

REQUIRED RTDC-DTO (CRT) CONSTRUCTION NOTES

Add these to your 'for construction' drawing for work performed on the East, Gold, and NWES Commuter Rail Lines

- 1) CONTRACTOR SHALL CONTACT DENVER TRANSIT OPERATORS (DTO) BY EMAIL AT TRACK.USAGE@RTDCRAIL.COM 30-DAYS PRIOR TO CONSTRUCTION TO OBTAIN THE MOST UP TO DATE PERMIT REQUEST FORMS AND TO INITIATE A REQUEST FOR AN ACCESS PERMIT.
- 2) CONTRACTOR SHALL COMPLETE ALL APPLICABLE COMMUTER RAIL SAFETY TRAINING, WHICH DTO SHALL PROVIDE AT CONTRACTORS COST. CONTRACTOR SHALL PROVIDE PROOF OF CURRENT SAFETY TRAINING, PRIOR TO THE PRE-ENTRY MEETING, FOR ANY WORK ON, ADJACENT TO, OR ACROSS RTD CRT ROW. PROOF OF CURRENT SAFETY TRAINING MUST BE READILY AVAILABLE WHILE WORKING ON SITE.
- 3) CONTRACTOR SHALL NOTIFY RTD'S UTILITY ENGINEERING/CONSTRUCTION TEAM (303-299-2811) AND DTO'S RAIL OPS (720-460-5803) A FULL 30-DAYS PRIOR TO CONSTRUCTION AND SHALL ARRANGE TO ATTEND A MONTHLY 3RD PARTY RAIL CONSTRUCTION MEETING WITH RTD AND DTO CURRENTLY HELD AT 3PM ON THE FIRST WEDNESDAY OF EACH MONTH AT THE COMMUTER RAIL MAINTENANCE FACILITY.
- 4) CONTRACTOR SHALL ATTEND RTDC-DTO'S TRACK USAGE RAIL CONSTRUCTION MEETING AT LEAST ONE WEEK PRIOR TO THE START OF CONSTRUCTION AT A TIME AND DATE ESTABLISHED BY DTO. CONTRACTOR MAY NOT BEGIN ANY WORK WITHOUT AN RTDC-DTO ACCESS PERMIT. RTDC-DTO WILL NOT ISSUE A PERMIT WITHOUT AN EXECUTED UTILITY AGREEMENT IN PLACE.
- 5) CONTRACTOR SHALL NOT BEGIN ANY WORK ON OR ACROSS RTD ROW/TRACKS UNTIL RTD HAS ISSUED AND EXECUTED UTILITY AGREEMENT.
- 6) CONTRACTOR SHALL NOTIFY RTD'S UTILITY ENGINEERING/CONSTRUCTION TEAM (303-299-2811) AND RTDC-DTO'S RAIL OPS (720-460-5803) A FULL TWO (2) WEEKS PRIOR TO CONSTRUCTION AND SHALL COORDINATE A UTILITY PRE-CONSTRUCTION MEETING WITH RTD AND RTDC-DTO, AND ARRANGE FOR AN RTD REPRESENTATIVE TO BE ON-SITE DURING CONSTRUCTION. THE UTILITY PRE-CONSTRUCTION MEETING SHALL OCCUR WITHIN A WEEK OF THE START OF CONSTRUCTION.
- 7) CONTRACTOR MAY NOT BEGIN WORK UNTIL RTD AND RTDC-DTO HAS ISSUED A PRE-CONSTRUCTION RESOLUTION RECORD (PCRR). A PCRR WILL BE COMPLETED, SIGNED, AND ISSUED BY RTDC-DTO'S REPRESENTATIVE DURING THE UTILITY PRE-CONSTRUCTION MEETING AND MUST BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION.
- 8) TRAFFIC CONTROL PLANS ARE REQUIRED IF WORK HAS THE POTENTIAL OF IMPACTING RTD COMMUTER RAIL OPERATIONS OR AUTOMOBILE TRAFFIC NEAR RTDC RAILROAD CROSSINGS. TRAFFIC CONTROL PLANS MUST BE SUBMITTED TO RTD FOR APPROVAL PRIOR TO CONSTRUCTION.
- 9) CONTRACTOR SHALL NOTIFY RTDC-DTO OCC (OPERATIONS CONTROL CENTER) DISPATCH PRIOR TO ENTERING THE RTD RIGHT-OF-WAY (ROW) IN ORDER TO ACTIVATE THE PERMIT, AND IMMEDIATELY AFTER CLEARING THE SITE IN ORDER TO DEACTIVATE THE PERMIT AS FOLLOWS:
 - CALL (720-460-5807) FOR WORK ALONG THE A-LINE
 - CALL (720-460-5808) FOR WORK ALONG THE B-LINE AND G-LINEAN RTDC-DTO EIC (EMPLOYEE IN CHARGE) / FLAGGER IS REQUIRED TO BE ON-SITE ANYTIME CONTRACTOR WORKERS OR EQUIPMENT ARE WITHIN 10 FEET OF THE NEAREST RUNNING RAIL. IF RTDC-DTO DEEMS NECESSARY AN RTD-DTO EIC/FLAGGER MAY ALSO BE REQUIRED AT OTHER TIMES DURING CONSTRUCTION. THE EIC/FLAGGER MUST BE SCHEDULED AT LEAST ONE WEEK PRIOR TO THE START OF WORK AND SHALL BE COORDINATED AT THE PRE-ENTRY MEETING AND SHALL BE PROVIDED AT THE CONTRACTORS EXPENSE. IF THERE ARE OTHER ADJACENT RAILROADS (BNSF, UP, ETC.) A SEPARATE

EIC/FLAGGER MUST BE ARRANGED THRU THOSE RAILROADS. THE RTDC-DTO EIC/FLAGGER WILL NOT FLAG FOR OTHER RAILROADS.

- 10) RTD AND RTDC-DTO ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS SHOWN ON THESE CONSTRUCTION DRAWINGS. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
- 11) CONTRACTOR SHALL IDENTIFY THE HORIZONTAL LOCATION AND VERTICAL DEPTH OF RTD UNDERGROUND ELECTRIC AND COMMUNICATION DUCTS AND INSTALL THE NEW UTILITY WITHOUT COMPROMISING THE INTEGRITY OF THE RTD TRACKS OR DYNAMIC ENVELOPE. THIS MUST BE ACCOMPLISHED BY NON-DESTRUCTIVE EXPLORATORY MEANS AND METHODS OF LOCATING THE RTD DUCTS THAT DOES NOT INCLUDE POTHOLING OR DIGGING WITHIN THE RTD TRACK ENVELOPE. THE LOCATING METHOD MUST BE AGREED UPON BY BOTH CONTRACTOR AND RTDC-DTO AND SHALL BE DESCRIBED AT PRE-CONSTRUCTION MEETING AND SHALL BE PART OF THE PRE-CONSTRUCTION RESOLUTION RECORD (PCRR). THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE RTD WHOLE FROM ANY DAMAGE TO RTD FACILITIES, INCLUDING DAMAGE DONE AFTER ASSISTANCE BY RTDC-DTO'S STAFF TO HELP LOCATE RTD DUCTS.
- 12) CONTRACTOR SHALL PROVIDE FOR CONSTANT MONITORING OF RAIL ELEVATIONS DURING CONSTRUCTION EITHER BY THE USE OF SURVEY TARGETS PLACED ON THE RAIL OR OTHER METHODS APPROVED BY RTDC-DTO. CONTRACTOR SHALL SUBMIT DAILY MONITORING REPORTS TO RTDC-DTO. ANY VARIATIONS IN RAIL ELEVATION MUST BE REPORTED TO THE DESIGNATED RTD-DTO EIC/FLAGGER AND TO THE RTDC-DTO CHIEF ENGINEER IMMEDIATELY FOR EVALUATION OF TRACK SAFETY. IF AN RTD-DTO EIC/FLAGGER IS NOT PRESENT ON SITE AND THE CHIEF ENGINEER IS UNREACHABLE, THE OCC SUPERVISOR SHOULD BE CONTACTED IMMEDIATELY INSTEAD AT (720-460-5809).
- 13) **AS-BUILT DOCUMENTATION:** CONTRACTOR SHALL SURVEY AND SUBMIT THE COMPLETED HORIZONTAL PLAN AND VERTICAL PROFILE AS-BUILTS TO RTD AND RTDC-DTO WITHIN 30 CALENDAR DAYS OF THE COMPLETION OF CONSTRUCTION WITHIN RTD RIGHT-OF-WAY. THE PLAN AND PROFILE AS-BUILTS MUST CONTAIN THE FOLLOWING INFORMATION:
 - a) PRE AND POST CONSTRUCTION AND SURVEY OF TOP OF RTD TRACKS TO SHOW NO MOVEMENT OF TRACKS DUE TO CONSTRUCTION: AT A MINIMUM, THE CONTRACTOR SHALL SURVEY EACH RAIL AT THE CENTERLINE AND 10' EACH SIDE OF THE NEW PIPELINE CROSSING LOCATION. TOP OF RAIL SURVEYS MUST BE COMPLETED IMMEDIATELY PRIOR TO AND IMMEDIATELY FOLLOWING CONSTRUCTION.
 - b) AT A MINIMUM THE CONTRACTOR SHALL SURVEY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF THE PIPELINE WHERE IT CROSSES EACH RIGHT-OF-WAY LINE, TRACK CENTER LINE, AND MIDWAY BETWEEN THE OUTMOST TRACKS AND EACH RIGHT-OF-WAY LINE.
 - c) ALL SURVEY DATA SHALL BE TIED TO RTD CONTROL POINTS.
 - d) CONTRACTOR SHALL SUPPLY RTD WITH A COPY OF THE SURVEYOR'S FIELD NOTES TO SUPPORT THE BEFORE AND AFTER SURVEY DATA AND FINAL UTILITY INSTALLATION DATA.
 - e) RTD UTILITY AGREEMENT NUMBER.
 - f) DATE THE FACILITY WAS INSTALLED.
 - g) SIZE OF PIPE AND SIZE OF CASING.
 - h) MATERIAL BEING CARRIED IN THE PIPE.
 - i) AS-BUILTS MUST BE STAMPED, SIGNED, AND DATED BY A LICENSED SURVEYOR OR ENGINEER.
- 14) CONTRACTOR SHALL CLEARLY MARK UTILITY CROSSING USING A METHOD AGREED UPON BY CONTRACTOR AND RTD AT PRE-CONSTRUCTION MEETING. MARKERS MAY INCLUDE 4 FOOT UTILITY POSTS OVER UTILITY OR VISIBLE MANHOLES ON BOTH SIDES OF RTD ROW/TRACKS. THE CONTRACTOR SHALL INSTALL TRACER WIRE IN ALL NON-METALLIC PIPES. ALL UTILITIES INSTALLED WITHIN RTD ROW OR CROSSING RTD TRACKS MUST BE LOCATABLE WITH STANDARD LOCATING EQUIPMENT.

- 15) CATHODIC PROTECTION MUST BE INCLUDED FOR ALL NEW, BURIED, METALLIC, PRESSURIZED, PIPING CROSSING RTD COMMUTER RAIL TRACKS. DESIGN MUST MEET RTDC-DTO'S CRT DESIGN CRITERIA FOR CATHODIC PROTECTION.
- 16) CONTRACTOR MUST HAVE THE FOLLOWING DOCUMENTS ON-SITE DURING CONSTRUCTION AT ALL TIMES:
- RTD'S EXECUTED UTILITY AGREEMENT,
 - RTDC-DTO'S APPROVED COMMUTER RAIL ACCESS PERMIT,
 - RTDC-DTO'S RAILROAD SAFETY TRAINING CERTIFICATES,
 - PE STAMPED/SIGNED FOR CONSTRUCTION PLANS/PROFILES APPROVED BY RTD,
 - RTD RR CROSSING APPLICATION DATA SHEET,
 - RTD's SIGNED PRE-CONSTRUCTION RESOLUTION RECORD.
- 17) NO IN-FIELD CHANGES ARE ALLOWED TO ANY PART OF THIS DESIGN WHERE THE UTILITY CROSSES RTD ROW/TRACKS WITHOUT WRITTEN APPROVAL FROM RTD AND RTDC-DTO PRIOR TO CONSTRUCTION OF THE CHANGE.