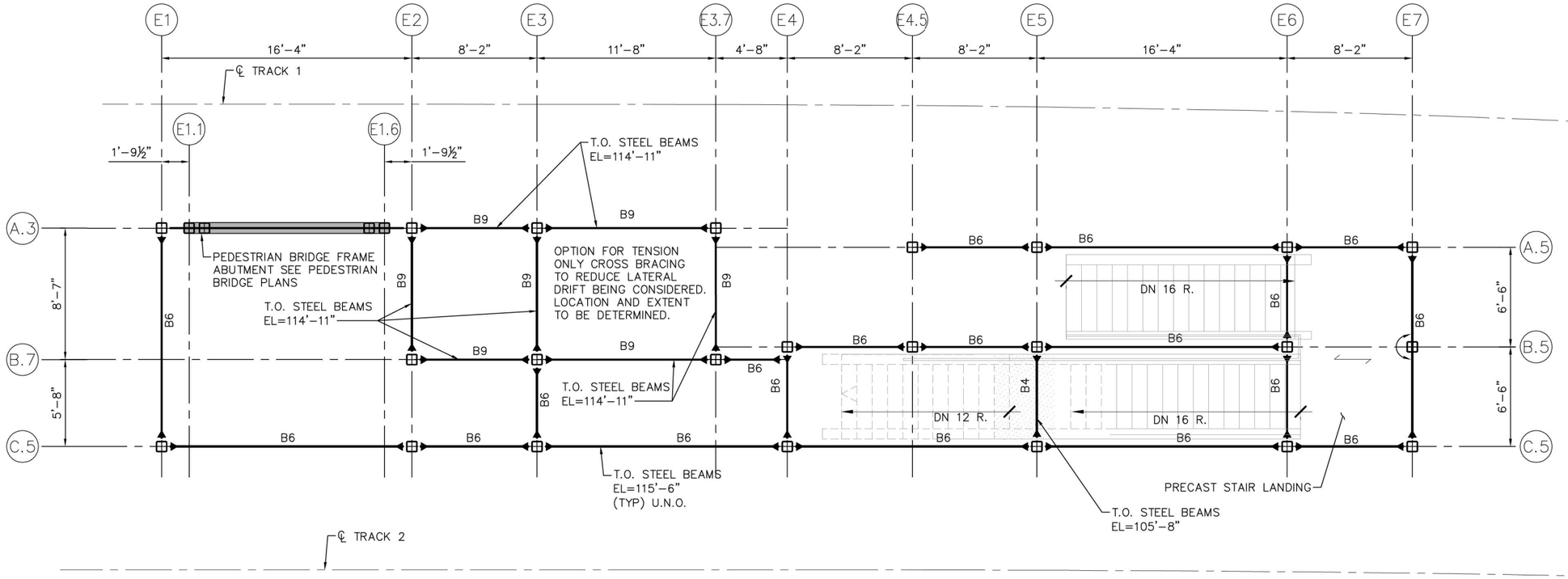
Sep. 21 2015 01:31 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\PEN-STATION\105 E4-PEN-STR-PLN-413.dwg By: scott.shepard

## GENERAL NOTES:

1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## STAIR LANDING PLAN NOTES

1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
2. ⟷ INDICATES SPAN DIRECTION OF PRECAST STAIR LANDING.
3. MOMENT CONNECTIONS ARE DENOTED THUS (▶—) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
4. ⌒ INDICATES BEAM IS CONTINUOUS OVER COLUMN.
5. □ DENOTES HSS8X8X5/8 COLUMN.
6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.




| BEAM SCHEDULE | |
|---|---|
| MARK | SIZE |
| B1 | C12x20.7 |
| B2 | W8x18 |
| B3 | W12x16 |
| B4 | HSS12x6x¼ |
| B5 | HSS12x6x½ |
| B6 | HSS18x6x⅝ |
| B7 | HSS18x6x½ |
| B8 | HSS16x8x½ |
| B9 | HSS6x4x⅝ |

1 VC STAIR LANDING LEVEL
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

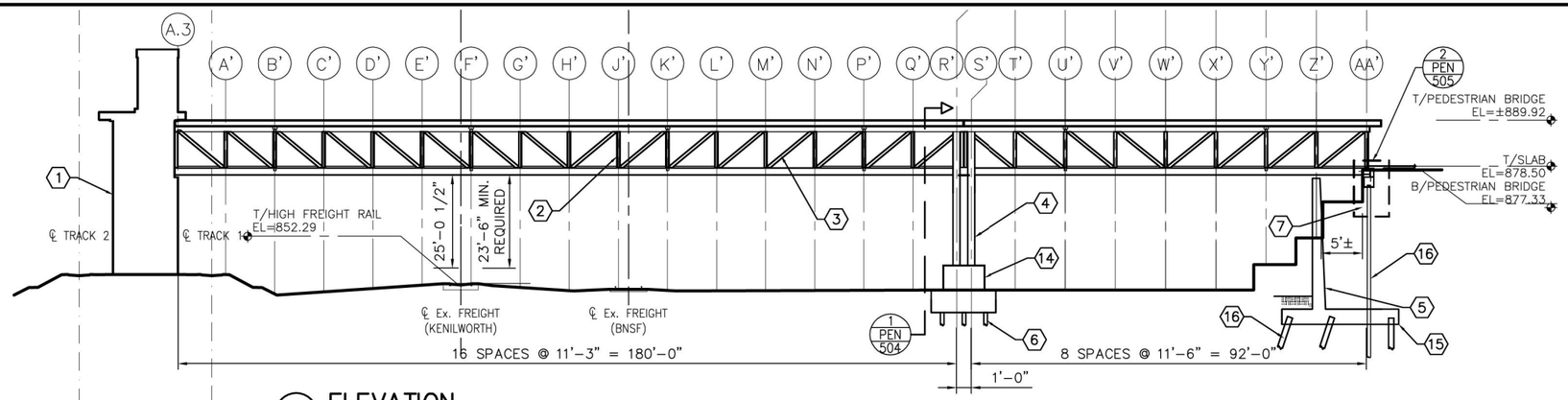
# CIVIL EAST - VOLUME 11B
# PENN STATION
# VC STAIR LANDING LEVEL FRAMING PLAN

DISCIPLINE: STRUCTURES

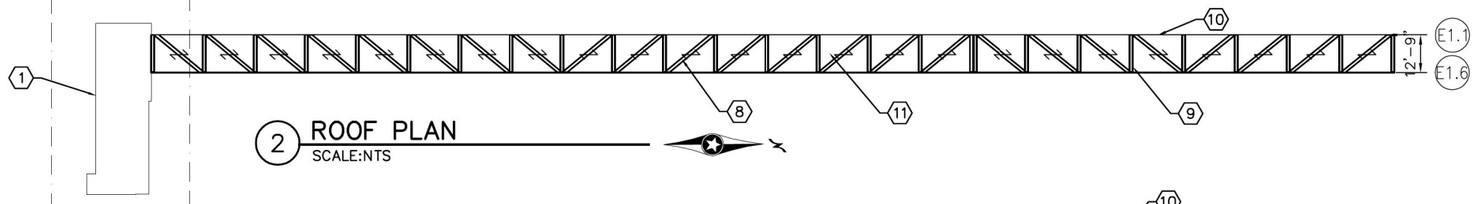
SHEET NAME: E4-PEN-STR-PLN-414

SHEET 106 OF 273

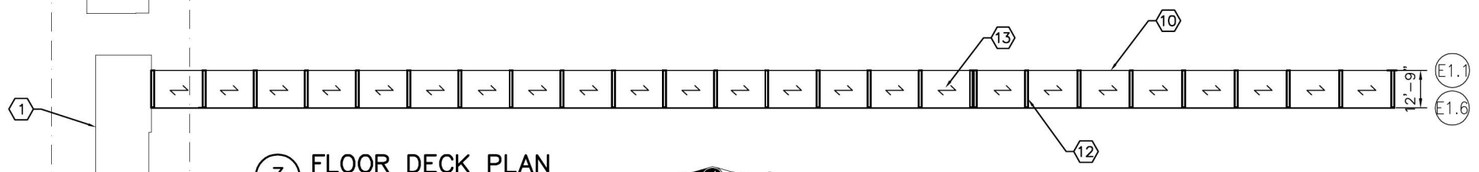
Sep. 21 2015 01:32 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\PEN-STATION\106 E4-PEN-STR-PLN-414.dwg By: scott.shepard



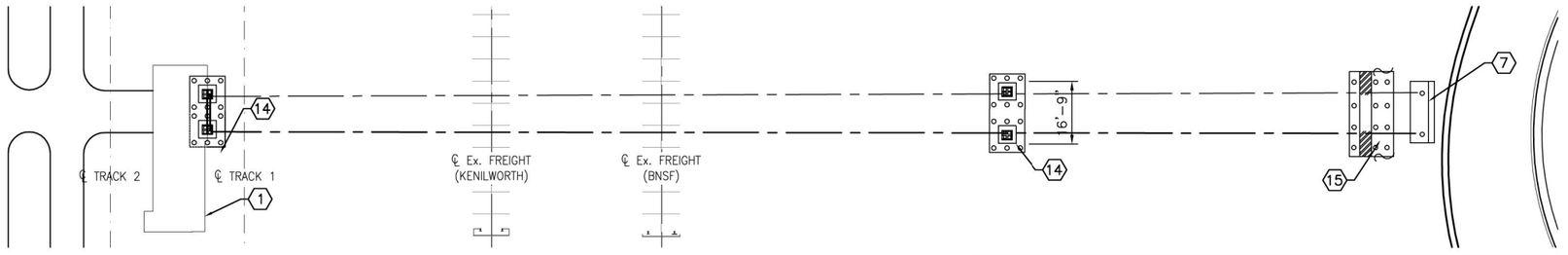

1 ELEVATION
SCALE:NTS




2 ROOF PLAN
SCALE:NTS




3 FLOOR DECK PLAN
SCALE:NTS




4 FOUNDATION PLAN
SCALE:NTS

## KEY NOTES

1. PENN STATION VERTICAL CIRCULATION STRUCTURE
2. HSS 8X8 TRUSS VERTICAL (TYP.)
3. HSS 8X8 TRUSS DIAGONAL (TYP.)
4. TRUSS SUPPORT FRAME
5. SITE RETAINING WALL
6. HELICAL STEEL PILES
7. LOW PARAPET ABUTMENT
8. HSS 4X4 ROOF BRACE DIAGONAL (TYP.)
9. HSS 4X4 TOP CHORD STRUT (TYP.)
10. HSS 12X12 TRUSS CHORD MEMBER (TYP.)
11. 3"-18 GA. GALVANIZED ACOUSTIC METAL ROOF DECK
12. HSS 6X6 FLOOR DECK SUPPORT BEAM (TYP.)
13. 5" THICK CONCRETE FLOOR SLAB WITH 2"-18 GA, GALVANIZED COMPOSITE METAL FLOOR DECK. REINFORCE SLAB WITH _____.
14. TRUSS SUPPORT FRAME PIER AND PILE CAP
15. RETAINING WALL FOUNDATION
16. 12" ø CIP PILES

FOUNDATION LOADS (KIPS)

| GRID | DEAD LOAD (DL, KIPS) | LIVE LOAD (LL, KIPS) | SNOW LOAD (SL, KIPS) | WIND LOAD (WL, KIPS) | | LOAD COMBINATION (KIPS) (1) | |
|---|---|---|---|---|---|---|---|
| | | | | VERTICAL | HORIZONTAL | SERVICE 1 | STRENGTH 1 |
| A.3 | 132 | 104 | 44 | | 49 | 295 | 425 |
| R'-S' | 198 | 156 | 66 | | 74 | 443 | 636 |
| AA' | 66 | 52 | 22 | | 25 | 148 | 212 |

(1) LOAD COMBINATION SERVICE 1: DL + LL + SL + 0.3xWL
STRENGTH 1: 1.25xDL + 1.75x(LL + SL)

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

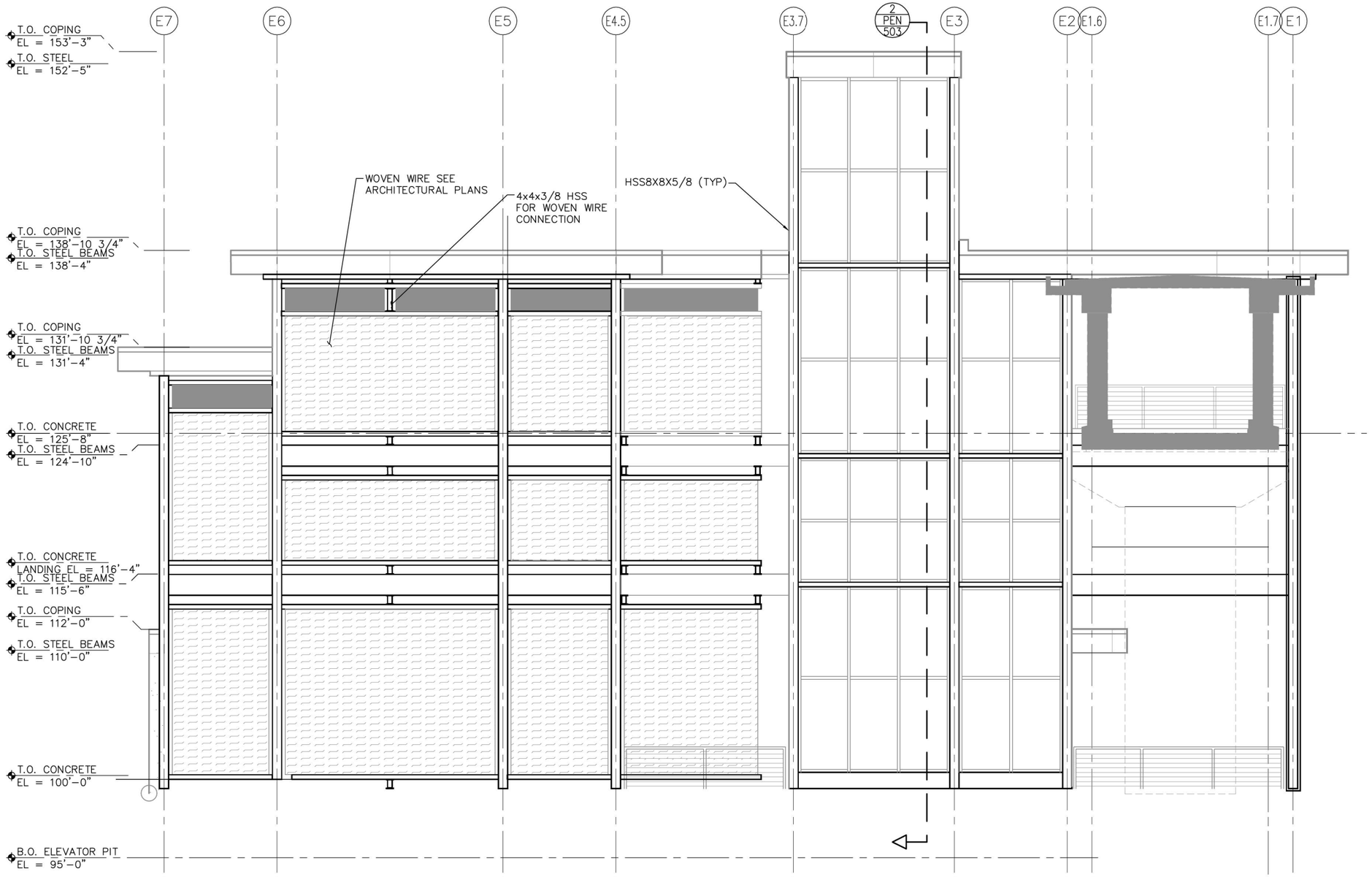
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# PEDESTRIAN BRIDGE
# GENERAL PLANS AND ELEVATION

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-PLN-415

SHEET 107 OF 273




1 VC TRACK 1 ELEVATION
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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SOUTHWEST Green Line LRT Extension

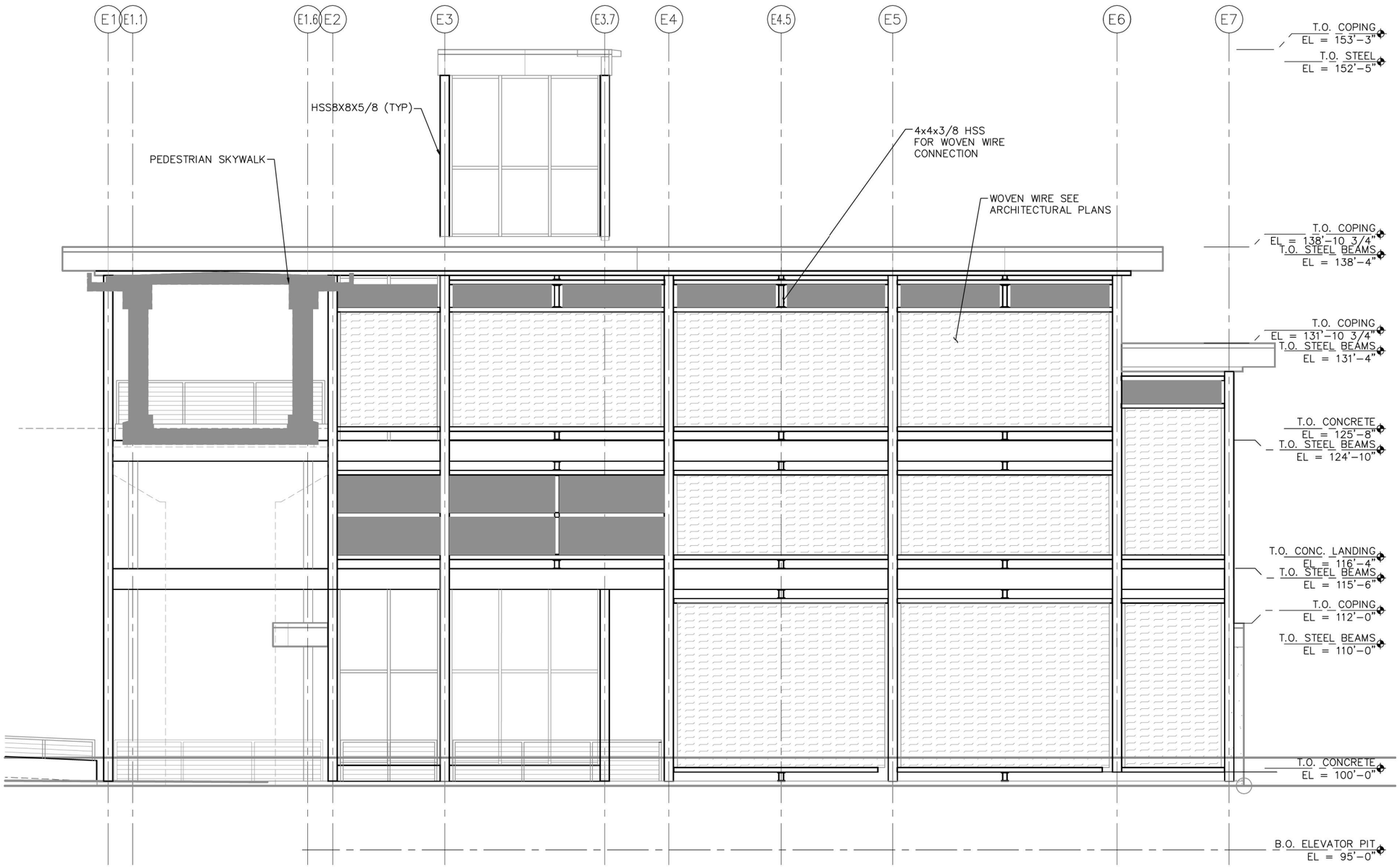
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC TRACK 1**
**ELEVATION**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-ELV-501

SHEET 108 OF 273

Sep. 21 2015 01:33 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\PEN-STATION\108 E4-PEN-STR-ELV-501.dwg By: scott.shepard




1 VC TRACK 2 ELEVATION
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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SOUTHWEST Green Line LRT Extension

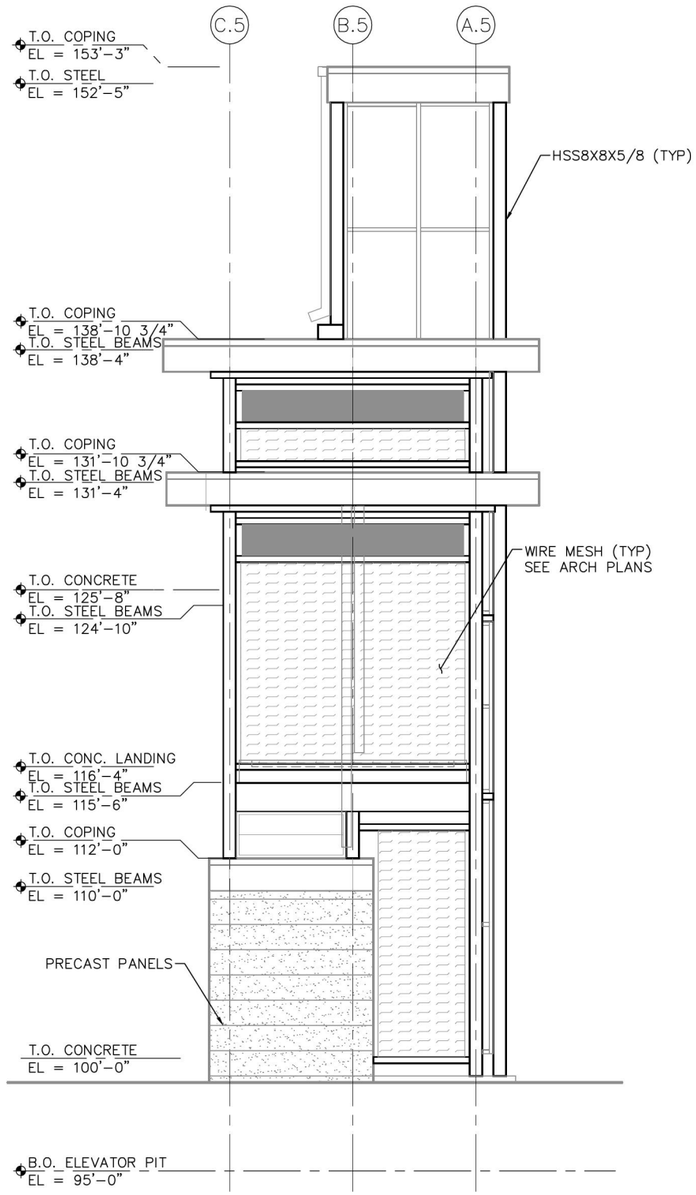
# CIVIL EAST - VOLUME 11B
# PENN STATION
# VC TRACK 2
# ELEVATION

DISCIPLINE: STRUCTURES

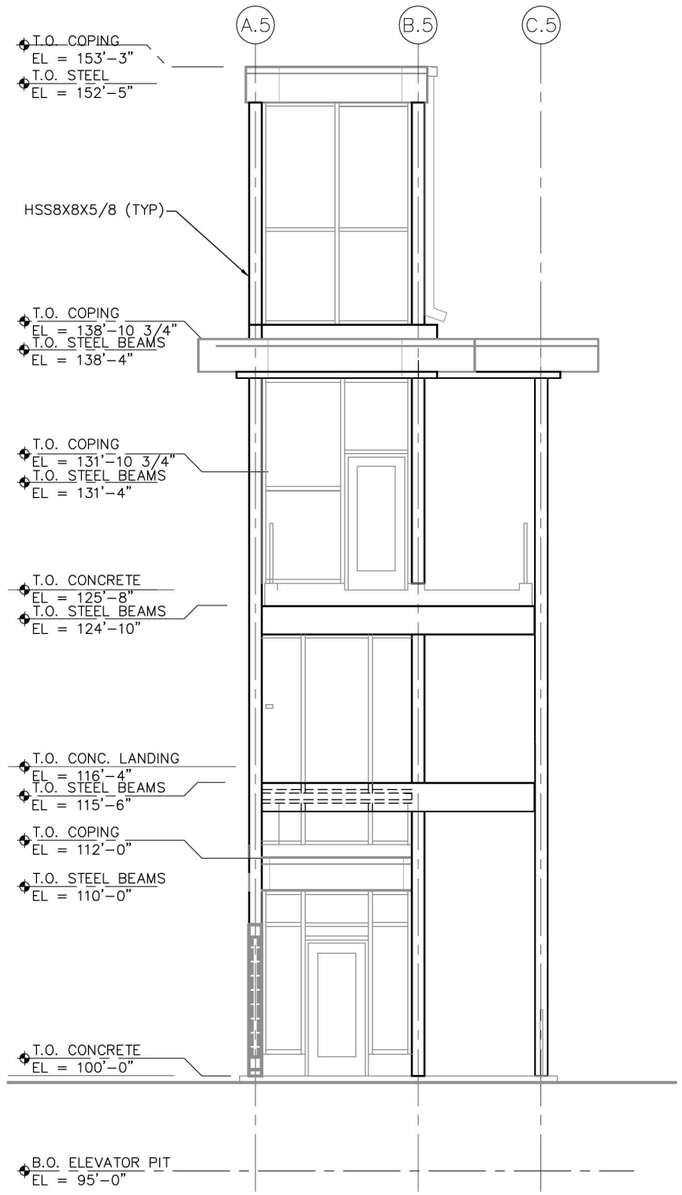
SHEET NAME: E4-PEN-STR-ELV-502

SHEET 109 OF 273

Sep. 21 2015 01:33 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\PEN-STATION\109 E4-PEN-STR-ELV-502.dwg By: scott.shepard




1 VC SIDE ELEVATION
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




2 VC SIDE ELEVATION
SCALE:1/8"=1'-0"
0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

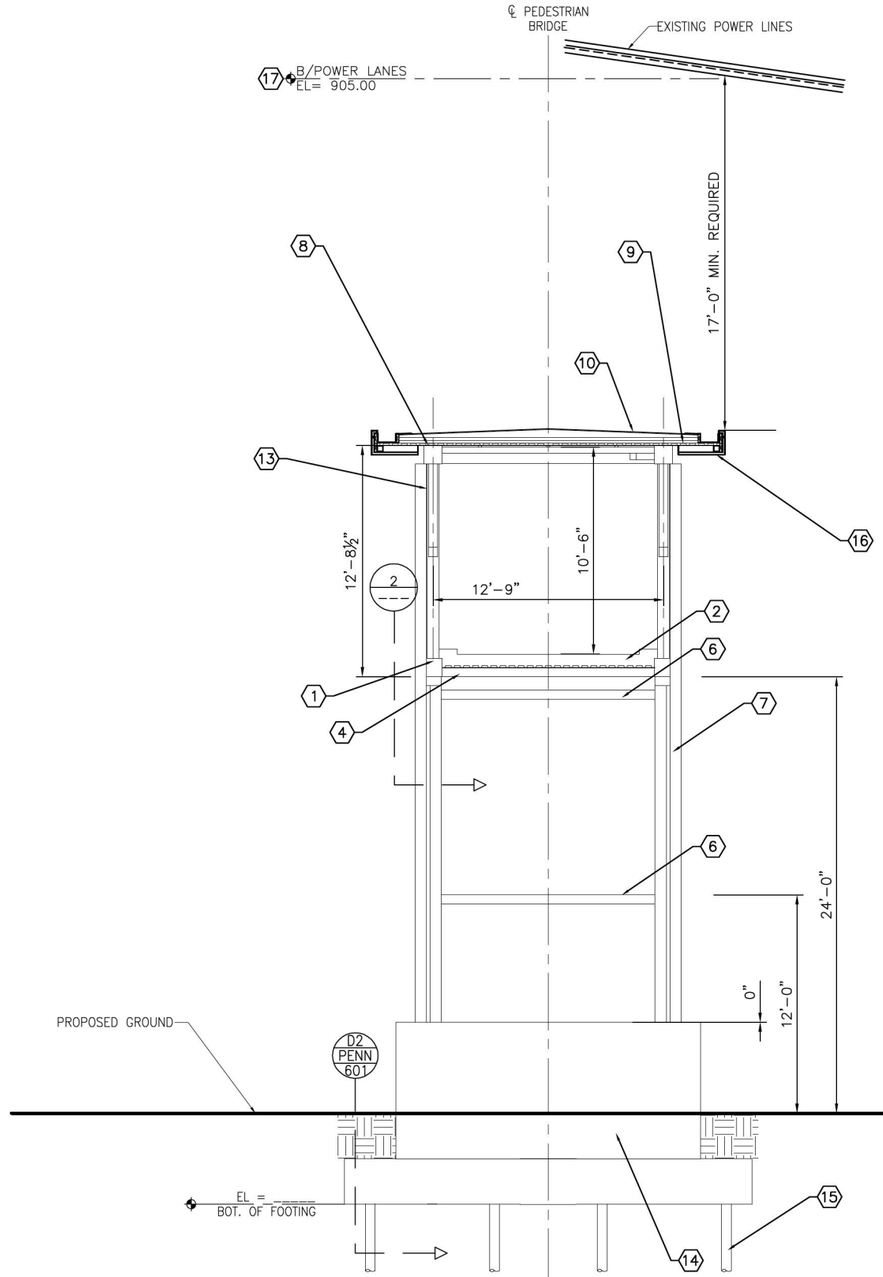
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# VC
# SECTION VIEWS

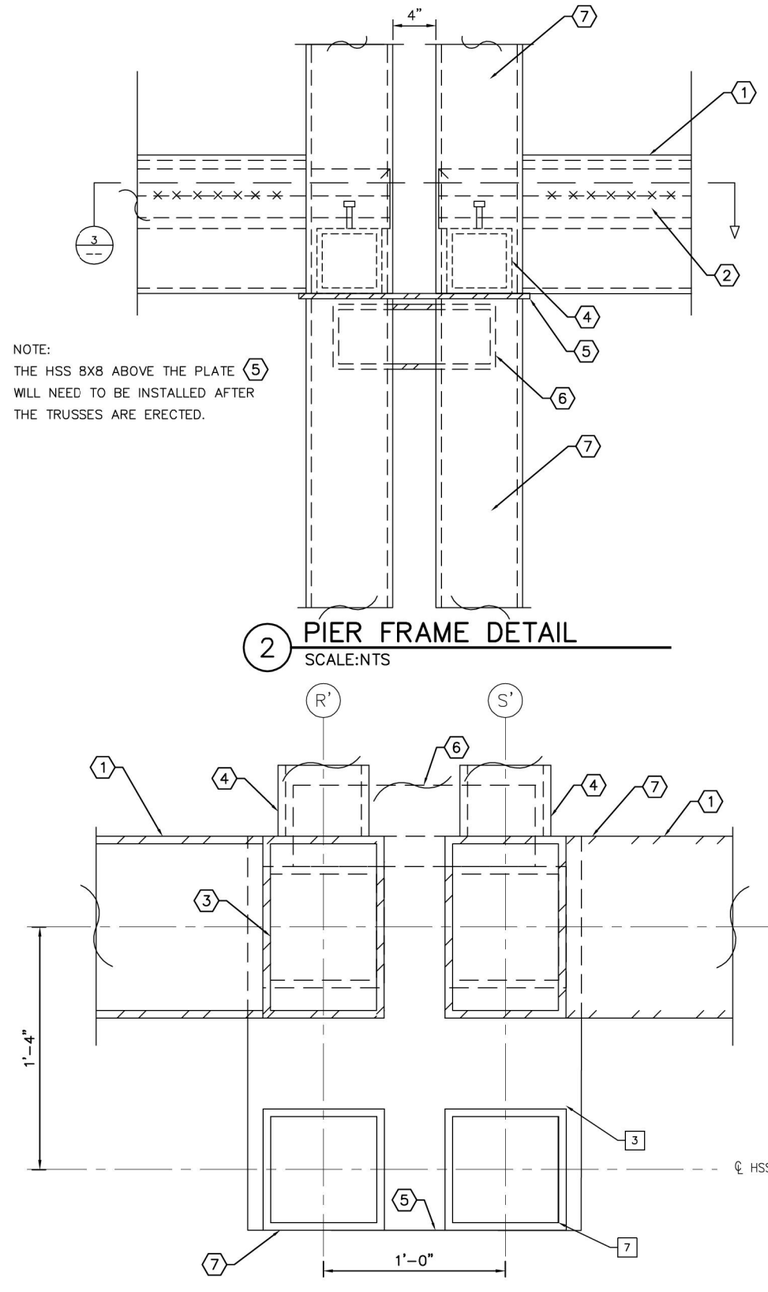
DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-ELV-503

SHEET 110 OF 273




1 TRANSVERSE SECTION
SCALE:NTS




2 PIER FRAME DETAIL
SCALE:NTS

3 PIER FRAME SECTION
SCALE:NTS

## KEY NOTES

1. HSS 12X12 TRUSS BOTTOM CHORD
2. 5" THICK CONCRETE FLOOR SLAB WITH 2"–18 GA, GALVANIZED COMPOSITE METAL DECK. REINFORCE SLAB WITH _____.
3. HSS 12X8 TRUSS END VERTICAL
4. HSS 6X6 FLOOR DECK SUPPORT BEAM (TYP)
5. PL 1" X 22" X 1'–11"
6. HSS 16X12 SUPPORT FRAME HORIZONTAL
7. HSS 8X8 SUPPORT FRAME VERTICAL
8. HSS 12X12 TRUSS TOP CHORD (TYP.)
9. 3"–18 GA. GALVANIZED ACOUSTIC METAL ROOF DECK. REINFORCE SLAB WITH _____.
10. ROOF SYSTEM, SEE ARCHITECTURAL
11. NOT USED
12. NOT USED
13. HSS 8X8 VERTICALS AND DIAGONALS (TYP.)
14. TRUSS SUPPORT FRAME PIER AND PILE CAP
15. HELICAL STEEL PILE (TYP.)
16. DRAINAGE GUTTER, SEE ARCHITECTURAL
17. MINIMUM ELEVATION PROVIDED BY XCEL ENERGY AT 55 FEET FROM TOWER.

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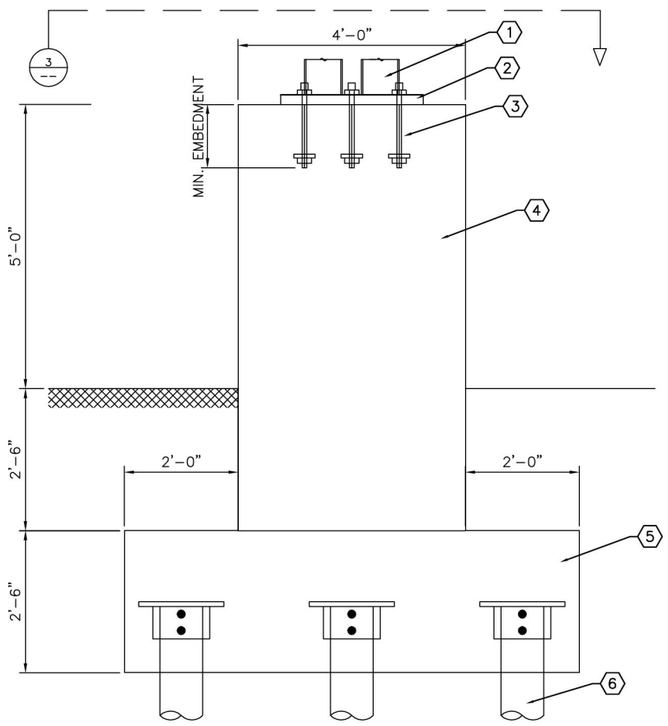
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE**
**SECTION VIEW**

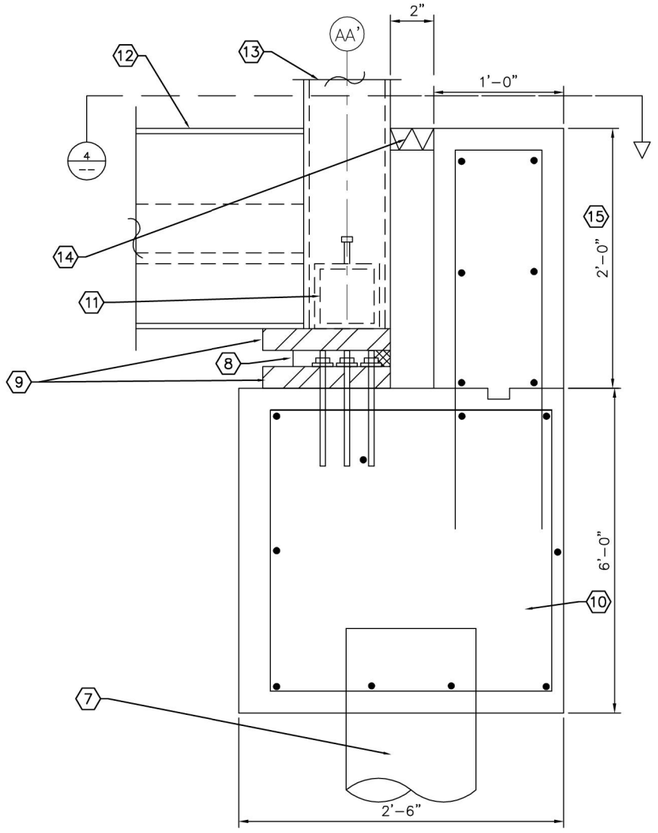
DISCIPLINE: STRUCTURES

SHEET NAME: E4-PEN-STR-ELV-504

SHEET 111 OF 273



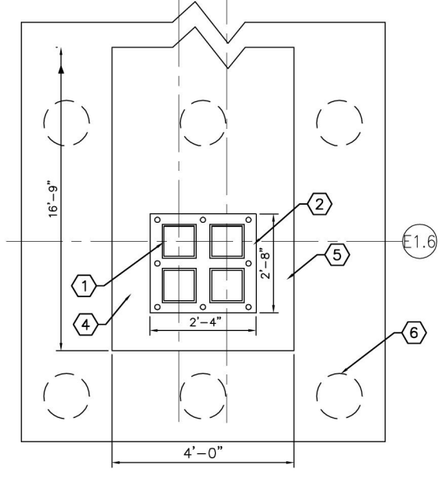

1 PIER FRAME FOUNDATION SECTION
SCALE:NTS



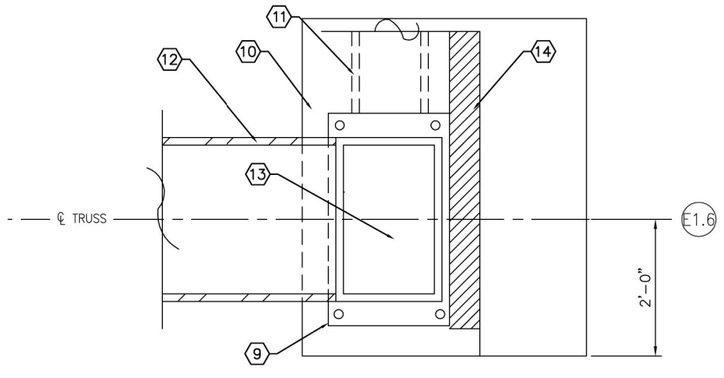

2 ABUTMENT SECTION
SCALE:NTS

## KEY NOTES

1. HSS 8X8 SUPPORT FRAME VERTICALS
2. $1-\frac{1}{2}$" X 28" X 2'-5" BASE PLATE
3. 1" ø ANCHOR BOLTS
4. CONCRETE PIER
5. CONCRETE PILE CAP
6. HELICAL STEEL PILES
7. 12" ø CIP PILES
8. STEEL REINFORCED ELASTOMERIC SLIDE BEARING PAD
9. 1" X 12" X 1'-8" STEEL BEARING PLATE
10. LOW PARAPET ABUTMENT
11. HSS 6X6 FLOOR BEAM
12. HSS 12X12 BOTTOM TRUSS BOTTOM CHORD
13. HSS 12X8 TRUSS END VERTICAL
14. EXPANSION JOINT SEAL
15. VERIFY DIMENSION WITH BRIDGE MANUFACTURER PRIOR TO CONSTRUCTION




3 PIER FRAME FOUNDATION PLAN
SCALE:NTS




4 PARTIAL ABUTMENT PLAN
SCALE:NTS

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

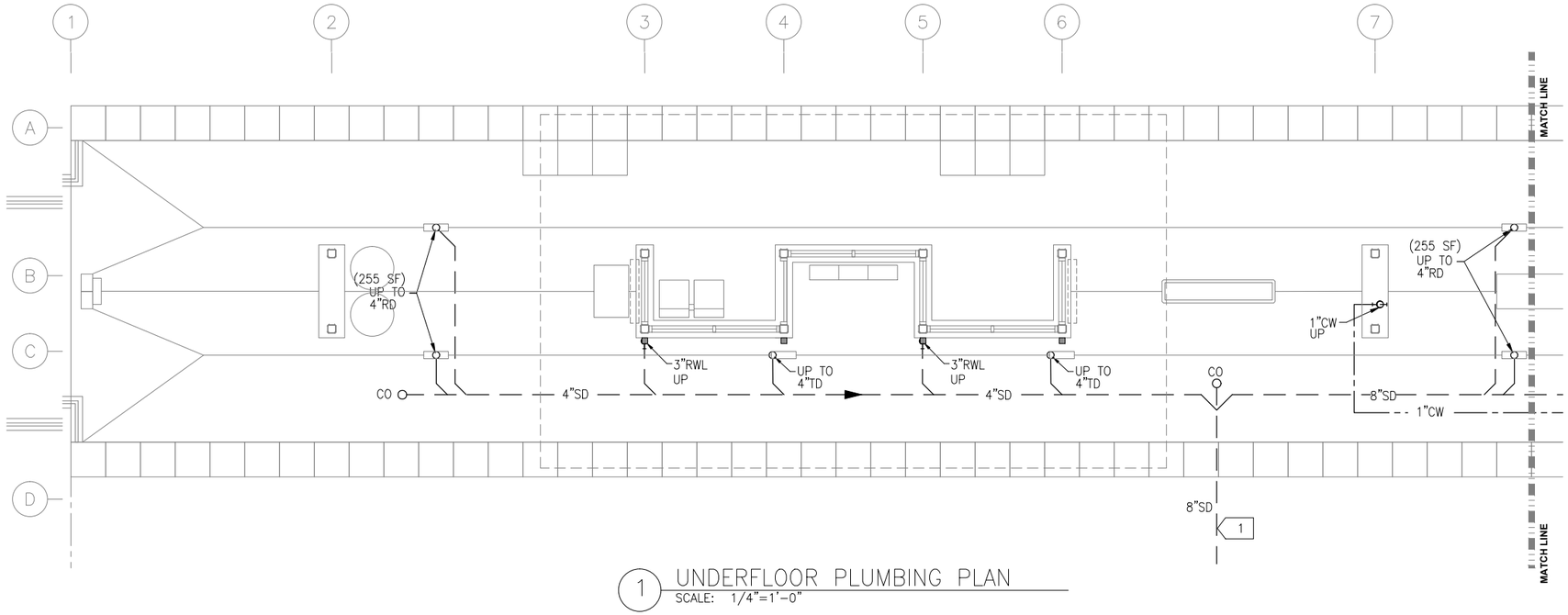
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**PEDESTRIAN BRIDGE**
**DETAILS**

DISCIPLINE: STRUCTURES

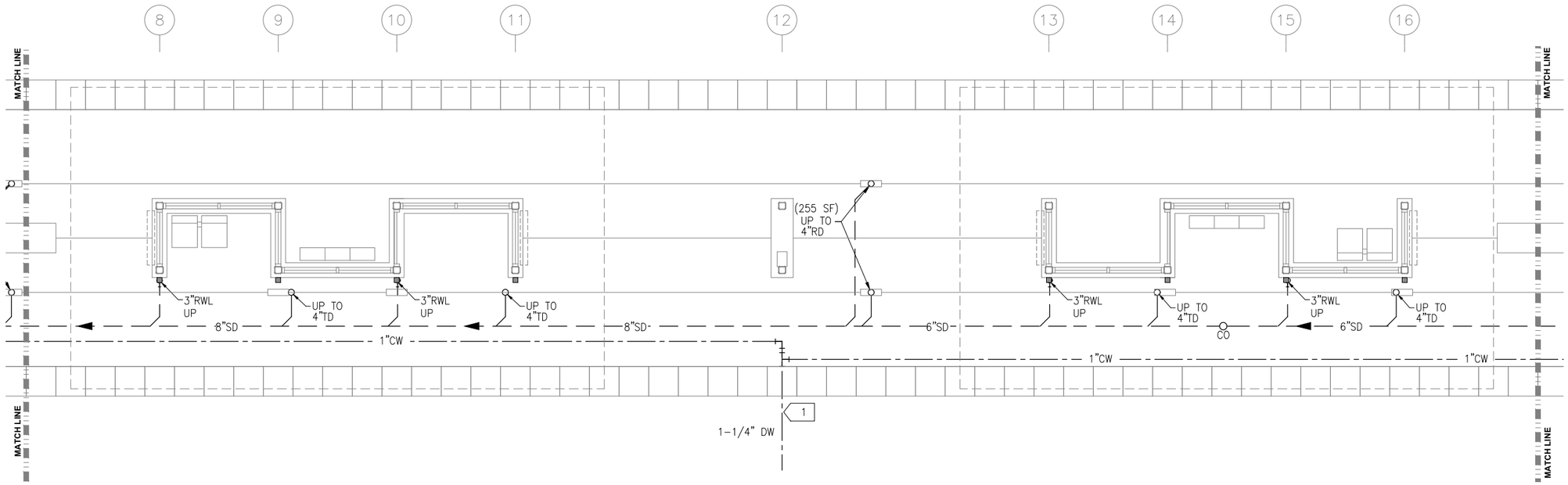
SHEET NAME: E4-PEN-STR-SCT-505

SHEET 112 OF 273

Sep. 21 2015 01:34 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\PEN-STATION\112 E4-PEN-STR-SCT-505.dwg By: scott.shepard




1 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"




2 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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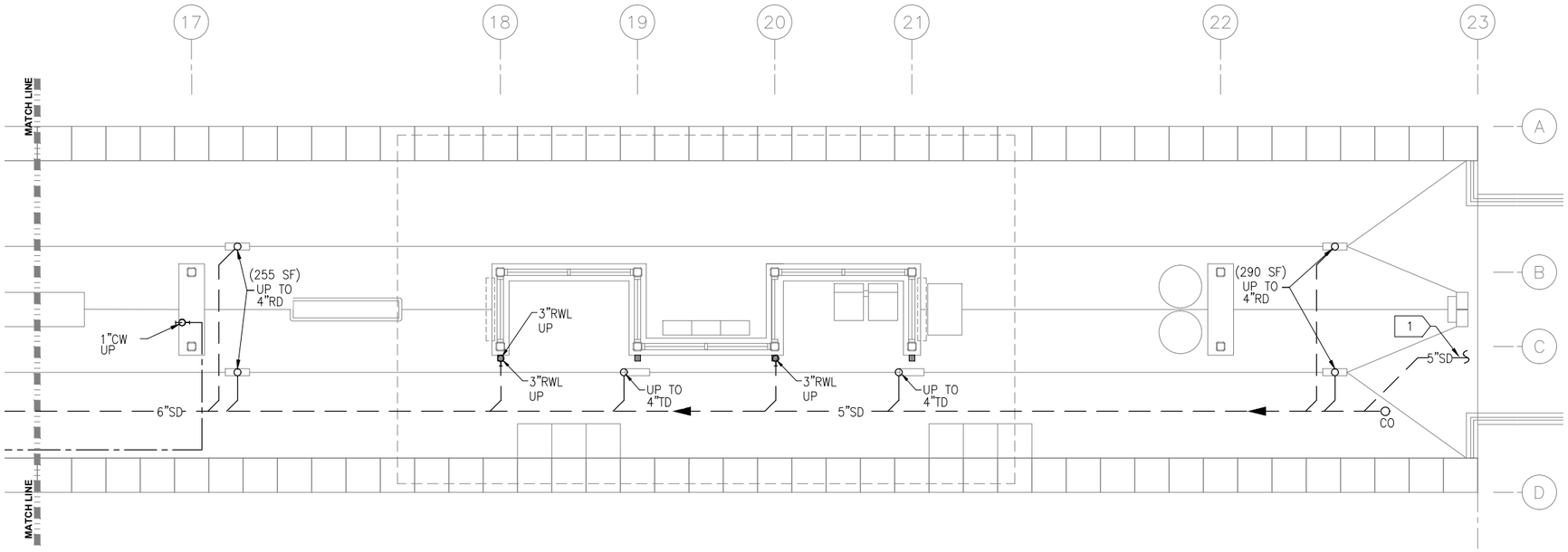
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# WEST AND MIDDLE PARTIAL
# UNDERFLOOR PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E4-PEN-PLM-PLN-100

SHEET 113 OF 273




1 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

2 CONTINUE TO VERTICAL CIRCULATION PLATFORM.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

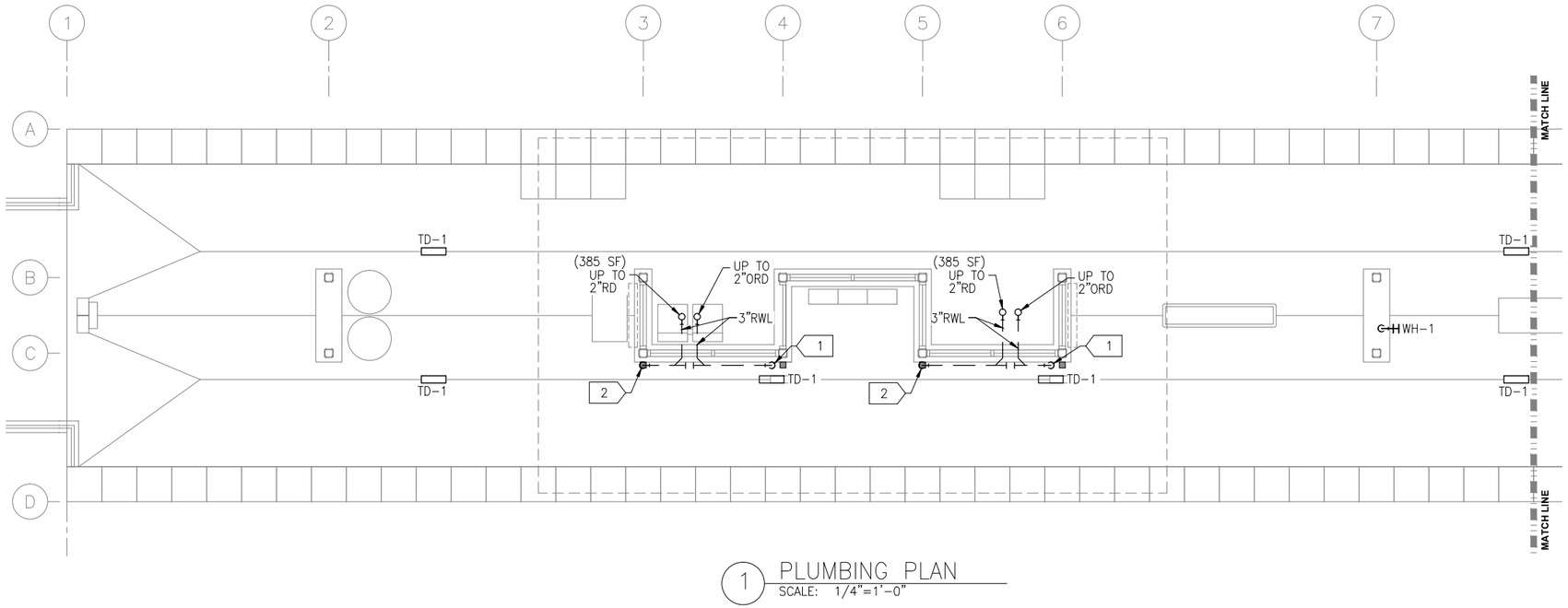
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**EAST PARTIAL UNDERFLOOR PLUMBING PLAN**

DISCIPLINE: PLUMBING

SHEET NAME: E4-PEN-PLM-PLN-101

SHEET 114 OF 273

Sep. 21 2015 02:10 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\PENN STATION\E4-PEN-PLM-PLN-101.dwg By: craig




1 PLUMBING PLAN
SCALE: 1/4"=1'-0"

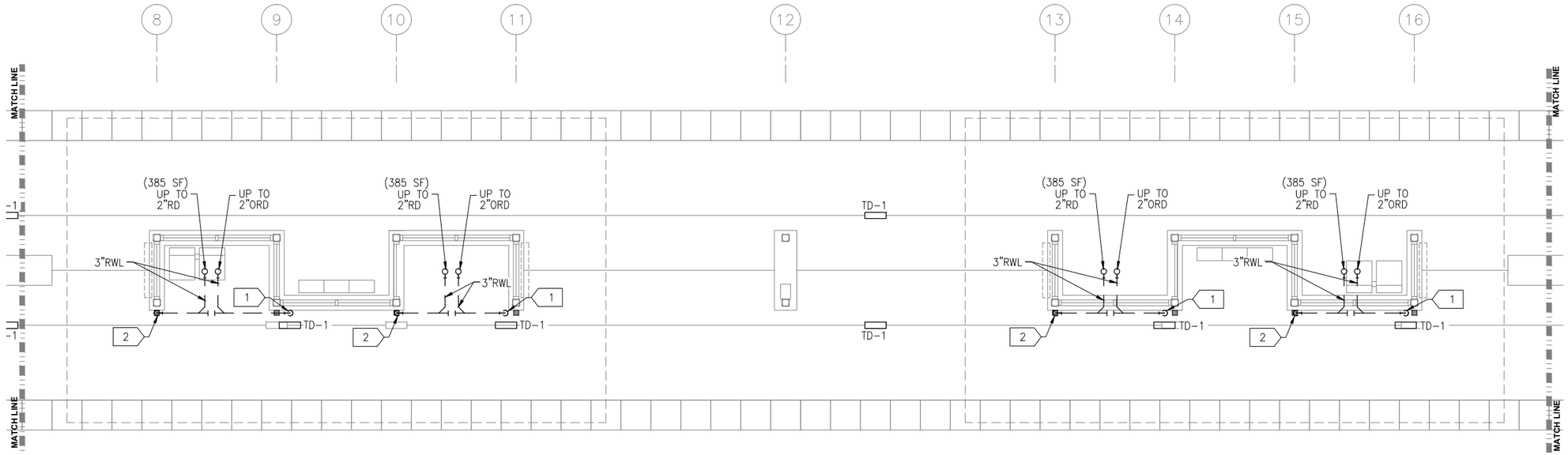
PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES

1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.




2 PLUMBING PLAN
SCALE: 1/4"=1'-0"

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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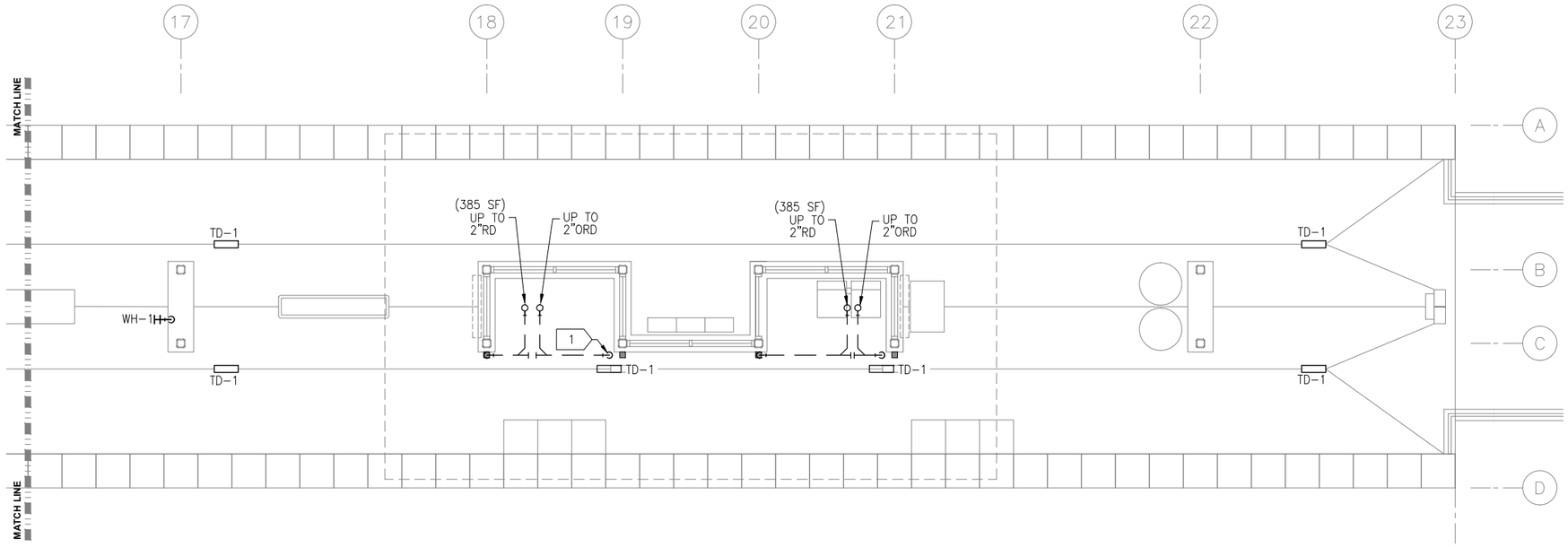
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# WEST AND MIDDLE PARTIAL PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E4-PEN-PLM-PLN-110

SHEET 115 OF 273

Sep. 21 2015 02:10 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\PENN STATION\E4-PEN-PLM-PLN-110.dwg By: craig




1 PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES

1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

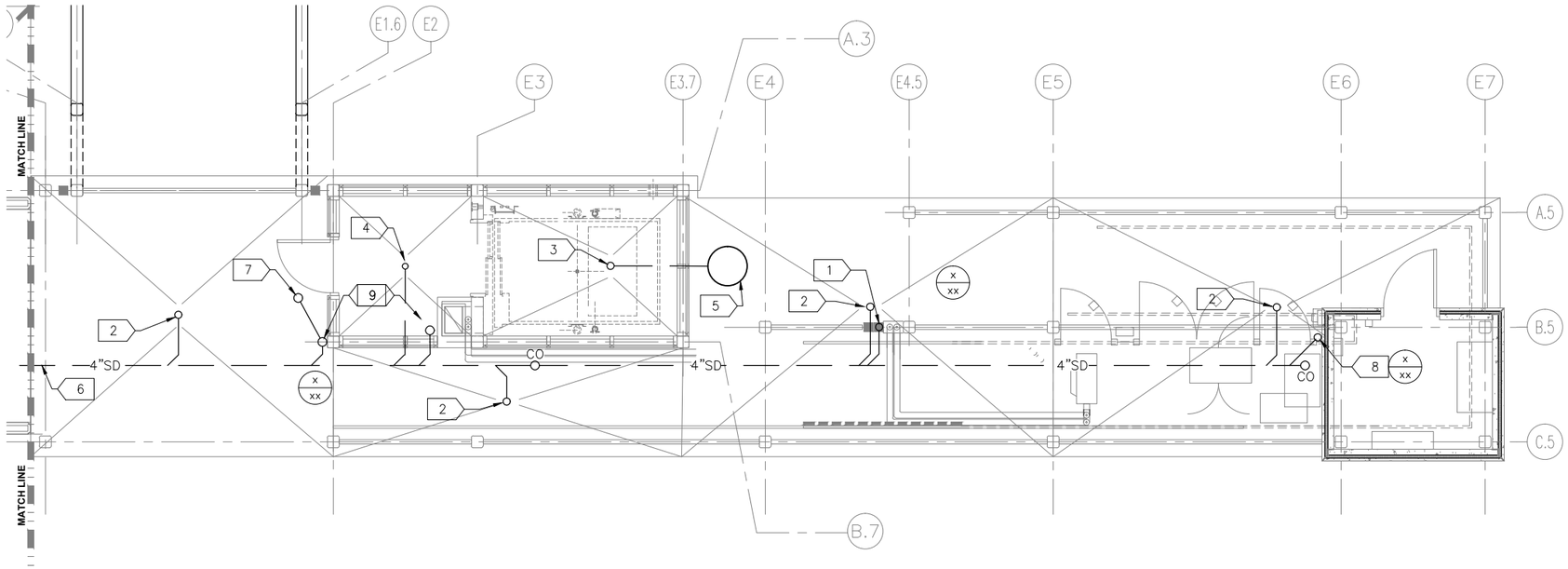
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**EAST PARTIAL PLUMBING PLAN**

DISCIPLINE: PLUMBING

SHEET NAME: E4-PEN-PLM-PLN-111

SHEET 116 OF 273

Sep. 21 2015 02:09 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\PENN STATION\E4-PEN-PLM-PLN-111.dwg By: craig




1 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1. UP TO 4" RWL WITH BOOT CONNECTION.
2. UP TO 4" TRENCH DRAIN OUTLET.
3. UP TO 4" FLOOR DRAIN IN ELEVATOR HOISTWAY. ELEVATOR DRAIN ROUTES TO SUMP INLET.
4. UP TO 4" TRENCH DRAIN IN ELEVATOR LOBBY.
5. ELEVATOR SUMP WITH 4-INCH INLET FROM ELEVATOR PIT.
6. STORM WATER DRAINAGE CONTINUES TO PLATFORM DRAWINGS.
7. UP TO 3" CANOPY DRAIN.
8. UP TO 4" RWL WITH BOOT CONNECTION.
9. 4" RWL UP.



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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

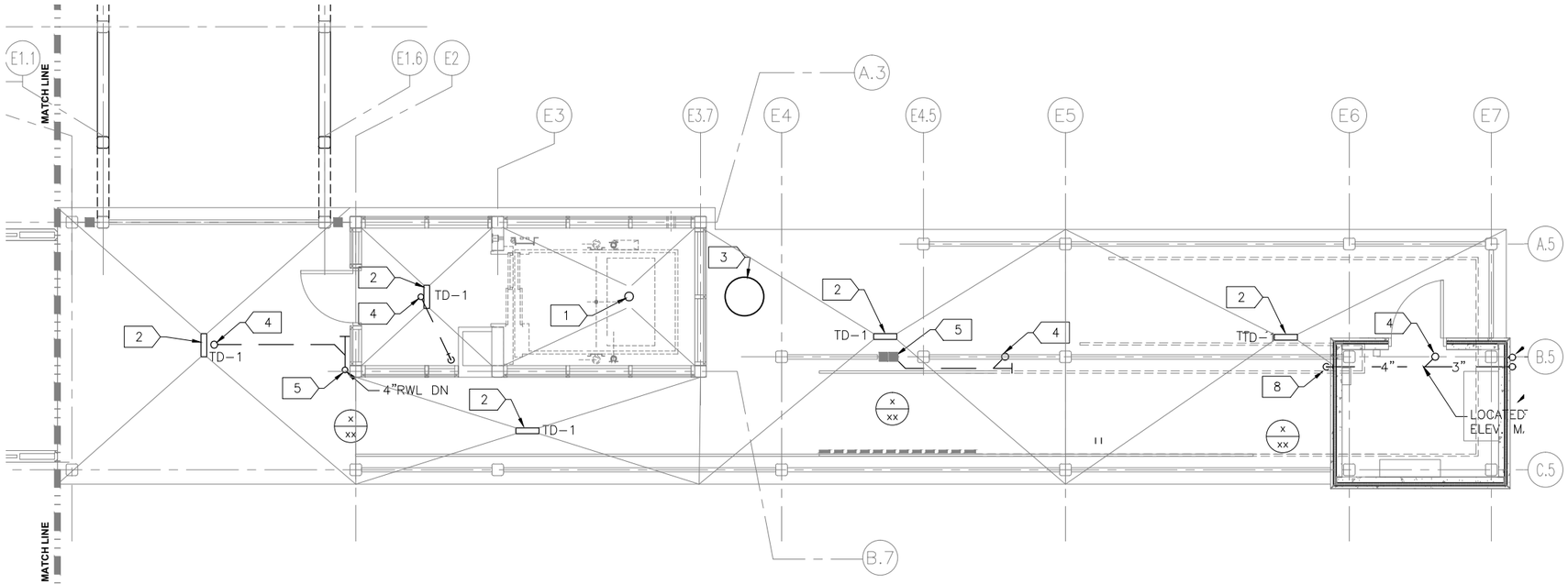
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC UNDERFLOOR PLATFORM LEVEL PLUMBING PLAN**

DISCIPLINE: PLUMBING

SHEET NAME: E4-PEN-PLM-PLN-130

SHEET 117 OF 273




1 VC PLATFORM LEVEL PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1. 4-INCH ELEVATOR HOISTWAY DRAIN TO UNDERFLOOR SUMP. DRAIN SHALL HAVE NO TRAP.
2. STORM WATER TRENCH DRAIN TD-1.
3. ELEVATOR HOISTWAY SUMP TANK LID.

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METROPOLITAN COUNCIL

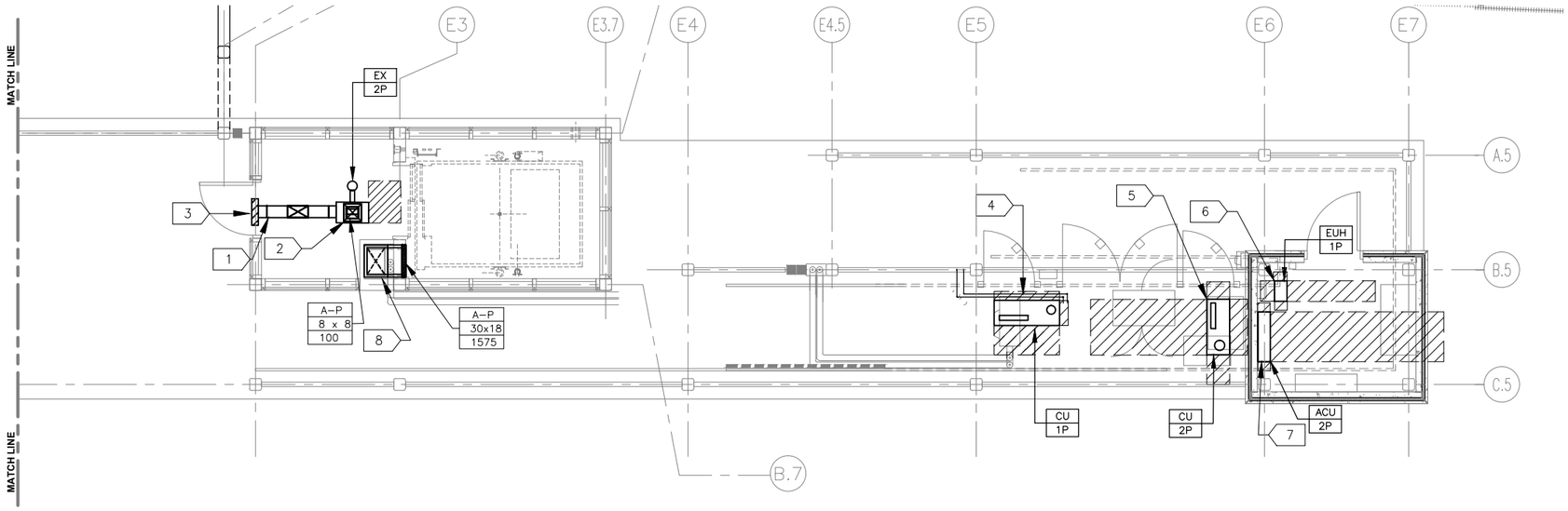
SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
PENN STATION
VC PLATFORM LEVEL PLUMBING PLAN

DISCIPLINE: PLUMBING

SHEET NAME: E4-PEN-PLM-PLN-131

SHEET 118 OF 273




1 PLATFORM LEVEL HVAC PLAN
SCALE: 1/4"=1'–0"

HVAC GENERAL SHEET NOTES

A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.
B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY AIR OUTLETS AND WHERE INDICATED ON BRANCH DUCTWORK.
C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL MOTORIZED DAMPERS AND FIRE DAMPERS.
D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK TO MECHANICAL EQUIPMENT CONNECTIONS.
E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL EQUIPMENT.
G. RUN DUCTWORK AS HIGH AS POSSIBLE.
H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED FULL LENGTH.
I. PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME DAMPERS AND FAN ACCESS.
J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

HVAC KEY NOTES:

1. LOUVER PLENUM TO 8X14 EXHAUST DUCT CONNECTED TO EXHAUST FAN OUTLET.
2. 12X12 TRANSITION FROM FAN INLET TO 8X8 DUCT DOWN TO 8X8 EXHAUST GRILLE.
3. LOUVER–SEE ARCH SPECIFICATION AND DRAWINGS FOR INFORMATION
4. CONDENSING UNIT MOUNTED ON 4–INCH EQUIPMENT PAD.
5. CONDENSING UNIT MOUNTED FROM STAIR AND WALL. 6'–6" CLEARANCE (MIN) ABOVE TRANSFORMER.
6. UNIT HEATER HUNG FROM DECK, 2–INCH CLEARANCE (MIN) FROM CEILING, 7' CLEARANCE (MIN) ABOVE FLOOR, 9–INCH CLEARANCE (MIN) IN FRONT OF WALL.
7. ACU WALL–MOUNTED, 2–INCH CLEARANCE (MIN) BELOW CEILING AND 66–INCH CLEARANCE (MIN) ABOVE FINISHED FLOOR.
8. 18X12 RETURN AIR DUCT UP TO ACU IN 2ND FLOOR PLENUM.

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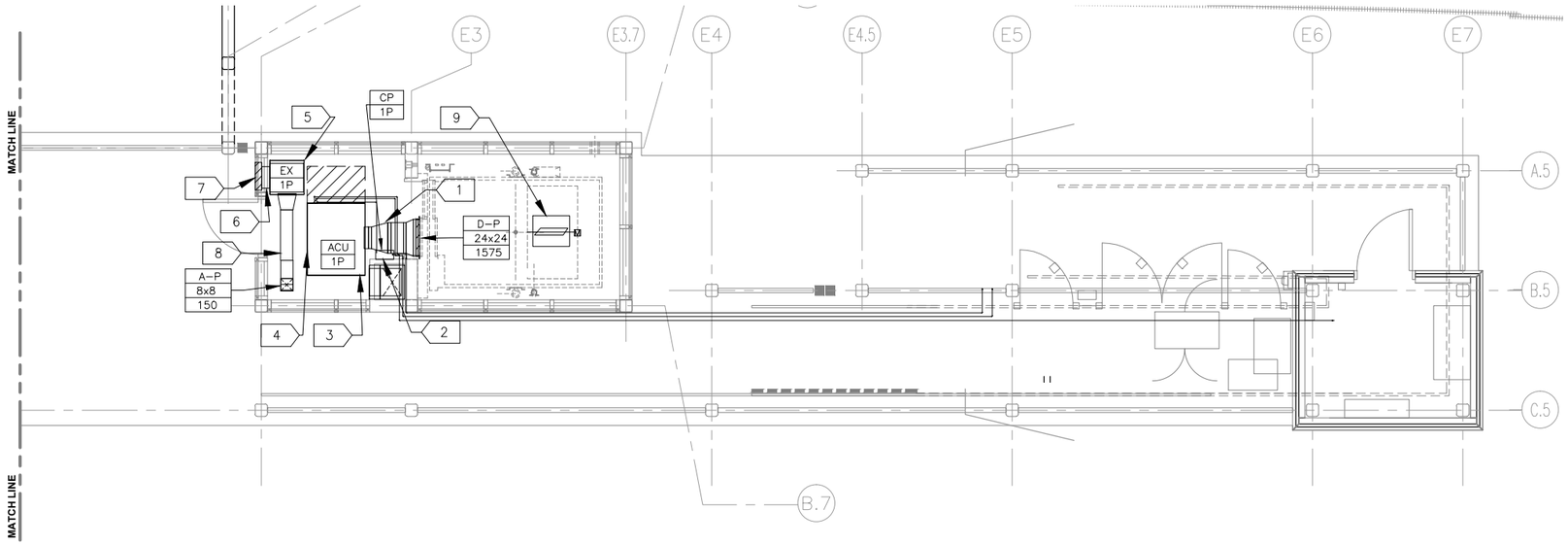
60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
PENN STATION
VC PLATFORM LEVEL HVAC PLAN

DISCIPLINE: MECHANICAL
SHEET NAME: E4-PEN-MEC-PLN-130

SHEET 119 OF 273




1 BRIDGE HVAC PLAN
SCALE: 1/4"=1'-0"

HVAC GENERAL SHEET NOTES

A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.
B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY AIR OUTLETS AND WHERE INDICATED ON BRANCH DUCTWORK.
C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL MOTORIZED DAMPERS AND FIRE DAMPERS.
D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK TO MECHANICAL EQUIPMENT CONNECTIONS.
E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL EQUIPMENT.
G. RUN DUCTWORK AS HIGH AS POSSIBLE.
H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED FULL LENGTH.
I. PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME DAMPERS AND FAN ACCESS.
J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

HVAC KEY NOTES:

1. ACU SUPPLY OUTLET TO TRANSITION TO 24X24 TO REGISTER.
2. CONDENSATE PUMP MOUNTED ON WALL.
3. ACU MOUNTED TO DECK. PROVIDE VIBRATION ISOLATION
4. RETURN AIR INLET DRAWING FROM PLENUM.
5. EXHAUST FAN HUNG FROM DECK. PROVIDE VIBRATION ISOLATION.
6. 14X8 EXHAUST AIR DUCT TO LOUVER PLENUM.
7. LOUVER—SEE ARCH SPECIFICATION AND DRAWINGS FOR INFORMATION.
8. 8X8 EXHAUST AIR DUCT FROM FROM EXHAUST GRILLE, TRANSITIONS TO A 12X12 DUCT TO CONNECT TO EXHAUST FAN INLENT.
9. 24X20 ROOF OPENING TO MOTORIZED DAMPER FOR FIRE SERVICE SMOKE EVACUATION. KEY OPERATED SWITCH AT LEVEL __. OPENING IS LOCATED AT THE TOP OF HOISTWAY AND CONNECTS TO A GRAVITY RELIEF VENTILATOR MOUNTED ON THE ROOF.



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METROPOLITAN COUNCIL

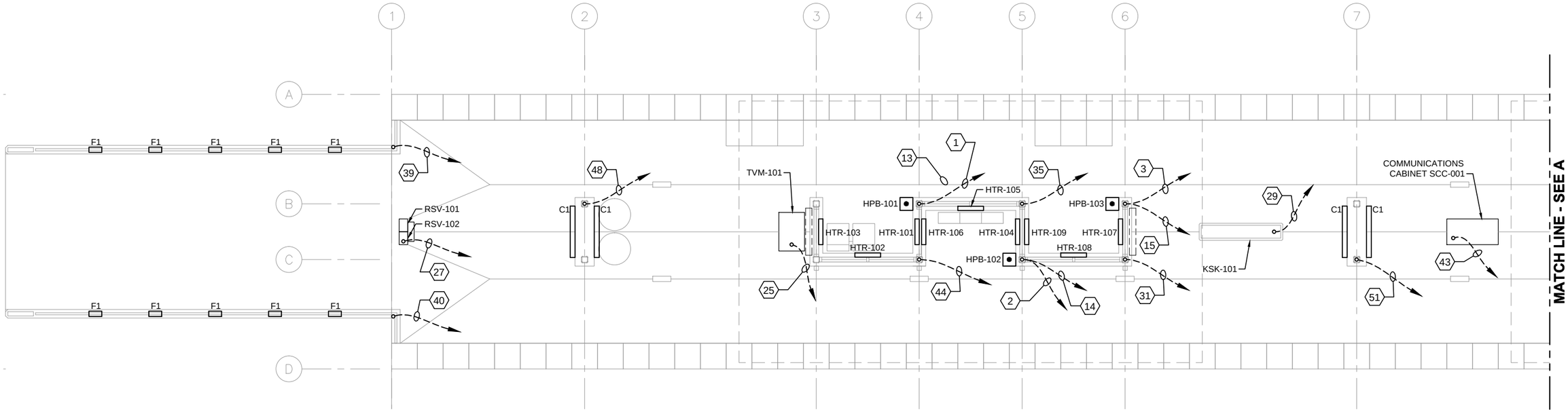
SOUTHWEST Green Line LRT Extension

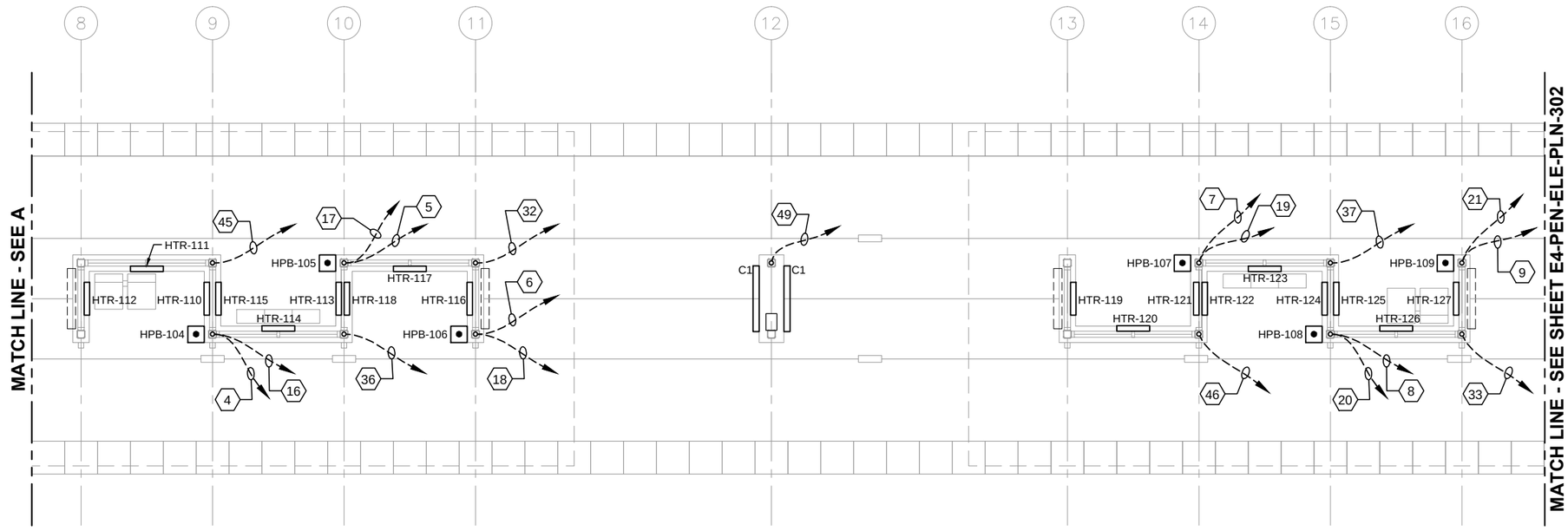
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**VC BRIDGE LEVEL HVAC PLAN**

DISCIPLINE: MECHANICAL

SHEET NAME: E4-PEN-MEC-PLN-131

SHEET 120 OF 273




GENERAL NOTES:

1. ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
2. AT CONDUIT STUB-UPS TRANSITION TO 1/2" LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

## 1 PLATFORM PLAN
SCALE: 1/8"=1'-0"

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METROPOLITAN COUNCIL
SOUTHWEST
Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# ELECTRICAL
# UNDERSLAB CONDUIT PLAN (1 OF 2)

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-301

SHEET 121 OF 273

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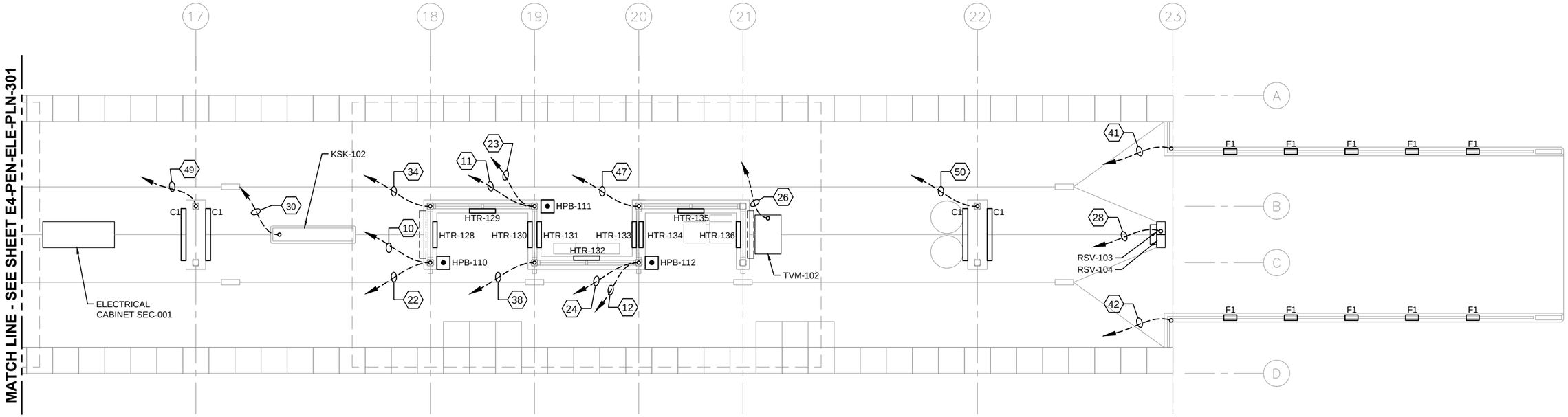


## 1 PLATFORM PLAN

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

GENERAL NOTES:

1. ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
2. AT CONDUIT STUB-UPS TRANSITION TO 1/2" LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**ELECTRICAL**
**UNDERSLAB CONDUIT PLAN (2 OF 2)**

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-PEN-ELE-PLN-302

SHEET 122 OF 273

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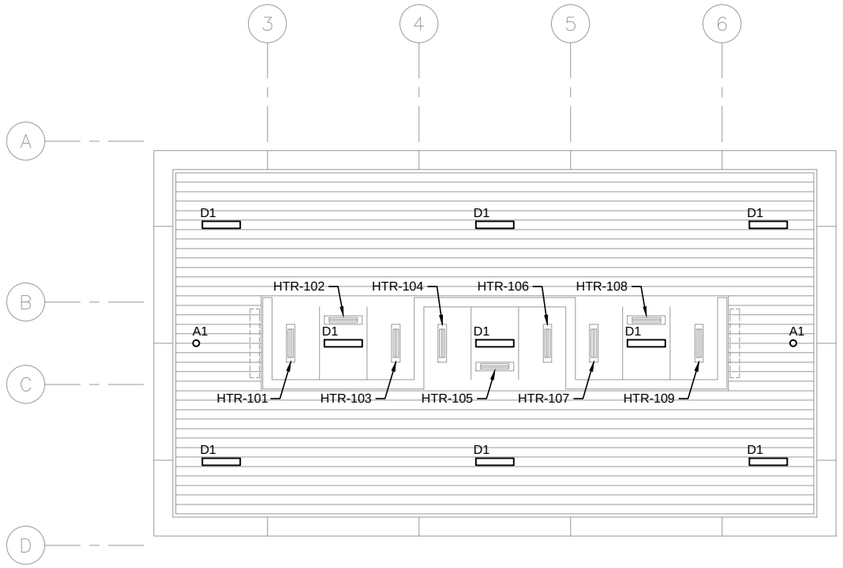
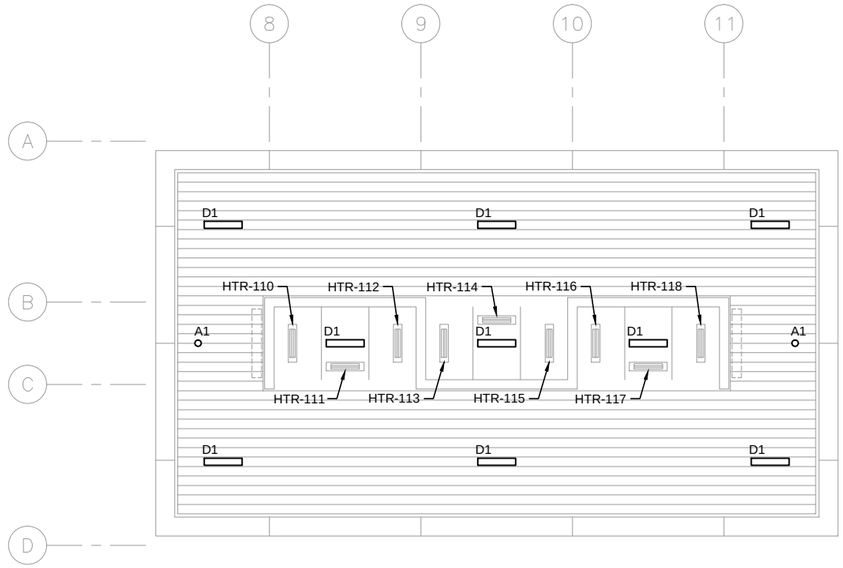
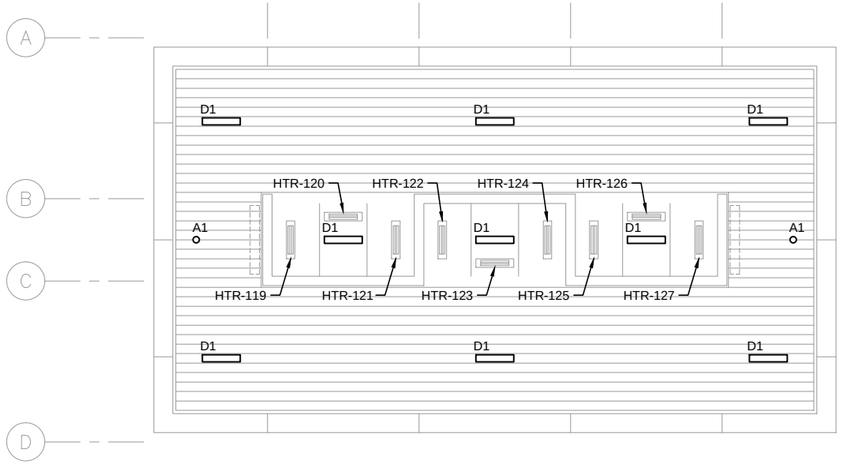


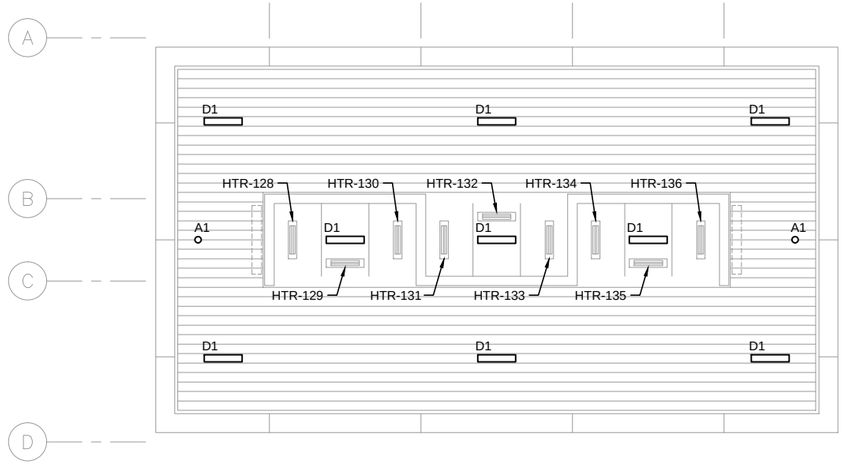

1 CANOPY PLAN – WEST END
SCALE: 1/8"=1'–0"




2 CANOPY PLAN – WEST MIDDLE
SCALE: 1/8"=1'–0"




3 CANOPY PLAN – EAST MIDDLE
SCALE: 1/8"=1'–0"



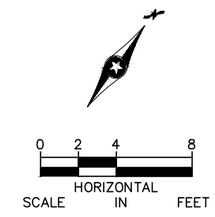

4 CANOPY PLAN – EAST END
SCALE: 1/8"=1'–0"

GENERAL NOTES:

1. PROVIDE HEAT TRACE IN GUTTERS, DOWN SPOUTS AND RAIN CONDUCTORS.

KEYNOTES:

1.

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METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOULUME 11B**
**PENN STATION**
**ELECTRICAL**
**CANOPY PLAN**

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-303

SHEET 123 OF 273

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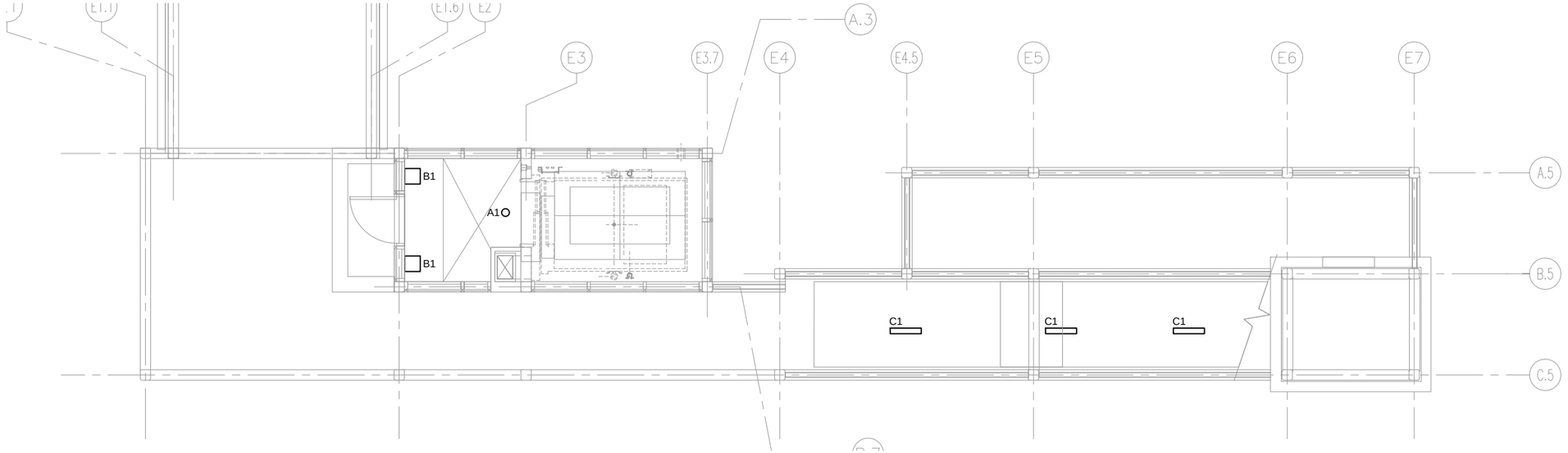
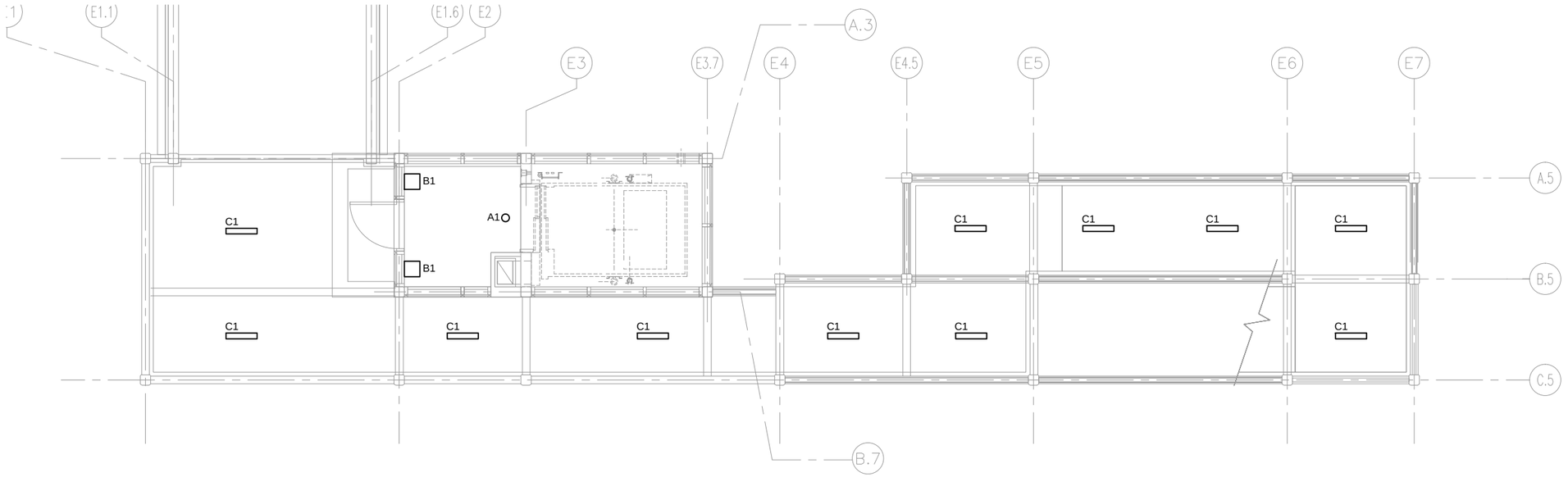



1 ELECTRICAL LIGHTING PLAN PLATFORM LEVEL
SCALE: 1/8"=1'-0"




2 ELECTRICAL LIGHTING PLAN INTERMEDIATE LEVEL
SCALE: 1/8"=1'-0"

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METROPOLITAN COUNCIL
SOUTHWEST
Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# ELECTRICAL LIGHTING PLAN
# VC PLATFORM LEVEL

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-304

SHEET 124 OF 273

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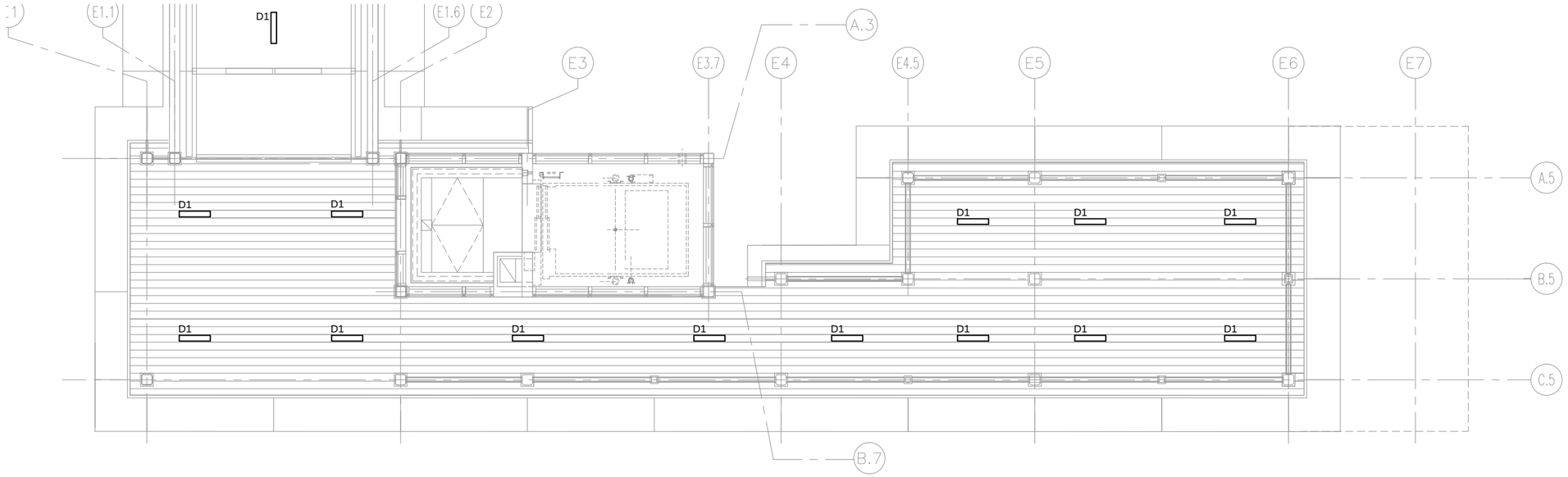
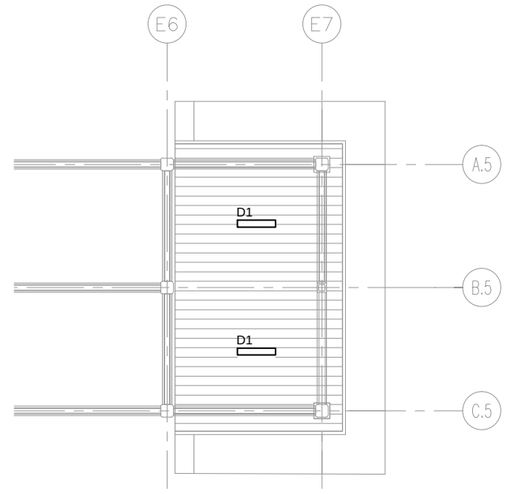



1 ELECTRICAL LIGHTING PLAN BRIDGE LEVEL
SCALE: 1/8"=1'-0"




2 ELECTRICAL LIGHTING PLAN INTERMEDIATE LEVEL
SCALE: 1/8"=1'-0"

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SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**ELECTRICAL LIGHTING PLAN**
**VC BRIDGE LEVEL**

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-305

SHEET 125 OF 273

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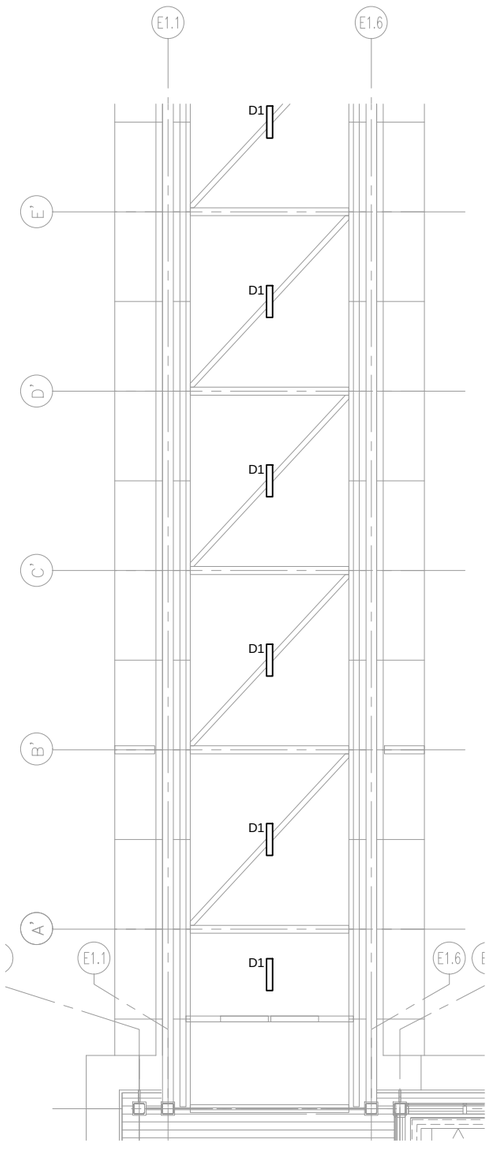
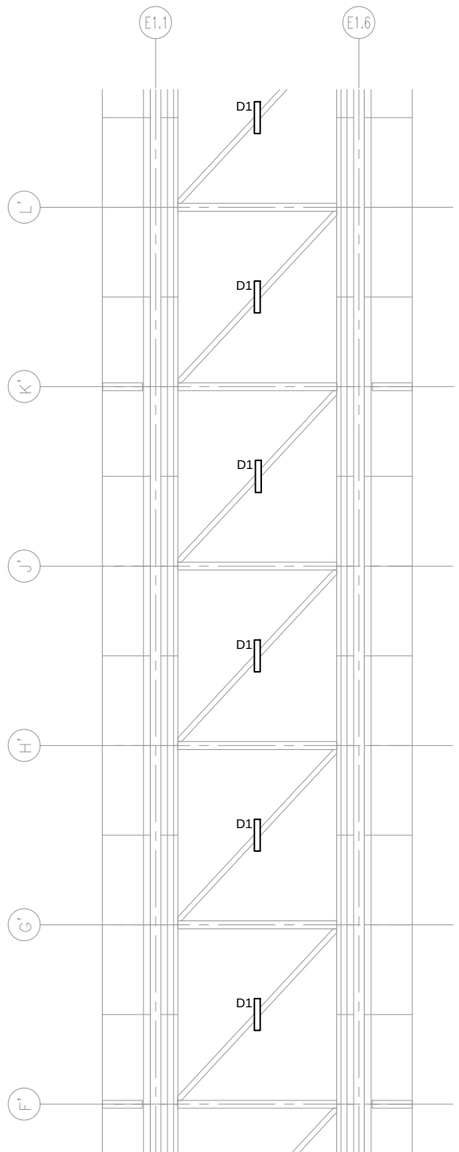
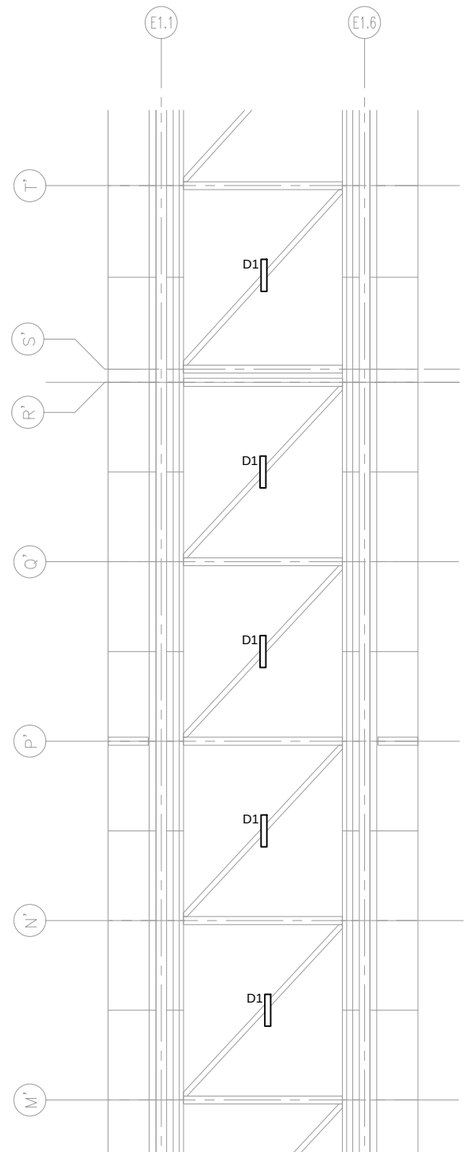



1 ELECTRICAL LIGHTING PLAN
PARTIAL BRIDGE LEVEL
SCALE: 1/8"=1'-0"




2 ELECTRICAL LIGHTING PLAN
PARTIAL BRIDGE LEVEL
SCALE: 1/8"=1'-0"




3 ELECTRICAL LIGHTING PLAN
PARTIAL BRIDGE LEVEL
SCALE: 1/8"=1'-0"

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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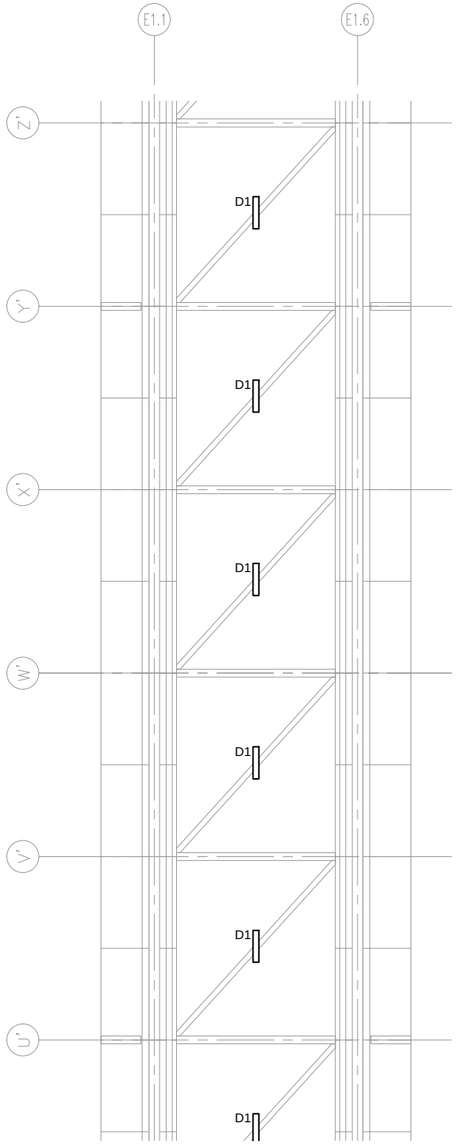
METROPOLITAN COUNCIL
SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**ELECTRICAL LIGHTING PLAN**
**PED WALKWAY (1 OF 2)**

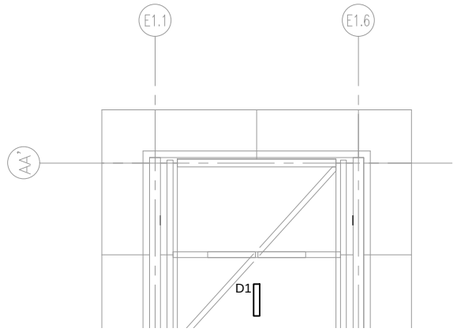
DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-306

SHEET 126 OF 273

Sep, 25 2015 09:57 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-PLN-306.dwg By: FergTK




PARTIAL BRIDGE LEVEL
ELECTRICAL LIGHTING PLAN
1 SCALE: 1/8"=1'-0"




PARTIAL BRIDGE LEVEL
ELECTRICAL LIGHTING PLAN
2 SCALE: 1/8"=1'-0"

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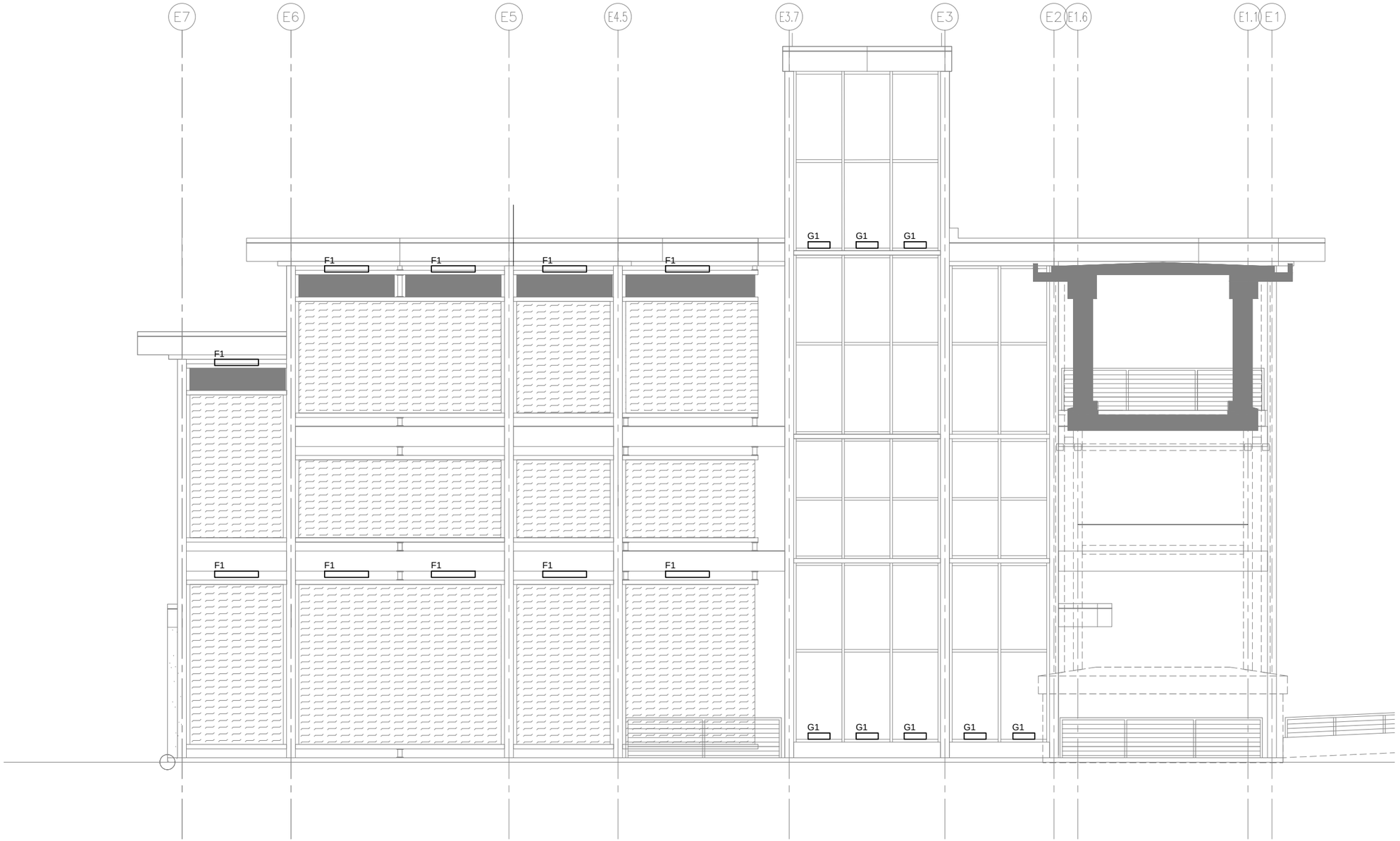
METROPOLITAN COUNCIL
SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOULUME 11B**
**PENN STATION**
**ELECTRICAL LIGHTING PLAN**
**PED WALKWAY (2 OF 2)**

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-307

SHEET 127 OF 273

Sep. 25 2015 09:58 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-PLN-307.dwg By: FergTK




1 VC TRACK 1 ELEVATION
SCALE:1/8"=1'-0"

GENERAL NOTES:

1.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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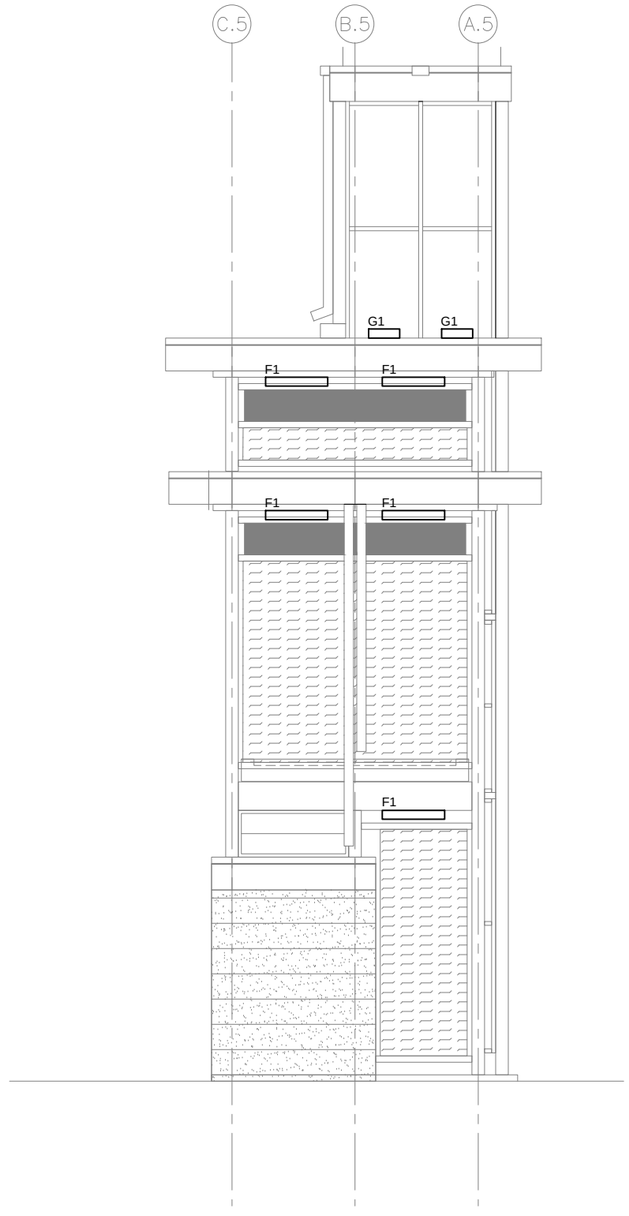
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**ELECTRICAL**
**VC TRACK 1 ELEVATION**

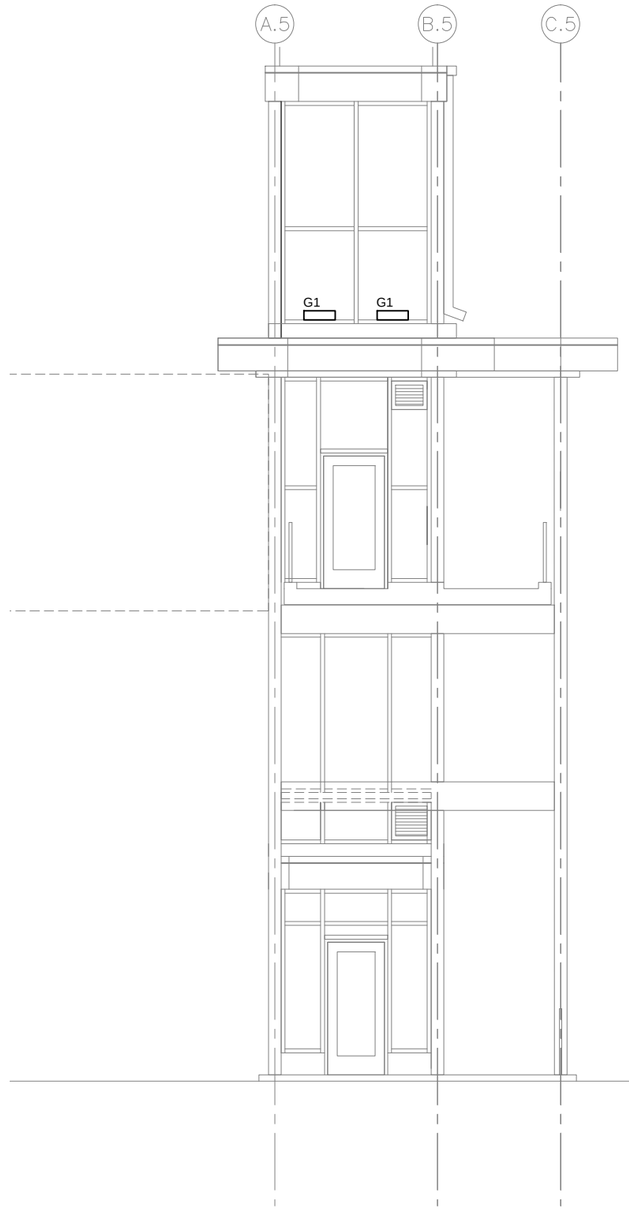
DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-ELV-320

SHEET 128 OF 273

Sep. 25 2015 09:58 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-ELV-320.dwg By: FergTK




1 VC SIDE ELEVATIONS
SCALE:1/8"=1'-0"




2 VC SIDE ELEVATIONS
SCALE:1/8"=1'-0"

GENERAL NOTES:

1.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

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SOUTHWEST Green Line LRT Extension

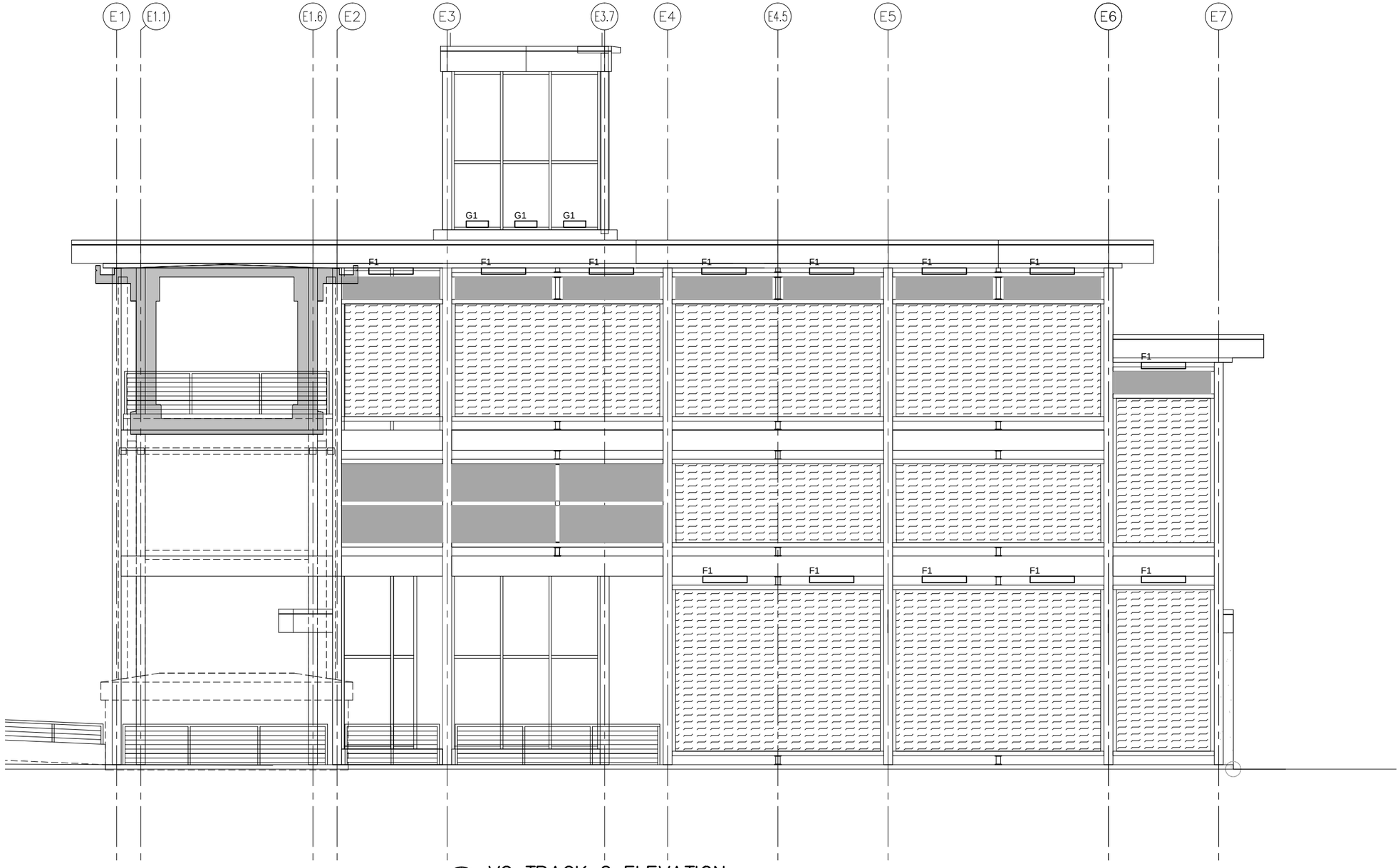
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**ELECTRICAL**
**VC SIDE ELEVATIONS**

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-PEN-ELE-ELV-321

SHEET 129 OF 273

Sep. 25 2015 09:59 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-ELV-321.dwg By: FergTK




1 VC TRACK 2 ELEVATION
SCALE:1/8"=1'-0"

GENERAL NOTES:

1.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

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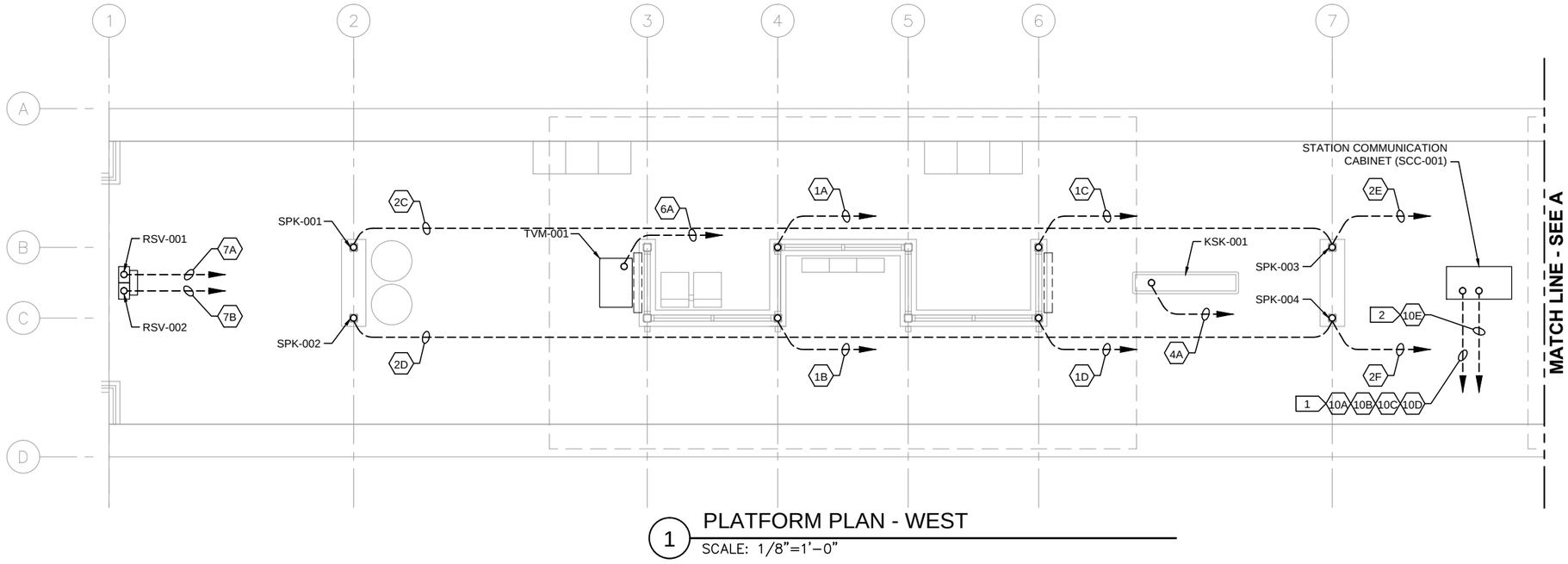
CIVIL EAST - VOLUME 11B
PENN STATION
ELECTRICAL
VC TRACK 2 ELEVATION

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-ELV-326

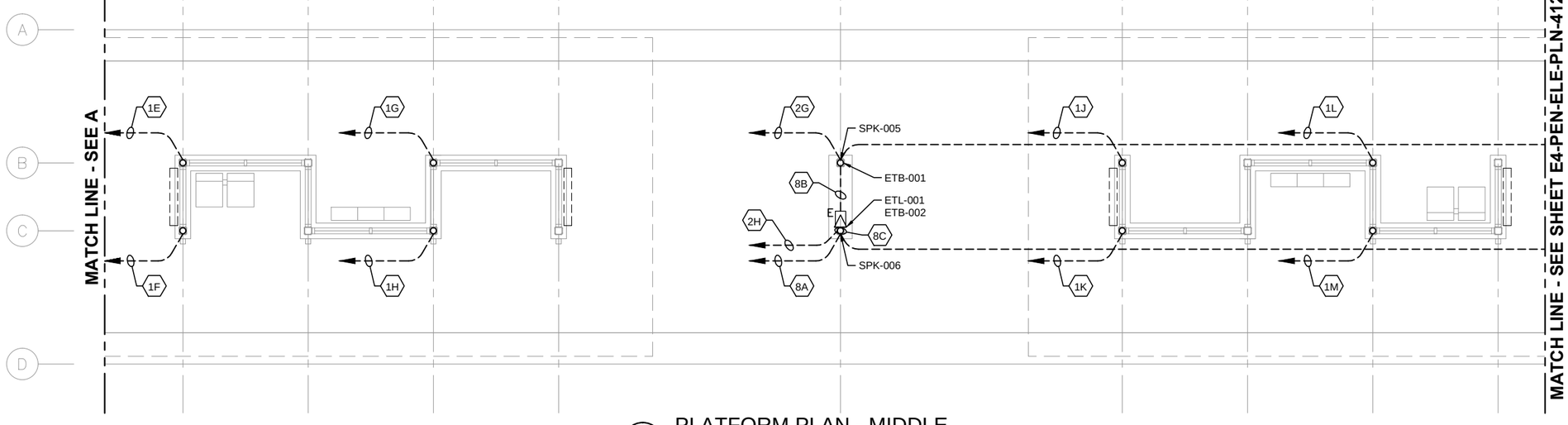
SHEET 130 OF 273

Sep. 25 2015 09:59 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-ELV-326.dwg By: FergTK




1 PLATFORM PLAN - WEST

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




2 PLATFORM PLAN - MIDDLE

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1. COMMUNICATIONS CONDUITS TO/FROM STATION SIGNAL-COMMUNICATIONS HOUSE.
2. CONDUIT TO/FROM STATION-COMMUNICATIONS HOUSE FOR UPS POWER FEED TO SCC-001.

0 2 4 8

HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

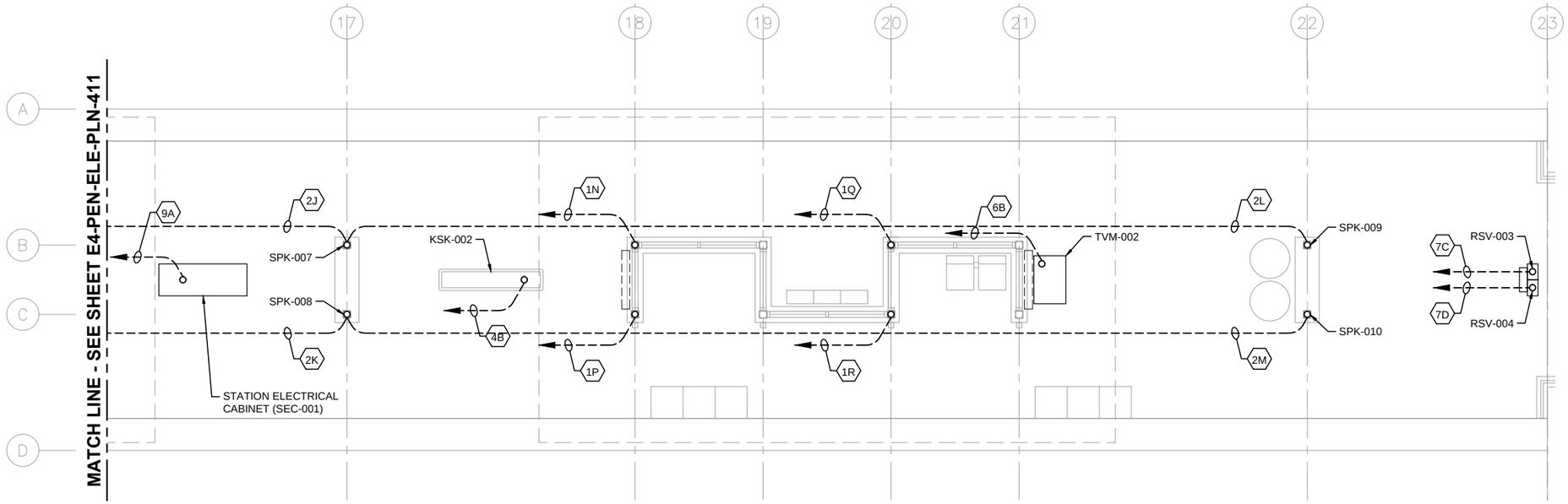
# CIVIL EAST - VOLUME 11B
# PENN STATION
# COMMUNICATIONS
# UNDERSLAB CONDUIT PLAN (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-PEN-ELE-PLN-411

SHEET 131 OF 273

Sep. 25 2015 10:00 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-PLN-411.dwg By: FergTK




1 PLATFORM PLAN - EAST

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1.

0 2 4 8

HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

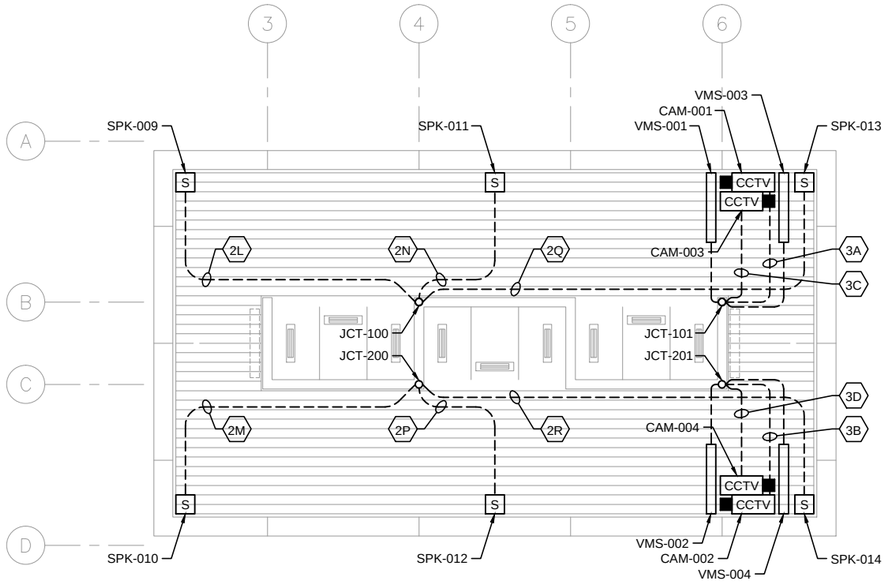
# CIVIL EAST - VOLUME 11B
# PENN STATION
# COMMUNICATIONS
# UNDERSLAB CONDUIT PLAN (2 OF 2)

DISCIPLINE: ELECTRICAL

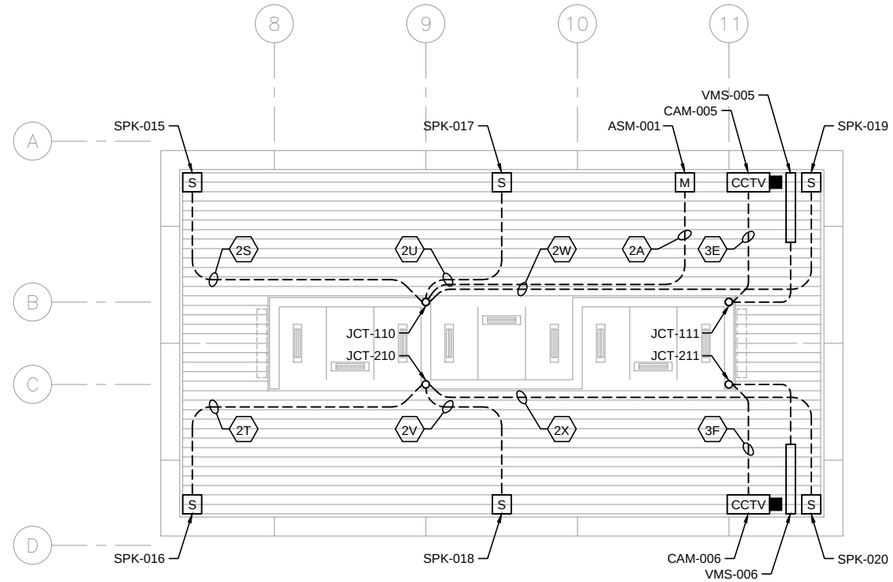
SHEET NAME: E4-PEN-ELE-PLN-412

SHEET 132 OF 273

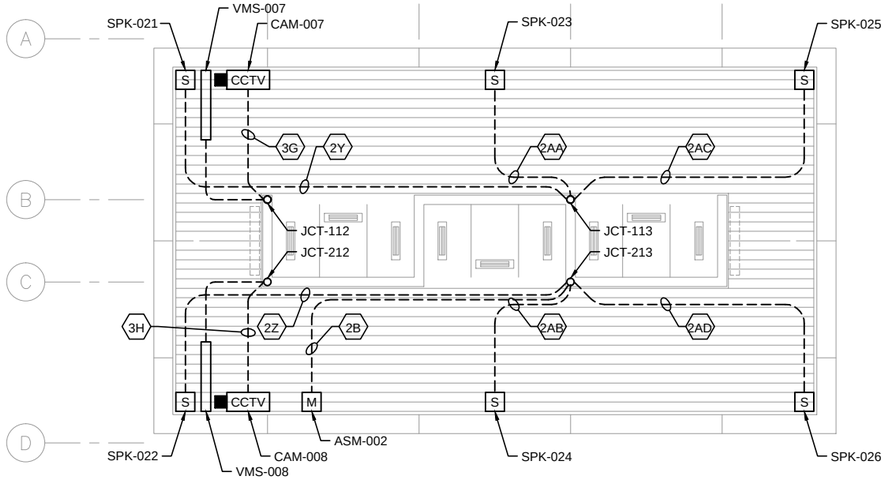
Sep. 25 2015 10:00 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-PLN-412.dwg By: FergTK



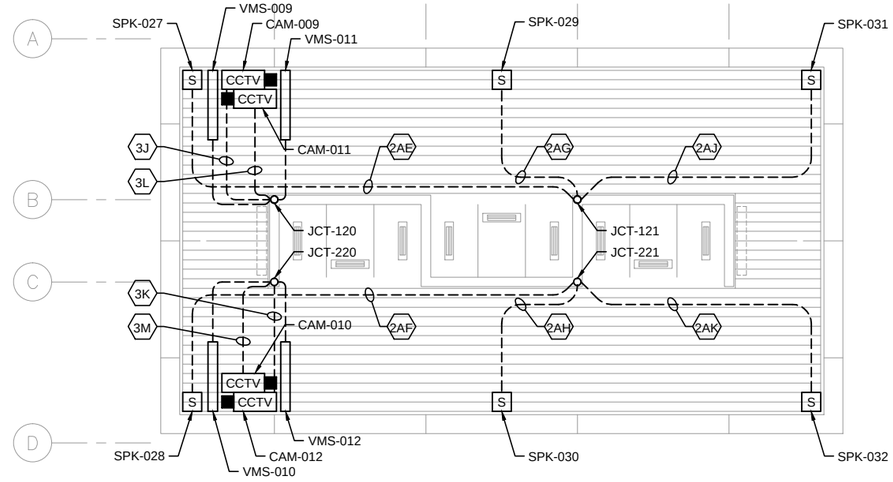

1 CANOPY PLAN – WEST END
SCALE: 1/8"=1'–0"




2 CANOPY PLAN – WEST MIDDLE
SCALE: 1/8"=1'–0"




3 CANOPY PLAN – EAST MIDDLE
SCALE: 1/8"=1'–0"




4 CANOPY PLAN – EAST END
SCALE: 1/8"=1'–0"

GENERAL NOTES:

1.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

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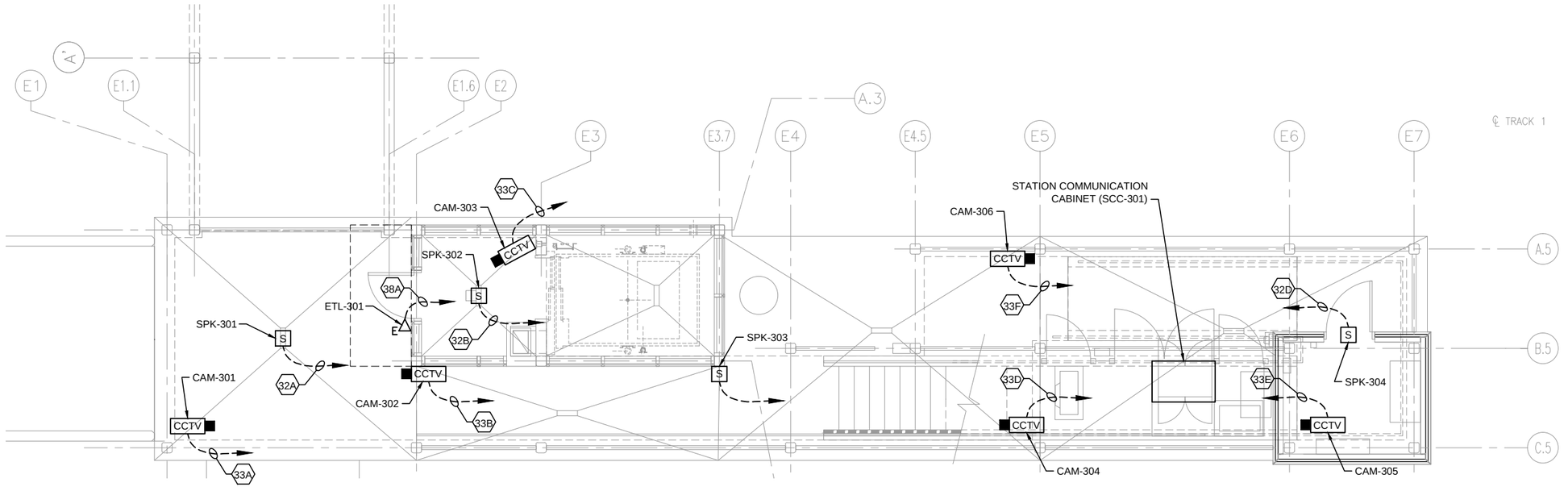
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# COMMUNICATIONS
# CANOPY PLAN

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-421

SHEET 133 OF 273

Sep. 25 2015 10:00 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-PLN-421.dwg By: FergTK




1 VC PLATFORM LEVEL PARTIAL PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. DASHED LINE WITH ARROWHEAD DENOTES HOME RUN TO SCC-301 UNLESS OTHERWISE NOTED.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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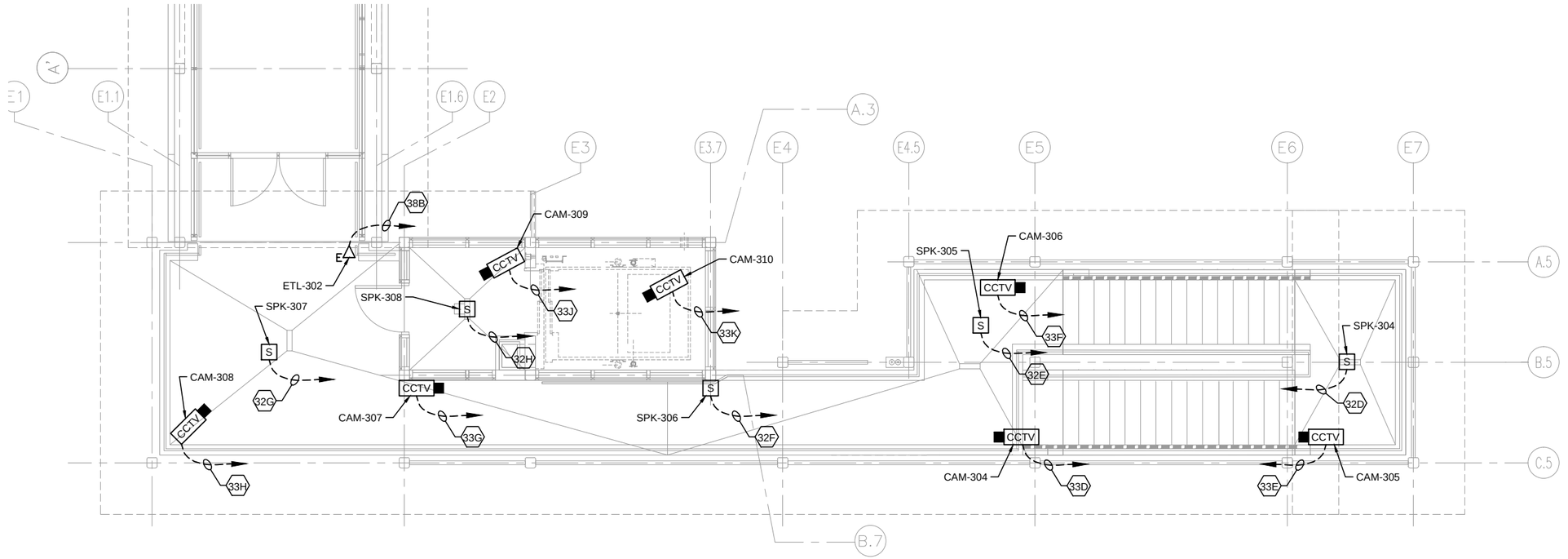
SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
PENN STATION
COMMUNICATIONS
VC PLATFORM LEVEL PLAN

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-431

SHEET 134 OF 273

Sep, 25 2015 10:01 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-PLN-431.dwg By: FergTK




GENERAL NOTES:

1. DASHED LINE WITH ARROWHEAD DENOTES HOME RUN TO SCC-301 UNLESS OTHERWISE NOTED.

KEYNOTES:

1.

## 2 VC BRIDGE LEVEL PLAN

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

0 2 4 8

HORIZONTAL SCALE IN FEET

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SOUTHWEST
Green Line LRT Extension

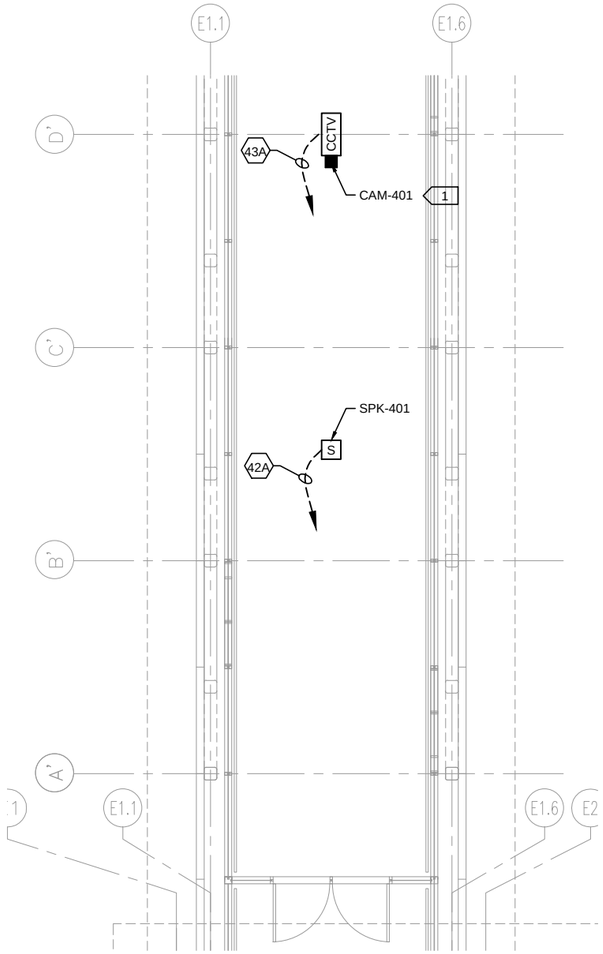
**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**COMMUNICATIONS**
**VC BRIDGE LEVEL PLAN**

DISCIPLINE: ELECTRICAL

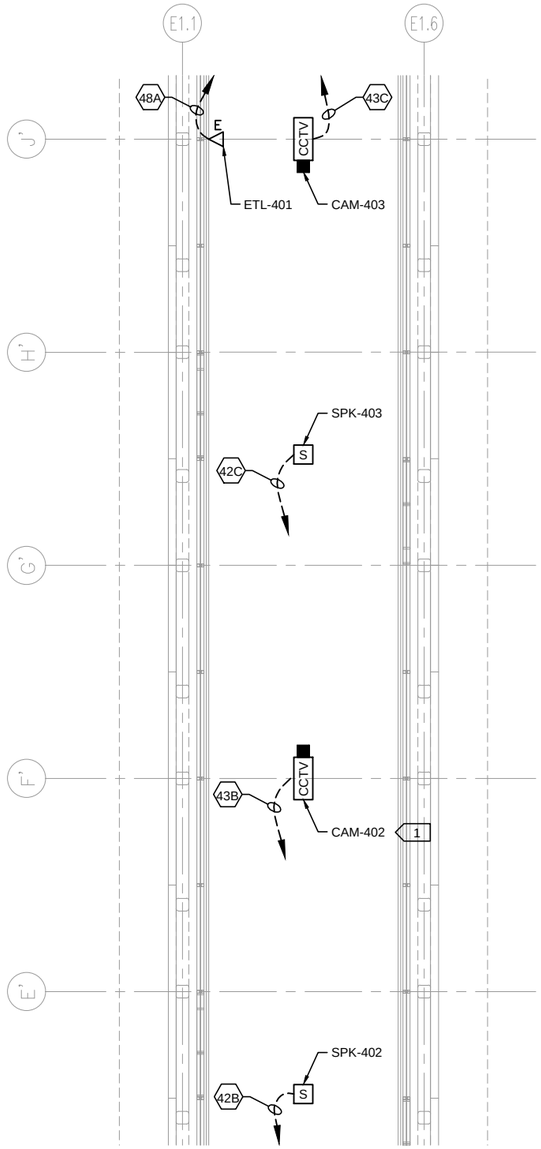
SHEET NAME: E4-PEN-ELE-PLN-432

SHEET 135 OF 273

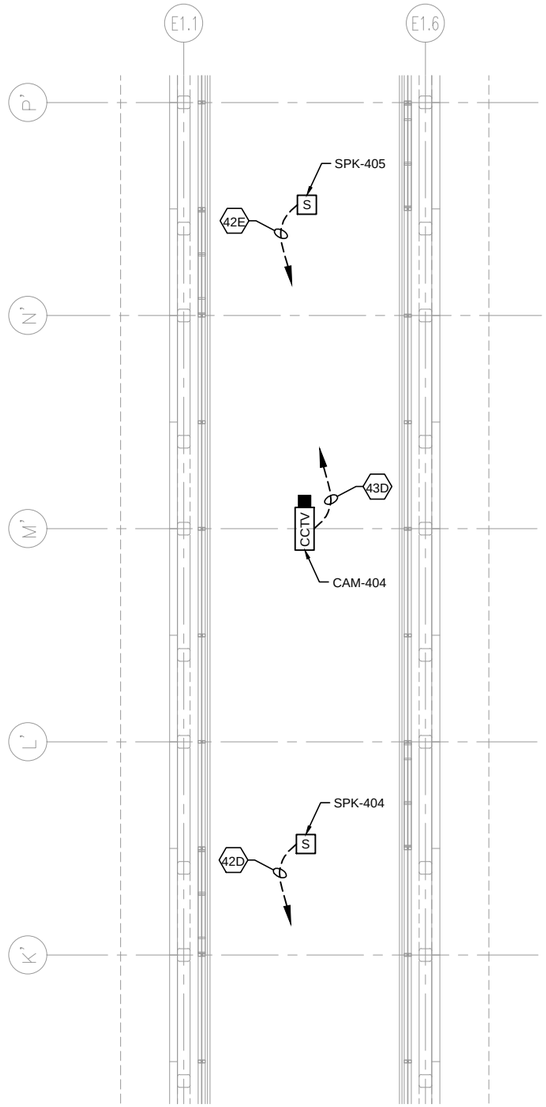
Sep. 25 2015 10:02 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-PLN-432.dwg By: FergTK




1 PB BRIDGE LEVEL PLAN
SCALE: 1/8"=1'-0"




2 PB BRIDGE LEVEL PLAN
SCALE: 1/8"=1'-0"




3 PB BRIDGE LEVEL PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. CONDUIT FOR ALL SPEAKERS SHALL BE ROUTED TO SCC-301.
2. CONDUIT FOR CAMERAS AND ETELS SHALL BE ROUTED TO SCC-401 UNLESS OTHERWISE NOTED.

KEYNOTES:

1. ROUTE CONDUIT TO THESE DEVICES TO SCC-301.

0 2 4 8
HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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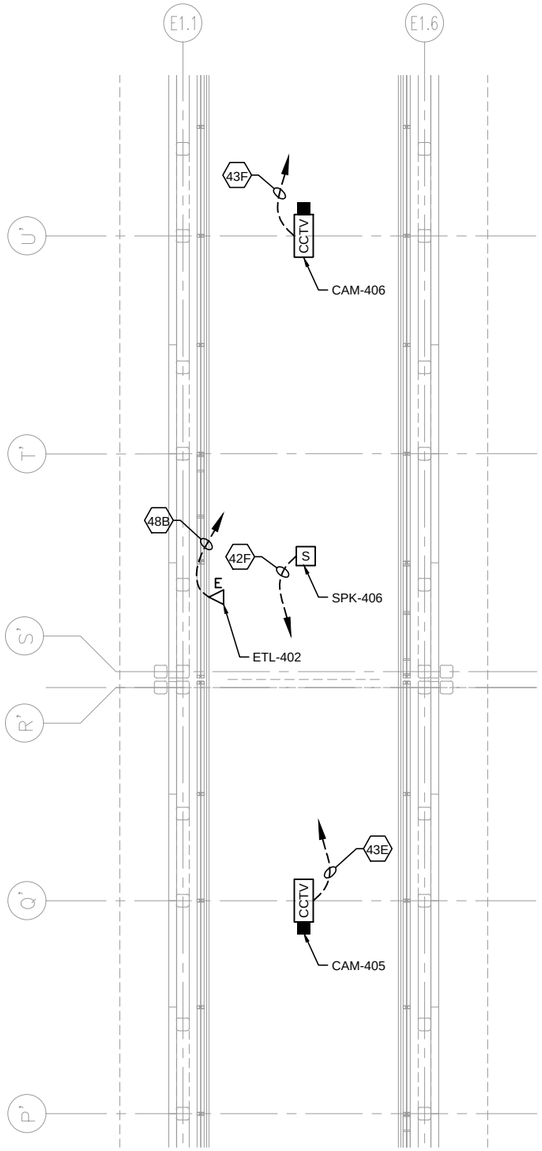
METROPOLITAN COUNCIL
SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**PENN STATION**
**COMMUNICATIONS**
**VC PED WALKWAY PLAN (1 OF 2)**

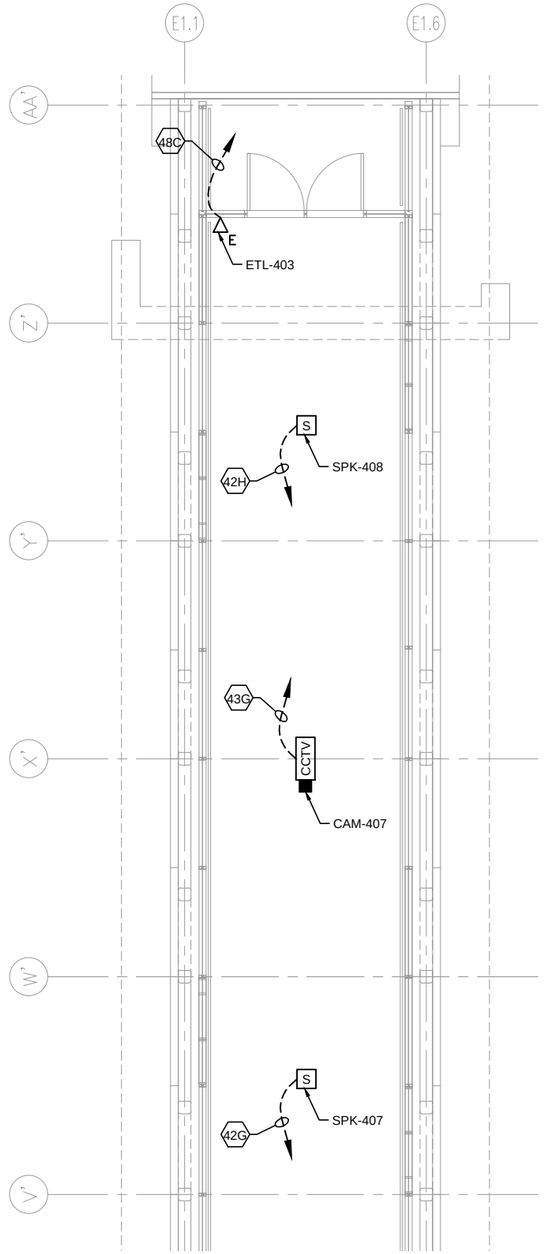
DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-433

SHEET 136 OF 273

Sep. 25 2015 10:02 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-PLN-433.dwg By: FergTK




1 PB BRIDGE LEVEL PLAN
SCALE: 1/8"=1'-0"




2 PB BRIDGE LEVEL PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. CONDUIT FOR ALL SPEAKERS SHALL BE ROUTED TO SCC-301.
2. CONDUIT FOR CAMERAS AND ETELS SHALL BE ROUTED TO SCC-401 UNLESS OTHERWISE NOTED.

KEYNOTES:

1.

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HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST
Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# COMMUNICATIONS
# VC PED WALKWAY PLAN (2 OF 2)

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-PEN-ELE-PLN-434

SHEET 137 OF 273

Sep, 25 2015 10:03 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-PEN-ELE-PLN-434.dwg By: FergTK

| CONDUIT NO. | DEVICE ID | DESCRIPTION/USE | FROM | TO | CONDUIT SIZE |
|---|---|---|---|---|---|
| 10A | PEN -CON-0001 | S/C HOUSE TO SCC-001 | S/C MANHOLE | PEN -SCC-001 | 3" |
| 10B | PEN -CON-0002 | S/C HOUSE TO SCC-001 | S/C MANHOLE | PEN -SCC-001 | 3" |
| 10C | PEN -CON-0003 | S/C HOUSE TO SCC-001 | S/C MANHOLE | PEN -SCC-001 | 3" |
| 10D | PEN -CON-0004 | S/C HOUSE TO SCC-001 | S/C MANHOLE | PEN -SCC-001 | 3" |
| 10E | PEN -CON-0005 | UPS POWER FEED: SCH TO SCC | PEN -SCH-001 | PEN -SCC-001 | 3" |
| 1A | PEN -CON-0101 | SCC TO JUNCTION 100 | PEN -SCC-001 | PEN -JCT-100 | 2" |
| 1B | PEN -CON-0102 | SCC TO JUNCTION 200 | PEN -SCC-001 | PEN -JCT-200 | 2" |
| 1C | PEN -CON-0103 | SCC TO JUNCTION 101 | PEN -SCC-001 | PEN -JCT-101 | 2" |
| 1D | PEN -CON-0104 | SCC TO JUNCTION 201 | PEN -SCC-001 | PEN -JCT-201 | 2" |
| 1E | PEN -CON-0105 | SCC TO JUNCTION 110 | PEN -SCC-001 | PEN -JCT-110 | 2" |
| 1F | PEN -CON-0106 | SCC TO JUNCTION 210 | PEN -SCC-001 | PEN -JCT-210 | 2" |
| 1G | PEN -CON-0107 | SCC TO JUNCTION 111 | PEN -SCC-001 | PEN -JCT-111 | 2" |
| 1H | PEN -CON-0107 | SCC TO JUNCTION 211 | PEN -SCC-001 | PEN -JCT-211 | 2" |
| 1J | PEN -CON-0108 | SCC TO JUNCTION 112 | PEN -SCC-001 | PEN -JCT-112 | 2" |
| 1K | PEN -CON-0109 | SCC TO JUNCTION 212 | PEN -SCC-001 | PEN -JCT-212 | 2" |
| 1L | PEN -CON-0110 | SCC TO JUNCTION 113 | PEN -SCC-001 | PEN -JCT-113 | 2" |
| 1M | PEN -CON-0110 | SCC TO JUNCTION 213 | PEN -SCC-001 | PEN -JCT-213 | 2" |
| 1N | PEN -CON-0111 | SCC TO JUNCTION 120 | PEN -SCC-001 | PEN -JCT-120 | 2" |
| 1P | PEN -CON-0112 | SCC TO JUNCTION 220 | PEN -SCC-001 | PEN -JCT-220 | 2" |
| 1Q | PEN -CON-0113 | SCC TO JUNCTION 121 | PEN -SCC-001 | PEN -JCT-121 | 2" |
| 1R | PEN -CON-0114 | SCC TO JUNCTION 221 | PEN -SCC-001 | PEN -JCT-221 | 2" |
| 2A | PEN -CON-0201 | MICROPHONE 1 - NOISE SENSING | PEN -JCT-111 | PEN -ASM-001 | 1" |
| 2B | PEN -CON-0202 | MICROPHONE 2 - NOISE SENSING | PEN -JCT-211 | PEN -ASM-002 | 1" |
| 2C | PEN -CON-0203 | SPEAKER 1 - POLE | PEN -SPK-003 | PEN -SPK-001 | 1-1/2" |
| 2D | PEN -CON-0204 | SPEAKER 2 - POLE | PEN -SPK-004 | PEN -SPK-002 | 1-1/2" |
| 2E | PEN -CON-0205 | SPEAKER 3 - POLE | PEN -SCC-001 | PEN -SPK-003 | 1-1/2" |
| 2F | PEN -CON-0206 | SPEAKER 4 - POLE | PEN -SCC-001 | PEN -SPK-004 | 1-1/2" |
| 2G | PEN -CON-0207 | SPEAKER 5 - POLE | PEN -SCC-001 | PEN -SPK-005 | 1-1/2" |
| 2H | PEN -CON-0208 | SPEAKER 6 - POLE | PEN -SCC-001 | PEN -SPK-006 | 1-1/2" |
| 2J | PEN -CON-0209 | SPEAKER 7 - POLE | PEN -SPK-005 | PEN -SPK-007 | 1-1/2" |
| 2K | PEN -CON-0210 | SPEAKER 8 - POLE | PEN -SPK-006 | PEN -SPK-008 | 1-1/2" |
| 2L | PEN -CON-0211 | SPEAKER 9 - CANOPY | PEN -JCT-100 | PEN -SPK-009 | 1" |
| 2M | PEN -CON-0212 | SPEAKER 10 - CANOPY | PEN -JCT-200 | PEN -SPK-010 | 1" |
| 2N | PEN -CON-0213 | SPEAKER 11 - CANOPY | PEN -JCT-100 | PEN -SPK-011 | 1" |
| 2P | PEN -CON-0214 | SPEAKER 12 - CANOPY | PEN -JCT-200 | PEN -SPK-012 | 1" |
| 2Q | PEN -CON-0215 | SPEAKER 13 - CANOPY | PEN -JCT-100 | PEN -SPK-013 | 1" |
| 2R | PEN -CON-0216 | SPEAKER 14 - CANOPY | PEN -JCT-200 | PEN -SPK-014 | 1" |
| 2S | PEN -CON-0217 | SPEAKER 15 - CANOPY | PEN -JCT-110 | PEN -SPK-015 | 1" |
| 2T | PEN -CON-0218 | SPEAKER 16 - CANOPY | PEN -JCT-210 | PEN -SPK-016 | 1" |
| 2U | PEN -CON-0219 | SPEAKER 17 - CANOPY | PEN -JCT-110 | PEN -SPK-017 | 1" |
| 2V | PEN -CON-0220 | SPEAKER 18 - CANOPY | PEN -JCT-210 | PEN -SPK-018 | 1" |
| 2W | PEN -CON-0221 | SPEAKER 19 - CANOPY | PEN -JCT-110 | PEN -SPK-019 | 1" |
| 2X | PEN -CON-0222 | SPEAKER 20 - CANOPY | PEN -JCT-210 | PEN -SPK-020 | 1" |
| 2Y | PEN -CON-0223 | SPEAKER 21 - CANOPY | PEN -JCT-112 | PEN -SPK-021 | 1" |
| 2Z | PEN -CON-0224 | SPEAKER 22 - CANOPY | PEN -JCT-212 | PEN -SPK-022 | 1" |
| 2AA | PEN -CON-0225 | SPEAKER 23 - CANOPY | PEN -JCT-112 | PEN -SPK-023 | 1" |
| 2AB | PEN -CON-0226 | SPEAKER 24 - CANOPY | PEN -JCT-212 | PEN -SPK-024 | 1" |

1 COMMUNICATIONS CONDUIT SCHEDULE



| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
PENN STATION
COMMUNICATIONS
CONDUIT SCHEDULE (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-PEN-ELE-SCH-461

SHEET 138 OF 273

| CONDUIT NO. | DEVICE ID | DESCRIPTION/USE | FROM | TO | CONDUIT SIZE |
|---|---|---|---|---|---|
| 2AC | PEN -CON-0227 | SPEAKER 25 - CANOPY | PEN -JCT-112 | PEN -SPK-025 | 1" |
| 2AD | PEN -CON-0228 | SPEAKER 26 - CANOPY | PEN -JCT-212 | PEN -SPK-026 | 1" |
| 2AE | PEN -CON-0229 | SPEAKER 27 - CANOPY | PEN -JCT-121 | PEN -SPK-027 | 1" |
| 2AF | PEN -CON-0230 | SPEAKER 28 - CANOPY | PEN -JCT-221 | PEN -SPK-028 | 1" |
| 2AG | PEN -CON-0231 | SPEAKER 29 - CANOPY | PEN -JCT-121 | PEN -SPK-029 | 1" |
| 2AH | PEN -CON-0232 | SPEAKER 30 - CANOPY | PEN -JCT-221 | PEN -SPK-030 | 1" |
| 2AJ | PEN -CON-0233 | SPEAKER 31 - CANOPY | PEN -JCT-121 | PEN -SPK-031 | 1" |
| 2AK | PEN -CON-0234 | SPEAKER 32 - CANOPY | PEN -JCT-221 | PEN -SPK-032 | 1" |
| 3A | PEN -CON-0301 | CAMERA 1 | PEN -JCT-101 | PEN CAM-001 | 1" |
| 3B | PEN -CON-0302 | CAMERA 2 | PEN -JCT-201 | PEN CAM-002 | 1" |
| 3C | PEN -CON-0303 | CAMERA 3 | PEN -JCT-101 | PEN CAM-003 | 1" |
| 3D | PEN -CON-0304 | CAMERA 4 | PEN -JCT-201 | PEN CAM-004 | 1" |
| 3E | PEN -CON-0305 | CAMERA 5 | PEN -JCT-111 | PEN CAM-005 | 1" |
| 3F | PEN -CON-0306 | CAMERA 6 | PEN -JCT-211 | PEN CAM-006 | 1" |
| 3G | PEN -CON-0307 | CAMERA 7 | PEN -JCT-111 | PEN CAM-007 | 1" |
| 3H | PEN -CON-0308 | CAMERA 8 | PEN -JCT-211 | PEN CAM-008 | 1" |
| 3J | PEN -CON-0309 | CAMERA 9 | PEN -JCT-120 | PEN CAM-009 | 1" |
| 3K | PEN -CON-0310 | CAMERA 10 | PEN -JCT-220 | PEN CAM-010 | 1" |
| 3L | PEN -CON-0311 | CAMERA 11 | PEN -JCT-120 | PEN CAM-011 | 1" |
| 3M | PEN -CON-0312 | CAMERA 12 | PEN -JCT-220 | PEN CAM-012 | 1" |
| 4A | PEN -CON-0401 | KIOSK 1 (F) | PEN -SCC-001 | PEN -KSK-001 | 2" |
| 4B | PEN -CON-0402 | KIOSK 2 (F) | PEN -SCC-001 | PEN -KSK-002 | 2" |
| 5A | PEN -CON-0501 | VMS 1 | PEN -JCT-101 | PEN -VMS-001 | 1" |
| 5B | PEN -CON-0502 | VMS 2 | PEN -JCT-201 | PEN -VMS-002 | 1" |
| 5C | PEN -CON-0503 | VMS 3 | PEN -JCT-101 | PEN -VMS-003 | 1" |
| 5D | PEN -CON-0504 | VMS 4 | PEN -JCT-201 | PEN -VMS-004 | 1" |
| 5E | PEN -CON-0505 | VMS 5 | PEN -JCT-111 | PEN -VMS-005 | 1" |
| 5F | PEN -CON-0506 | VMS 6 | PEN -JCT-211 | PEN -VMS-006 | 1" |
| 5G | PEN -CON-0507 | VMS 7 | PEN -JCT-111 | PEN -VMS-007 | 1" |
| 5H | PEN -CON-0508 | VMS 8 | PEN -JCT-211 | PEN -VMS-008 | 1" |
| 5J | PEN -CON-0509 | VMS 9 | PEN -JCT-120 | PEN -VMS-009 | 1" |
| 5K | PEN -CON-0510 | VMS 10 | PEN -JCT-220 | PEN -VMS-010 | 1" |
| 5L | PEN -CON-0511 | VMS 11 | PEN -JCT-120 | PEN -VMS-011 | 1" |
| 5M | PEN -CON-0512 | VMS 12 | PEN -JCT-220 | PEN -VMS-012 | 1" |
| 6A | PEN -CON-0601 | TVM 1 | PEN -SCC-001 | PEN -TVM-001 | 2" |
| 6B | PEN -CON-0602 | TVM 2 | PEN -SCC-001 | PEN -TVM-002 | 2" |
| 7A | PEN -CON-0701 | VALIDATOR 1 | PEN -SCC-001 | PEN -RSV-001 | 1-1/2" |
| 7B | PEN -CON-0702 | VALIDATOR 2 | PEN -SCC-001 | PEN -RSV-002 | 1-1/2" |
| 7C | PEN -CON-0703 | VALIDATOR 3 | PEN -SCC-001 | PEN -RSV-003 | 1-1/2" |
| 7D | PEN -CON-0704 | VALIDATOR 4 | PEN -SCC-001 | PEN -RSV-004 | 1-1/2" |
| 8A | PEN -CON-0801 | EMERGENCY TELEPHONE 1 - PHONE | PEN -SCC-001 | PEN -ETL-001 | 1-1/2" |
| 8B | PEN -CON-0802 | EMERGENCY TELEPHONE 1 - BEACON LIGHT 1 | PEN -ETL-001 | PEN -ETB-001 | 1" |
| 8C | PEN -CON-0803 | EMERGENCY TELEPHONE 1 - BEACON LIGHT 2 | PEN -ETL-001 | PEN -ETB-002 | 1" |
| 9A | PEN -CON-0901 | STATION ELECTRICAL CABINET | PEN -SCC-001 | PEN -SEC-001 | 2" |

1 COMMUNICATIONS CONDUIT SCHEDULE



| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# PENN STATION
# COMMUNICATIONS
# CONDUIT SCHEDULE (2 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-PEN-ELE-SCH-462

SHEET 139 OF 273

# CODE SUMMARY - CENTER PLATFORM
# VAN WHITE STATION

## CODE REFERENCES

| | |
|---|---|
| MINNESOTA STATE BUILDING CODE | 2015 |
| NFPA 130 – STANDARD FOR FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS | 2014 |

IBC REVIEW

A. DESCRIPTION
LOCATION: MINNEAPOLIS, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF A PLATFORM 270' LONG BY 21'–4" ACCESSED BY A SLOPED WALK AT EACH END OF PLATFORM. PLATFORM IS OPEN TO EXTERIOR ON ALL FOUR SIDES.

A PASSENGER ELEVATOR AND OPEN STAIR (VERTICAL CIRCULATION) ARE PROVIDED FOR PEDESTRIAN STATION ACCESS FROM VAN WHITE BOULEVARD.

TYPICAL PLATFORM AREA: 5760 SQUARE FEET (GROSS AREA)
5420 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA AT PLATFORM: = 3416 SQUARE FEET
1708 SQUARE FEET (1 @ 84'–0" X 20'–4") WEST CANOPY
1708 SQUARE FEET (1 @ 84'–0" X 20'–4") EAST CANOPY

B. OCCUPANCY CLASSIFICATION (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3
(15 S.F. PER PERSON)

C. OCCUPANCY SEPARATIONS

NONE ARE REQUIRED
ELEVATOR HOIST WAY DOES NOT PENETRATE FLOOR/CEILING OR ROOF/CEILING ASSEMBLIES – NO RATING REQUIRED
ELEVATOR MACHINE ROOM DOES NOT ABUT, OR OPEN TO, THE ELEVATOR HOIST WAY – NO RATING REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. IBC EXITING SUMMARY

NO. OF OCCUPANTS = 5420 S.F. / 15 S.F./OCC = 361
REQUIRED EGRESS WIDTH = 361 X 0.2 = 72" (PER 1005.3.2)
WIDTH PROVIDED = 2 RAMPS AT 145" = 290"
2 MEANS OF EGRESS PROVIDED
THE VERTICAL CIRCULATION IS NOT CONSIDERED A MEANS OF EGRESS FROM THE STATION, AND IT IS CONSIDERED UNOCCUPIED

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

## PLATFORM COLOR AND FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

PLATFORM COLOR AND FINISH SCHEDULE

| TYPE | STATION | STRUCTURAL STEEL PAINT COLOR | PLATFORM CONC COLOR | PLATFORM CONC FINISH | CONC WALL COLOR | CONC WALL FINISH | RAILING INFILL MATERIAL | ALUM WDW FRAME FINISH | EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH | ALUM COMP CANOPY SOFFIT AND FASCIA COLOR | ARCH WOVEN MESH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CENTER | VAN WHITE STATION | PPG 518–6 KNIGHT'S ARMOR | CEMSTONE SPLIT ROCK | TBD | CEMSTONE SPLIT ROCK | TBD | SS CABLE | CLEAR ANODIZED | HUNTER DOUGLAS WOODWRIGHT 8420 LIGHT OAK | ALUCOBOND DAYLILY YELLOW | TBD |

VERTICAL CIRCULATION COLOR AND FINISH SCHEDULE

| PRECAST WALL COLOR | PRECAST FLOOR COLOR | STRUCTURAL STEEL PAINT COLOR | PLATFORM CONC COLOR | PLATFORM CONC FINISH | CONC WALL COLOR | CONC WALL FINISH | ARCH WOVEN MESH | ALUM WDW FRAME FINISH | EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH | ALUM COMP CANOPY SOFFIT AND FASCIA COLOR | TRANSLUCENT PLASTIC PANEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TBD | TBD | PPG 518–6 KNIGHT'S ARMOR | CEMSTONE SPLIT ROCK | TBD | CEMSTONE SPLIT ROCK | TBD | GKD OMEGA DIVERGENCE | CLEAR ANODIZED | HUNTER DOUGLAS WOODWRIGHT 8420 LIGHT OAK | ALUCOBOND DAYLILY YELLOW | 3FORM KODA XT YELLOW Y–04 |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

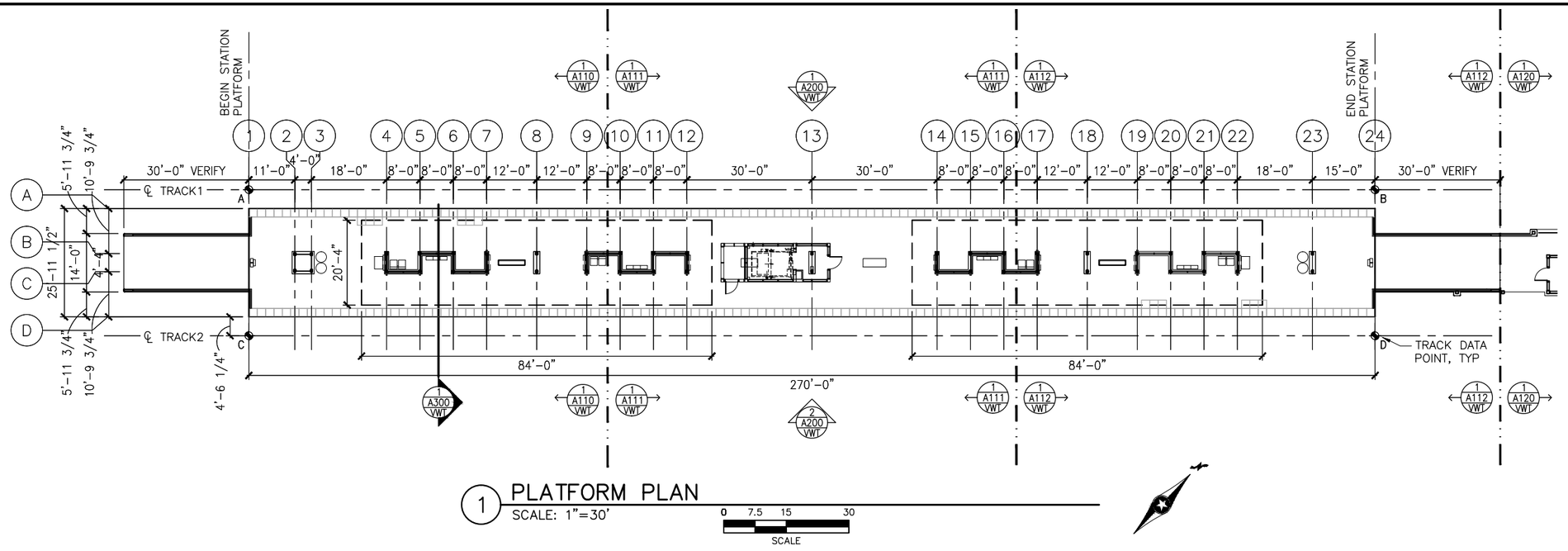
CIVIL EAST - VOLUME 11B
VAN WHITE STATION
CODE SUMMARY / FINISH SCHEDULE

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-COD-010

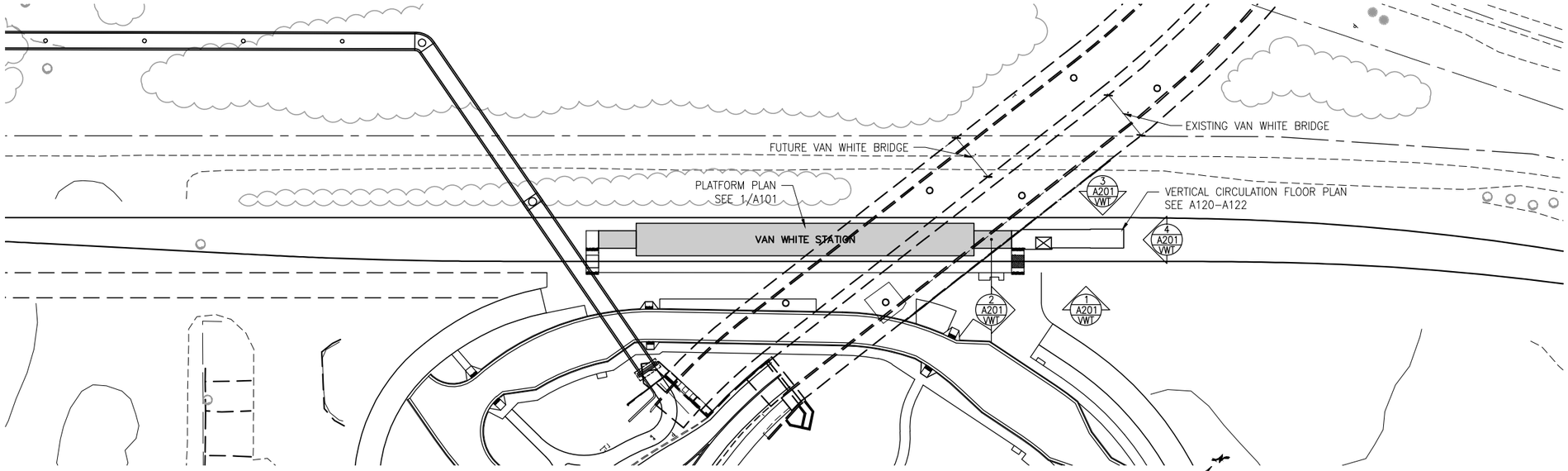
SHEET 140 OF 273

Sep. 25 2015 10:20 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-COD-010.dwg By: MurphySP




1 PLATFORM PLAN
SCALE: 1"=30'

SCALE 0 7.5 15 30




2 STATION AREA PLAN
SCALE: 1"=100'

SCALE 0 25 50 100

## TRACK DATA

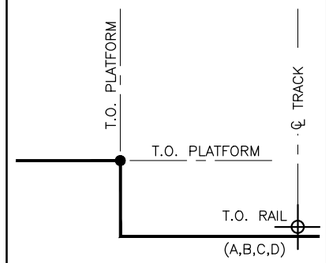
℄ ELEV 100'-0" (LOCATION ON PLAN)

**TRACK 1 EL 100'-0"=** XXX.XX (PT 'A')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| A | XXX.XX | XXXX+XX.XX | |
| B | XXX.XX | XXXX+XX.XX | |
| | | | |

**TRACK 2 EL 100'-0"=** XXX.XX (PT 'C')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| C | XXX.XX | XXXX+XX.XX | |
| D | XXX.XX | XXXX+XX.XX | |
| | | | |




SECTION DIAGRAM AT PLATFORM EDGE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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SOUTHWEST Green Line LRT Extension

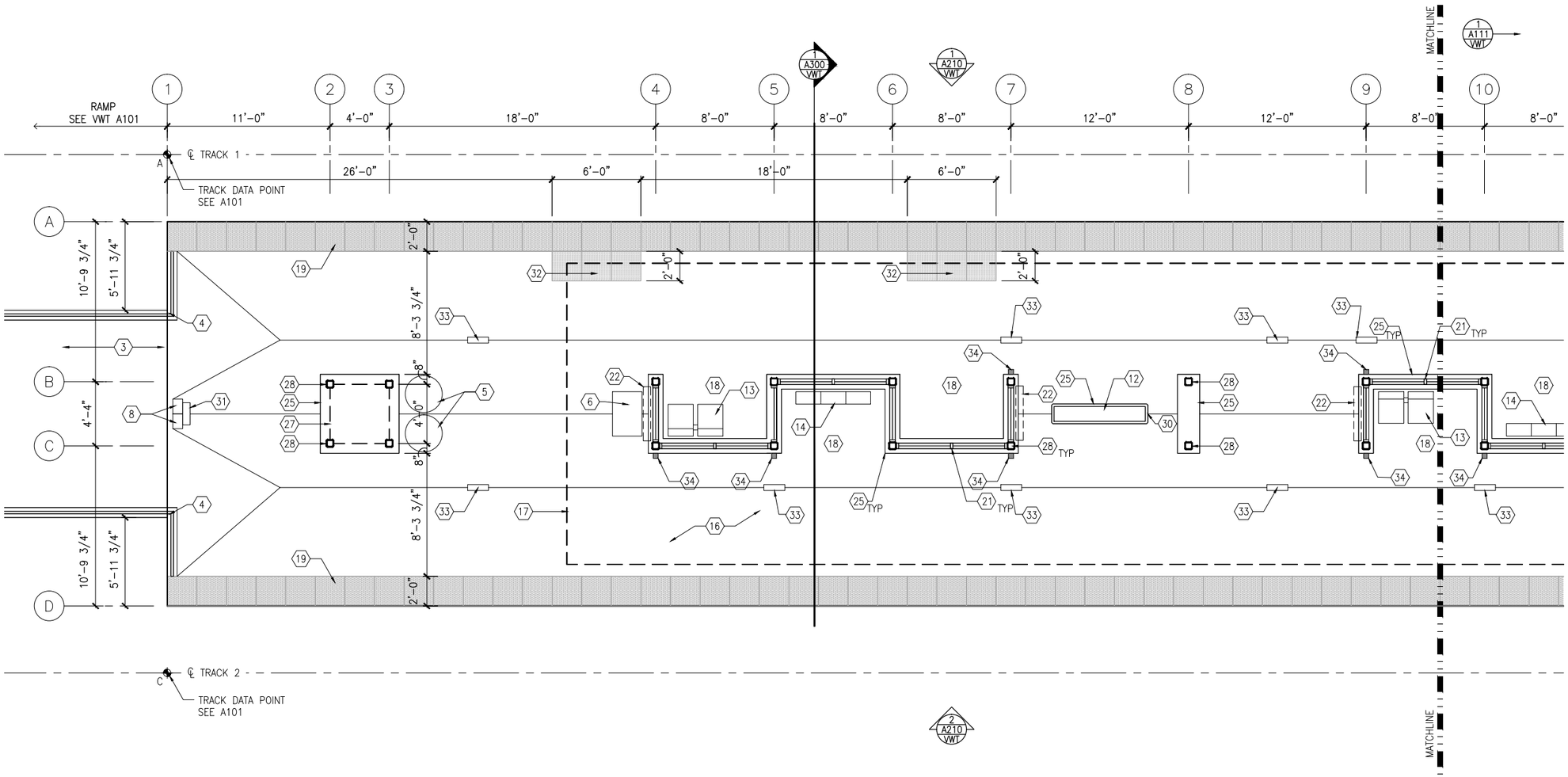
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-PLN-101

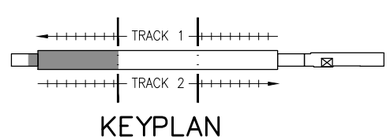
SHEET 141 OF 273

Sep. 21 2015 12:58 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-PLN-101.DWG By: V-lyerN




1 WEST PARTIAL PLATFORM PLAN
SCALE: 1/8"=1'–0"

0 2 4 8
SCALE




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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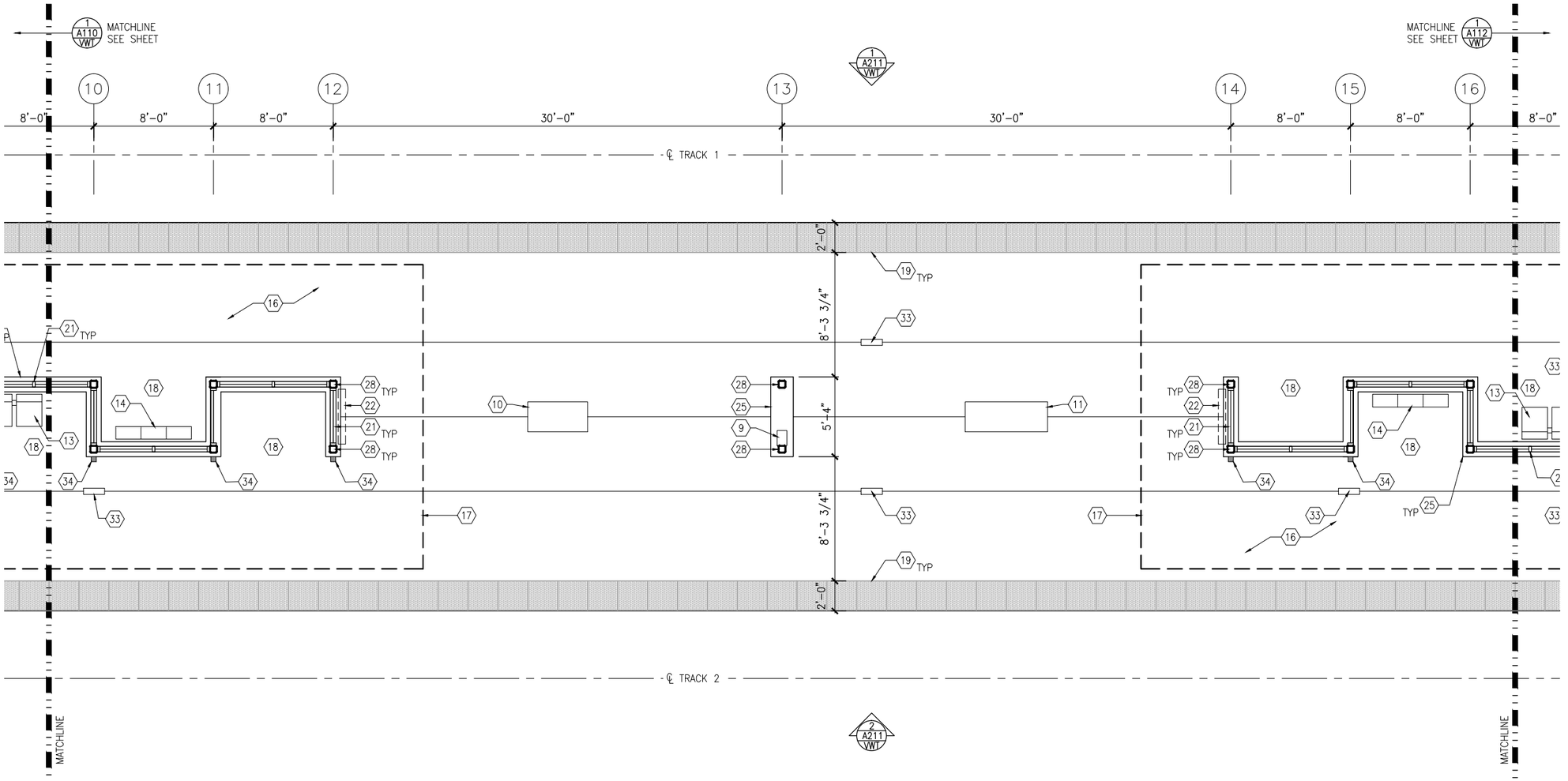
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**WEST PARTIAL PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

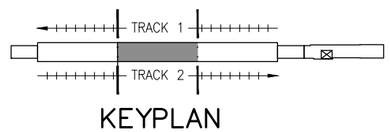
SHEET NAME: E4-VWT-ARC-PLN-110

SHEET 142 OF 273




1 MIDDLE PARTIAL PLATFORM PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

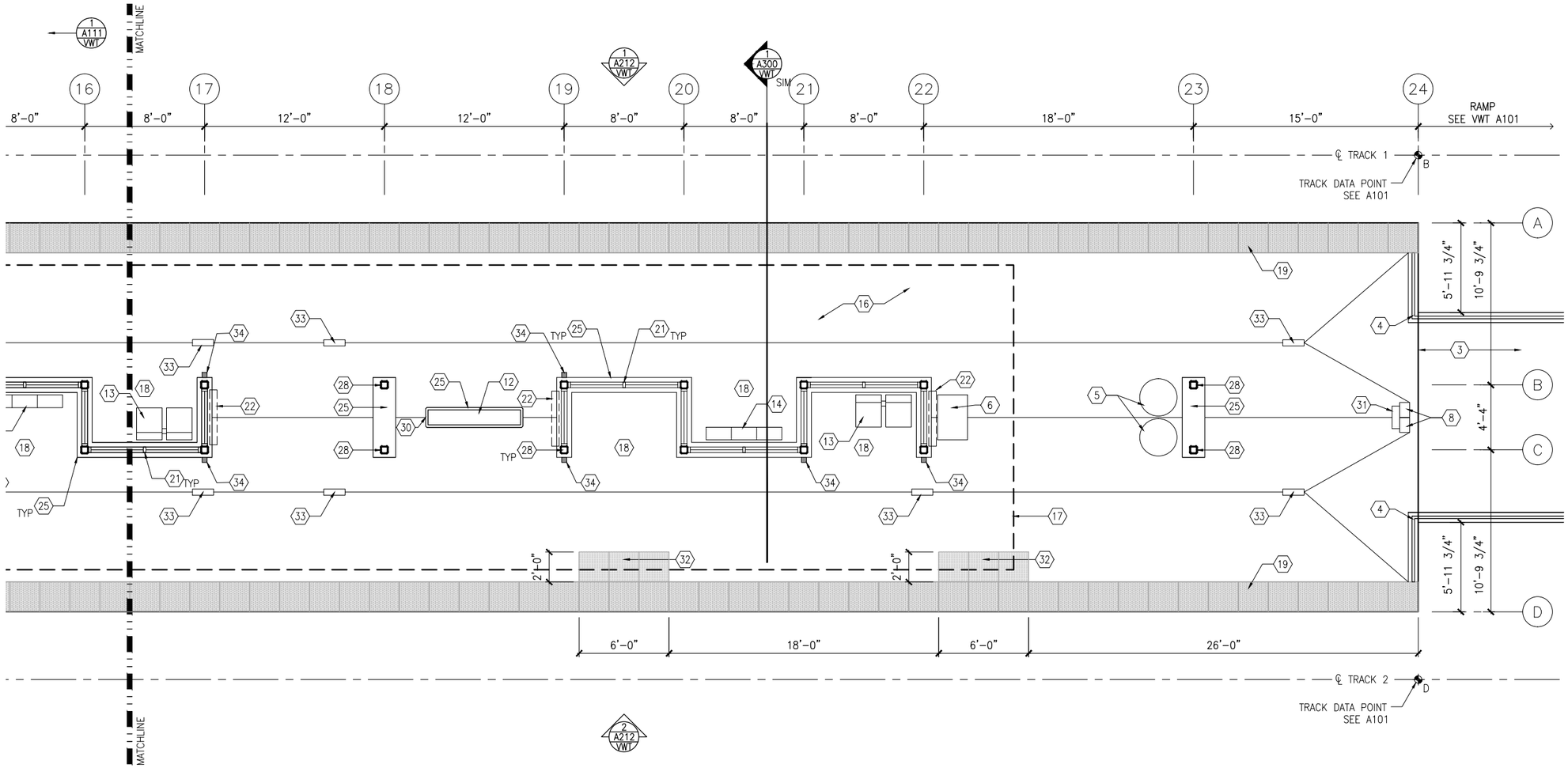
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**MIDDLE PARTIAL PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-PLN-111

SHEET 143 OF 273

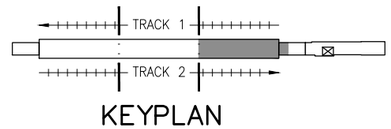
Sep. 21 2015 12:59 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-PLN-111.dwg By: V-IyerN




## 1 EAST PARTIAL PLATFORM PLAN

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

SCALE 0 2 4 8




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

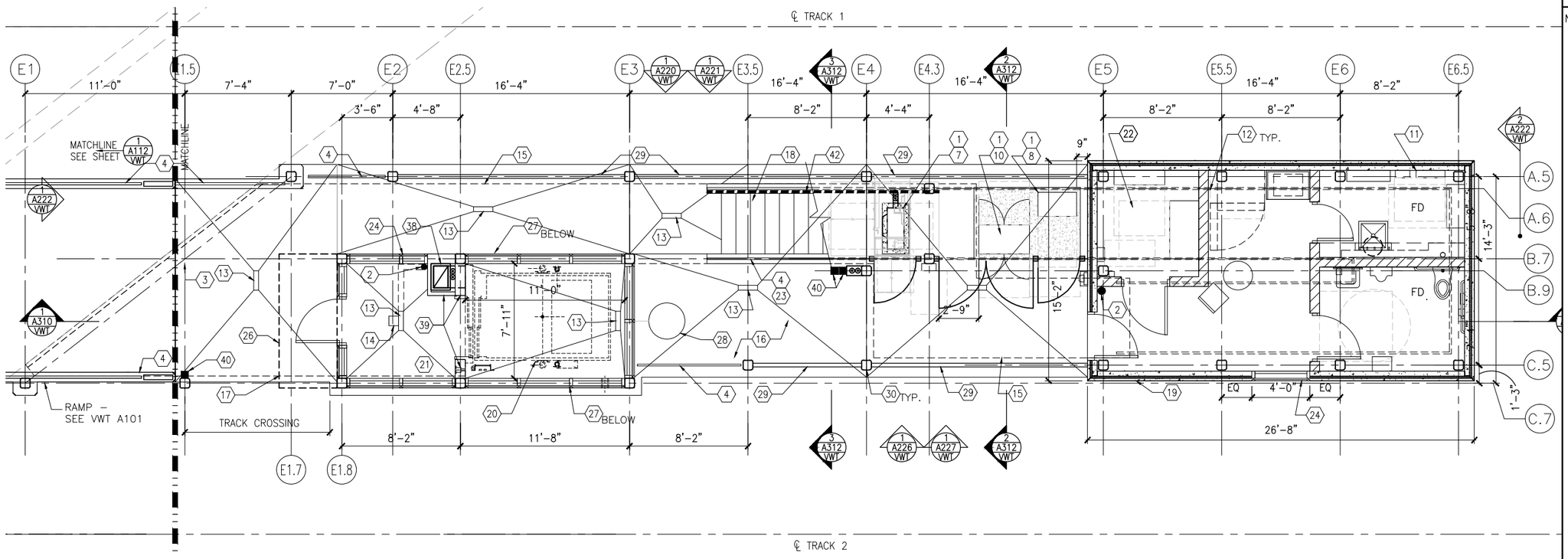
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**EAST PARTIAL PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-PLN-112

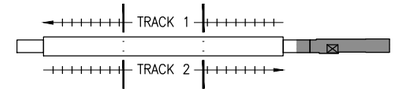
SHEET 144 OF 273

Sep. 21 2015 12:59 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-PLN-112.dwg By: V-IyerN




1 VC PLATFORM LEVEL PLAN
SCALE:1/8"=1'-0"

SCALE 0 2 4 8




KEYPLAN

## SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. CONCRETE HOUSEKEEPING PAD
2. RAINWATER LEADER – SEE PLUMB
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. CONDENSING UNIT – SEE MECH
8. TRANSFORMER – SEE ELEC
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. CMU WALL
13. AREA DRAIN
14. SNOW MELT SYSTEM
15. PRCST CONC WALKWAY
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. PRCST CONC STAIR – SEE STRUCT
19. PRCST CONC WALL PANEL–SEE STRUCT
20. ELEVATOR
21. ELEVATOR VESTIBULE / LOBBY
22. ELEVATOR EQUIPMENT ROOM
23. GUARD RAIL
24. ALUM & GLASS FRAMING SYSTEM
25. VARIABLE MESSAGE SIGN
26. METAL SOFFIT AND FASCIA
27. GUARD RAIL
28. SUMP PIT
29. ARCHITECTURAL WOVEN MESH
30. STEEL COLUMN – SEE STRUCTURAL
31. STEEL BEAM – SEE STRUCTURAL
32. CONNECTION WALL HYDRANT
33. EXPANSION JOINT
34. EXISTING CRASH BARRIER
35. CRASH BARRIER/GUARD RAIL
36. EXISTING BARRIER / SIDEWALK
37. ROOF BELOW – SEE ROOF PLAN
38. CHASE – SEE MECH FOR DUCT WORK
39. COMPOSITE ALUM WALL PANEL
40. PRE–FINISHED METAL DOWNSPOUT
41. LIGHT MOUNTED TO STRUCTURE
42. BIKE RAIL MOUNTED TO STAIR

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

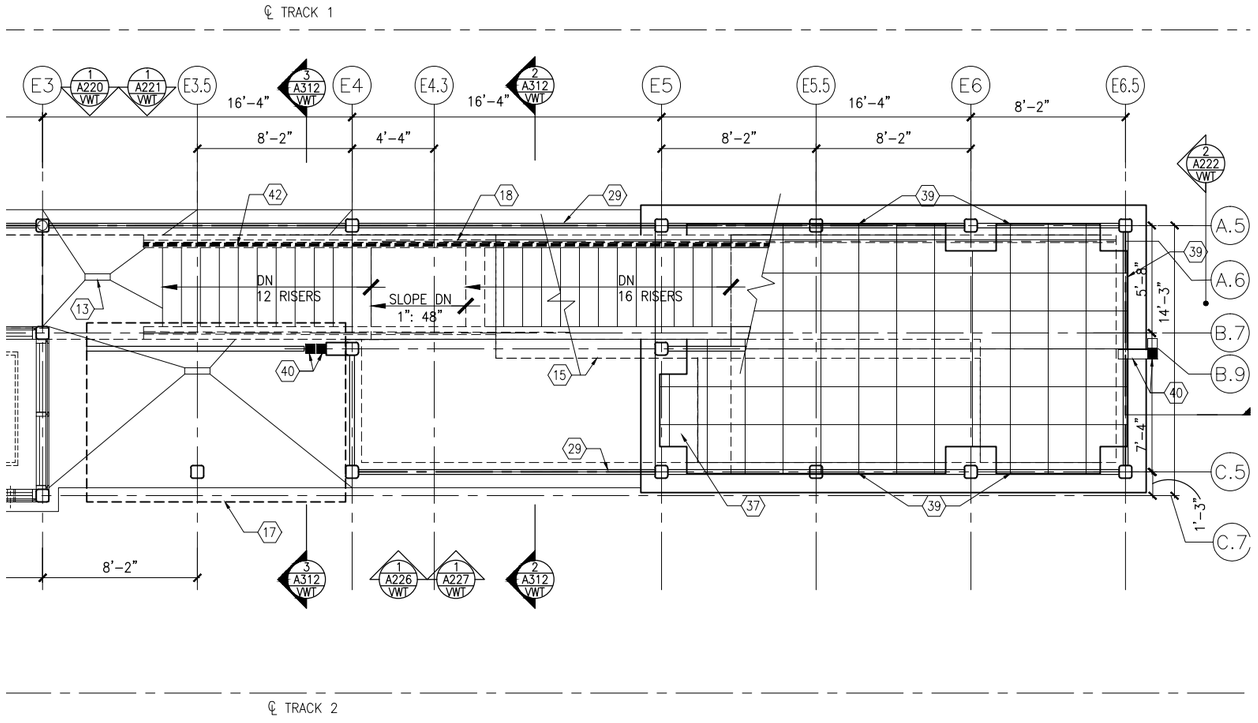
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC PLATFORM LEVEL PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-PLN-120

SHEET 145 OF 273

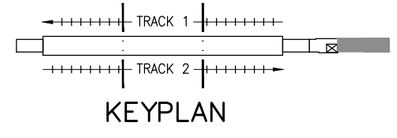
Sep. 21 2015 01:00 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-PLN-120.dwg By: V-lyerN




## 1 VC INTERMEDIATE LEVEL PLAN

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

0 2 4 8
SCALE




KEYPLAN

## SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. CONCRETE HOUSEKEEPING PAD
2. RAINWATER LEADER – SEE PLUMB
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. CONDENSING UNIT – SEE MECH
8. TRANSFORMER – SEE ELEC
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. CMU WALL
13. AREA DRAIN
14. SNOW MELT SYSTEM
15. PRCST CONC WALKWAY
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. PRCST CONC STAIR – SEE STRUCT
19. PRCST CONC WALL PANEL–SEE STRUCT
20. ELEVATOR
21. ELEVATOR VESTIBULE / LOBBY
22. ELEVATOR EQUIPMENT ROOM
23. GUARD RAIL
24. ALUM & GLASS FRAMING SYSTEM
25. VARIABLE MESSAGE SIGN
26. METAL SOFFIT AND FASCIA
27. GUARD RAIL
28. SUMP PIT
29. ARCHITECTURAL WOVEN MESH
30. STEEL COLUMN – SEE STRUCTURAL
31. STEEL BEAM – SEE STRUCTURAL
32. CONNECTION WALL HYDRANT
33. EXPANSION JOINT
34. EXISTING CRASH BARRIER
35. CRASH BARRIER/GUARD RAIL
36. EXISTING BARRIER / SIDEWALK
37. ROOF BELOW – SEE ROOF PLAN
38. CHASE – SEE MECH FOR DUCT WORK
39. COMPOSITE ALUM WALL PANEL
40. PRE–FINISHED METAL DOWNSPOUT
41. LIGHT MOUNTED TO STRUCTURE
42. BIKE RAIL MOUNTED TO STAIR

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

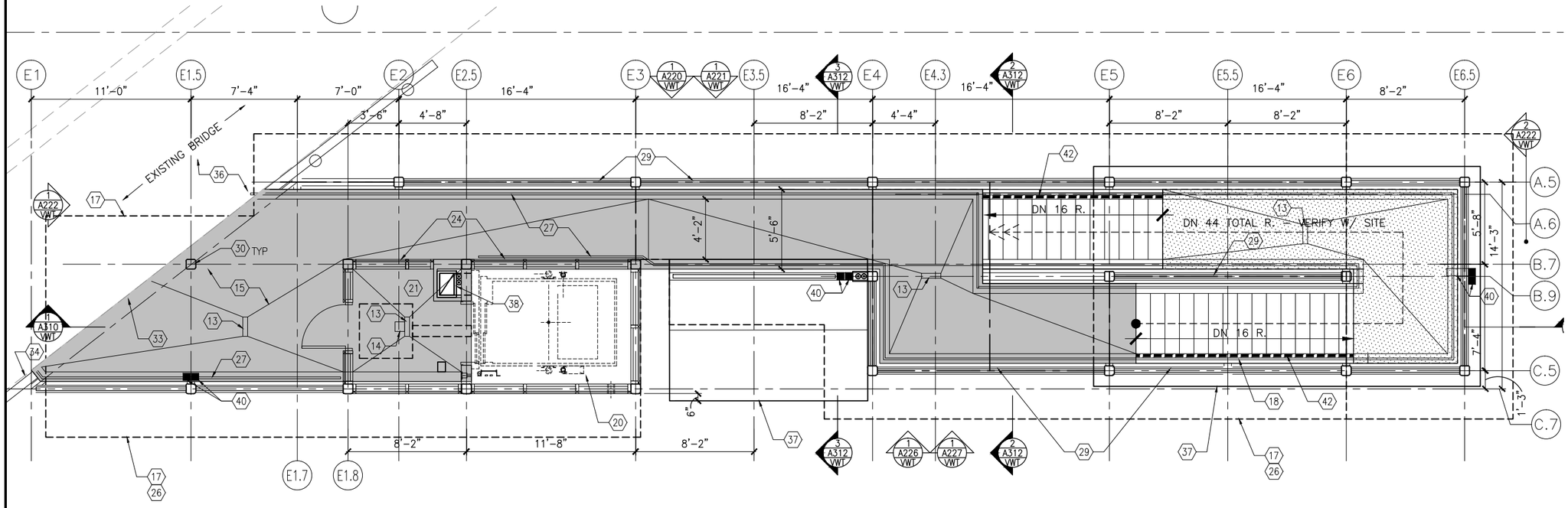
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC INTERMEDIATE LEVEL PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-PLN-121

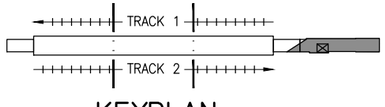
SHEET 146 OF 273

Sep. 21 2015 01:01 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-PLN-121.dwg By: V-IyerN




1 VC BRIDGE LEVEL PLAN
SCALE:1/8"=1'-0"

0 2 4 8
SCALE




KEYPLAN

## SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. CONCRETE HOUSEKEEPING PAD
2. RAINWATER LEADER – SEE PLUMB
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. CONDENSING UNIT – SEE MECH
8. TRANSFORMER – SEE ELEC
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. CMU WALL
13. AREA DRAIN
14. SNOW MELT SYSTEM
15. PRCST CONC WALKWAY
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. PRCST CONC STAIR – SEE STRUCT
19. PRCST CONC WALL PANEL–SEE STRUCT
20. ELEVATOR
21. ELEVATOR VESTIBULE / LOBBY
22. ELEVATOR EQUIPMENT ROOM
23. GUARD RAIL
24. ALUM & GLASS FRAMING SYSTEM
25. VARIABLE MESSAGE SIGN
26. METAL SOFFIT AND FASCIA
27. GUARD RAIL
28. SUMP PIT
29. ARCHITECTURAL WOVEN MESH
30. STEEL COLUMN – SEE STRUCTURAL
31. STEEL BEAM – SEE STRUCTURAL
32. CONNECTION WALL HYDRANT
33. EXPANSION JOINT
34. EXISTING CRASH BARRIER
35. CRASH BARRIER/GUARD RAIL
36. EXISTING BARRIER / SIDEWALK
37. ROOF BELOW – SEE ROOF PLAN
38. CHASE – SEE MECH FOR DUCT WORK
39. COMPOSITE ALUM WALL PANEL
40. PRE-FINISHED METAL DOWNSPOUT
41. LIGHT MOUNTED TO STRUCTURE
42. BIKE RAIL MOUNTED TO STAIR

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

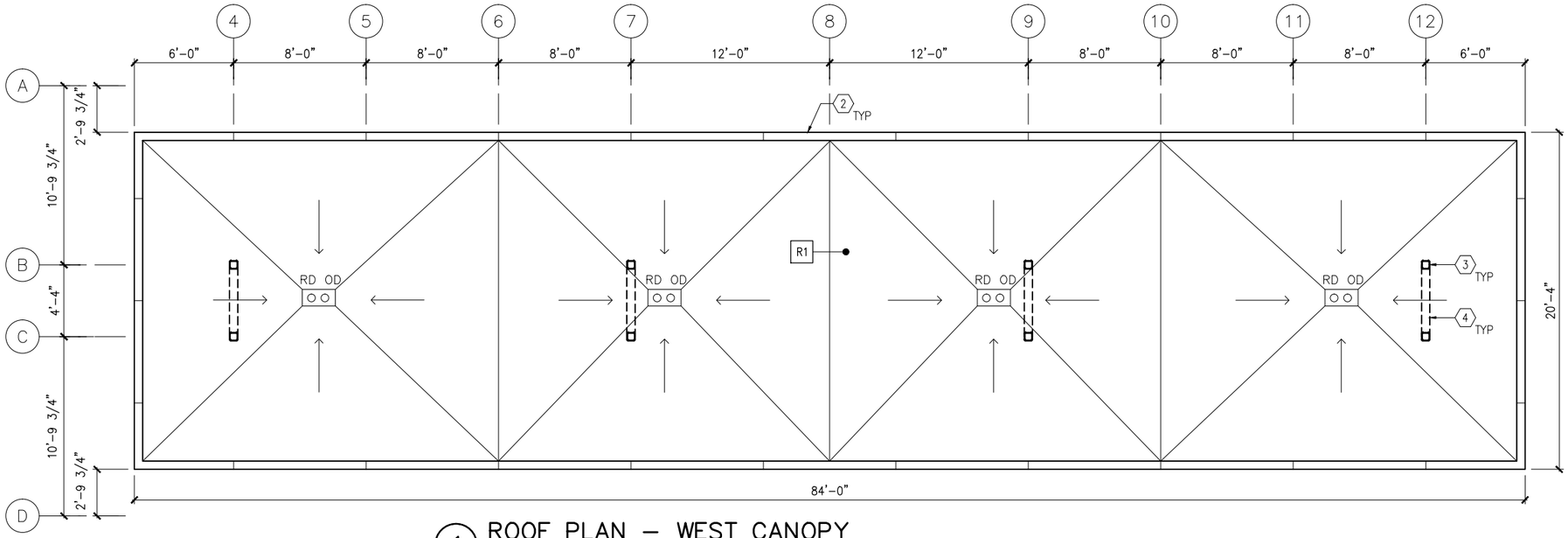
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC BRIDGE LEVEL PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-PLN-122

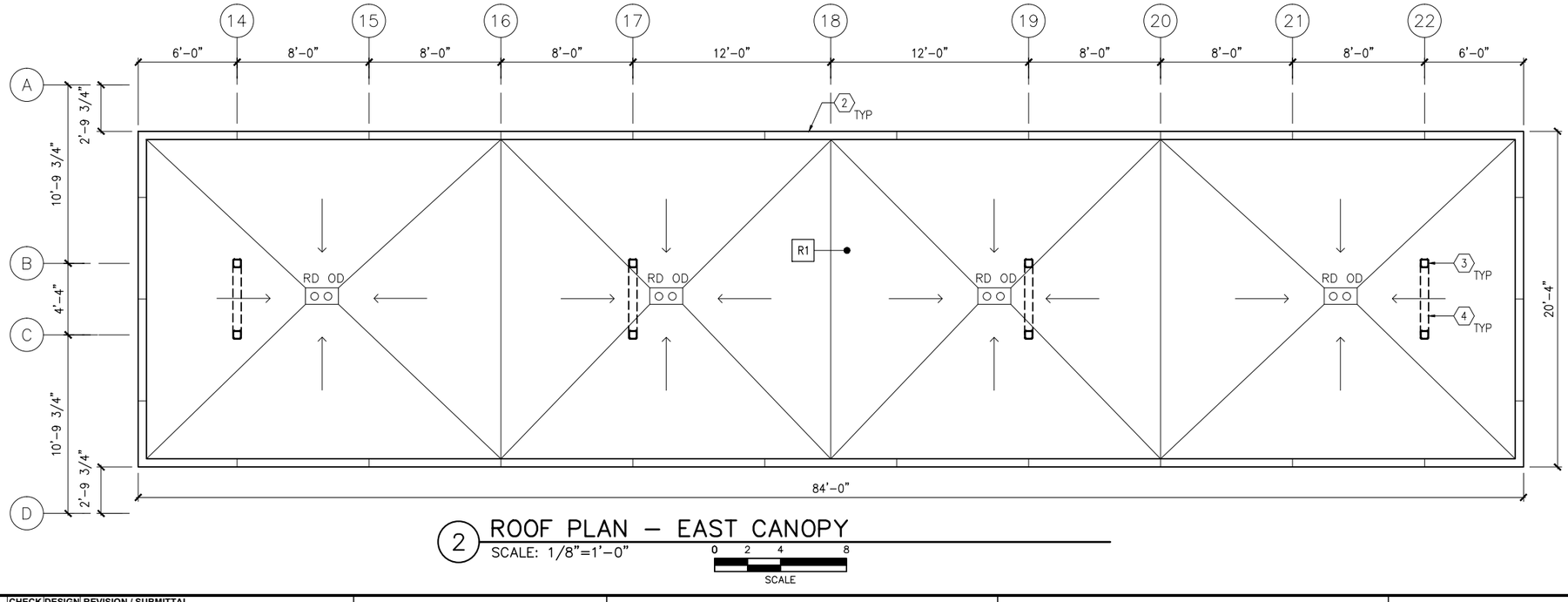
SHEET 147 OF 273

Sep. 21 2015 01:01 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-PLN-122.dwg By: V-lyerN




1 ROOF PLAN – WEST CANOPY
SCALE: 1/8"=1'-0"

SCALE 0 2 4 8




2 ROOF PLAN – EAST CANOPY
SCALE: 1/8"=1'-0"

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE-FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

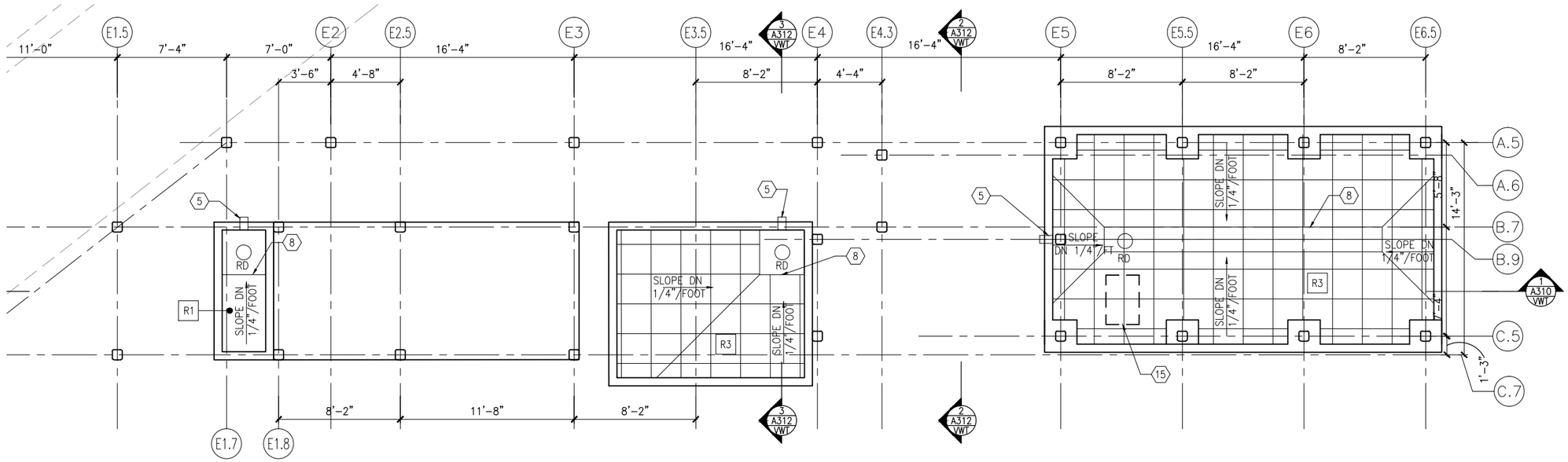
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ROOF PLANS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-PLN-150

SHEET 148 OF 273

Sep, 21 2015 01:02 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-PLN-150.dwg By: V-lyerN




1 VC LOWER ROOF PLAN
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE-FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

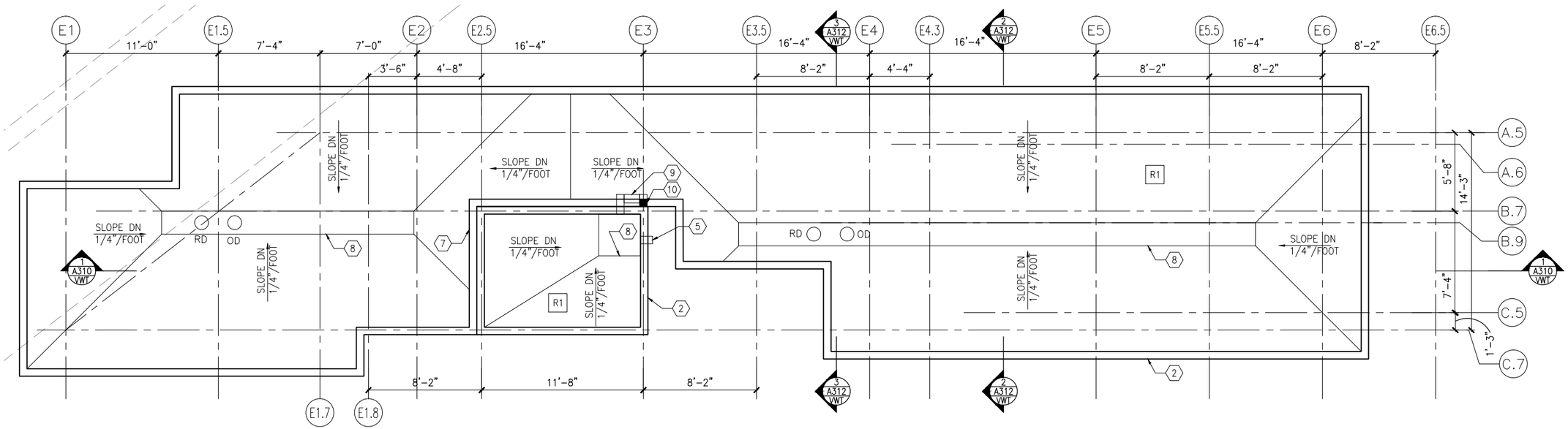
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC ROOF PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-PLN-160

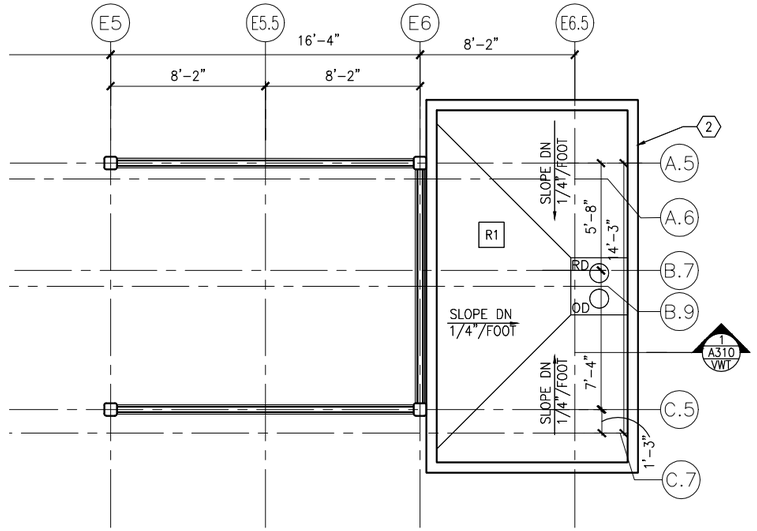
SHEET 149 OF 273




## 1 PARTIAL VC UPPER ROOF PLAN

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

0 2 4 8
SCALE




## 2 PARTIAL VC INTERMEDIATE ROOF PLAN

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

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE-FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

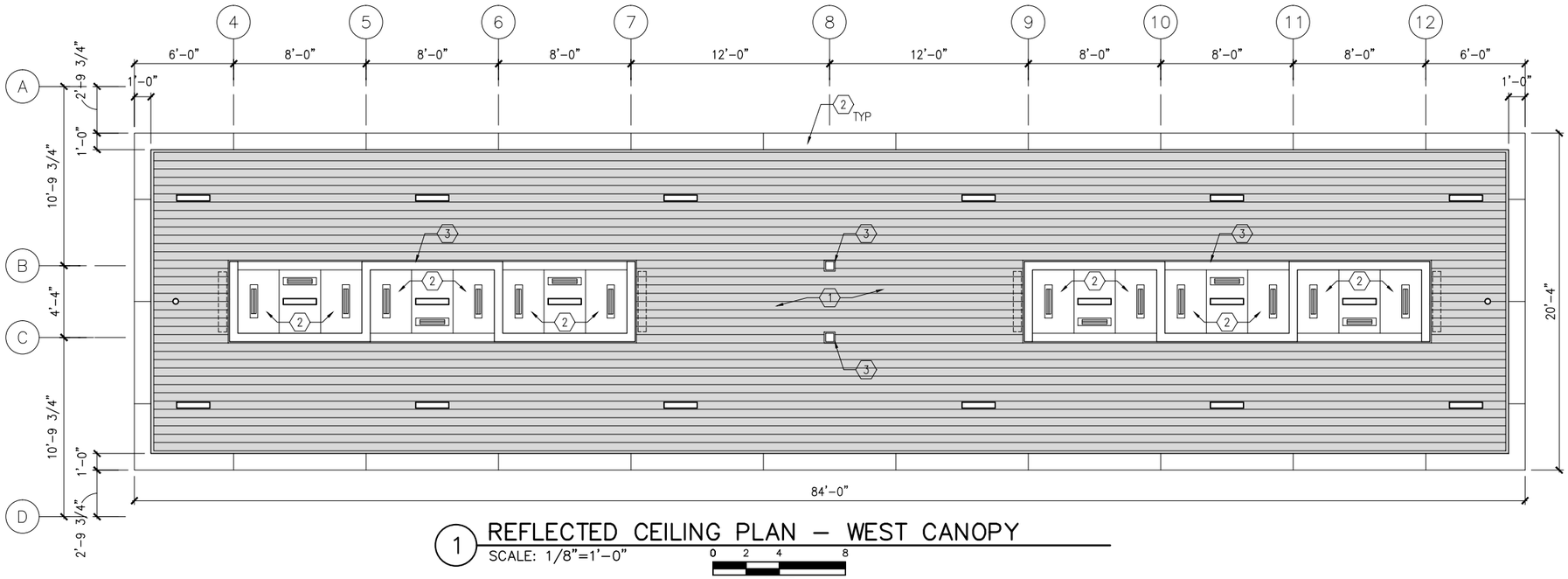
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC ROOF PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-PLN-161

SHEET 150 OF 273

Sep. 21 2015 01:03 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-PLN-161.dwg By: V-lyerN

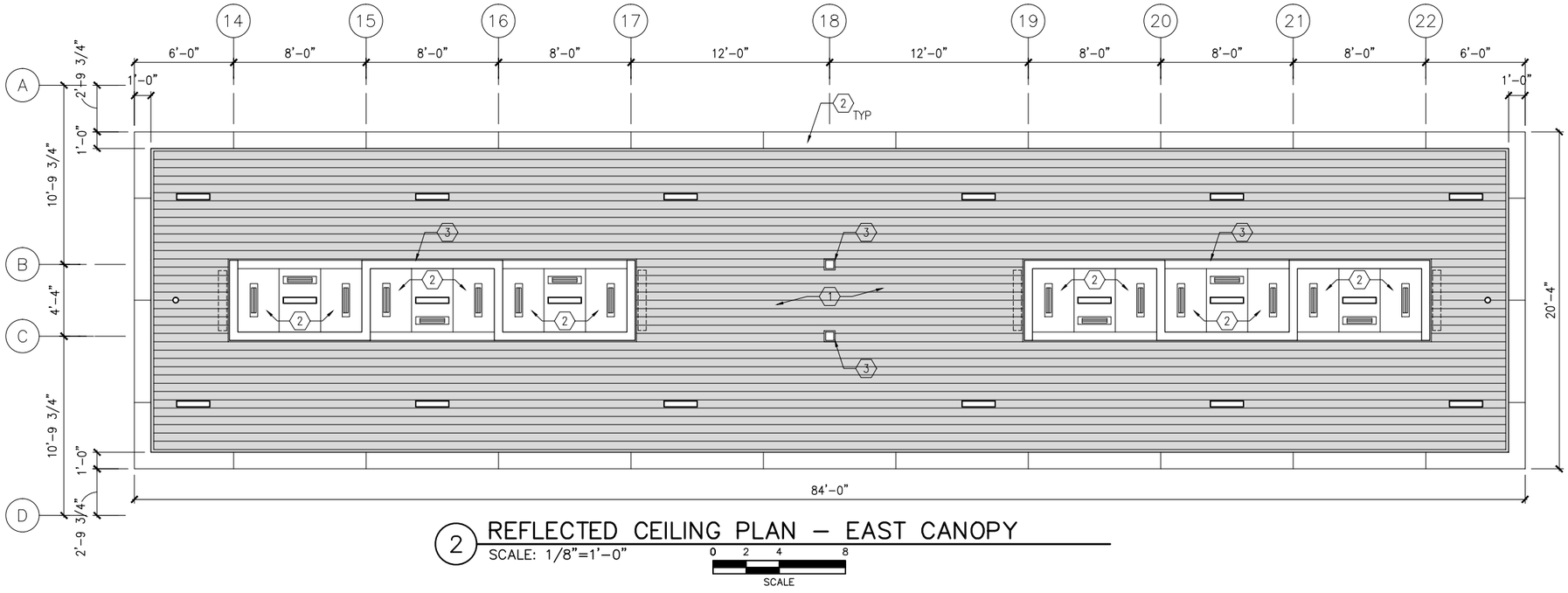



1 REFLECTED CEILING PLAN – WEST CANOPY

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

0 2 4 8

SCALE




2 REFLECTED CEILING PLAN – EAST CANOPY

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

0 2 4 8

SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- S SPEAKER
- M MICROPHONE
- C SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

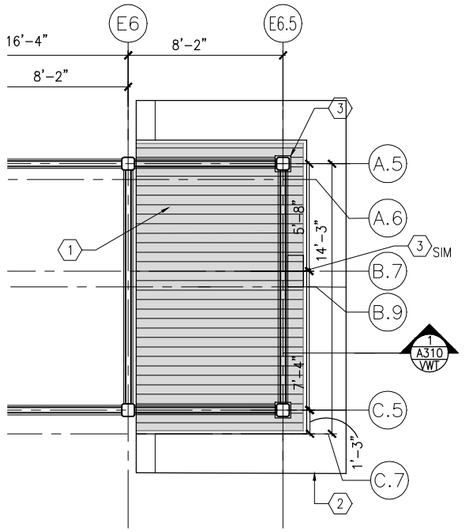
SOUTHWEST Green Line LRT Extension

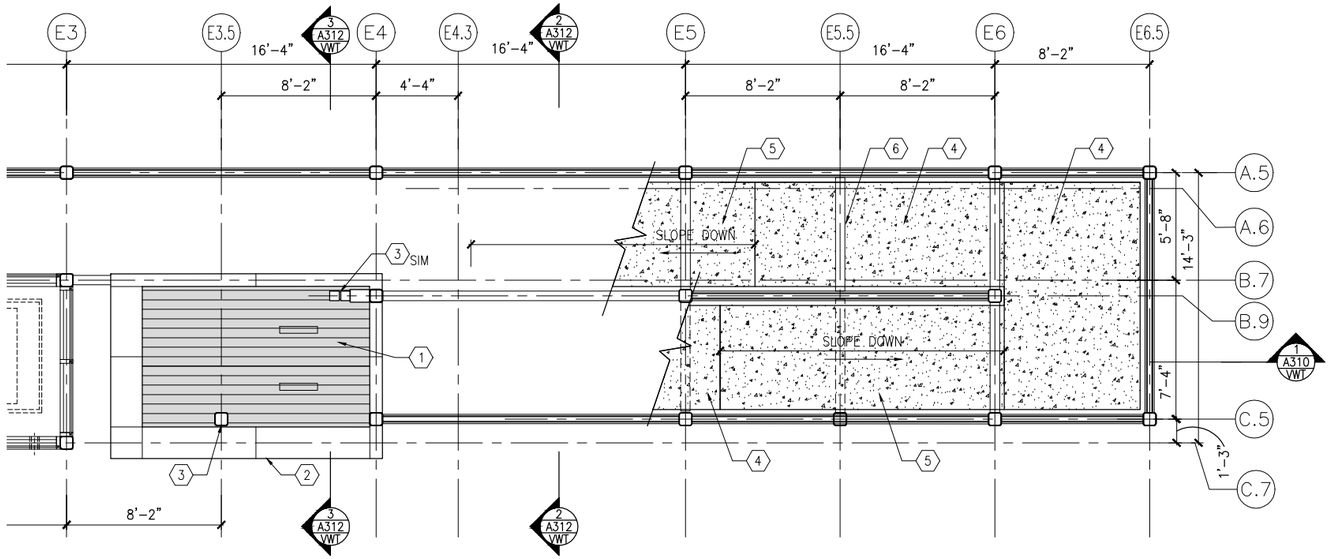
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# REFLECTED CEILING PLANS

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-RCP-180

SHEET 151 OF 273




## 1 VC RCP INTERMEDIATE LEVEL 018

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

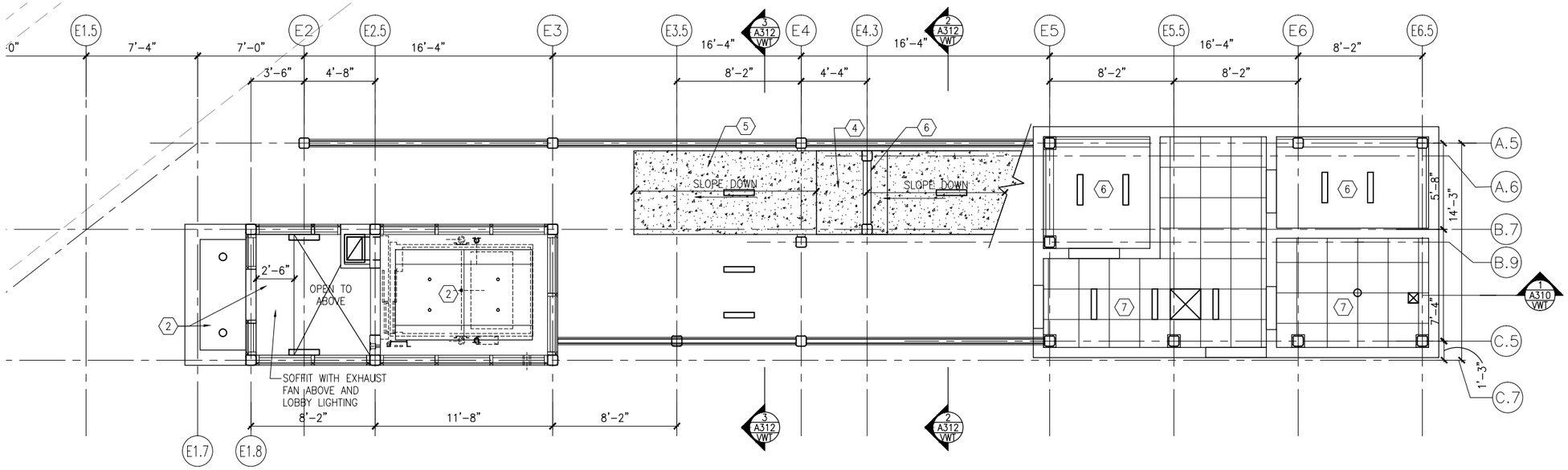
0 2 4 8 SCALE

## 1 VC RCP INTERMEDIATE LEVEL 015

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

0 2 4 8 SCALE

SEE SHEETS A220-A227 FOR LED ACCENT LIGHTING AT FACADE




## 2 VC RCP PLATFORM LEVEL

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

0 2 4 8 SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- S SPEAKER
- M MICROPHONE
- C SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

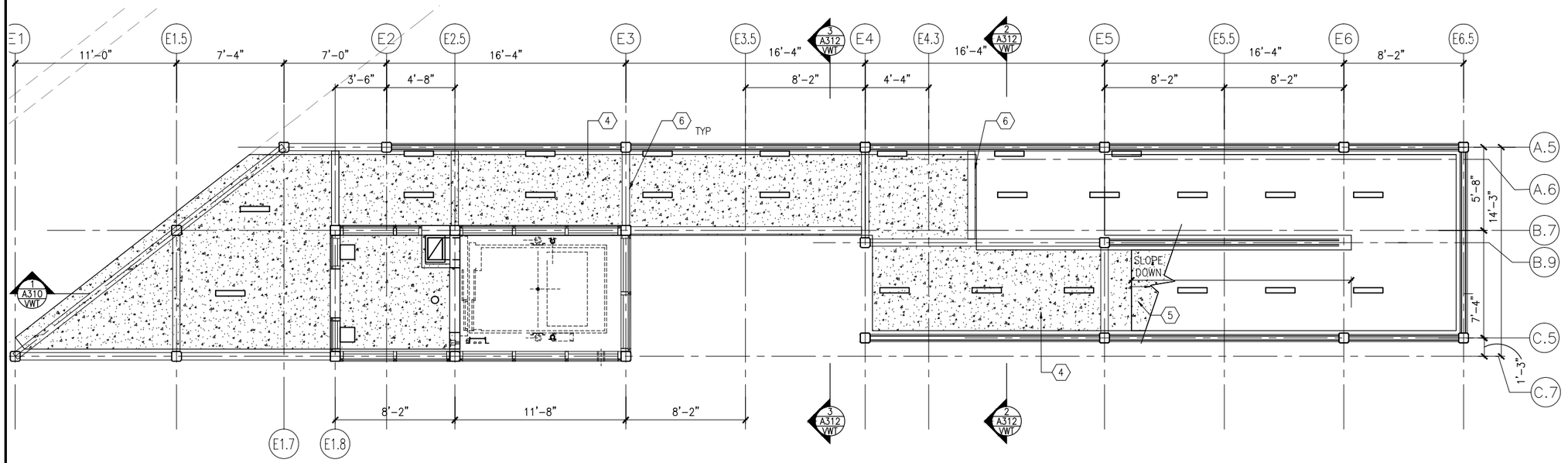
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC RCP INTERMEDIATE AND PLATFORM LEVEL**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-RCP-185

SHEET 152 OF 273

Sep. 21 2015 01:04 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-RCP-185.dwg By: V-IyerN

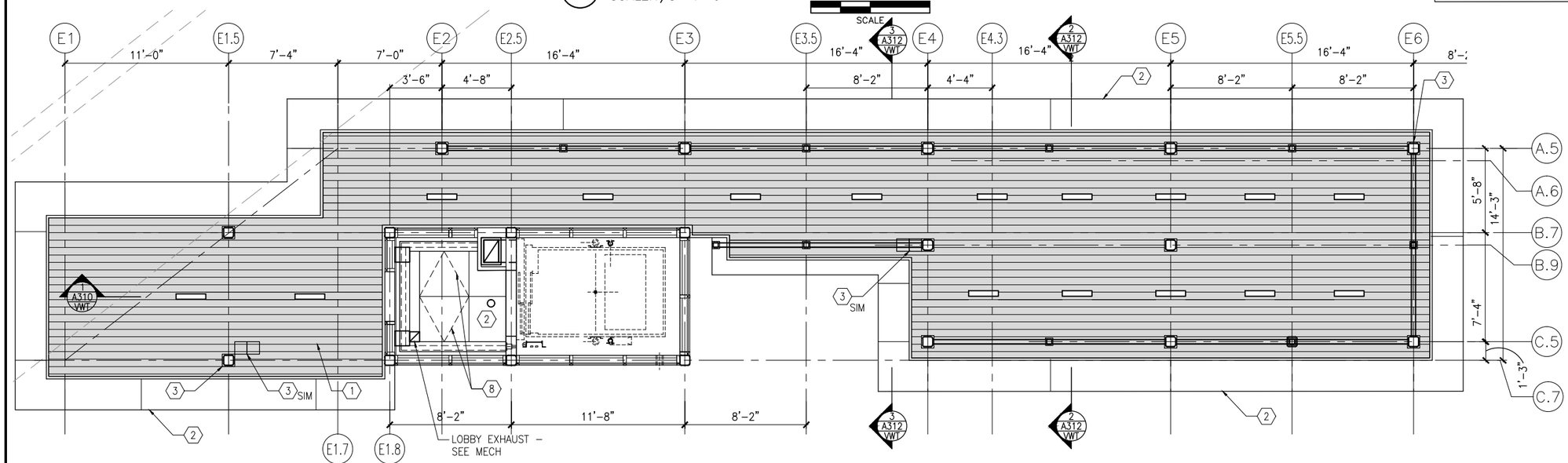



## 1 VC RCP INTERMEDIATE LEVEL 017

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

SCALE 0 2 4 8

SEE SHEETS A220-A227 FOR LED ACCENT LIGHTING AT FACADE




## 2 VC REFLECTED CEILING PLAN BRIDGE LEVEL

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

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES - (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY - SEE STRUCTURAL
5. PRECAST CONCRETE STAIR - SEE STRUCTURAL
6. EXPOSED STRUCTURE - SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- S SPEAKER
- M MICROPHONE
- C SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

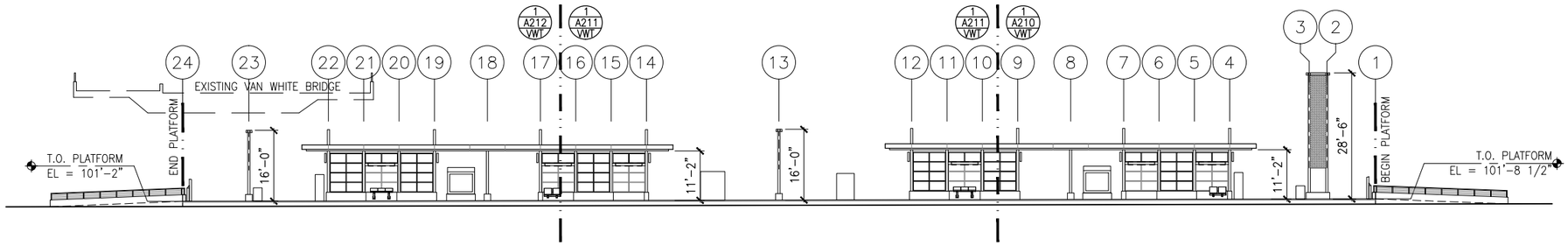
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC RCP INTERMEDIATE AND BRIDGE LEVEL**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-RCP-186

SHEET 153 OF 273

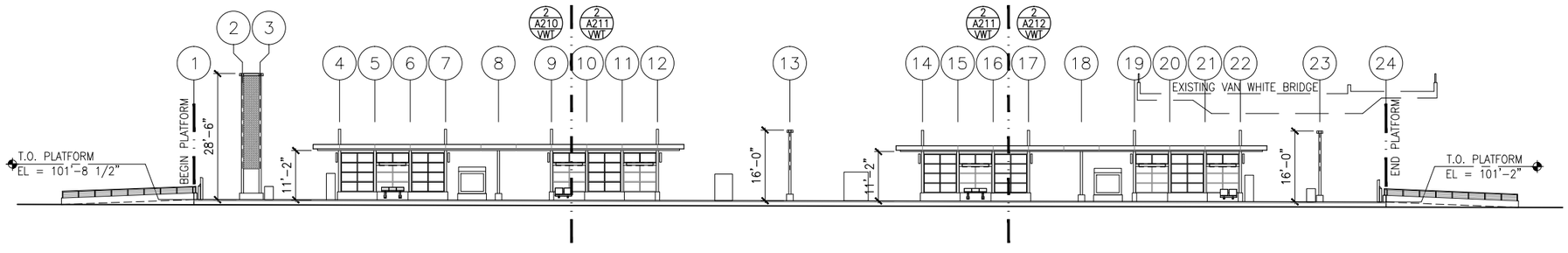
Sep. 21 2015 01:05 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-RCP-186.dwg By: V-lyerN




1 TRACK 1 ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE

(-0.20% SLOPE)*




2 TRACK 2 ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE

(-0.20% SLOPE)*

*VERIFY W/ TRACK PROFILE, ADJUST ELEVATIONS ACCORDINGLY

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

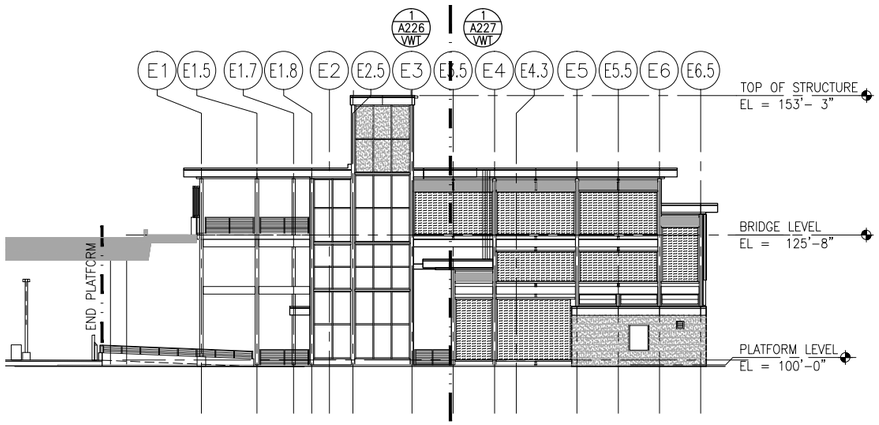
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# ELEVATIONS

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-ELV-200

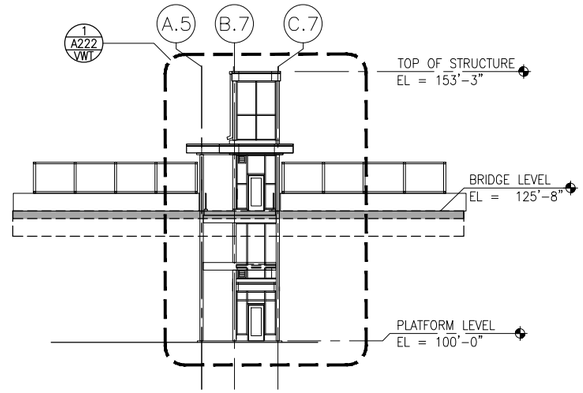
SHEET 154 OF 273

Sep. 21 2015 01:05 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-ELV-200.DWG By: V-lyerN



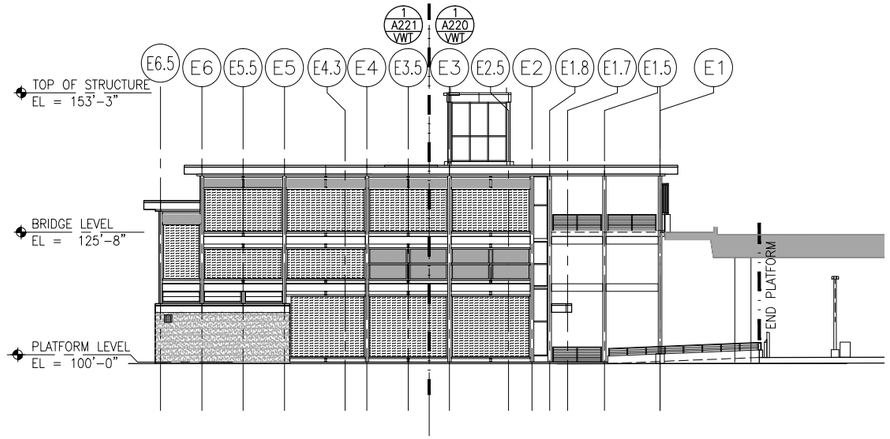

1 VC TRACK 2 ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE



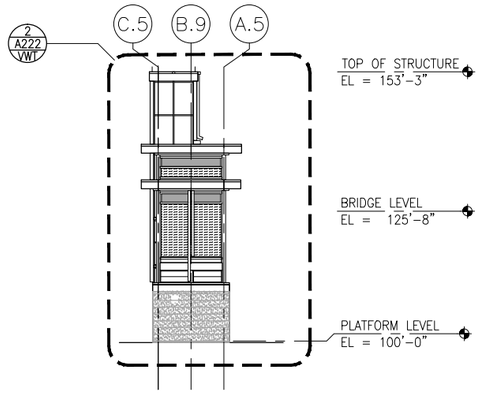

2 VC WEST ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE




3 VC TRACK 1 ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE




4 VC EAST ELEVATION
SCALE: 1"=30'

0 7.5 15 30
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

*VERIFY W/ TRACK PROFILE, ADJUST ELEVATIONS ACCORDINGLY

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

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METROPOLITAN COUNCIL

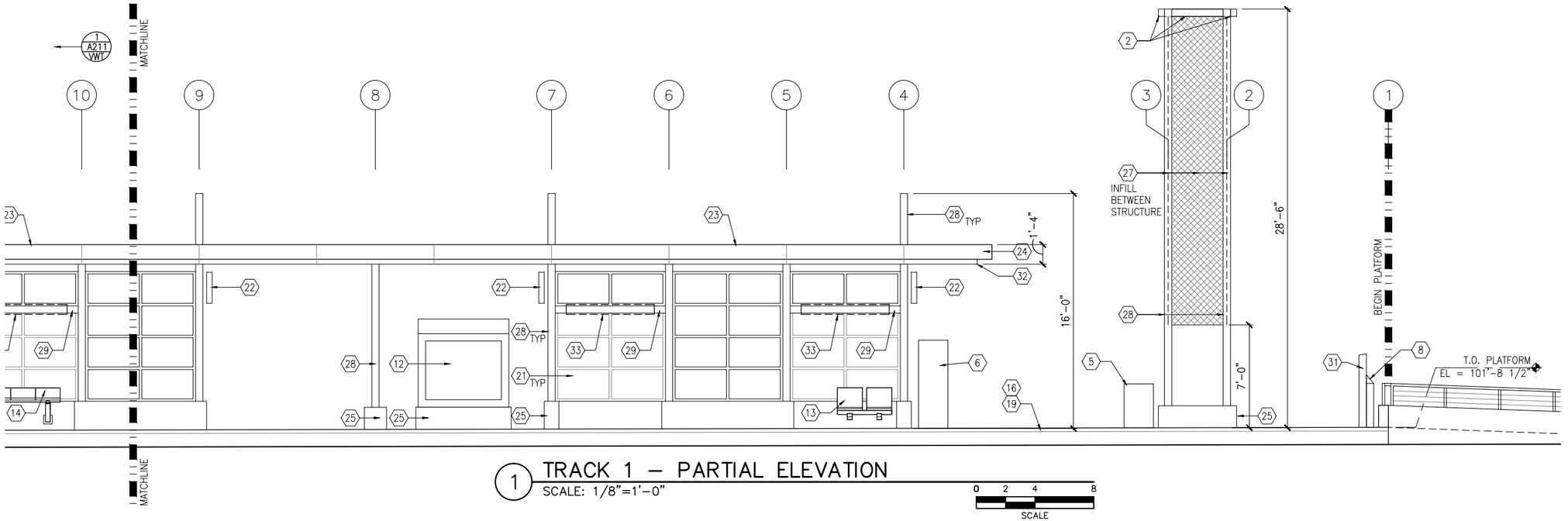
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC ELEVATIONS**

DISCIPLINE: ARCHITECTURE

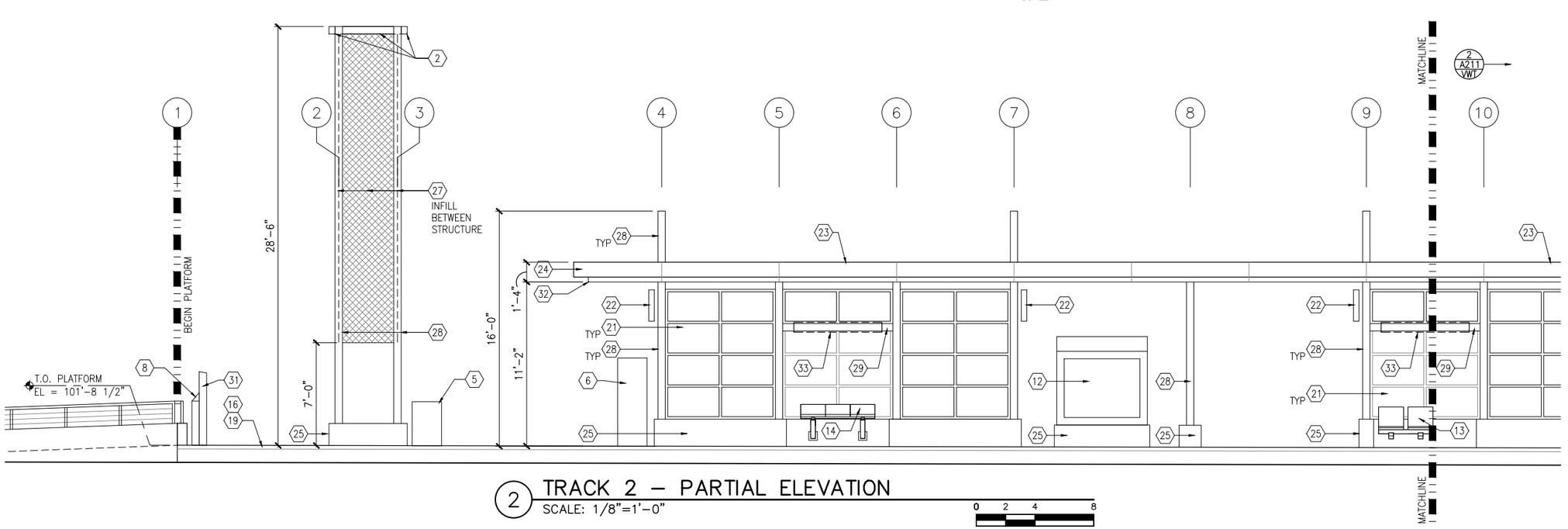
SHEET NAME: E4-VWT-ARC-ELV-201

SHEET 155 OF 273




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

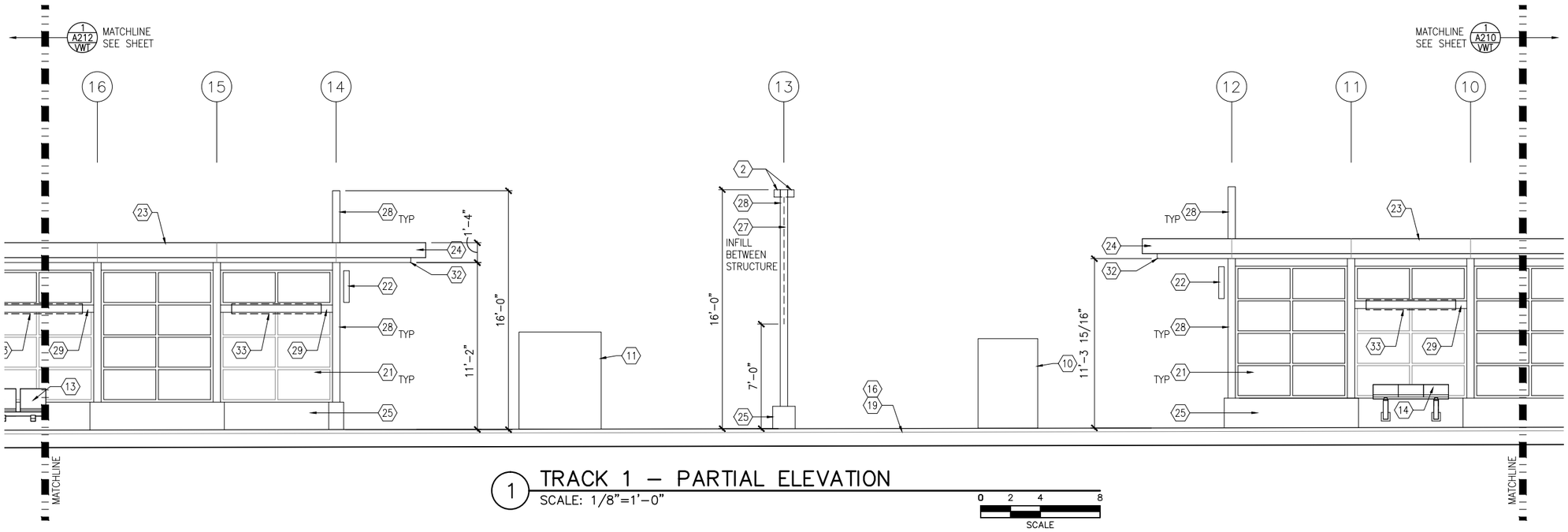
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**WEST PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

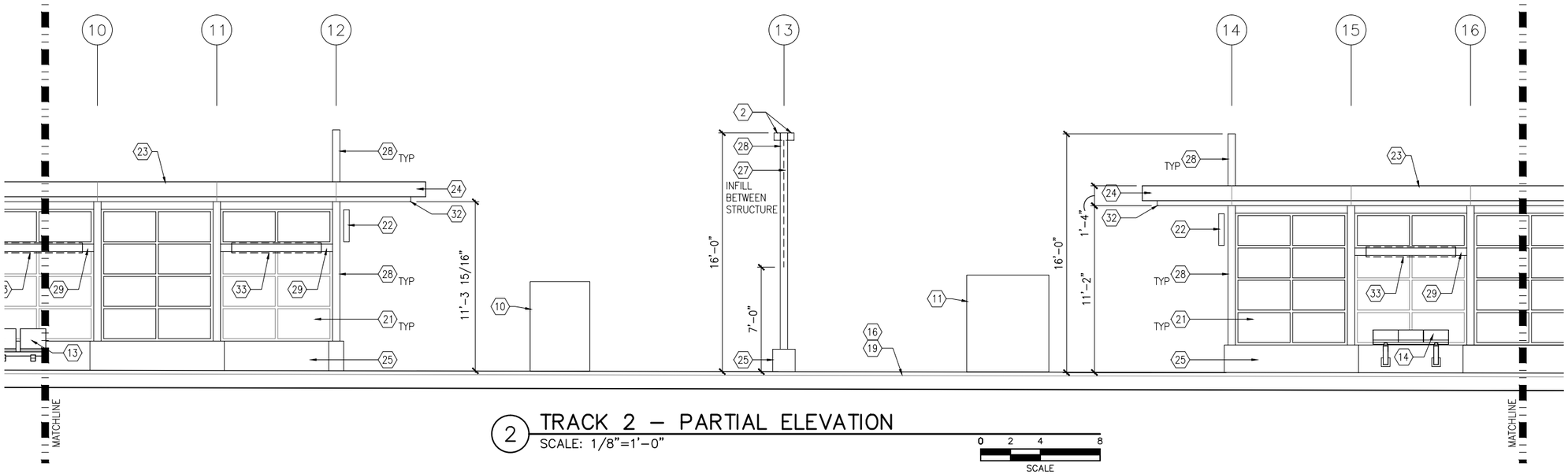
SHEET NAME: E4-VWT-ARC-ELV-210

SHEET 156 OF 273




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

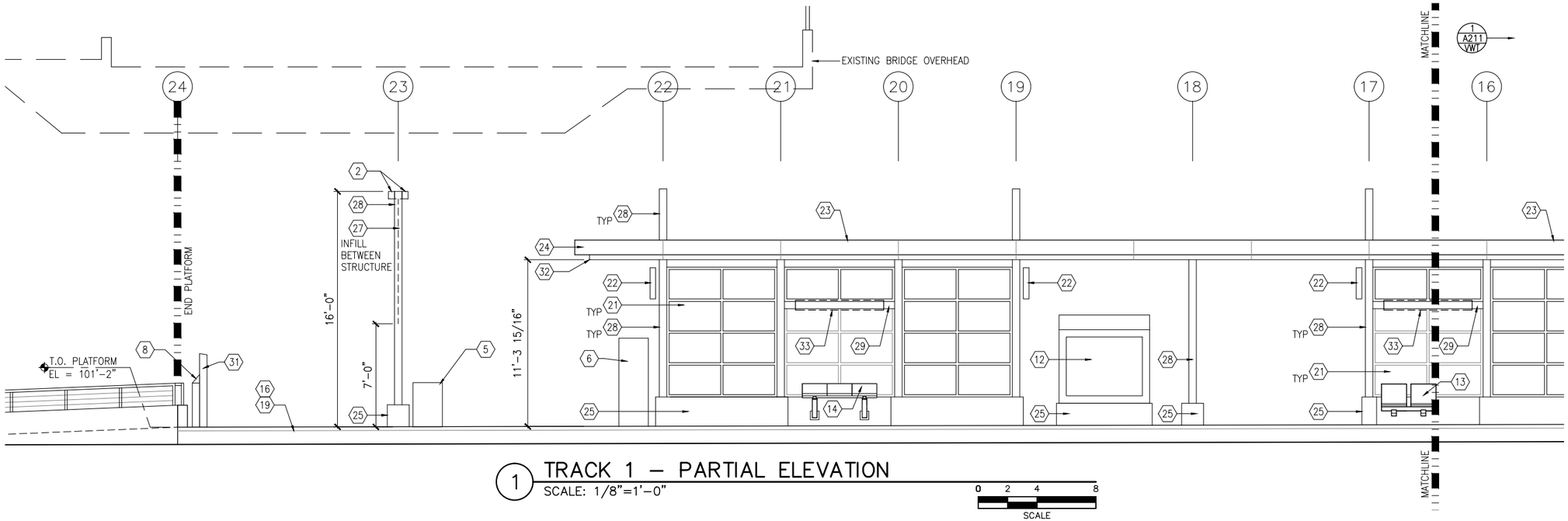
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**MIDDLE PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-ELV-211

SHEET 157 OF 273

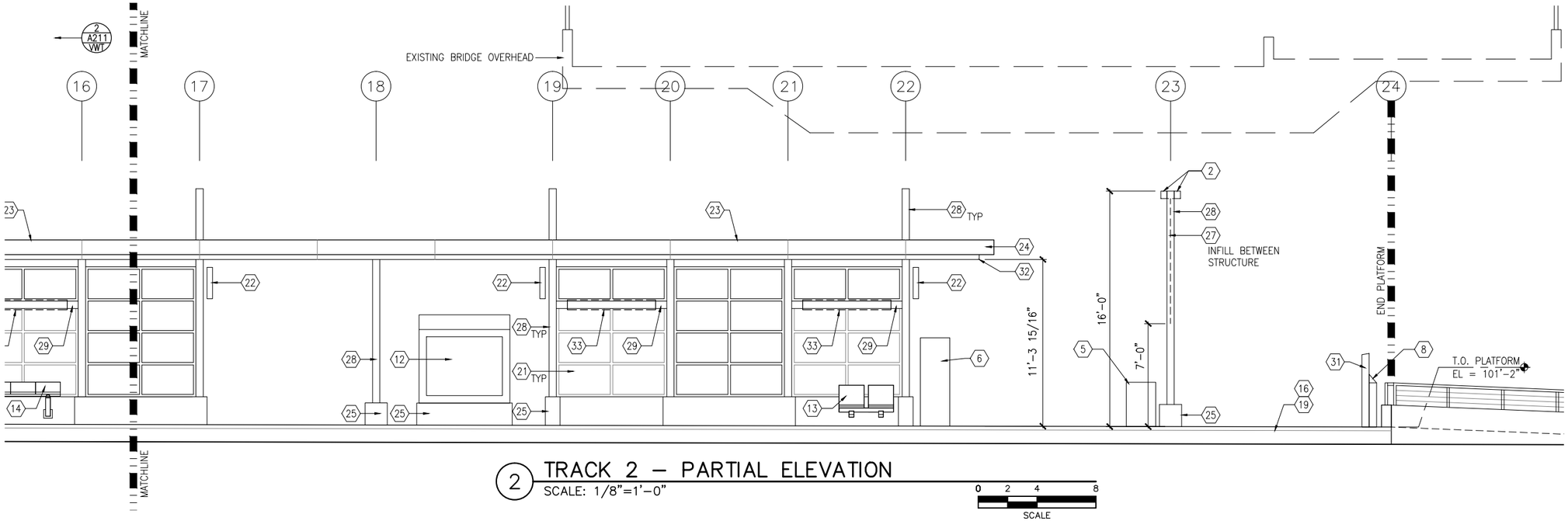
Sep, 21 2015 01:07 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-ELV-211.dwg By: V-IyerN




1 TRACK 1 – PARTIAL ELEVATION

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

SCALE 0 2 4 8




2 TRACK 2 – PARTIAL ELEVATION

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

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

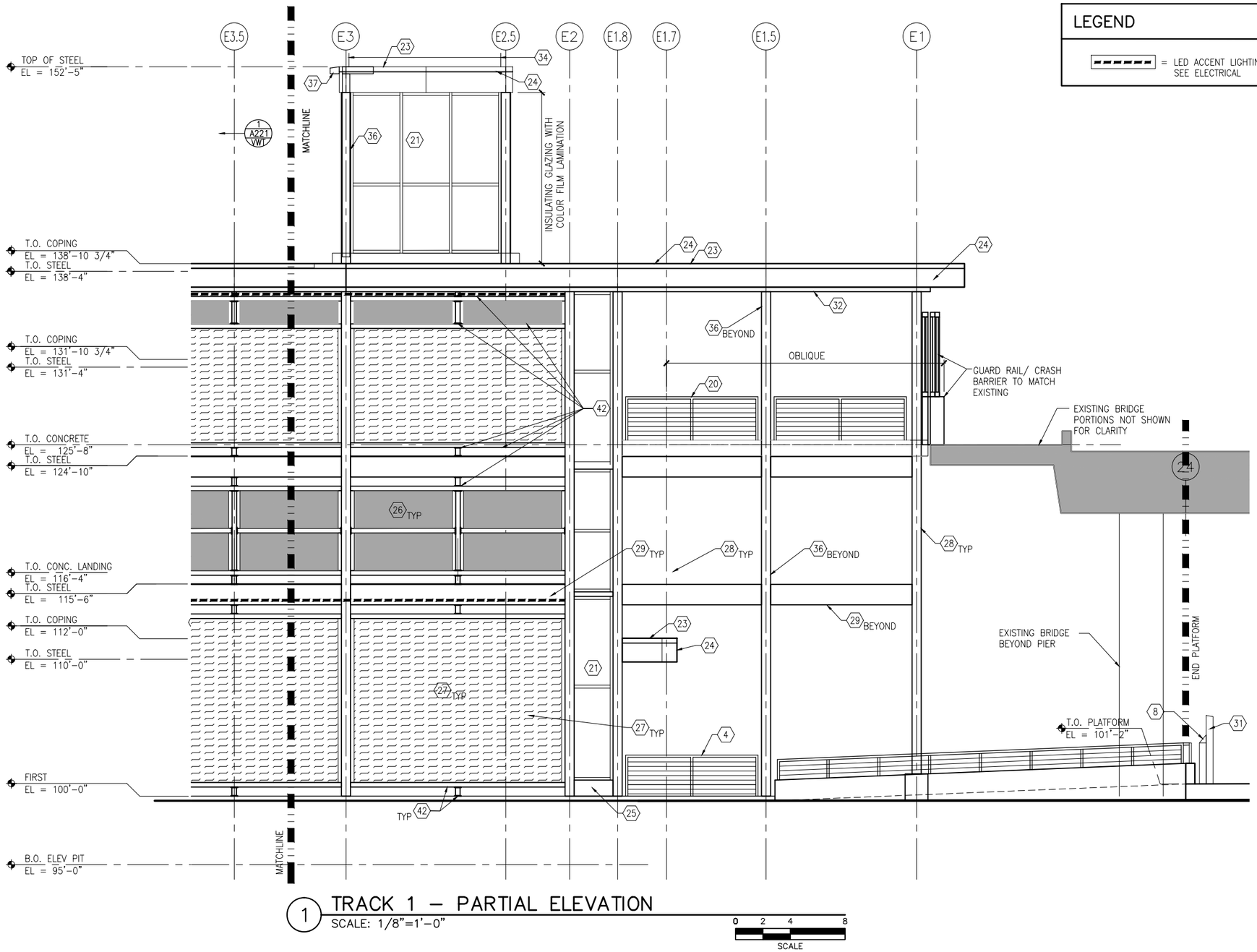
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# EAST PARTIAL ELEVATIONS

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-ELV-212

SHEET 158 OF 273

Sep. 21 2015 01:07 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-ELV-212.dwg By: V-IyerN




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## LEGEND

= LED ACCENT LIGHTING – SEE ELECTRICAL

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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| | | | | | |

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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

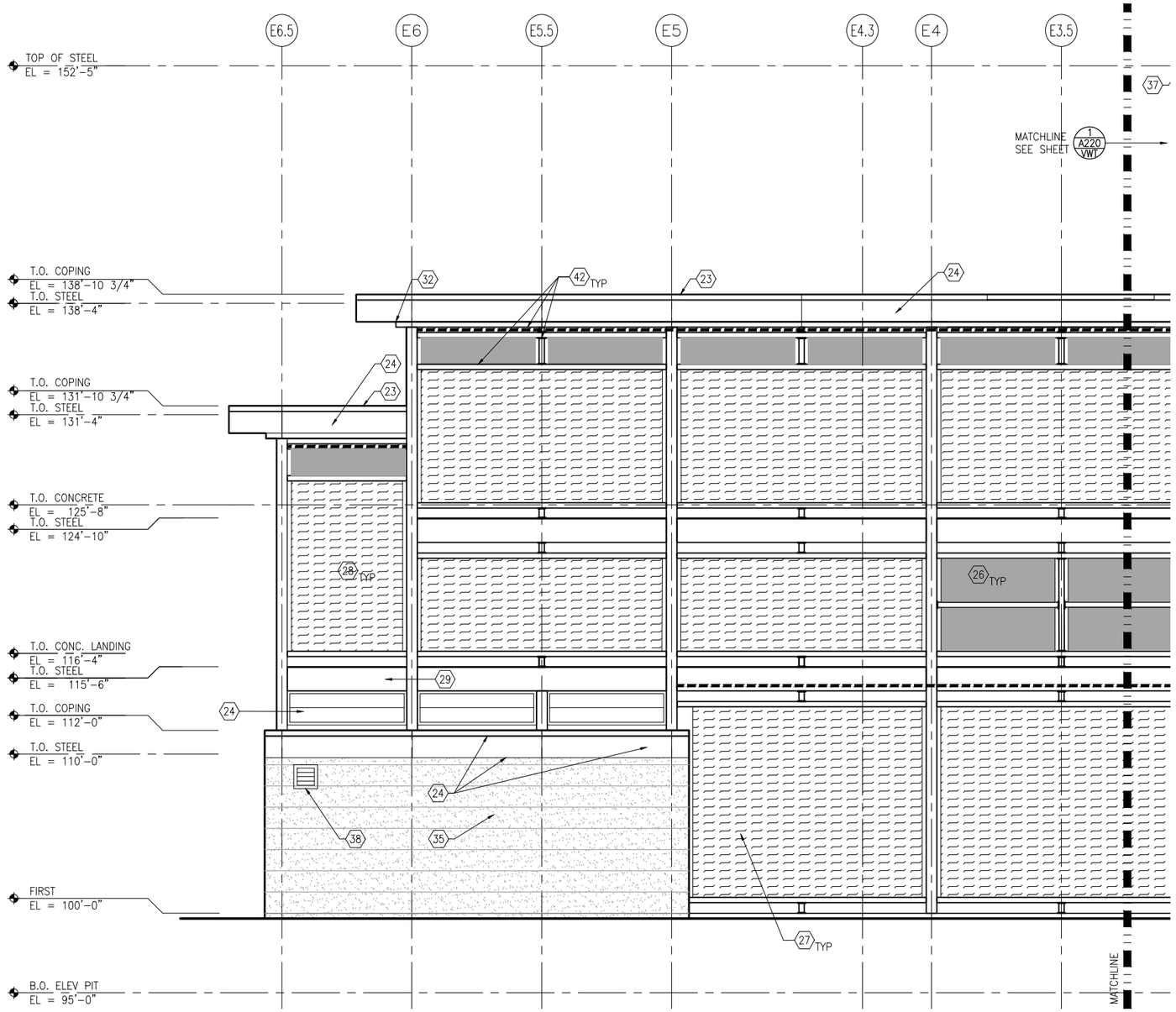
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC TRACK 1 - PARTIAL ELEVATION**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-ELV-220

SHEET 159 OF 273

Sep. 21 2015 01:08 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-ELV-220.dwg By: V-lyerN




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## LEGEND

= LED ACCENT LIGHTING – SEE ELECTRICAL

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

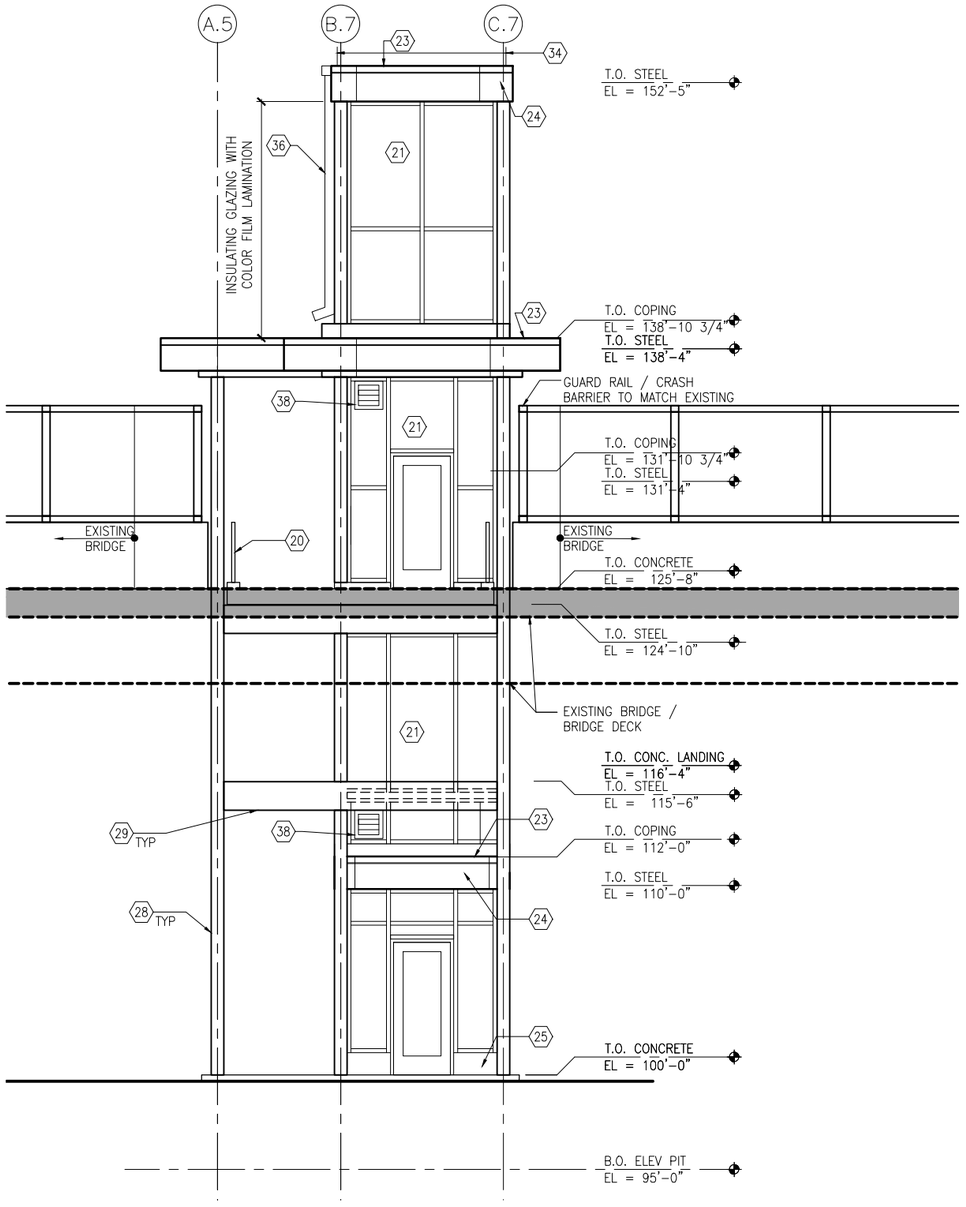
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC TRACK 1 - PARTIAL ELEVATION**

DISCIPLINE: ARCHITECTURE

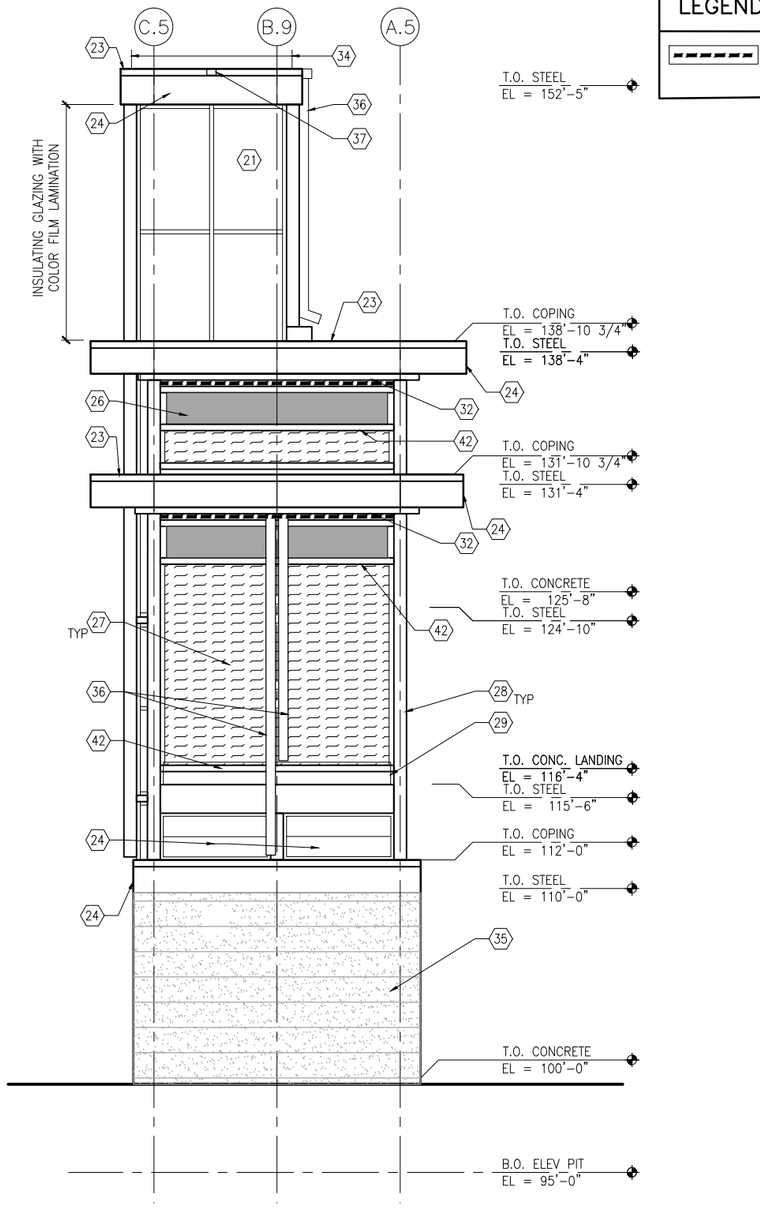
SHEET NAME: E4-VWT-ARC-ELV-221

SHEET 160 OF 273




1 VC WEST ELEVATION
SCALE: 1/8"=1'-0"

SCALE 0 2 4 8




2 VC EAST ELEVATION
SCALE: 1/8"=1'-0"

SCALE 0 2 4 8

## LEGEND

= LED ACCENT LIGHTING – SEE ELECTRICAL

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
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28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
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43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

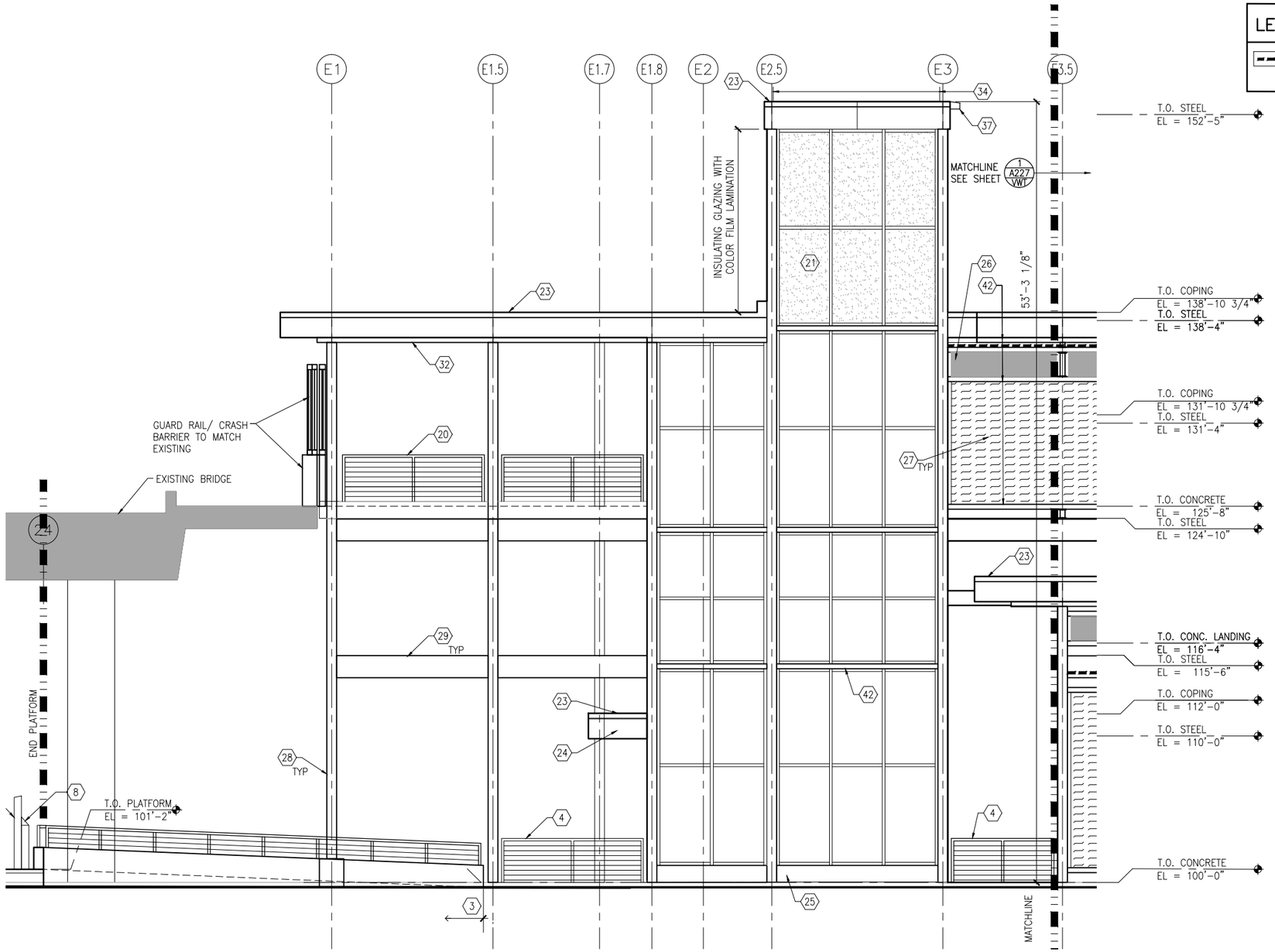
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC SIDE ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-ELV-222

SHEET 161 OF 273

Sep. 21 2015 01:09 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-ELV-222.dwg By: V-lyerN




1 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## LEGEND

= LED ACCENT LIGHTING – SEE ELECTRICAL

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
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11. ELECTRICAL CABINET
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43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

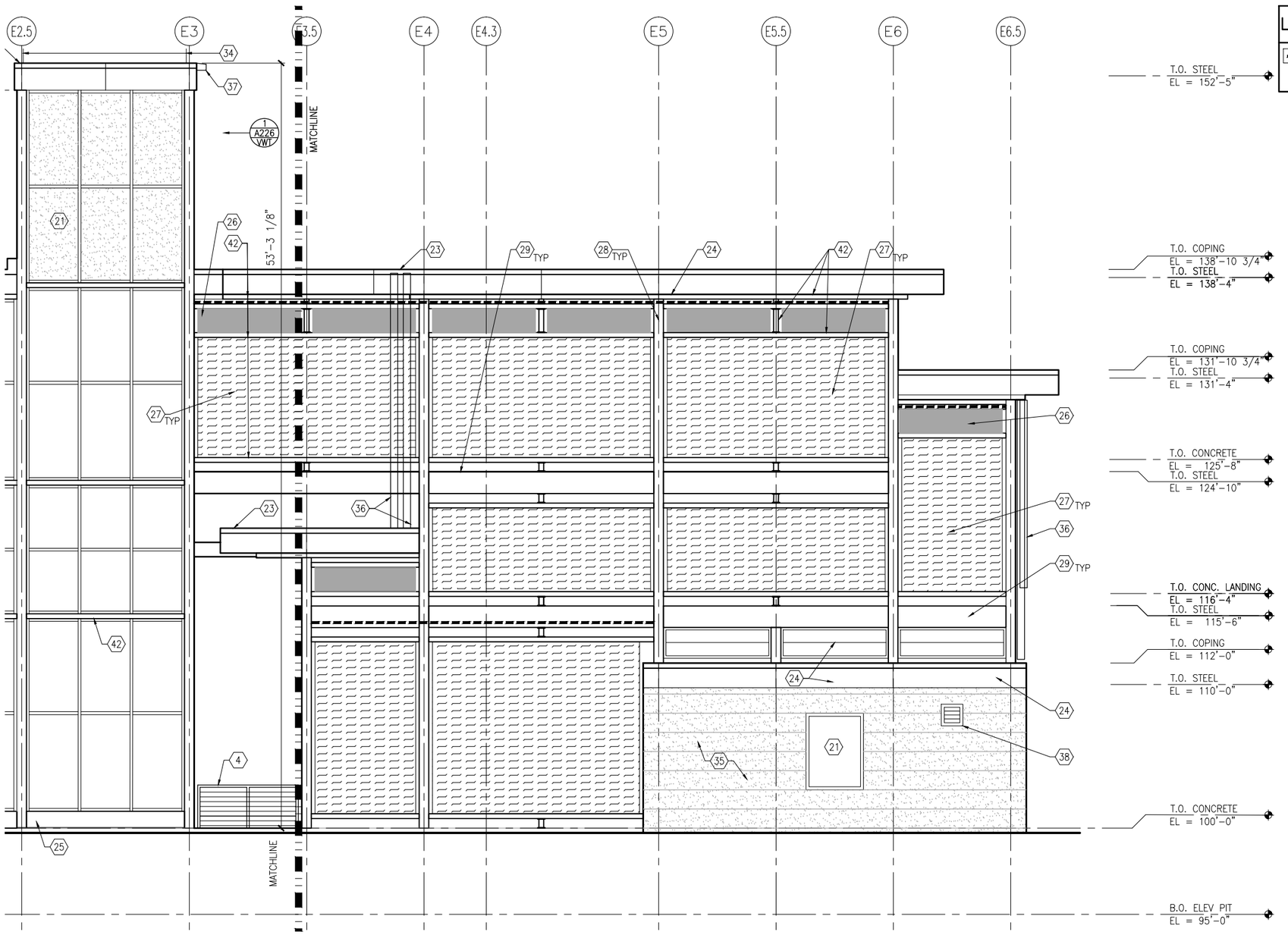
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC TRACK 2 - PARTIAL ELEVATION**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-ELV-226

SHEET 162 OF 273

Sep. 21 2015 01:10 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-ELV-226.dwg By: V-lyerN




1 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## LEGEND

= LED ACCENT LIGHTING – SEE ELECTRICAL

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
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18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
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43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

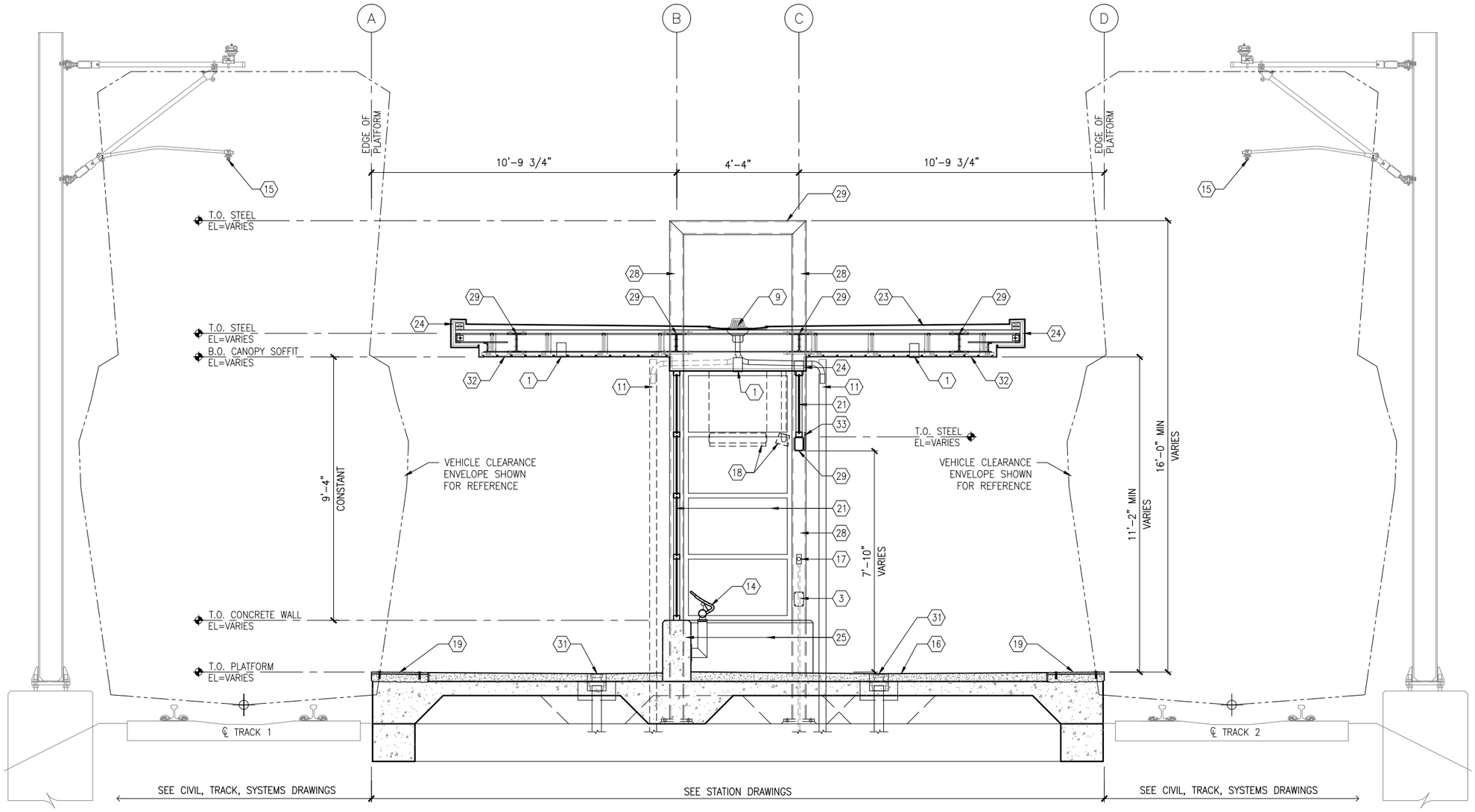
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC TRACK 2 - PARTIAL ELEVATION**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-ELV-227

SHEET 163 OF 273

Sep. 21 2015 01:11 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-ELV-227.dwg By: V-IyerN




## 1 TYPICAL PLATFORM SECTION

SCALE: 1/4"=1'-0"

0 1 2 4
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. LIGHT RECESSED IN SOFFIT
2. LIGHT MOUNTED TO STRUCTURE
3. HAND HOLE IN STEEL STRUCTURE
4. HAND RAIL
5. SECURITY CAMERA
6. TICKET VENDING MACHINE
7. EMERGENCY TELEPHONE LIGHT
8. EMERGENCY CALL BOX
9. ROOF DRAIN
10. PRE-FINISHED METAL GUTTER
11. PRE-FINISHED METAL DOWNSPOUT
12. PRE-FINISHED METAL SCUPPER
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. HEATER PUSH BUTTON CONTROLS
18. INFRARED HEATER
19. DETECTABLE WARNING PAVER AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. AREA DRAIN
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. PC CONC WALKWAY – SEE STRUCT
35. PC CONC STAIR – SEE STRUCT
36. PC CONC WALL PANEL
37. SECONDARY STEEL FRAMING – SEE STRUCTURAL
38. COMPOSITE ALUM PANEL

## LEGEND

- CIP CONCRETE
- ARCHITECTURAL CONCRETE
- R– ROOF TYPE – SEE A150

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

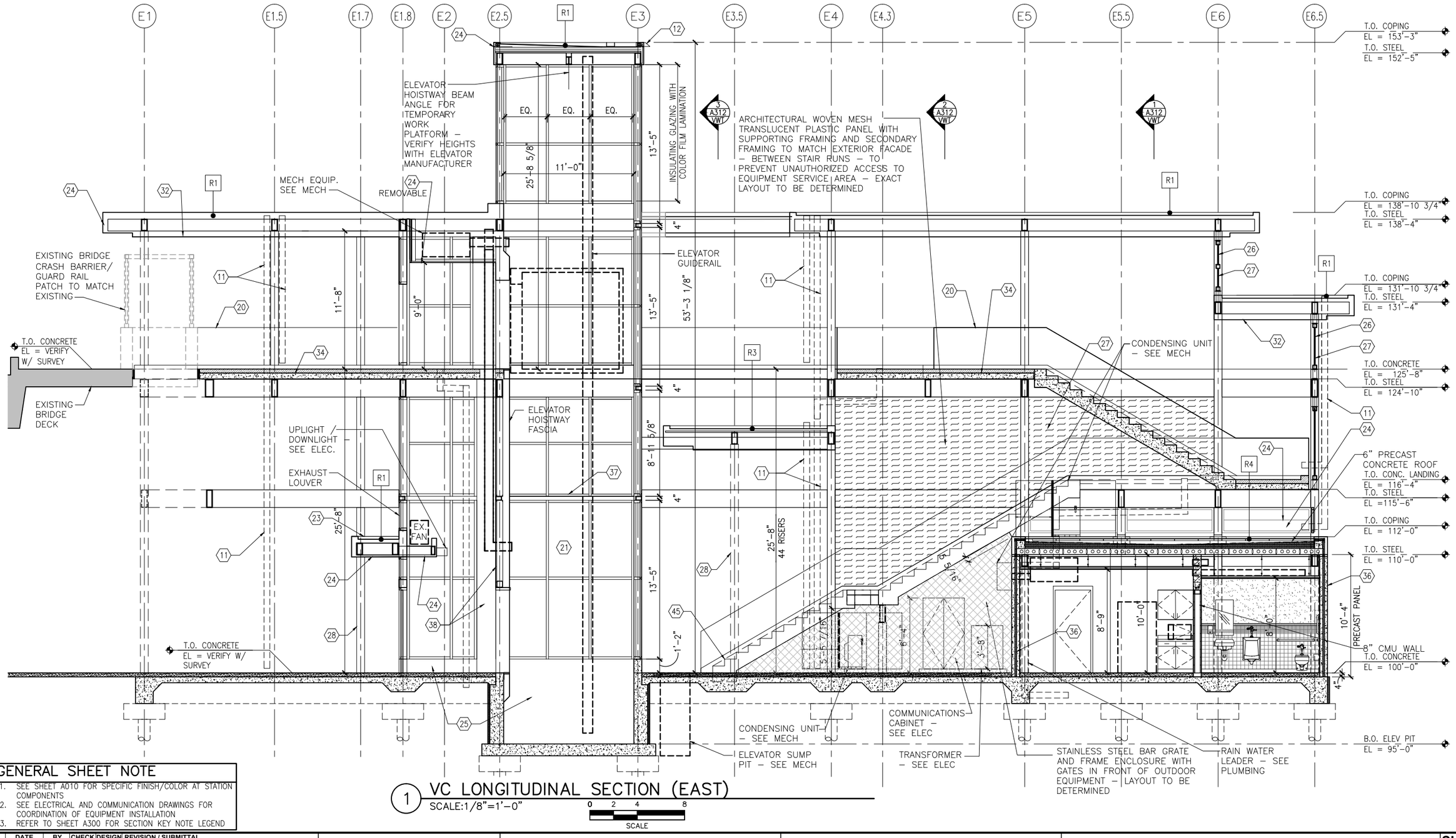
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**TYPICAL PLATFORM SECTION**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-SCT-300

SHEET 164 OF 273

Sep. 21 2015 01:11 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-SCT-300.dwg By: V-IyerN




1 VC LONGITUDINAL SECTION (EAST)
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTE

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION
3. REFER TO SHEET A300 FOR SECTION KEY NOTE LEGEND

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

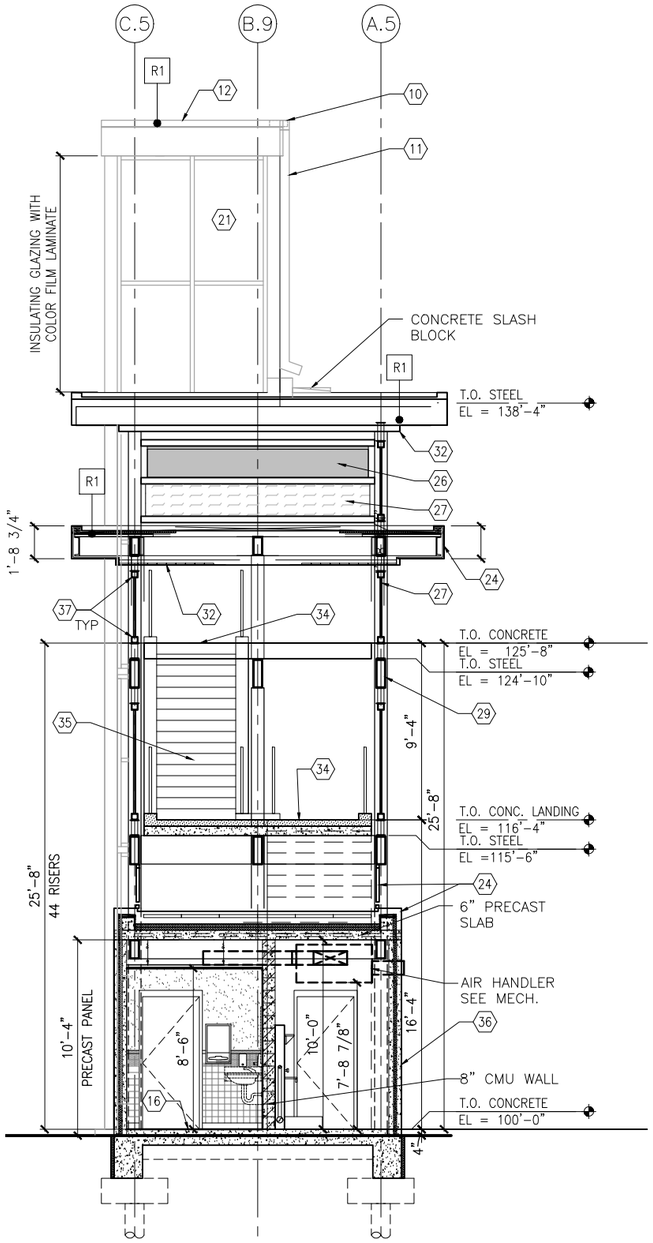
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# VC LONGITUDINAL SECTION

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-SCT-310

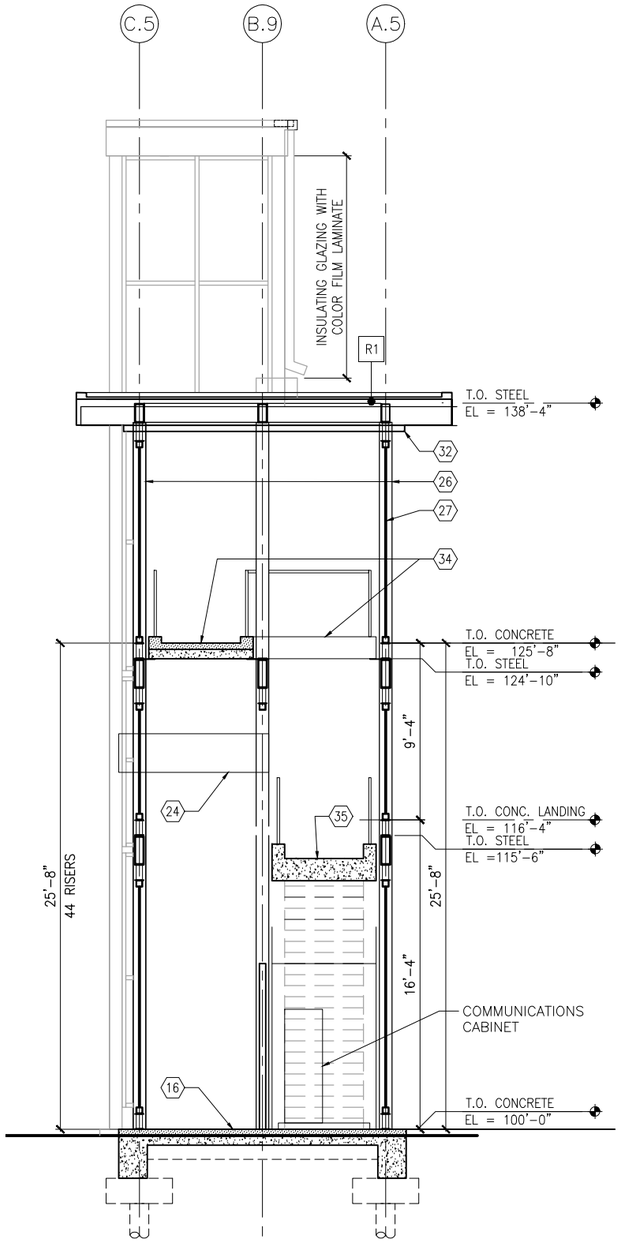
SHEET 165 OF 273

Sep. 21 2015 02:55 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\VAN WHITE STATION\E4-VWT-ARC-SCT-310.dwg By: V-lyerN




1 VC TRANSVERSE SECTION
SCALE:1/8"=1'-0"

SCALE 0 2 4 8




2 VC TRANSVERSE SECTION
SCALE:1/8"=1'-0"

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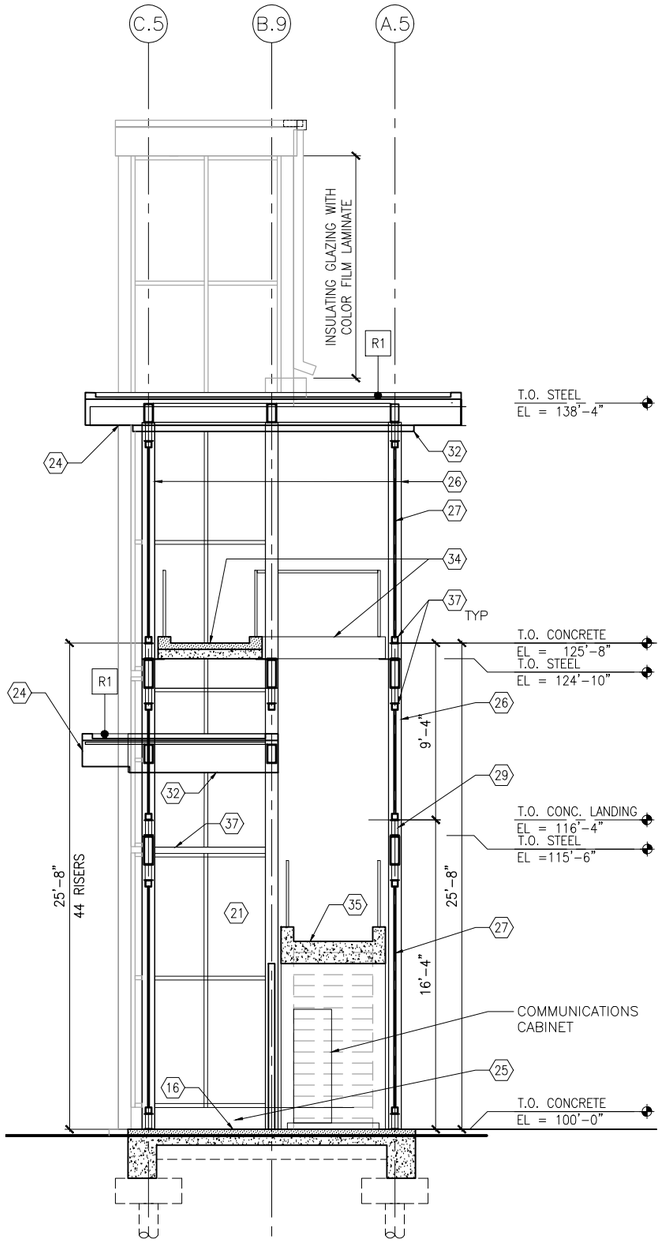


3 VC TRANSVERSE SECTION
SCALE:1/8"=1'-0"

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. LIGHT RECESSED IN SOFFIT
2. LIGHT MOUNTED TO STRUCTURE
3. HAND HOLE IN STEEL STRUCTURE
4. HAND RAIL
5. SECURITY CAMERA
6. TICKET VENDING MACHINE
7. EMERGENCY TELEPHONE LIGHT
8. EMERGENCY CALL BOX
9. ROOF DRAIN
10. PRE-FINISHED METAL GUTTER
11. PRE-FINISHED METAL DOWNSPOUT
12. PRE-FINISHED METAL SCUPPER
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. HEATER PUSH BUTTON CONTROLS
18. INFRARED HEATER
19. DETECTABLE WARNING PAVER AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
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25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. AREA DRAIN
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. PC CONC WALKWAY – SEE STRUCT
35. PC CONC STAIR – SEE STRUCT
36. PC CONC WALL PANEL
37. SECONDARY STEEL FRAMING – SEE STRUCTURAL
38. COMPOSITE ALUM PANEL

## LEGEND

- CIP CONCRETE
- ARCHITECTURAL CONCRETE
- R– ROOF TYPE – SEE A150

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM

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METROPOLITAN COUNCIL

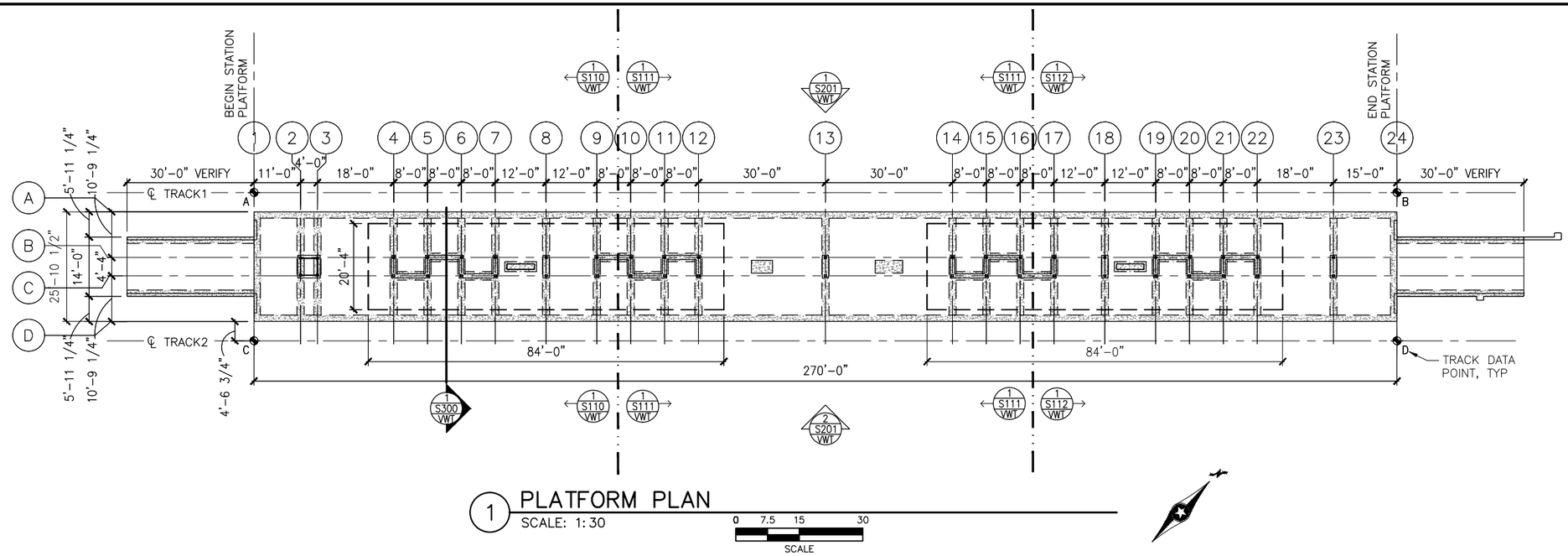
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC SECTIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-VWT-ARC-SCT-312

SHEET 166 OF 273




1 PLATFORM PLAN

SCALE: 1:30

0 7.5 15 30

SCALE

## TRACK DATA

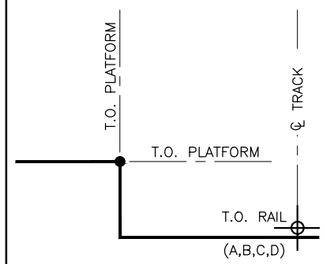
℄ ELEV 100'-0" (LOCATION ON PLAN)

**TRACK 1 EL 100'-0"=** XXX.XX (PT 'A')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| A | XXX.XX | XXXX+XX.XX | |
| B | XXX.XX | XXXX+XX.XX | |
| | | | |

**TRACK 2 EL 100'-0"=** XXX.XX (PT 'C')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| C | XXX.XX | XXXX+XX.XX | |
| D | XXX.XX | XXXX+XX.XX | |
| | | | |




SECTION DIAGRAM AT PLATFORM EDGE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

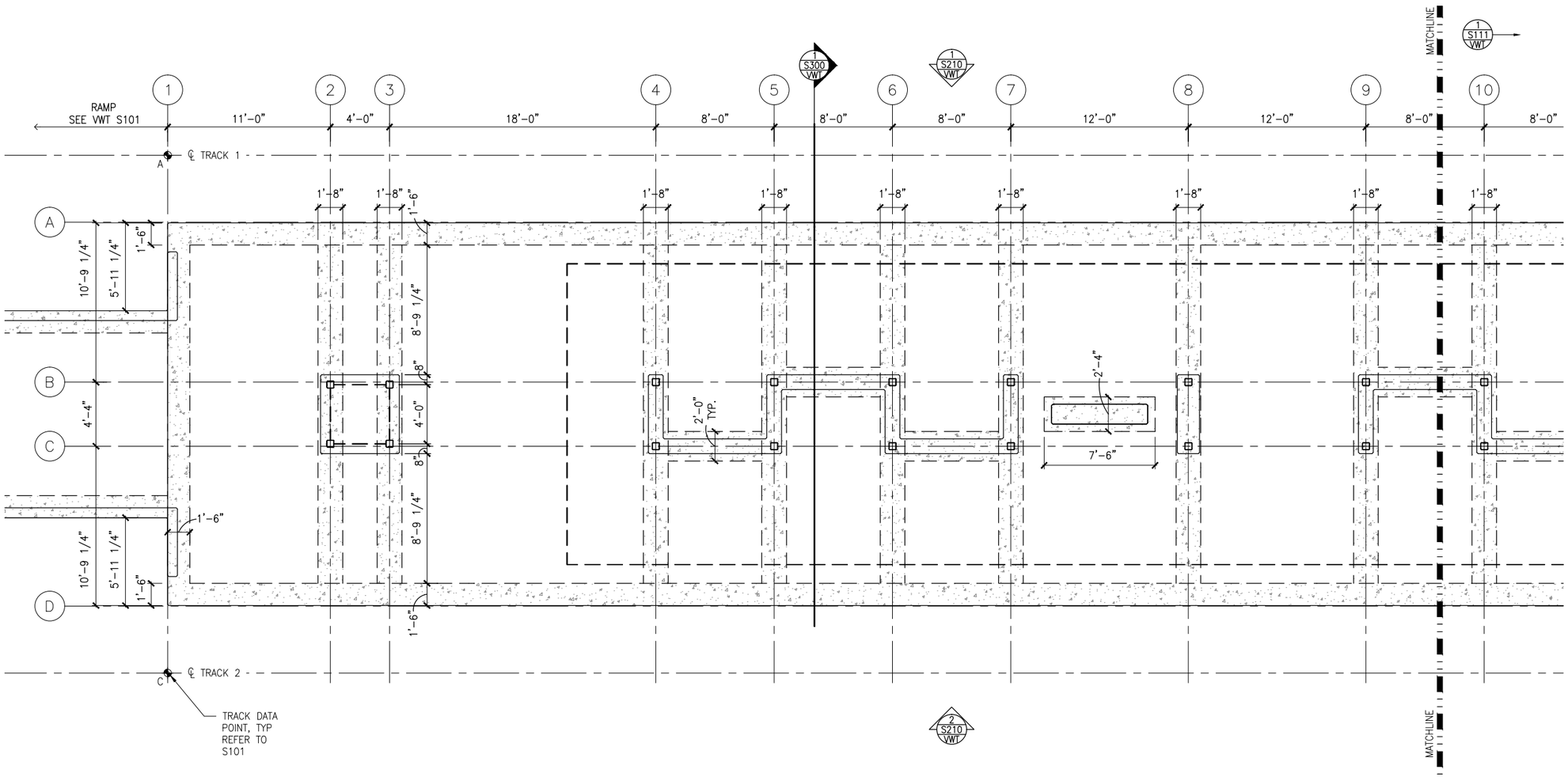
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**PLATFORM PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-101

SHEET 167 OF 273

Sep. 21 2015 10:02 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Van_White\CAD\STR\E4-VWT-STR-PLN-101.dwg By: pepins




1 WEST PARTIAL FOUNDATION PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM

60% SUBMISSION - 9/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

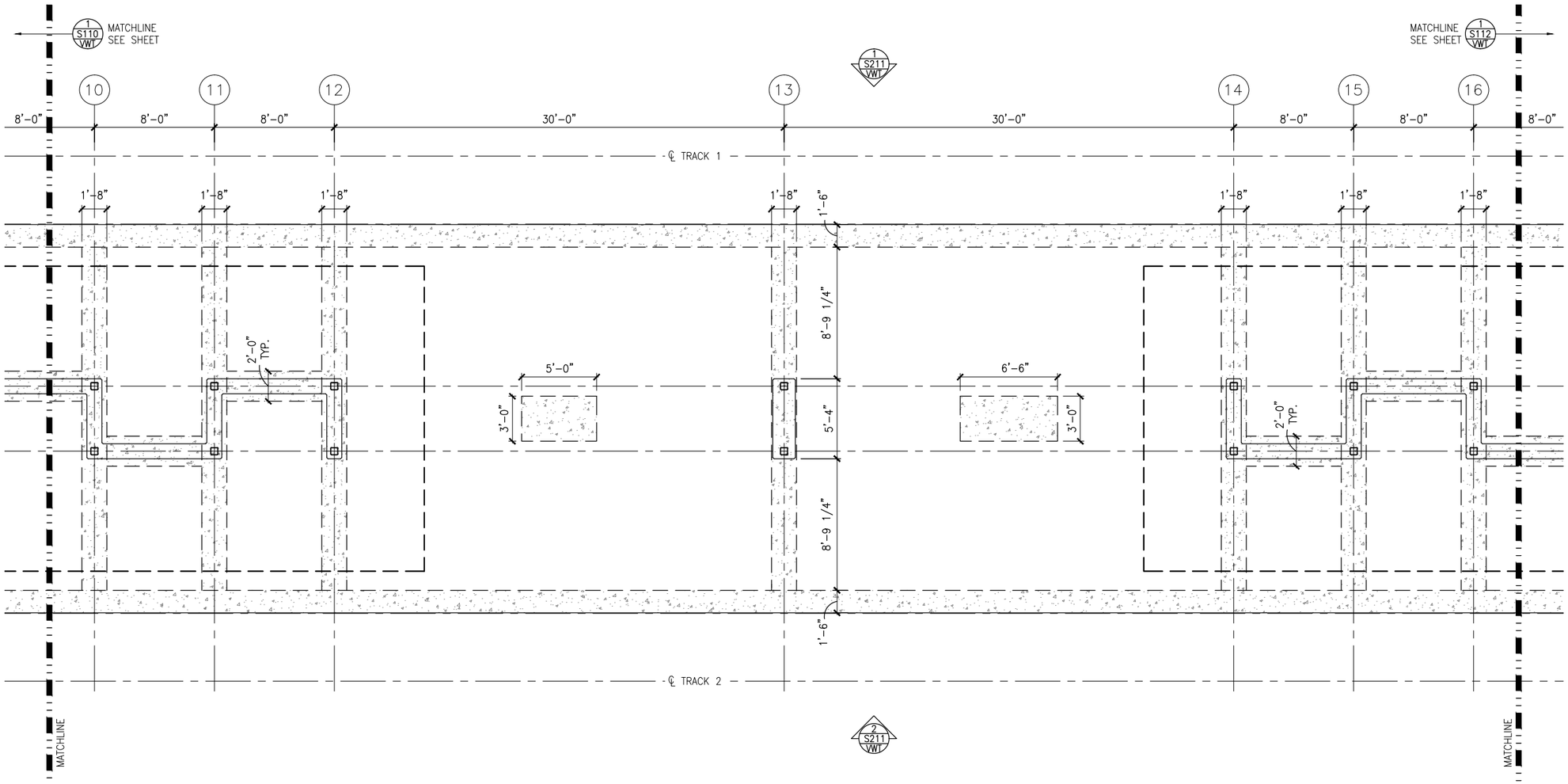
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**WEST PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-110

SHEET 168 OF 273

Sep, 21 2015 10:03 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Van_White\CAD\STR\E4-VWT-STR-PLN-110.dwg By: pepins




1 MIDDLE PARTIAL FOUNDATION PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

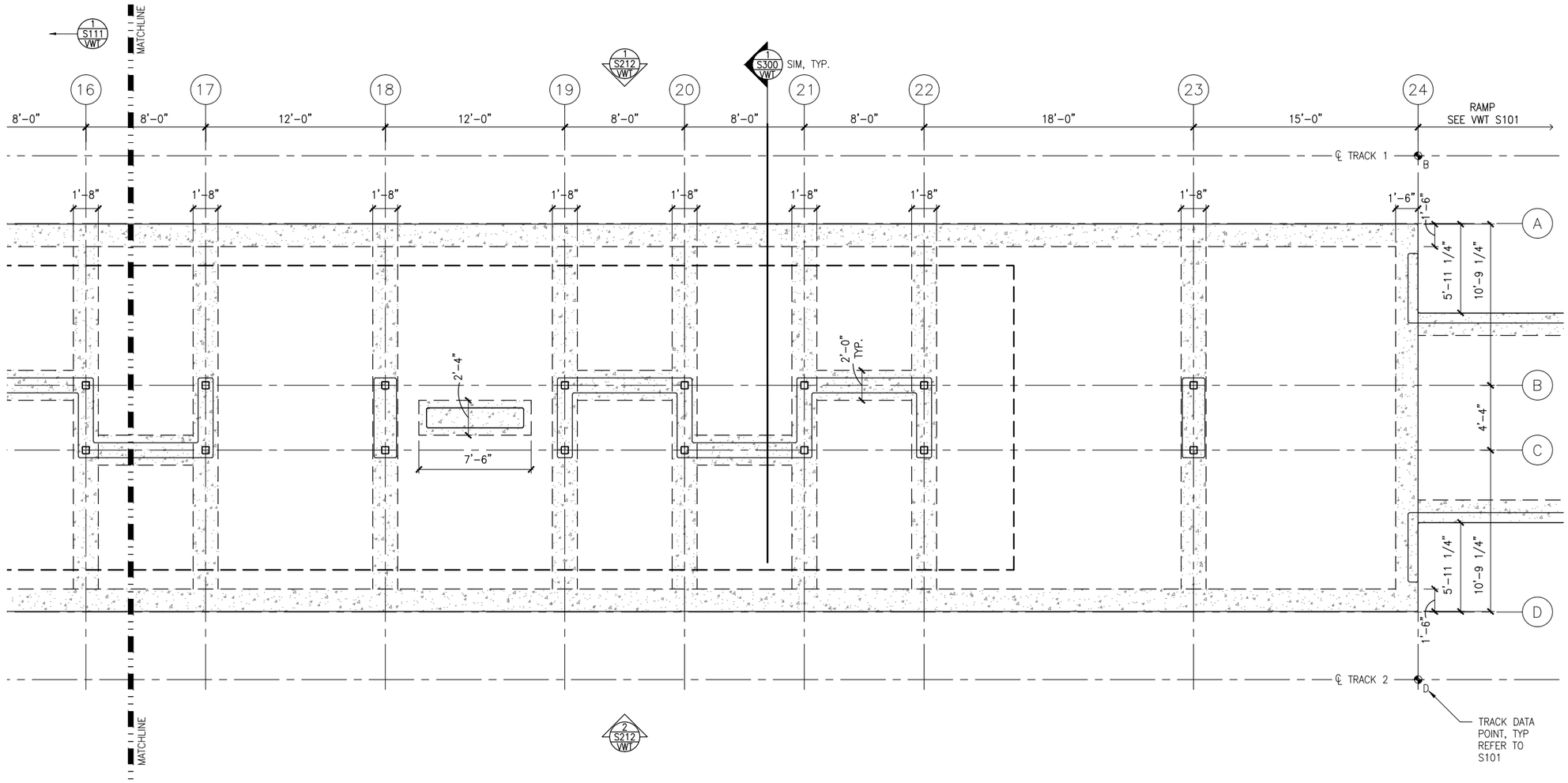
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**MIDDLE PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-111

SHEET 169 OF 273

Sep. 21 2015 10:03 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Van_White\CAD\STR\E4-VWT-STR-PLN-111.dwg By: pepins




1 EAST PARTIAL FOUNDATION PLAN
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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| | | | | | |

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SOUTHWEST Green Line LRT Extension

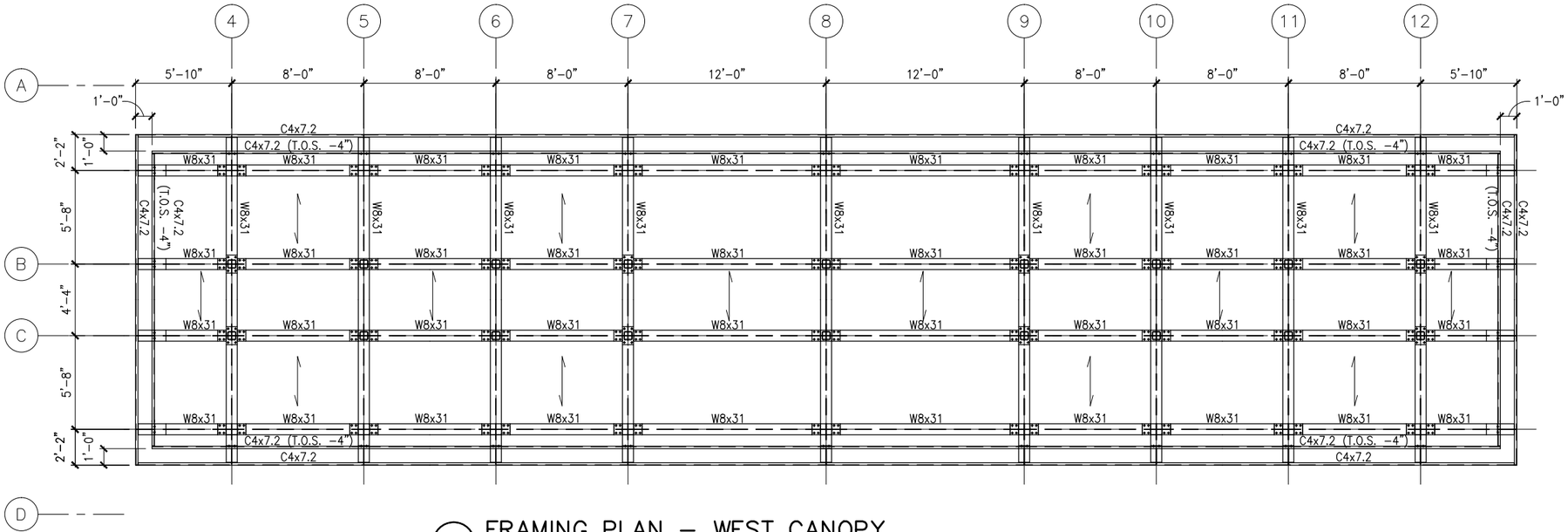
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**EAST PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-112

SHEET 170 OF 273

Sep. 21 2015 10:04 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Van_White\CAD\STR\E4-VWT-STR-PLN-112.dwg By: pepins

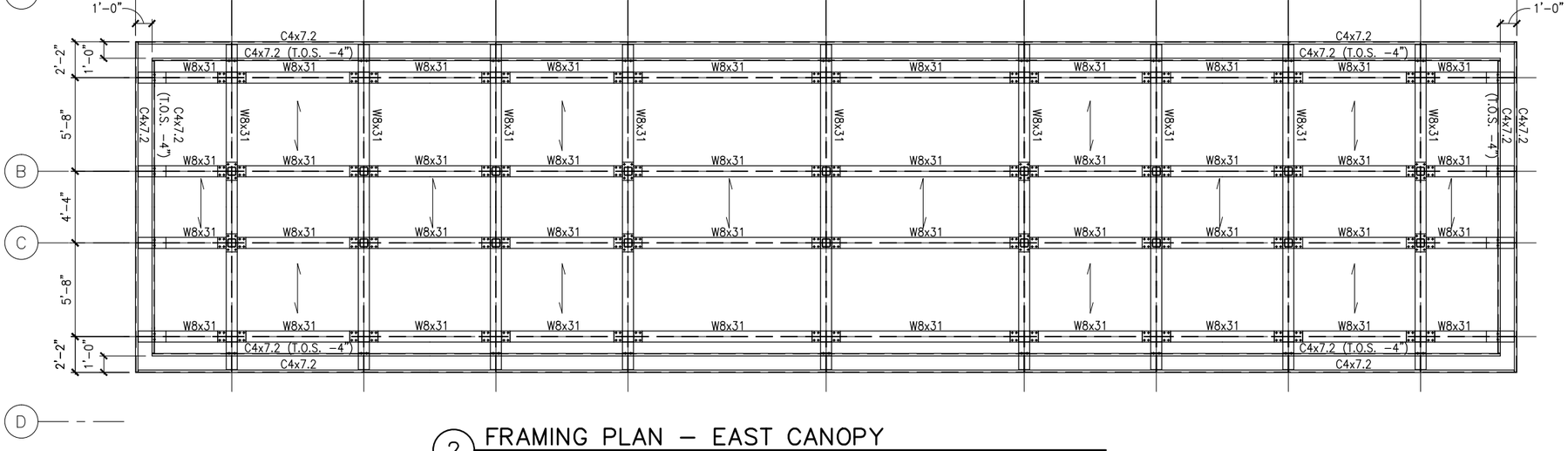



1 FRAMING PLAN – WEST CANOPY

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

0 2 4 8

SCALE




2 FRAMING PLAN – EAST CANOPY

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

0 2 4 8

SCALE

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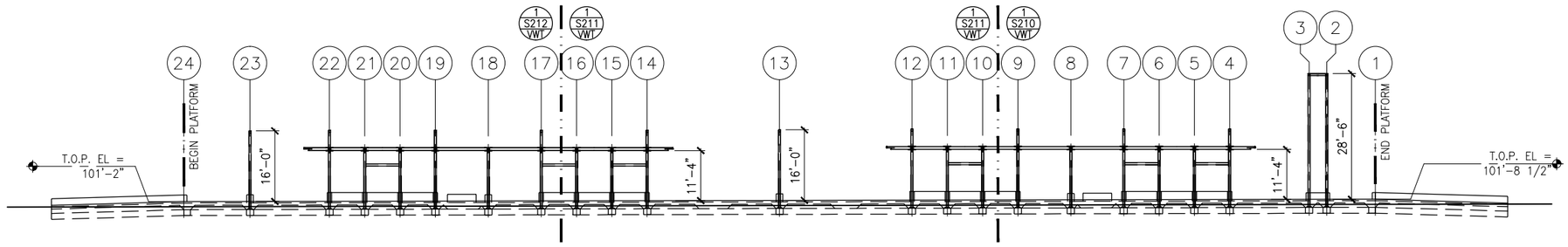
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ROOF FRAMING PLANS**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-150

SHEET 171 OF 273



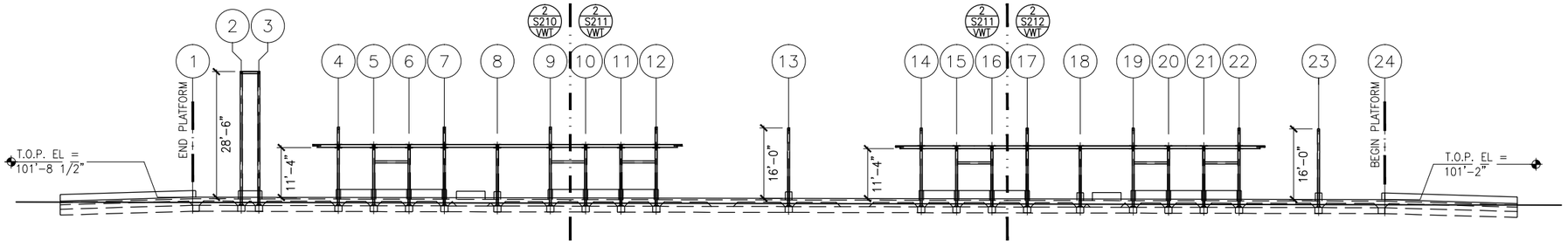

1 TRACK 1 ELEVATION – FRAMING

SCALE: 1:30

0 7.5 15 30

SCALE

(–0.20% SLOPE)*




2 TRACK 2 ELEVATION – FRAMING

SCALE: 1:30

0 7.5 15 30

SCALE

(–0.20% SLOPE)*

*VERIFY W/ TRACK PROFILE, ADJUST ELEVATIONS ACCORDINGLY

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SOUTHWEST Green Line LRT Extension

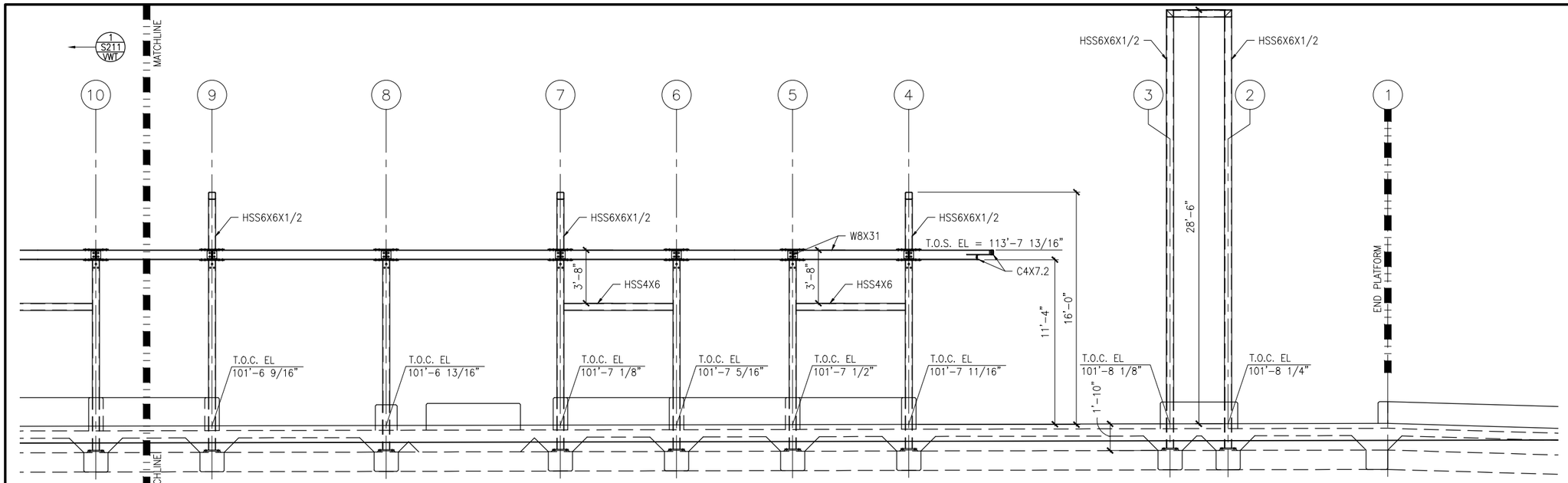
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-ELV-201

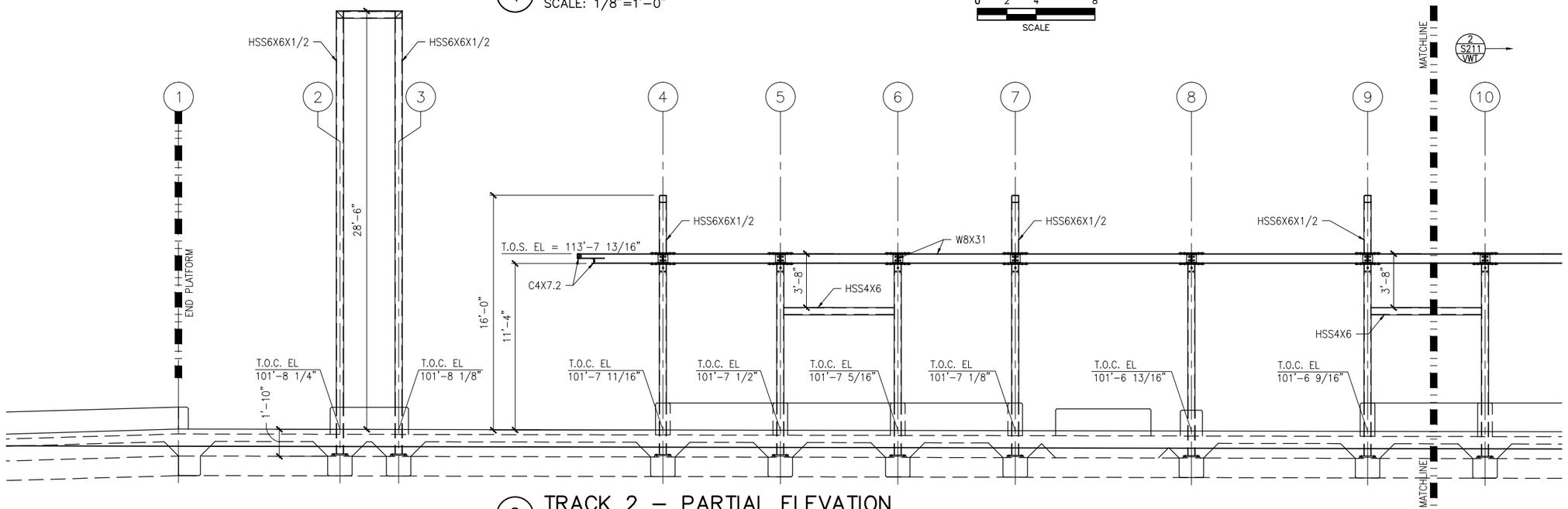
SHEET 172 OF 273

Sep. 21 2015 10:07 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Van_White\CAD\STR\E4-VWT-STR-ELV-201.dwg By: pepins




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

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| | | | | | |

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SOUTHWEST Green Line LRT Extension

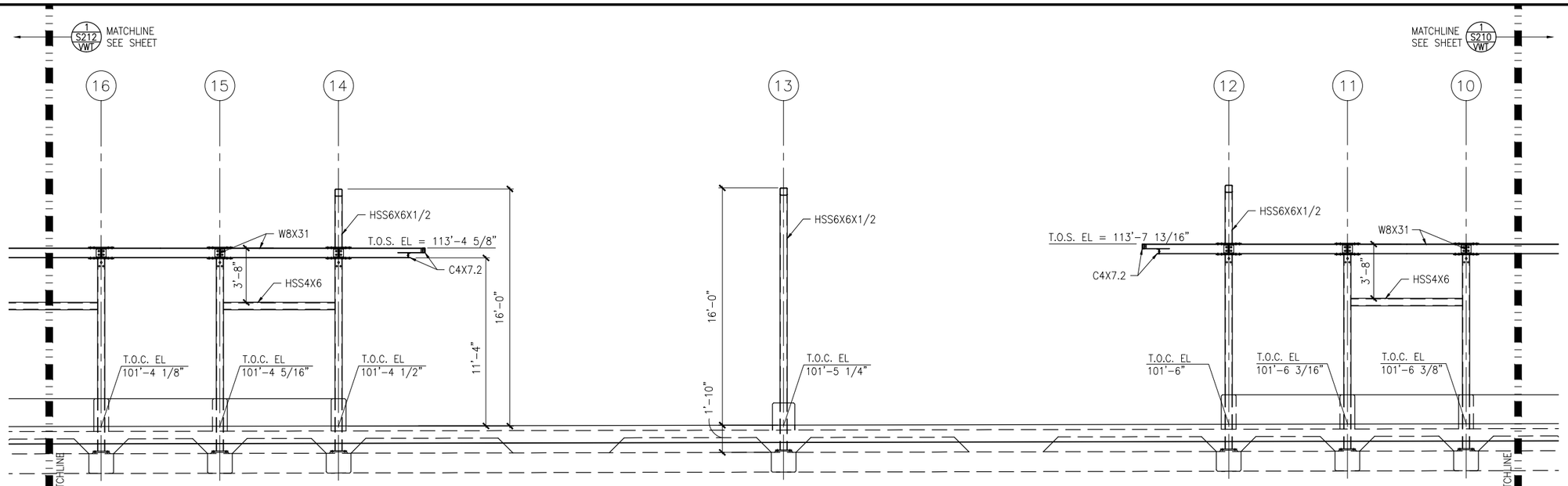
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**WEST PARTIAL ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-ELV-210

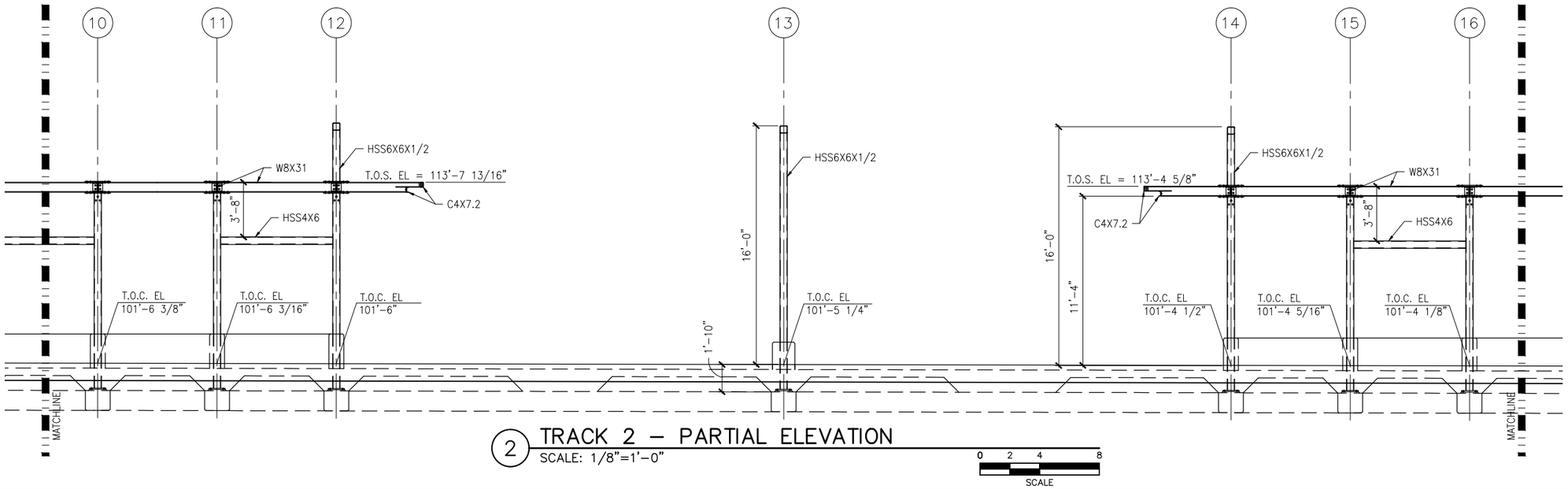
SHEET 173 OF 273

Sep, 21 2015 10:07 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Van_White\CAD\STR\E4-VWT-STR-ELV-210.dwg By: pepins




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

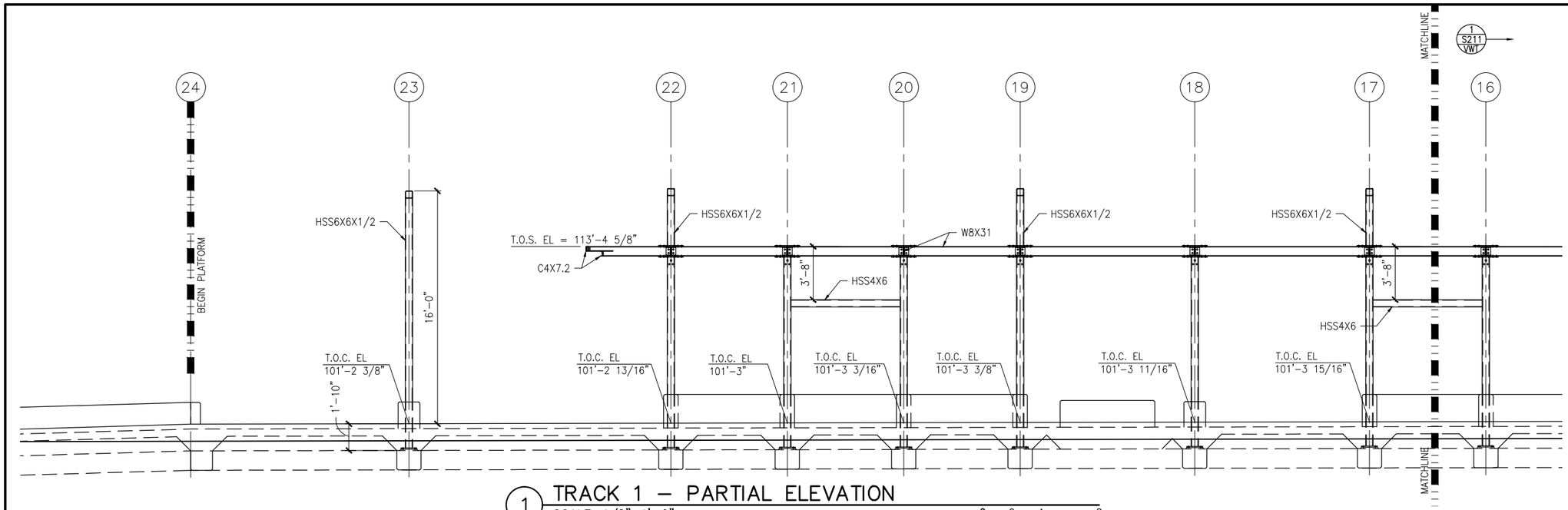
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# MIDDLE PARTIAL ELEVATIONS -- FRAMING

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-ELV-211

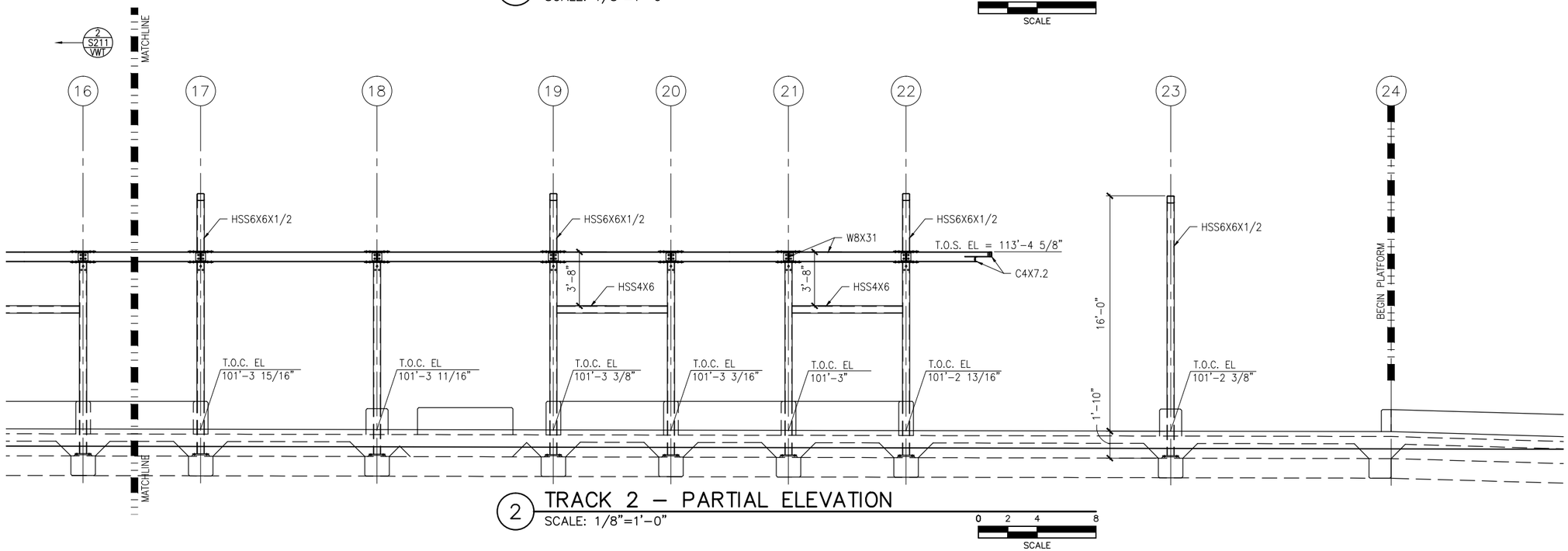
SHEET 174 OF 273

Sep, 21 2015 10:08 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Van_White\CAD\STR\E4-VWT-STR-ELV-211.dwg By: pepins




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

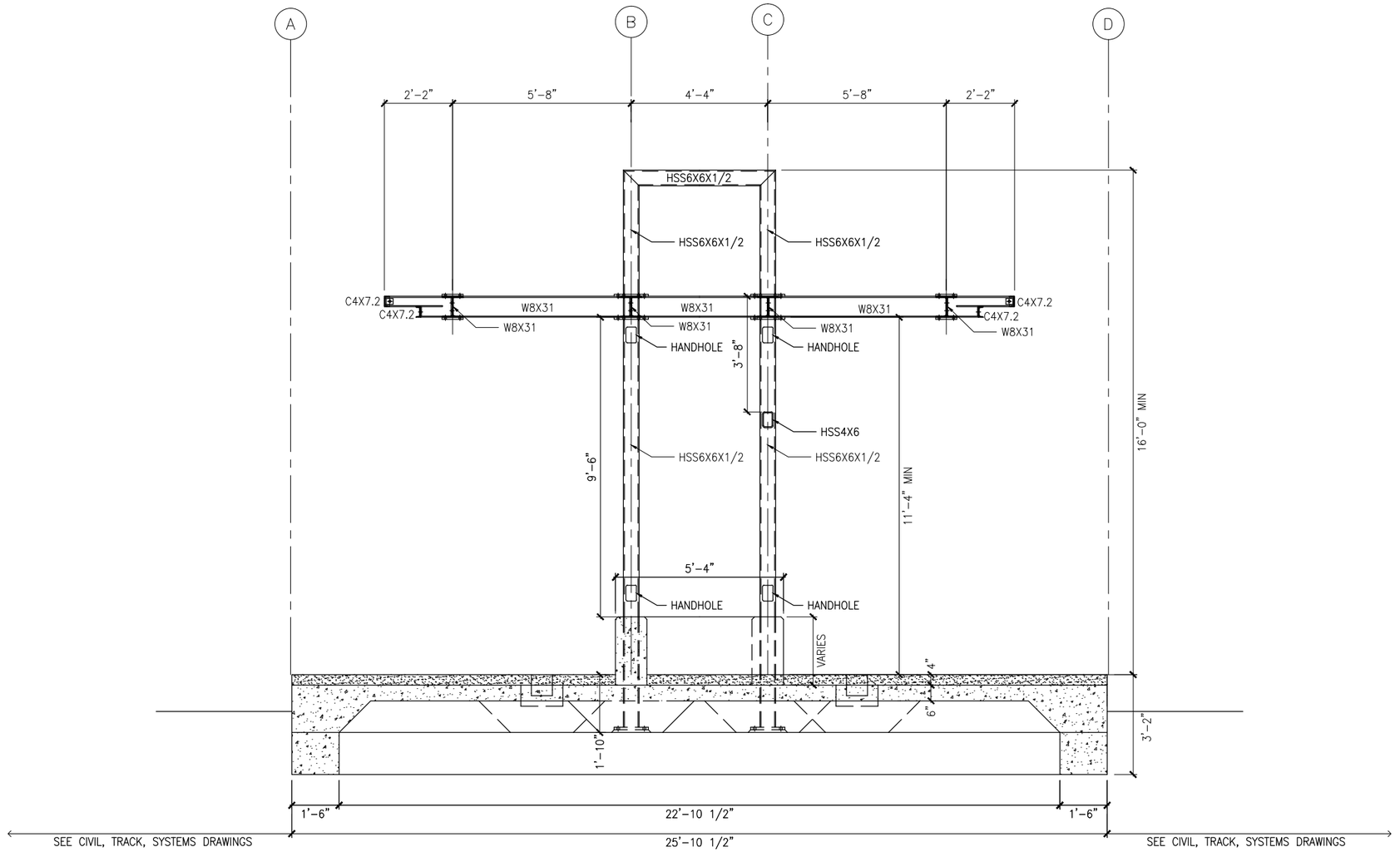
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**EAST PARTIAL ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-ELV-212

SHEET 175 OF 273

Sep, 21 2015 10:09 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Van_White\CAD\STR\E4-VWT-STR-ELV-212.dwg By: pepins




1 TYPICAL PLATFORM SECTION
SCALE:1/4"=1'-0"

0 1 2 4
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# TYPICAL PLATFORM SECTION

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-SCT-300

SHEET 176 OF 273

## GENERAL NOTES:

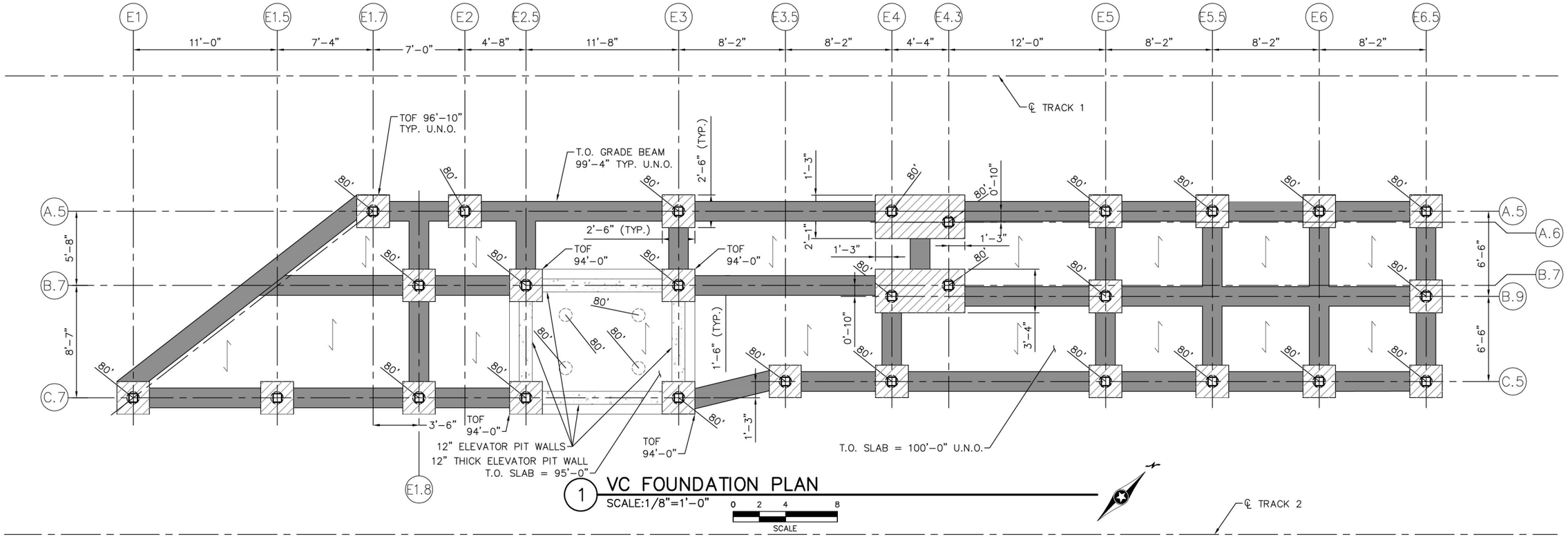
1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.

## FOUNDATION NOTES:

1. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES RELATING TO THE FOUNDATION PLAN SHALL GOVERN.
2. FOUNDATIONS SHALL BE CENTERED ON COLUMN GRID LINES, EG COLUMNS, WALLS, ETC. UNLESS NOTED OTHERWISE.
3. ALL FOUNDATION WORK RELATING TO THE INSTALLATION OF REBAR SHALL BE OBSERVED AND APPROVED BY THE ENGINEER.
4. WHERE SHOWN, BUT NOT SPECIFICALLY NOTED, PROVIDE STANDARD ACI 90° OR 180° HOOKS, AS APPLICABLE, TO REBAR.
5. FOUNDATION DESIGN IS BASED ON INFORMATION AND RECOMMENDATIONS PROVIDED BY AMERICAN ENGINEERING TESTING IN THEIR PRELIMINARY REPORT OF GEOTECHNICAL EXPLORATION AND REVIEW REPORT No. 01-05697.01 DATED 8/19/2014.
6. PERCHED GROUNDWATER MAY BE ENCOUNTERED WITHIN FOUNDATION EXCAVATIONS. REMOVE WATER TO FACILITATE FOUNDATION CONSTRUCTION.
7. SEE STR-GEN-603 FOR FOUNDATION AND SLAB ON GRADE DETAILS.

## LEGEND:

- TOF 96'-10" — DENOTES TOP OF FOOTING ELEVATION AT 96'-10"
- 80' — 12" CIP STEEL PILE 80' LENGTH
- STEEL TUBE COLUMN – SEE FRAMING PLANS
- CAST IN PLACE CONCRETE PILE CAP 2'-6"L X 2'-6"W X 2'-6"D
- CAST IN PLACE CONCRETE GRADE BEAM "VARIES"L X 1'-6"W X 2'-6"D
- 6" SLAB ON GRADE WITH #4 @ 9" O.C. LONGITUDINAL AND TRANSVERSE REINFORCEMENT PLACED AT MID-DEPTH
- ELEVATION 100'-0" = SEE ARCHITECTURAL TRACK ELEVATION AT CENTER OF PEDESTRIAN CROSSING.




1 VC FOUNDATION PLAN
SCALE:1/8"=1'-0"
0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC**
**FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-401

SHEET 177 OF 273

Sep. 21 2015 01:05 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\VNWHT-STATION\177 E4-VWT-STR-PLN-401.dwg By: scott.shepard

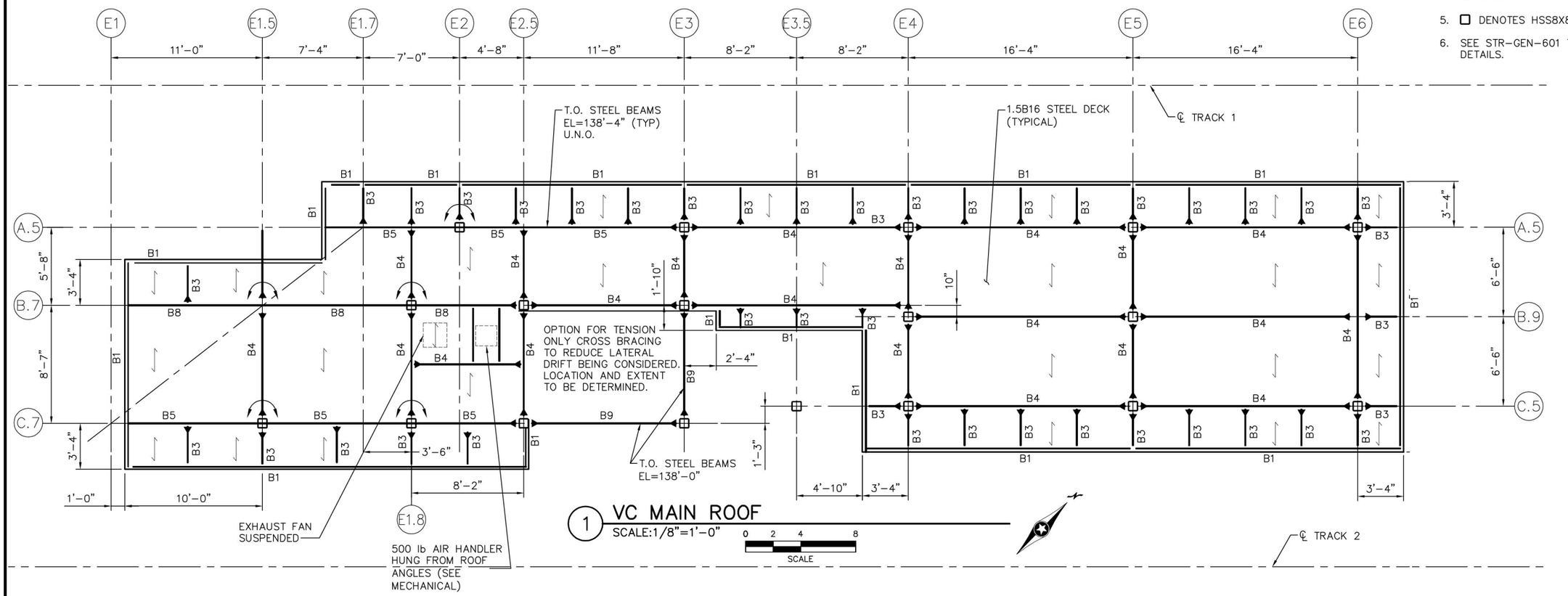
| BEAM SCHEDULE | |
|---|---|
| MARK | SIZE |
| B1 | C12x20.7 |
| B2 | W8x18 |
| B3 | W12x16 |
| B4 | HSS12x6x$\frac{1}{4}$ |
| B5 | HSS12x6x$\frac{1}{2}$ |
| B6 | HSS18x6x$\frac{5}{16}$ |
| B7 | HSS18x6x$\frac{1}{2}$ |
| B8 | HSS16x8x$\frac{1}{2}$ |
| B9 | HSS6x4x$\frac{5}{16}$ |

## GENERAL NOTES:

1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## ROOF PLAN NOTES

1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
2. ⟵⟶ INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK.
3. MOMENT CONNECTIONS ARE DENOTED THUS (▶——) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.
4. ⌒ INDICATES BEAM IS CONTINUOUS OVER COLUMN.
5. ☐ DENOTES HSS8X8X5/8 COLUMN.
6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.




1 VC MAIN ROOF
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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SOUTHWEST Green Line LRT Extension

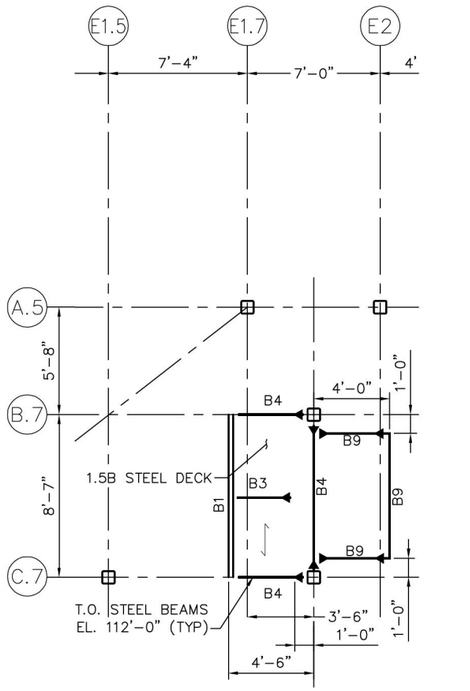
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC MAIN ROOF**
**FRAMING PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-411

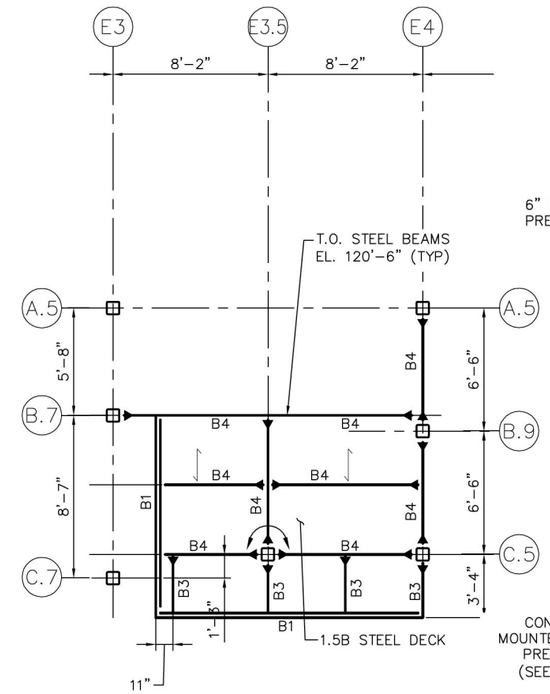
SHEET 178 OF 273

Sep. 21 2015 01:06 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\VNWHT-STATION\178 E4-VWT-STR-PLN-411.dwg By: scott.shepard



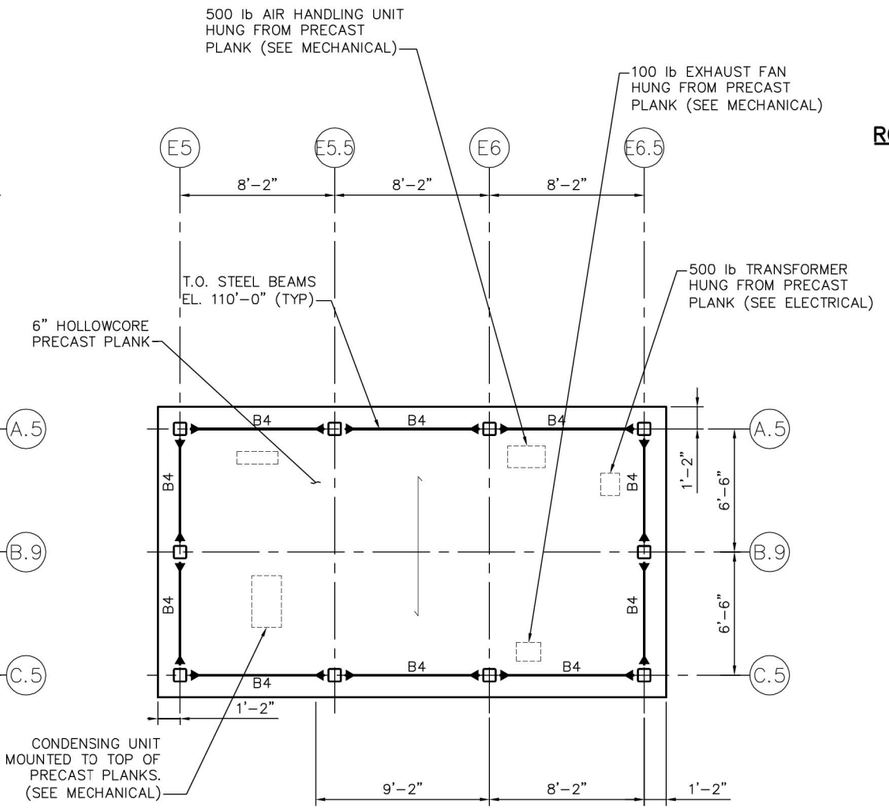

1 VC ELEVATOR LOBBY ENTRANCE ROOF FRAMING PLAN

SCALE:1/8"=1'–0"




2 VC STAIR ENTRANCE ROOF FRAMING PLAN

SCALE:1/8"=1'–0"




3 VC DRIVER AMENITY ROOF FRAMING PLAN

SCALE:1/8"=1'–0"

## GENERAL NOTES:

1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## ROOF PLAN NOTES

1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
2. ⟵⟶ INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK UNLESS NOTED OTHERWISE.
3. MOMENT CONNECTIONS ARE DENOTED THUS (▶—) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
4. ⌒ INDICATES BEAM IS CONTINUOUS OVER COLUMN.
5. ☐ DENOTES HSS8X8X5/8 COLUMN.
6. SEE STR–GEN–601 TO 602 FOR CONNECTION DETAILS.

| BEAM SCHEDULE | |
|---|---|
| MARK | SIZE |
| B1 | C12x20.7 |
| B2 | W8x18 |
| B3 | W12x16 |
| B4 | HSS12x6x¼ |
| B5 | HSS12x6x½ |
| B6 | HSS18x6x⅝ |
| B7 | HSS18x6x½ |
| B8 | HSS16x8x½ |
| B9 | HSS6x4x⅝ |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

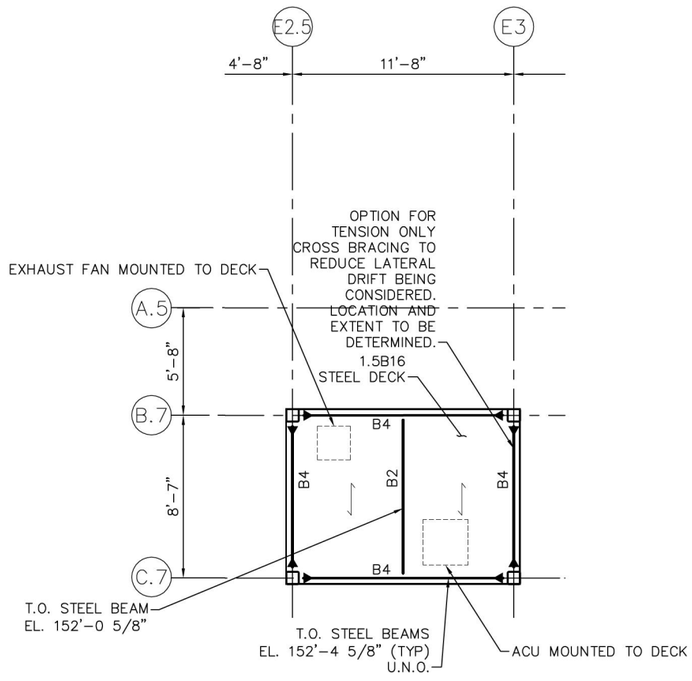
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC PARTIAL ROOF FRAMING PLAN**

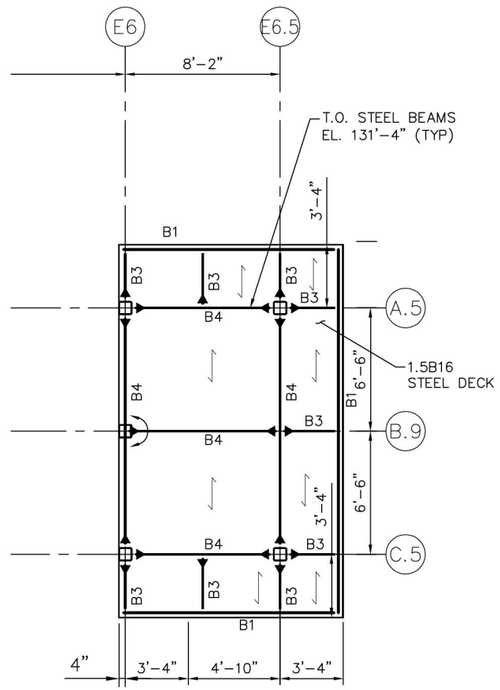
DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-412

SHEET 179 OF 273

Sep. 21 2015 01:06 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\VNWHT-STATION\179 E4-WHT-STR-PLN-412.dwg By: scott.shepard




1 VC ELEVATOR CORE ROOF
SCALE:1/8"=1'-0"

2 VC REAR STAIR LANDING ROOF
SCALE:1/8"=1'-0"

## GENERAL NOTES:

1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## ROOF PLAN NOTES

1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
2. ⟵⟶ INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK UNLESS NOTED OTHERWISE.
3. MOMENT CONNECTIONS ARE DENOTED THUS (▶—) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
4. ⌒ INDICATES BEAM IS CONTINUOUS OVER COLUMN.
5. ☐ DENOTES HSS8X8X5/8 COLUMN.
6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.

| BEAM SCHEDULE | |
|---|---|
| MARK | SIZE |
| B1 | C12x20.7 |
| B2 | W8x18 |
| B3 | W12x16 |
| B4 | HSS12x6x$\frac{1}{4}$ |
| B5 | HSS12x6x$\frac{1}{2}$ |
| B6 | HSS18x6x$\frac{5}{16}$ |
| B7 | HSS18x6x$\frac{1}{2}$ |
| B8 | HSS16x8x$\frac{1}{2}$ |
| B9 | HSS6x4x$\frac{5}{16}$ |

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# VC PARTIAL ROOF FRAMING PLAN

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-413

SHEET 180 OF 273

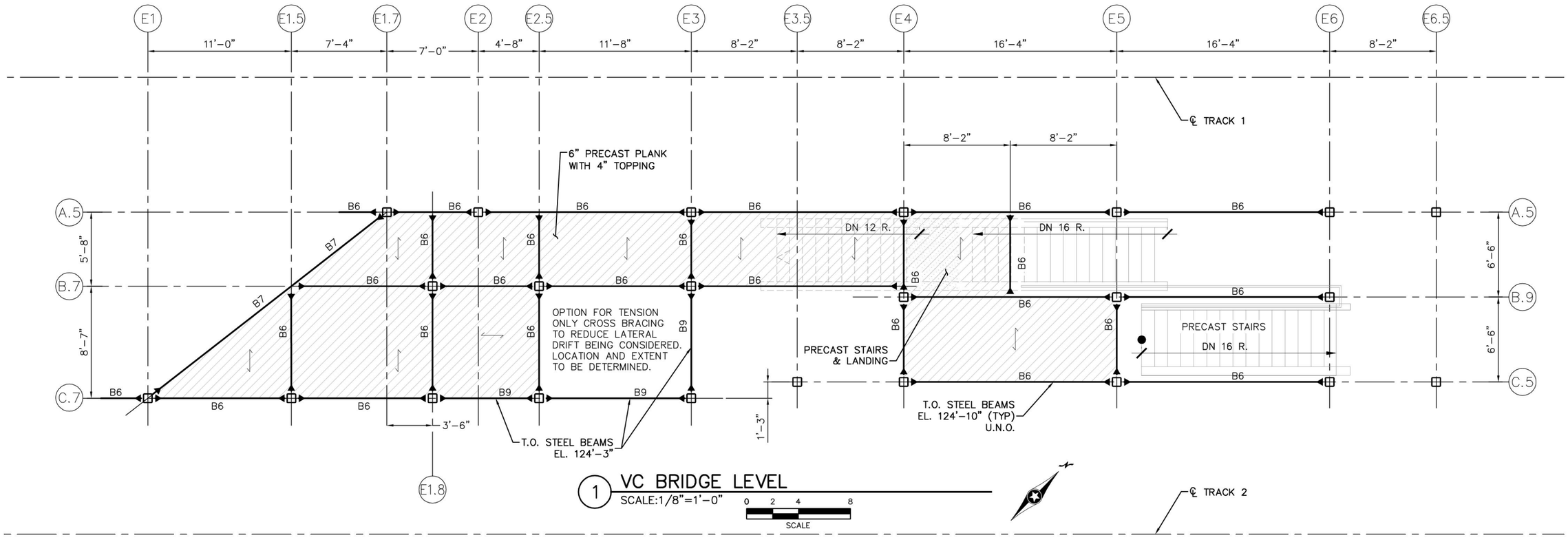
| BEAM SCHEDULE | |
|---|---|
| MARK | SIZE |
| B1 | C12X20.7 |
| B2 | W8X18 |
| B3 | W12X16 |
| B4 | HSS12X6X$\frac{1}{4}$ |
| B5 | HSS12X6X$\frac{1}{2}$ |
| B6 | HSS18X6X$\frac{5}{16}$ |
| B7 | HSS18X6X$\frac{1}{2}$ |
| B8 | HSS16X8X$\frac{1}{2}$ |
| B9 | HSS6X4X$\frac{5}{16}$ |

## GENERAL NOTES:

1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## BRIDGE LEVEL PLAN NOTES

1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
2. ⟷ INDICATES SPAN DIRECTION OF 6" PRECAST SOLID PLANK WITH 4" TOPPING CONCRETE.
3. MOMENT CONNECTIONS ARE DENOTED THUS (▶—) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
4. ⌒ INDICATES BEAM IS CONTINUOUS OVER COLUMN.
5. □ DENOTES HSS8X8X5/8 COLUMN.
6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS..




1 VC BRIDGE LEVEL
SCALE:1/8"=1'-0"
0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# VC BRIDGE LEVEL
# FRAMING PLAN

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-414

SHEET 181 OF 273

Sep. 21 2015 01:07 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\VNWHT-STATION\181 E4-VWT-STR-PLN-414.dwg By: scott.shepard

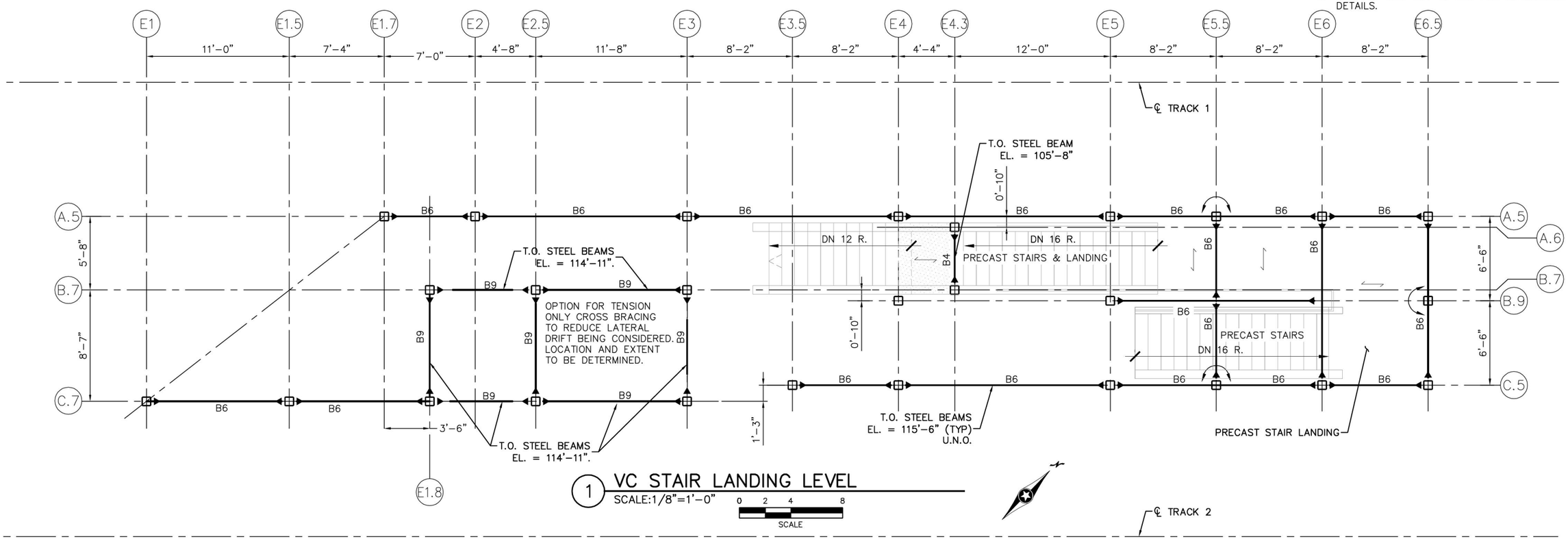
| BEAM SCHEDULE | |
|---|---|
| MARK | SIZE |
| B1 | C12x20.7 |
| B2 | W8x18 |
| B3 | W12x16 |
| B4 | HSS12x6x$\frac{1}{4}$ |
| B5 | HSS12x6x$\frac{1}{2}$ |
| B6 | HSS18x6x$\frac{5}{16}$ |
| B7 | HSS18x6x$\frac{1}{2}$ |
| B8 | HSS16x8x$\frac{1}{2}$ |
| B9 | HSS6x4x$\frac{5}{16}$ |

## GENERAL NOTES:

1. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## STAIR LANDING PLAN NOTES

1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
2. ⟵⟶ INDICATES SPAN DIRECTION OF PRECAST STAIR LANDING.
3. MOMENT CONNECTIONS ARE DENOTED THUS (▶—) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
4. ⌒ INDICATES BEAM IS CONTINUOUS OVER COLUMN.
5. □ DENOTES HSS8X8X5/8 COLUMN.
6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.




1 VC STAIR LANDING LEVEL
SCALE:1/8"=1'-0"
0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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SOUTHWEST Green Line LRT Extension

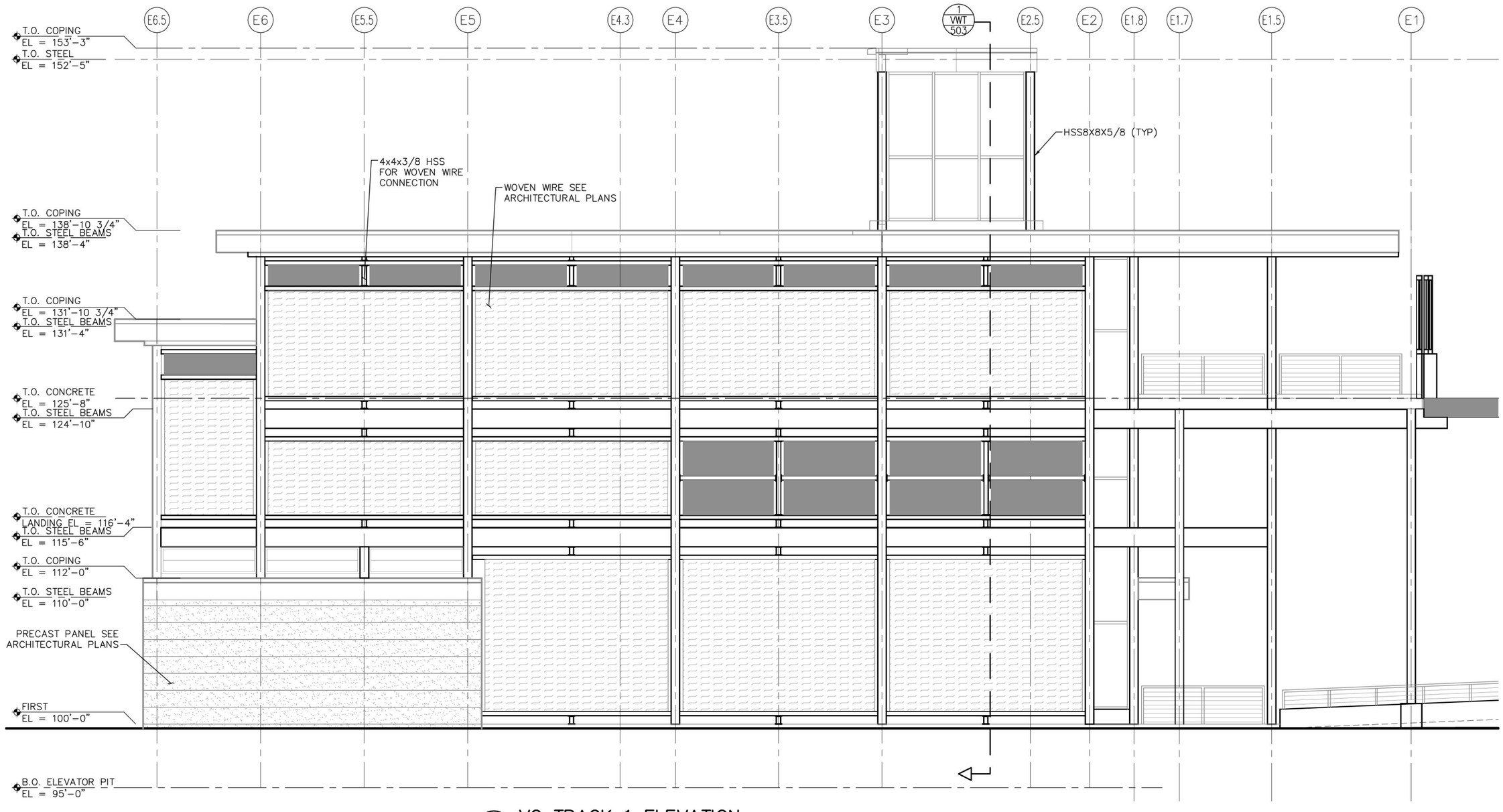
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC STAIR LANDING LEVEL FRAMING PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-PLN-415

SHEET 182 OF 273

Sep. 21 2015 01:07 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\VNWHT-STATION\182 E4-VWT-STR-PLN-415.dwg By: scott.shepard




1 VC TRACK 1 ELEVATION
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST
Green Line LRT Extension

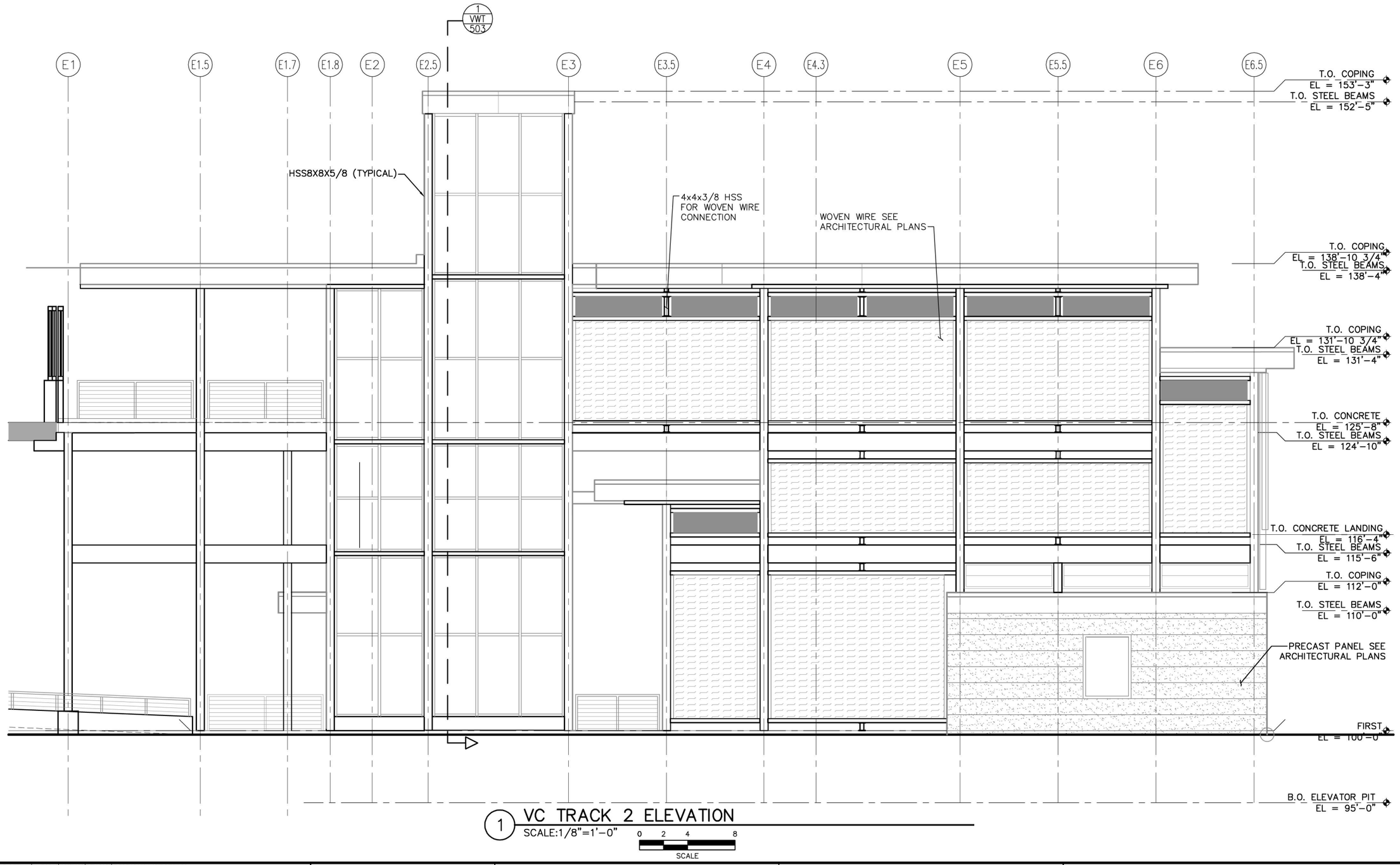
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# VC TRACK 1
# ELEVATION VIEW

DISCIPLINE: STRUCTURES

SHEET NAME: E4-VWT-STR-ELV-501

SHEET 183 OF 273

Sep. 21 2015 01:08 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\VNWHT-STATION\183 E4-VWT-STR-ELV-501.dwg By: scott.shepard




1 VC TRACK 2 ELEVATION
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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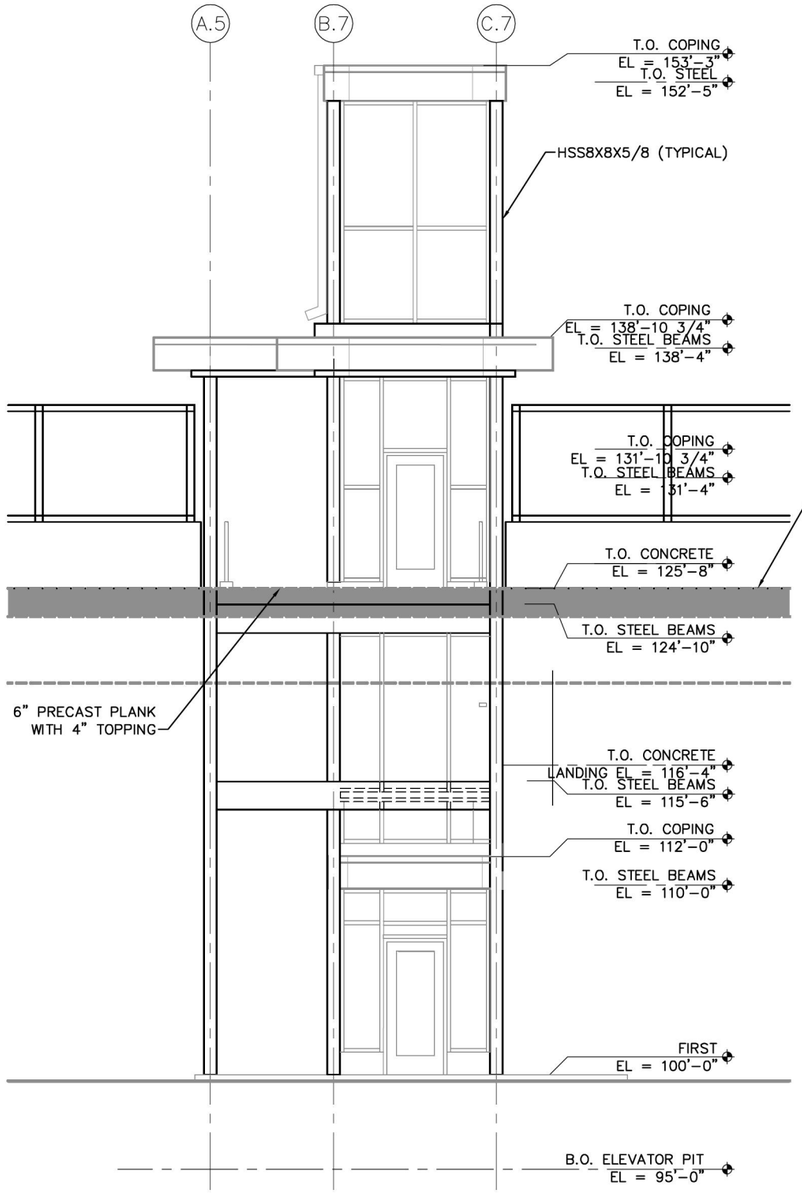
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# VC TRACK 2
# ELEVATION VIEW

DISCIPLINE: STRUCTURES

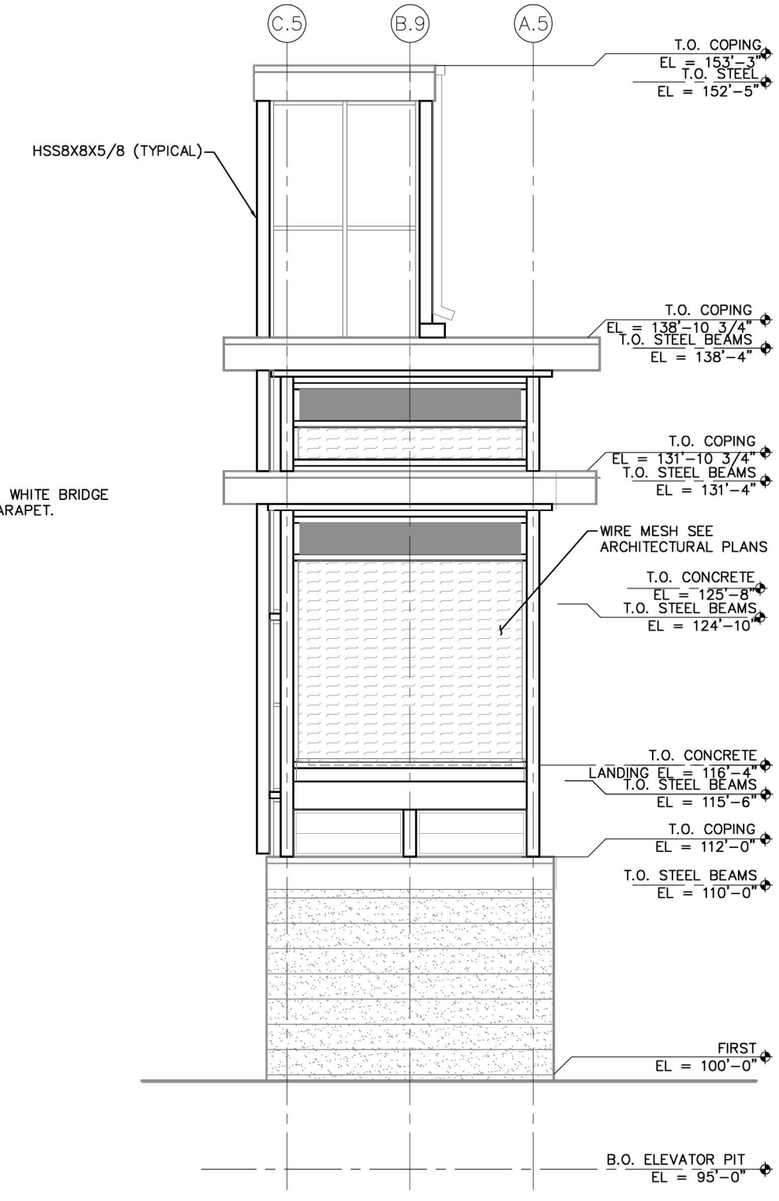
SHEET NAME: E4-VWT-STR-ELV-502

SHEET 184 OF 273

Sep. 21 2015 01:08 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\VNWHT-STATION\184 E4-VWT-STR-ELV-502.dwg By: scott.shepard




1 VC SIDE ELEVATION
SCALE:1/8"=1'-0"
0 2 4 8
SCALE




2 VC SIDE ELEVATION
SCALE:1/8"=1'-0"
0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

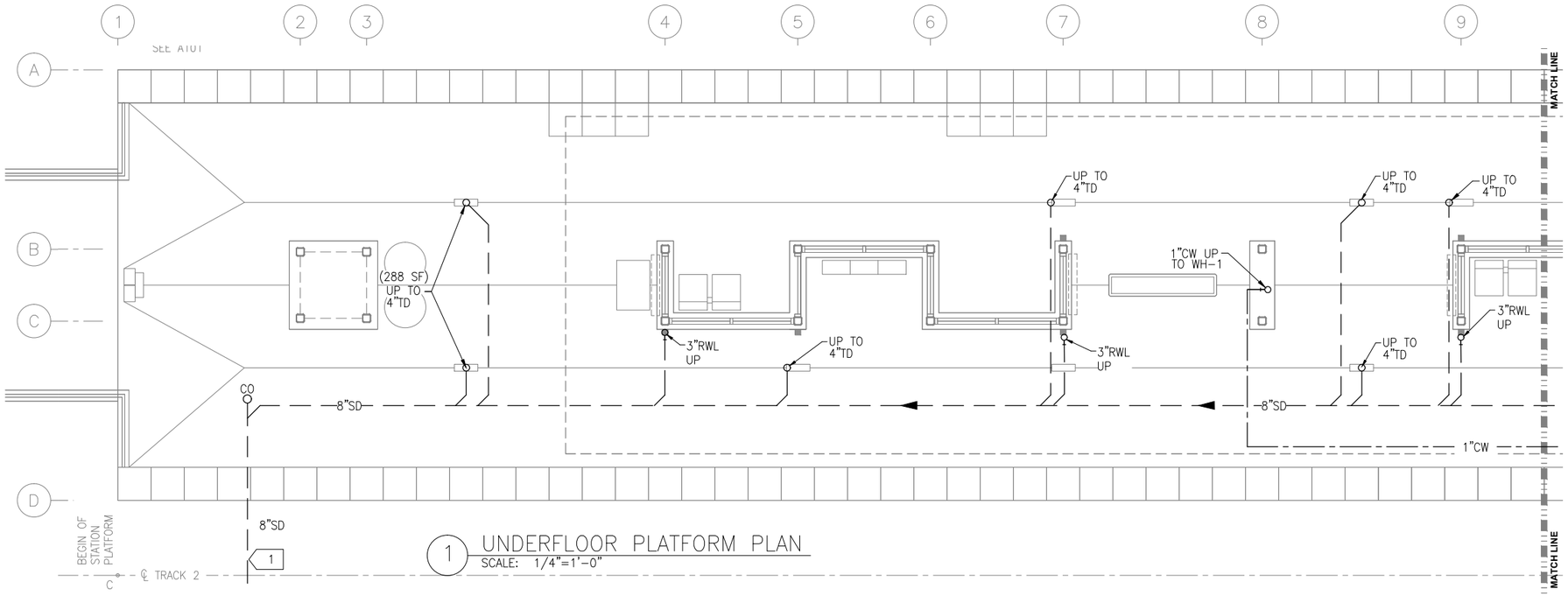
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# VC
# SECTION VIEWS

DISCIPLINE: STRUCTURES

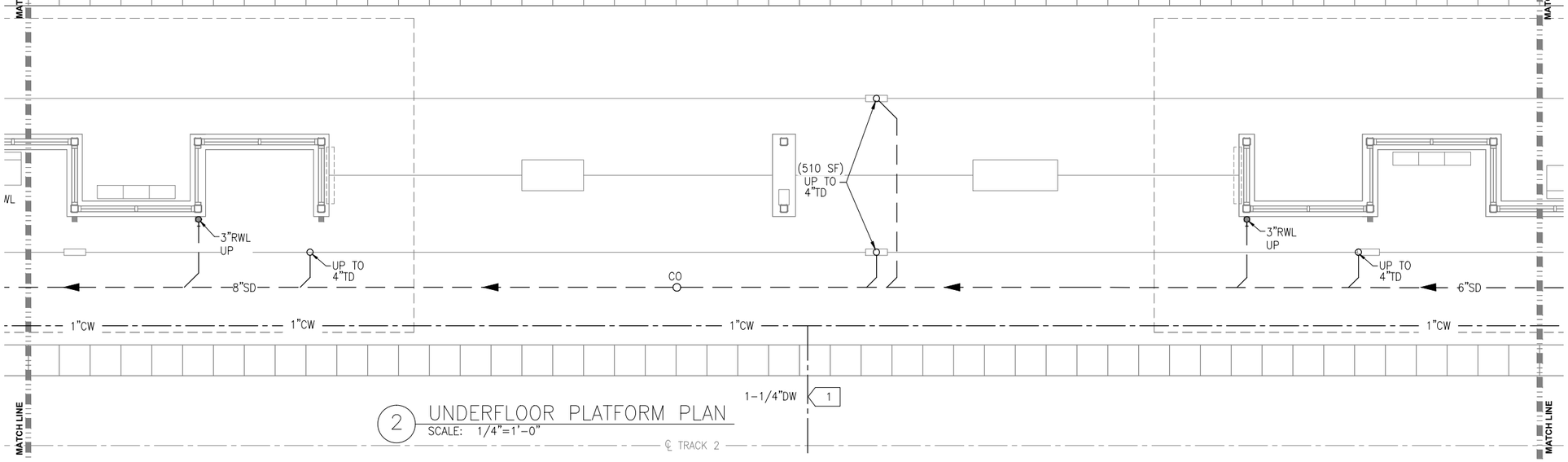
SHEET NAME: E4-VWT-STR-ELV-503

SHEET 185 OF 273

Sep. 21 2015 01:09 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\VNWHT-STATION\185 E4-VWT-STR-ELV-503.dwg By: scott.shepard




1 UNDERFLOOR PLATFORM PLAN
SCALE: 1/4"=1'-0"




2 UNDERFLOOR PLATFORM PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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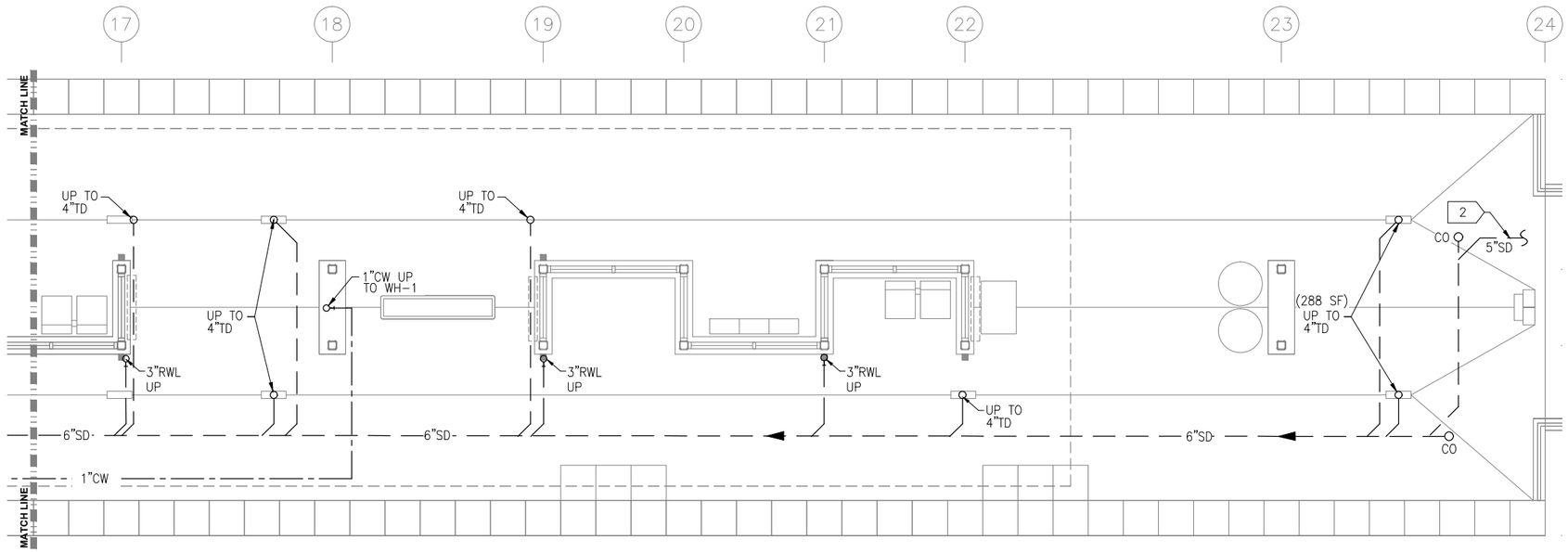
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# WEST AND MIDDLE PARTIAL
# UNDERFLOOR PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E4-VWT-PLM-PLN-100

SHEET 186 OF 273

Sep. 21 2015 02:18 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\VAN WHITE STATION\E4-VWT-PLM-PLN-100.dwg By: craig




1 UNDERFLOOR PLATFORM PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

2 CONTINUE AT VERTICAL CIRCULATION.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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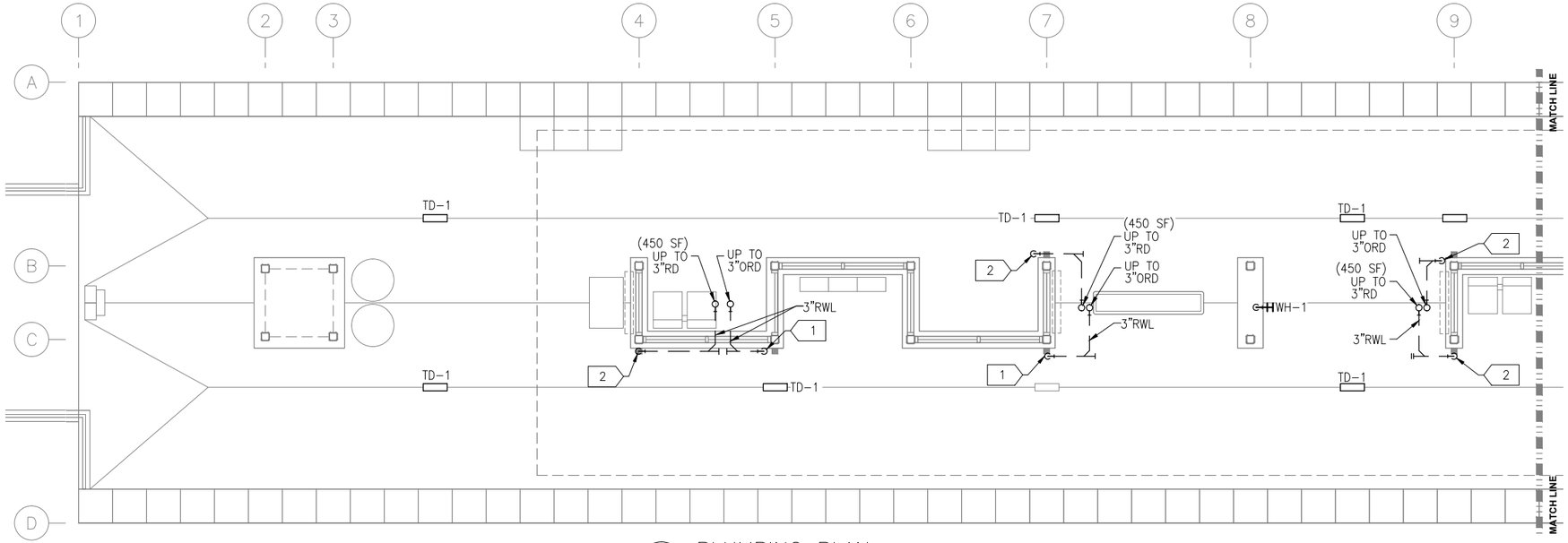
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**EAST PARTIAL UNDERFLOOR PLUMBING PLAN**

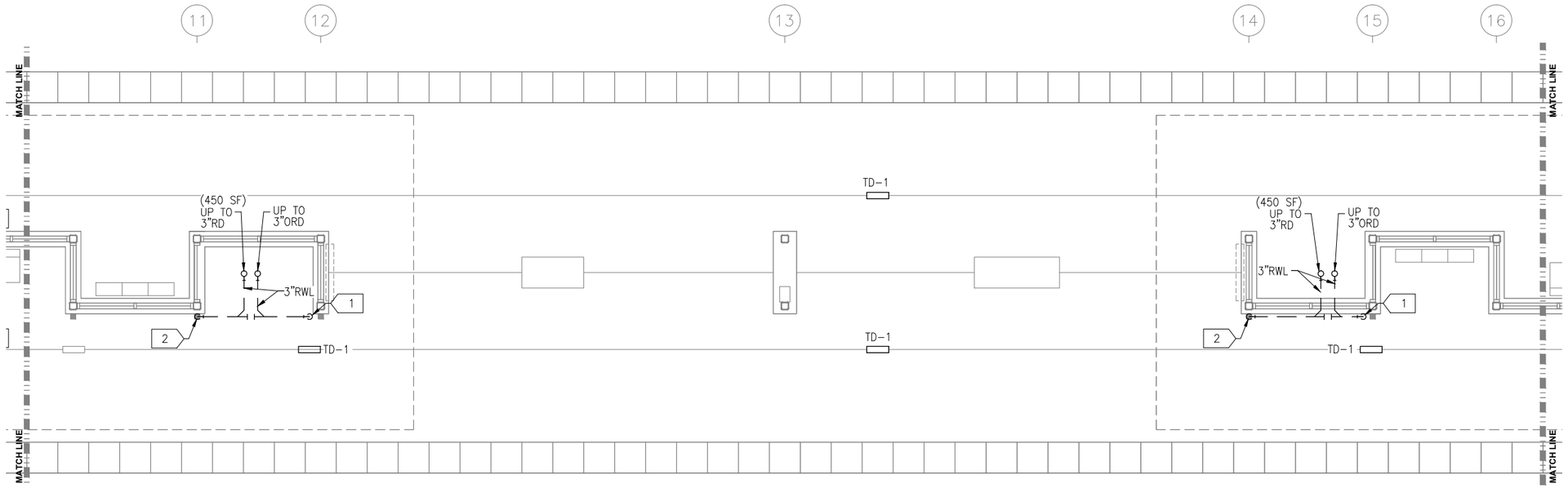
DISCIPLINE: PLUMBING

SHEET NAME: E4-VWT-PLM-PLN-101

SHEET 187 OF 273




1 PLUMBING PLAN
SCALE: 1/4"=1'-0"




2 PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES

1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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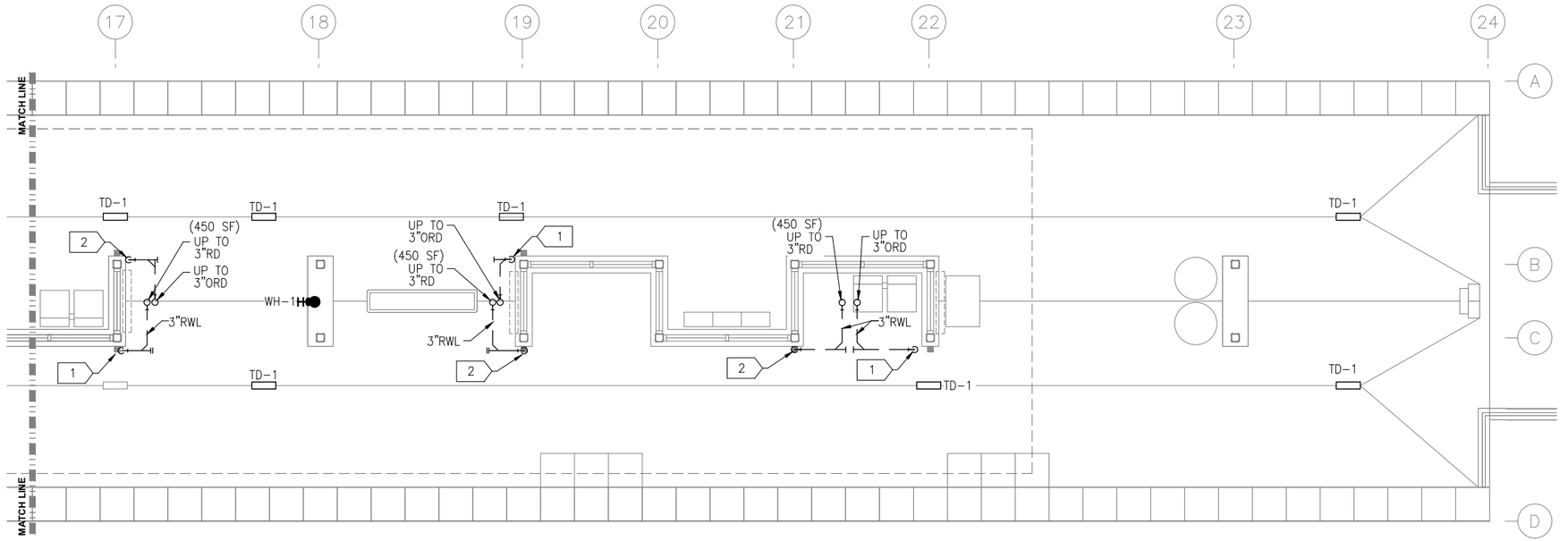
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# WEST AND MIDDLE PARTIAL
# PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E4-VWT-PLM-PLN-110

SHEET 188 OF 273

Sep, 21 2015 02:17 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\VAN WHITE STATION\E4-VWT-PLM-PLN-110.dwg By: craig




1 PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES

1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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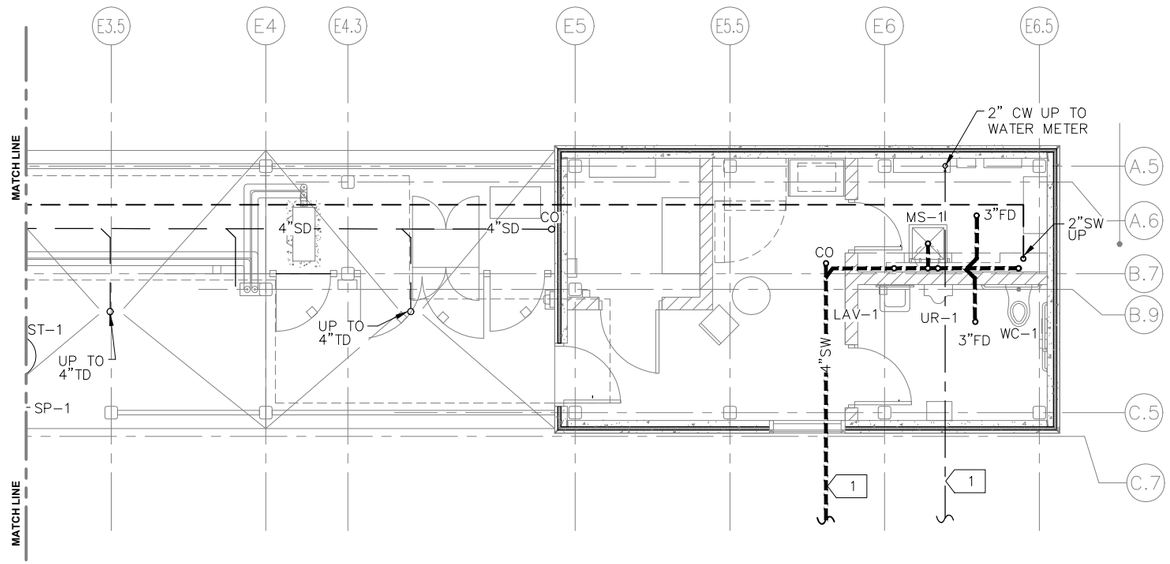
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# EAST PARTIAL PLUMBING PLAN

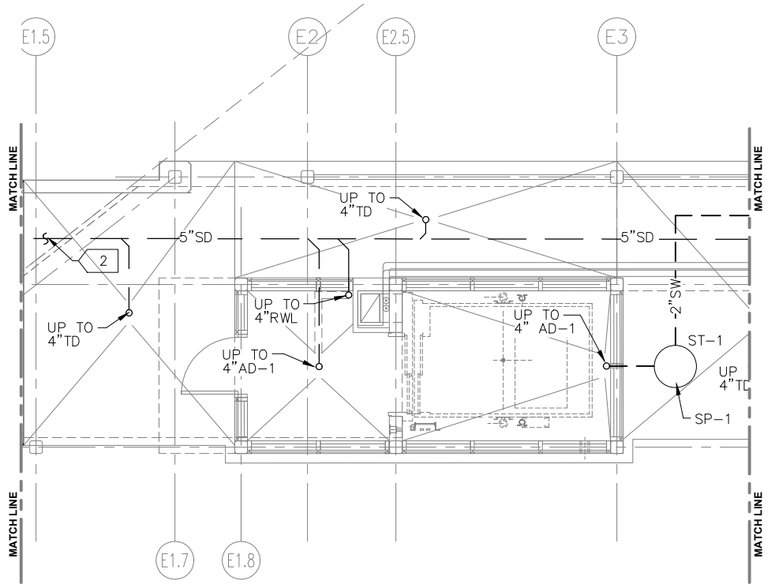
DISCIPLINE: PLUMBING
SHEET NAME: E4-VWT-PLM-PLN-111

SHEET 189 OF 273

Sep. 21 2015 02:16 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\VAN WHITE STATION\E4-VWT-PLM-PLN-111.dwg By: craig




1 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"




2 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

2 5" STORM WATER DRAINAGE CONTINUES TO PLATFORM DRAWINGS.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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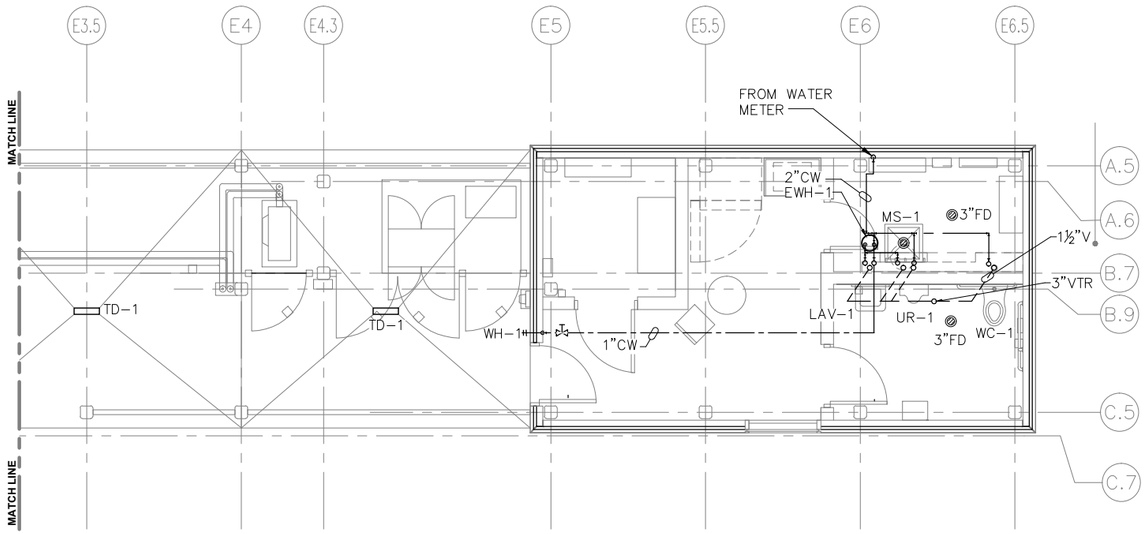
METROPOLITAN COUNCIL SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
VAN WHITE STATION
VC UNDERFLOOR PLATFORM LEVEL PLUMBING PLAN

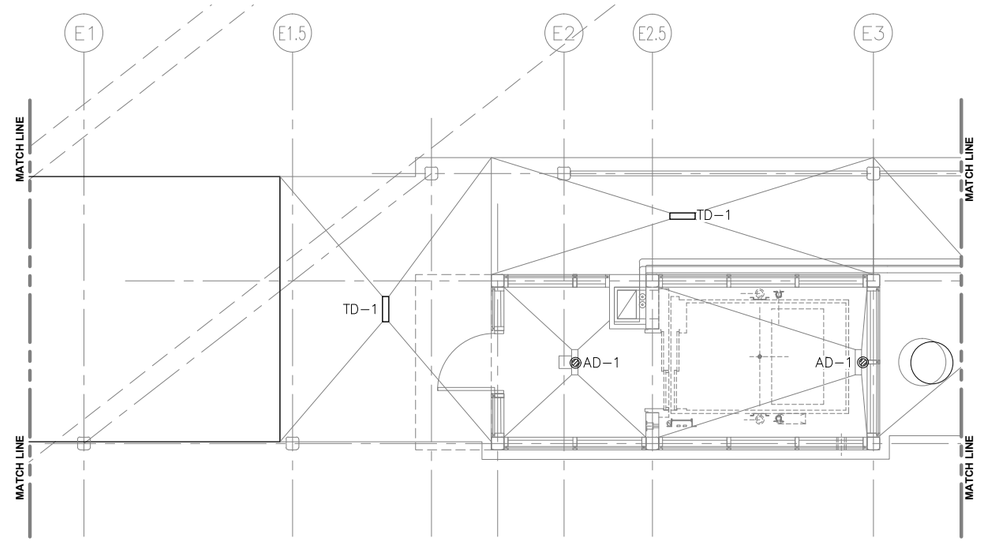
DISCIPLINE: PLUMBING
SHEET NAME: E4-VWT-PLM-PLN-130

SHEET 190 OF 273

Sep. 21 2015 02:23 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\VAN WHITE STATION\VAN WHITE VERTICAL CIRCULATION\E4-VWT-PLM-PLN-130.dwg By: craig




1 PLATFORM LEVEL PLUMBING PLAN
SCALE: 1/4"=1'-0"




2 PLATFORM LEVEL PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 XXX.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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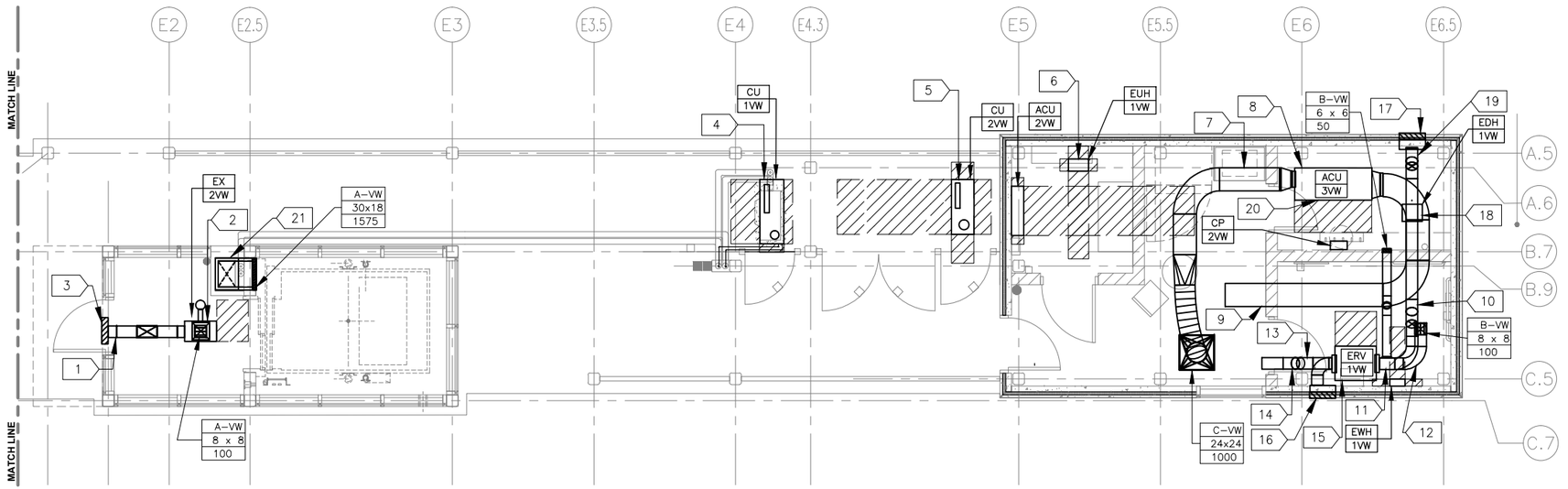
CIVIL EAST - VOLUME 11B
VAN WHITE STATION
VC PLATFORM LEVEL PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E4-VWT-PLM-PLN-131

SHEET 191 OF 273

Sep. 21 2015 02:22 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\VAN WHITE STATION\VAN WHITE VERTICAL CIRCULATION\E4-VWT-PLM-PLN-131.dwg By: craig




1 PLATFORM HVAC PLAN
SCALE: 1/4"=1'-0"

HVAC GENERAL SHEET NOTES

A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.
B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY AIR OUTLETS AND WHERE INDICATED ON BRANCH DUCTWORK.
C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND FIRE/SMOKE DAMPERS.
D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK TO MECHANICAL EQUIPMENT CONNECTIONS.
E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL EQUIPMENT.
G. RUN DUCTWORK AS HIGH AS POSSIBLE.
H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED FULL LENGTH.
I. PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME DAMPERS AND FAN ACCESS.
J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

HVAC KEY NOTES:

1. LOUVER PLENUM TO 8X14 EXHAUST DUCT CONNECTED TO EXHAUST FAN OUTLET.
2. 12X12 TRANSITION FROM FAN INLET TO 8X8 DUCT DOWN TO 8X8 EXHAUST GRILLE.
3. LOUVER–SEE ARCH SPECIFICATION AND DRAWINGS FOR INFORMATION.
4. CONDENSING UNIT MOUNTED ON 4–INCH EQUIPMENT PAD.
5. CONDENSING UNIT MOUNTED FROM STAIR AND WALL. 6'–6" CLEARANCE (MIN) ABOVE TRANSFORMER.
6. UNIT HEATER HUNG FROM DECK, 2–INCH CLEARANCE (MIN) FROM CEILING, 7' CLEARANCE (MIN) ABOVE FLOOR, 9–INCH CLEARANCE (MIN) IN FRONT OF WALL.
7. PROVIDE AND INSTALL A 14X16 INSULATED SA DUCT FROM ACU. A 14–INCH ROUND FLEX DUCT FROM 14X16 TO CONNECT WITH DIFFUSER. FLEX DUCT IS NOT TO EXCEED 5FT. FULLY EXTENDED.
8. ACU MOUNTED TO DECK. PROVIDE VIBRATION ISOLATION.
9. 14X16 INSULATED RETURN AIR DUCT FROM BREAK ROOM PLENUM TO TRANSITION TO ACU INLET.
10. 8–INCH DIAMETER ROUND OUTDOOR AIR FROM LOUVER PLENUM. OFFSET DUCT TO CLEAR CONFLICTS AND ATTACH TO ERV OA INLET.
11. 6–INCH DIAMETER ROUND EXHAUST AIR FROM 6X6 RETURN AIR GRILLE TO EXHAUST AIR MAIN. OFFSET DUCT TO CLEAR OBSTRUCTIONS.
12. 8–INCH DIAMETER ROUND EXHAUST AIR DUCT FROM 8X8 EXHAUST GRILLE TO COMBINE WITH JANITOR'S CLOSET EXHAUST AND ENTER ERV EXHAUST INLET.
13. 8–INCH DIAMETER ROUND VENTILATION AIR DUCT FROM ERV VENTILATION AIR OUTLET TO BREAK ROOM PLENUM. PROVIDE 1/4 –INCH HARDWARE CLOTH OVER DUCT OUTLET.
14. 8–INCH DIAMETER EXHAUST AIR DUCT RUN FROM ERV TO CONNECT TO LOUVER PLENUM.
15. HANG ERV FROM DECK. PROVIDE VIBRATION ISOLATION.
16. LOUVER–SEE ARCH SPECIFICATION AND DRAWINGS FOR INFORMATION.
17. LOUVER–SEE ARCH SPECIFICATION AND DRAWINGS FOR INFORMATION.
18. 5 KW DUCT HEATER MOUNTED ON OUTSIDE AIR DUCT BETWEEN LOUVER INTAKE AND THE ERV INLET. LEAVE 1/2–INCH CLEARANCE ABOVE HEATER. PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCE AND DISTANCES FROM INTAKES AND OUTLETS.
19. PROVIDE AND INSTALL A 3/4–INCH CONDENSATE LINE FROM ERV OUTDOOR AIR INLET TO MOP SINK. REFER TO DETAIL _/_ FOR CONNECTION.
20. PROVIDE AND INSTALL A 3/4–INCH CONDENSATE LINE FROM ACU TO MOP SINK. REFER TO DETAIL _/_ FOR CONNECTION.
21. 18X12 RETURN AIR DUCT UP TO ACU IN 2ND FLOOR PLENUM.

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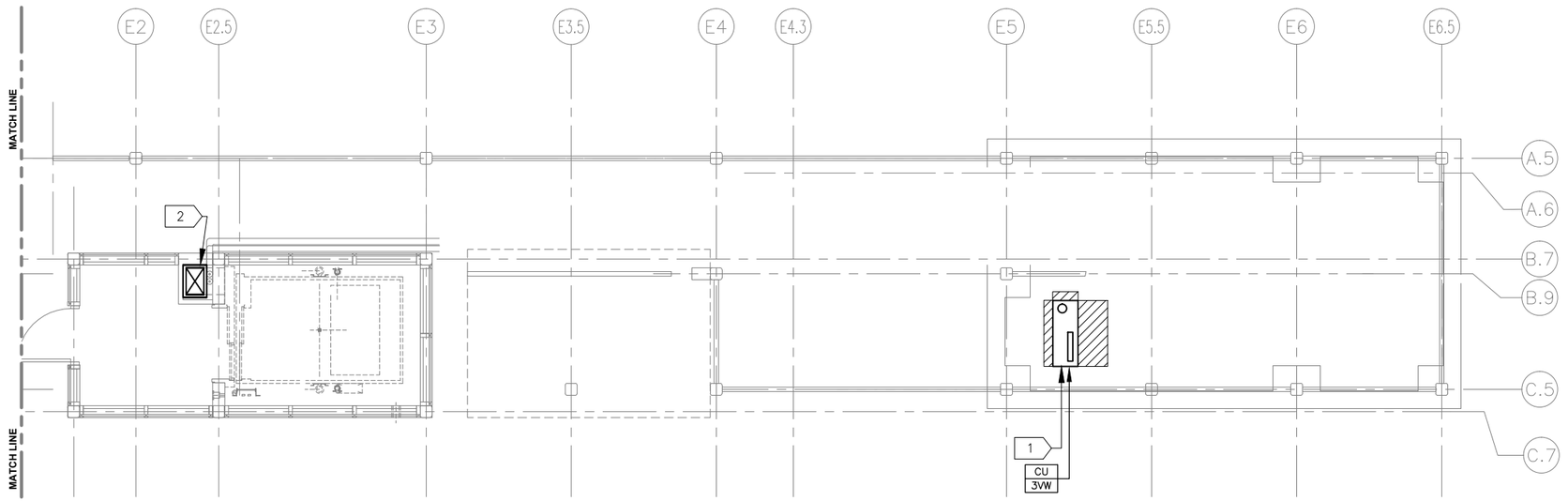
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# VC PLATFORM LEVEL HVAC PLAN

DISCIPLINE: MECHANICAL
SHEET NAME: E4-VWT-MEC-PLN-130

SHEET 192 OF 273

Sep. 21 2015 02:21 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\VAN WHITE STATION\VAN WHITE VERTICAL CIRCULATION\E4-VWT-MEC-PLN-130.dwg By: craig




1 INTERMEDIATE HVAC PLAN
SCALE: 1/4"=1'-0"

HVAC GENERAL SHEET NOTES

A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.
B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY AIR OUTLETS AND WHERE INDICATED ON BRANCH DUCTWORK.
C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL MOTORIZED DAMPERS AND FIRE DAMPERS.
D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK TO MECHANICAL EQUIPMENT CONNECTIONS.
E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL EQUIPMENT.
G. RUN DUCTWORK AS HIGH AS POSSIBLE.
H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED FULL LENGTH.
I. PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME DAMPERS AND FAN ACCESS.
J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

HVAC KEY NOTES:

1 MOUNT CONDENSING UNIT ON 4-INCH EQUIPMENT PAD.
2 12X18 RETURN DUCT UP TO ACU IN 2ND FLOOR PLENUM AND DOWN TO RETURN GRILLE IN HOISTWAY.

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METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
VAN WHITE STATION
VC INTERMEDIATE LEVEL
HVAC PLAN

DISCIPLINE: MECHANICAL
SHEET NAME: E4-VWT-MEC-PLN-131

SHEET 193 OF 273

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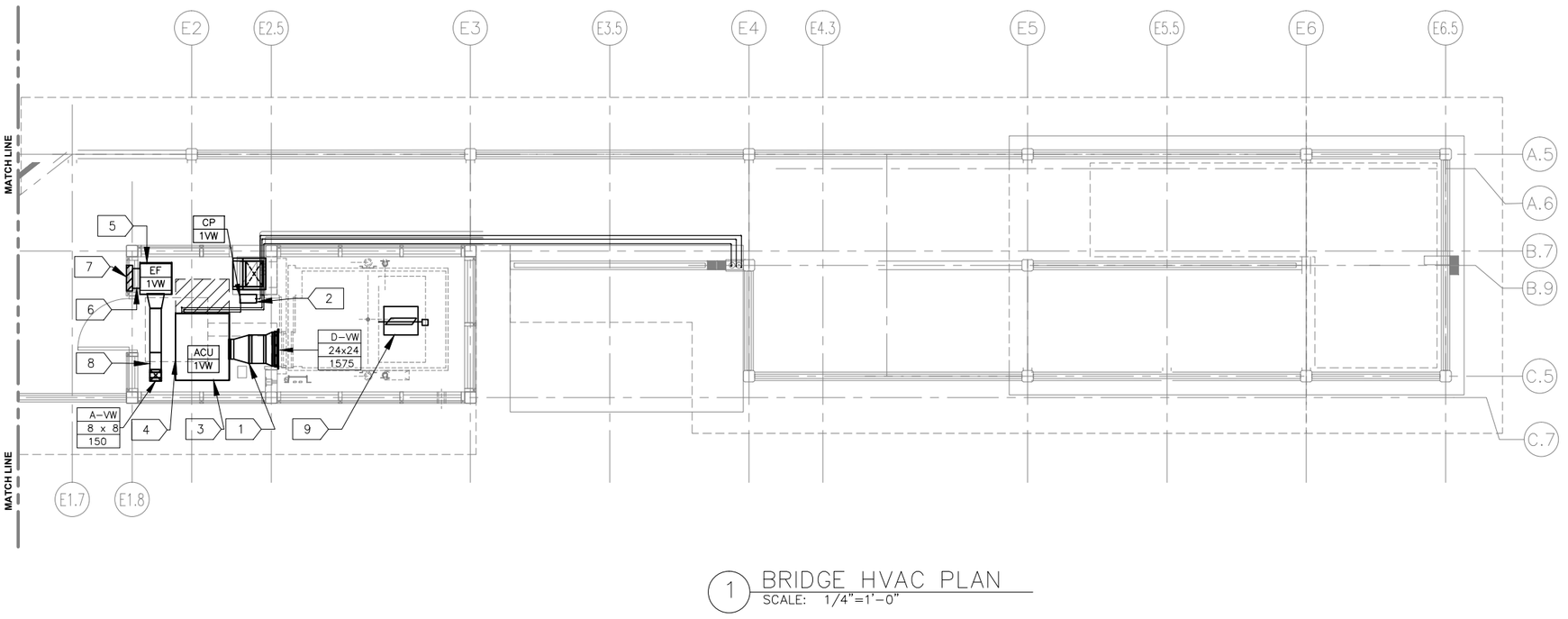


1 BRIDGE HVAC PLAN
SCALE: 1/4"=1'-0"

HVAC GENERAL SHEET NOTES

A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.
B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY AIR OUTLETS AND WHERE INDICATED ON BRANCH DUCTWORK.
C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL MOTORIZED DAMPERS AND FIRE DAMPERS.
D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK TO MECHANICAL EQUIPMENT CONNECTIONS.
E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL EQUIPMENT.
G. RUN DUCTWORK AS HIGH AS POSSIBLE.
H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED FULL LENGTH.
I. PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME DAMPERS AND FAN ACCESS.
J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

HVAC KEY NOTES:

1. ACU SUPPLY OUTLET TO TRANSITION TO 24X24 TO REGISTER.
2. CONDENSATE PUMP MOUNTED ON WALL.
3. ACU MOUNTED TO DECK. PROVIDE VIBRATION ISOLATION.
4. RETURN AIR INLET DRAWING FROM PLENUM.
5. EXHAUST FAN HUNG FROM DECK. PROVIDE VIBRATION ISOLATION.
6. 14X8 EXHAUST AIR DUCT TO LOUVER PLENUM.
7. LOUVER-SEE ARCH SPECIFICATION AND DRAWINGS FOR INFORMATION.
8. 8X8 EXHAUST AIR DUCT FROM FROM EXHAUST GRILLE, TRANSITIONS TO A 12X12 DUCT TO CONNECT TO EXHAUST FAN INLET.
9. 24X20 ROOF OPENING TO MOTORIZED DAMPER FOR FIRE SERVICE SMOKE EVACUATION. KEY OPERATED SWITCH AT LEVEL _. OPENING IS LOCATED AT THE TOP OF HOISTWAY AND CONNECTS TO A GRAVITY RELIEF VENTILATOR MOUNTED ON THE ROOF.

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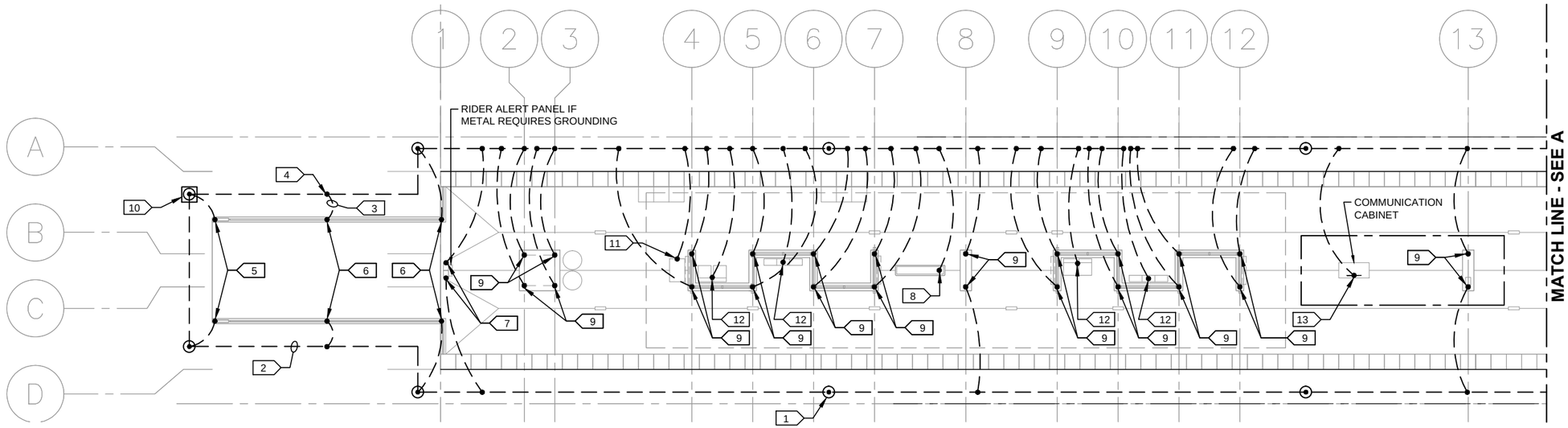
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**VC BRIDGE LEVEL HVAC PLAN**

DISCIPLINE: MECHANICAL
SHEET NAME: E4-VWT-MEC-PLN-132

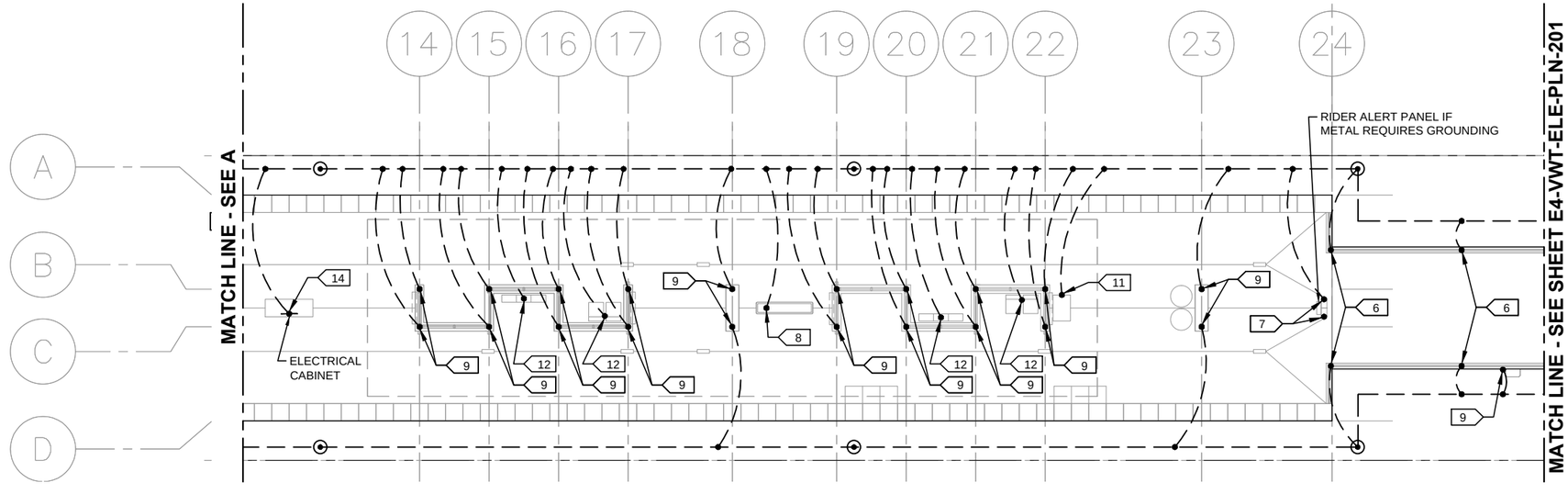
SHEET 194 OF 273

Sep. 21 2015 02:20 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\VAN WHITE STATION\VAN WHITE VERTICAL CIRCULATION\E4-VWT-MEC-PLN-132.dwg By: craig




1 PARTIAL PLATFORM PLAN

SCALE: 1/16"=1'-0"




2 PARTIAL PLATFORM PLAN

SCALE: 1/16"=1'-0"

KEYNOTES:

1. GROUND ROD, TYPICAL.
2. GROUND LOOP, TYPICAL.
3. GEC, TYPICAL.
4. EXOTHERMIC WELD, TYPICAL.
5. GEC CONNECTION TO SIGN.
6. GEC CONNECTION TO RAILING POST.
7. GEC CONNECTION TO RSV.
8. GEC CONNECTION TO KIOSK.
9. GEC CONNECTION TO COLUMN.
10. GROUND TEST WELL.
11. GEC CONNECTION TO TVM.
12. GEC CONNECTION TO SEAT OR LEAN RAIL.
13. GEC CONNECTION TO COMMUNICATIONS CABINET GROUND BUS.
14. #3/0 GEC CONNECTION TO ELECTRICAL ENCLOSURE GROUND BUS.

GENERAL NOTES:

1. ALL METALLIC OBJECTS SHALL BE GROUNDED AND THE GROUNDING PLAN IS INTENDED TO DEMONSTRATE THE GROUNDING OF THE PLATFORM, GUIDEWAY AND EQUIPMENT WITHIN THE VICINITY. OBJECTS NOT SHOWN GROUNDED DOES RELIEVE THE CONTRACTOR FROM THE DESIGN INTENT.
2. GROUND LOOP SHALL BE #3/0 BARE COPPER. LOOP SHALL BE INSTALLED 48" BELOW GRADE OR 6" BELOW THE FROST LINE, WHICHEVER IS GREATER. GROUND LOOP IS SHOWN DIAGRAMMATICALLY. INSTALL GROUND LOOP UNDER PLATFORM PERIMETER TO PROTECT FROM WORK PERFORMED OUTSIDE THE PLATFORM LIMITS BY OTHER TRADES. GROUND TEST WELLS SHALL REMAIN ACCESSIBLE AS SHOWN
3. GROUNDING ELECTRODE CONDUCTORS (GEC) SHALL BE #2/0 BARE COPPER UNLESS NOTED OTHERWISE.
4. ALL EXOTHERMIC WELDS TO COLUMNS, TVM'S, RSV'S, SEATS, LEAN RAILS AND EQUIPMENT CABINETS SHALL BE ABOVE GRADE AND VISIBLE. PAINT WELDS TO MATCH SURFACE COLOR. VERIFY COLOR WITH CAR.
5. INSTALL GROUND ROD SO THAT 8' IS BELOW THE FROST LINE.
6. IF RAILING HAS AN ISOLATION GAP, JUMPER BETWEEN GAPS WITH GEC.

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HORIZONTAL SCALE IN FEET

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# ELECTRICAL
# GROUNDING PLAN (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-PLN-201

SHEET 195 OF 273

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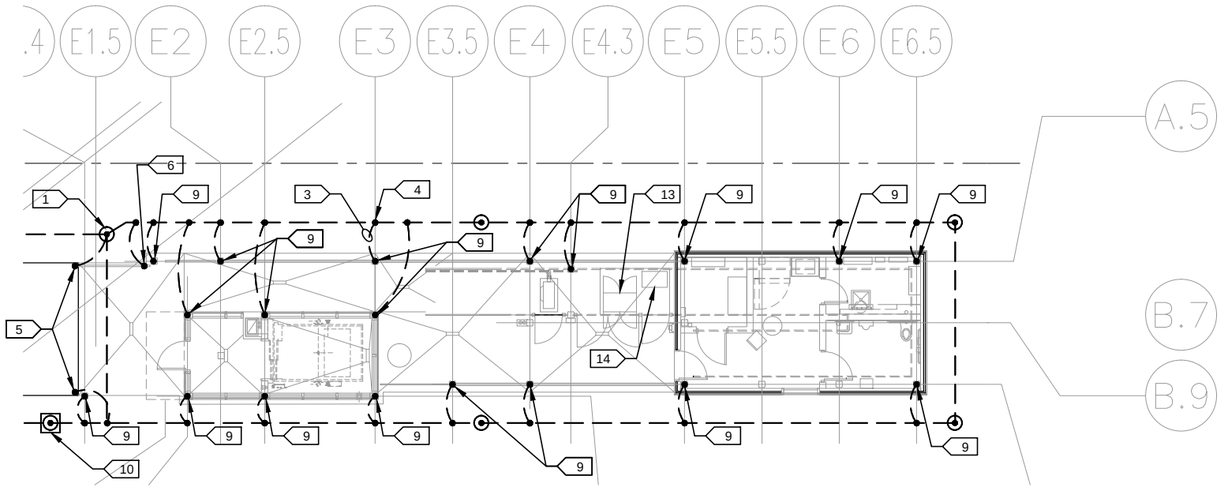


1 PARTIAL PLATFORM PLAN
SCALE: 1/16"=1'-0"

KEYNOTES:

1. GROUND ROD, TYPICAL.
2. GROUND LOOP, TYPICAL.
3. GEC, TYPICAL.
4. EXOTHERMIC WELD, TYPICAL.
5. GEC CONNECTION TO SIGN.
6. GEC CONNECTION TO RAILING POST.
7. NOT USED.
8. NOT USED.
9. GEC CONNECTION TO COLUMN.
10. GROUND TEST WELL.
11. NOT USED.
12. NOT USED.
13. GEC CONNECTION TO COMMUNICATIONS GROUNDING BUS.
14. #3/0 GEC CONNECTION TO ELECTRICAL ENCLOSURE GROUND BUS.

GENERAL NOTES:

1. ALL METALLIC OBJECTS SHALL BE GROUNDED AND THE GROUNDING PLAN IS INTENDED TO DEMONSTRATE THE GROUNDING OF THE PLATFORM, GUIDEWAY AND EQUIPMENT WITHIN THE VICINITY. OBJECTS NOT SHOWN GROUNDED DOES RELIEVE THE CONTRACTOR FROM THE DESIGN INTENT.
2. GROUND LOOP SHALL BE #3/0 BARE COPPER. LOOP SHALL BE INSTALLED 48" BELOW GRADE OR 6" BELOW THE FROST LINE, WHICHEVER IS GREATER. GROUND LOOP IS SHOWN DIAGRAMMATICALLY. INSTALL GROUND LOOP UNDER PLATFORM PERIMETER TO PROTECT FROM WORK PERFORMED OUTSIDE THE PLATFORM LIMITS BY OTHER TRADES. GROUND TEST WELLS SHALL REMAIN ACCESSIBLE AS SHOWN.
3. GROUNDING ELECTRODE CONDUCTORS (GEC) SHALL BE #2/0 BARE COPPER UNLESS NOTED OTHERWISE.
4. ALL EXOTHERMIC WELDS TO COLUMNS AND EQUIPMENT CABINETS SHALL BE ABOVE GRADE AND VISIBLE. PAINT WELDS TO MATCH SURFACE COLOR. VERIFY COLOR WITH CAR.
5. INSTALL GROUND ROD SO THAT 8' IS BELOW THE FROST LINE.
6. IF RAILING HAS AN ISOLATION GAP, JUMPER BETWEEN GAPS WITH GEC.

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HORIZONTAL SCALE IN FEET

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METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# ELECTRICAL
# GROUNDING PLAN (2 OF 2)

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-PLN-202

SHEET 196 OF 273

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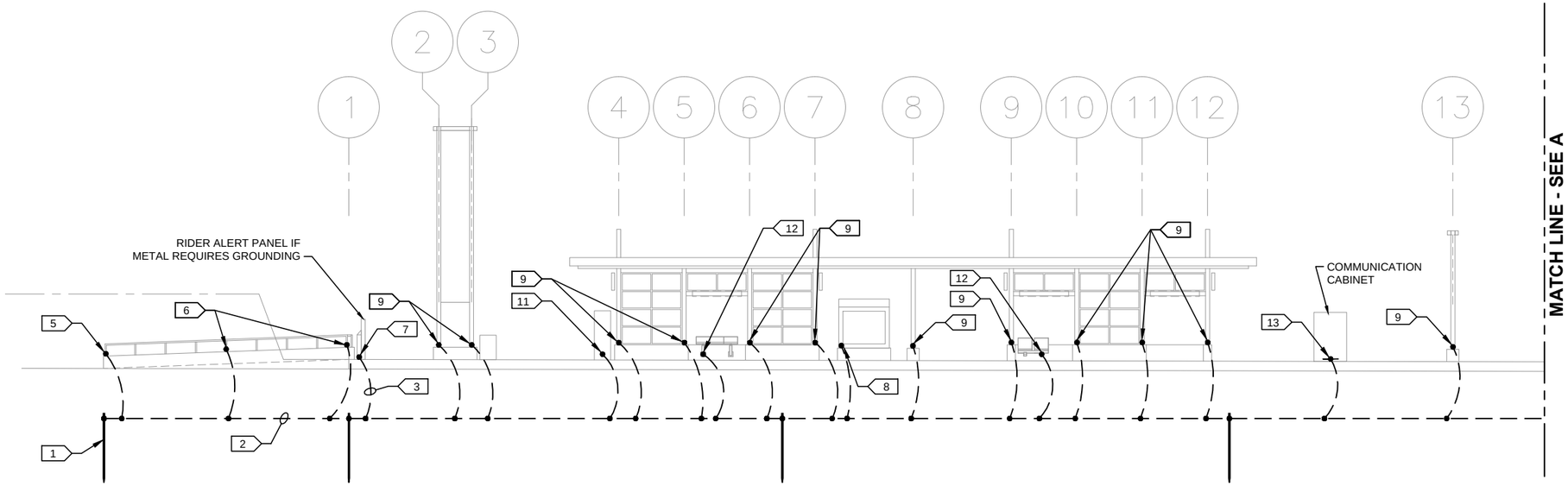
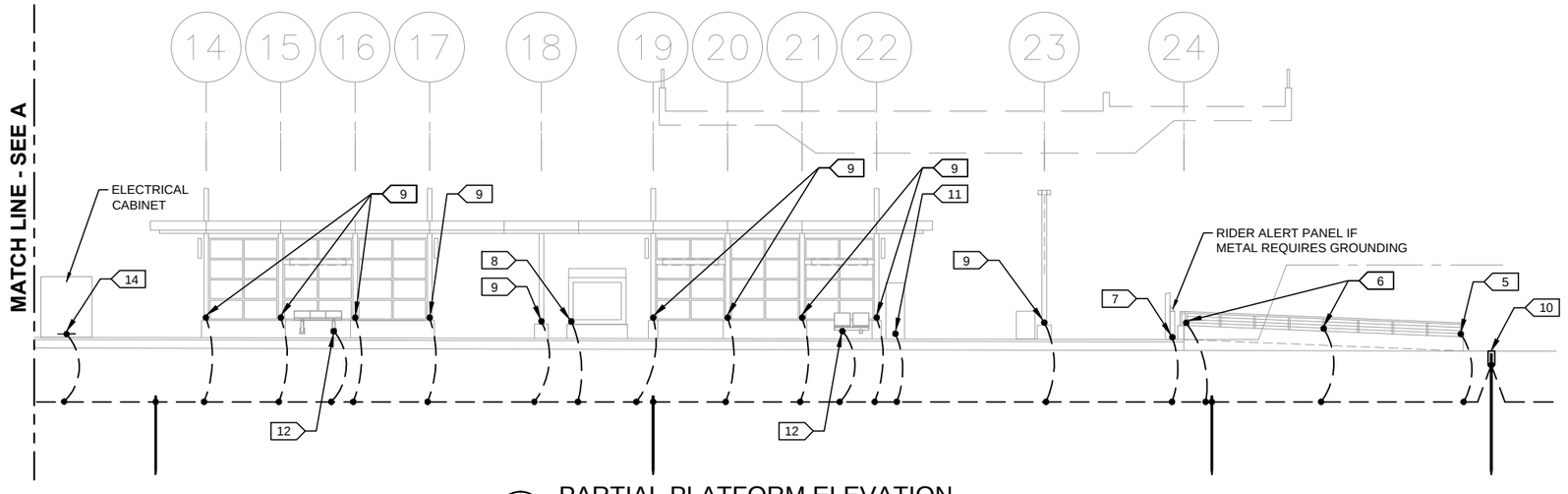



1 PARTIAL PLATFORM ELEVATION

SCALE: 1/16"=1'-0"




2 PARTIAL PLATFORM ELEVATION

SCALE: 1/16"=1'-0"

KEYNOTES:

1. GROUND ROD, TYPICAL.
2. GROUND LOOP, TYPICAL.
3. GEC, TYPICAL.
4. EXOTHERMIC WELD, TYPICAL.
5. GEC CONNECTION TO SIGN.
6. GEC CONNECTION TO RAILING POST.
7. GEC CONNECTION TO RSV.
8. GEC CONNECTION TO KIOSK.
9. GEC CONNECTION TO COLUMN.
10. GROUND TEST WELL.
11. GEC CONNECTION TO TVM.
12. GEC CONNECTION TO SEAT OR LEAN RAIL.
13. GEC CONNECTION TO COMMUNICATIONS CABINET GROUND BUS.
14. #3/0 GEC CONNECTION TO ELECTRICAL ENCLOSURE GROUND BUS.

GENERAL NOTES:

1. ALL METALLIC OBJECTS SHALL BE GROUNDED AND THE GROUNDING PLAN IS INTENDED TO DEMONSTRATE THE GROUNDING OF THE PLATFORM, GUIDEWAY AND EQUIPMENT WITHIN THE VICINITY. OBJECTS NOT SHOWN GROUNDED DOES RELIEVE THE CONTRACTOR FROM THE DESIGN INTENT.
2. GROUND LOOP SHALL BE #3/0 BARE COPPER. LOOP SHALL BE INSTALLED 48" BELOW GRADE OR 6" BELOW THE FROST LINE, WHICHEVER IS GREATER. GROUND LOOP IS SHOWN DIAGRAMMATICALLY. INSTALL GROUND LOOP UNDER PLATFORM PERIMETER TO PROTECT FROM WORK PERFORMED OUTSIDE THE PLATFORM LIMITS BY OTHER TRADES. GROUND TEST WELLS SHALL REMAIN ACCESSIBLE AS SHOWN
3. GROUNDING ELECTRODE CONDUCTORS (GEC) SHALL BE #2/0 BARE COPPER UNLESS NOTED OTHERWISE.
4. ALL EXOTHERMIC WELDS TO COLUMNS, TVM'S, RSV'S, SEATS, LEAN RAILS AND EQUIPMENT CABINETS SHALL BE ABOVE GRADE AND VISIBLE. PAINT WELDS TO MATCH SURFACE COLOR. VERIFY COLOR WITH CAR.
5. INSTALL GROUND ROD SO THAT 8' IS BELOW THE FROST LINE.
6. IF RAILING HAS AN ISOLATION GAP, JUMPER BETWEEN GAPS WITH GEC.

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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# ELECTRICAL
# GROUNDING ELEVATIONS

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-PLN-203

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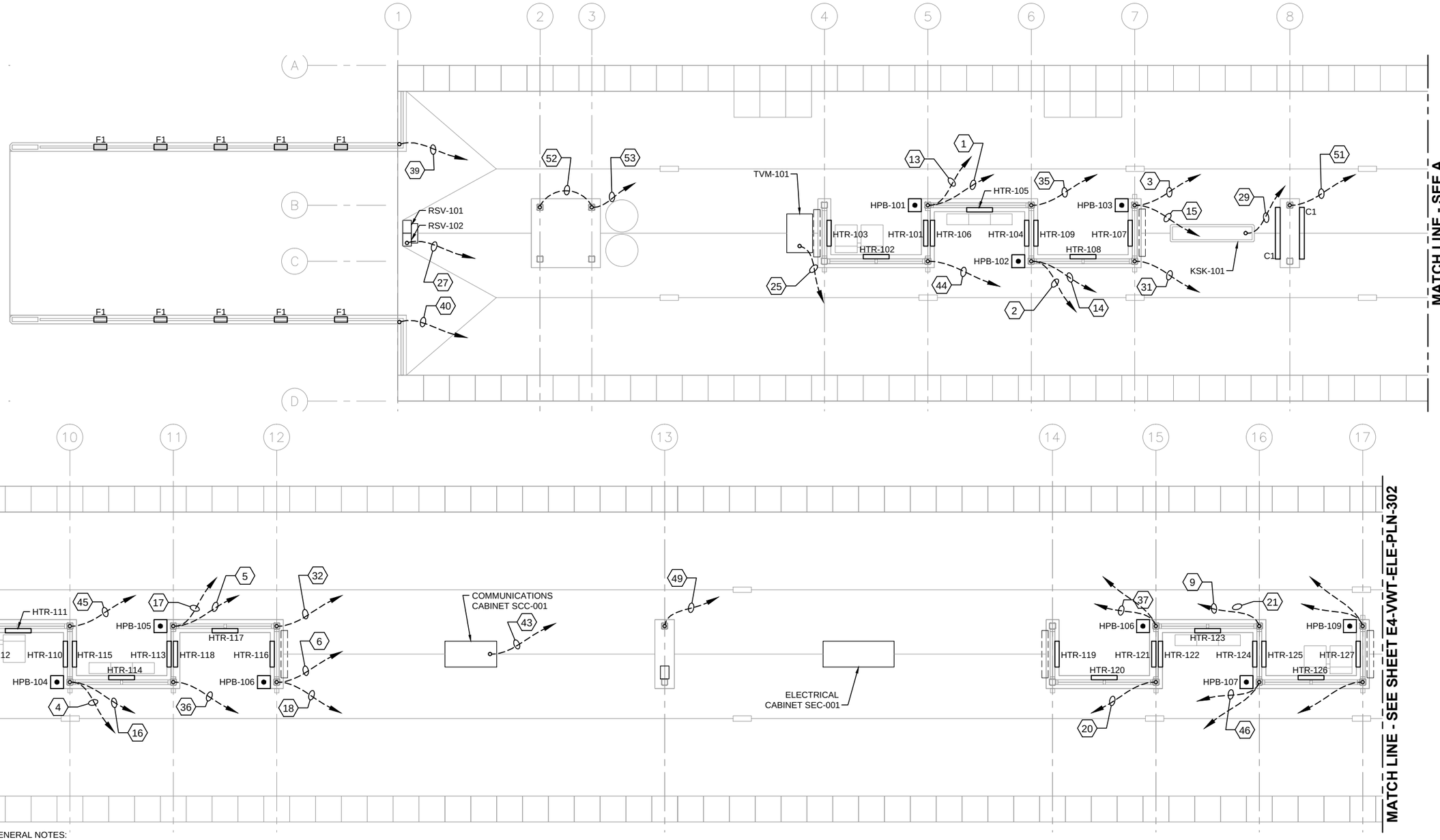


GENERAL NOTES:

1. ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
2. AT CONDUIT STUB-UPS TRANSITION TO 1/2" LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.

## 1 PLATFORM PLAN

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

0 2 4 8

HORIZONTAL SCALE IN FEET

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SOUTHWEST
Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# ELECTRICAL
# UNDERSLAB CONDUIT PLAN (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-PLN-301

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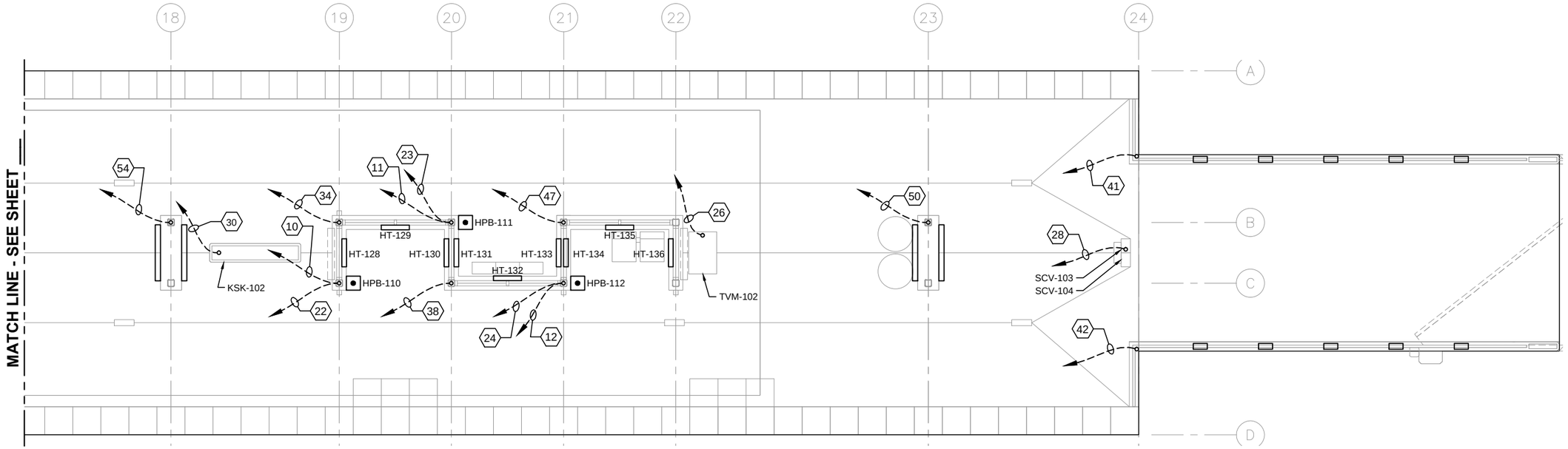
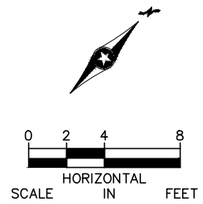



## 1 PLATFORM PLAN

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

GENERAL NOTES:

1. ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF SVC'S.
2. AT CONDUIT STUB-UPS TRANSITION TO 1/2" LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.
4. SEE DETAIL XX/XXX FOR SCV ROUGH-IN AND DETAIL XX/XXX FOR TVM ROUGH-IN.
5. SEE DETAIL XX/XXX FOR MOUNTING OF HEATERS. WIRE BETWEEN ELECTRIC HEATERS.

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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# ELECTRICAL
# UNDERSLAB CONDUIT PLAN (2 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-PLN-302

SHEET 199 OF 273

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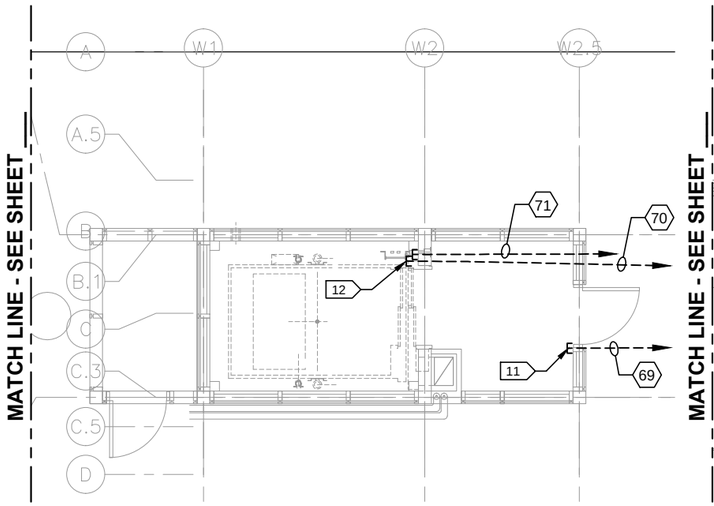
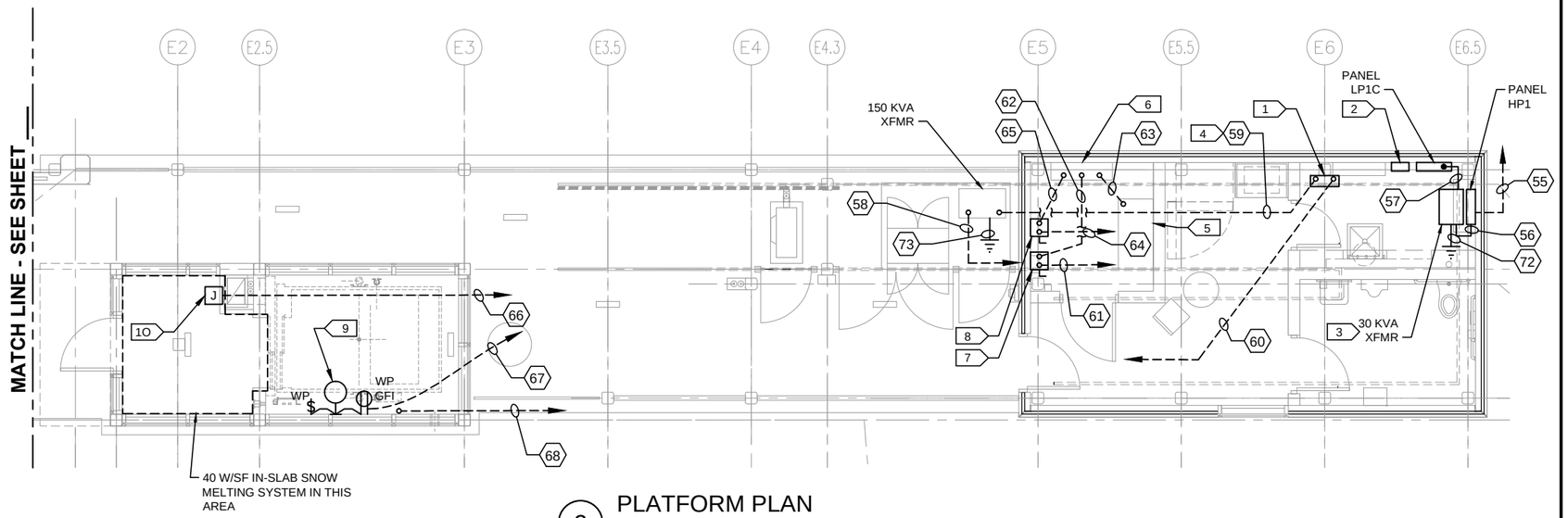



1 PLATFORM PLAN (FUTURE)

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




2 PLATFORM PLAN

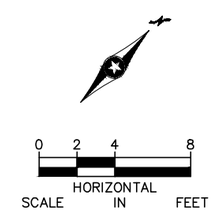
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF SVC'S.
2. AT CONDUIT STUB-UPS TRANSITION TO 1/2" LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.
4. SEE DETAIL XX/XXX FOR SCV ROUGH-IN AND DETAIL XX/XXX FOR TVM ROUGH-IN.
5. SEE DETAIL XX/XXX FOR MOUNTING OF HEATERS. WIRE BETWEEN ELECTRIC HEATERS.

KEYNOTES:

1. 500A, 208V, 3P CIRCUIT BREAKER DISCONNECT SWITCH FOR 150 KVA XFMR.
2. 20A/2P, 208V CONTACTOR AND CONTROLLER FOR ELEVATOR LOBBY IN-SLAB HEATING. PROVIDE SPACE FOR FUTURE ELEVATOR LOBBY IN-SLAB 20A/2P, 208V CONTACTOR AND CONTROLLER.
3. HANG XFMR FROM CEILING WITH THREADED RODS AND STEEL U-CHANNEL.
4. MAXIMUM LENGTH OF CONDUCTORS SHALL BE 25' FROM TERMINATION TO TERMINATION.
5. ELEVATOR HYDRAULIC PUMP.
6. ELEVATOR CONTROLLER.
7. 80A, 208V, 3P CIRCUIT BREAKER DISCONNECT SWITCH FOR ELEVATOR.
8. 20A, 120V, 2P DISCONNECT SWITCH FOR ELEVATOR CAB LIGHTING AND POWER.
9. ELEVATOR PIT LUMINAIRE, LIGHT SWITCH AND RECEPTACLE. INSTALL AT 18" ABOVE PIT FLOOR.
10. FLUSH MOUNTED JUNCTION BOX FOR CONNECTION TO IN-SLAB FLOOR HEATING CABLES.
11. STUB CONDUIT OUT AT 12" BELOW FINISHED SURFACE OF PLATFORM. CAP AND SEAL WATERTIGHT.
12. STUB CONDUITS OUT AT 36" BELOW FINISHED SURFACE OF PLATFORM. CAP AND SEAL WATERTIGHT.

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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

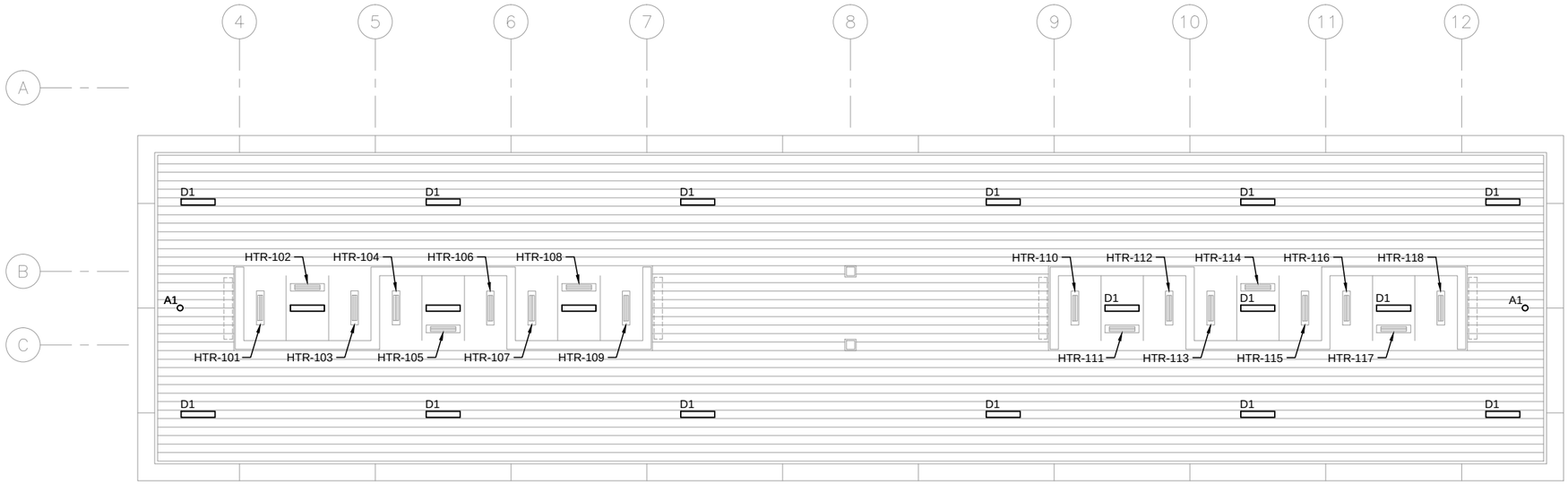
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# ELECTRICAL
# UNDERSLAB CONDUIT PLAN - VC WALKWAY

DISCIPLINE: ELECTRICAL

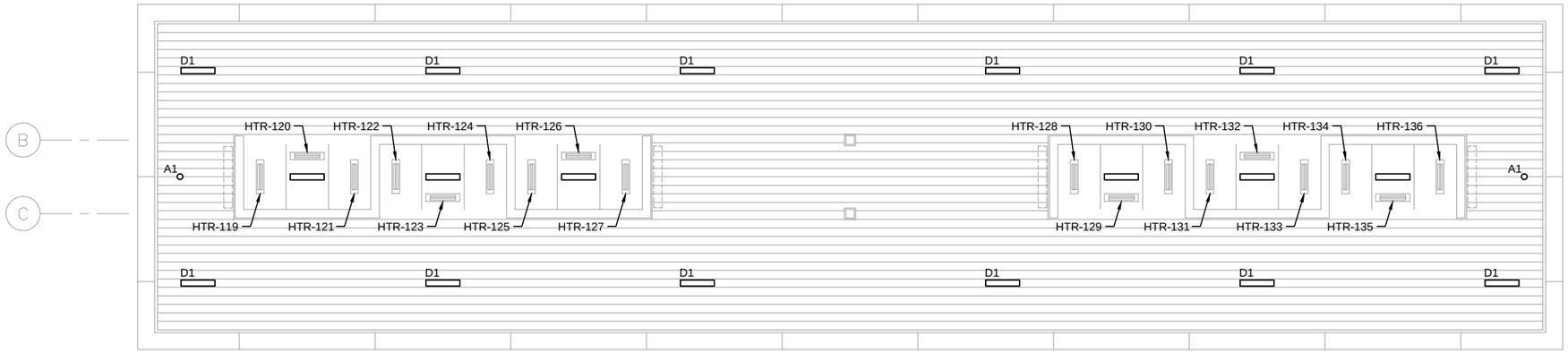
SHEET NAME: E4-VWT-ELE-PLN-303

SHEET 200 OF 273

Sep, 25 2015 04:39 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-PLN-303.dwg By: FergTK




1 CANOPY PLAN – WEST
SCALE: 1/8"=1'–0"




2 CANOPY PLAN – EAST
SCALE: 1/8"=1'–0"

GENERAL NOTES:

1. PROVIDE HEAT TRACE IN GUTTERS, DOWN SPOUTS AND RAIN CONDUCTORS.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ELECTRICAL**
**CANOPY PLAN**

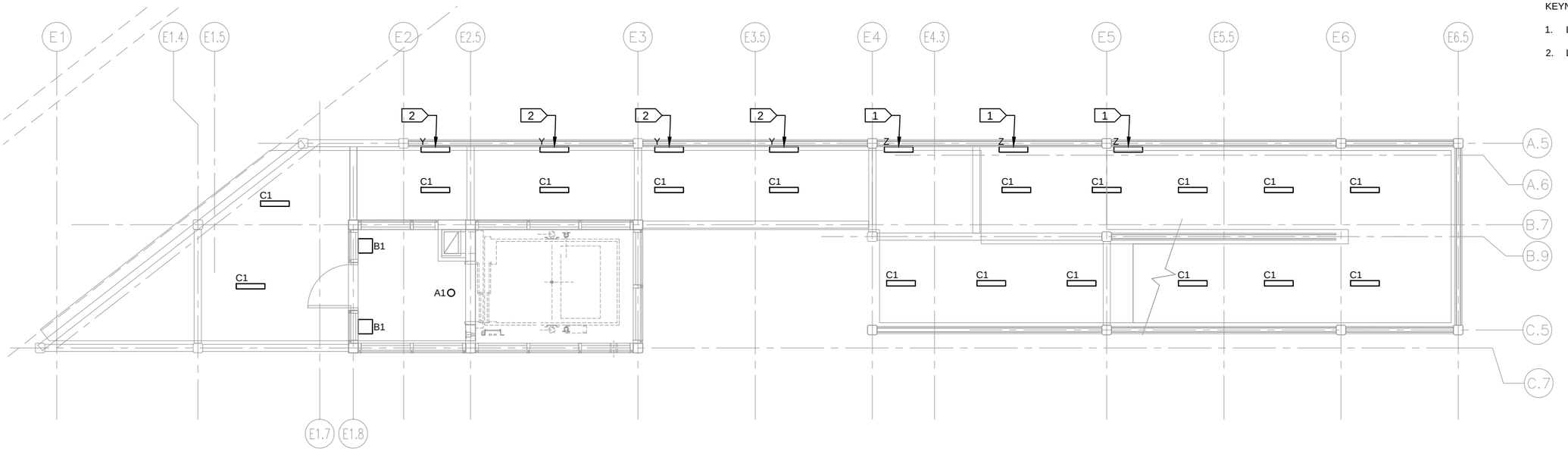
DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-PLN-304

SHEET 201 OF 273

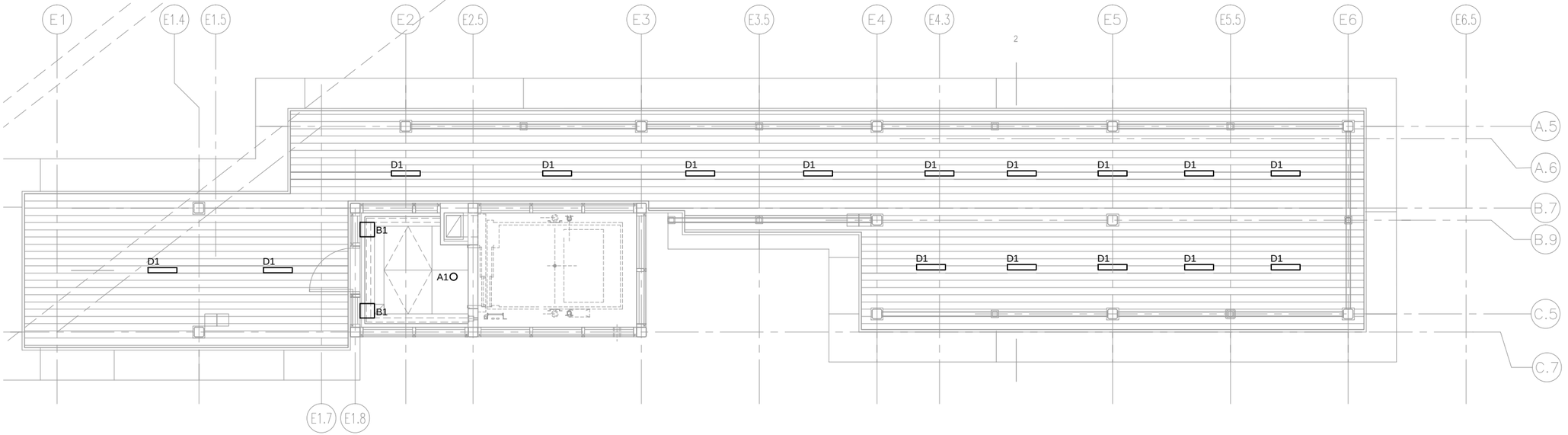
Sep. 25 2015 04:40 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-PLN-304.dwg By: FergTK

KEYNOTES:

1. LUMINAIRES MOUNTED AT 17'-6" A.F.F.
2. LUMINAIRES MOUNTED AT 14'-0" A.F.F.




1 ELECTRICAL LIGHTING PLAN INTERMEDIATE LEVEL
SCALE: 1/8"–1'–0"




2 ELECTRICAL LIGHTING PLAN BRIDGE LEVEL
SCALE: 1/8"–1'–0"

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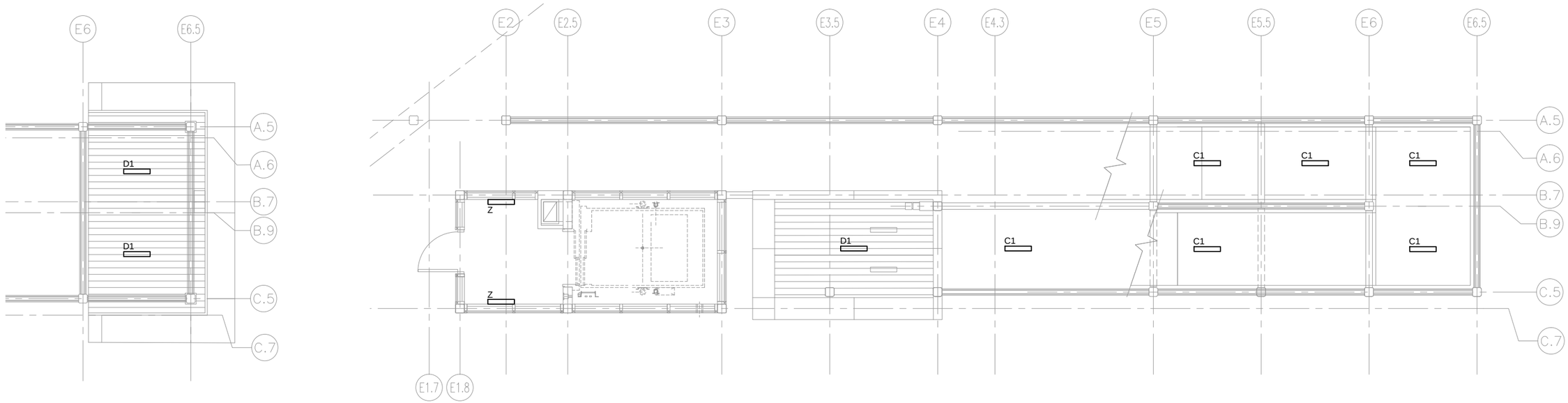
Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ELECTRICAL LIGHTING PLAN**
**VC PLATFORM LEVEL**

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-PLN-305

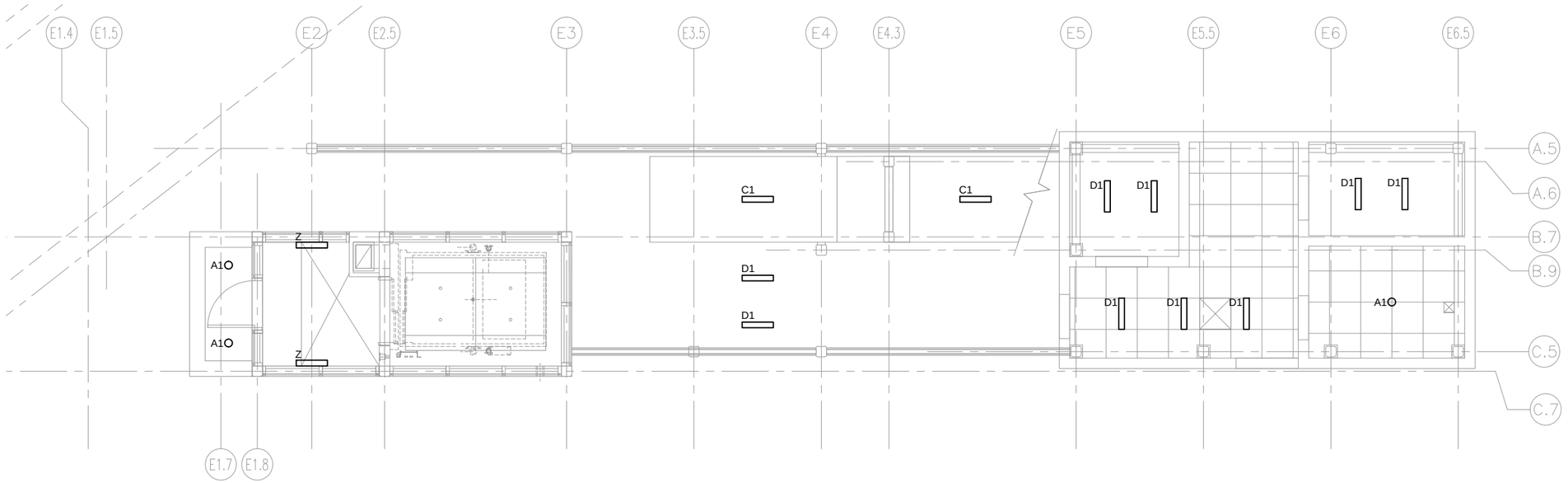
SHEET 202 OF 273

Sep. 25 2015 04:40 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-PLN-305.dwg By: FergTK




1 ELECTRICAL LIGHTING PLAN INTERMEDIATE LEVEL
SCALE: 1/8"–1'–0"

1 ELECTRICAL LIGHTING PLAN INTERMEDIATE LEVEL
SCALE: 1/8"–1'–0"




2 ELECTRICAL LIGHTING PLAN PLATFORM LEVEL
SCALE: 1/8"–1'–0"

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**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ELECTRICAL LIGHTING PLAN**
**VC BRIDGE LEVEL**

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-PLN-306

SHEET 203 OF 273

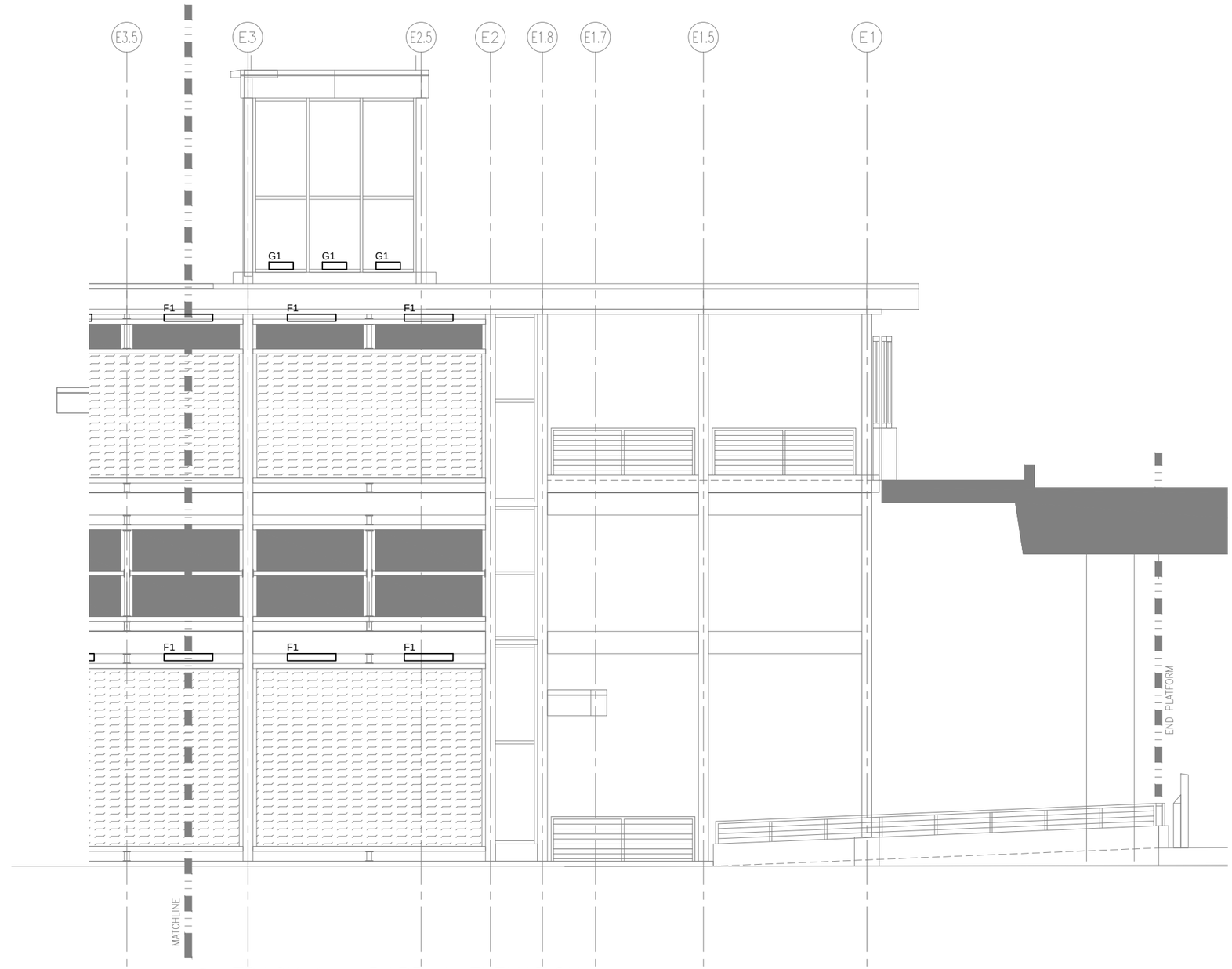
Sep. 25 2015 04:41 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-PLN-306.dwg By: FergTK

GENERAL NOTES:

1.

KEYNOTES:

1.




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
HORIZONTAL SCALE IN FEET

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SOUTHWEST Green Line LRT Extension

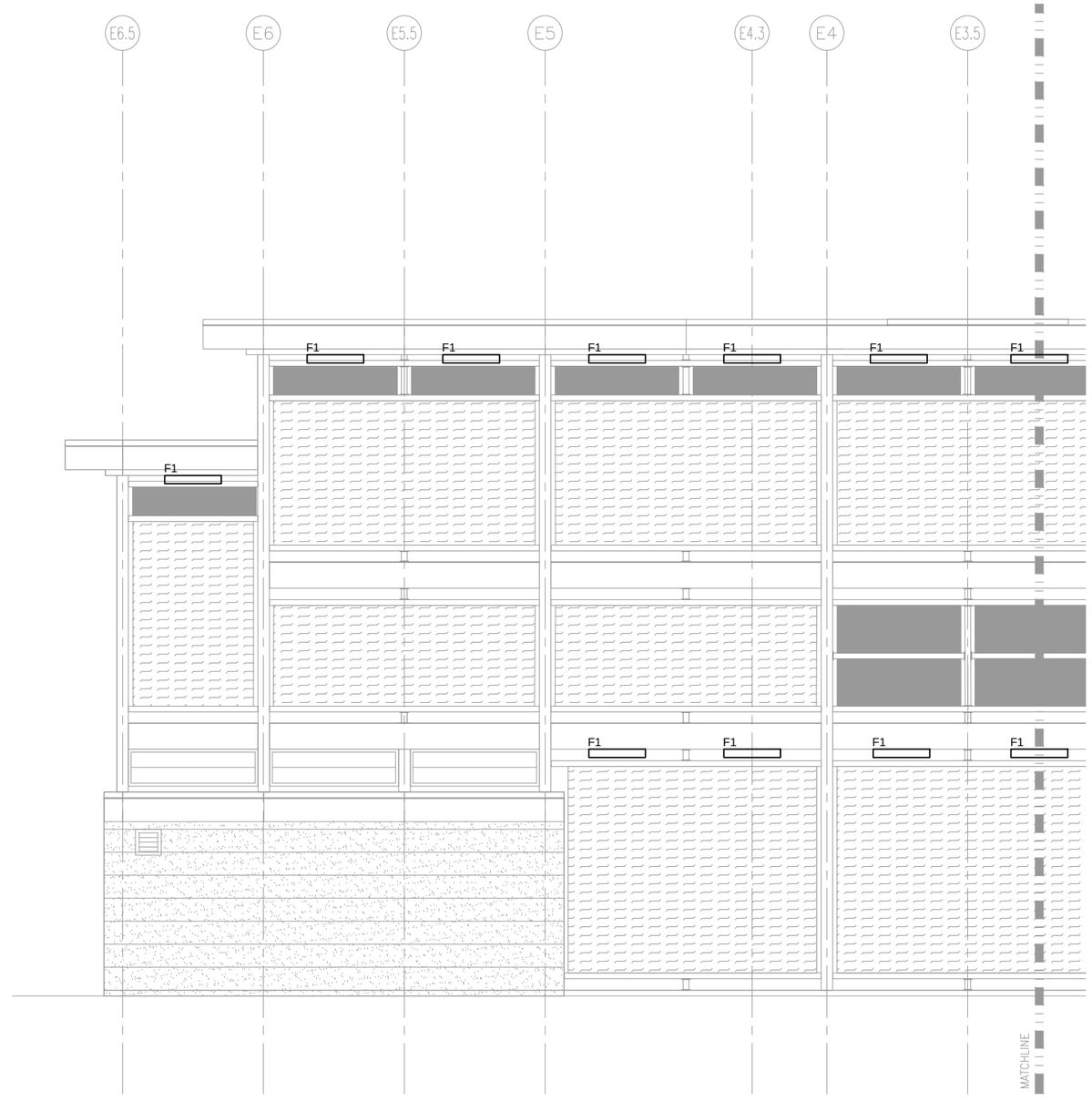
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ELECTRICAL**
**VC TRACK 1 - PARTIAL ELEVATION**

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-ELV-320

SHEET 204 OF 273

Sep. 25 2015 04:42 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-ELV-320.dwg By: FergTK




1 TRACK 1 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1.

KEYNOTES:

1.

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HORIZONTAL SCALE IN FEET

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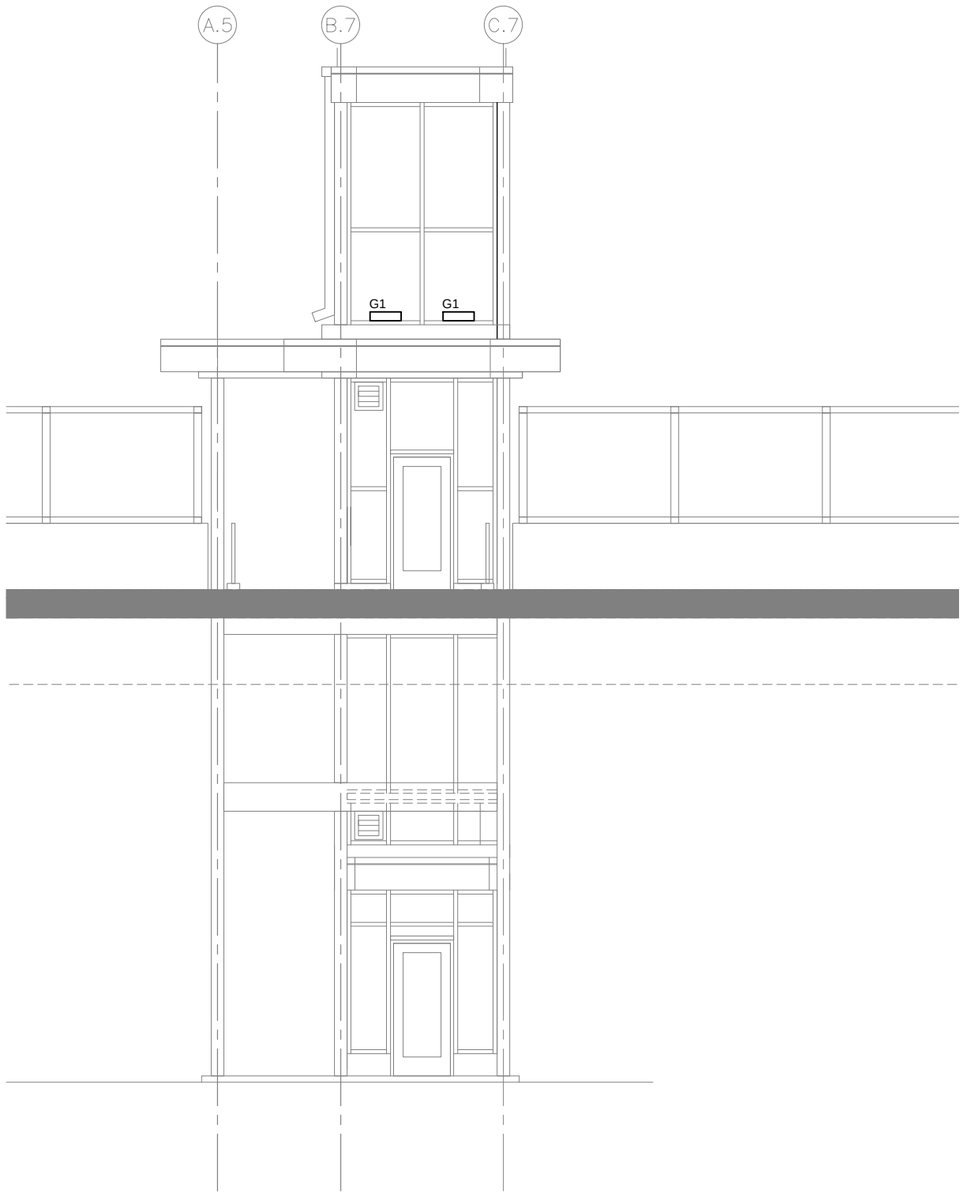
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# ELECTRICAL
# VC TRACK 1 - PARTIAL ELEVATION

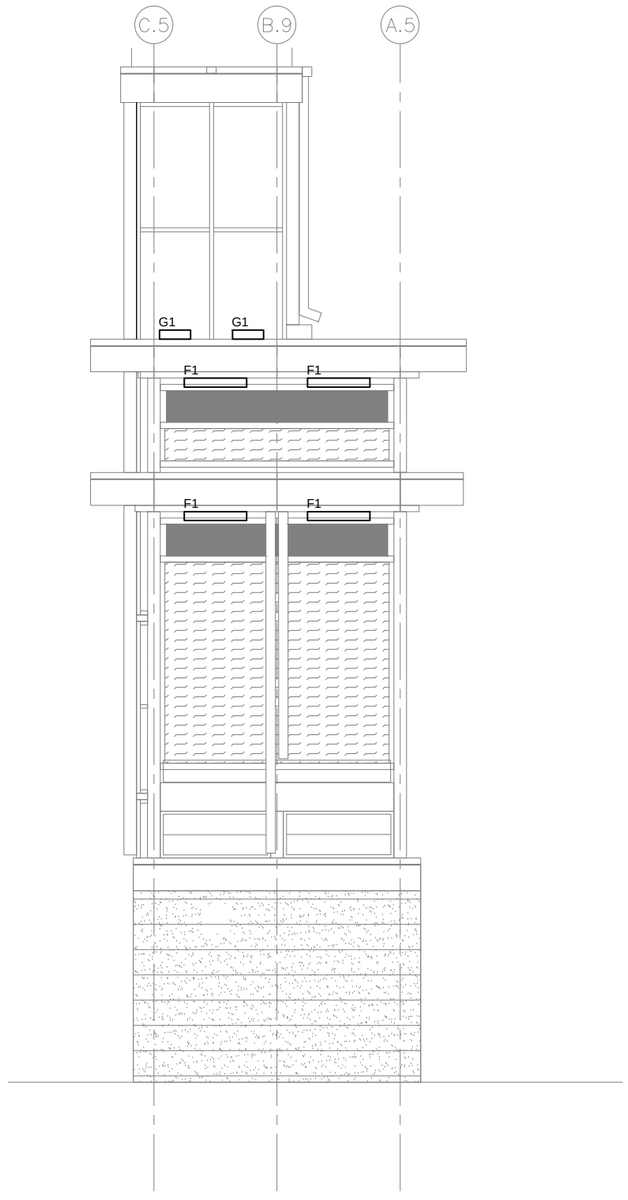
DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-ELV-321

SHEET 205 OF 273

Sep. 25 2015 04:42 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-ELV-321.dwg By: FergTK




1 VC WEST ELEVATION
SCALE: 1/8"=1'-0"




2 VC EAST ELEVATION
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1.

KEYNOTES:

1.

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HORIZONTAL SCALE IN FEET

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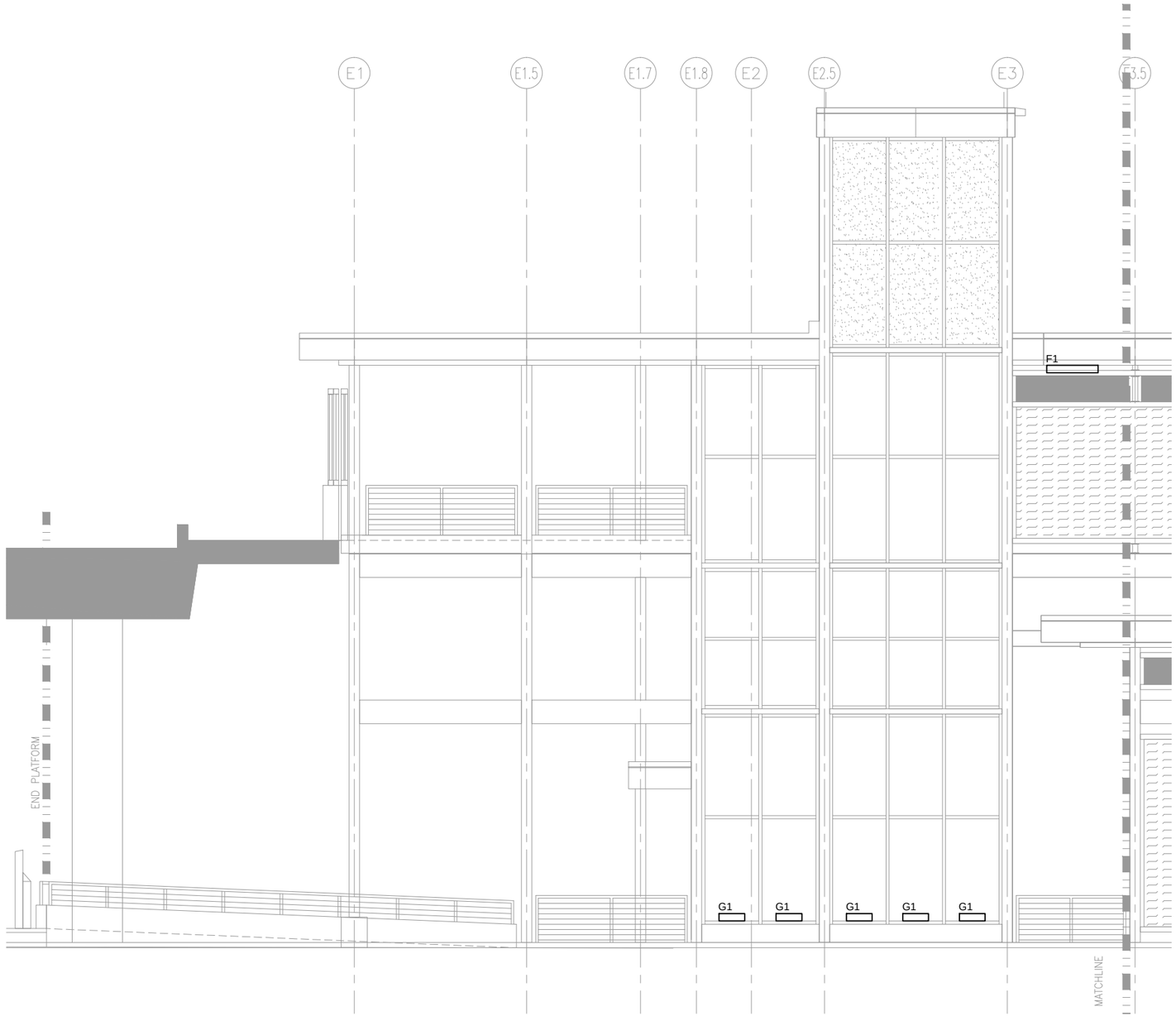
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# ELECTRICAL
# VC SIDE ELEVATIONS

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-ELV-322

SHEET 206 OF 273

Sep. 25 2015 04:43 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-ELV-322.dwg By: FergTK




1 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

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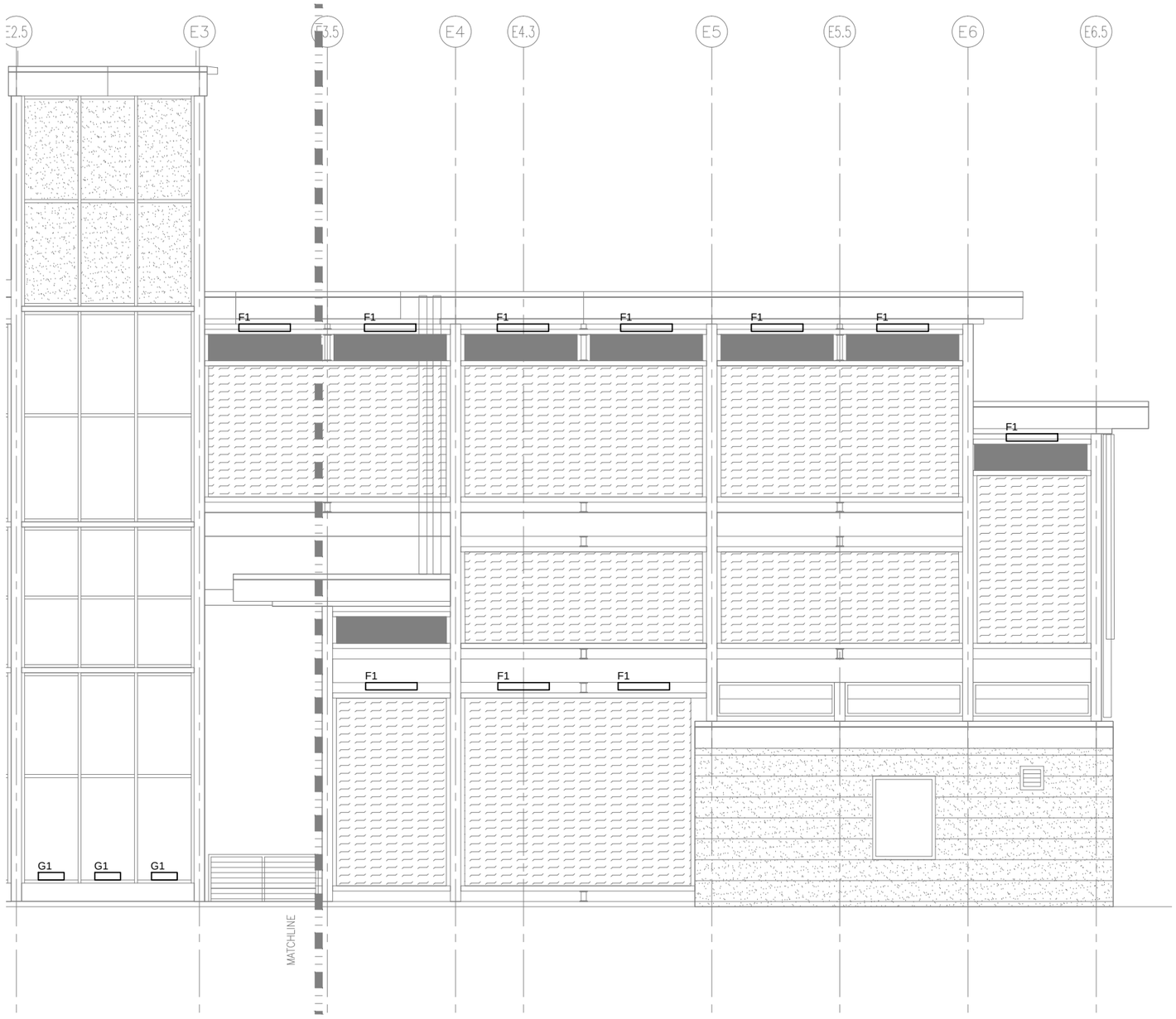
CIVIL EAST - VOLUME 11B
VAN WHITE STATION
ELECTRICAL
VC TRACK 2 - PARTIAL ELEVATION

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-ELV-326

SHEET 207 OF 273

Sep. 25 2015 04:43 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-ELV-326.dwg By: FergTK




1 TRACK 2 – PARTIAL ELEVATION
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1.

KEYNOTES:

1.

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HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

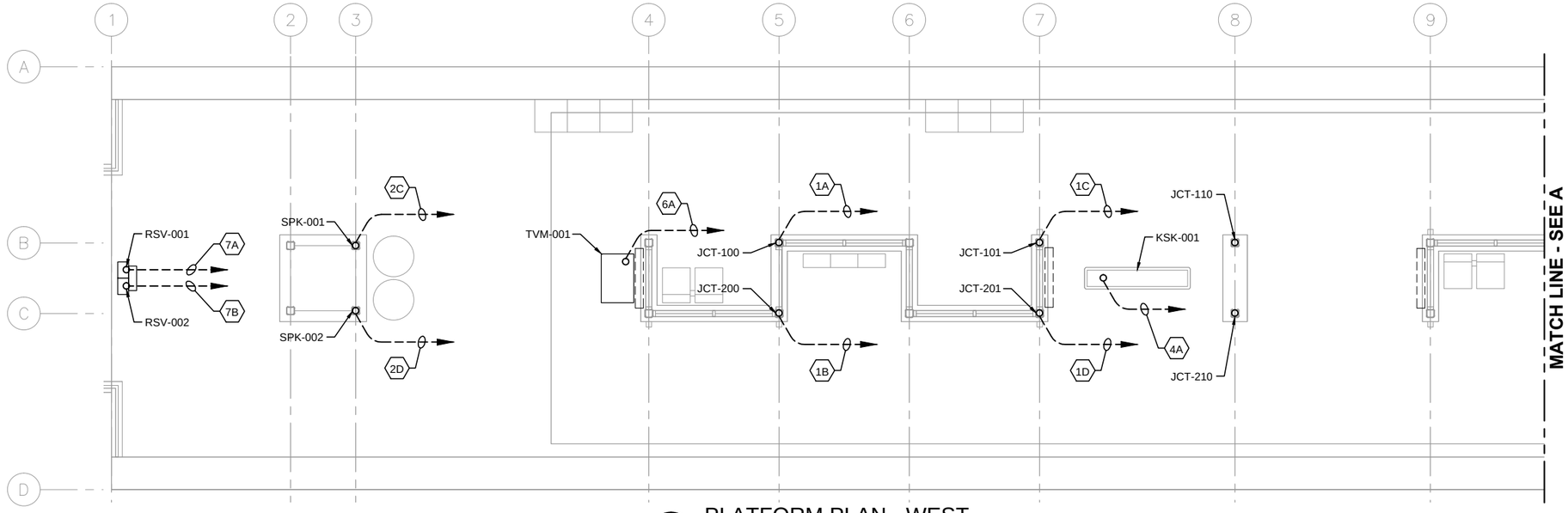
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ELECTRICAL**
**VC TRACK 2 - PARTIAL ELEVATION**

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-ELV-327

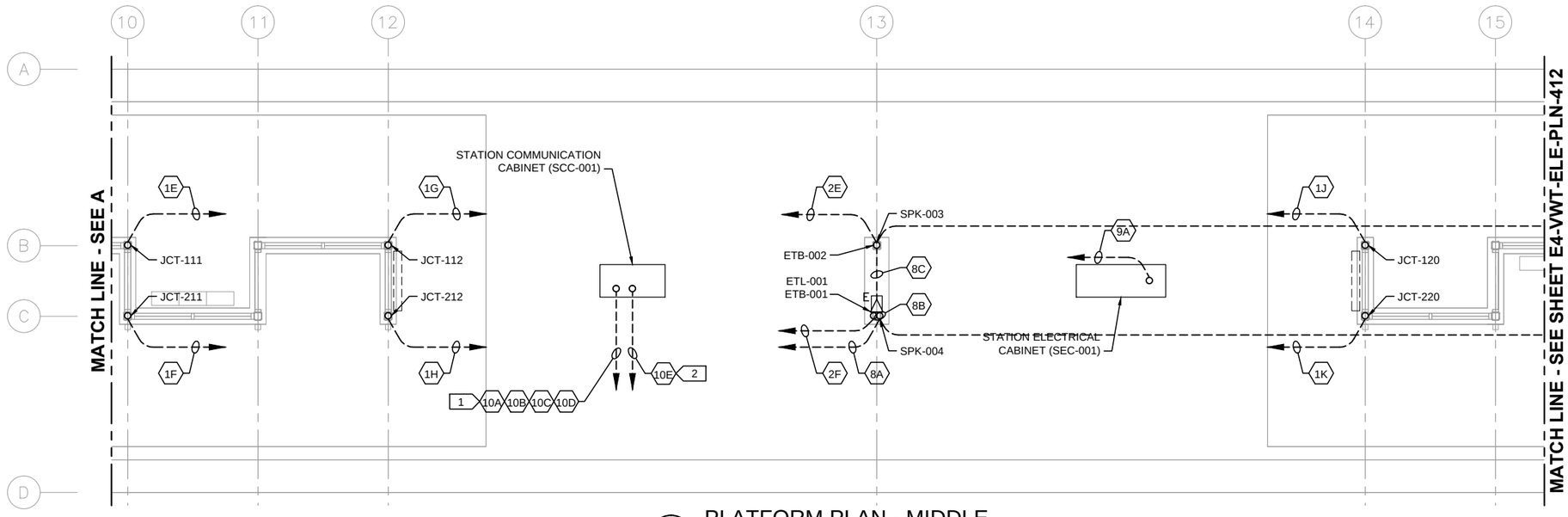
SHEET 208 OF 273

Sep. 25 2015 04:44 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-ELV-327.dwg By: FergTK




1 PLATFORM PLAN - WEST

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




2 PLATFORM PLAN - MIDDLE

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1. COMMUNICATIONS CONDUITS TO/FROM STATION SIGNAL-COMMUNICATIONS HOUSE.
2. CONDUIT TO/FROM STATION-COMMUNICATIONS HOUSE FOR UPS POWER FEED TO SCC-001.

0 2 4 8

HORIZONTAL SCALE IN FEET

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SOUTHWEST
Green Line LRT Extension

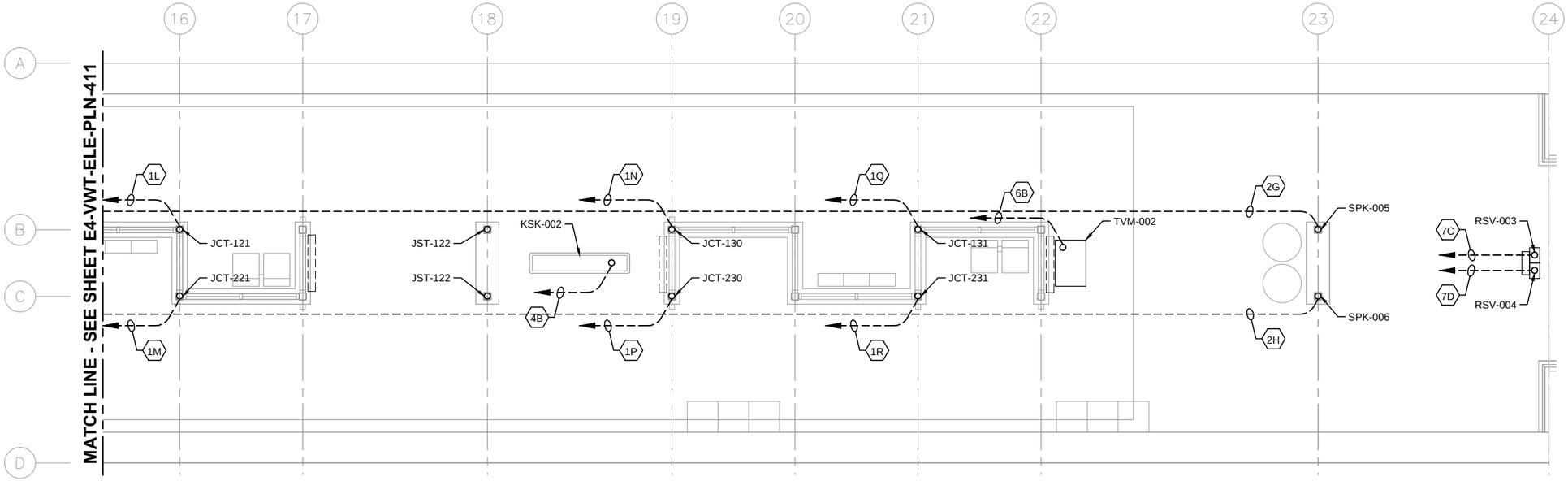
# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# COMMUNICATIONS
# UNDERSLAB CONDUIT PLAN (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-PLN-411

SHEET 209 OF 273

Sep. 25 2015 04:44 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-PLN-411.dwg By: FergTK




1 PLATFORM PLAN - EAST

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1.

0 2 4 8

HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

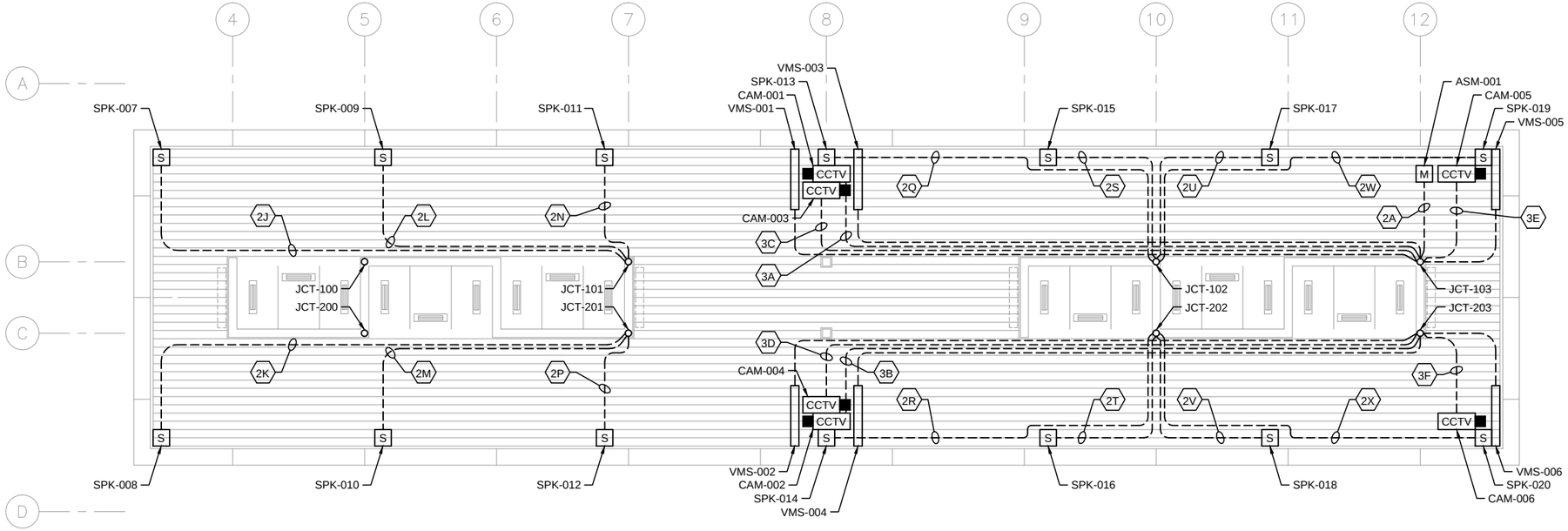
**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**COMMUNICATIONS**
**UNDERSLAB CONDUIT PLAN (2 OF 2)**

DISCIPLINE: ELECTRICAL

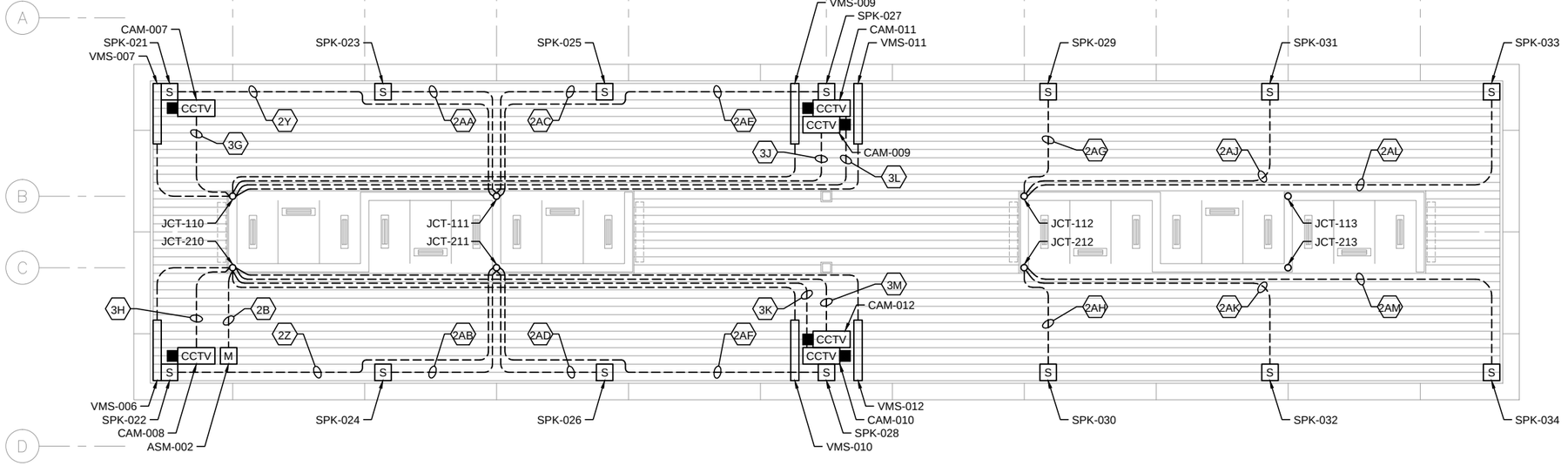
SHEET NAME: E4-VWT-ELE-PLN-412

SHEET 210 OF 273

Sep. 25 2015 04:45 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-PLN-412.dwg By: FergTK




1 CANOPY PLAN – WEST
SCALE: 1/8"=1'–0"




2 CANOPY PLAN – EAST
SCALE: 1/8"=1'–0"

GENERAL NOTES:

1.

KEYNOTES:

1.

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SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# VAN WHITE STATION
# COMMUNICATIONS
# CANOPY PLAN

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-PLN-421

SHEET 211 OF 273

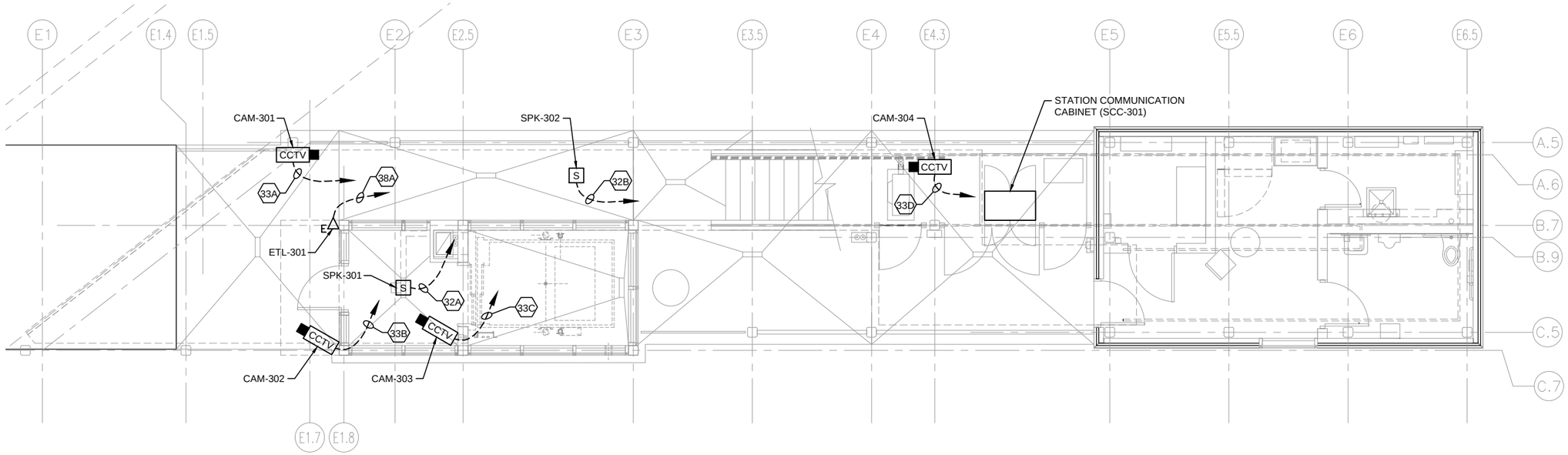
Sep. 25 2015 04:45 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-PLN-421.dwg By: FergTK

GENERAL NOTES:

1. DASHED LINE WITH ARROWHEAD DENOTES HOME RUN TO SCC-301 UNLESS OTHERWISE NOTED.

KEYNOTES:

1.




1 VC PLATFORM LEVEL PLAN (EAST)
SCALE: 1/8"=1'-0"

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HORIZONTAL SCALE IN FEET

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SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
VAN WHITE STATION
COMMUNICATIONS
VC PLATFORM LEVEL PLAN

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-PLN-431

SHEET 212 OF 273

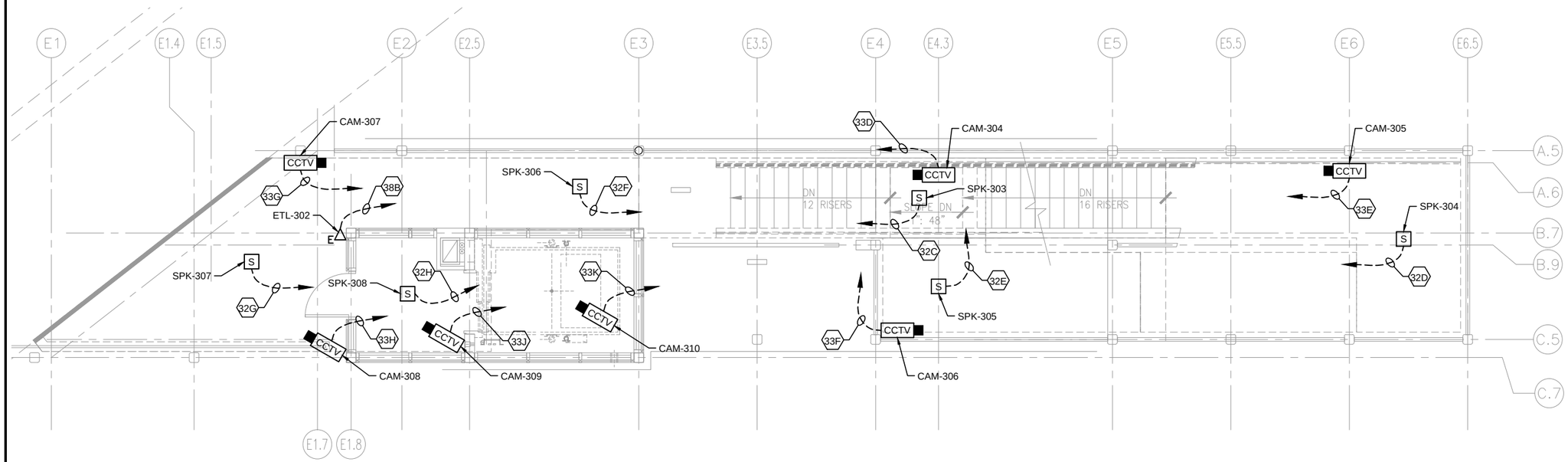
Sep. 25 2015 04:45 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-PLN-431.dwg By: FergTK

GENERAL NOTES:

1. DASHED LINE WITH ARROWHEAD DENOTES HOME RUN TO SCC-301 UNLESS OTHERWISE NOTED.

KEYNOTES:

1.




1 VC BRIDGE LEVEL PLAN (EAST)
SCALE: 1/8"=1'-0"

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HORIZONTAL SCALE IN FEET

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SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
VAN WHITE STATION
COMMUNICATIONS
VC BRIDGE LEVEL PLAN

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-PLN-432

SHEET 213 OF 273

Sep. 25 2015 04:46 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-PLN-432.dwg By: FergTK

| CONDUIT NO. | DEVICE ID | DESCRIPTION/USE | FROM | TO | CONDUIT SIZE |
|---|---|---|---|---|---|
| 10A | VWT -CON-0001 | S/C HOUSE TO SCC-001 | S/C MANHOLE | VWT -SCC-001 | 3" |
| 10B | VWT -CON-0002 | S/C HOUSE TO SCC-001 | S/C MANHOLE | VWT -SCC-001 | 3" |
| 10C | VWT -CON-0003 | S/C HOUSE TO SCC-001 | S/C MANHOLE | VWT -SCC-001 | 3" |
| 10D | VWT -CON-0004 | S/C HOUSE TO SCC-001 | S/C MANHOLE | VWT -SCC-001 | 3" |
| 10E | VWT -CON-0005 | UPS POWER FEED: SCH TO SCC | VWT -SCH-001 | VWT -SCC-001 | 3" |
| 1A | VWT -CON-0101 | SCC TO JUNCTION 100 | VWT -SCC-001 | VWT -JCT-100 | 2" |
| 1B | VWT -CON-0102 | SCC TO JUNCTION 200 | VWT -SCC-001 | VWT -JCT-200 | 2" |
| 1C | VWT -CON-0103 | SCC TO JUNCTION 101 | VWT -SCC-001 | VWT -JCT-101 | 2" |
| 1D | VWT -CON-0104 | SCC TO JUNCTION 201 | VWT -SCC-001 | VWT -JCT-201 | 2" |
| 1E | VWT -CON-0105 | SCC TO JUNCTION 102 | VWT -SCC-001 | VWT -JCT-102 | 2" |
| 1F | VWT -CON-0106 | SCC TO JUNCTION 202 | VWT -SCC-001 | VWT -JCT-202 | 2" |
| 1G | VWT -CON-0107 | SCC TO JUNCTION 103 | VWT -SCC-001 | VWT -JCT-103 | 2" |
| 1H | VWT -CON-0108 | SCC TO JUNCTION 203 | VWT -SCC-001 | VWT -JCT-203 | 2" |
| 1J | VWT -CON-0109 | SCC TO JUNCTION 110 | VWT -SCC-001 | VWT -JCT-110 | 2" |
| 1K | VWT -CON-0110 | SCC TO JUNCTION 210 | VWT -SCC-001 | VWT -JCT-210 | 2" |
| 1L | VWT -CON-0111 | SCC TO JUNCTION 111 | VWT -SCC-001 | VWT -JCT-111 | 2" |
| 1M | VWT -CON-0112 | SCC TO JUNCTION 211 | VWT -SCC-001 | VWT -JCT-211 | 2" |
| 1N | VWT -CON-0113 | SCC TO JUNCTION 112 | VWT -SCC-001 | VWT -JCT-112 | 2" |
| 1P | VWT -CON-0114 | SCC TO JUNCTION 212 | VWT -SCC-001 | VWT -JCT-212 | 2" |
| 1Q | VWT -CON-0115 | SCC TO JUNCTION 113 | VWT -SCC-001 | VWT -JCT-113 | 2" |
| 1R | VWT -CON-0116 | SCC TO JUNCTION 213 | VWT -SCC-001 | VWT -JCT-213 | 2" |
| 2A | VWT -CON-0201 | MICROPHONE 1 - NOISE SENSING | VWT -JCT-103 | VWT -ASM-001 | 1" |
| 2B | VWT -CON-0202 | MICROPHONE 2 - NOISE SENSING | VWT -JCT-210 | VWT -ASM-002 | 1" |
| 2C | VWT -CON-0203 | SPEAKER 1 - POLE | VWT -SCC-001 | VWT -SPK-001 | 1-1/2" |
| 2D | VWT -CON-0204 | SPEAKER 2 - POLE | VWT -SCC-001 | VWT -SPK-002 | 1-1/2" |
| 2E | VWT -CON-0205 | SPEAKER 3 - POLE | VWT -SCC-001 | VWT -SPK-003 | 1-1/2" |
| 2F | VWT -CON-0206 | SPEAKER 4 - POLE | VWT -SCC-001 | VWT -SPK-004 | 1-1/2" |
| 2G | VWT -CON-0207 | SPEAKER 5 - POLE | VWT -SPK-003 | VWT -SPK-005 | 1-1/2" |
| 2H | VWT -CON-0208 | SPEAKER 6 - POLE | VWT -SPK-004 | VWT -SPK-006 | 1-1/2" |
| 2J | VWT -CON-0209 | SPEAKER 7 - CANOPY | VWT -JCT-101 | VWT -SPK-007 | 1" |
| 2K | VWT -CON-0210 | SPEAKER 8 - CANOPY | VWT -JCT-201 | VWT -SPK-008 | 1" |
| 2L | VWT -CON-0211 | SPEAKER 9 - CANOPY | VWT -JCT-101 | VWT -SPK-009 | 1" |
| 2M | VWT -CON-0212 | SPEAKER 10 - CANOPY | VWT -JCT-201 | VWT -SPK-010 | 1" |
| 2N | VWT -CON-0213 | SPEAKER 11 - CANOPY | VWT -JCT-101 | VWT -SPK-011 | 1" |
| 2P | VWT -CON-0214 | SPEAKER 12 - CANOPY | VWT -JCT-201 | VWT -SPK-012 | 1" |
| 2Q | VWT -CON-0215 | SPEAKER 13 - CANOPY | VWT -JCT-102 | VWT -SPK-013 | 1" |
| 2R | VWT -CON-0216 | SPEAKER 14 - CANOPY | VWT -JCT-202 | VWT -SPK-014 | 1" |
| 2S | VWT -CON-0217 | SPEAKER 15 - CANOPY | VWT -JCT-102 | VWT -SPK-015 | 1" |
| 2T | VWT -CON-0218 | SPEAKER 16 - CANOPY | VWT -JCT-202 | VWT -SPK-016 | 1" |
| 2U | VWT -CON-0219 | SPEAKER 17 - CANOPY | VWT -JCT-102 | VWT -SPK-017 | 1" |
| 2V | VWT -CON-0220 | SPEAKER 18 - CANOPY | VWT -JCT-202 | VWT -SPK-018 | 1" |
| 2W | VWT -CON-0221 | SPEAKER 19 - CANOPY | VWT -JCT-102 | VWT -SPK-019 | 1" |
| 2X | VWT -CON-0222 | SPEAKER 20 - CANOPY | VWT -JCT-202 | VWT -SPK-020 | 1" |
| 2Y | VWT -CON-0223 | SPEAKER 21 - CANOPY | VWT -JCT-111 | VWT -SPK-021 | 1" |
| 2Z | VWT -CON-0224 | SPEAKER 22 - CANOPY | VWT -JCT-211 | VWT -SPK-022 | 1" |
| 2AA | VWT -CON-0225 | SPEAKER 23 - CANOPY | VWT -JCT-111 | VWT -SPK-023 | 1" |
| 2AB | VWT -CON-0226 | SPEAKER 24 - CANOPY | VWT -JCT-211 | VWT -SPK-024 | 1" |

1 COMMUNICATIONS CONDUIT SCHEDULE



| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
VAN WHITE STATION
COMMUNICATIONS
CONDUIT SCHEDULE (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-SCH-461

SHEET 214 OF 273

| CONDUIT NO. | DEVICE ID | DESCRIPTION/USE | FROM | TO | CONDUIT SIZE |
|---|---|---|---|---|---|
| 2AC | VWT -CON-0227 | SPEAKER 25 - CANOPY | VWT -JCT-111 | VWT -SPK-025 | 1" |
| 2AD | VWT -CON-0228 | SPEAKER 26 - CANOPY | VWT -JCT-211 | VWT -SPK-026 | 1" |
| 2AE | VWT -CON-0229 | SPEAKER 27 - CANOPY | VWT -JCT-111 | VWT -SPK-027 | 1" |
| 2AF | VWT -CON-0230 | SPEAKER 28 - CANOPY | VWT -JCT-211 | VWT -SPK-028 | 1" |
| 2AG | VWT -CON-0231 | SPEAKER 29 - CANOPY | VWT -JCT-112 | VWT -SPK-029 | 1" |
| 2AH | VWT -CON-0232 | SPEAKER 30 - CANOPY | VWT -JCT-212 | VWT -SPK-030 | 1" |
| 2AJ | VWT -CON-0233 | SPEAKER 31 - CANOPY | VWT -JCT-112 | VWT -SPK-031 | 1" |
| 2AK | VWT -CON-0234 | SPEAKER 32 - CANOPY | VWT -JCT-212 | VWT -SPK-032 | 1" |
| 2AL | VWT -CON-0235 | SPEAKER 33 - CANOPY | VWT -JCT-112 | VWT -SPK-033 | 1" |
| 2AM | VWT -CON-0236 | SPEAKER 34 - CANOPY | VWT -JCT-212 | VWT -SPK-034 | 1" |
| 3A | VWT -CON-0301 | CAMERA 1 | VWT -JCT-103 | VWT CAM-001 | 1" |
| 3B | VWT -CON-0302 | CAMERA 2 | VWT -JCT-203 | VWT CAM-002 | 1" |
| 3C | VWT -CON-0303 | CAMERA 3 | VWT -JCT-103 | VWT CAM-003 | 1" |
| 3D | VWT -CON-0304 | CAMERA 4 | VWT -JCT-203 | VWT CAM-004 | 1" |
| 3E | VWT -CON-0305 | CAMERA 5 | VWT -JCT-103 | VWT CAM-005 | 1" |
| 3F | VWT -CON-0306 | CAMERA 6 | VWT -JCT-203 | VWT CAM-006 | 1" |
| 3G | VWT -CON-0307 | CAMERA 7 | VWT -JCT-110 | VWT CAM-007 | 1" |
| 3H | VWT -CON-0308 | CAMERA 8 | VWT -JCT-210 | VWT CAM-008 | 1" |
| 3J | VWT -CON-0309 | CAMERA 9 | VWT -JCT-110 | VWT CAM-009 | 1" |
| 3K | VWT -CON-0310 | CAMERA 10 | VWT -JCT-210 | VWT CAM-010 | 1" |
| 3L | VWT -CON-0311 | CAMERA 11 | VWT -JCT-110 | VWT CAM-011 | 1" |
| 3M | VWT -CON-0312 | CAMERA 12 | VWT -JCT-210 | VWT CAM-012 | 1" |
| 4A | VWT -CON-0401 | KIOSK 1 (F) | VWT -SCC-001 | VWT -KSK-001 | 2" |
| 4B | VWT -CON-0402 | KIOSK 2 (F) | VWT -SCC-001 | VWT -KSK-002 | 2" |
| 5A | VWT -CON-0501 | VMS 1 | VWT -JCT-103 | VWT -VMS-001 | 1" |
| 5B | VWT -CON-0502 | VMS 2 | VWT -JCT-203 | VWT -VMS-002 | 1" |
| 5C | VWT -CON-0503 | VMS 3 | VWT -JCT-103 | VWT -VMS-003 | 1" |
| 5D | VWT -CON-0504 | VMS 4 | VWT -JCT-203 | VWT -VMS-004 | 1" |
| 5E | VWT -CON-0505 | VMS 5 | VWT -JCT-103 | VWT -VMS-005 | 1" |
| 5F | VWT -CON-0506 | VMS 6 | VWT -JCT-203 | VWT -VMS-006 | 1" |
| 5G | VWT -CON-0507 | VMS 7 | VWT -JCT-110 | VWT -VMS-007 | 1" |
| 5H | VWT -CON-0508 | VMS 8 | VWT -JCT-210 | VWT -VMS-008 | 1" |
| 5J | VWT -CON-0509 | VMS 9 | VWT -JCT-110 | VWT -VMS-009 | 1" |
| 5K | VWT -CON-0510 | VMS 10 | VWT -JCT-210 | VWT -VMS-010 | 1" |
| 5L | VWT -CON-0511 | VMS 11 | VWT -JCT-110 | VWT -VMS-011 | 1" |
| 5M | VWT -CON-0512 | VMS 12 | VWT -JCT-210 | VWT -VMS-012 | 1" |
| 6A | VWT -CON-0601 | TVM 1 | VWT -SCC-001 | VWT -TVM-001 | 2" |
| 6B | VWT -CON-0602 | TVM 2 | VWT -SCC-001 | VWT -TVM-002 | 2" |
| 7A | VWT -CON-0701 | VALIDATOR 1 | VWT -SCC-001 | VWT -RSV-001 | 1-1/2" |
| 7B | VWT -CON-0702 | VALIDATOR 2 | VWT -SCC-001 | VWT -RSV-002 | 1-1/2" |
| 7C | VWT -CON-0703 | VALIDATOR 3 | VWT -SCC-001 | VWT -RSV-003 | 1-1/2" |
| 7D | VWT -CON-0704 | VALIDATOR 4 | VWT -SCC-001 | VWT -RSV-004 | 1-1/2" |
| 8A | VWT -CON-0801 | EMERGENCY TELEPHONE 1 - PHONE | VWT -SCC-001 | VWT -ETL-001 | 1-1/2" |
| 8B | VWT -CON-0802 | EMERGENCY TELEPHONE 1 - BEACON LIGHT 1 | VWT -ETL-001 | VWT -ETB-001 | 1" |
| 8C | VWT -CON-0803 | EMERGENCY TELEPHONE 1 - BEACON LIGHT 2 | VWT -ETL-001 | VWT -ETB-002 | 1" |
| 9A | VWT -CON-0901 | STATION ELECTRICAL CABINET | VWT -SCC-001 | VWT -SEC-001 | 2" |

1 COMMUNICATIONS CONDUIT SCHEDULE

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
VAN WHITE STATION
COMMUNICATIONS
CONDUIT SCHEDULE (2 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-SCH-462

SHEET 215 OF 273

Sep, 25 2015 04:46 pm V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-SCH-462.dwg By: FergTK

## VAN WHITE CONDUIT AND WIRE SCHEDULE

| CONDUIT NUMBER | SIZE | WIRE | FROM | TO | REMARKS | NOTES |
|---|---|---|---|---|---|---|
| 1 | 1" | 2#8, 1#10G | HEATERS HTR-101, 102, 103 | LP1A | POWER TO HEATERS | 4 |
| 2 | 1" | 2#8, 1#10G | HEATERS HTR-104, 105, 106 | LP1A | POWER TO HEATERS | 4 |
| 3 | 1" | 2#8, 1#10G | HEATERS HTR-107, 108, 109 | LP1A | POWER TO HEATERS | 4 |
| 4 | 1" | 2#8, 1#10G | HEATERS HTR-110, 111, 112 | LP1A | POWER TO HEATERS | 4 |
| 5 | 1" | 2#8, 1#10G | HEATERS HTR-113, 114, 115 | LP1A | POWER TO HEATERS | 4 |
| 6 | 1" | 2#8, 1#10G | HEATERS HTR-116, 117, 118 | LP1A | POWER TO HEATERS | 4 |
| 7 | 1" | 2#8, 1#10G | HEATERS HTR-119, 120, 121 | LP1A | POWER TO HEATERS | 4 |
| 8 | 1" | 2#8, 1#10G | HEATERS HTR-122, 123, 124 | LP1A | POWER TO HEATERS | 4 |
| 9 | 1" | 2#8, 1#10G | HEATERS HTR-125, 126, 127 | LP1A | POWER TO HEATERS | 4 |
| 10 | 1" | 2#8, 1#10G | HEATERS HTR-128, 129, 130 | LP1A | POWER TO HEATERS | 4 |
| 11 | 1" | 2#8, 1#10G | HEATERS HTR-131, 132, 133 | LP1A | POWER TO HEATERS | 4 |
| 12 | 1" | 2#8, 1#10G | HEATERS HTR-134, 135, 136 | LP1A | POWER TO HEATERS | 4 |
| 13 | 1" | 2#14, 1#14G | HPB-101 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 14 | 1" | 2#14, 1#14G | HPB-102 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 15 | 1" | 2#14, 1#14G | HPB-103 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 16 | 1" | 2#14, 1#14G | HPB-104 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 17 | 1" | 2#14, 1#14G | HPB-105 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 18 | 1" | 2#14, 1#14G | HPB-106 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 19 | 1" | 2#14, 1#14G | HPB-107 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 20 | 1" | 2#14, 1#14G | HPB-108 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 21 | 1" | 2#14, 1#14G | HPB-109 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 22 | 1" | 2#14, 1#14G | HPB-110 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 23 | 1" | 2#14, 1#14G | HPB-111 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 24 | 1" | 2#14, 1#14G | HPB-112 | OFF DELAY TIME CIRCUIT | CONTROL FOR HEATERS | 4 |
| 25 | 1" | 2#10, 1#10G | TVM-101 | LP1A | POWER TO TVM | 4 |
| 26 | 1" | 2#10, 1#10G | TVM-102 | LP1A | POWER TO TVM | 4 |
| 27 | 1" | 4#12, 2#12G | RSV-101, RSV-102 | LP1A | POWER TO RSVs | 4 |
| 28 | 1" | 4#12, 2#12G | RSV-103, RSV-104 | LP1A | POWER TO RSVs | 4 |
| 29 | 1" | 2#12, 1#12G | KSK-101 | LP1B | POWER TO KIOSK | 4 |
| 30 | 1" | 2#12, 1#12G | KSK-102 | LP1B | POWER TO KIOSK | 4 |
| 31 | 1" | 2#12, 1#12G | CANOPY LUMINAIRES | LP1A | POWER TO LUMINAIRES | 4 |
| 32 | 1" | 2#12, 1#12G | CANOPY LUMINAIRES | LP1A | POWER TO LUMINAIRES | 4 |
| 33 | 1" | 2#12, 1#12G | CANOPY LUMINAIRES | LP1A | POWER TO LUMINAIRES | 4 |
| 34 | 1" | 2#12, 1#12G | CANOPY LUMINAIRES | LP1A | POWER TO LUMINAIRES | 4 |
| 35 | 1" | 2#10, 1#10G | HEAT TAPE | HTCP | POWER TO HEAT TAPE | 2, 3, 4 |
| 36 | 1" | 2#10, 1#10G | HEAT TAPE | HTCP | POWER TO HEAT TAPE | 2, 3, 4 |
| 37 | 1" | 2#10, 1#10G | HEAT TAPE | HTCP | POWER TO HEAT TAPE | 2, 3, 4 |
| 38 | 1" | 2#10, 1#10G | HEAT TAPE | HTCP | POWER TO HEAT TAPE | 2, 3, 4 |
| 39 | 1" | 2#10, 1#10G | RAMP RAILING LUMINAIRE | RAMP RAILING LUMINAIRE DRIVER | POWER TO RAMP RAILING LUMINAIRE | 1, 4 |
| 40 | 1" | 2#10, 1#10G | RAMP RAILING LUMINAIRE | RAMP RAILING LUMINAIRE DRIVER | POWER TO RAMP RAILING LUMINAIRE | 1, 4 |
| 41 | 1" | 2#10, 1#10G | RAMP RAILING LUMINAIRE | RAMP RAILING LUMINAIRE DRIVER | POWER TO RAMP RAILING LUMINAIRE | 1, 4 |
| 42 | 1" | 2#10, 1#10G | RAMP RAILING LUMINAIRE | RAMP RAILING LUMINAIRE DRIVER | POWER TO RAMP RAILING LUMINAIRE | 1, 4 |

1 ELECTRICAL CONDUIT & CABLE SCHEDULE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
VAN WHITE STATION
ELECTRICAL
CONDUIT AND WIRE SCHEDULE (1 OF 2)

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-SCH-503

SHEET 216 OF 273

| VAN WHITE CONDUIT AND WIRE SCHEDULE | | | | | | |
|---|---|---|---|---|---|---|
| 43 | 1 1/4" | 4#8, 1#10G, 2#14, 1#14G | COMMUNICATIONS CABINET SCC-001 | LP1A | POWER TO COMMUNICATIONS CABINET | 4, 5 |
| 44 | 1" | 4#10, 2#10G | VMSs | LP1B | POWER TO VMS | 4 |
| 45 | 1" | 4#10, 2#10G | VMSs | LP1B | POWER TO VMS | 4 |
| 46 | 1" | 4#10, 2#10G | VMSs | LP1B | POWER TO VMS | 4 |
| 47 | 1" | 4#10, 2#10G | VMSs | LP1B | POWER TO VMS | 4 |
| 48 | 1" | 2#10, 1#10G | POLE LUMINAIRES | LP1A | POWER TO POLE LUMINAIRES | 4 |
| 49 | 1" | 2#10, 1#10G | POLE LUMINAIRES | LP1A | POWER TO POLE LUMINAIRES | 4 |
| 50 | 1" | 2#10, 1#10G | POLE LUMINAIRES | LP1A | POWER TO POLE LUMINAIRES | 4 |
| 51 | 1" | 2#10, 1#10G | POLE LUMINAIRES | LP1A | POWER TO POLE LUMINAIRES | 4 |
| 52 | 1" | 2#10, 1#10G | POLE LUMINAIRES | POLE LUMINAIRES | POWER TO POLE LUMINAIRES | 4 |
| 53 | 1" | 2#10, 1#10G | POLE LUMINAIRES | LP1A | POWER TO POLE LUMINAIRES | 4 |
| 54 | 1" | 2#10, 1#10G | POLE LUMINAIRES | POLE LUMINAIRES | POWER TO POLE LUMINAIRES | 4 |
| 55 | 2(2") | 2(4#3/0, 1#3G) | C/T METERING CABINET AT XCEL POINT OF CONNECTION. | PANELBOARD HP1 | PLATFORM POWER | 4 |
| 56 | 3/4" | 3#10, 1#10G | PANELBOARD HP1 | 15 KVA TRANSFORMER | PLATFORM POWER | 6 |
| 57 | 1-1/4" | 4#6, 1#10G | 15 KVA TRANSFORMER | PANELBOARD LP1C | PLATFORM POWER | 6 |
| 58 | 2(2-1/2)" | 2(3#2/0 , 1#6G) | PANELBOARD HP1 | 112.5 KVA TRANSFORMER | PLATFORM POWER | 6 |
| 59 | 2(3") | 2(4#3/0, 1#3G) | 112.5 KVA TRANSFORMER | PANELBOARD LP1A | PLATFORM POWER | 6 |
| 60 | 1 1/4" | 3#3, 1#8G | PANELBOARD HP1 | ELEVATOR DISCONNECT SWITCH | ELEVATOR POWER | 4 |
| 61 | 1 1/4" | 3#3, 1#8G | ELEVATOR DISCONNECT SWITCH | ELEVATOR CONTROLLER | ELEVATOR POWER | 4 |
| 62 | 1 1/4" | PULL WIRE | ELEVATOR CONTROLLER | ELEVATOR MOTOR | ELEVATOR POWER | 4 |
| 63 | 1" | 3#10, 1#10G | LP1C | ELEVATOR CAB DISCONNECT SWITCH | ELEVATOR CAB LTG AND POWER | 4 |
| 64 | 1" | 3#10, 1#10G | ELEVATOR CAB DISCONNECT SWITCH | ELEVATOR CONTROLLER | ELEVATOR CAB LTG AND POWER | 4 |
| 65 | 1" | 2#10, 1#10G | SNOW MELT JUNCTION BOX | SNOW MELT SYSTEM 30/2P CONTACTOR | ELEVATOR LOBBY SNOW MELT SYSTEM POWER | 4 |
| 66 | 1" | 3#10, 1#10G | ELEVATOR PIT LTG AND RECEPTACLE | PANELBOARD LP1C | ELEVATOR PIT LTG AND RECEPTACLE POWER | 4 |
| 67 | 3" | | | | EMPTY WITH PULL WIRE | 4 |
| 68 | 1" | PULL WIRE | FUTURE SNOW MELT JUNCTION BOX | FUTURE SNOW MELT SYSTEM 30/2P CONTACTOR | FUTURE ELEVATOR LOBBY SNOW MELT SYSTEM POWER | 4 |
| 69 | 1" | PULL WIRE | FUTURE ELEVATOR PIT LTG AND RECEPTACLE | PANELBOARD LP1C | ELEVATOR PIT LTG AND RECEPTACLE POWER | 4 |
| 70 | 3" | PULL WIRE | FUTURE ELEVATOR PIT | ELEVATOR CONTROLLER | FUTURE TRAVELLER CABLE | 4 |
| 71 | | 1#8 | 15 KVA TRANSFORMER | GROUNDING ELECTRODE SYSTEM | GROUNDING ELECTRODE CONDUCTOR FOR 15 KVA TRANSFORMER | 7 |
| 72 | | 1#1/0 | 112.5 KVA TRANSFORMER | GROUNDING ELECTRODE SYSTEM | GROUNDING ELECTRODE CONDUCTOR FOR 112.5 KVA TRANSFORMER | 7 |
| 73 | | | | | | |
| 74 | | | | | | |

1 ELECTRICAL CONDUIT & CABLE SCHEDULE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST
Green Line LRT Extension

CIVIL EAST - VOLUME 11B
VAN WHITE STATION
ELECTRICAL
CONDUIT AND WIRE SCHEDULE (2 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-SCH-504

SHEET 217 OF 273

PANELBOARD SCHEDULE **HP1**

400 AMP BUS RATING | 277/480 VOLTS | 350 AMP MAIN BREAKER | 3 PHASE | 4 WIRE 60Hz | 24 POLES | SURFACE MOUNTED | LOCATION _____

| DESCRIPTION | kVA | AMPS/POLES | CKT | AØ | BØ | CØ | CKT | AMPS/POLES | kVA | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| 112.5 KVA TRANSFORMER | 31.4 | 170/3 | 1 | X | | | 2 | 100/3 | 17.7 | ELEVATOR |
| | 29.3 | | 3 | | X | | 4 | | 17.7 | |
| | 31.6 | | 5 | | | X | 6 | | 17.7 | |
| 15 KVA TRANSFORMER | 3.9 | 30/3 | 7 | X | | | 8 | 100/3 | 17.7 | FUTURE ELEVATOR |
| | 4.6 | | 9 | | X | | 10 | | 17.7 | |
| | 3.9 | | 11 | | | X | 12 | | 17.7 | |
| SPD | | 60/3 | 13 | X | | | 14 | | | |
| | | | 15 | | X | | 16 | | | |
| | | | 17 | | | X | 18 | | | |
| SPACE | | | 19 | X | | | 20 | | | |
| SPACE | | | 21 | | X | | 22 | | | |
| SPACE | | | 23 | | | X | 24 | | | |
| | | | | | | | | | | |
| | | kVA | | 70.7 | 69.3 | 70.9 | kVA | | | |
| | | AMPS | | 255.2 | 250.0 | 256.0 | AMPS | | | |

1 PANELBOARD SCHEDULE HP1

PANELBOARD SCHEDULE **LP1A**

400 AMP BUS RATING | 120/208 VOLTS | MLO | 3 PHASE | 4 WIRE 60Hz | 42 POLES | SURFACE MOUNTED | LOCATION

| DESCRIPTION | kVA | AMPS/POLES | CKT | AØ | BØ | CØ | CKT | AMPS/POLES | kVA | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| SPD | | 60/2 | 1 | X | | | 2 | 30/2 | 2.4 | HTR-119, 120, 121 |
| | | | 3 | | X | | 4 | | 2.4 | |
| HTR-101, 102, 103 | 2.4 | 30/2 | 5 | | | X | 6 | 30/2 | 2.4 | HTR-122, 123, 124 |
| | 2.4 | | 7 | X | | | 8 | | 2.4 | |
| HTR-104, 105, 106 | 2.4 | 30/2 | 9 | | X | | 10 | 30/2 | 2.4 | HTR-125, 126, 127 |
| | 2.4 | | 11 | | | X | 12 | | 2.4 | |
| HTR-107, 108, 109 | 2.4 | 30/2 | 13 | X | | | 14 | 30/2 | 2.4 | HTR-128, 129, 130 |
| | 2.4 | | 15 | | X | | 16 | | 2.4 | |
| HTR-110, 111 112 | 2.4 | 30/2 | 17 | | | X | 18 | 30/2 | 2.4 | HTR-131, 132, 133 |
| | 2.4 | | 19 | X | | | 20 | | 2.4 | |
| HTR-113, 114, 115 | 2.4 | 30/2 | 21 | | X | | 22 | 30/2 | 2.4 | HTR-134, 135, 136 |
| | 2.4 | | 23 | | | X | 24 | | 2.4 | |
| HTR-116, 117, 118 | 2.4 | 30/2 | 25 | X | | | 26 | 30/1 | 1.6 | TVM-101 |
| | 2.4 | | 27 | | X | | 28 | 30/1 | 1.6 | TVM-102 |
| SCC-001 | 2.5 | 30/2 | 29 | | | X | 30 | 30/1 | 1.6 | TVM-103 |
| | 2.5 | | 31 | X | | | 32 | 20/1 | 0.3 | RSV-101 |
| HTRCP-101 | 1.0 | 30/2 | 33 | | X | | 34 | 20/1 | 0.3 | RSV-102 |
| | 1.0 | | 35 | | | X | 36 | 20/1 | 0.3 | RSV-103 |
| HTRCP-102 | 1.0 | 30/2 | 37 | X | | | 38 | 20/1 | 0.3 | RSV-104 |
| | 1.0 | | 39 | | X | | 40 | | | SPACE |
| SPACE | | | 41 | | | X | 42 | | | SPACE |
| | | kVA | | 31.4 | 29.3 | 31.6 | kVA | | 6.5 | |
| | | AMPS | | 261.7 | 243.8 | 263.3 | AMPS | | 6.2 | |
| | | | | | | | | | 7.0 | FEED THROUGH LUGS LP1B |

2 PANELBOARD SCHEDULE LP1A

PANELBOARD SCHEDULE **LP1B**

400 AMP BUS RATING | 120/208 VOLTS | MLO | 3 PHASE | 4 WIRE 60Hz | 30 POLES | SURFACE MOUNTED | LOCATION

| DESCRIPTION | kVA | AMPS/POLES | CKT | AØ | BØ | CØ | CKT | AMPS/POLES | kVA | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| SEC-001 | 0.5 | 20/1 | 1 | X | | | 2 | 20/1 | 1.0 | SHELTER LUMINAIRES |
| HTG AND LTG CONTROL SYSTEM | 0.2 | 15/1 | 3 | | X | | 4 | 20/1 | 1.0 | SHELTER LUMINAIRES |
| RAILING LUMINAIRE DRIVERS | 1.0 | 20/1 | 5 | | | X | 6 | 20/1 | 1.0 | SHELTER LUMINAIRES |
| VMS-101 | 1.0 | 20/1 | 7 | X | | | 8 | 20/1 | 1.0 | SHELTER LUMINAIRES |
| VMS-102 | 1.0 | 20/1 | 9 | | X | | 10 | 20/1 | 1.0 | VMS-105 |
| VMS-103 | 1.0 | 20/1 | 11 | | | X | 12 | 20/1 | 1.0 | VMS-106 |
| VMS-104 | 1.0 | 20/1 | 13 | X | | | 14 | 20/1 | 1.0 | VMS-107 |
| KSK-101 | 1.0 | 20/1 | 15 | | X | | 16 | 20/1 | 1.0 | VMS-108 |
| KSK-102 | 1.0 | 20/1 | 17 | | | X | 18 | 20/1 | 1.0 | POLE LUMINAIRES |
| SPARE | | 20/1 | 19 | X | | | 20 | 20/1 | 1.0 | ELEVATOR TOWER LIGHTING |
| SPARE | | 20/1 | 21 | | X | | 22 | 20/1 | 1.0 | ELEVATOR TOWER LIGHTING |
| SPARE | | 20/1 | 23 | | | X | 24 | 20/1 | 1.0 | POLE LUMINAIRES |
| SPACE | | | 25 | X | | | 26 | | | SPACE |
| SPACE | | | 27 | | X | | 28 | | | SPACE |
| SPACE | | | 29 | | | X | 30 | | | SPACE |
| | | | | | | | | | | |
| | | kVA | | 6.5 | 6.2 | 7.0 | kVA | | | |
| | | AMPS | | 54.2 | 51.3 | 58.3 | AMPS | | | |

3 PANELBOARD SCHEDULE LP1B

120/208 VOLTS | 60 AMP MAIN BREAKER | 3 PHASE | 4 WIRE 60Hz | SURFACE MOUNTED | LOCATION

| DESCRIPTION | kVA | AMPS/POLES | CKT | AØ | BØ | CØ | CKT | AMPS/POLES | kVA | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| ELEVATOR CAB LTG & POWER | 1.0 | 20/1 | 1 | X | | | 2 | 30/2 | 2.3 | ELEVATOR LOBBY SNOW MELT |
| SPARE | | 20/1 | 3 | | X | | 4 | | 2.3 | |
| FUTURE ELEVATOR CAB LTG & POWER | 1.0 | 20/1 | 5 | | | X | 6 | 20/1 | | SPARE |
| SPARE | | 20/1 | 7 | X | | | 8 | 20/1 | | SPARE |
| SPARE | | 20/1 | 9 | | X | | 10 | 30/2 | 2.3 | FUTURE ELEVATOR LOBBY SNOW MELT |
| ELEVATOR PIT LTG & RECEPT | 0.6 | 20/1 | 11 | | | X | 12 | | 2.3 | |
| FUTURE ELEVATOR PIT LTG & RECPT | 0.6 | 20/1 | 13 | X | | | 14 | | | SPACE |
| SPARE | | 20/1 | 15 | | X | | 16 | | | SPACE |
| SPARE | | 20/1 | 17 | | | X | 18 | | | SPACE |
| SPACE | | | 19 | X | | | 20 | | | SPACE |
| SPACE | | | 21 | | X | | 22 | | | SPACE |
| SPACE | | | 23 | | | X | 24 | | | SPACE |
| SPACE | | | 25 | X | | | 26 | | | SPACE |
| SPACE | | | 27 | | X | | 28 | | | SPACE |
| SPACE | | | 29 | | | X | 30 | | | SPACE |
| | | kVA | | 3.9 | 4.6 | 3.9 | kVA | | | |
| | | AMPS | | 32.5 | 38.3 | 32.5 | AMPS | | | |

4 PANELBOARD SCHEDULE LP1C

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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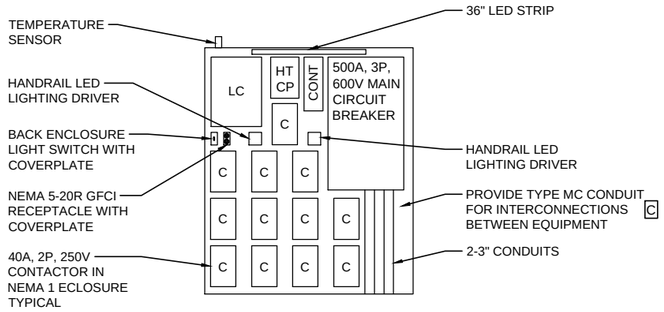
CIVIL EAST - VOLUME 11B
VAN WHITE STATION
ELECTRICAL
PANELBOARD SCHEDULES

DISCIPLINE: ELECTRICAL

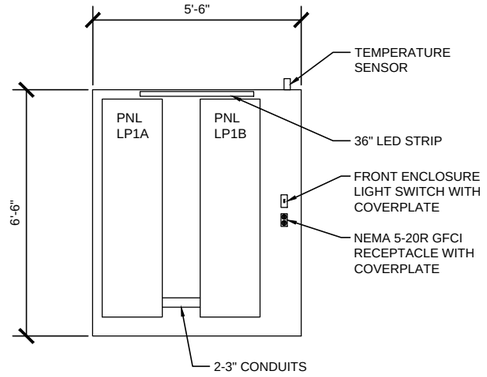
SHEET NAME: E4-VWT-ELE-SCH-505

SHEET 218 OF 273



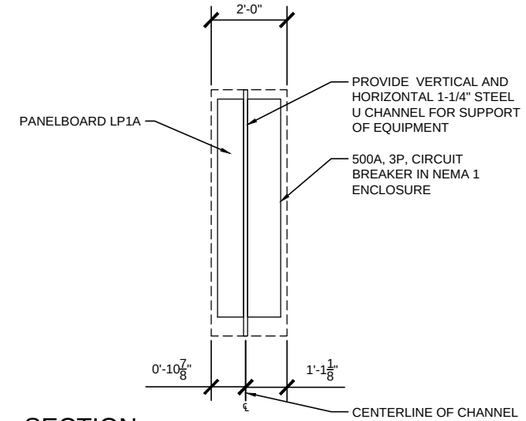

1 BACK ELEVATION

SCALE: 1/2"=1'-0"



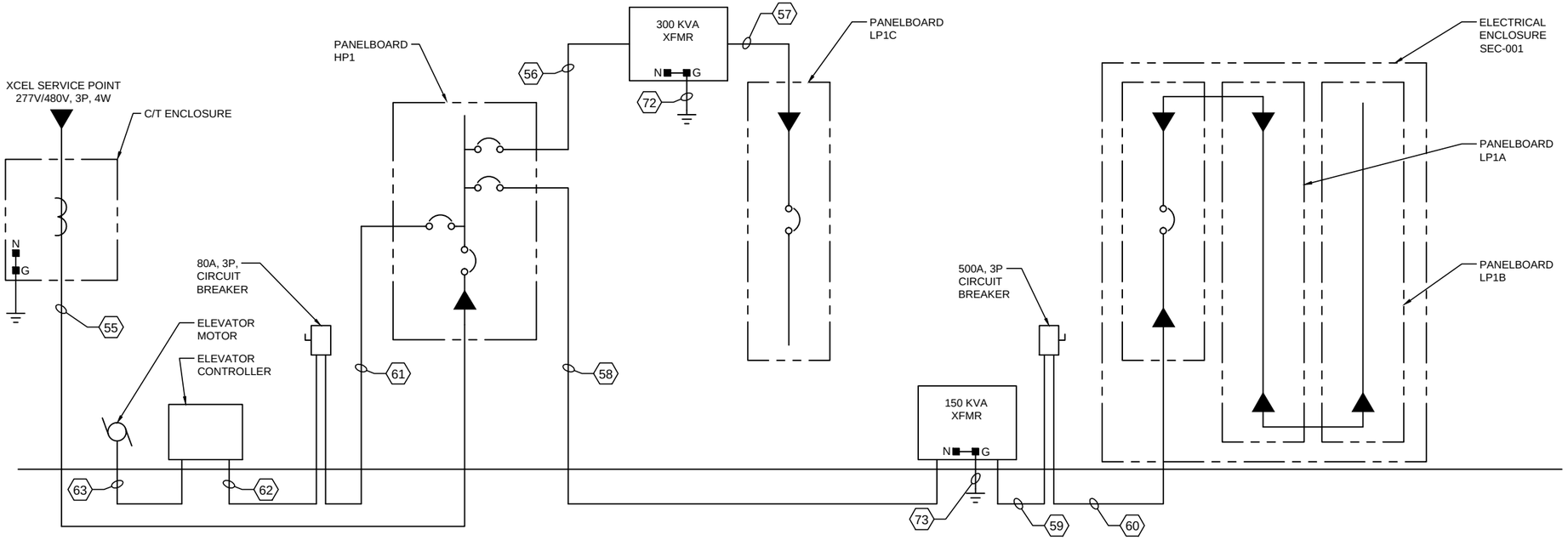

2 FRONT ELEVATION

SCALE: 1/2"=1'-0"




3 SECTION

SCALE: 1/2"=1'-0"




4 ELECTRICAL SERVICE ONE LINE DIAGRAM

SCALE: N.T.S.

GENERAL NOTES:

1. SEE PANELBOARD SCHEDULES ON SHEET 502 FOR PANELBOARD VOLTAGE, AMPACITY AND PHASE.
2. SEE VAN WHITE CONDUIT AND WIRE SCHEDULE ON SHEET 501 FOR CONDUIT AND WIRE SIZES FOR TAGS INDICATED.
3. ALL DETAILS ON THIS SHEET ARE FOR VAN WHITE STATION AND OTHER STATIONS WITH ELEVATORS.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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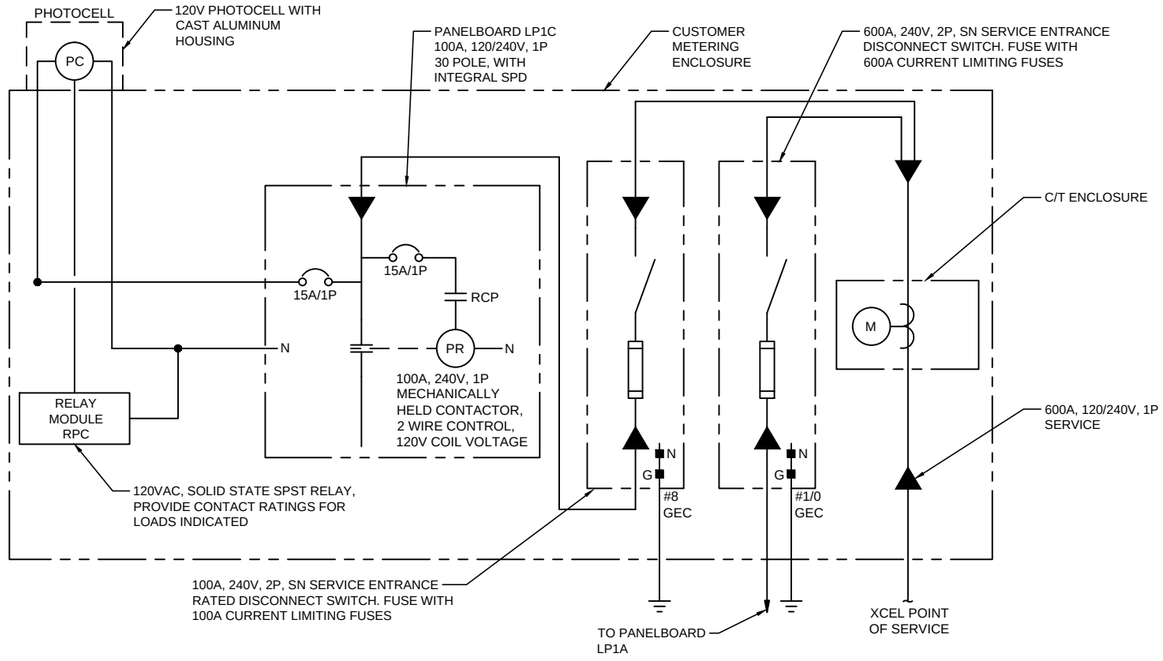
Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ELECTRICAL DETAILS**
**ONE LINE DIAGRAM (1 OF 2)**

DISCIPLINE: ELECTRICAL

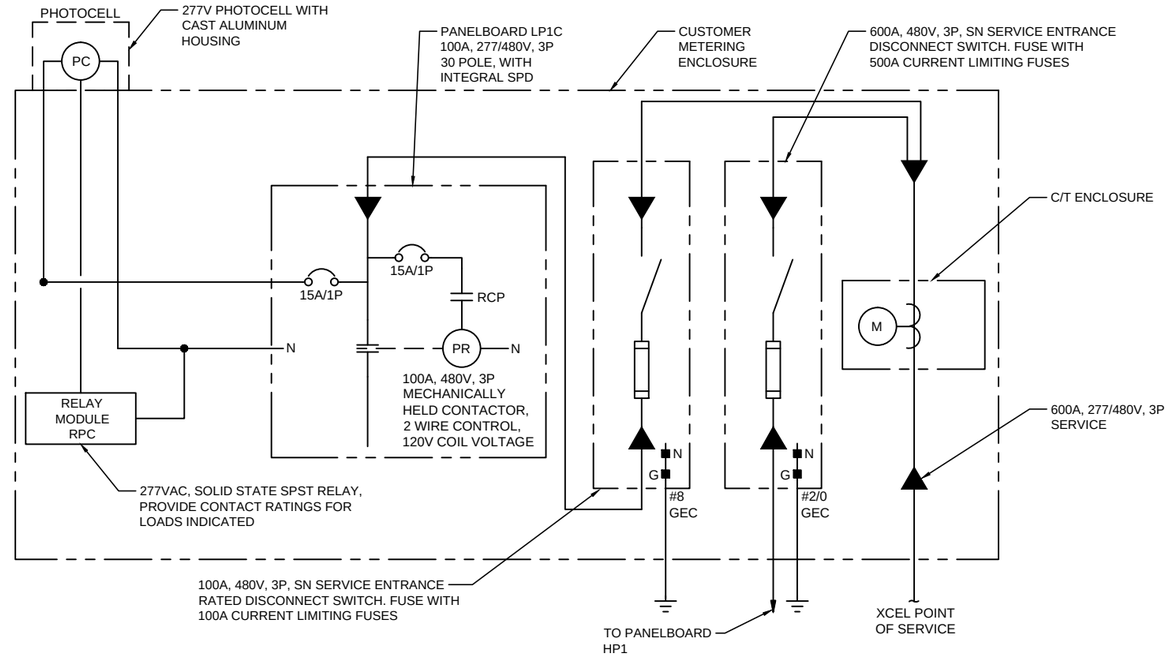
SHEET NAME: E4-VWT-ELE-DTL-601

SHEET 219 OF 273




3 PLATFORM ONE LINE DIAGRAM

SCALE: N.T.S. 120/240V, 1P SERVICE




4 PLATFORM ONE LINE DIAGRAM

SCALE: N.T.S. 277/480V, 3P SERVICE

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**CIVIL EAST - VOLUME 11B**
**VAN WHITE STATION**
**ELECTRICAL DETAILS**
**ONE LINE DIAGRAM (2 OF 2)**

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-VWT-ELE-DTL-602

SHEET 220 OF 273

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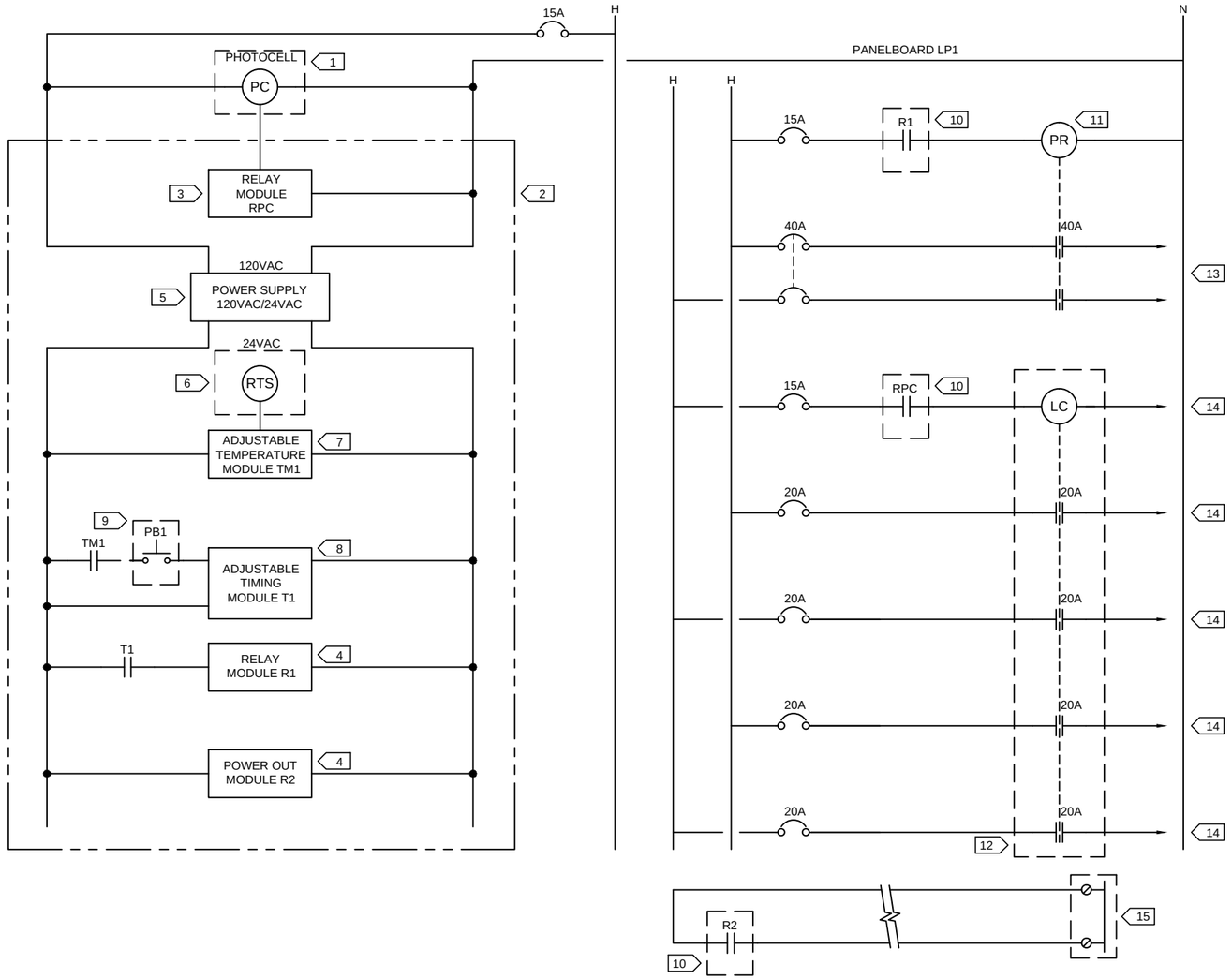


KEYNOTES:

1. PHOTOCELL WITH CAST ALUMINUM HOUSING, REMOTE MOUNT AT LOCATION WITH MINIMAL NIGHT LIGHTING.
2. DIN RAIL MOUNTED MODULES. LOCATED IN THE ELECTRICAL ENCLOSURE.
3. SOLID STATE SPST RELAY, 120VAC INPUT/OUTPUT. PROVIDE CONTACT RATINGS FOR LOADS INDICATED.
4. SOLID STATE SPST RELAY, 24VAC INPUT/OUTPUT. PROVIDE CONTACT RATINGS FOR LOADS INDICATED.
5. SOLID STATE POWER SUPPLY, 120VAC IN 24VAC OUT.
6. HERMETICALLY SEALED TEMPERATURE SENSOR. MOUNT ON TOP OF ENCLOSURE. PROVIDE PROTECTIVE METAL HOUSING.
7. SOLID STATE ADJUSTABLE TEMPERATURE MODULE. PROVIDE WITH BRACKET AND SOCKET FOR DIN RAIL MOUNTING.
8. SOLID STATE, DELAYED TIME, TIMER. PROVIDE TOTAL OF 12 TIMERS.
9. 16MM 5/8" ANTI-VANDAL MOMENTARY STAINLESS STEEL METAL PUSH BUTTON SWITCH WITH SCREW TERMINALS. MOUNT IN PASSENGER SHELTER COLUMN WITH STAINLESS STEEL COVERPLATE. PROVIDE TOTAL OF 12 PUSH BUTTONS AND COVERPLATES.
10. CONTACTS LOCATED AT DIN RAIL MOUNTED RELAY MODULES.
11. 40A, 2P, 250V MECHANICALLY HELD, LATCHING TYPE, 2 WIRE CONTROL, NEMA 1 ENCLOSURE, PANEL MOUNTED CONTACTOR. PROVIDE TOTAL OF 12 CONTACTORS.
12. 20A, 4 POLE, 250V MECHANICALLY HELD, LATCHING TYPE, 2 WIRE CONTROL, NEMA 1 ENCLOSURE, PANEL MOUNTED LIGHTING CONTACTOR.
13. TO RADIANT HEATERS.
14. TO LUMINAIRES.
15. TO SCADA TERMINALS ON PLC. LOCATED IN COMMUNICATIONS CABINET SCC-001, VERIFY TERMINALS.

## 1 PLATFORM CONTROL WIRING DETAIL

SCALE: N.T.S.

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CIVIL EAST - VOLUME 11B
VAN WHITE STATION
ELECTRICAL
PLATFORM CONTROL WIRING DETAIL

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-VWT-ELE-DTL-603

SHEET 221 OF 273

Sep, 25 2015 04:48 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-VWT-ELE-DTL-603.dwg By: FergTK

# CODE SUMMARY - SIDE PLATFORM
# ROYALSTON STATION

## CODE REFERENCES

| | |
|---|---|
| MINNESOTA STATE BUILDING CODE | 2015 |
| NFPA 130 – STANDARD FOR FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS | 2014 |

IBC REVIEW

A. DESCRIPTION
LOCATION: MINNEAPOLIS, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF TWO SIDE PLATFORMS 270' LONG BY 12'–8" THAT ARE ACCESSED BY SLOPED WALKS AT THE ENDS OF EACH PLATFORM. PLATFORMS ARE OPEN TO EXTERIOR ON ALL FOUR SIDES. THE PLATFORMS ARE LOCATED WITHIN EXISTING ROADWAY WHICH WILL BE MODIFIED TO INCLUDE RAIL TRANSIT USE.

TYPICAL PLATFORM AREA: 3420 SQUARE FEET (GROSS AREA)
2944 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA PER PLATFORM: = 1968 SQUARE FEET
492 SQUARE FEET (1 @ 36'–0" X 13'–8") SOUTH CANOPY
492 SQUARE FEET (1 @ 36'–0" X 13'–8") MIDDLE CANOPY
492 SQUARE FEET (1 @ 36'–0" X 13'–8") MIDDLE CANOPY
492 SQUARE FEET (1 @ 36'–0" X 13'–8") NORTH CANOPY

B. OCCUPANCY CLASSIFICATION (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3
(15 S.F. PER PERSON)

C. OCCUPANCY SEPARATIONS

NONE ARE REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. IBC EXITING SUMMARY

NO. OF OCCUPANTS = 2944 S.F. / 15 S.F./OCC = 196
REQUIRED EGRESS WIDTH = 196 X 0.2 = 39" (PER 1005.3.2)
WIDTH PROVIDED = 2 RAMPS AT 80.5" = 161"
2 MEANS OF EGRESS PROVIDED

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

## PLATFORM COLOR AND FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

PLATFORM COLOR AND FINISH SCHEDULE

| TYPE | STATION | STRUCTURAL STEEL PAINT COLOR | PLATFORM CONC COLOR | PLATFORM CONC FINISH | CONC WALL COLOR | CONC WALL FINISH | RAILING INFILL MATERIAL | ALUM WDW FRAME FINISH | EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH | ALUM COMP CANOPY SOFFIT AND FASCIA COLOR | ARCH WOVEN MESH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SIDE | ROYALSTON STATION | PPG 518–6 KNIGHT'S ARMOR | CEMSTONE SPLIT ROCK | TBD | CEMSTONE SPLIT ROCK | TBD | SS CABLE | CLEAR ANODIZED | HUNTER DOUGLAS WOODWRIGHT 8436 GOLDEN DOUGLAS FIR | CUSTOM COLOR TO MATCH PPG 130–7 CROSSFIRE | TBD |

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SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
ROYALSTON STATION
CODE SUMMARY / FINISH SCHEDULE

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-COD-010

SHEET 222 OF 273

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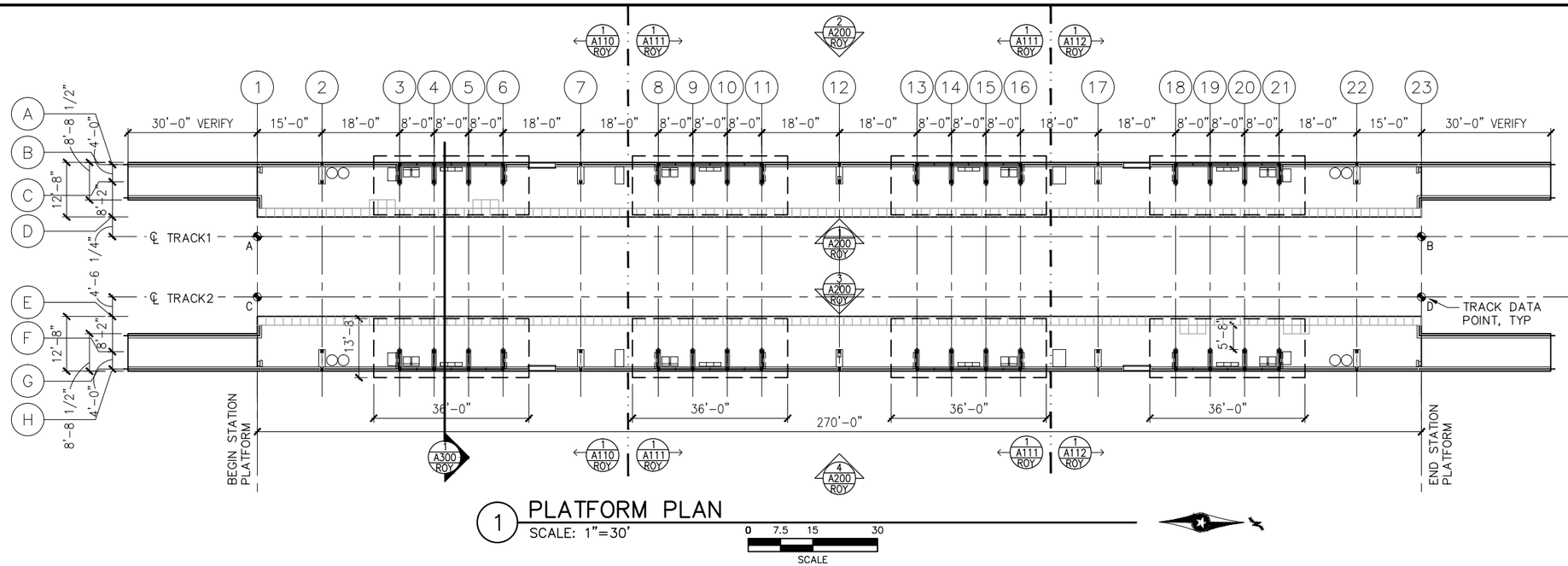
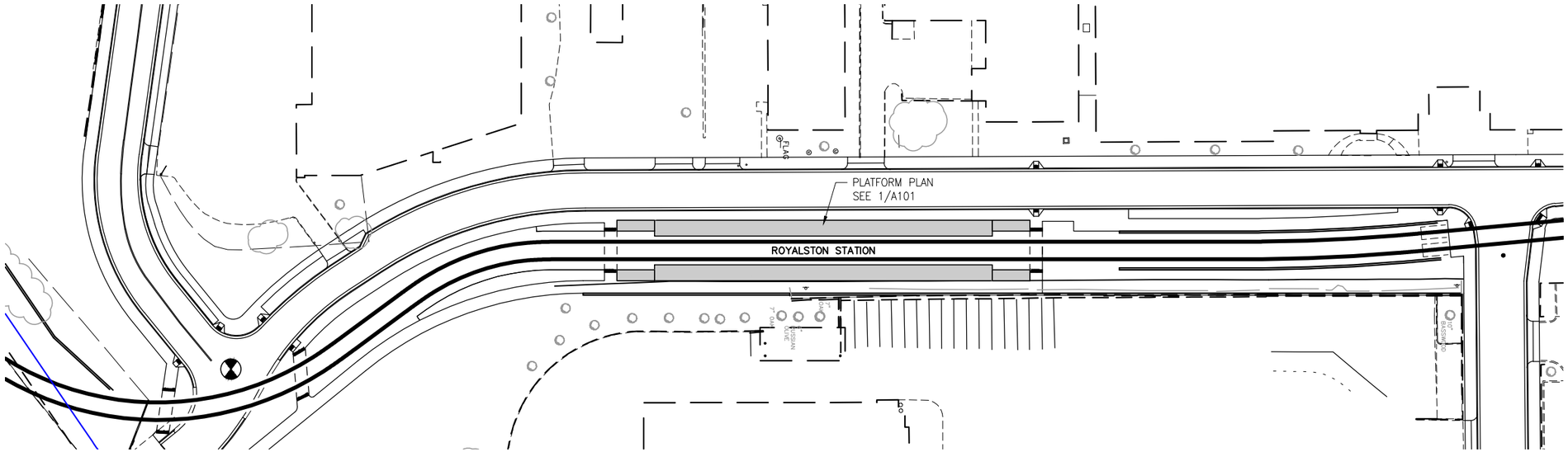



1 PLATFORM PLAN
SCALE: 1"=30'

SCALE 0 7.5 15 30




2 STATION AREA PLAN
SCALE: 1"=100'

SCALE 0 25 50 100

## TRACK DATA

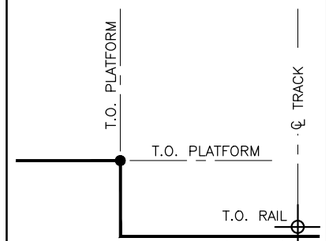
℄ ELEV 100'-0" (LOCATION ON PLAN)

**TRACK 1 EL 100'-0"=** XXX.XX (PT 'A')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| A | XXX.XX | XXXX+XX.XX | |
| B | XXX.XX | XXXX+XX.XX | |
| | | | |

**TRACK 2 EL 100'-0"=** XXX.XX (PT 'C')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| C | XXX.XX | XXXX+XX.XX | |
| D | XXX.XX | XXXX+XX.XX | |
| | | | |




SECTION DIAGRAM AT PLATFORM EDGE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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| | | | | | |

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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**PLATFORM PLAN**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-PLN-101

SHEET 223 OF 273

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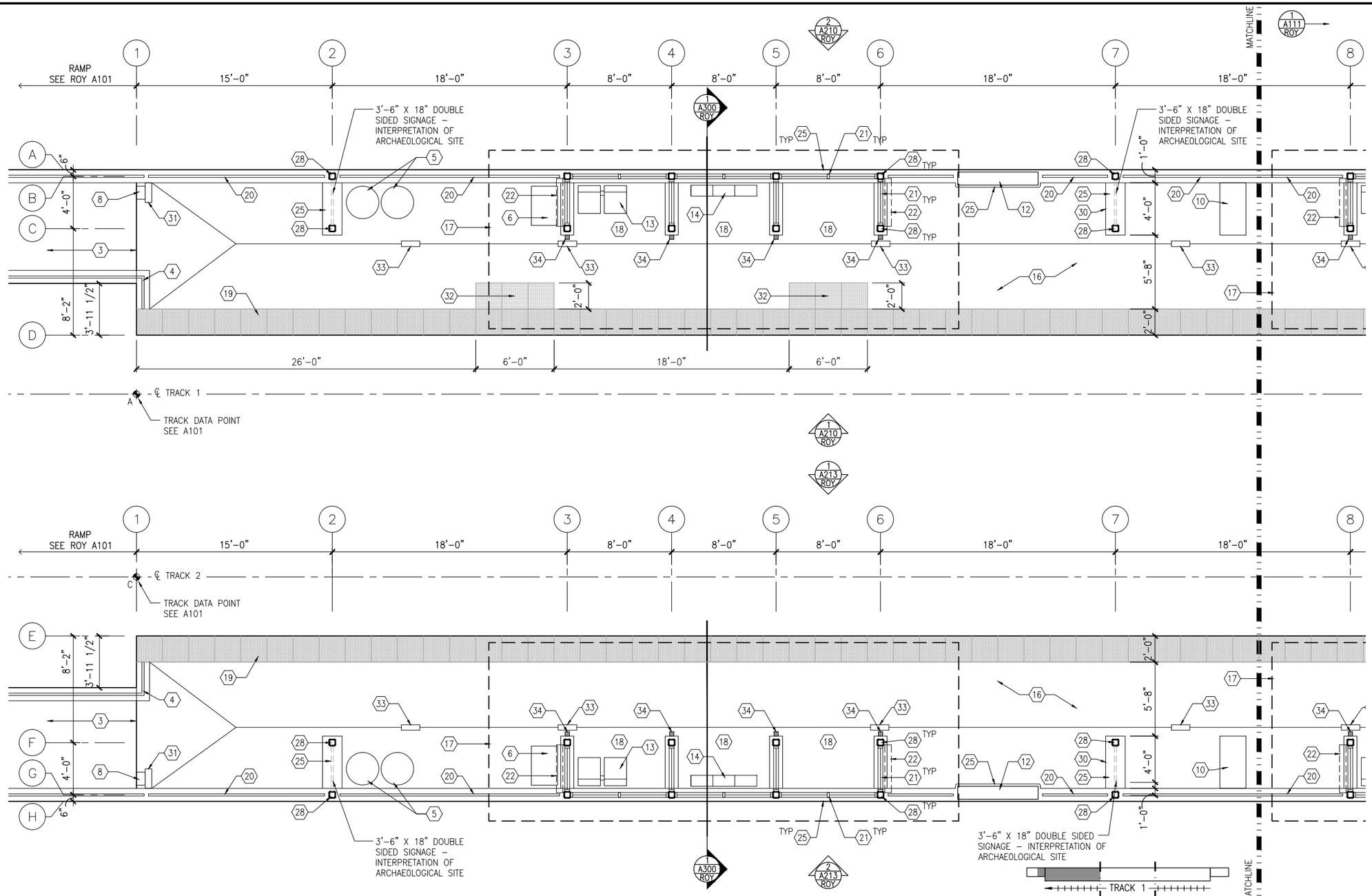


1 SOUTH PARTIAL PLATFORM PLANS
SCALE:1/8"=1'-0"

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**SOUTH PARTIAL PLATFORM PLANS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-PLN-110

SHEET 224 OF 273

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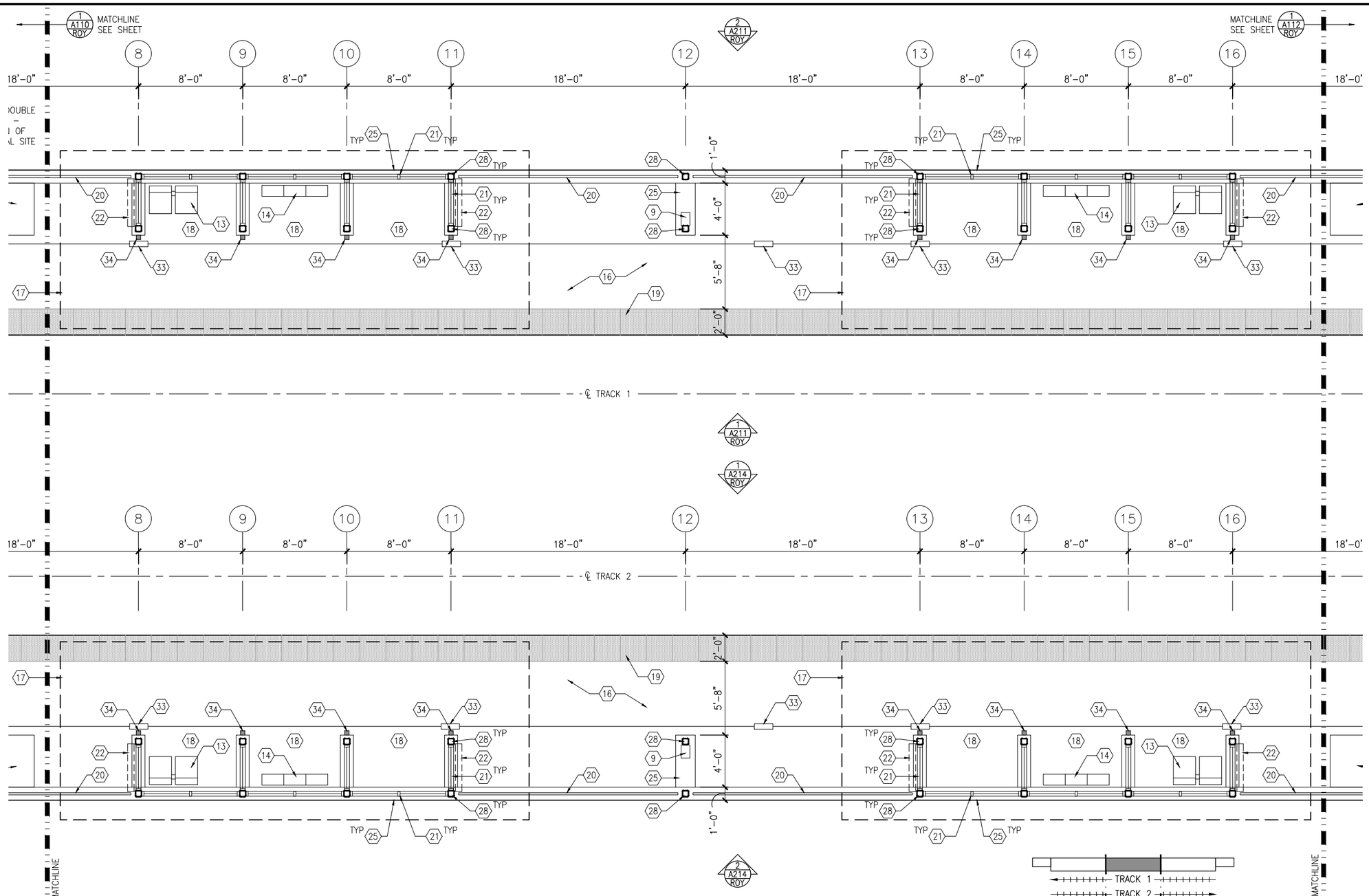


1 MIDDLE PARTIAL PLATFORM PLANS
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

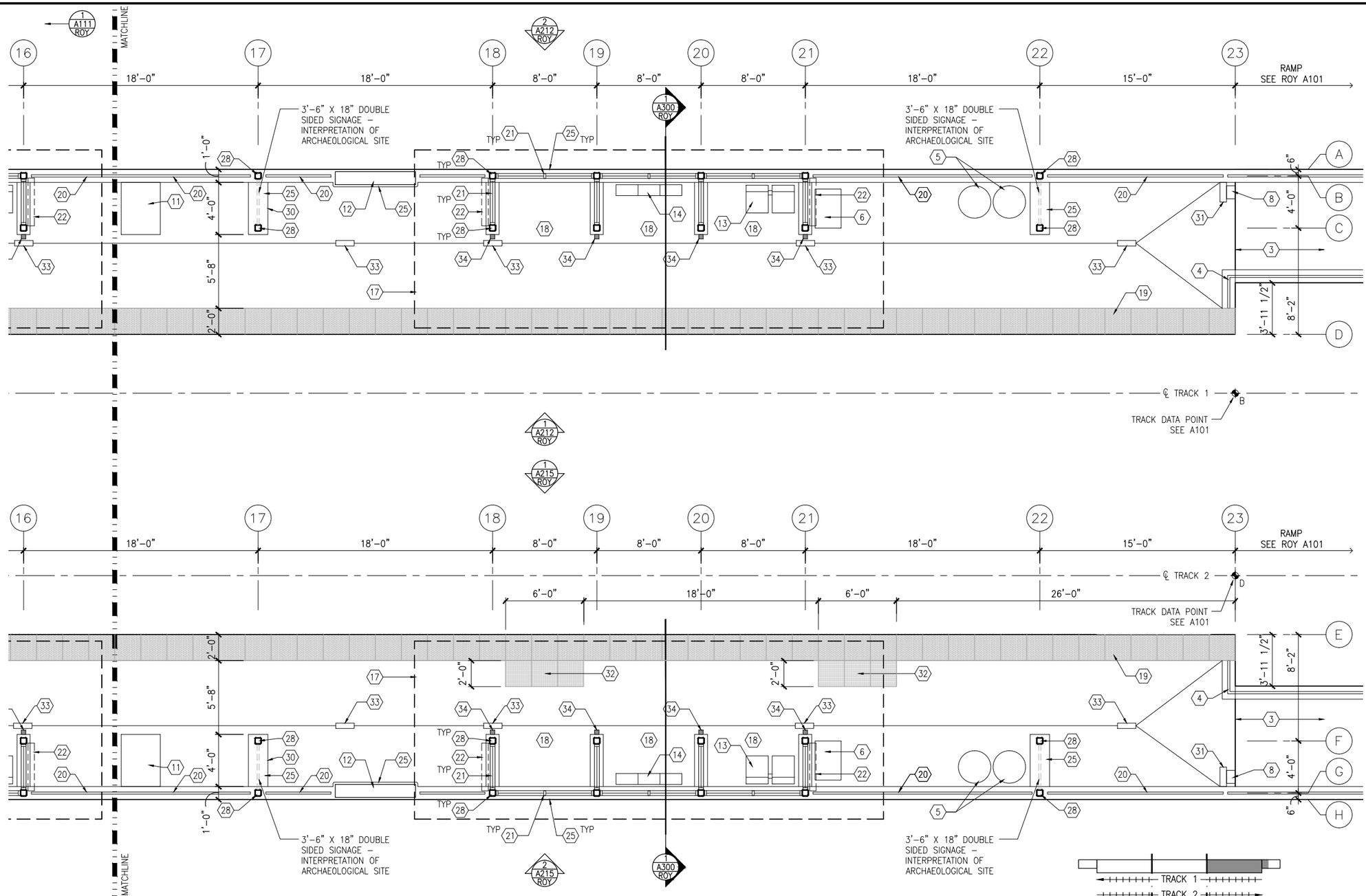
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**MIDDLE PARTIAL PLATFORM PLANS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-PLN-111

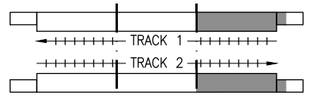
SHEET 225 OF 273

Sep. 21 2015 08:33 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-PLN-111.dwg By: V-IyerN




1 NORTH PARTIAL PLATFORM PLANS
SCALE:1/8"=1'–0"

0 2 4 8
SCALE




KEYPLAN

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN ABOVE (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. ADA DOOR POSITION INDICATOR
33. AREA DRAIN
34. PRE-FINISHED METAL DOWNSPOUT

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

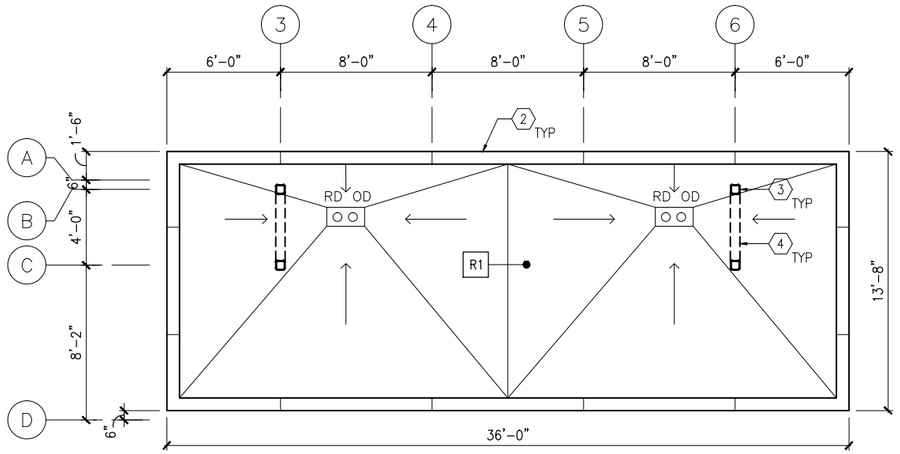
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**NORTH PARTIAL PLATFORM PLANS**

DISCIPLINE: ARCHITECTURE

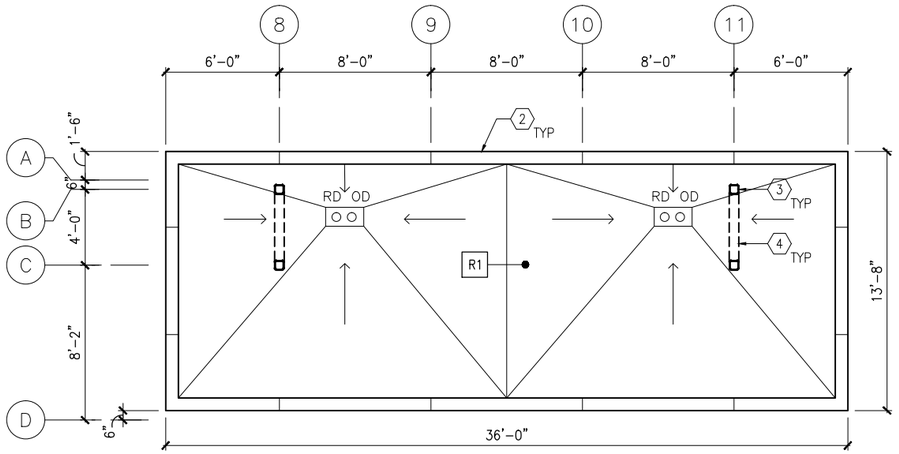
SHEET NAME: E4-ROY-ARC-PLN-112

SHEET 226 OF 273

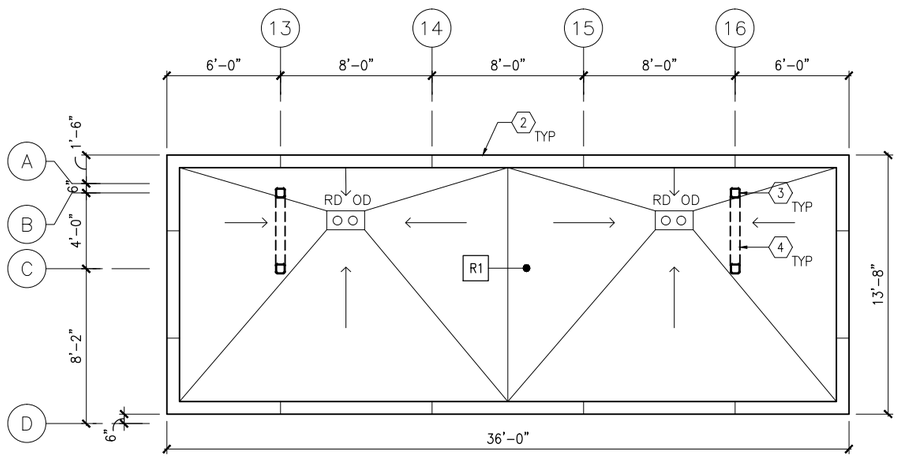
Sep. 21 2015 08:33 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-PLN-112.dwg By: V-IyerN



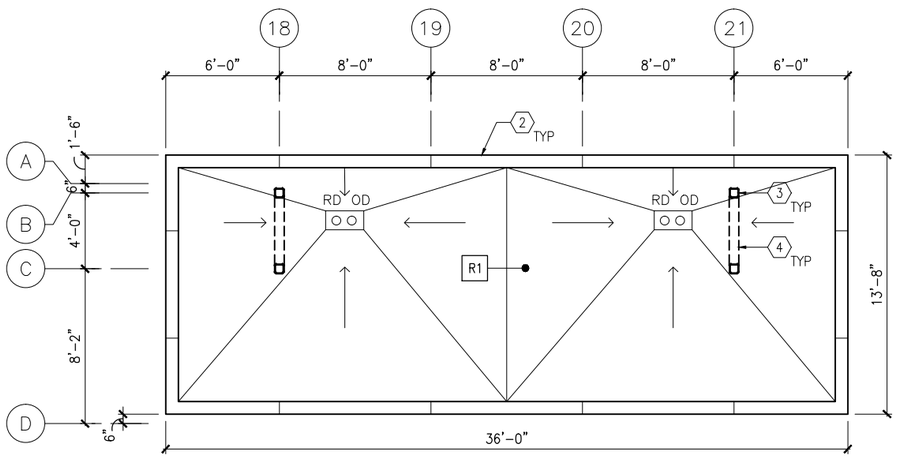

1 ROOF PLAN – SOUTH CANOPY
SCALE: 1/8"=1'–0"




2 ROOF PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'–0"




3 ROOF PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'–0"




4 ROOF PLAN – NORTH CANOPY
SCALE: 1/8"=1'–0"

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – ⬡

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE–FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

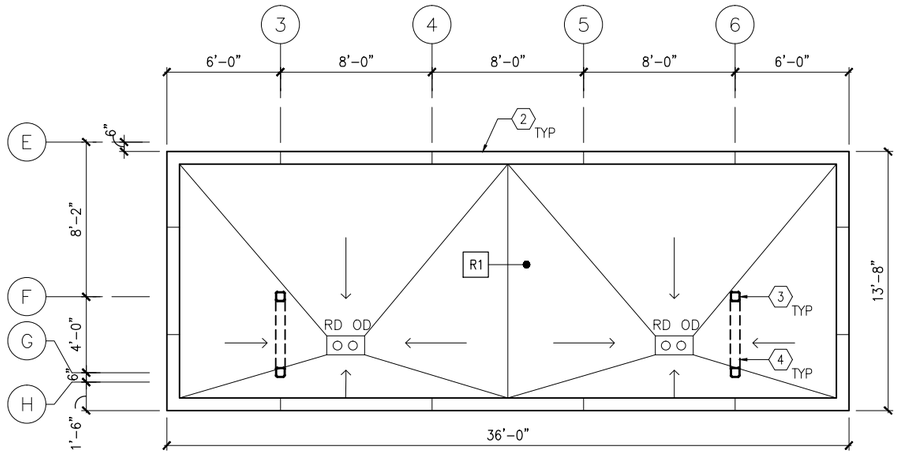
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 1 - ROOF PLANS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-PLN-150

SHEET 227 OF 273

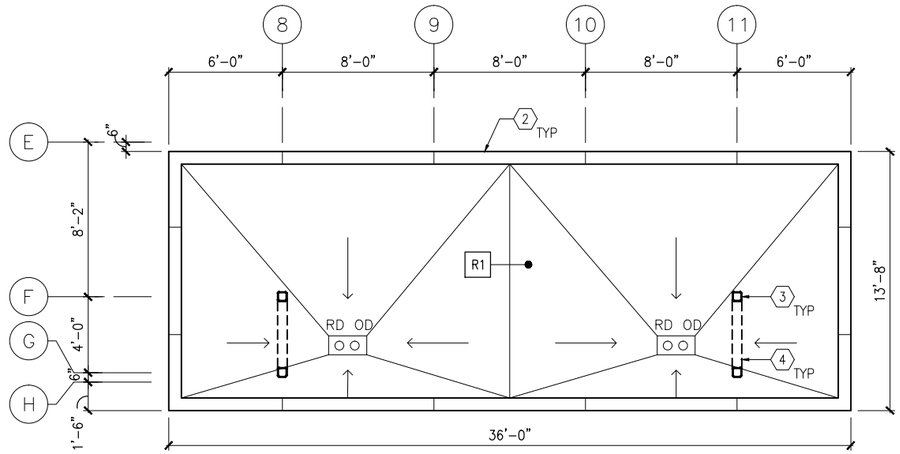
Sep. 21 2015 08:33 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-PLN-150.dwg By: V-IyerN




## 1 ROOF PLAN – SOUTH CANOPY

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

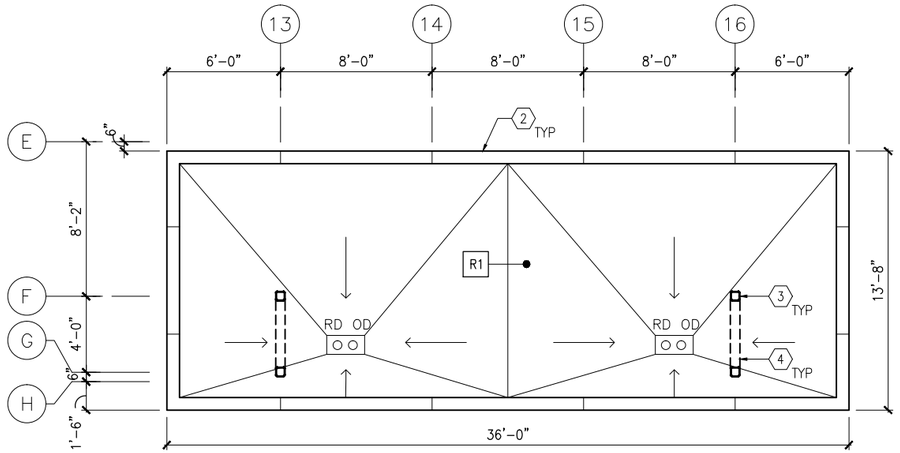
SCALE 0 2 4 8




## 2 ROOF PLAN – MIDDLE CANOPY

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

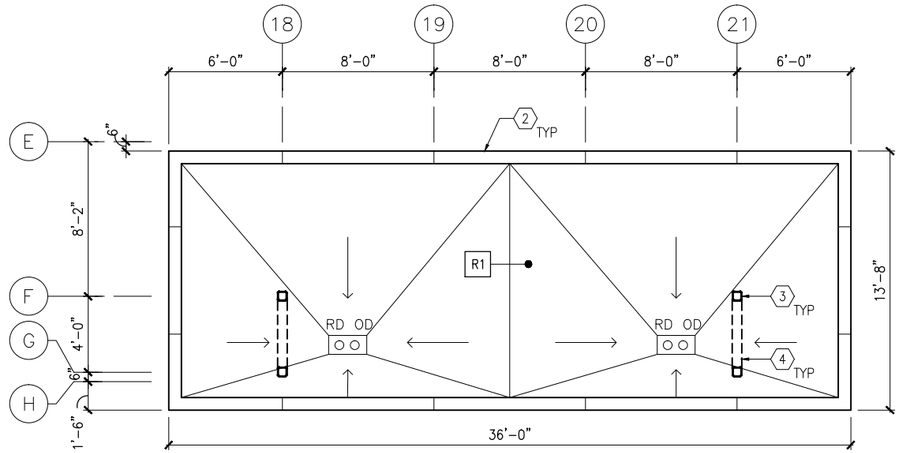
SCALE 0 2 4 8




## 3 ROOF PLAN – MIDDLE CANOPY

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

SCALE 0 2 4 8




## 4 ROOF PLAN – NORTH CANOPY

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

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. ROOF SLOPE IS 1/8" PER FT UNO

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ALUMINUM STOREFRONT AND TRANSLUCENT GLAZING SYSTEM
2. ALUMINUM COMPOSITE PANEL COPING
3. STEEL COLUMN – SEE STRUCTURAL
4. STEEL BEAM ABOVE – SEE STRUCTURAL
5. PREFINISHED METAL SCUPPER
6. PREFINISHED METAL GUTTER, SLOPE TO DOWNSPOUTS
7. ROOF BASE FLASHING
8. SUMP
9. CONCRETE SPLASH BLOCK
10. PRE-FINISHED METAL DOWNSPOUT
11. ROOF EXPANSION JOINT
12. BUILDING EXPANSION JOINT
13. VENT THROUGH ROOF – SEE PLUMB
14. INTEGRAL ROOF GUTTER – SLOPE TO DOWNSPOUTS BELOW
15. MECHANICAL EQUIP – SEE MECH

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- STEEL COLUMN
- OVERHEAD SUPPORT
- RD OD — ROOF DRAIN AND OVERFLOW ROOF DRAIN
- R1 — ROOF ASSEMBLY TYPE 1 BALLASTED EPDM
- R2 — ROOF ASSEMBLY TYPE 2 PRECAST PAVER OVER EPDM
- R3 — ROOF ASSEMBLY TYPE 3 SAME AS TYPE 2 WITH R_ INSULATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

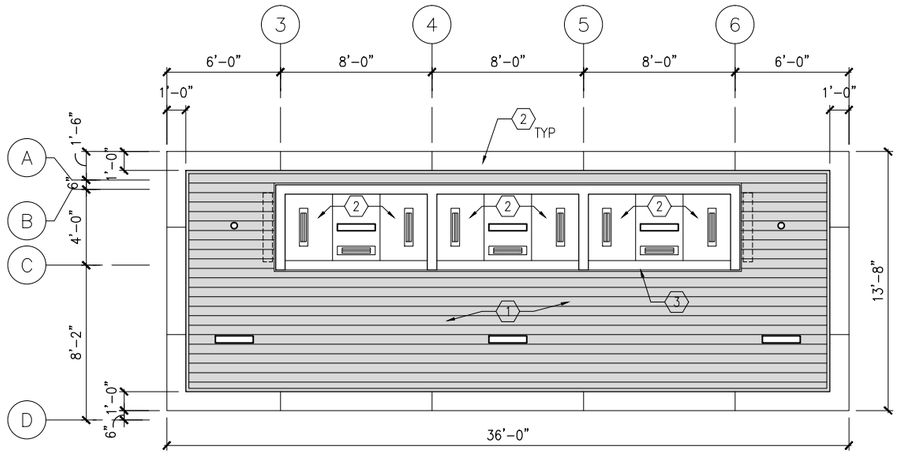
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 2 - ROOF PLANS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-PLN-151

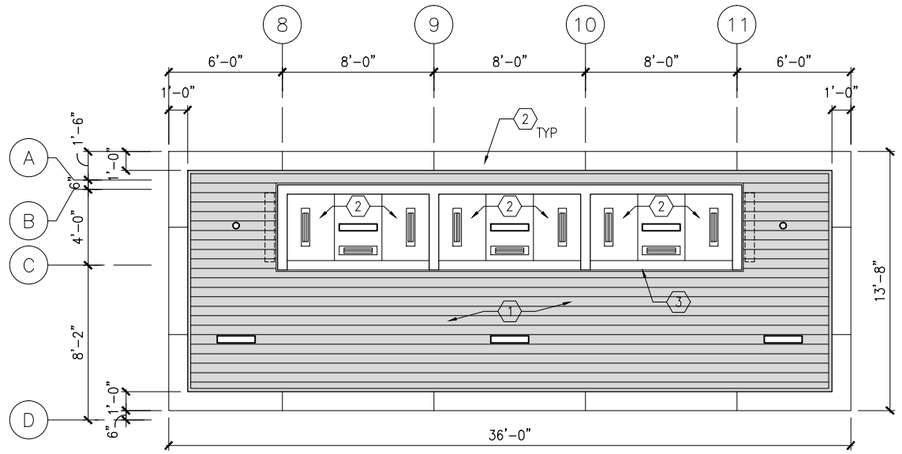
SHEET 228 OF 273

Sep. 21 2015 08:34 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-PLN-151.dwg By: V-IyerN



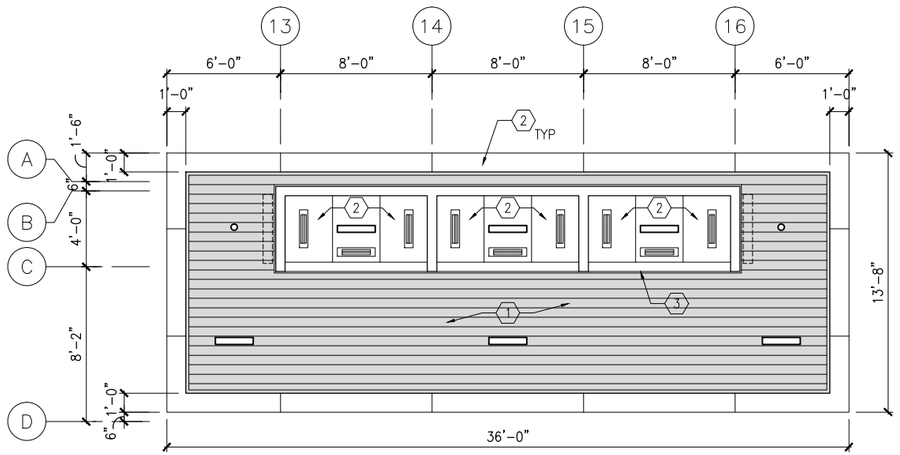

1 REFLECTED CEILING PLAN – SOUTH CANOPY
SCALE: 1/8"=1'–0"



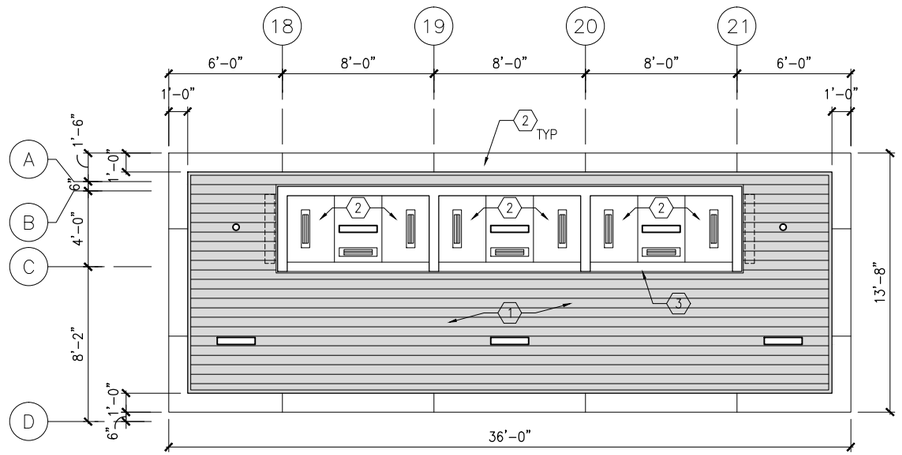

2 REFLECTED CEILING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'–0"




3 REFLECTED CEILING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'–0"




4 REFLECTED CEILING PLAN – NORTH CANOPY
SCALE: 1/8"=1'–0"




## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- S SPEAKER
- M MICROPHONE
- C SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY–IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

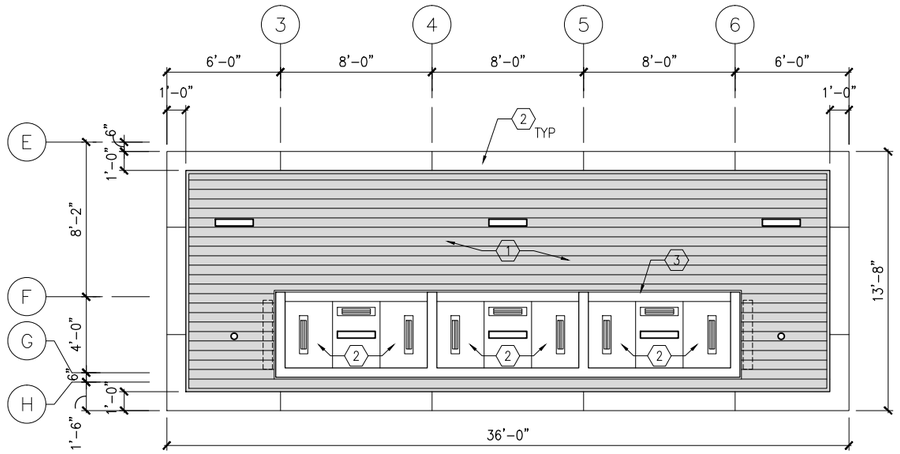
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 1 - REFLECTED CEILING PLANS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-RCP-180

SHEET 229 OF 273

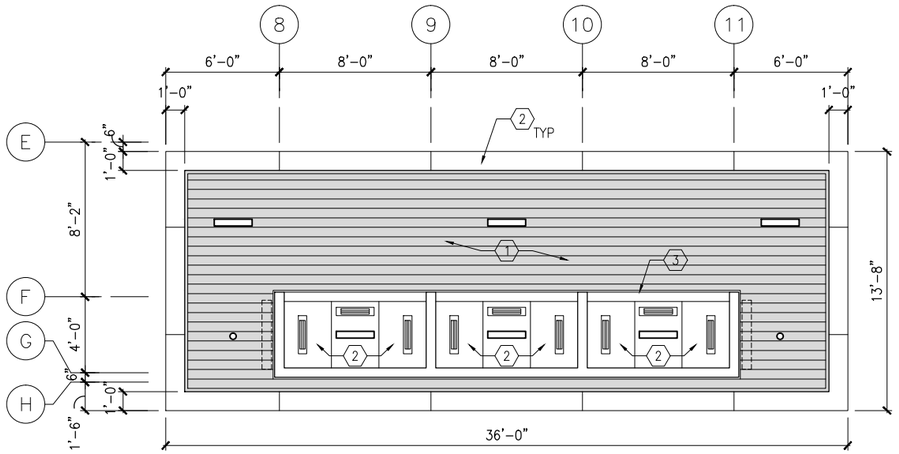
Sep. 21 2015 08:34 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-RCP-180.dwg By: V-IyerN




1 REFLECTED CEILING PLAN – SOUTH CANOPY
SCALE: 1/8"=1'-0"




3 REFLECTED CEILING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"




2 REFLECTED CEILING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"




4 REFLECTED CEILING PLAN – NORTH CANOPY
SCALE: 1/8"=1'-0"

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
2. ALUMINUM COMPOSITE PANEL SOFFIT
3. PROVIDE MATCHING CEILING TRIM AROUND STEEL COLUMN AND/OR SHELTERS
4. PRECAST CONCRETE WALKWAY – SEE STRUCTURAL
5. PRECAST CONCRETE STAIR – SEE STRUCTURAL
6. EXPOSED STRUCTURE – SEE STRUCTURAL
7. ACOUSTIC CEILING
8. HINGED PANELS FOR EQUIPMENT ACCESS

## LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

- SHELTER HEATER
- S SPEAKER
- M MICROPHONE
- C SECURITY CAMERA
- ELECT/COMM JUNCTION BOX
- LED LINEAR LIGHT FIXTURE
- LED DOWNLIGHT LIGHT FIXTURE
- VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
- LAY-IN CEILING
- EXPOSED CONCRETE
- EXTERIOR LINEAR METAL CEILING

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

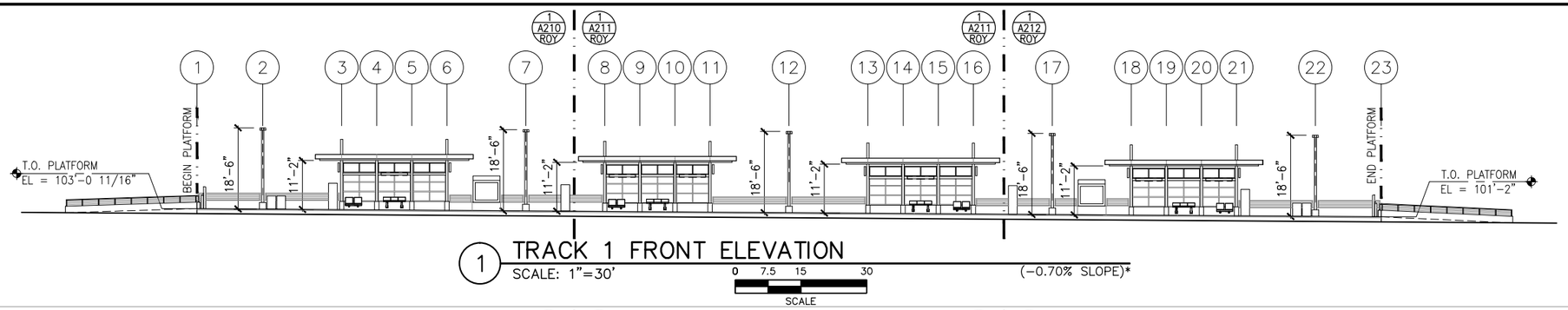
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 2 - REFLECTED CEILING PLANS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-RCP-181

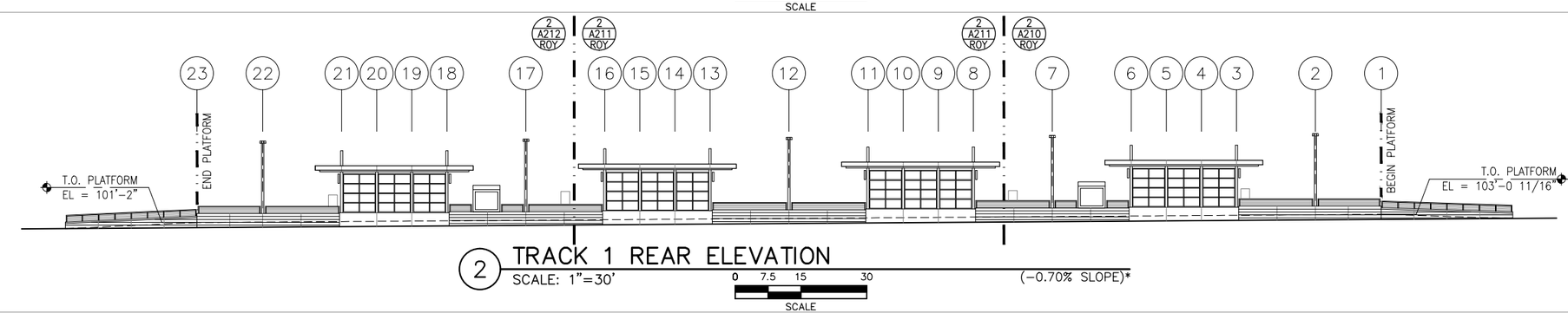
SHEET 230 OF 273

Sep. 21 2015 08:34 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-RCP-181.dwg By: V-IyerN



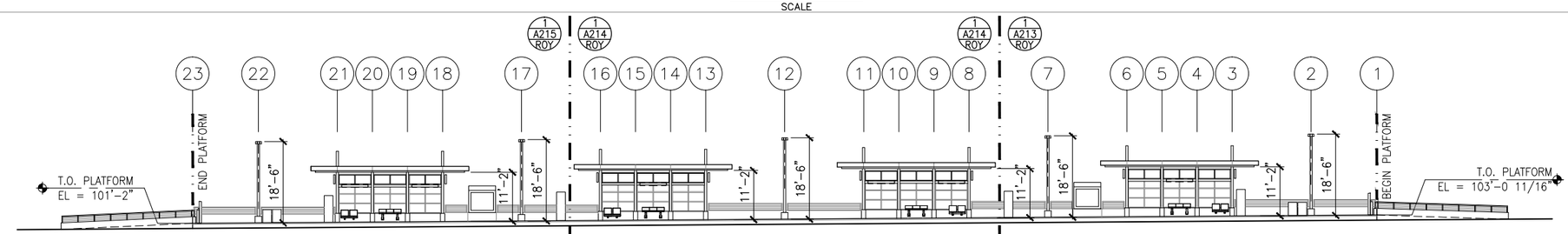

1 TRACK 1 FRONT ELEVATION

SCALE: 1"=30' 0 7.5 15 30 SCALE (-0.70% SLOPE)*



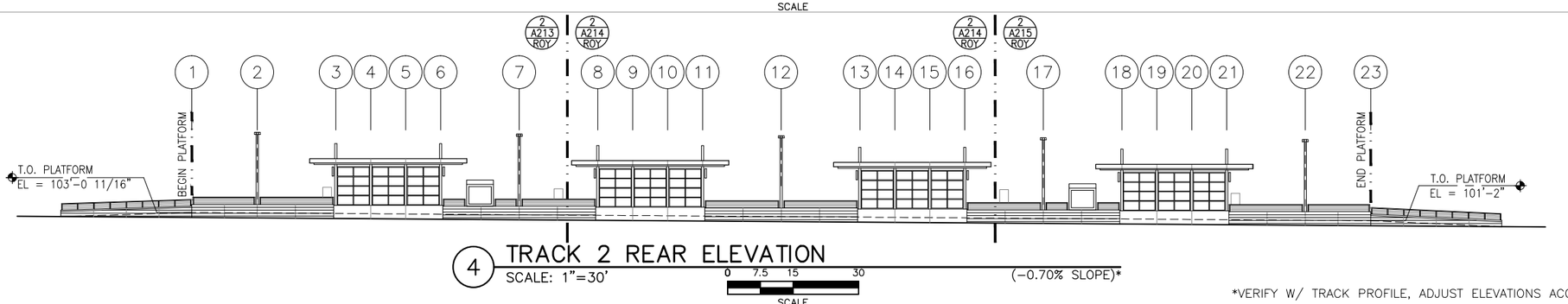

2 TRACK 1 REAR ELEVATION

SCALE: 1"=30' 0 7.5 15 30 SCALE (-0.70% SLOPE)*




3 TRACK 2 FRONT ELEVATION

SCALE: 1"=30' 0 7.5 15 30 SCALE (-0.70% SLOPE)*




4 TRACK 2 REAR ELEVATION

SCALE: 1"=30' 0 7.5 15 30 SCALE (-0.70% SLOPE)*

*VERIFY W/ TRACK PROFILE, ADJUST ELEVATIONS ACCORDINGLY

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

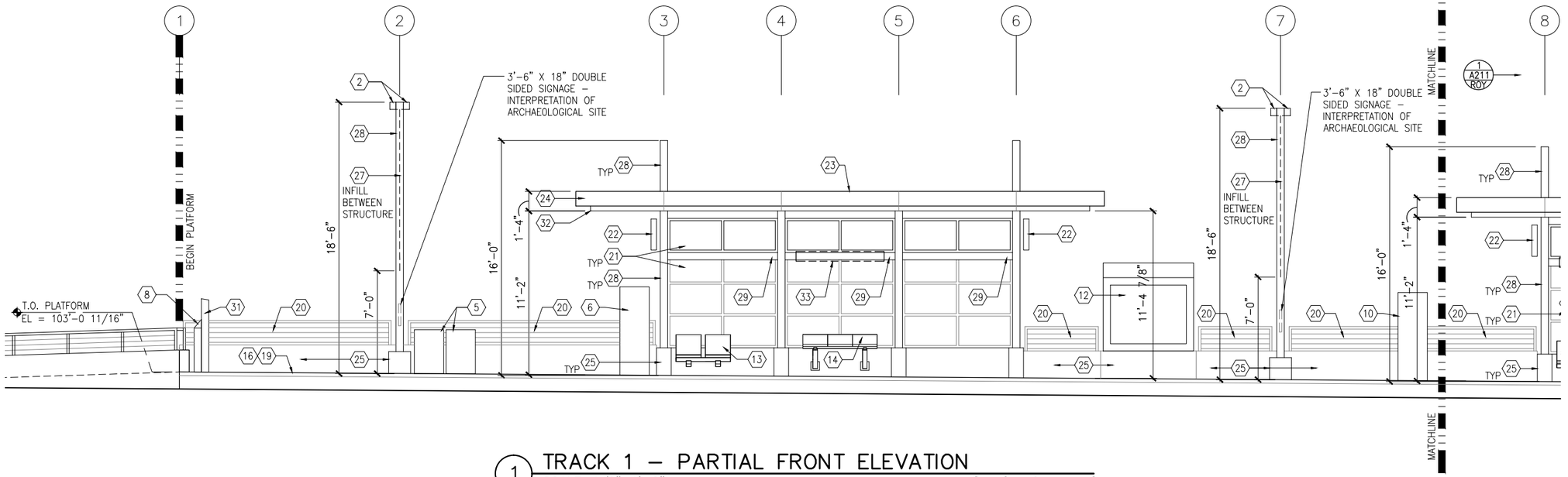
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-ELV-200

SHEET 231 OF 273

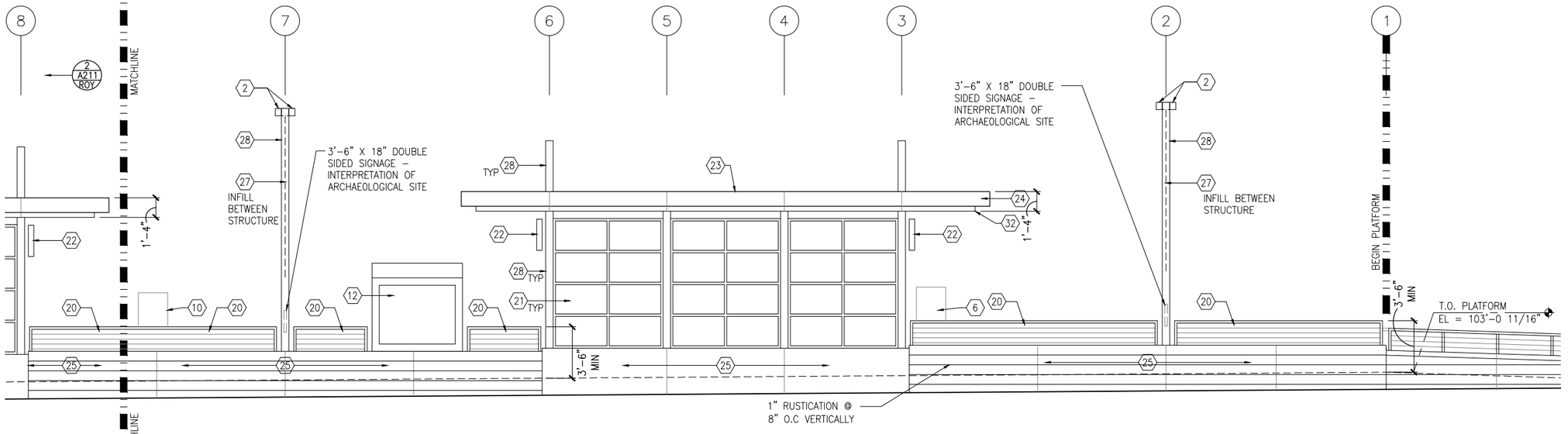
Sep. 21 2015 08:35 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-ELV-200.dwg By: V-IyerN




1 TRACK 1 – PARTIAL FRONT ELEVATION

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

SCALE 0 2 4 8




2 TRACK 1 – PARTIAL REAR ELEVATION

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

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

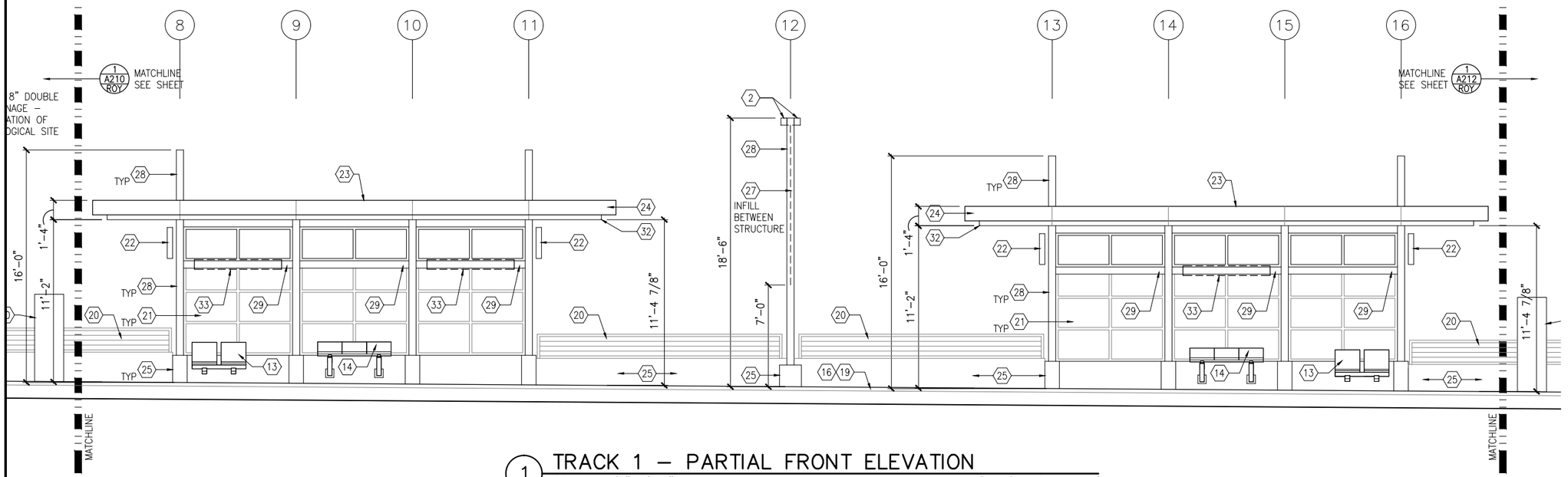
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 1 - SOUTH PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-ELV-210

SHEET 232 OF 273

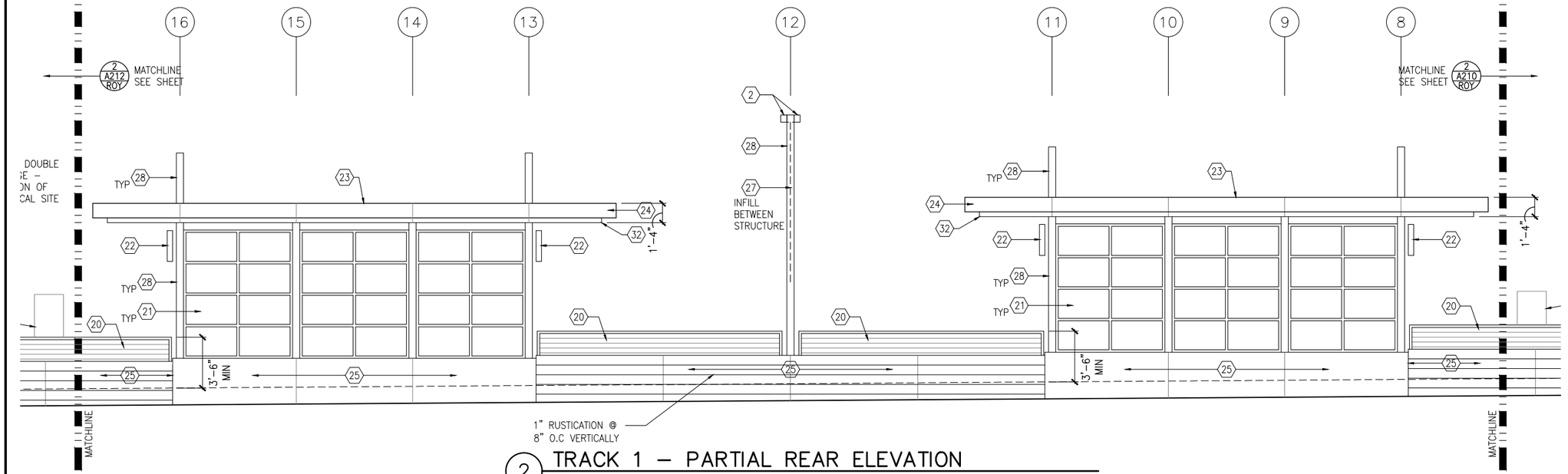
Sep. 21 2015 08:35 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-ELV-210.dwg By: V-IyerN




1 TRACK 1 – PARTIAL FRONT ELEVATION

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

SCALE 0 2 4 8




2 TRACK 1 – PARTIAL REAR ELEVATION

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

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

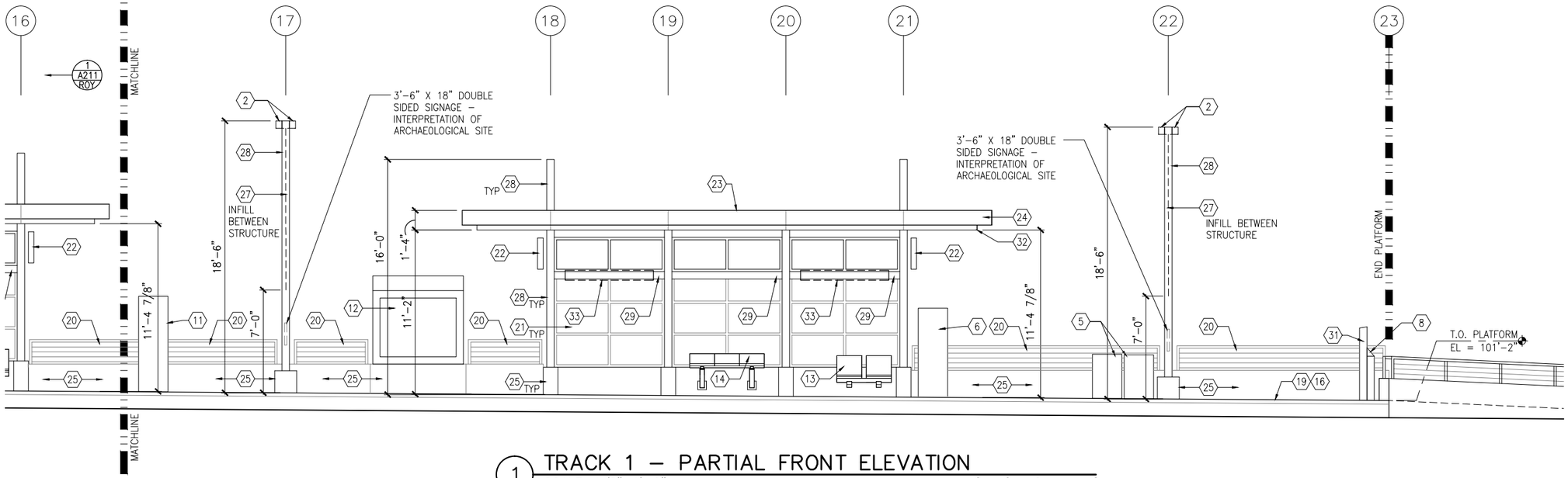
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 1 - MIDDLE PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-ELV-211

SHEET 233 OF 273

Sep. 21 2015 08:36 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-ELV-211 .dwg By: V-IyerN

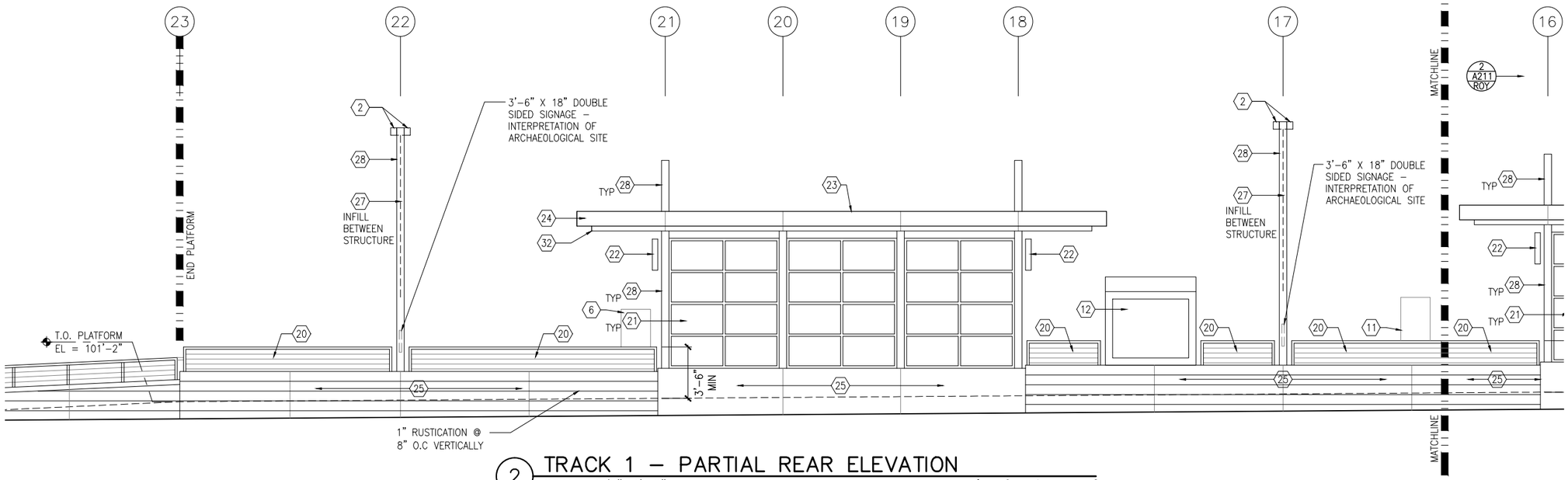



1 TRACK 1 – PARTIAL FRONT ELEVATION

SCALE: 1/8"=1'–0"

0 2 4 8

SCALE




2 TRACK 1 – PARTIAL REAR ELEVATION

SCALE: 1/8"=1'–0"

0 2 4 8

SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

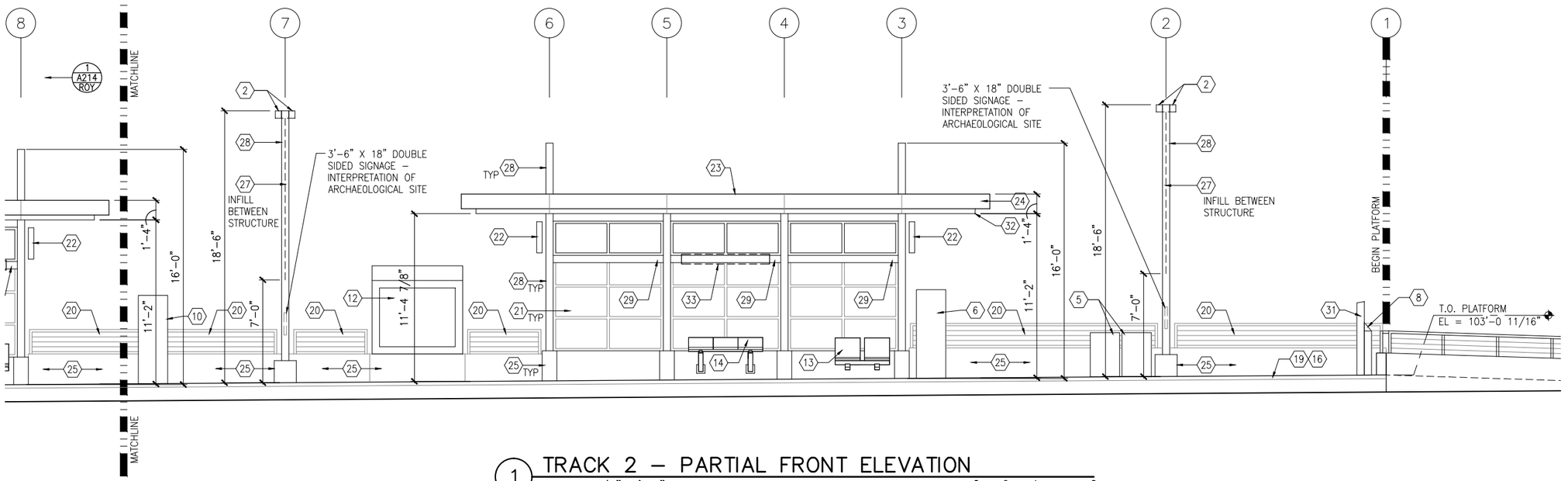
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 1 - NORTH PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-ELV-212

SHEET 234 OF 273

Sep. 21 2015 08:36 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-ELV-212 .dwg By: V-IyerN

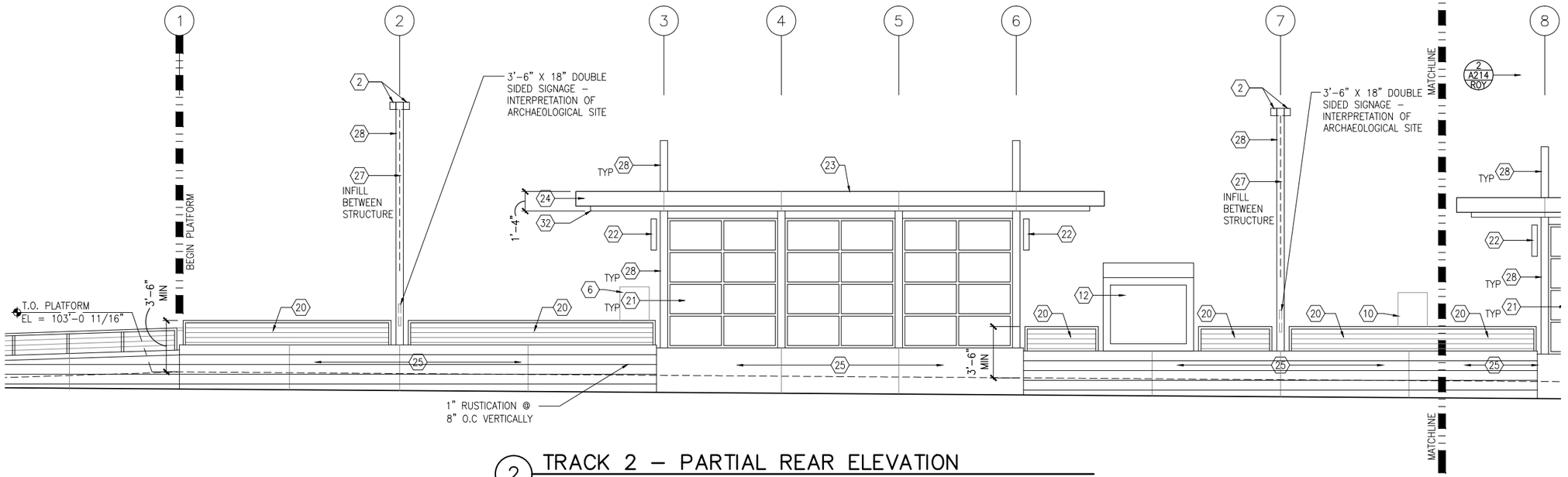



1 TRACK 2 – PARTIAL FRONT ELEVATION

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

0 2 4 8

SCALE




2 TRACK 2 – PARTIAL REAR ELEVATION

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

0 2 4 8

SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

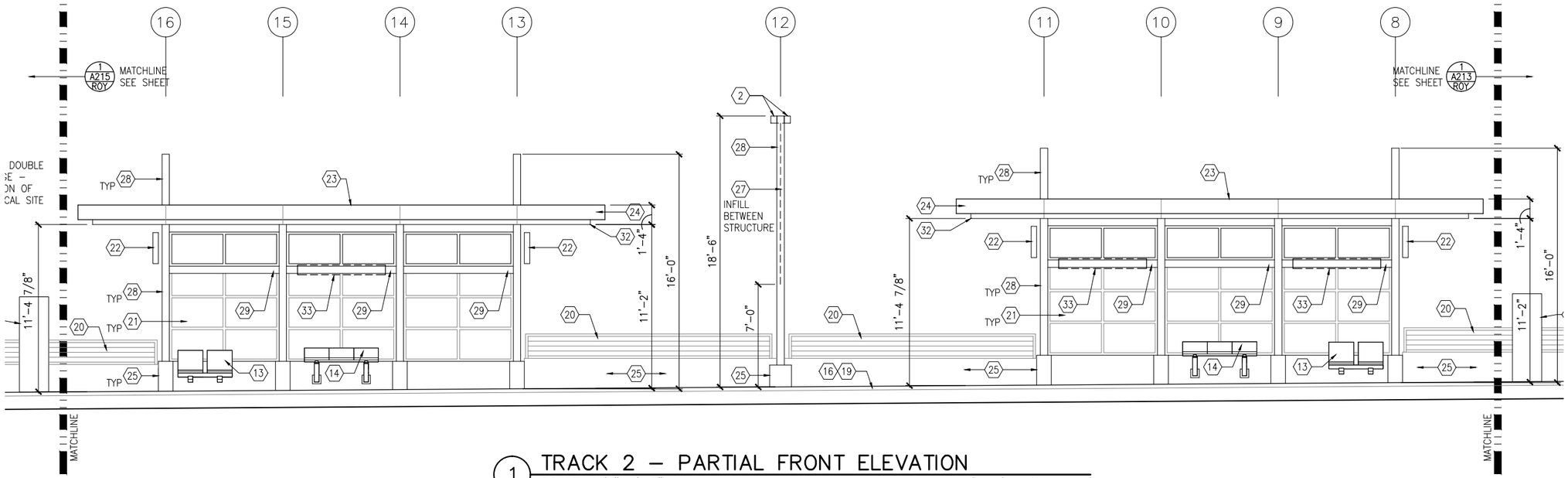
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 2 - SOUTH PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

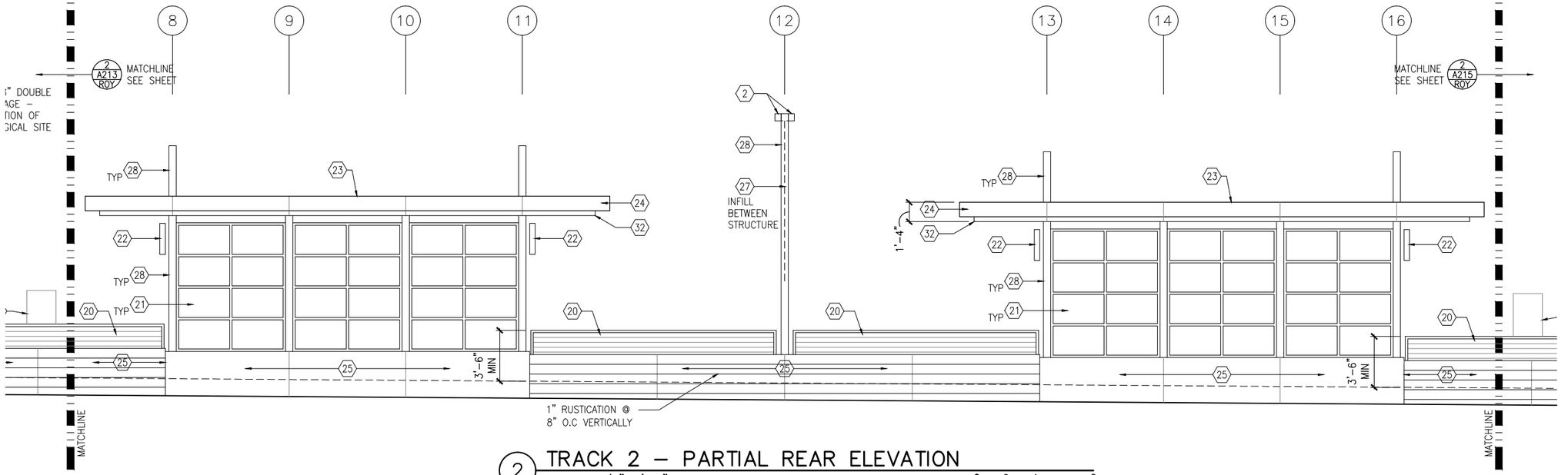
SHEET NAME: E4-ROY-ARC-ELV-213

SHEET 235 OF 273




1 TRACK 2 – PARTIAL FRONT ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL REAR ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
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7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
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16. CONCRETE PLATFORM
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18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
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44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

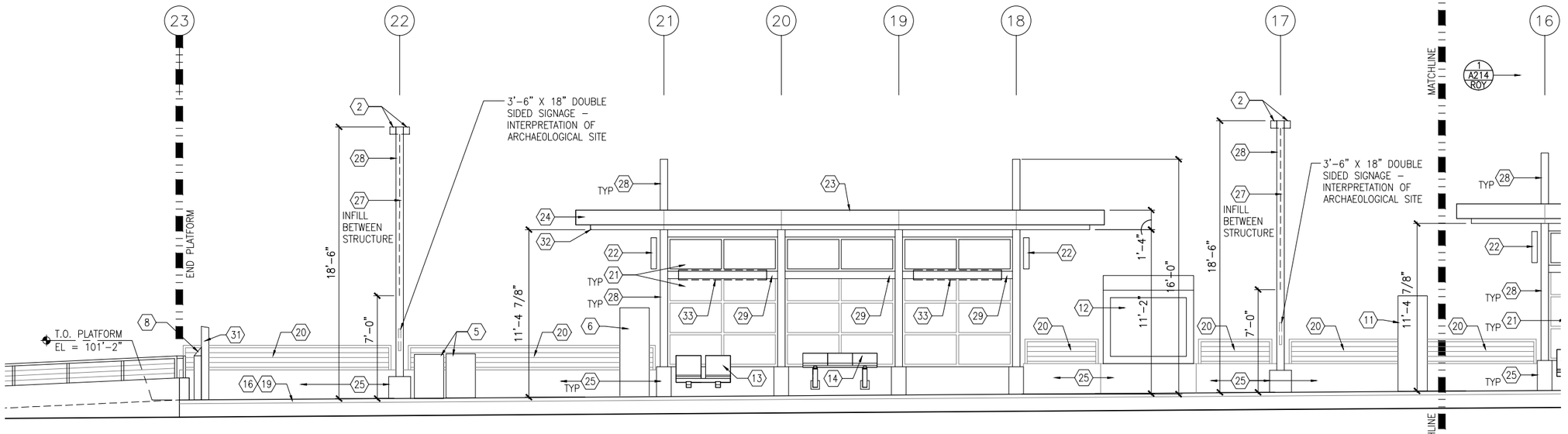
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 2 - MIDDLE PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-ELV-214

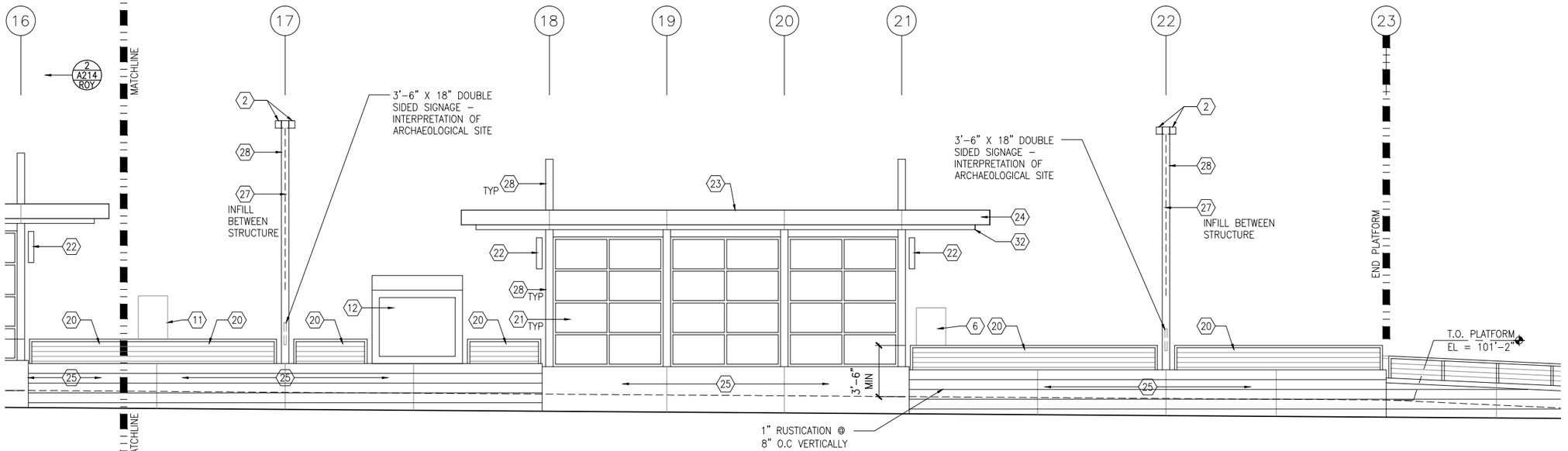
SHEET 236 OF 273

Sep. 21 2015 08:37 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-ELV-214 .dwg By: V-IyerN




1 TRACK 2 – PARTIAL FRONT ELEVATION
SCALE: 1/8"=1'-0"

SCALE 0 2 4 8




2 TRACK 2 – PARTIAL REAR ELEVATION
SCALE: 1/8"=1'-0"

SCALE 0 2 4 8

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

1. ENTRY MARKER
2. LIGHT MOUNTED TO STRUCTURE
3. ACCESS RAMP
4. HAND RAIL
5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
6. TICKET VENDING MACHINE
7. FUTURE TICKET VENDING MACHINE
8. STORED VALUE VALIDATOR
9. EMERGENCY CALL BOX
10. COMMUNICATION CABINET
11. ELECTRICAL CABINET
12. INFORMATION KIOSK WITH TRANSIT INFO AND ADVERTISING
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. CANOPY ABOVE
18. SHELTER: WINDSCREEN, LIGHTS, AND INFRARED HEATERS
19. DETECTABLE WARNING AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. RIDER ALERT PANEL
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. LIGHTNING ROD – SEE ELECTRICAL
35. PC CONC WALL PANEL – SEE STRUCT
36. PRE-FINISHED METAL DOWNSPOUT
37. PRE-FIN. METAL SCUPPER
38. PRE-FINISHED LOUVER
39. LOUVER WITH MOTORIZED DAMPER
40. RAIN WATER LEADER – SEE PLUMBING
41. NOT USED
42. SECONDARY STEEL FRAMING – SEE STRUCTURAL
43. DOOR – SEE DOOR SCHEDULE
44. PC CONC WALKWAY – SEE STRUCT
45. PC CONC STAIR – SEE STRUCT
46. PRE-FINISHED METAL GUTTER

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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AECOM

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

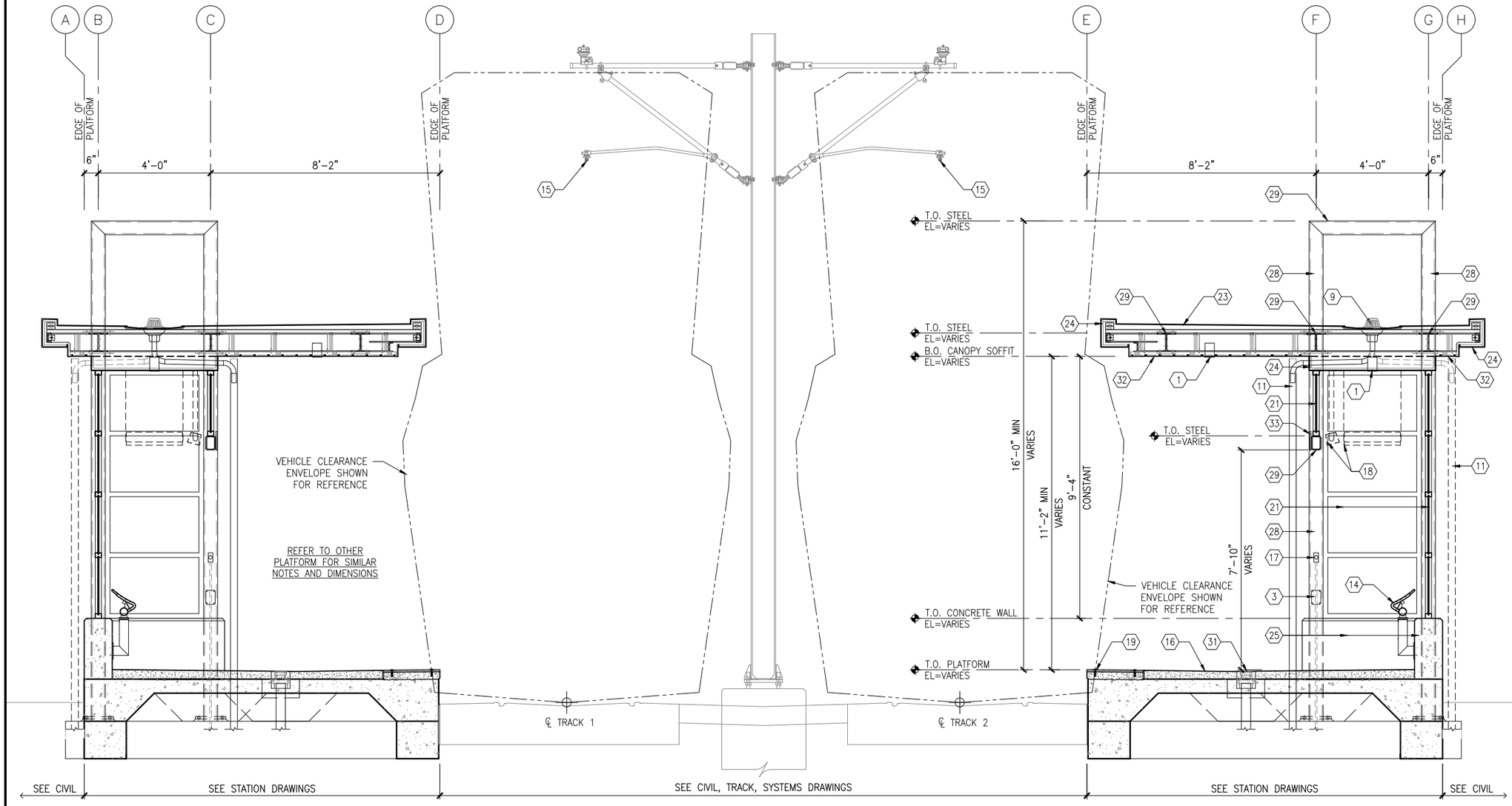
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 2 - NORTH PARTIAL ELEVATIONS**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-ELV-215

SHEET 237 OF 273

Sep. 21 2015 08:37 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-ELV-215.dwg By: V-IyerN




## 1 TYPICAL PLATFORM SECTION

SCALE: 1/4"=1'-0"

0 1 2 4
SCALE

## GENERAL SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES – ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

1. LIGHT RECESSED IN SOFFIT
2. LIGHT MOUNTED TO STRUCTURE
3. HAND HOLE IN STEEL STRUCTURE
4. HAND RAIL
5. SECURITY CAMERA
6. TICKET VENDING MACHINE
7. EMERGENCY TELEPHONE LIGHT
8. EMERGENCY CALL BOX
9. ROOF DRAIN
10. PRE-FINISHED METAL GUTTER
11. PRE-FINISHED METAL DOWNSPOUT
12. PRE-FINISHED METAL SCUPPER
13. BENCH
14. LEANING RAIL
15. OVERHEAD CONTACT SYSTEM
16. CONCRETE PLATFORM
17. HEATER PUSH BUTTON CONTROLS
18. INFRARED HEATER
19. DETECTABLE WARNING PAVER AT BOARDING EDGE
20. GUARD RAIL AND SAFETY SCREEN
21. ALUMINUM STOREFRONT AND GLASS WINDOW SYSTEM
22. VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)
23. ROOFING – REFER TO ROOF PLAN FOR ROOFING TYPE
24. ALUMINUM COMPOSITE PANEL SOFFIT AND FASCIA
25. CONCRETE WALL
26. TRANSLUCENT PLASTIC PANEL
27. ARCHITECTURAL WOVEN MESH
28. STEEL COLUMN – SEE STRUCTURAL
29. STEEL BEAM – SEE STRUCTURAL
30. WALL HYDRANT
31. AREA DRAIN
32. EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA
33. STATION SIGNAGE
34. PC CONC WALKWAY – SEE STRUCT
35. PC CONC STAIR – SEE STRUCT
36. PC CONC WALL PANEL
37. SECONDARY STEEL FRAMING – SEE STRUCTURAL
38. COMPOSITE ALUM PANEL

## LEGEND

- CIP CONCRETE
- ARCHITECTURAL CONCRETE
- R– ROOF TYPE – SEE A150

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

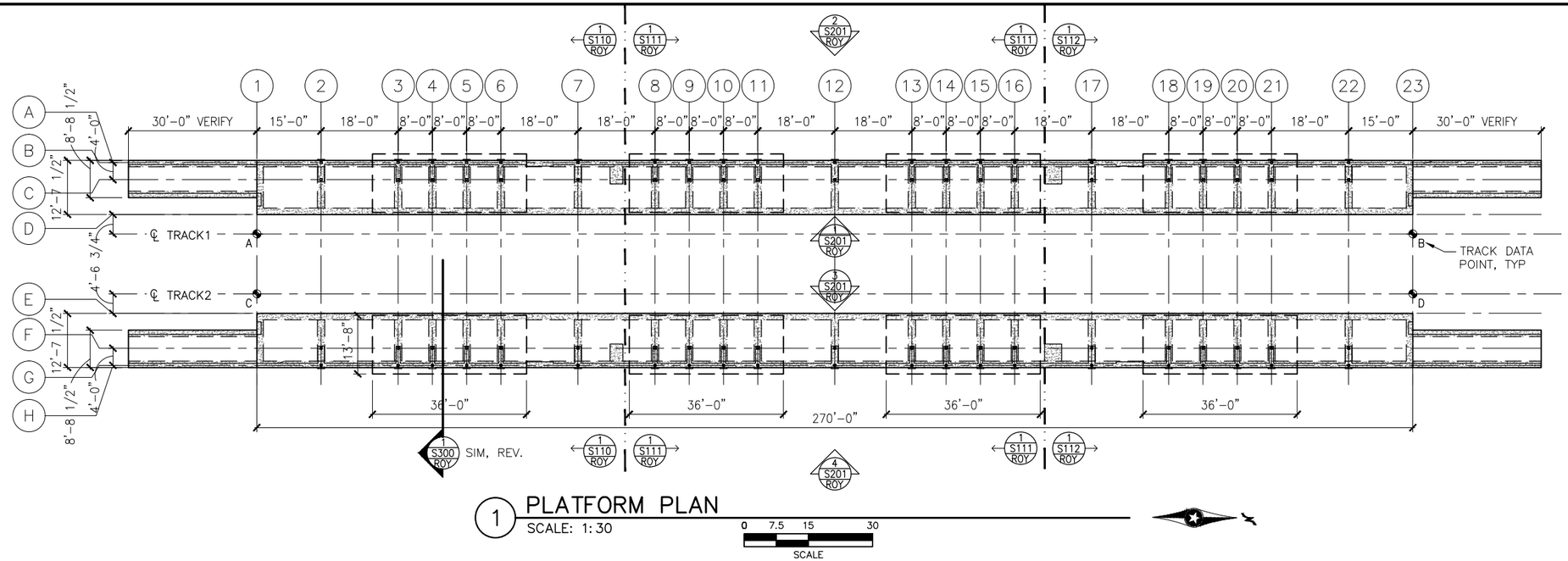
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TYPICAL PLATFORM SECTION**

DISCIPLINE: ARCHITECTURE

SHEET NAME: E4-ROY-ARC-SCT-300

SHEET 238 OF 273

Sep. 21 2015 08:38 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ARCH\ROYALSTON STATION\E4-ROY-ARC-SCT-300.dwg By: V-IyerN




1 PLATFORM PLAN

SCALE: 1:30

0 7.5 15 30

SCALE

## TRACK DATA

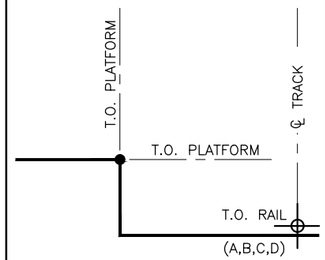
ELEV 100'-0" (LOCATION ON PLAN)

**TRACK 1 EL 100'-0"=** XXX.XX (PT 'A')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| A | XXX.XX | XXXX+XX.XX | |
| B | XXX.XX | XXXX+XX.XX | |
| | | | |

**TRACK 2 EL 100'-0"=** XXX.XX (PT 'C')

| POINT | T.O. RAIL ELEVATION | TRACK 2 STATIONING | |
|---|---|---|---|
| | | | |
| C | XXX.XX | XXXX+XX.XX | |
| D | XXX.XX | XXXX+XX.XX | |
| | | | |




SECTION DIAGRAM AT PLATFORM EDGE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM

60% SUBMISSION - 9/28/15

METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

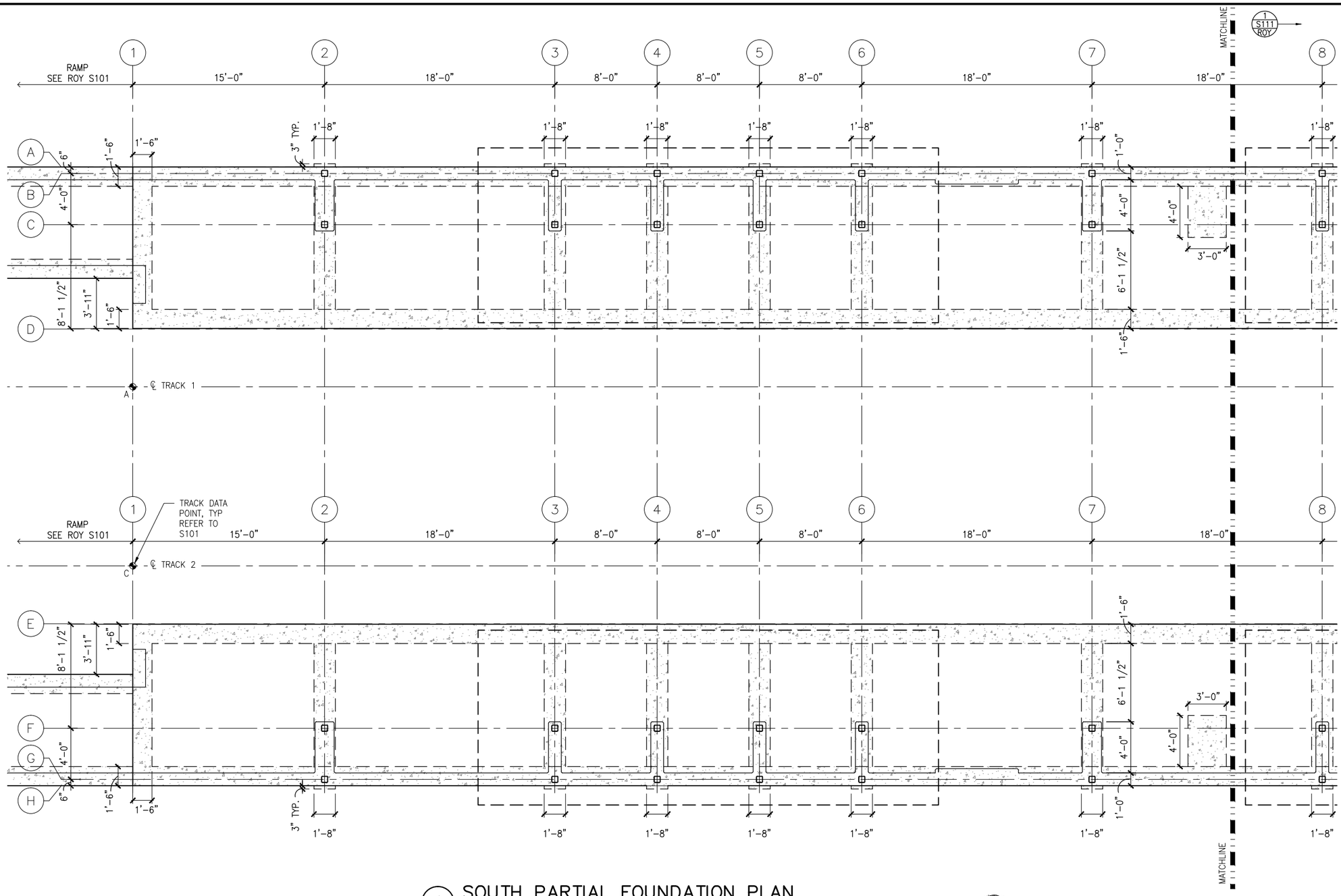
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**PLATFORM PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-PLN-101

SHEET 239 OF 273

Sep. 21 2015 10:12 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-PLN-101.dwg By: pepins




1 SOUTH PARTIAL FOUNDATION PLAN
SCALE:1/8"=1'-0"

SCALE 0 2 4 8

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

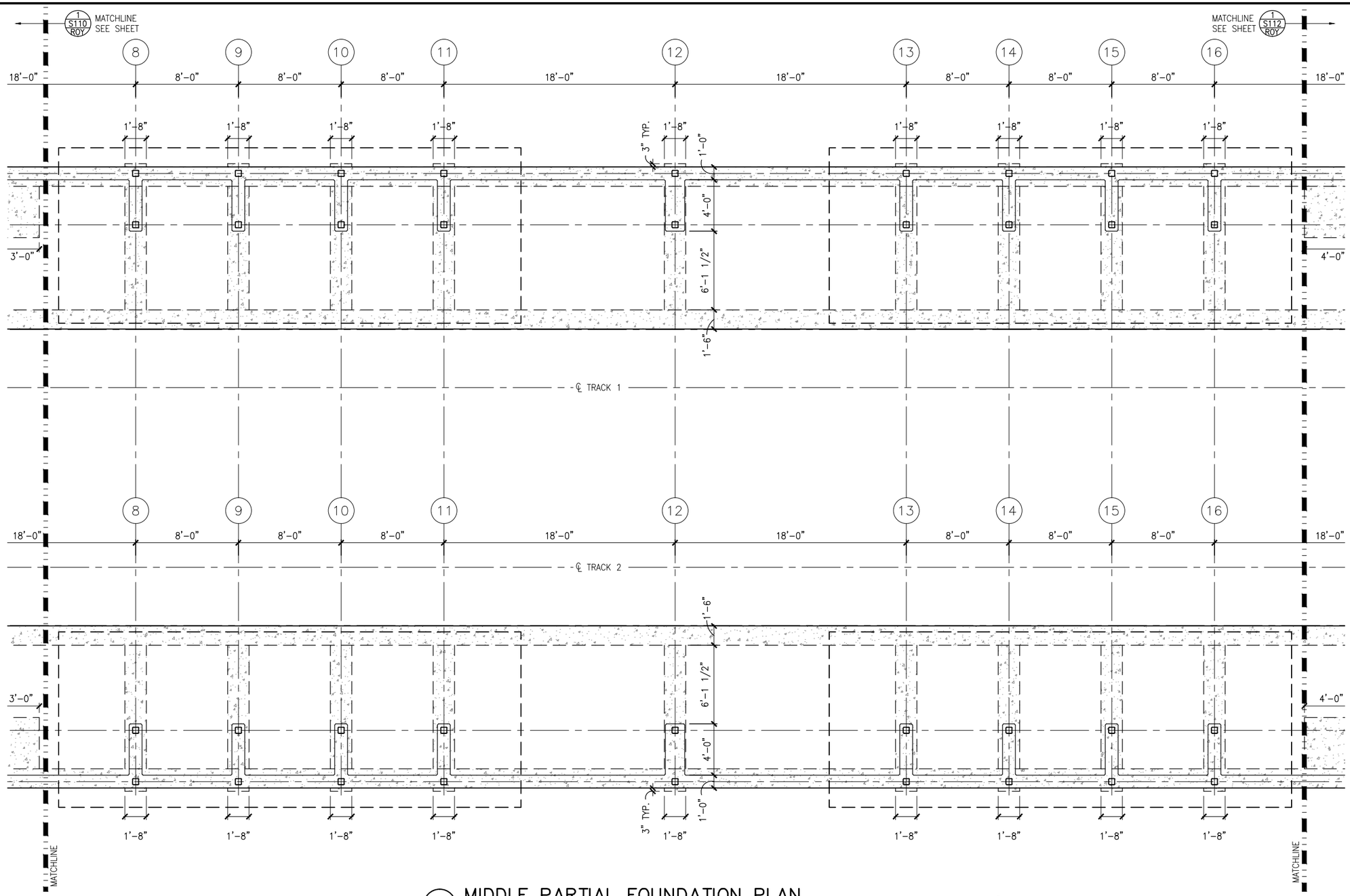
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**SOUTH PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-PLN-110

SHEET 240 OF 273

Sep. 21 2015 10:13 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-PLN-110.dwg By: pepins




1 MIDDLE PARTIAL FOUNDATION PLAN
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

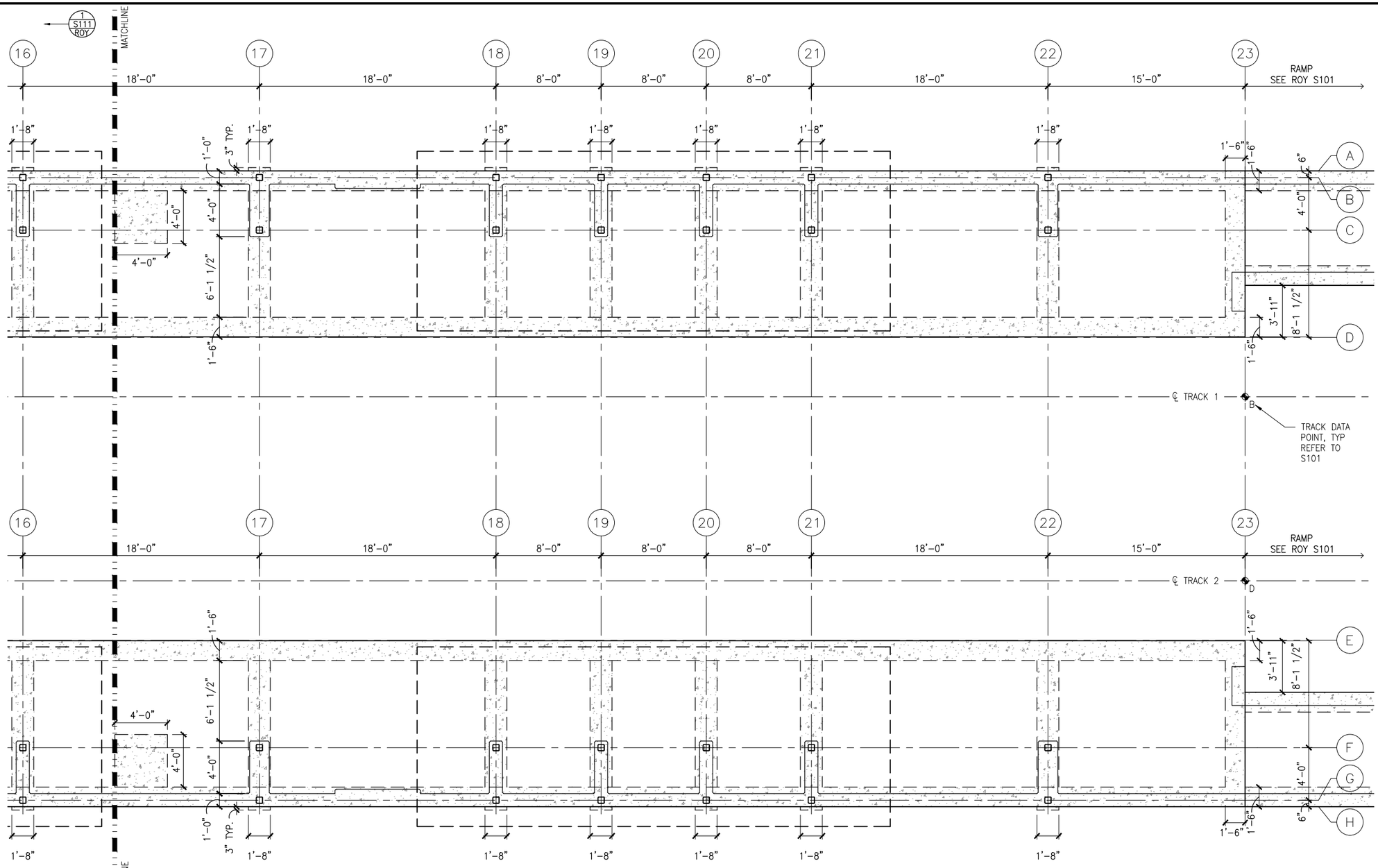
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**MIDDLE PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-PLN-111

SHEET 241 OF 273

Sep. 21 2015 10:15 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-PLN-111.dwg By: pepins




1 NORTH PARTIAL FOUNDATION PLAN
SCALE:1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

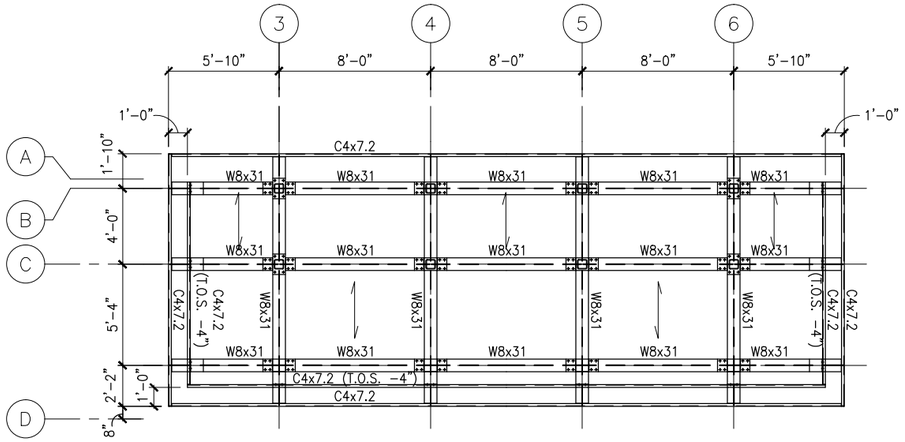
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**NORTH PARTIAL FOUNDATION PLAN**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-PLN-112

SHEET 242 OF 273

Sep. 21 2015 10:16 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-PLN-112.dwg By: pepins

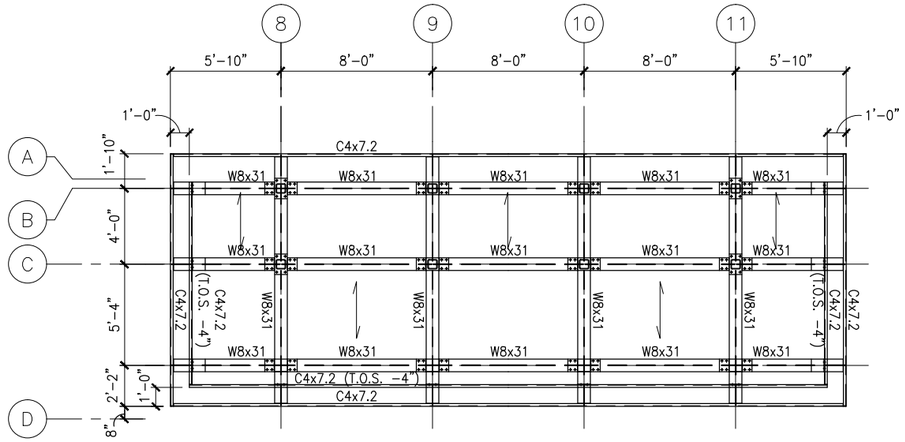



1 FRAMING PLAN – SOUTH CANOPY

SCALE: 1/8"=1'–0"

0 2 4 8

SCALE

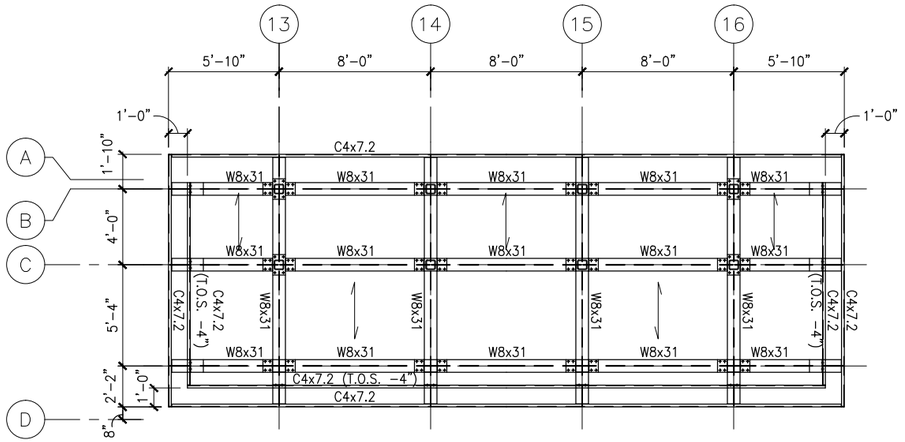



2 FRAMING PLAN – MIDDLE CANOPY

SCALE: 1/8"=1'–0"

0 2 4 8

SCALE

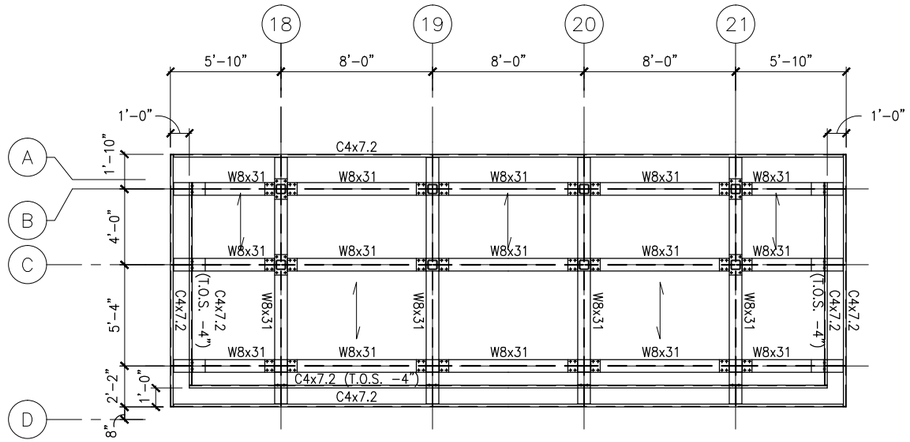



3 FRAMING PLAN – MIDDLE CANOPY

SCALE: 1/8"=1'–0"

0 2 4 8

SCALE




4 FRAMING PLAN – NORTH CANOPY

SCALE: 1/8"=1'–0"

0 2 4 8

SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

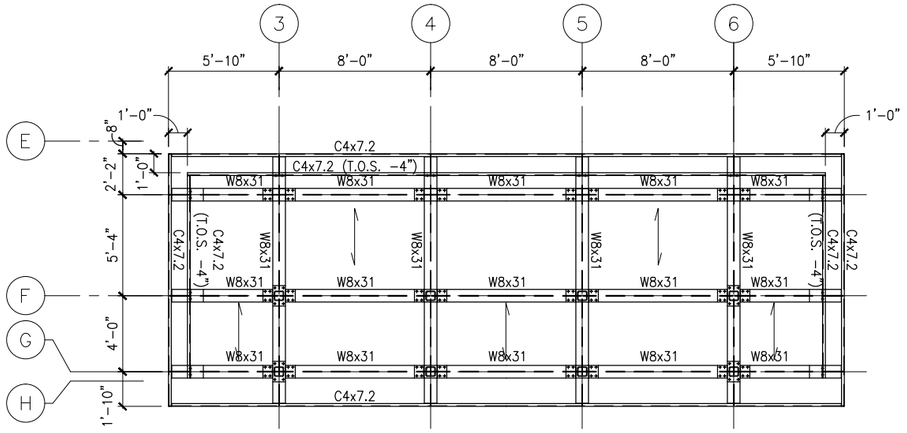
CIVIL EAST - VOLUME 11B
ROYALSTON STATION
TRACK 1 - ROOF FRAMING PLANS

DISCIPLINE: STRUCTURES

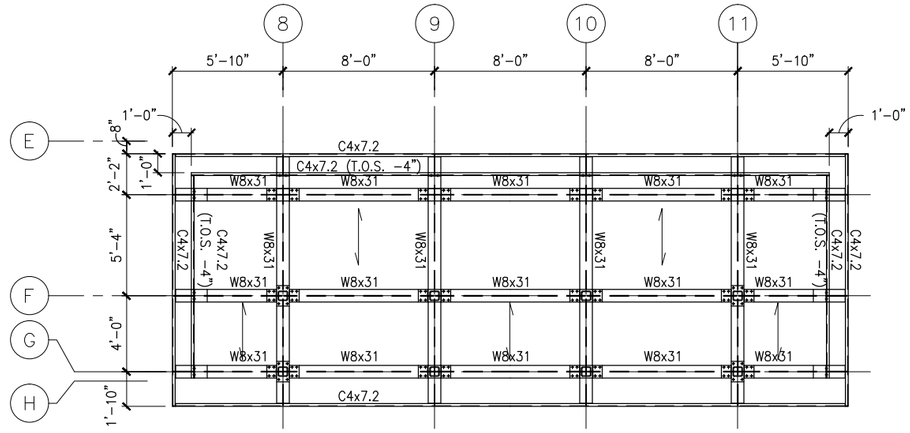
SHEET NAME: E4-ROY-STR-PLN-150

SHEET 243 OF 273

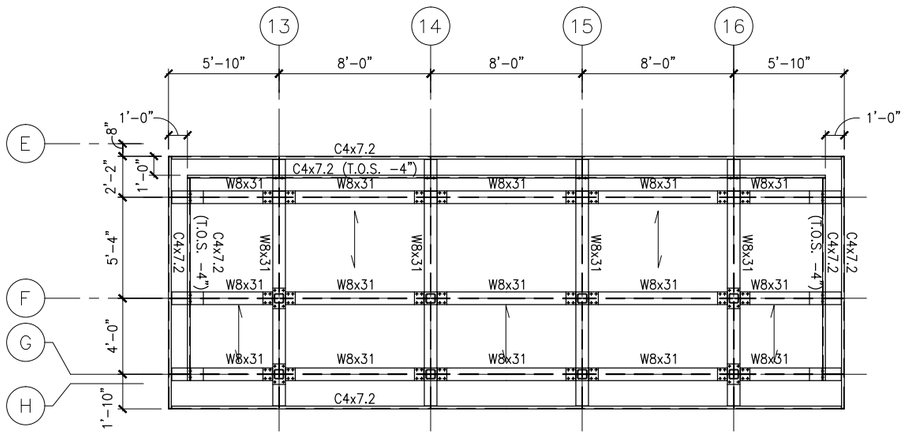
Sep. 21 2015 10:17 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-PLN-150.dwg By: pepins



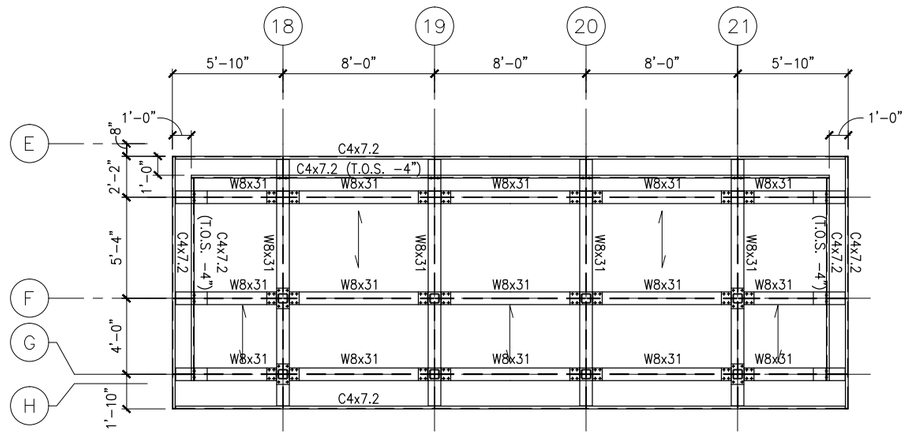

1 FRAMING PLAN – SOUTH CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




2 FRAMING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




3 FRAMING PLAN – MIDDLE CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE




4 FRAMING PLAN – NORTH CANOPY
SCALE: 1/8"=1'-0"
0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

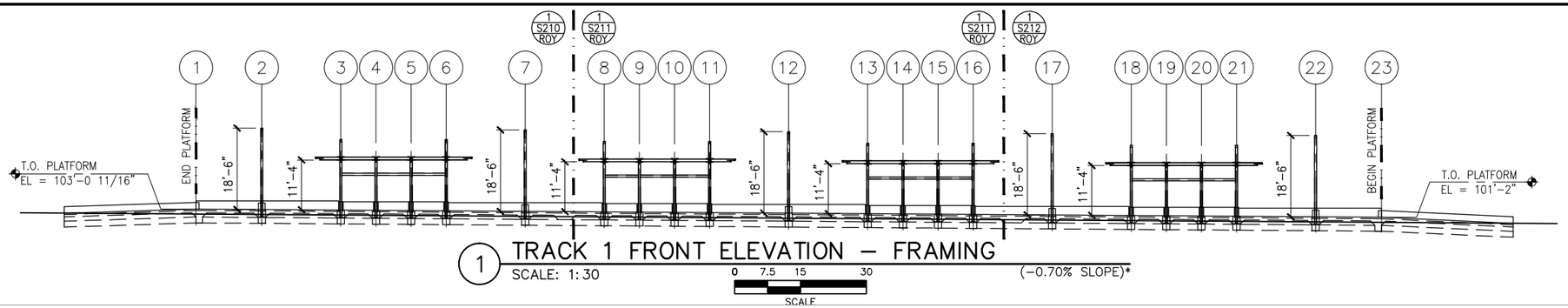
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 2 - ROOF FRAMING PLANS**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-PLN-151

SHEET 244 OF 273

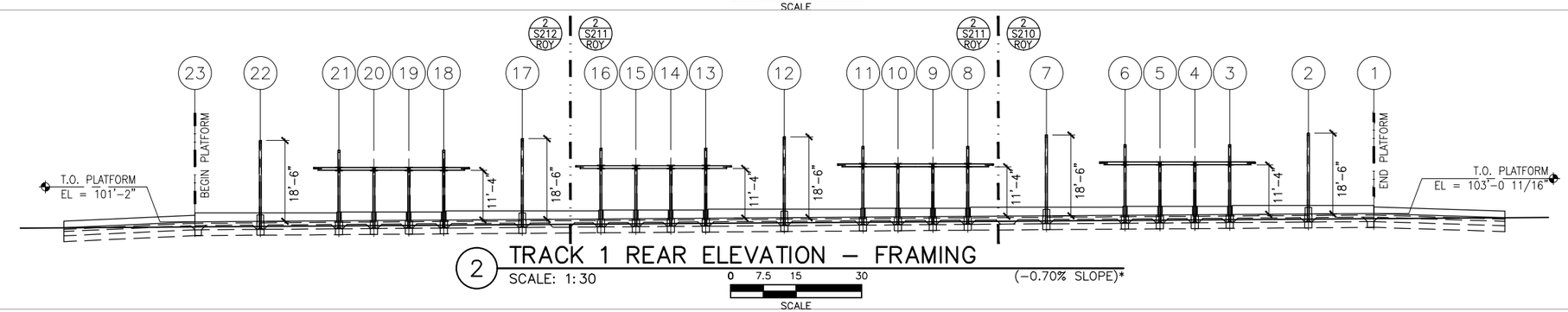
Sep. 21 2015 10:17 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-PLN-151.dwg By: pepins




1 TRACK 1 FRONT ELEVATION – FRAMING

SCALE: 1:30 (–0.70% SLOPE)*

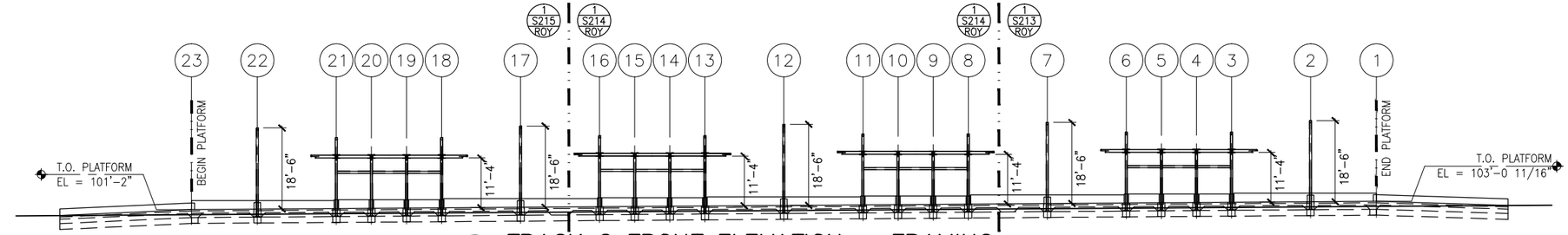
SCALE 0 7.5 15 30




2 TRACK 1 REAR ELEVATION – FRAMING

SCALE: 1:30 (–0.70% SLOPE)*

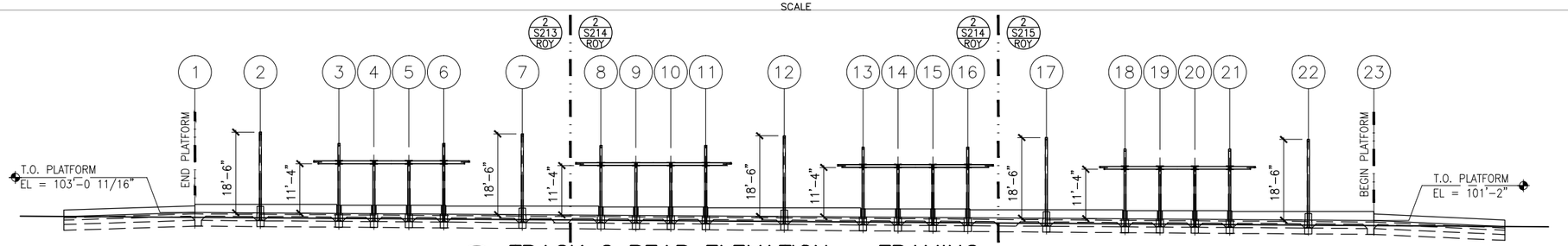
SCALE 0 7.5 15 30




3 TRACK 2 FRONT ELEVATION – FRAMING

SCALE: 1:30 (–0.70% SLOPE)*

SCALE 0 7.5 15 30




4 TRACK 2 REAR ELEVATION – FRAMING

SCALE: 1:30 (–0.70% SLOPE)*

SCALE 0 7.5 15 30

*VERIFY W/ TRACK PROFILE, ADJUST ELEVATIONS ACCORDINGLY

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

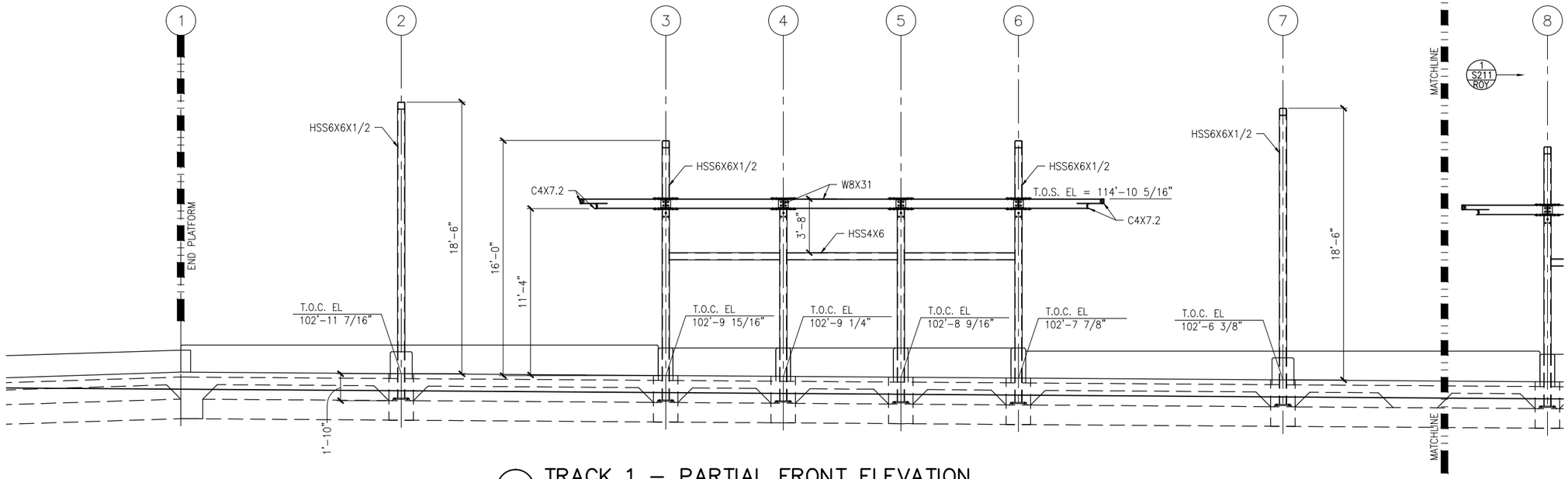
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-ELV-201

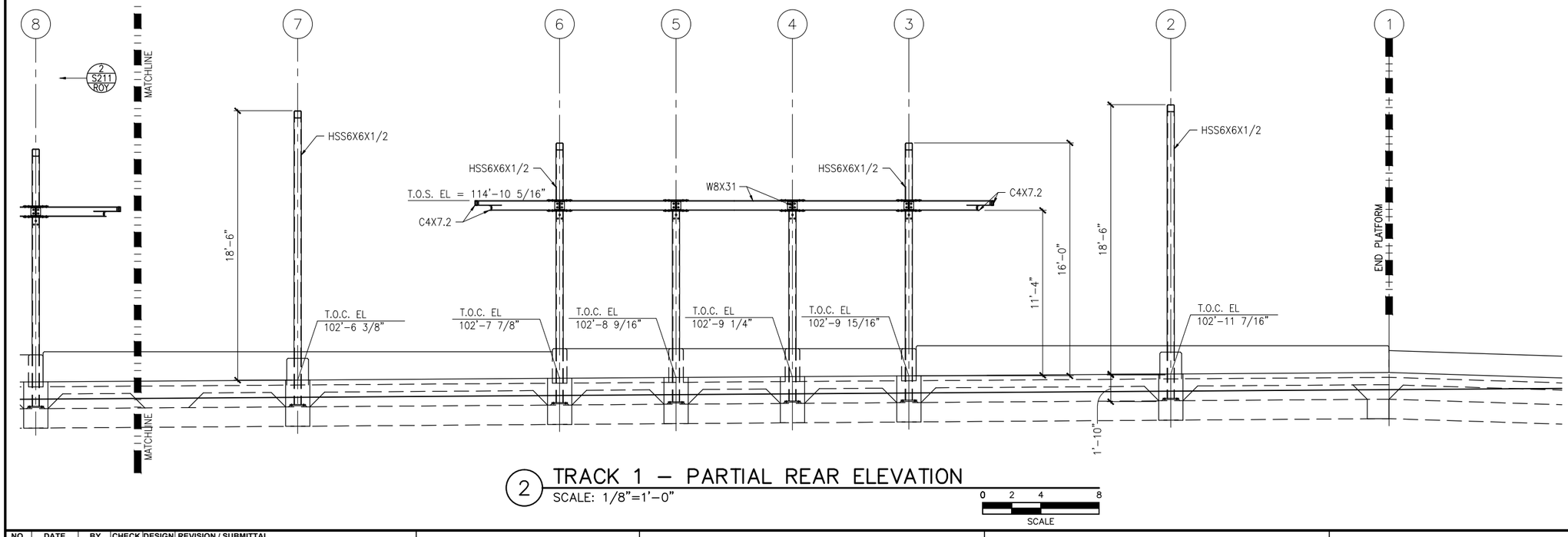
SHEET 245 OF 273

Sep. 21 2015 10:18 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-ELV-201.dwg By: pepins




1 TRACK 1 – PARTIAL FRONT ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 1 – PARTIAL REAR ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

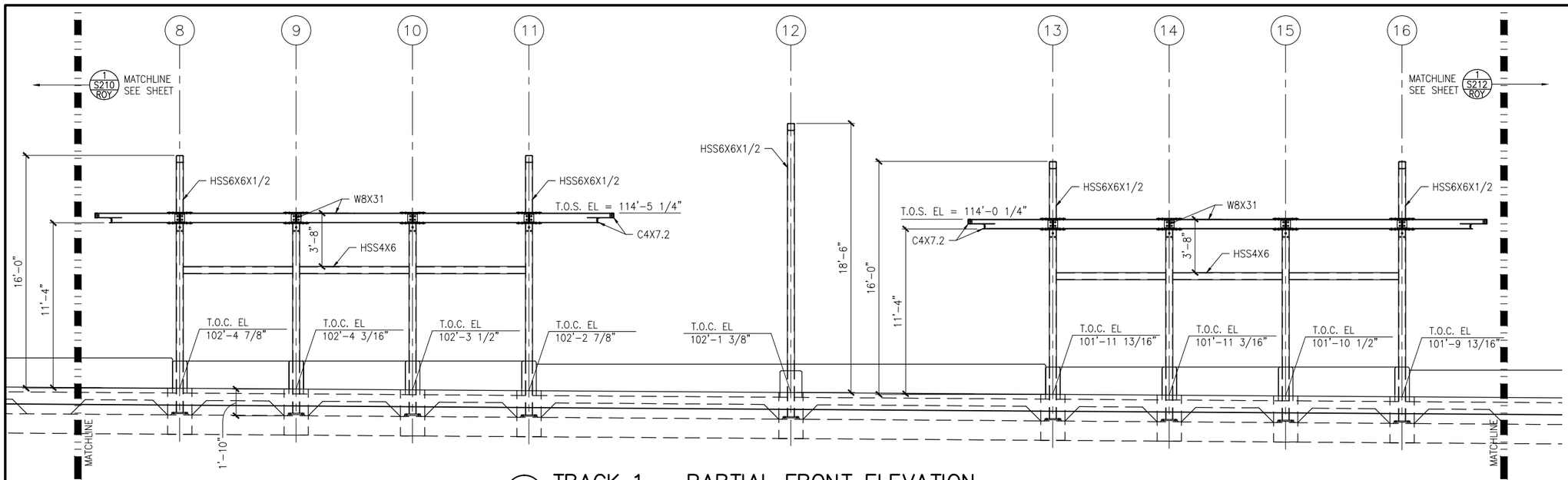
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 1 - SOUTH PARTIAL ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-ELV-210

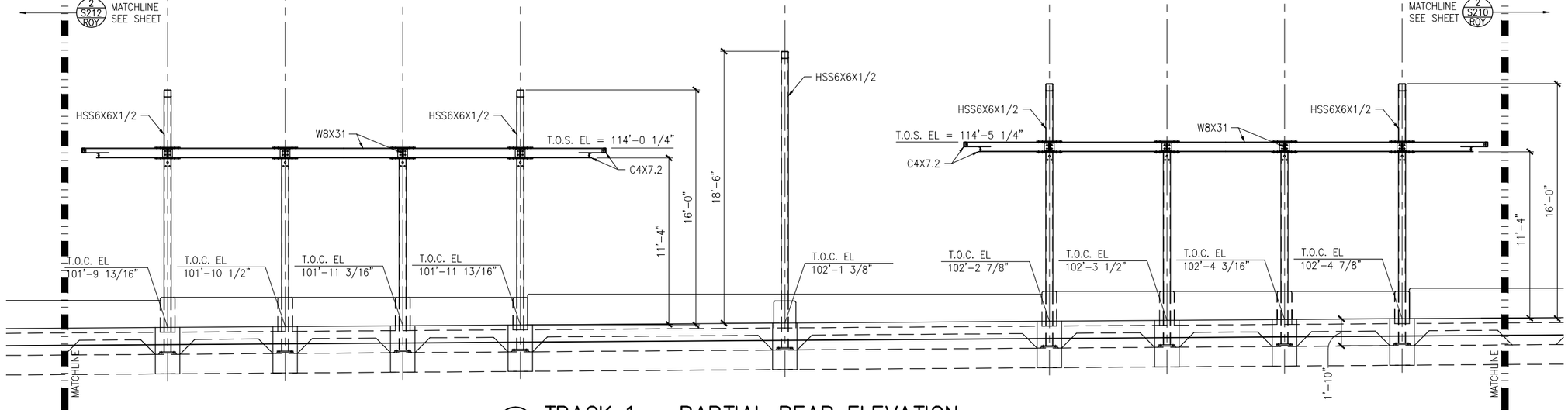
SHEET 246 OF 273

Sep. 21 2015 10:18 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-ELV-210.dwg By: pepins




1 TRACK 1 – PARTIAL FRONT ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 1 – PARTIAL REAR ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

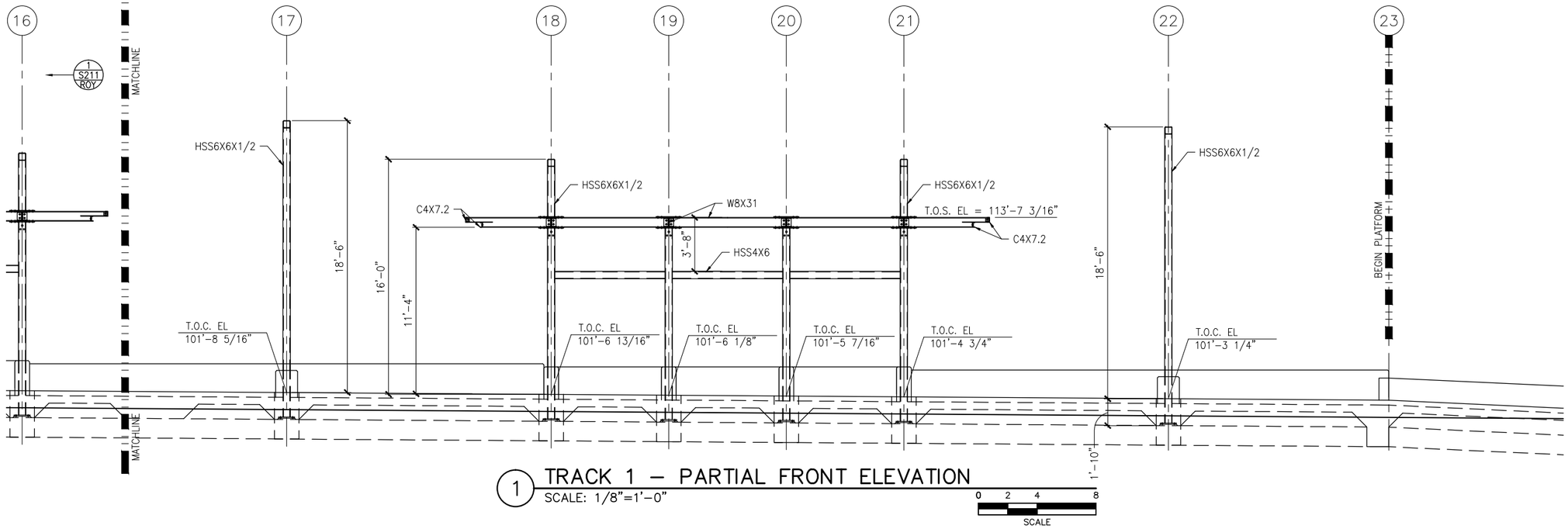
# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# TRACK 1 - MIDDLE PARTIAL ELEVATIONS -- FRAMING

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-ELV-211

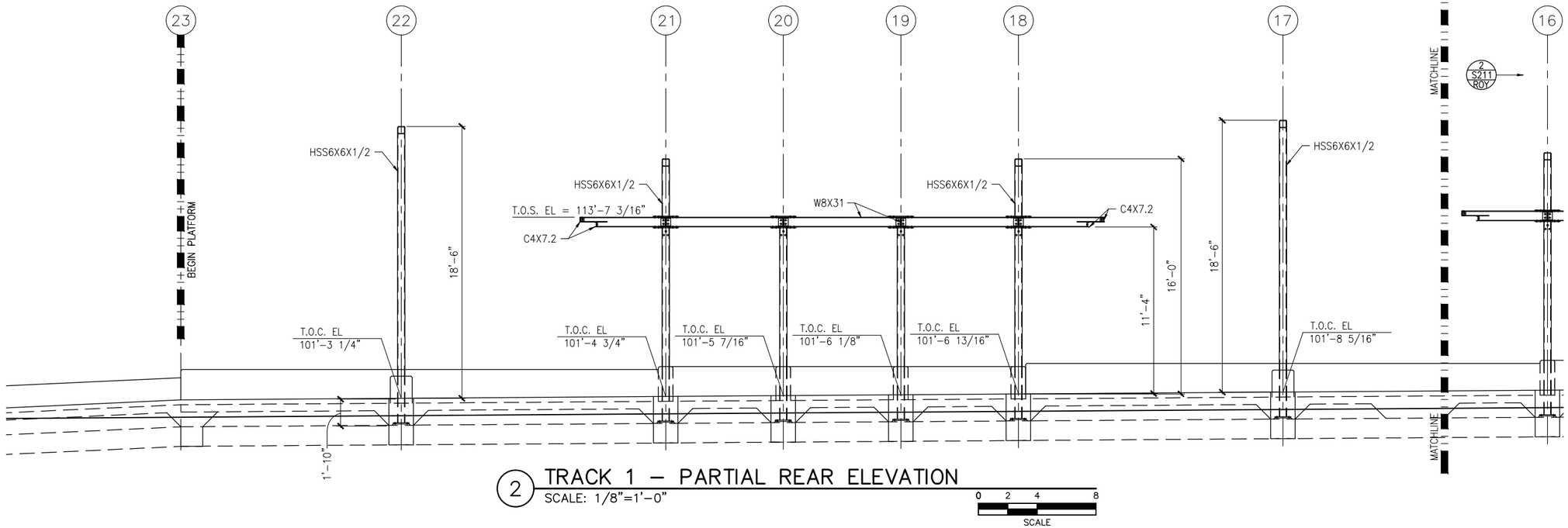
SHEET 247 OF 273

Sep. 21 2015 10:19 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-ELV-211.dwg By: pepins




1 TRACK 1 – PARTIAL FRONT ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 1 – PARTIAL REAR ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

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SOUTHWEST Green Line LRT Extension

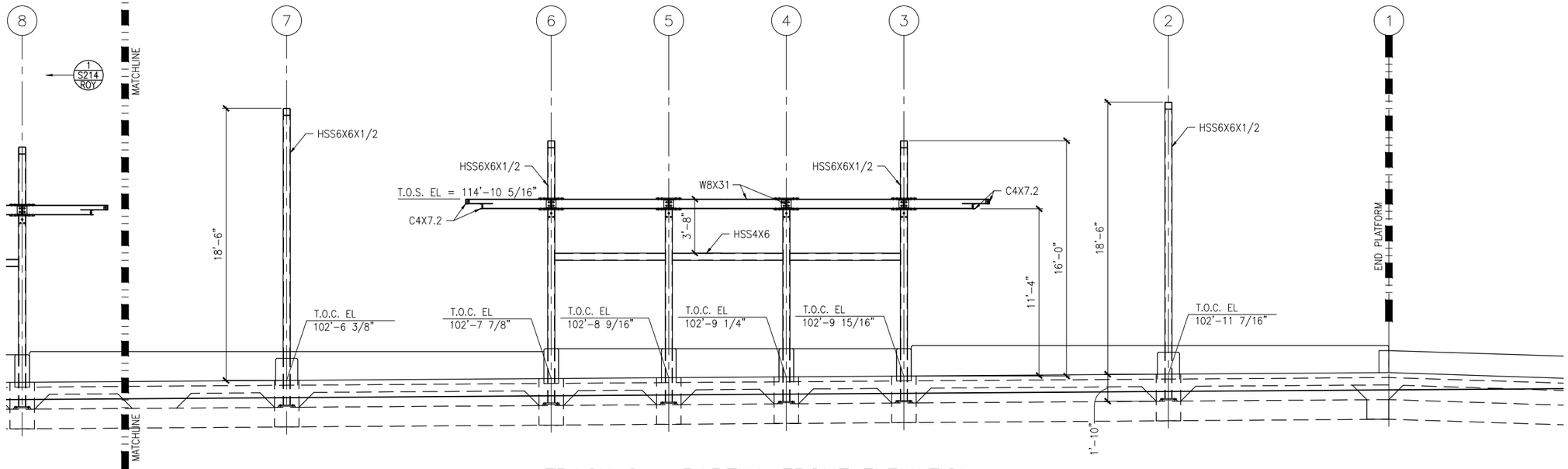
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 1 - NORTH PARTIAL ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-ELV-212

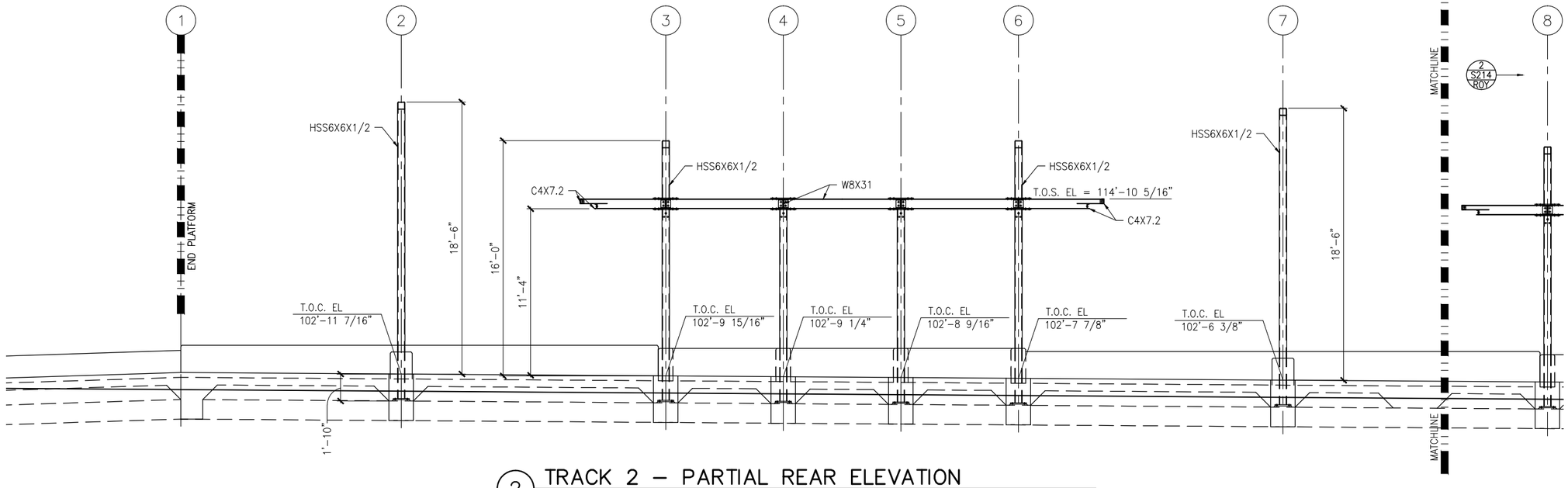
SHEET 248 OF 273

Sep. 21 2015 10:19 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-ELV-212.dwg By: pepins




1 TRACK 2 – PARTIAL FRONT ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL REAR ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

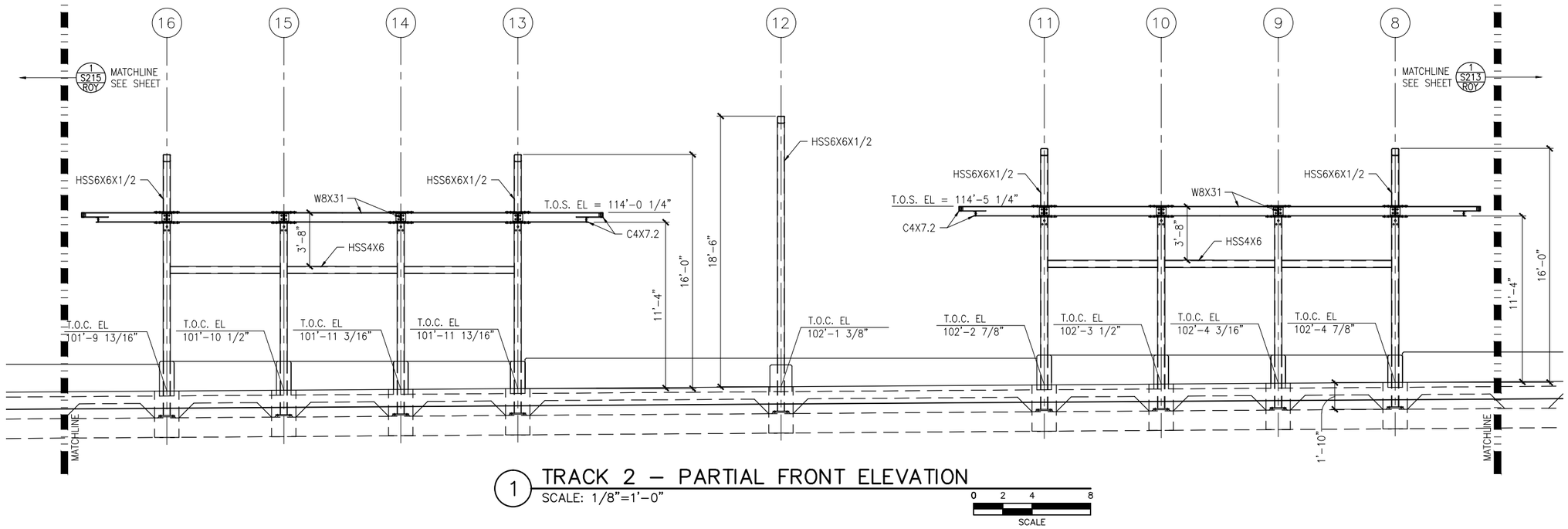
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 2 - SOUTH PARTIAL ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-ELV-213

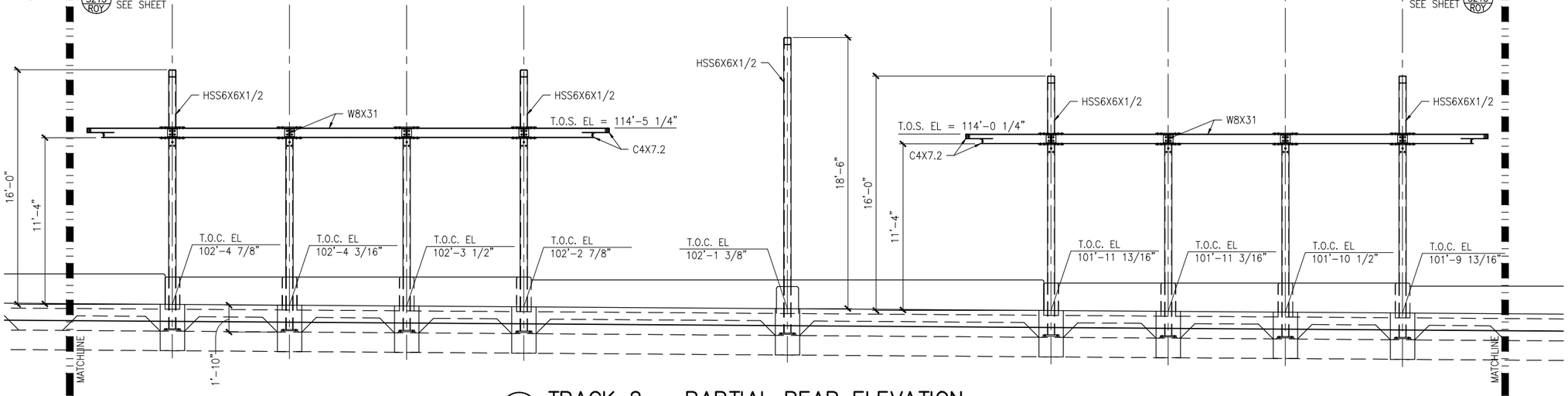
SHEET 249 OF 273

Sep. 21 2015 10:20 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-ELV-213.dwg By: pepins




1 TRACK 2 – PARTIAL FRONT ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL REAR ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

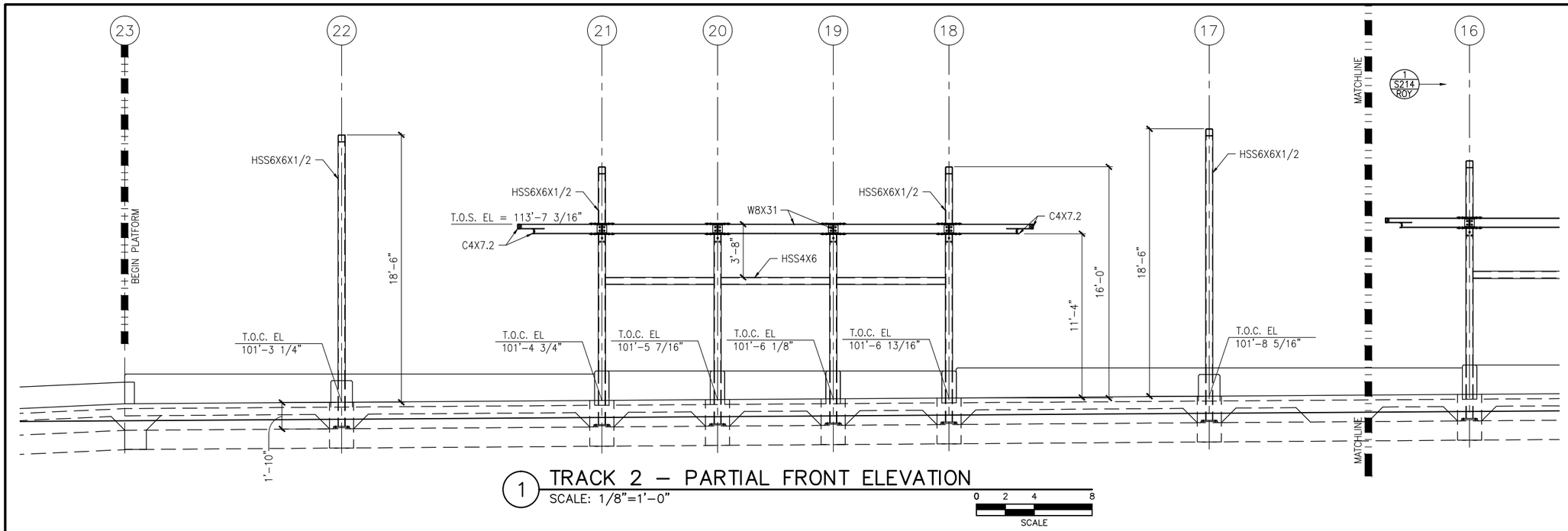
# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# TRACK 2 - MIDDLE PARTIAL ELEVATIONS -- FRAMING

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-ELV-214

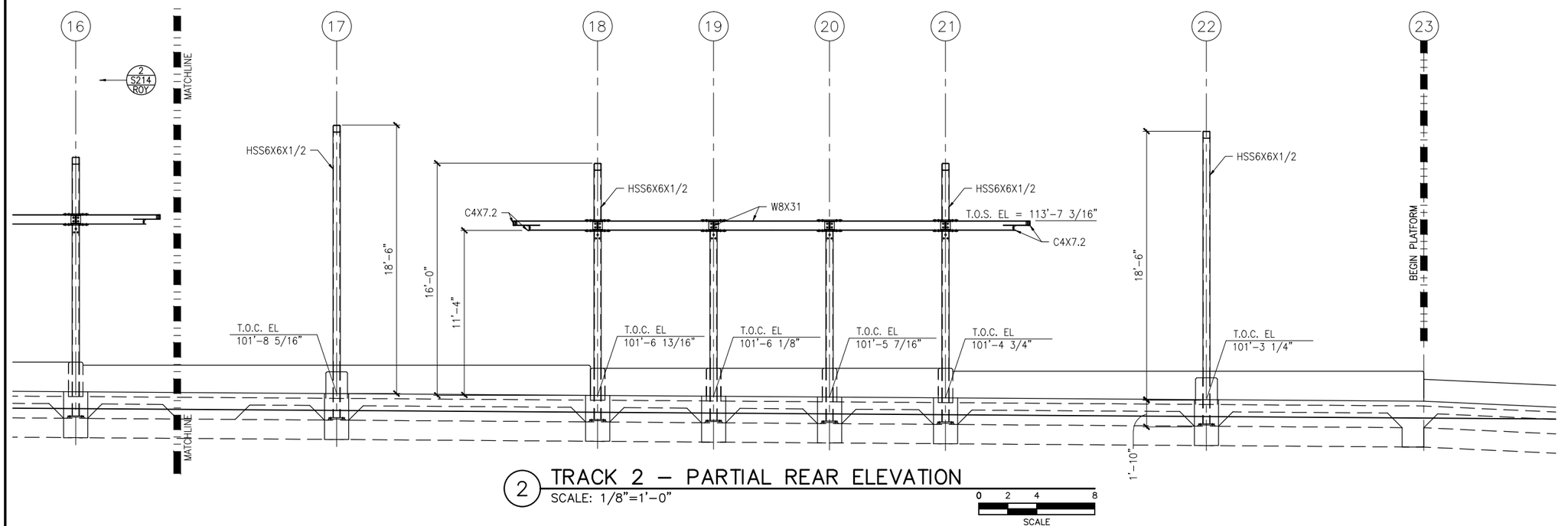
SHEET 250 OF 273

Sep. 21 2015 10:20 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-ELV-214.dwg By: pepins




1 TRACK 2 – PARTIAL FRONT ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE




2 TRACK 2 – PARTIAL REAR ELEVATION
SCALE: 1/8"=1'-0"

0 2 4 8
SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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SOUTHWEST Green Line LRT Extension

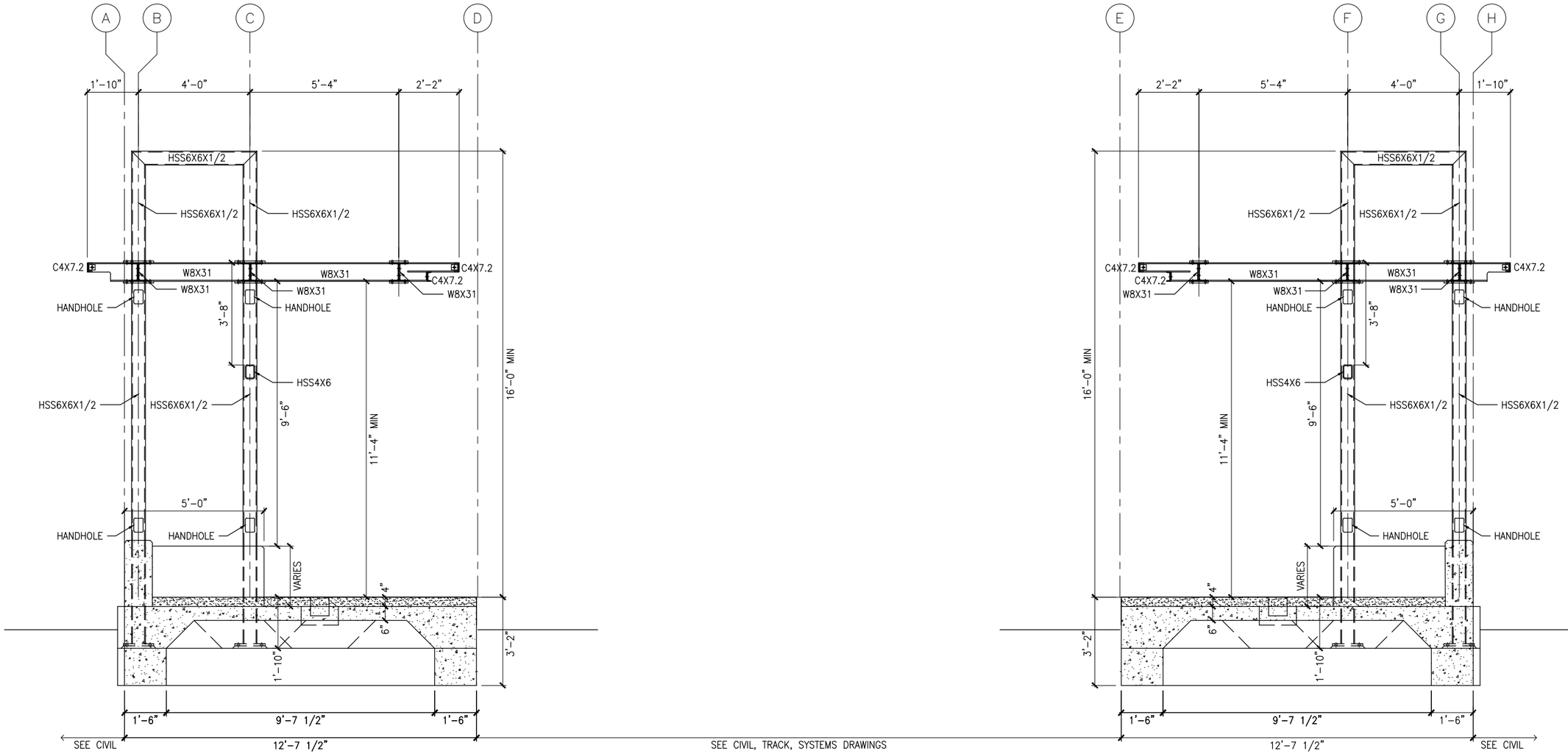
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**TRACK 2 - NORTH PARTIAL ELEVATIONS -- FRAMING**

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-ELV-215

SHEET 251 OF 273

Sep. 21 2015 10:21 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-ELV-215.dwg By: pepins




1 TYPICAL PLATFORM SECTION

SCALE:1/4"=1'-0"

0 1 2 4

SCALE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

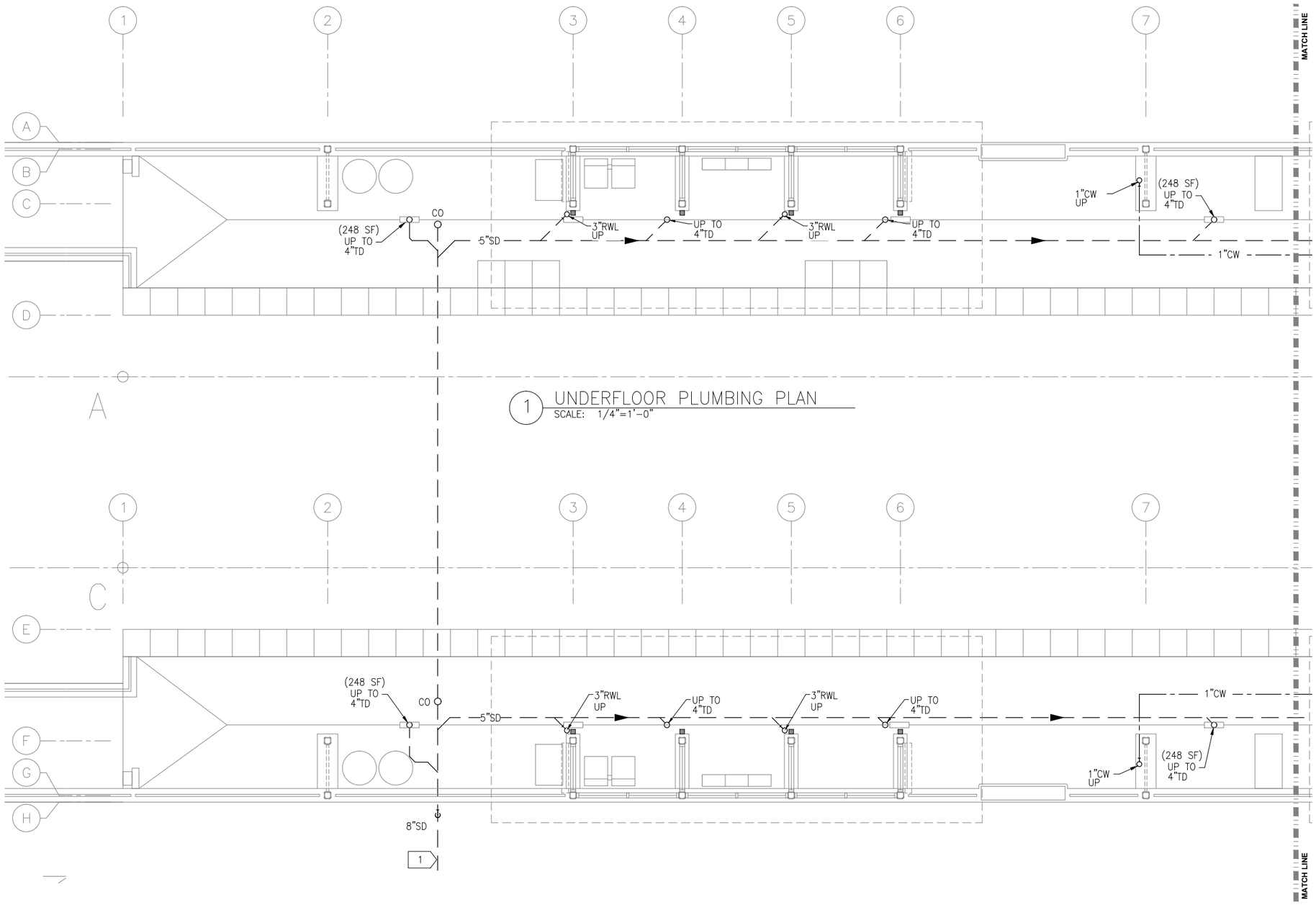
# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# TYPICAL PLATFORM SECTION

DISCIPLINE: STRUCTURES

SHEET NAME: E4-ROY-STR-SCT-300

SHEET 252 OF 273

Sep. 21 2015 10:44 am K:\Projects\Minneapolis_Light_Rail\Station_Structural_Drawings\Royalston\CAD\STR\E4-ROY-STR-SCT-300.dwg By: pepins




1 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

2 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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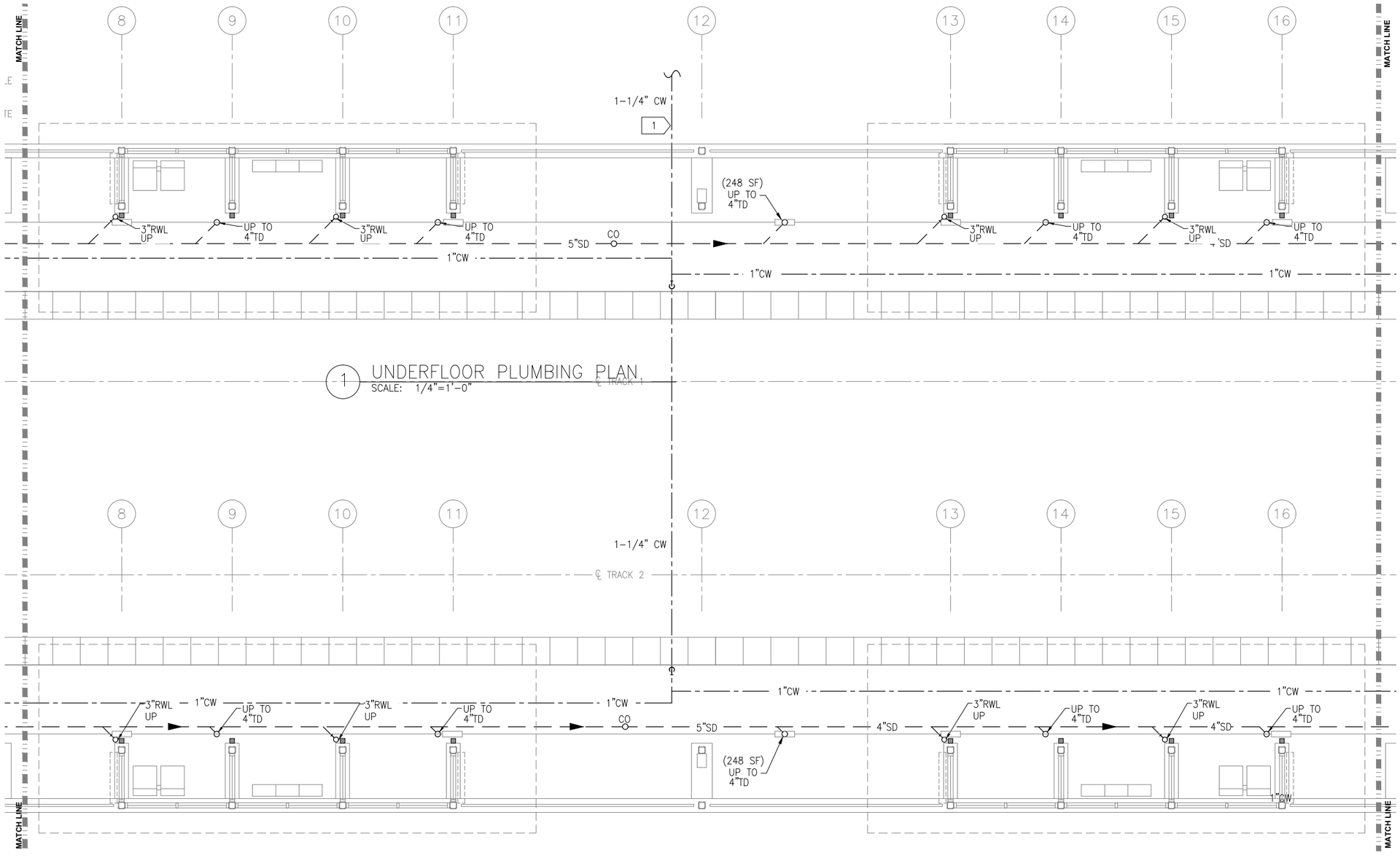
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# SOUTH PARTIAL UNDERFLOOR PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E4-ROY-PLM-PLN-100

SHEET 253 OF 273

Sep. 21 2015 02:34 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\ROYALSTON STATION\E4-ROY-PLM-PLN-100.dwg By: craig




1 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

2 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

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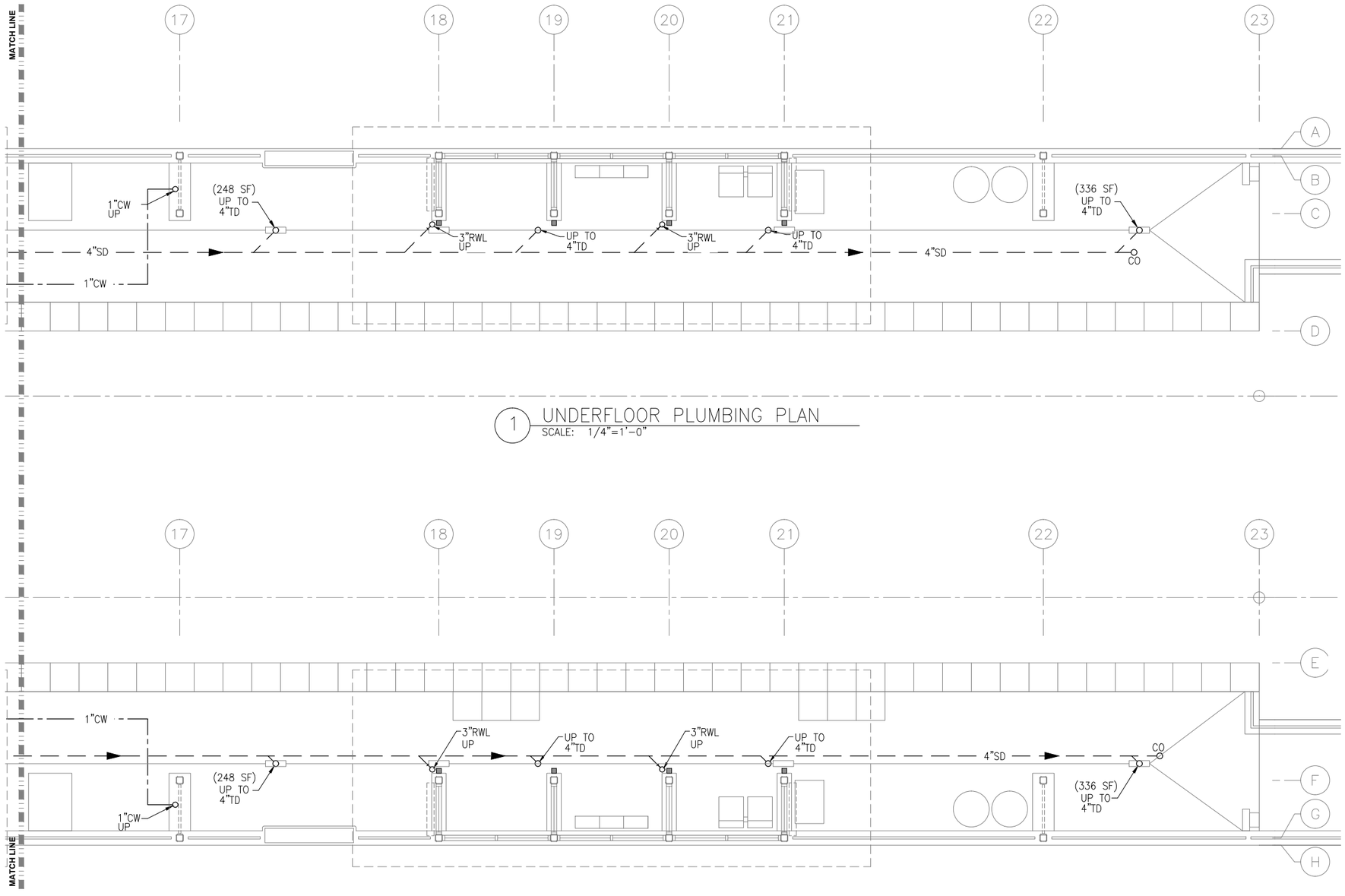
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# MIDDLE PARTIAL UNDERFLOOR PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E4-ROY-PLM-PLN-101

SHEET 254 OF 273

Sep, 21 2015 02:34 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\ROYALSTON STATION\E4-ROY-PLM-PLN-101.dwg By: craig




1 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

2 UNDERFLOOR PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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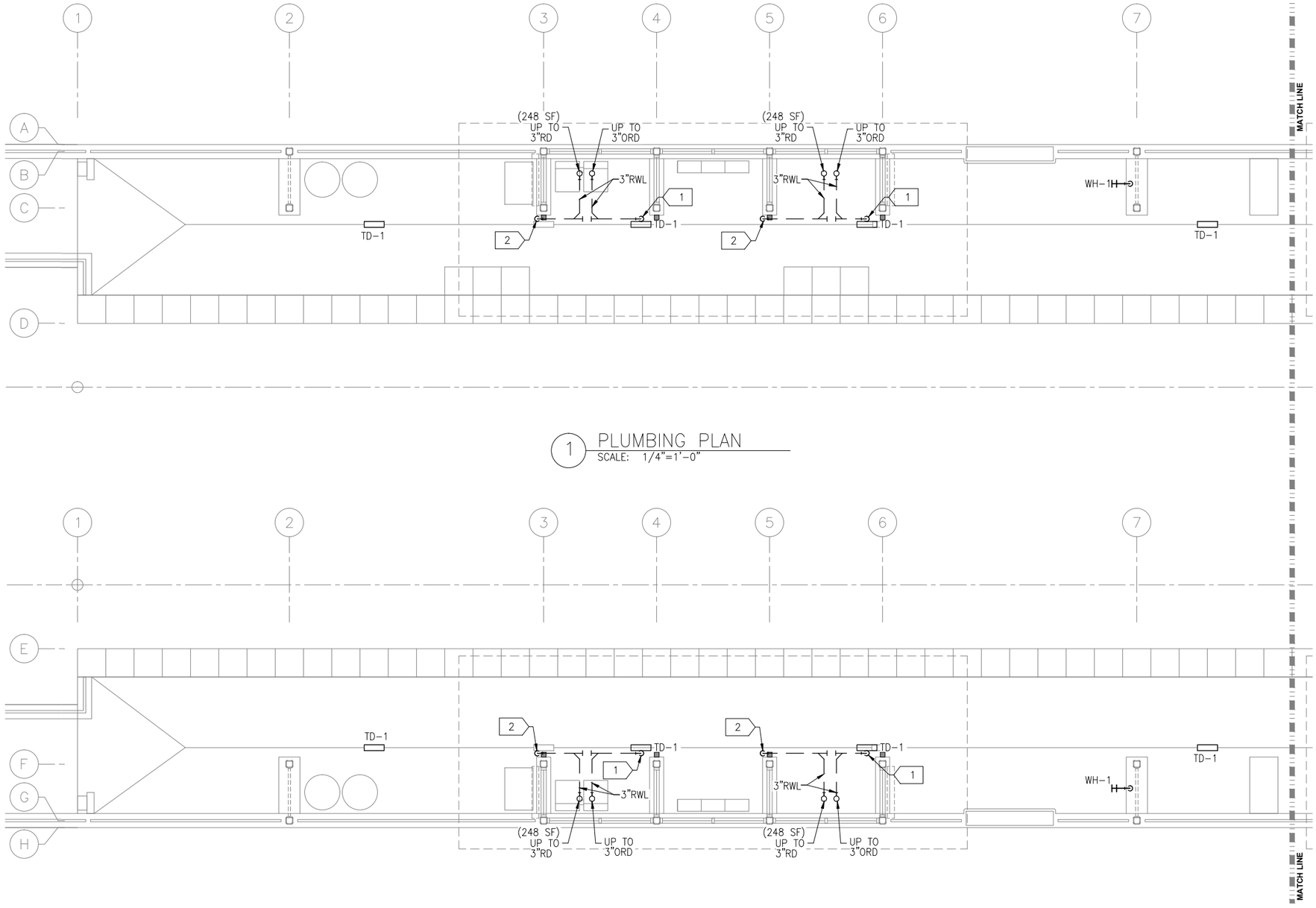
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# NORTH PARTIAL UNDERFLOOR PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E4-ROY-PLM-PLN-102

SHEET 255 OF 273

Sep, 21 2015 02:33 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\ROYALSTON STATION\E4-ROY-PLM-PLN-102.dwg By: craig




1 PLUMBING PLAN
SCALE: 1/4"=1'-0"




2 PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
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D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES

1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

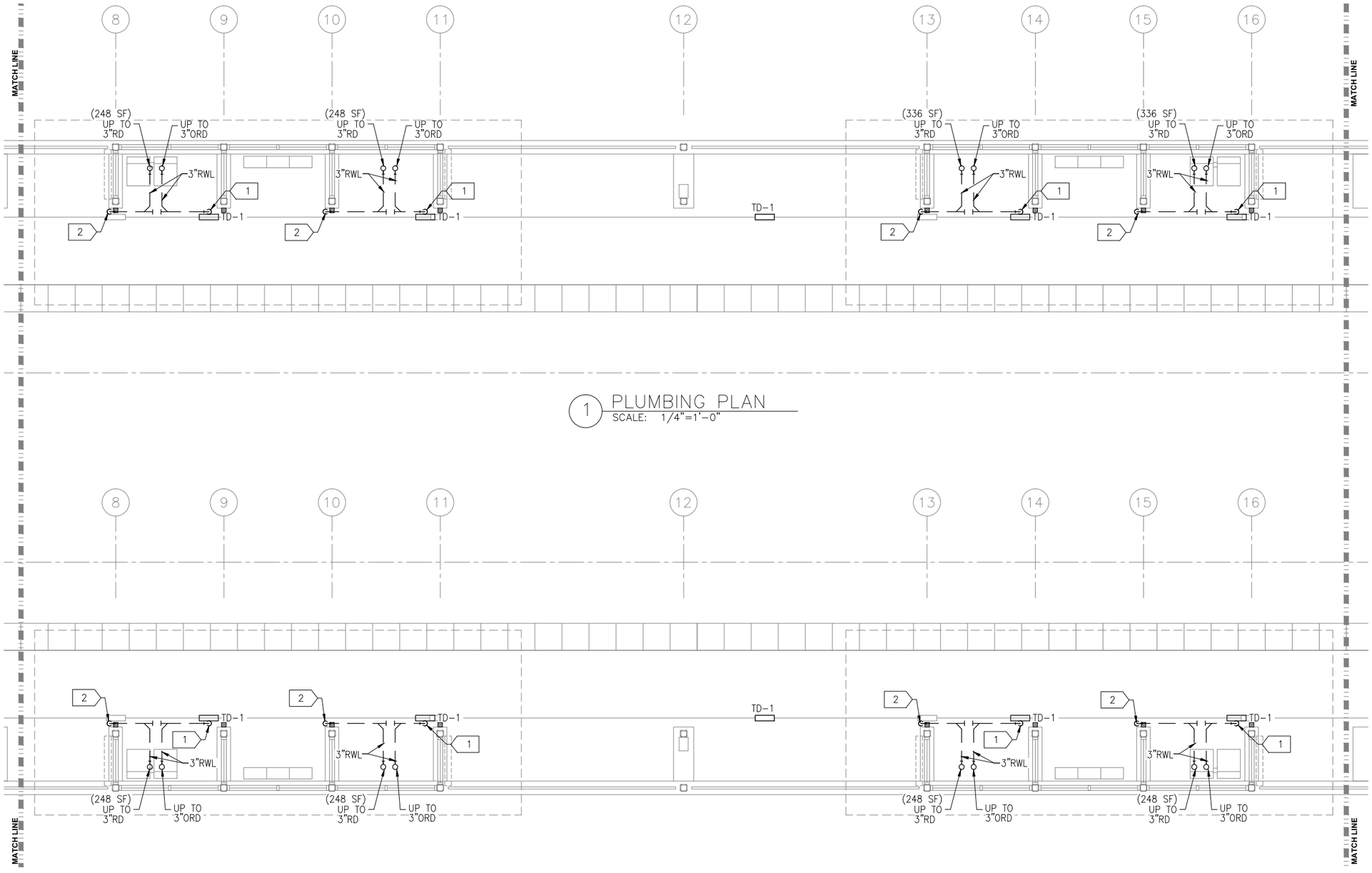
# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# SOUTH PARTIAL PLUMBING PLAN

SHEET 256 OF 273

DISCIPLINE: PLUMBING

SHEET NAME: E4-ROY-PLM-PLN-110

Sep, 21 2015 02:33 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\ROYALSTON STATION\E4-ROY-PLM-PLN-110.dwg By: craig




1 PLUMBING PLAN
SCALE: 1/4"=1'-0"

2 PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
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E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES

1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

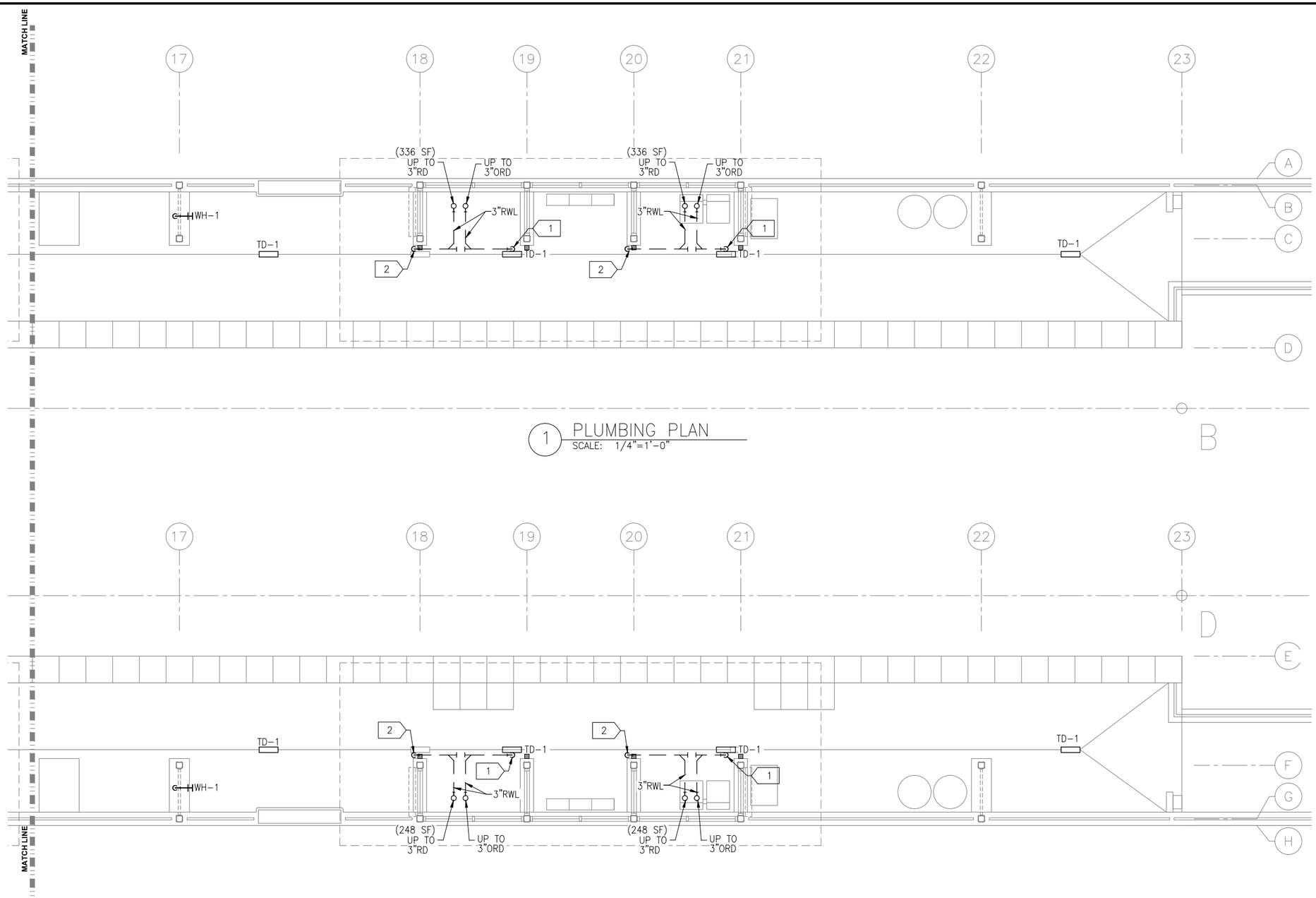
# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# MIDDLE PARTIAL PLUMBING PLAN

SHEET 257 OF 273

DISCIPLINE: PLUMBING

SHEET NAME: E4-ROY-PLM-PLN-111

Sep, 21 2015 02:32 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\ROYALSTON STATION\E4-ROY-PLM-PLN-111.dwg By: craig




1 PLUMBING PLAN
SCALE: 1/4"=1'-0"




2 PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
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E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES

1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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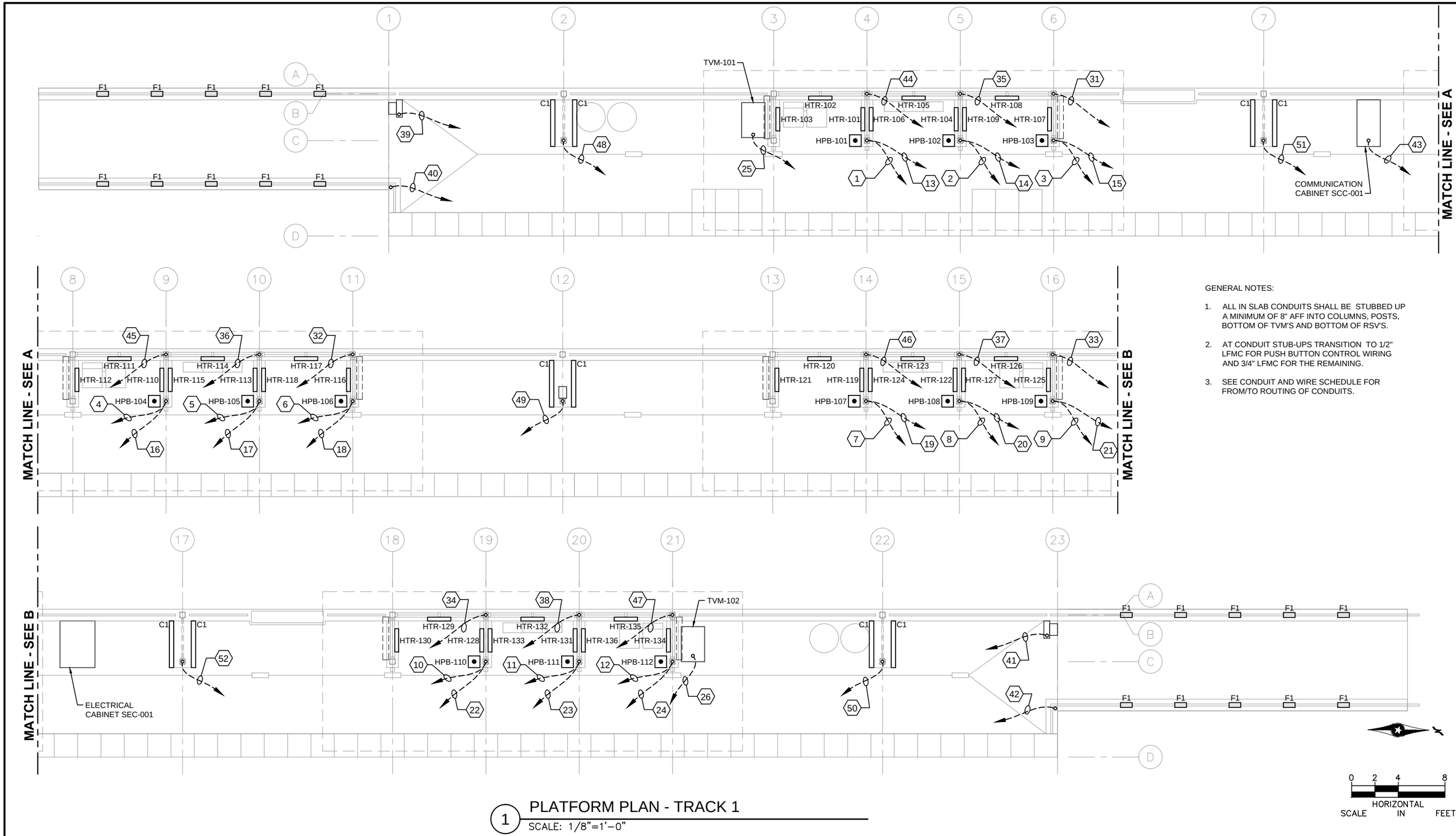
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# NORTH PARTIAL PLUMBING PLAN

DISCIPLINE: PLUMBING
SHEET NAME: E4-ROY-PLM-PLN-112

SHEET 258 OF 273

Sep. 21 2015 02:31 pm Z:\Projects\AECOM SWLRT west\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\MECHANICAL\ROYALSTON STATION\E4-ROY-PLM-PLN-112.dwg By: craig




GENERAL NOTES:

1. ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
2. AT CONDUIT STUB-UPS TRANSITION TO 1/2" LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.

1 PLATFORM PLAN - TRACK 1
SCALE: 1/8"=1'-0"

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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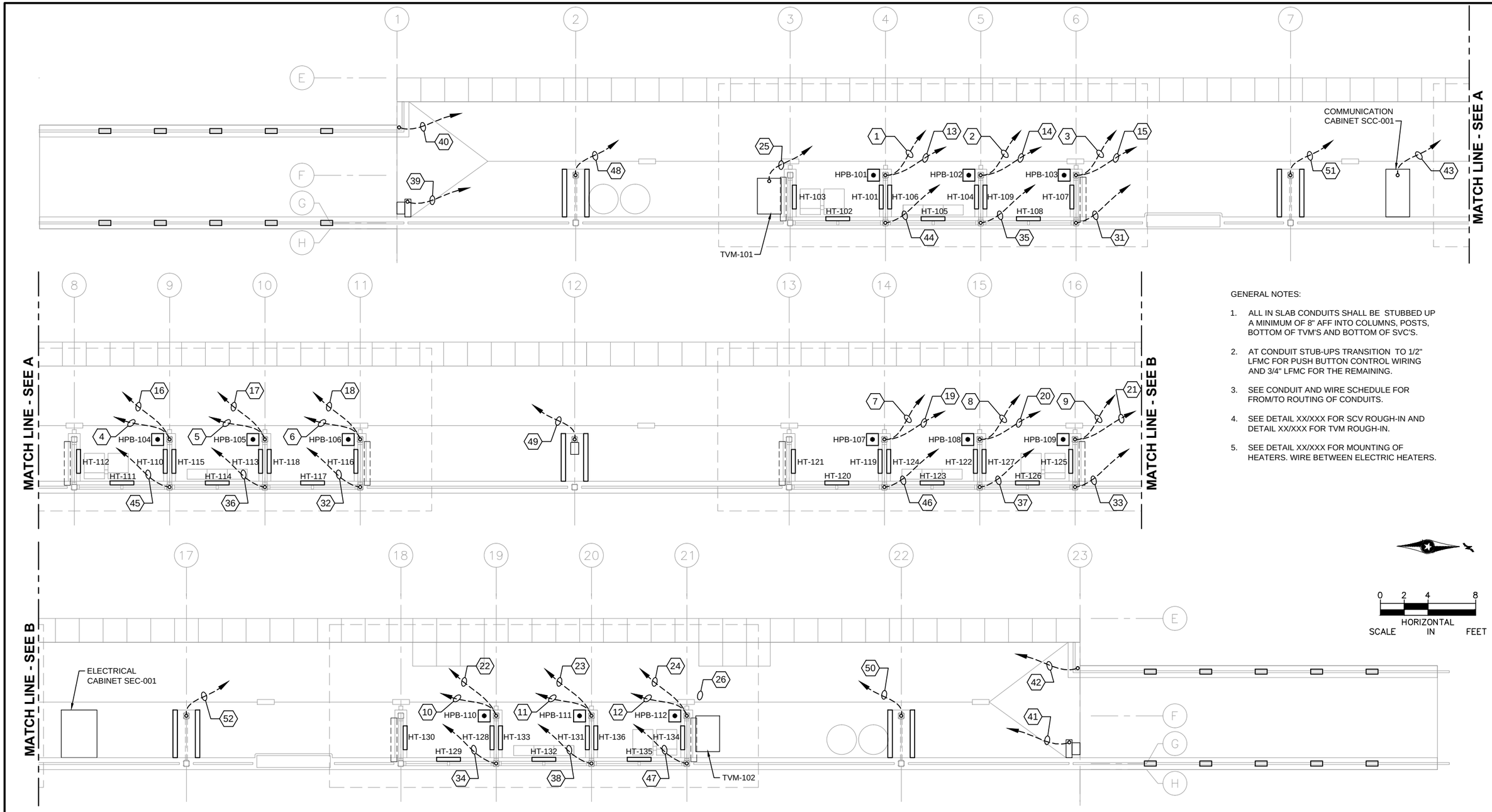
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**ELECTRICAL**
**UNDERSLAB CONDUIT PLAN - TRACK 1**

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-ROY-ELE-PLN-301

SHEET 259 OF 273

Sep. 25 2015 10:22 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-PLN-301.dwg By: FergTK




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

GENERAL NOTES:

1. ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF SVC'S.
2. AT CONDUIT STUB-UPS TRANSITION TO 1/2" LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.
4. SEE DETAIL XX/XXX FOR SCV ROUGH-IN AND DETAIL XX/XXX FOR TVM ROUGH-IN.
5. SEE DETAIL XX/XXX FOR MOUNTING OF HEATERS. WIRE BETWEEN ELECTRIC HEATERS.

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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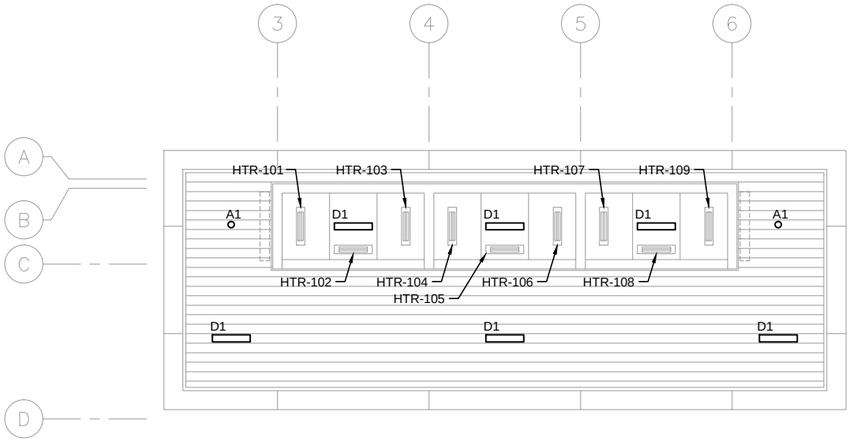
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# ELECTRICAL
# UNDERSLAB CONDUIT PLAN - TRACK 2

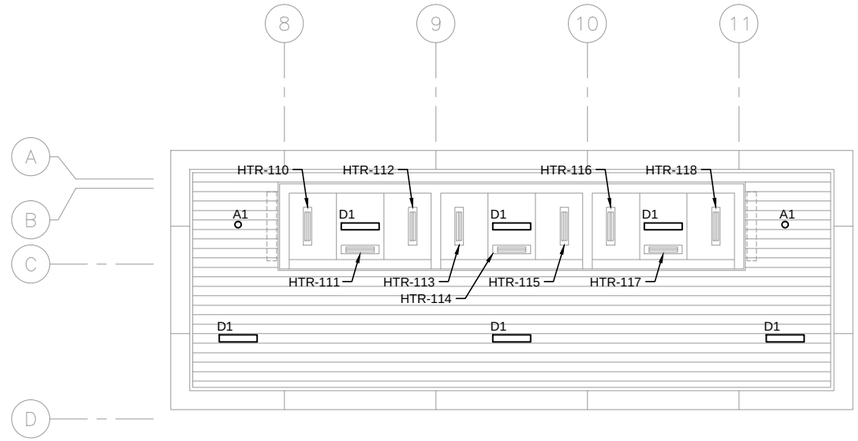
DISCIPLINE: ELECTRICAL
SHEET NAME: E4-ROY-ELE-PLN-302

SHEET 260 OF 273

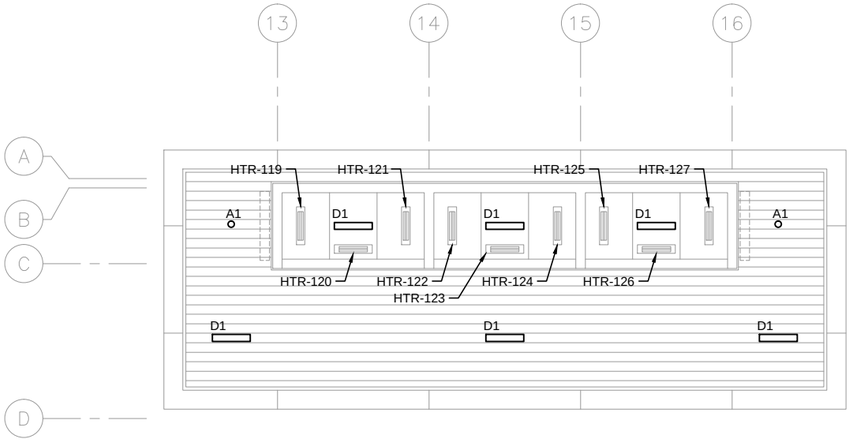
Sep. 25 2015 10:23 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-PLN-302.dwg By: FergTK



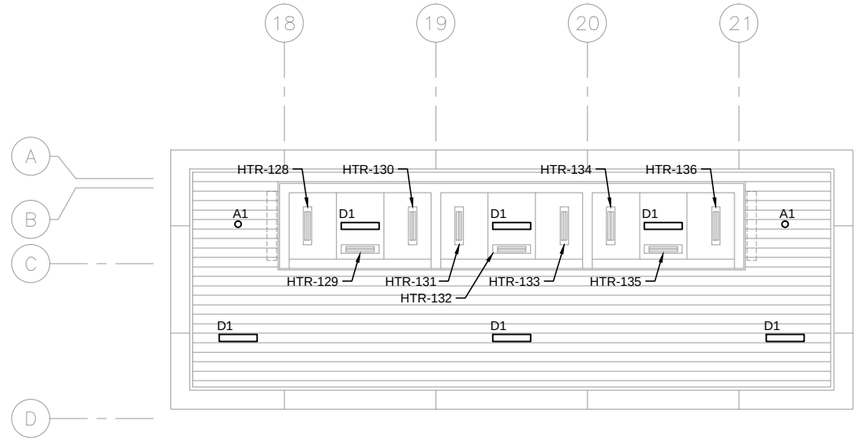

1 TRACK 1 SIDE CANOPY PLAN – SOUTH
SCALE: 1/8"=1'–0"




2 TRACK 1 SIDE CANOPY PLAN – SOUTH MIDDLE
SCALE: 1/8"=1'–0"




3 TRACK 1 CANOPY PLAN – NORTH MIDDLE
SCALE: 1/8"=1'–0"




4 TRACK 1 CANOPY PLAN – NORTH
SCALE: 1/8"=1'–0"

GENERAL NOTES:

1. PROVIDE HEAT TRACE IN GUTTERS, DOWN SPOUTS AND RAIN CONDUCTORS.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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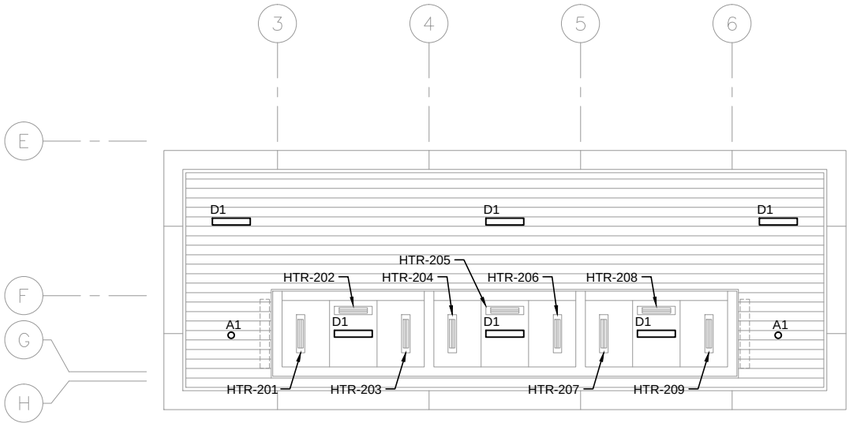
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
ROYALSTON STATION
ELECTRICAL
CANOPY PLAN - TRACK 1 SIDE

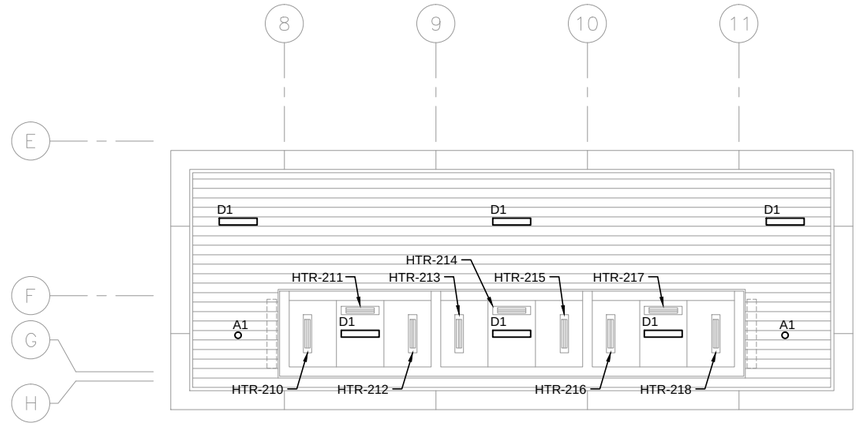
DISCIPLINE: ELECTRICAL
SHEET NAME: E4-ROY-ELE-PLN-303

SHEET 261 OF 273

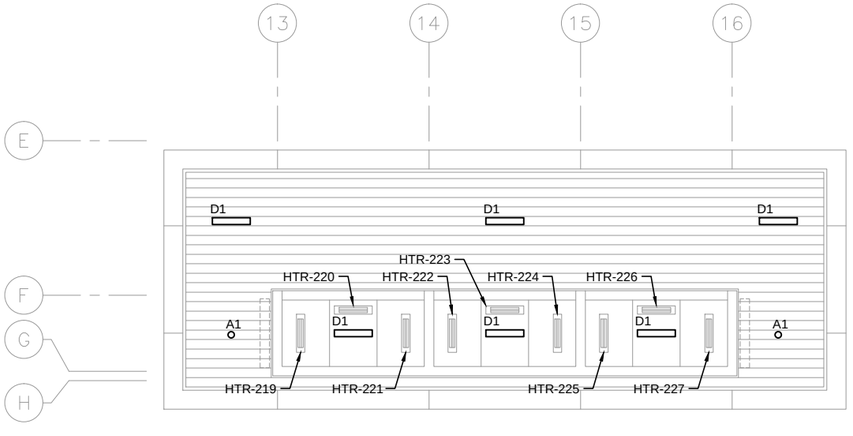
Sep. 25 2015 10:23 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-PLN-303.dwg By: FergTK



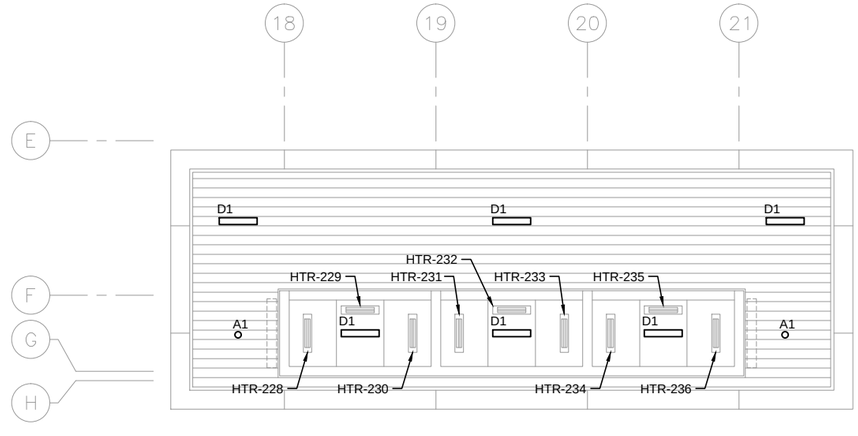

1 TRACK 2 SIDE CANOPY PLAN – SOUTH
SCALE: 1/8"=1'–0"




2 TRACK 2 SIDE CANOPY PLAN – SOUTH MIDDLE
SCALE: 1/8"=1'–0"




3 TRACK 2 CANOPY PLAN – NORTH MIDDLE
SCALE: 1/8"=1'–0"




4 TRACK 2 CANOPY PLAN – NORTH
SCALE: 1/8"=1'–0"

GENERAL NOTES:

1. PROVIDE HEAT TRACE IN GUTTERS, DOWN SPOUTS AND RAIN CONDUCTORS.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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60% SUBMISSION - 09/28/15

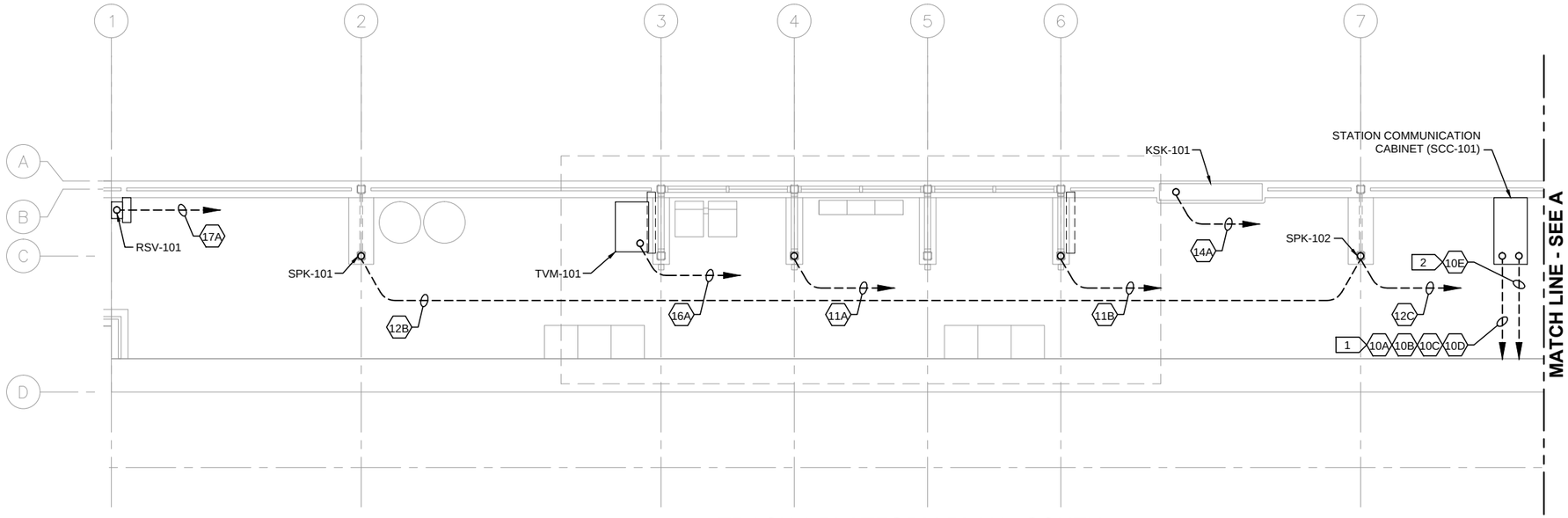
METROPOLITAN COUNCIL
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**ELECTRICAL**
**CANOPY PLAN - TRACK 2 SIDE**

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-ROY-ELE-PLN-304

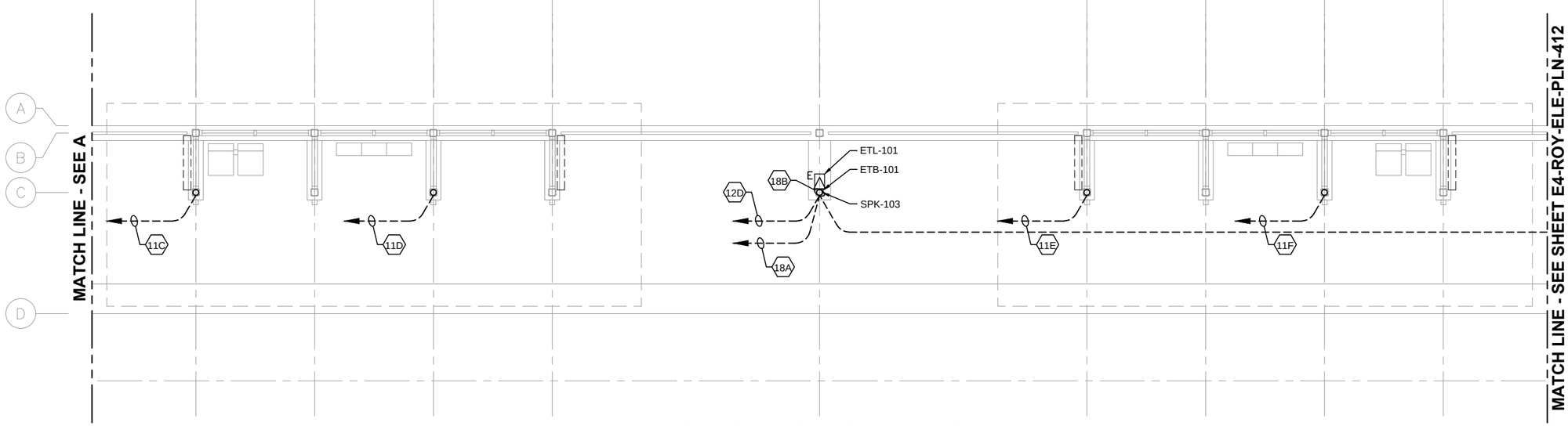
SHEET 262 OF 273

Sep. 25 2015 10:24 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-PLN-304.dwg By: FergTK




1 TRACK 1 PLATFORM PLAN - SOUTH

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




2 TRACK 1 PLATFORM PLAN - MIDDLE

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-101, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1. COMMUNICATIONS CONDUITS TO/FROM STATION SIGNAL-COMMUNICATIONS HOUSE.
2. CONDUIT TO/FROM STATION-COMMUNICATIONS HOUSE FOR UPS POWER FEED TO SCC-101.

0 2 4 8

HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

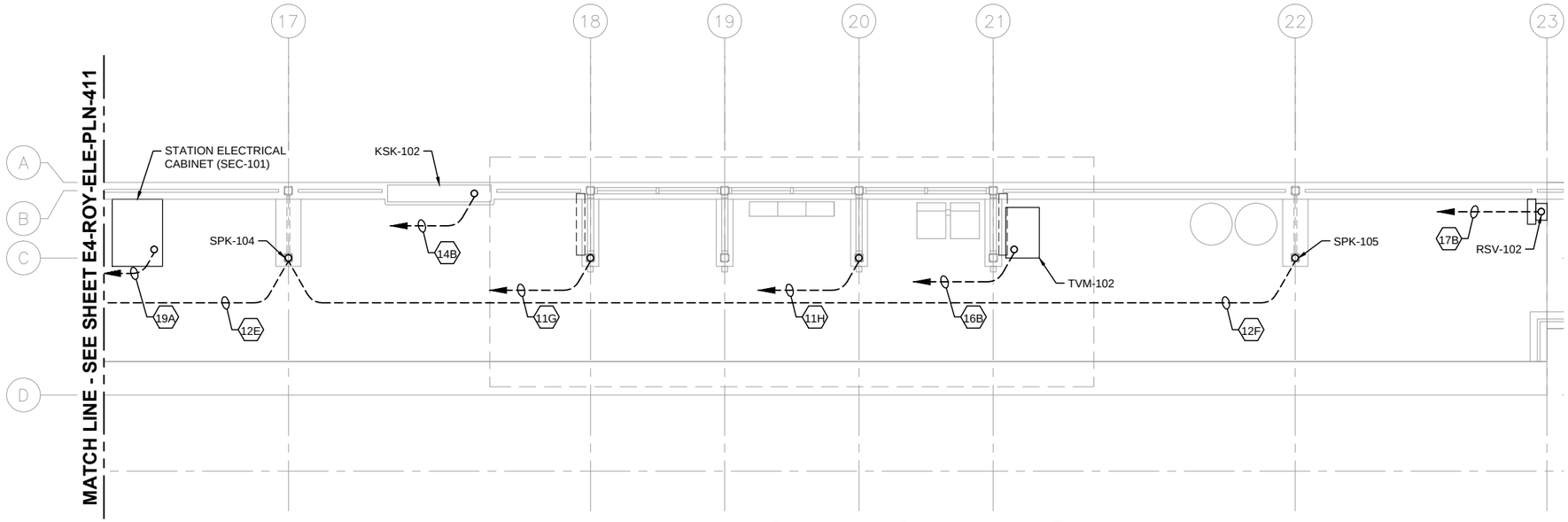
# CIVIL EAST - VOLUME 11B
# ROYALSTION STATION
# COMMUNICATIONS UNDERSLAB CONDUIT PLAN - TRACK 1 (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-ROY-ELE-PLN-411

SHEET 263 OF 273

Sep. 25 2015 10:24 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-PLN-411.dwg By: FergTK




1 TRACK 1 PLATFORM PLAN - NORTH

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-101, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1.

0 2 4 8

HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

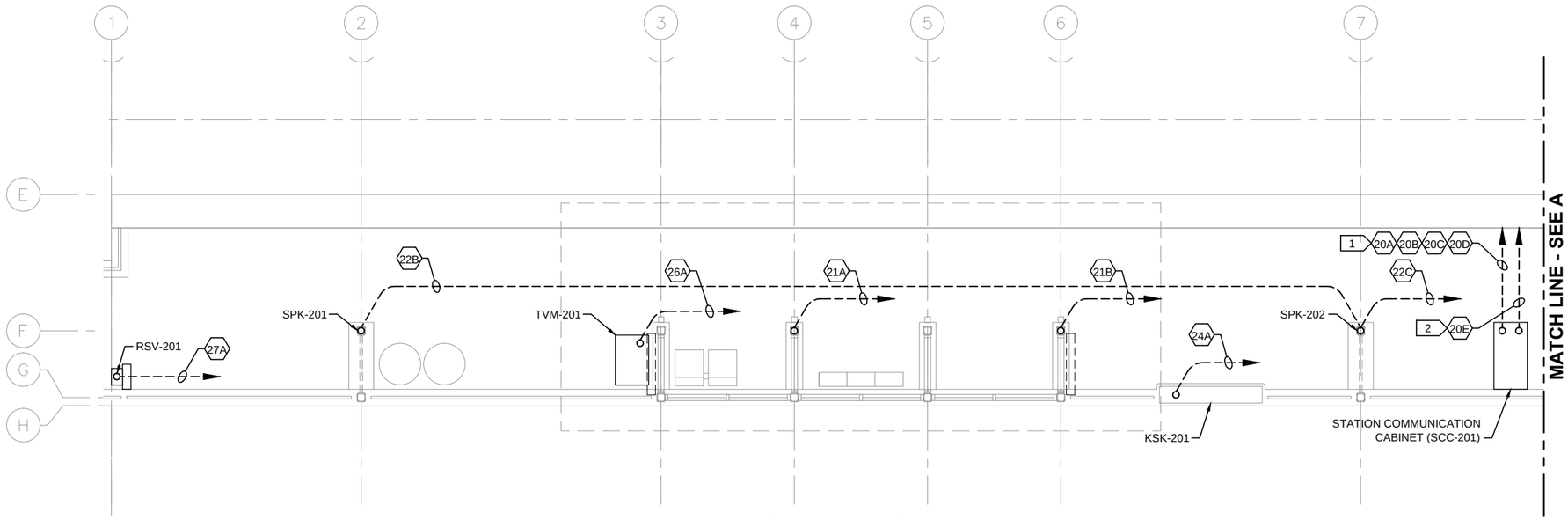
# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# COMMUNICATIONS UNDERSLAB CONDUIT PLAN - TRACK 1 (2 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-ROY-ELE-PLN-412

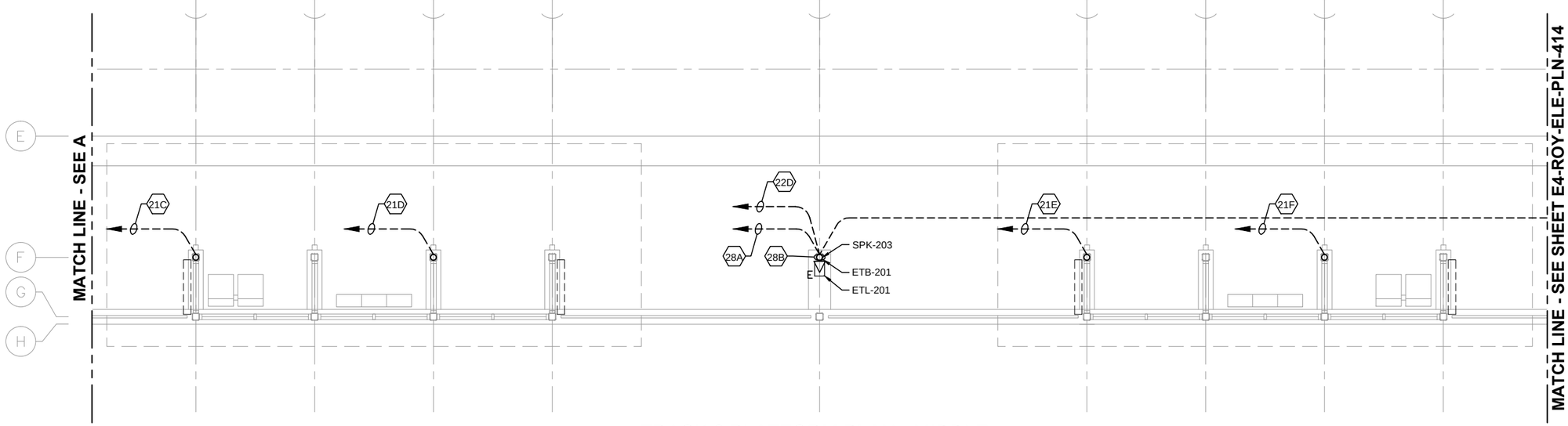
SHEET 264 OF 273

Sep. 25 2015 10:24 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-PLN-412.dwg By: FergTK




1 TRACK 2 PLATFORM PLAN - SOUTH

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




2 TRACK 2 PLATFORM PLAN - MIDDLE

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-101, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1. COMMUNICATIONS CONDUITS TO/FROM STATION SIGNAL-COMMUNICATIONS HOUSE.
2. CONDUIT TO/FROM STATION-COMMUNICATIONS HOUSE FOR UPS POWER FEED TO SCC-101.

0 2 4 8

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SOUTHWEST Green Line LRT Extension

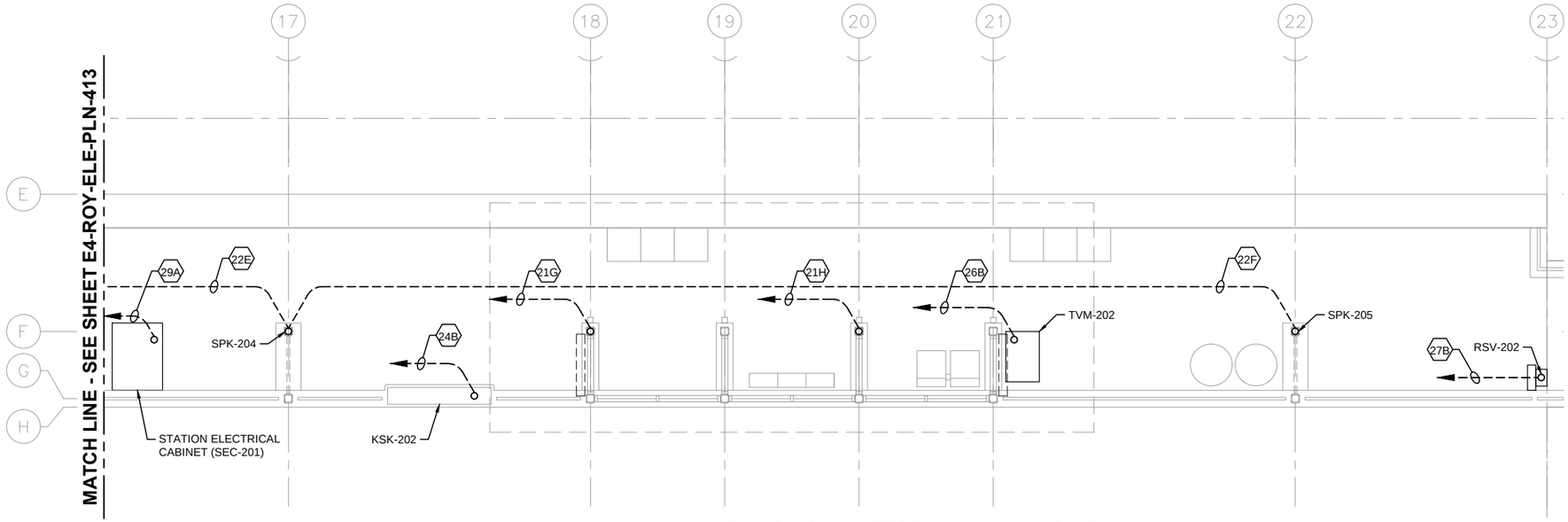
# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# COMMUNICATIONS UNDERSLAB CONDUIT PLAN - TRACK 2 (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-ROY-ELE-PLN-413

SHEET 265 OF 273

Sep. 25 2015 10:25 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-PLN-413.dwg By: FergTK




1 TRACK 2 PLATFORM PLAN - NORTH

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

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-201, UNLESS OTHERWISE NOTED.
2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

1.

0 2 4 8

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SOUTHWEST Green Line LRT Extension

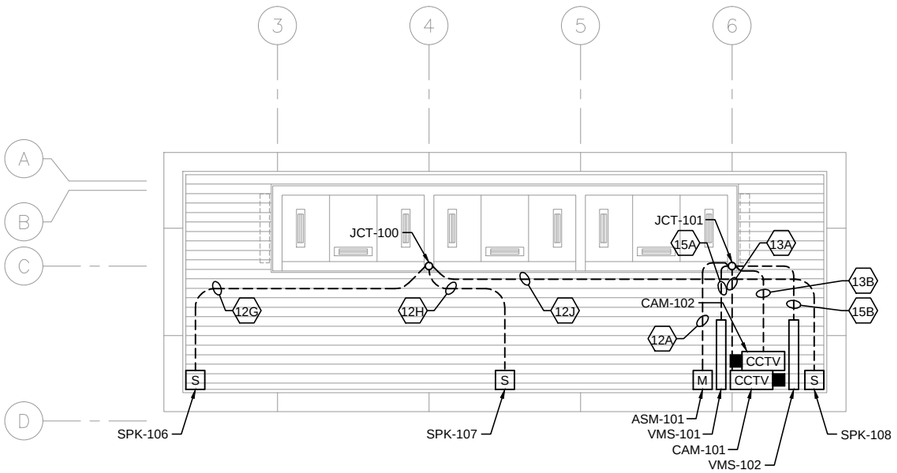
**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**COMMUNICATIONS UNDERSLAB CONDUIT PLAN - TRACK 2 (2 OF 2)**

DISCIPLINE: ELECTRICAL

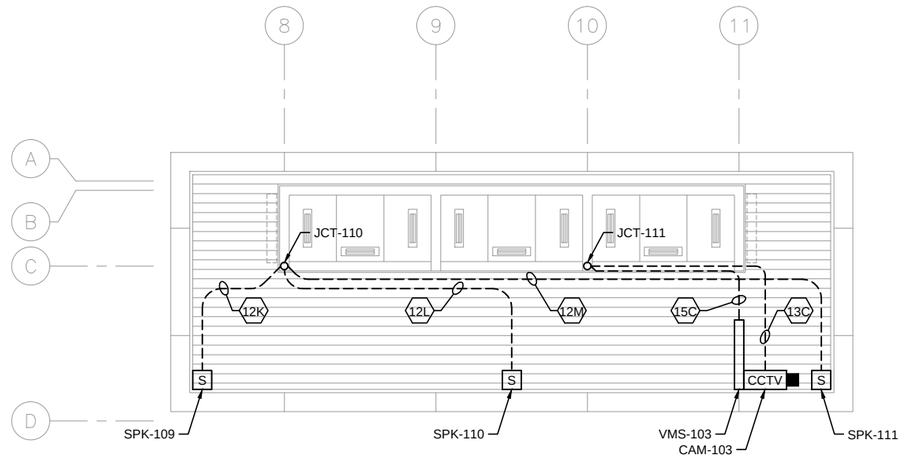
SHEET NAME: E4-ROY-ELE-PLN-414

SHEET 266 OF 273

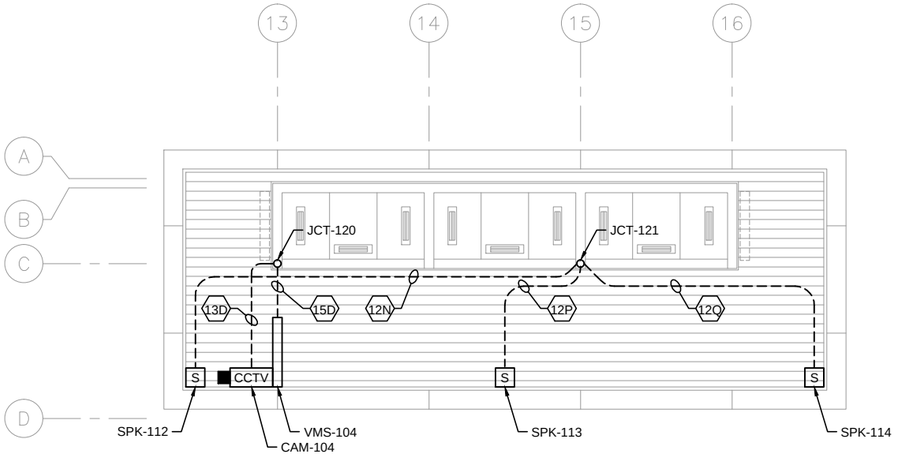
Sep, 25 2015 10:25 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-PLN-414.dwg By: FergTK



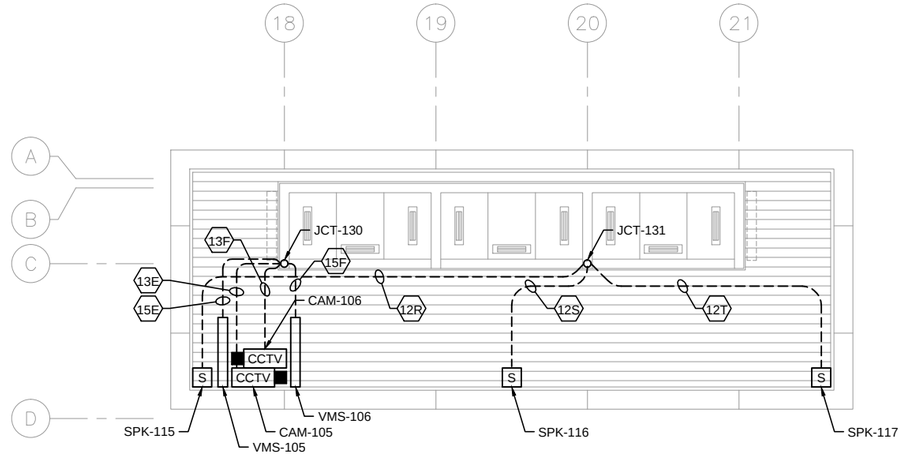

1 TRACK 1 SIDE CANOPY PLAN – SOUTH
SCALE: 1/8"=1'–0"




2 TRACK 1 SIDE CANOPY PLAN – SOUTH MIDDLE
SCALE: 1/8"=1'–0"




3 TRACK 1 CANOPY PLAN – NORTH MIDDLE
SCALE: 1/8"=1'–0"




4 TRACK 1 CANOPY PLAN – NORTH
SCALE: 1/8"=1'–0"

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-201, UNLESS OTHERWISE NOTED.

KEYNOTES:

1.

0 2 4 8
HORIZONTAL SCALE IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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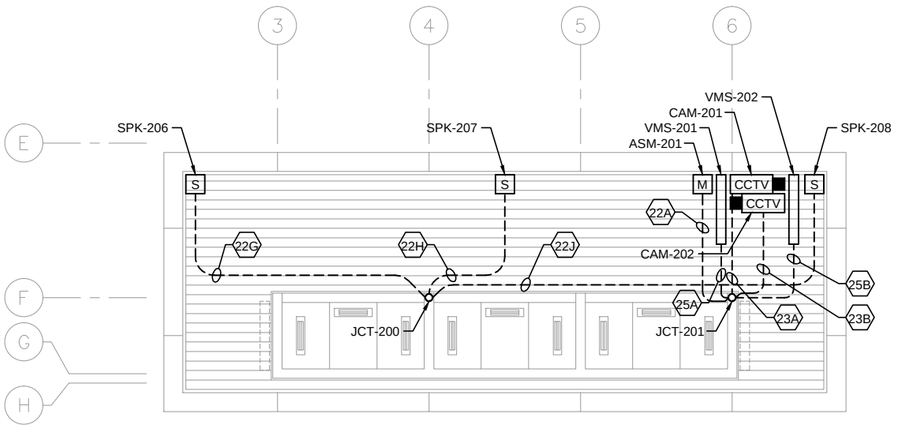
SOUTHWEST Green Line LRT Extension

CIVIL EAST - VOLUME 11B
ROYALSTON STATION
COMMUNICATIONS
CANOPY PLAN - TRACK 1 SIDE

DISCIPLINE: ELECTRICAL
SHEET NAME: E4-ROY-ELE-PLN-421

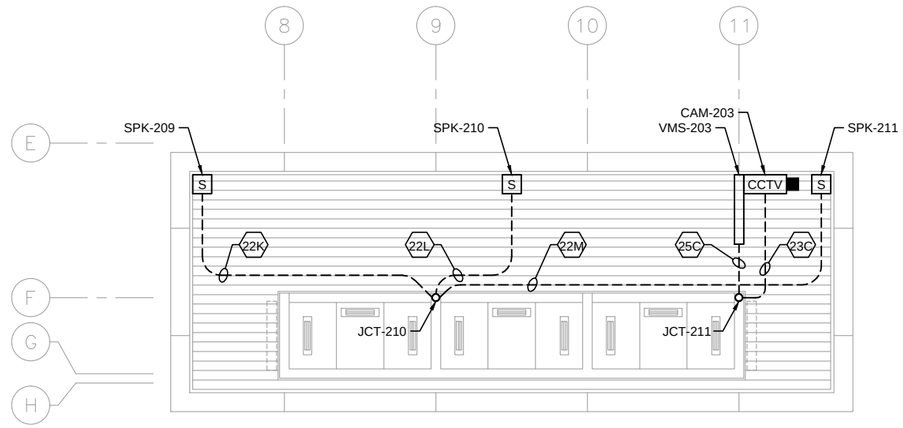
SHEET 267 OF 273

Sep, 25 2015 10:25 am V:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-PLN-421.dwg By: FergTK



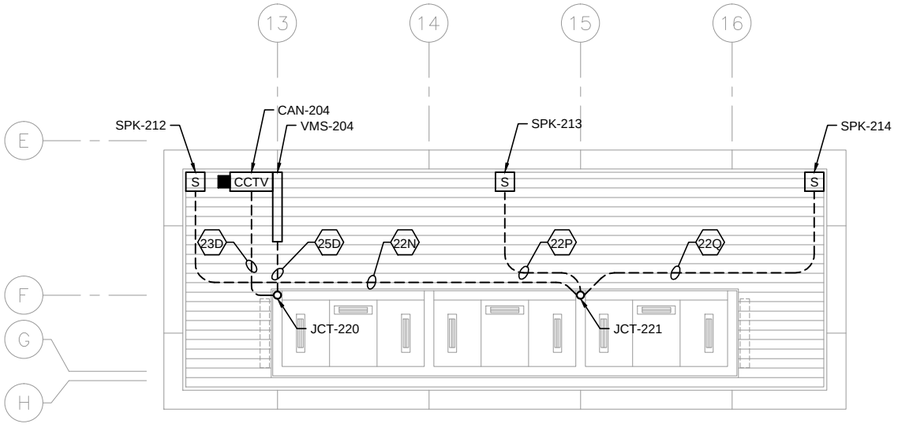

## 1 TRACK 2 SIDE CANOPY PLAN – SOUTH

SCALE: 1/8"=1'–0"



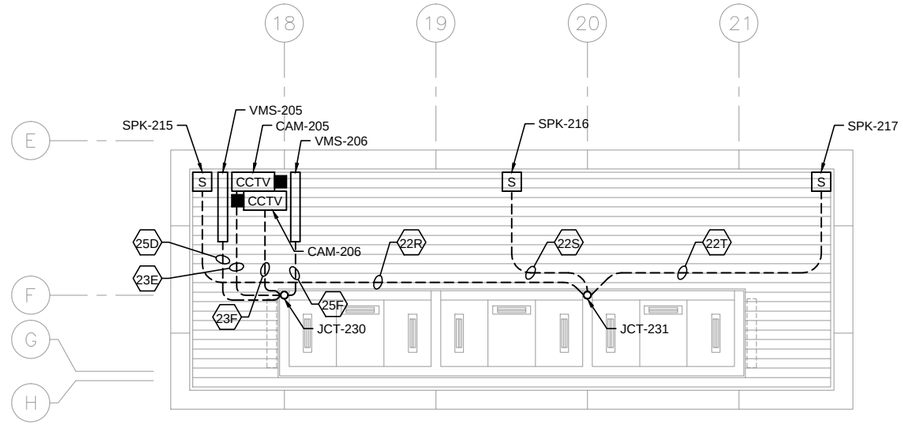

## 2 TRACK 2 SIDE CANOPY PLAN – SOUTH MIDDLE

SCALE: 1/8"=1'–0"




## 3 TRACK 2 CANOPY PLAN – NORTH MIDDLE

SCALE: 1/8"=1'–0"




## 4 TRACK 2 CANOPY PLAN – NORTH

SCALE: 1/8"=1'–0"

GENERAL NOTES:

1. DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-201, UNLESS OTHERWISE NOTED.

KEYNOTES:

1.

HORIZONTAL SCALE 0 2 4 8 IN FEET

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**ROYALSTON STATION**
**COMMUNICATIONS**
**CANOPY PLAN - TRACK 2 SIDE**

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-ROY-ELE-PLN-422

SHEET 268 OF 273

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| CONDUIT NO. | DEVICE ID | DESCRIPTION/USE | FROM | TO | CONDUIT SIZE |
|---|---|---|---|---|---|
| 10A | ROY -CON-1001 | S/C HOUSE TO SCC 101 | S/C MANHOLE | ROY -SCC-101 | 3" |
| 10B | ROY -CON-1002 | S/C HOUSE TO SCC 101 | S/C MANHOLE | ROY -SCC-101 | 3" |
| 10C | ROY -CON-1003 | S/C HOUSE TO SCC 101 | S/C MANHOLE | ROY -SCC-101 | 3" |
| 10D | ROY -CON-1004 | S/C HOUSE TO SCC 101 | S/C MANHOLE | ROY -SCC-101 | 3" |
| 10E | ROY -CON-1005 | UPS POWER FEED: SCH TO SCC | S/C MANHOLE | ROY -SCC-101 | 3" |
| 11A | ROY -CON-1101 | SCC TO JUNCTION 100 | ROY -SCC-101 | ROY -JCT-100 | 2" |
| 11B | ROY -CON-1102 | SCC TO JUNCTION 101 | ROY -SCC-101 | ROY -JCT-101 | 2" |
| 11C | ROY -CON-1103 | SCC TO JUNCTION 110 | ROY -SCC-101 | ROY -JCT-110 | 2" |
| 11D | ROY -CON-1104 | SCC TO JUNCTION 111 | ROY -SCC-101 | ROY -JCT-111 | 2" |
| 11E | ROY -CON-1105 | SCC TO JUNCTION 120 | ROY -SCC-101 | ROY -JCT-120 | 2" |
| 11F | ROY -CON-1106 | SCC TO JUNCTION 121 | ROY -SCC-101 | ROY -JCT-121 | 2" |
| 11G | ROY -CON-1107 | SCC TO JUNCTION 130 | ROY -SCC-101 | ROY -JCT-130 | 2" |
| 11H | ROY -CON-1108 | SCC TO JUNCTION 131 | ROY -SCC-101 | ROY -JCT-131 | 2" |
| 12A | ROY -CON-1201 | MICROPHONE 101 - NOISE SENSING | ROY -JCT-101 | ROY -ASM-101 | 1" |
| 12B | ROY -CON-1202 | SPEAKER 101 - POLE | ROY -SPK-102 | ROY -SPK-101 | 1-1/2" |
| 12C | ROY -CON-1203 | SPEAKER 102 - POLE | ROY -SCC-101 | ROY -SPK-102 | 1-1/2" |
| 12D | ROY -CON-1204 | SPEAKER 103 - POLE | ROY -SCC-101 | ROY -SPK-103 | 1-1/2" |
| 12E | ROY -CON-1205 | SPEAKER 104 - POLE | ROY -SPK-103 | ROY -SPK-104 | 1-1/2" |
| 12F | ROY -CON-1206 | SPEAKER 105 - POLE | ROY -SPK-104 | ROY -SPK-105 | 1-1/2" |
| 12G | ROY -CON-1207 | SPEAKER 106 - CANOPY | ROY -JCT-100 | ROY -SPK-106 | 1" |
| 12H | ROY -CON-1208 | SPEAKER 107 - CANOPY | ROY -JCT-100 | ROY -SPK-107 | 1" |
| 12J | ROY -CON-1209 | SPEAKER 108 - CANOPY | ROY -JCT-100 | ROY -SPK-108 | 1" |
| 12K | ROY -CON-1210 | SPEAKER 109 - CANOPY | ROY -JCT-110 | ROY -SPK-109 | 1" |
| 12L | ROY -CON-1211 | SPEAKER 110 - CANOPY | ROY -JCT-110 | ROY -SPK-110 | 1" |
| 12M | ROY -CON-1212 | SPEAKER 111 - CANOPY | ROY -JCT-110 | ROY -SPK-111 | 1" |
| 12N | ROY -CON-1213 | SPEAKER 112 - CANOPY | ROY -JCT-121 | ROY -SPK-112 | 1" |
| 12P | ROY -CON-1214 | SPEAKER 113 - CANOPY | ROY -JCT-121 | ROY -SPK-113 | 1" |
| 12Q | ROY -CON-1215 | SPEAKER 114 - CANOPY | ROY -JCT-121 | ROY -SPK-114 | 1" |
| 12R | ROY -CON-1216 | SPEAKER 115 - CANOPY | ROY -JCT-131 | ROY -SPK-115 | 1" |
| 12S | ROY -CON-1217 | SPEAKER 116 - CANOPY | ROY -JCT-131 | ROY -SPK-116 | 1" |
| 12T | ROY -CON-1218 | SPEAKER 117 - CANOPY | ROY -JCT-131 | ROY -SPK-117 | 1" |
| 13A | ROY -CON-1301 | CAMERA 101 | ROY -JCT-101 | ROY -CAM-101 | 1" |
| 13B | ROY -CON-1302 | CAMERA 102 | ROY -JCT-101 | ROY -CAM-102 | 1" |
| 13C | ROY -CON-1303 | CAMERA 103 | ROY -JCT-111 | ROY -CAM-103 | 1" |
| 13D | ROY -CON-1304 | CAMERA 104 | ROY -JCT-120 | ROY -CAM-104 | 1" |
| 13E | ROY -CON-1305 | CAMERA 105 | ROY -JCT-130 | ROY -CAM-105 | 1" |
| 13F | ROY -CON-1306 | CAMERA 106 | ROY -JCT-130 | ROY -CAM-106 | 1" |
| 14A | ROY -CON-1401 | KIOSK 101 (F) | ROY -SCC-101 | ROY -KSK-101 | 1" |
| 14B | ROY -CON-1402 | KIOSK 102 (F) | ROY -SCC-101 | ROY -KSK-102 | 1" |
| 15A | ROY -CON-1501 | VMS 101 | ROY -JCT-101 | ROY -VMS-101 | 1" |
| 15B | ROY -CON-1502 | VMS 102 | ROY -JCT-101 | ROY -VMS-102 | 1" |
| 15C | ROY -CON-1503 | VMS 103 | ROY -JCT-111 | ROY -VMS-103 | 1" |
| 15D | ROY -CON-1504 | VMS 104 | ROY -JCT-120 | ROY -VMS-104 | 1" |
| 15E | ROY -CON-1505 | VMS 105 | ROY -JCT-130 | ROY -VMS-105 | 1" |
| 15F | ROY -CON-1506 | VMS 106 | ROY -JCT-130 | ROY -VMS-106 | 1" |
| 16A | ROY -CON-1601 | TVM 101 | ROY -SCC-101 | ROY -TVM-101 | 1-1/2" |
| 16B | ROY -CON-1602 | TVM 102 | ROY -SCC-101 | ROY -TVM-102 | 1-1/2" |
| 17A | ROY -CON-1701 | VALIDATOR 101 | ROY -SCC-101 | ROY -RSV-101 | 1" |
| 17B | ROY -CON-1702 | VALIDATOR 102 | ROY -SCC-101 | ROY -RSV-102 | 1" |
| 18A | ROY -CON-1801 | EMERGENCY TELEPHONE 101 - PHONE | ROY -SCC-101 | ROY -ETL-101 | 1-1/2" |
| 18B | ROY -CON-1802 | EMERGENCY TELEPHONE 101 - BEACON LIGHT | ROY -ETL-101 | ROY -ETB-101 | 1" |
| 19A | ROY -CON-1901 | STATION ELECTRICAL CABINET | ROY -SCC-101 | ROY -SEC-101 | 2" |

1 COMMUNICATIONS CONDUIT SCHEDULE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
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SOUTHWEST Green Line LRT Extension

# CIVIL EAST - VOLUME 11B
# ROYALSTON STATION
# COMMUNICATIONS
# CONDUIT SCHEDULE (1 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-ROY-ELE-SCH-461

SHEET 269 OF 273

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| CONDUIT NO. | DEVICE ID | DESCRIPTION/USE | FROM | TO | CONDUIT SIZE |
|---|---|---|---|---|---|
| 20A | ROY -CON-2001 | S/C HOUSE TO SCC 201 | S/C MANHOLE | ROY -SCC-201 | 3" |
| 20B | ROY -CON-2002 | S/C HOUSE TO SCC 201 | S/C MANHOLE | ROY -SCC-201 | 3" |
| 20C | ROY -CON-2003 | S/C HOUSE TO SCC 201 | S/C MANHOLE | ROY -SCC-201 | 3" |
| 20D | ROY -CON-2004 | S/C HOUSE TO SCC 201 | S/C MANHOLE | ROY -SCC-201 | 3" |
| 20E | ROY -CON-2005 | UPS POWER FEED: SCH TO SCC | S/C MANHOLE | ROY -SCC-201 | 3" |
| 21A | ROY -CON-2101 | SCC TO JUNCTION 200 | ROY -SCC-201 | ROY -JCT-200 | 2" |
| 21B | ROY -CON-2102 | SCC TO JUNCTION 201 | ROY -SCC-201 | ROY -JCT-201 | 2" |
| 21C | ROY -CON-2103 | SCC TO JUNCTION 210 | ROY -SCC-201 | ROY -JCT-210 | 2" |
| 21D | ROY -CON-2104 | SCC TO JUNCTION 211 | ROY -SCC-201 | ROY -JCT-211 | 2" |
| 21E | ROY -CON-2105 | SCC TO JUNCTION 220 | ROY -SCC-201 | ROY -JCT-220 | 2" |
| 21F | ROY -CON-2106 | SCC TO JUNCTION 221 | ROY -SCC-201 | ROY -JCT-221 | 2" |
| 21G | ROY -CON-2107 | SCC TO JUNCTION 230 | ROY -SCC-201 | ROY -JCT-230 | 2" |
| 21H | ROY -CON-2108 | SCC TO JUNCTION 231 | ROY -SCC-201 | ROY -JCT-231 | 2" |
| 22A | ROY -CON-2201 | MICROPHONE 201 - NOISE SENSING | ROY -JCT-201 | ROY -ASM-201 | 1" |
| 22B | ROY -CON-2202 | SPEAKER 201 - POLE | ROY -SPK-202 | ROY -SPK-201 | 1-1/2" |
| 22C | ROY -CON-2203 | SPEAKER 202 - POLE | ROY -SCC-201 | ROY -SPK-202 | 1-1/2" |
| 22D | ROY -CON-2204 | SPEAKER 203 - POLE | ROY -SCC-201 | ROY -SPK-203 | 1-1/2" |
| 22E | ROY -CON-2205 | SPEAKER 204 - POLE | ROY -SPK-203 | ROY -SPK-204 | 1-1/2" |
| 22F | ROY -CON-2206 | SPEAKER 205 - POLE | ROY -SPK-204 | ROY -SPK-205 | 1-1/2" |
| 22G | ROY -CON-2207 | SPEAKER 206 - CANOPY | ROY -JCT-200 | ROY -SPK-206 | 1" |
| 22H | ROY -CON-2208 | SPEAKER 207 - CANOPY | ROY -JCT-200 | ROY -SPK-207 | 1" |
| 22J | ROY -CON-2209 | SPEAKER 208 - CANOPY | ROY -JCT-200 | ROY -SPK-208 | 1" |
| 22K | ROY -CON-2210 | SPEAKER 209 - CANOPY | ROY -JCT-210 | ROY -SPK-209 | 1" |
| 22L | ROY -CON-2211 | SPEAKER 210 - CANOPY | ROY -JCT-210 | ROY -SPK-210 | 1" |
| 22M | ROY -CON-2212 | SPEAKER 211 - CANOPY | ROY -JCT-210 | ROY -SPK-211 | 1" |
| 22N | ROY -CON-2213 | SPEAKER 212 - CANOPY | ROY -JCT-221 | ROY -SPK-212 | 1" |
| 22P | ROY -CON-2214 | SPEAKER 213 - CANOPY | ROY -JCT-221 | ROY -SPK-213 | 1" |
| 22Q | ROY -CON-2215 | SPEAKER 214 - CANOPY | ROY -JCT-221 | ROY -SPK-214 | 1" |
| 22R | ROY -CON-2216 | SPEAKER 215 - CANOPY | ROY -JCT-231 | ROY -SPK-215 | 1" |
| 22S | ROY -CON-2217 | SPEAKER 216 - CANOPY | ROY -JCT-231 | ROY -SPK-216 | 1" |
| 22T | ROY -CON-2218 | SPEAKER 217 - CANOPY | ROY -JCT-231 | ROY -SPK-217 | 1" |
| 23A | ROY -CON-2301 | CAMERA 201 | ROY -JCT-201 | ROY -CAM-201 | 1" |
| 23B | ROY -CON-2302 | CAMERA 202 | ROY -JCT-201 | ROY -CAM-202 | 1" |
| 23C | ROY -CON-2303 | CAMERA 203 | ROY -JCT-211 | ROY -CAM-203 | 1" |
| 23D | ROY -CON-2304 | CAMERA 204 | ROY -JCT-220 | ROY -CAM-204 | 1" |
| 23E | ROY -CON-2305 | CAMERA 205 | ROY -JCT-230 | ROY -CAM-205 | 1" |
| 23F | ROY -CON-2306 | CAMERA 206 | ROY -JCT-230 | ROY -CAM-206 | 1" |
| 24A | ROY -CON-2401 | KIOSK 201 (F) | ROY -SCC-201 | ROY -KSK-201 | 1" |
| 24B | ROY -CON-2402 | KIOSK 202 (F) | ROY -SCC-201 | ROY -KSK-202 | 1" |
| 25A | ROY -CON-2501 | VMS 201 | ROY -JCT-201 | ROY -VMS-201 | 1" |
| 25B | ROY -CON-2502 | VMS 202 | ROY -JCT-201 | ROY -VMS-202 | 1" |
| 25C | ROY -CON-2503 | VMS 203 | ROY -JCT-211 | ROY -VMS-203 | 1" |
| 25D | ROY -CON-2504 | VMS 204 | ROY -JCT-220 | ROY -VMS-204 | 1" |
| 25E | ROY -CON-2505 | VMS 205 | ROY -JCT-230 | ROY -VMS-205 | 1" |
| 25F | ROY -CON-2506 | VMS 206 | ROY -JCT-230 | ROY -VMS-206 | 1" |
| 26A | ROY -CON-2601 | TVM 201 | ROY -SCC-201 | ROY -TVM-201 | 1-1/2" |
| 26B | ROY -CON-2602 | TVM 202 | ROY -SCC-201 | ROY -TVM-202 | 1-1/2" |
| 27A | ROY -CON-2701 | VALIDATOR 201 | ROY -SCC-201 | ROY -RSV-201 | 1" |
| 27B | ROY -CON-2702 | VALIDATOR 202 | ROY -SCC-201 | ROY -RSV-202 | 1" |
| 28A | ROY -CON-2801 | EMERGENCY TELEPHONE 201 - PHONE | ROY -SCC-201 | ROY -ETL-201 | 1-1/2" |
| 28B | ROY -CON-2802 | EMERGENCY TELEPHONE 201 - BEACON LIGHT | ROY -ETL-201 | ROY -ETB-201 | 1" |
| 29A | ROY -CON-2901 | STATION ELECTRICAL CABINET | ROY -SCC-201 | ROY -SEC-201 | 2" |

1 COMMUNICATIONS CONDUIT SCHEDULE

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

AECOM

M-P Consultants
CONSULTING ENGINEERING
MINNEAPOLIS • MINNESOTA

60% SUBMISSION - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

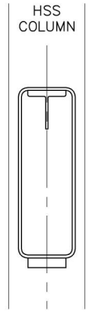
CIVIL EAST - VOLUME 11B
ROYALSTON STATION
COMMUNICATIONS
CONDUIT SCHEDULE (2 OF 2)

DISCIPLINE: ELECTRICAL

SHEET NAME: E4-ROY-ELE-SCH-462

SHEET 270 OF 273

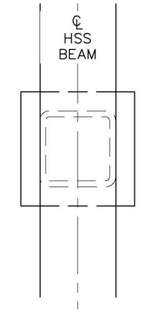
Sep, 25 2015 10:26 am v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\ELECTRICAL\E4-ROY-ELE-SCH-462.dwg By: FergTK




A1 / --

## TYPICAL HSS COLUMN TO HSS BEAM CONNECTION SECTION DETAIL

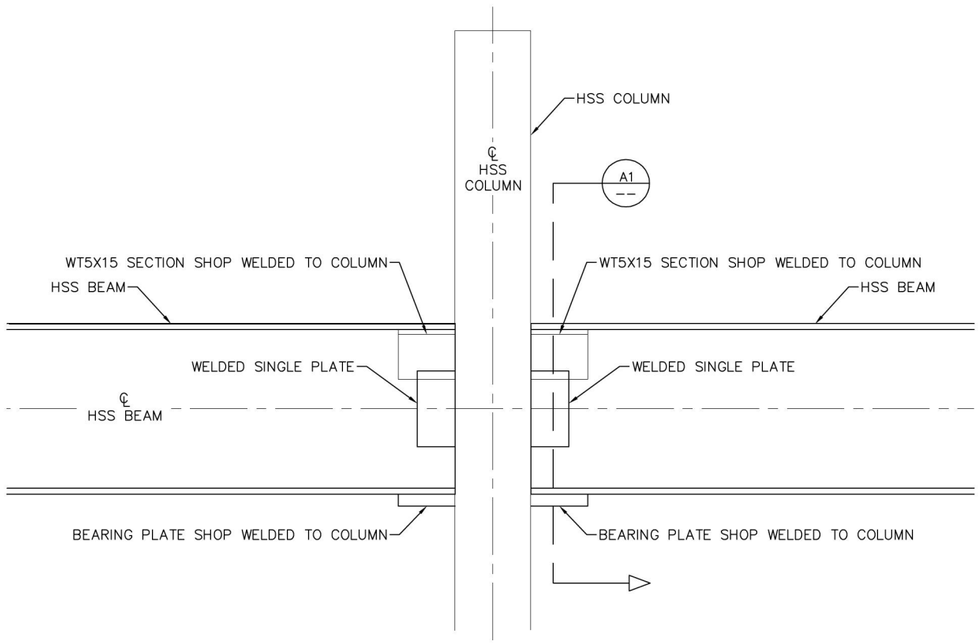
SCALE:NTS




A1 / --

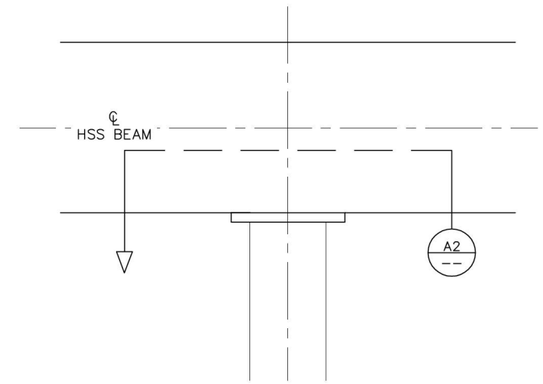
## CONTINOUS HSS BEAM OVER HSS COLUMN CONNECITON SECTION DETAIL

SCALE:NTS




1 / TYPICAL HSS COLUMN TO HSS BEAM CONNECTION

SCALE:NTS




2 / TYPICAL CONTINUOUS HSS BEAM OVER HSS COLUMN CONNECITON

SCALE:NTS

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
|---|---|---|---|---|---|
| | | | | | |

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METROPOLITAN COUNCIL

SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**GENERAL STRUCTURAL**
**VC TYPICAL STEEL CONNECTIONS**

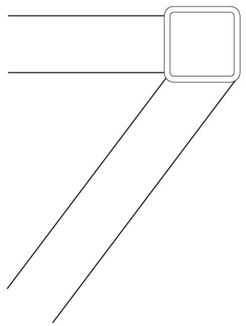
DISCIPLINE: STRUCTURES

SHEET NAME: STR-GEN-601

SHEET 271 OF 273

3 TYPICAL WIDE FLANGE BEAM TO HSS BEAM CONNECITON
SCALE:NTS

4 TYPICAL CHANNEL BEAM TO WIDE FLANGE BEAM CONNECTION
SCALE:NTS



1 AMGLED HSS BEAM TO HSS COLUMN CONNECTION
SCALE:NTS

2 TYPICAL HSS BEAM TO HSS BEAM CONNECITON
SCALE:NTS

| NO. | DATE | BY | CHECK | DESIGN | REVISION / SUBMITTAL |
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METROPOLITAN COUNCIL

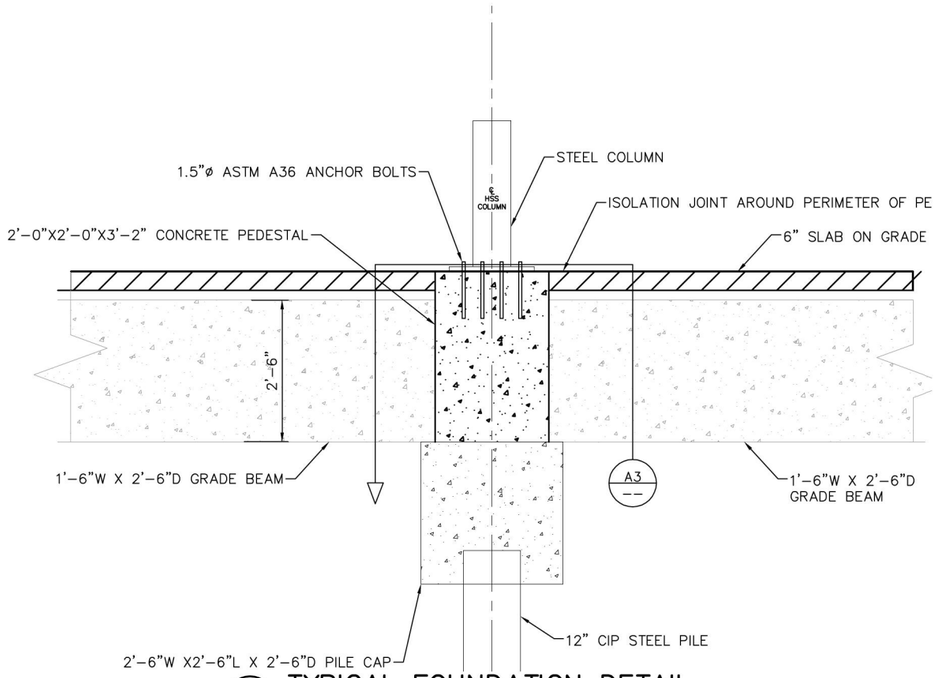
SOUTHWEST Green Line LRT Extension

**CIVIL EAST - VOLUME 11B**
**GENERAL STRUCTURAL**
**VC TYPICAL STEEL CONNECTIONS**

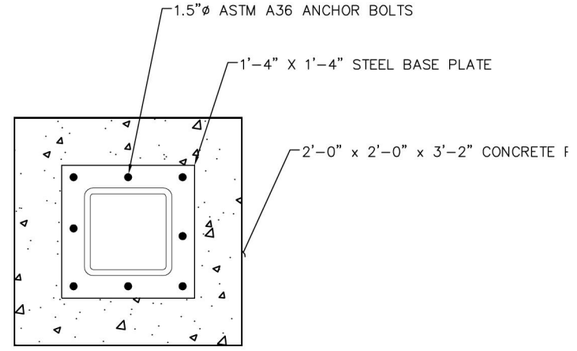
DISCIPLINE: STRUCTURES

SHEET NAME: STR-GEN-602

SHEET 272 OF 273




1 TYPICAL FOUNDATION DETAIL
SCALE:NTS




A3 TYPICAL FOUNDATION DETAIL SECTION DETAIL
SCALE:NTS

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CIVIL EAST - VOLUME 11B
GENERAL STRUCTURAL
VC TYPICAL FOUNDATION DETAILS

DISCIPLINE: STRUCTURES
SHEET NAME: STR-GEN-603

SHEET 273 OF 273

Sep. 21 2015 01:40 pm v:\3400_ADC\CAD\SEGMENT E4\PLAN SHEETS\STRUCTURES\VNWHT-STATION\273 STR-GEN-603.dwg By: scott.shepard