





**UTILITIES**

UTILITY LINES AS SHOWN ON THE PLAN AND PROFILE SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR'S ATTENTION IS DIRECTED TO PARAGRAPH 105.11 OF THE STANDARD SPECIFICATIONS CONCERNING UTILITIES.

THE CONTRACTOR SHALL CALL "811" OR 1-800-922-1987 FOR UTILITY LOCATIONS AT LEAST 3 WORKING DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) PRIOR TO ANY DIGGING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES PRIOR TO COMMENCING CONSTRUCTION AND TO NOTIFY THE ENGINEER OF ANY DISCREPANCY. ALL CONFLICTING UTILITIES SHALL BE EXPOSED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND INSPECTED BY THE ENGINEER TO VERIFY CONFORMANCE WITH THE PLANS. THIS PARTICULARLY APPLIES TO WATER SERVICE RELOCATIONS AND CULVERT CROSSINGS TO BE COMPLETED ON THIS PROJECT BY THE CONTRACTOR.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF UTILITY RELOCATIONS BY UTILITY COMPANIES. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING UTILITIES DURING CONSTRUCTION AND SHALL HOLD BOULDER COUNTY HARMLESS FOR DAMAGES ARISING FROM CONTRACTOR'S FAILURE TO ADEQUATELY PROTECT EXISTING UTILITIES.

THE CONTRACTOR SHALL PROTECT ALL EXISTING FACILITIES (POWER POLES, MANHOLES, etc.) IN THE GENERAL AREA OF CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OPERATIONS AT NO COST TO THE PROJECT.

FOR UTILITY INFORMATION SEE UTILITY PLANS.

IT IS ESTIMATED THAT 10 HOURS OF POTHOLING (HOUR) WILL BE REQUIRED AS PART OF THIS PROJECT.

**CONSTRUCTION**

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CDOT STANDARDS AND SPECIFICATIONS OF THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2011; THE CITY OF BOULDER COUNTY ROAD STANDARDS AND SPECIFICATIONS, IN SO FAR AS THE SAME MAY APPLY AND IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS INCLUDED HEREIN.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCEPTANCE AND CONTROL OF ALL SURFACE AND SUBSURFACE DRAINAGE AND GROUNDWATER ENTERING THE PROJECT AREA. THE CONTRACTOR SHALL OBTAIN ALL APPROPRIATE PERMITS, EQUIPMENT AND LABOR NECESSARY TO DEWATER THE PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO DETERMINE APPROPRIATE LOCATIONS FOR WATER DISPOSAL AND TO OBTAIN A CDPS CONSTRUCTION DEWATERING PERMIT. CONTRACTOR SHALL REFER TO SPECIFICATION SUBSECTION 107.25 FOR FURTHER REQUIREMENTS. THIS WORK WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.

TREE TRIMMING AND/OR REMOVAL ACTIVITIES SHALL BE COMPLETED BEFORE BIRDS BEGIN TO NEST OR AFTER THE YOUNG HAVE FLEDGED. IN COLORADO, MOST NESTING AND REARING ACTIVITIES OCCUR BETWEEN APRIL 1 AND AUGUST 31. HOWEVER, SINCE SOME BIRDS NEST AS EARLY AS FEBRUARY, A NESTING BIRD SURVEY SHALL BE CONDUCTED BY A BIOLOGIST BEFORE ANY TREE TRIMMING OR REMOVAL ACTIVITIES BEGIN. ALL TREE TRIMMING WORK SHALL BE PERFORMED BY A LICENSED ARBORIST IN ACCORDANCE WITH SECTION 202.

ALL SURVEYING NECESSARY TO COMPLETE THE WORK SHALL BE DONE BY THE CONTRACTOR. THIS WORK WILL BE PAID FOR AS ITEM 625, CONSTRUCTION SURVEYING, LUMP SUM. REFER TO THE SURVEY TABULATION SHEET.

CLEARING AND GRUBBING WILL BE PAID FOR AS A LUMP SUM. THIS ITEM SHALL INCLUDE ALL TREES LESS THAN 6" CALIPER AND REMOVAL OF PRE-EXISTING STUMPS IN THE IMPACTED AREAS.

DOWELS SHALL BE PLACED AT CONSTRUCTION JOINTS ON CONCRETE TRAIL AS DIRECTED BY THE ENGINEER. DOWELS SHALL CONSIST OF #4 REBAR PLACED AT 1' CENTERS ALONG THE ENTIRE COLD JOINT. EMBEDMENT SHALL BE ONE HALF OF THE TOTAL CONCRETE THICKNESS AND EPOXIED IN PLACE. COST SHALL BE INCLUDED IN THE WORK. A 1-1/2" CHAMFER SHALL BE FORMED ON ALL CONCRETE ENDS WHERE COMPACTED CRUSHER FINES MEETS CONCRETE EDGE.

WHERE CUTTING OF ASPHALT PAVEMENT IS REQUIRED, THE CUTTING SHALL BE DONE TO A NEAT WORK LINE WITH A SAW OR CUTTING WHEEL AS APPROVED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS SUBSIDIARY TO THE WORK.

**EARTHWORK**

WATER SHALL BE USED AS A DUST PALLIATIVE AS DIRECTED BY THE ENGINEER AND SHALL BE CONSIDERED SUBSIDIARY TO THE WORK.

TYPE OF COMPACTION FOR THIS PROJECT WILL BE AASHTO T99.

DEPTH OF MOISTURE - DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:

FULL DEPTH OF ALL EMBANKMENTS.

BASES OF CUTS AND FILLS - 6 INCHES.

ALL REMOVAL AND WASTE MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR UNLESS INDICATED IN THE PLANS AND PROJECT SPECIFICATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A DISPOSAL SITE FOR THE UNUSABLE MATERIALS.

EXISTING WETLANDS WILL BE DELINEATED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR MUST PROTECT AND PREVENT DAMAGE TO ALL WETLAND AREAS MARKED FOR NON-DISTURBANCE.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMANCE WITH LOCAL, STATE, AND FEDERAL CODES GOVERNING SHORING, SHEETING, AND BRACING OF EXCAVATIONS AND TRENCHES, AND FOR PROTECTION AND SAFETY OF WORKERS AND OTHER CONSTRUCTION RELATED PERSONNEL. THIS SUPPORT WILL BE INCIDENTAL TO THE WORK AND WILL NOT BE PAID FOR SEPARATELY.

EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS WILL BE CONSIDERED AS SUBSIDIARY TO THAT OPERATION, AND WILL NOT BE PAID FOR SEPARATELY, PROOF ROLLING WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

**SIGNING, STRIPING, TRAFFIC CONTROL NOTES**

CONSTRUCTION TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE BOULDER COUNTY, CITY OF BOULDER TRANSPORTATION, AND CDOT FOR APPROVAL PRIOR TO TRAFFIC CONTROL OPERATIONS.

THE CONTRACTOR SHALL PROTECT ALL EXISTING SIGNS DURING CONSTRUCTION. ANY TEMPORARY REMOVAL OR RESETTING OF SIGNS MUST BE APPROVED BY THE ENGINEER.

**QUANTITIES**

FOR PLAN QUANTITIES OF PAVEMENT MATERIAL, THE FOLLOWING RATES OF APPLICATION WERE USED:

ABC (CLASS 6).....133 LBS / CF

ASPHALT .....115 LBS/CY/IN

RATES OF APPLICATION SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION.

STOCKPILING AND PLACING OF TOPSOIL SHALL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

FIELD OFFICE (CLASS 1) WILL BE PAID FOR AS AN EACH ITEM.

MOBILIZATION WILL BE PAID FOR AS LUMP SUM.

IT IS ESTIMATED THAT ONE (1) SANITARY FACILITY (EACH) WILL BE REQUIRED FOR THIS PROJECT.

PROJECT CONTACT LIST				
Kristine Obendorf, P.P.E.	Project Engineer	Boulder County Transportation	(720)564-2664	
Jeff Haley	Parks Planning Manager	City of Boulder Parks and Recreation Department	(303)413-7233	(720)648-0197
Jim Reeder	Land and Visitor Services Division Manager	City of Boulder Open Space and Mountain Parks	(720)564-2080	(303)859-1555
Colton Coughlin	Project Manager	City of Boulder Open Space and Mountain Parks		

Print Date:	08/01/2016
File Name:	63061_TITLESHEET.DWG
Horz. Scale:	N/A
Vert. Scale:	N/A
City Project Manager	
	1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 Fax: 303-860-7139

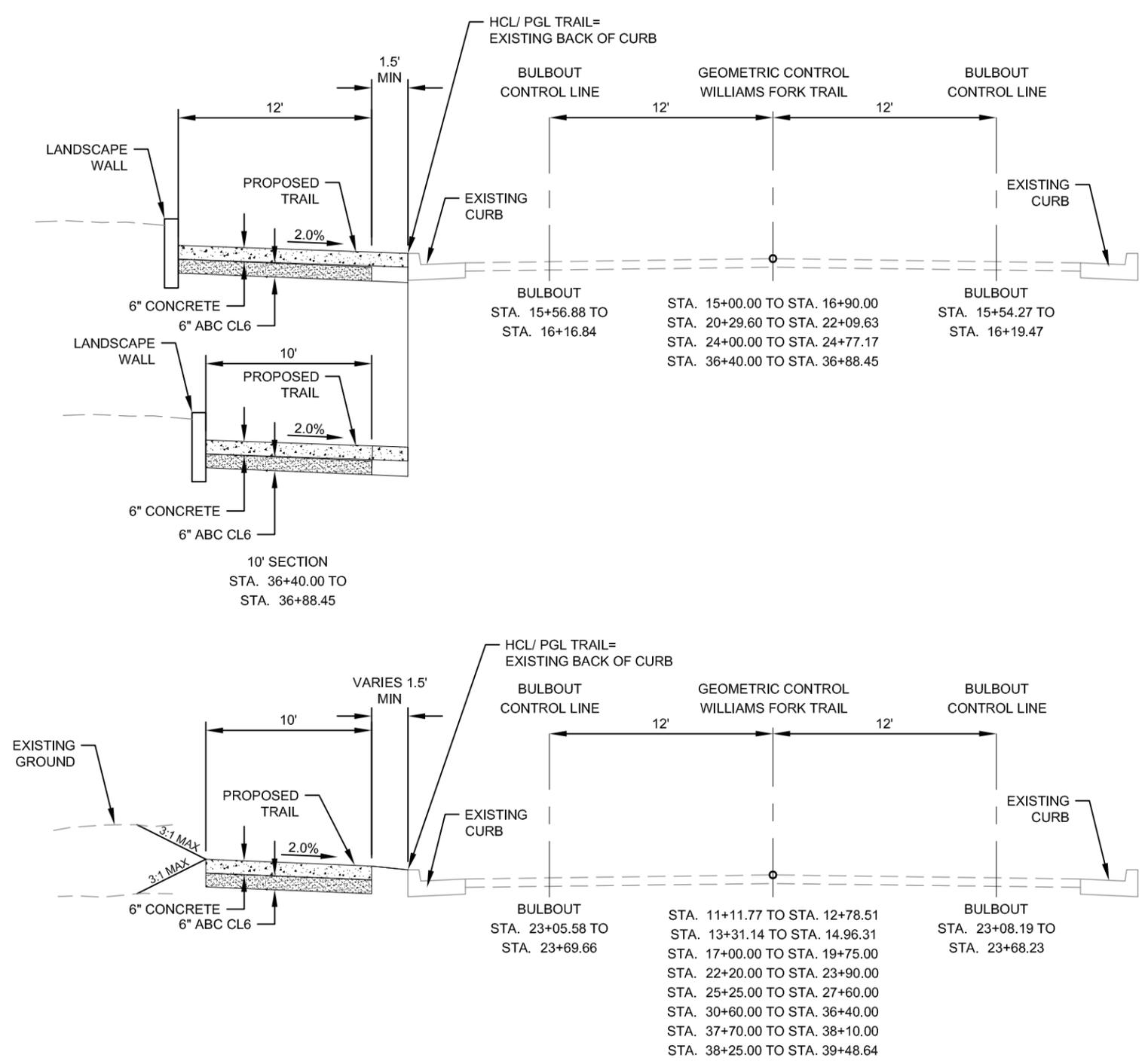
Sheet Revisions		
Date:	Comments	Init.



<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>TWIN LAKES MULTI-USE PATH CONNECTIONS</b>			
<b>GENERAL NOTES</b>			
Designer:	E. BAYLEY	Structure Numbers	
Detailer:	A. NILES		
Sheet Subset:	ROADWAY	Subset Sheets:	1 of 1

<b>Project Number / Code</b>
TAP C070-076
20673
Sheet Number <b>3</b>



Print Date: 08/01/2016  
 File Name: 63061\_TITLESHEET.DWG  
 Horiz. Scale: N.T.S. Vert. Scale: N.T.S.  
 City Project Manager  
 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202  
 Phone: 303-764-1520 Fax: 303-860-7139

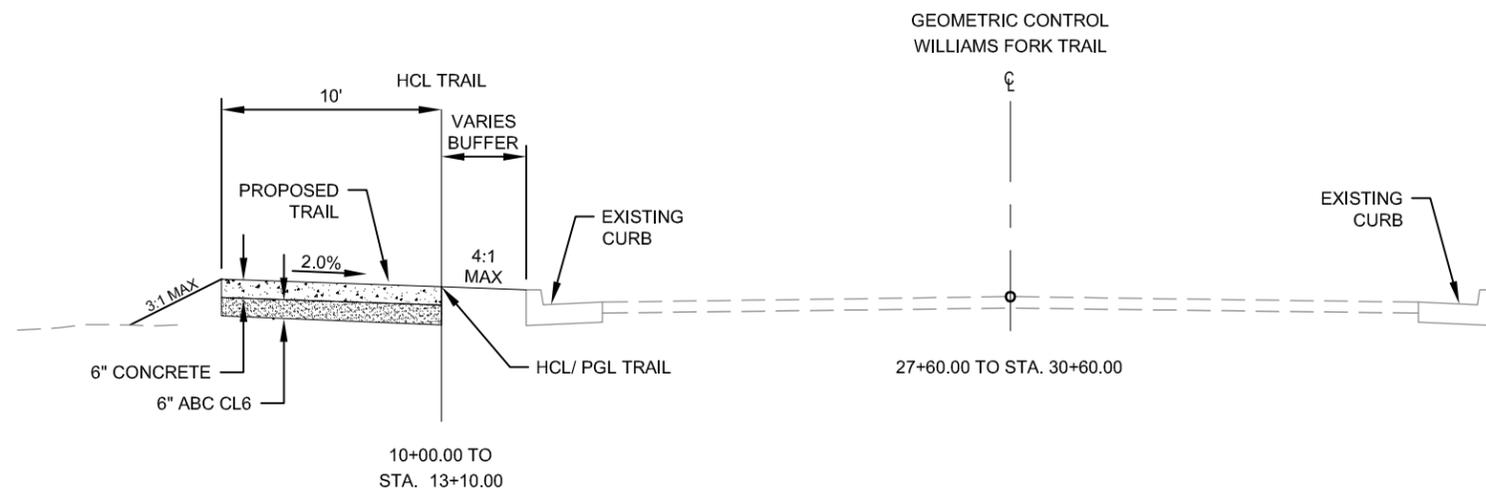
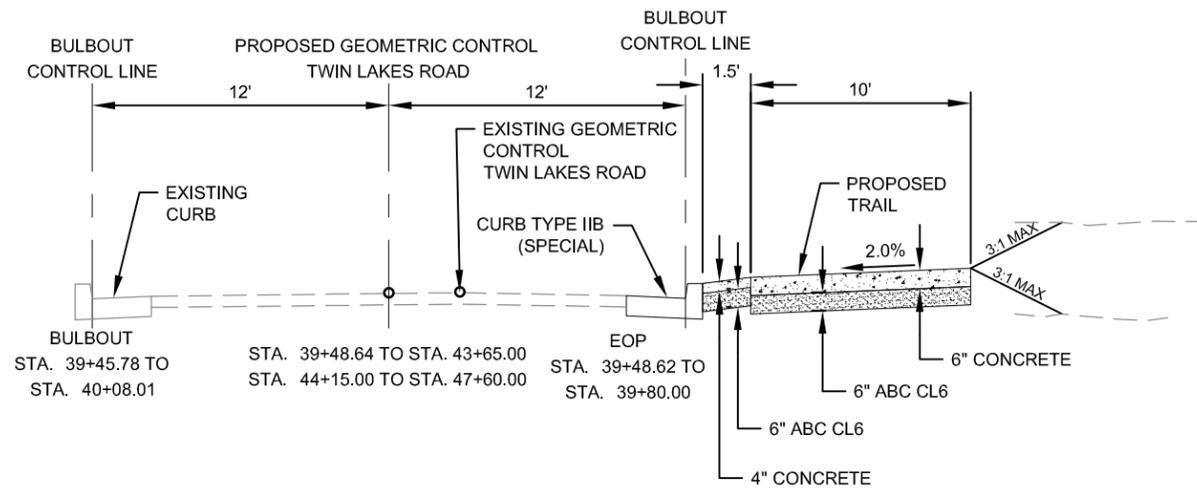
Sheet Revisions		
Date:	Comments	Init.



As Constructed  
 No Revisions:  
 Revised:  
 Void:

TWIN LAKES MULTI-USE PATH CONNECTIONS  
 TYPICAL SECTIONS  
 Designer: E. BAYLEY  
 Detailer: A. NILES  
 Sheet Subset: TYPICALS  
 Structure Numbers  
 Subset Sheets: 1 of 2

Project Number / Code  
 TAP C070-076  
 20673  
 Sheet Number 4



Print Date: 08/01/2016  
 File Name: 63061\_TITLESHEET.DWG  
 Hertz. Scale: N.T.S. Vert. Scale: N.T.S.  
 City Project Manager  
**HR** 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202  
 Phone: 303-764-1520 Fax: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.



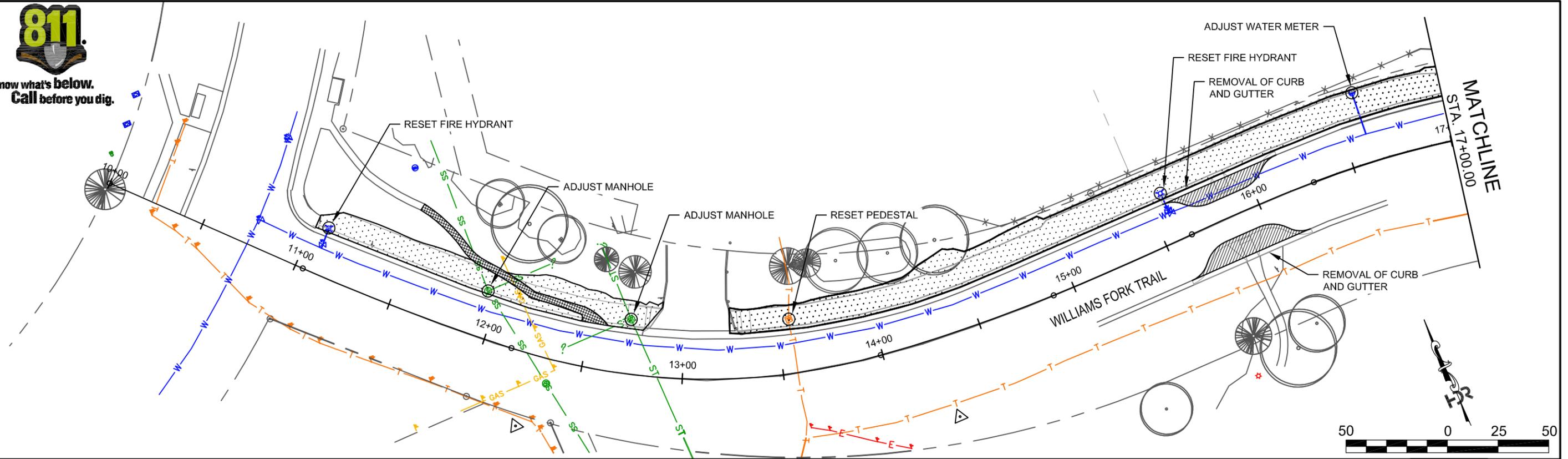
As Constructed  
 No Revisions:  
 Revised:  
 Void:

TWIN LAKES MULTI-USE PATH CONNECTIONS TYPICAL SECTIONS		
Designer:	E. BAYLEY	Structure Numbers
Detailer:	A. NILES	
Sheet Subset:	TYPICALS	Subset Sheets: 2 of 2

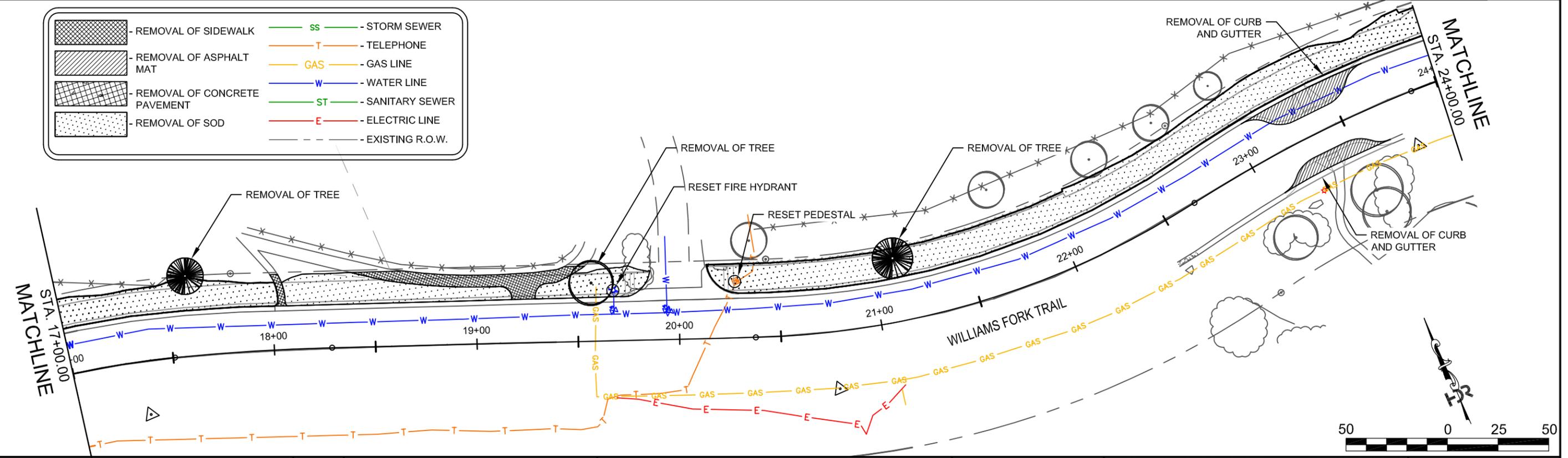
Project Number / Code
TAP C070-076
20673
Sheet Number 5



Know what's below.  
Call before you dig.



	- REMOVAL OF SIDEWALK		- STORM SEWER
	- REMOVAL OF ASPHALT MAT		- TELEPHONE
	- REMOVAL OF CONCRETE PAVEMENT		- GAS LINE
	- REMOVAL OF SOD		- WATER LINE
			- SANITARY SEWER
			- ELECTRIC LINE
			- EXISTING R.O.W.



Print Date: 08/01/2016  
 File Name: 60316\_REM-01.DWG  
 Hertz. Scale: 1" = 50'      Vert. Scale: N/A  
 City Project Manager  
 1670 BROADWAY, SUITE 3400    DENVER, COLORADO 80202  
 Phone: 303-764-1520      Fax: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.



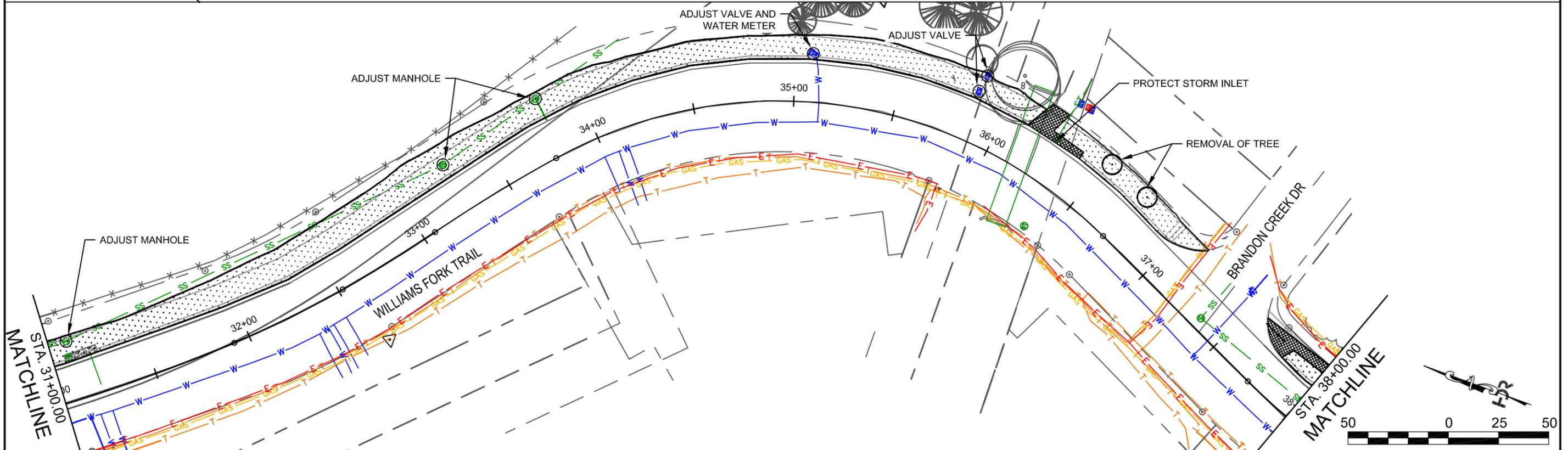
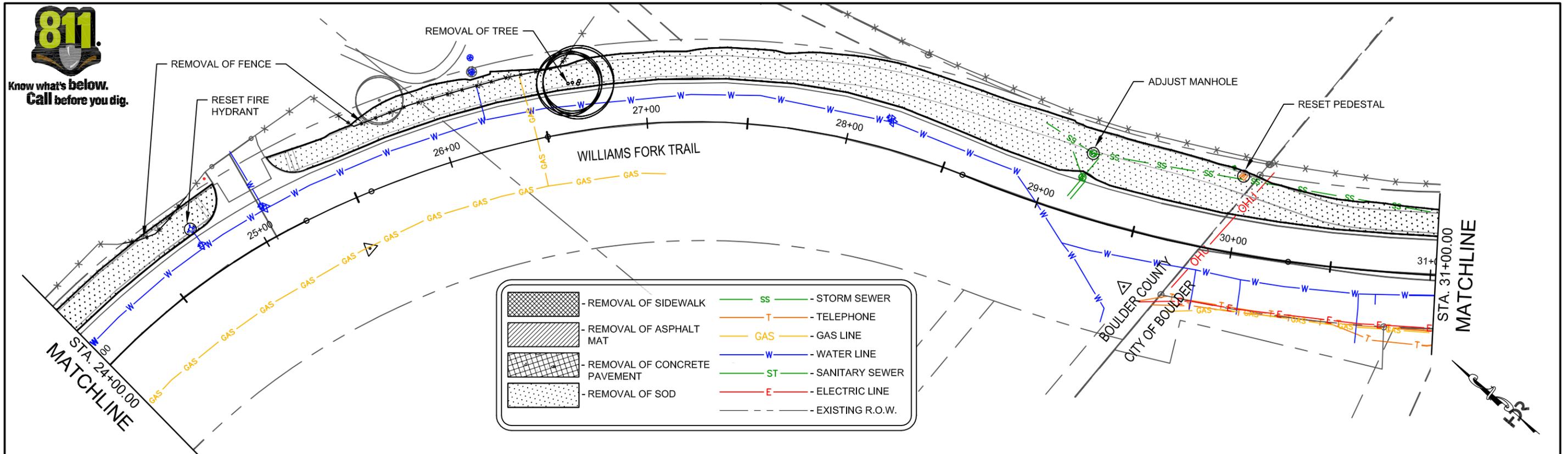
As Constructed
No Revisions:
Revised:
Void:

TWIN LAKES MULTI-USE PATH CONNECTIONS	
WILLIAMS FORK TRAIL	
REMOVAL AND UTILITY PLAN	
Designer:	E. BAYLEY
Detailer:	A. NILES
Sheet Subset:	REMOVAL
Structure Numbers	
Subset Sheets:	1 of 3

Project Number / Code
TAP C070-076
20673
Sheet Number
6



Know what's below.  
Call before you dig.



Print Date: 08/01/2016  
 File Name: 60316\_REM-01.DWG  
 Hertz. Scale: 1" = 50'      Vert. Scale: N/A  
 City Project Manager  
 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202  
 Phone: 303-764-1520 Fax: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.



As Constructed  
 No Revisions:  
 Revised:  
 Void:

TWIN LAKES MULTI-USE PATH CONNECTIONS  
 WILLIAMS FORK TRAIL  
 REMOVAL AND UTILITY PLAN

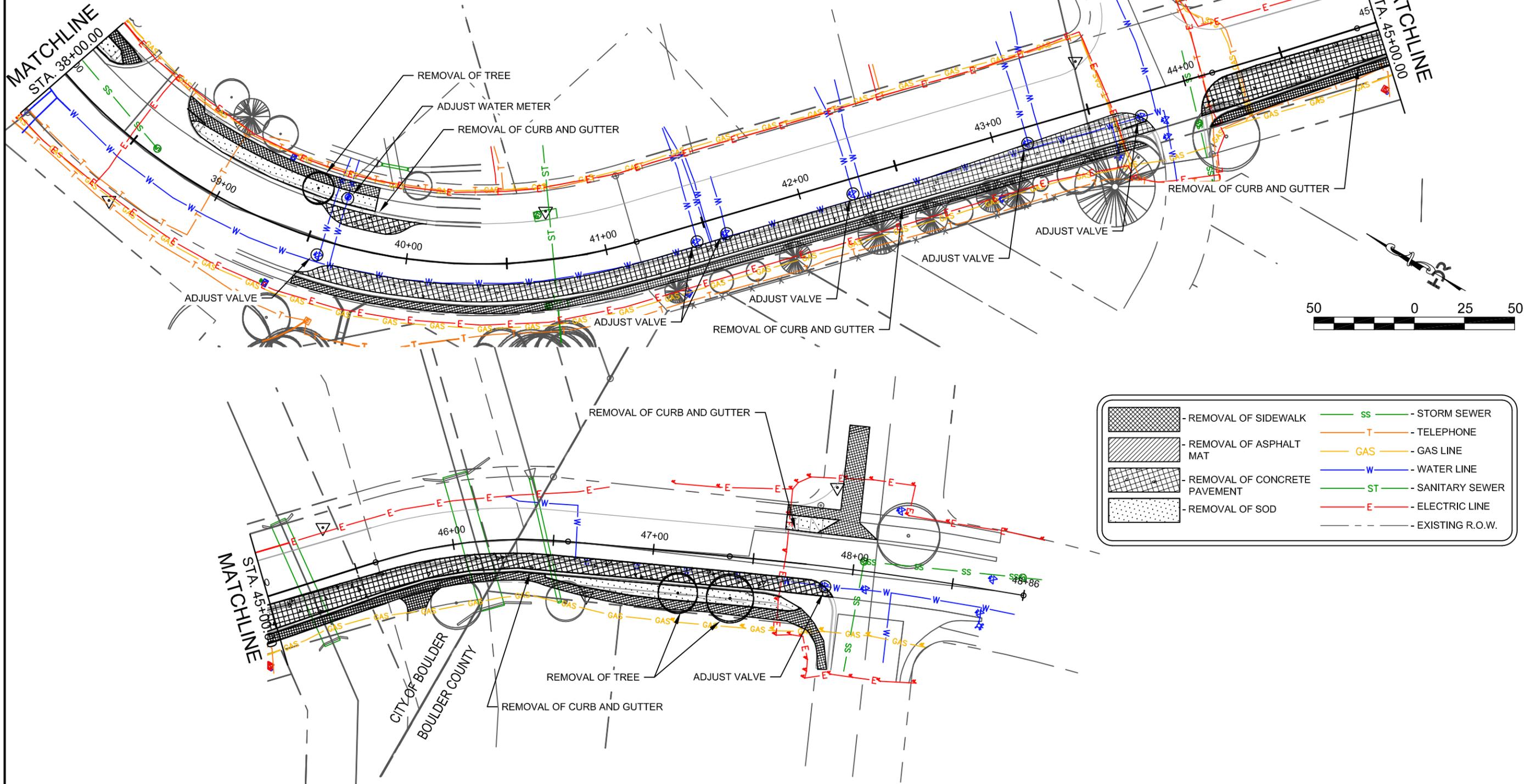
Designer: E. BAYLEY  
 Detailer: A. NILES  
 Sheet Subset: REMOVAL

Structure Numbers  
 Subset Sheets: 2 of 3

Project Number / Code  
 TAP C070-076  
 20673  
 Sheet Number 7



Know what's below.  
Call before you dig.



	- REMOVAL OF SIDEWALK		- STORM SEWER
	- REMOVAL OF ASPHALT MAT		- TELEPHONE
	- REMOVAL OF CONCRETE PAVEMENT		- GAS LINE
	- REMOVAL OF SOD		- WATER LINE
			- SANITARY SEWER
			- ELECTRIC LINE
			- EXISTING R.O.W.

Print Date: 08/01/2016  
 File Name: 60316\_REM-01.DWG  
 Horiz. Scale: 1" = 50' Vert. Scale: N/A  
 City Project Manager  
 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202  
 Phone: 303-764-1520 Fax: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.



As Constructed  
 No Revisions:  
 Revised:  
 Void:

TWIN LAKES MULTI-USE PATH CONNECTIONS  
 TWIN LAKES ROAD  
 REMOVAL AND UTILITY PLAN  
 Designer: E. BAYLEY  
 Detailer: A. NILES  
 Sheet Subset: REMOVAL

Project Number / Code  
 TAP C070-076  
 20673  
 Sheet Number 8

TO ESTABLISH GEOMETRIC CONTROL FOR THE CONSTRUCTION OF THIS PROJECT, THE DEPARTMENT HAS PROVIDED THE FOLLOWING INFORMATION:

- Format \*
- Horizontal Control
  - Vertical Control
  - Roadway Alignment
  - Original Terrain Data
  - Other: \_\_\_\_\_

\* Specify the information format, ie., plan sheet, computer disk, computer printout, or other. The information marked is either contained on the plans or is available from the Engineer.

TYPE OF PROJECT

- Landscaping
- Signalization
- Safety Improvement
- Asphalt Overlay
- Concrete Overlay
- Minor Widening
- Major Reconstruction
- New Roadway Construction
- Bridge Replacement
- Bridge Widening
- New Bridge
- Other: \_\_\_\_\_

SURVEY WORK TO BE PERFORMED BY OTHERS: \_\_\_\_\_

WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 625:

- Establish and Maintain Project Centerline or Engineer Approved Offset Line(s)
- Verification and Maintenance of Horizontal and Vertical Control
- Verify or Determine existing grades and alignments
- Verify or Determine existing topography
- GPS/RTS (Global Positioning System/Robotic Total Station) Construction Machine Control
- Clearing and Grubbing Limits (Section 201)
- Removal Limits (Section 202)
- Reset Items (Section 210)
- Excavation and Embankment (Section 203)

- Excavation
  - Unclassified
  - Stripping
  - Muck
  - Rock
  - Borrow
  - Other: \_\_\_\_\_
  - Potholing

- Embankment
  - Site Grading
  - Erosion Control (Perm)
  - Other: \_\_\_\_\_
  - As Staked Earthwork Quantities (See General Notes)

- Landscaping
  - Top Soil (Section 207)
  - Seeding (Section 212)
  - Mulching (Section 213)
  - Planting (Section 214)
  - Herbicide (Section 217)
  - Other: \_\_\_\_\_

- Erosion Control (Section 208)
  - Seeding (Temp)
  - Silt Fence
  - Erosion Bales
  - Erosion Logs
  - Riprap (Temp)
  - Other: \_\_\_\_\_

- Roadway Bases
  - Untreated Subgrade
  - Treated Subgrade
  - Aggregate Base Course (Section 304)
  - Reconditioning
  - PMBB - Plant Mix Bituminous Base
  - Other: \_\_\_\_\_

	Slope Staking (Y/N)	Grid (Y/N)	Grade (Y/N)	Special Interval
Excavation	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

	Slope Staking (Y/N)	Grid (Y/N)	Grade (Y/N)	Special Interval
Embankment	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

	Grid (Y/N)	Grade (Y/N)	Special Interval	Special Offset
Roadway Bases	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

- Pavements
  - HMA - Hot Mix Asphalt (Section 403)
  - Concrete (Section 412)
  - Heating & Scarifying Treatment
  - Prime Coat, Tack Coat & Rejuvenating Agent (Section 407)
  - Seal Coat or Chip Seal (Section 409)
  - Other: \_\_\_\_\_

	Grid (Y/N)	Special Interval	Special Offset
Pavements	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

- Roadway Elements
  - Curb and Gutter (Section 609)
  - Drop inlets - alignment and grades (Section 604)
  - Retaining Walls
  - Guard Rail (Section 606)
  - Sidewalk (Section 608)
  - Overlay Stationing
  - Other: \_\_\_\_\_

	Tangent Interval	Curve Interval	Special Offset
Curb & Gutter	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

- Riprap (Perm) (Section 506)
- Slope and Ditch Paving (Section 507)

- Minor Structures
  - Structure Excavation limits (Section 206)
  - Culverts (Section 603)
  - Culverts w/ Headwalls and Wingwalls (Section 601)
  - Concrete Box Culverts w/ Headwalls and Wingwalls
  - Pipes (Section 603)
    - Sanitary Sewer
    - Storm Sewer
    - Water
    - Irrigation
    - Miscellaneous
  - Manholes (Section 604)
  - Inlets (Section 604)
  - Permanent Water Quality BMP (Section 208)
  - Other: \_\_\_\_\_

	Left Interval	Center Interval	Right Interval
Stationing	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

- Major Structures - Overhead Signs (Section 614), Concrete Box Culverts, Bridges - and all other structures assigned a structure number
  - Structure Excavation limits (Section 206)
  - Concrete Box Culverts (Section 603) w/ Headwalls and Wingwalls (Section 601)
  - Piling locations and cut off elevations (Section 502)
  - Caisson locations and elevations (Section 503)
  - Footing locations, alignment, and elevations
  - Abutment/Pier locations, alignment, and elevations
  - Wingwall skew angles/offsets
  - Structural concrete form locations
  - Substructure As-constructed survey required for Bridges (Subsection 601 .12) and Overhead signs (S-614-50)
  - Bridge expansion joint(s) alignment and grade (longitudinal and transverse)
  - Deck grades at Girder 10th or "n" th point locations and elevations
  - Slope and Ditch Paving (Section 507)
  - Other: \_\_\_\_\_

- Fencing (Section 607)
  - Temporary
  - Permanent
  - Sound Barrier
  - Other: \_\_\_\_\_

- Delineators (Section 612)
  - Temporary
  - Permanent

- Lighting (Section 613) and Traffic Control Devices (Permanent) (Section 614)
  - Signal pole locations and elevations
  - Light pole locations and elevations
  - Sign locations
  - Field verify sign post locations, elevations, and lengths before fabrication.
  - Other: \_\_\_\_\_

- Pavement Marking (Section 627)
  - Striping (Temp)
  - Striping (Perm)
  - Symbols
  - Other: \_\_\_\_\_
- Temporary Lighting and Construction Traffic Control Devices (Section 630)
  - Signal pole locations and elevations (Temp)
  - Light pole locations and elevations (Temp)
  - Sign Locations (Temp)
  - Other: \_\_\_\_\_
- All Easements (Temp Staking by P.L.S. Only)
- Right of Way (Temp Staking by P.L.S. Only)

WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 629:

- Monumentation (Section 629)
  - Control
  - Right of Way
  - Land corners, Aliquot corners
  - Easements
  - Reference the specified existing monuments:\*\* \_\_\_\_\_
  - Replace the specified existing monuments: \*\* \_\_\_\_\_
  - Locate monuments. It is estimated \_\_\_\_\_ hours are required.

NOTE: All 629 items shall include adequate research, calculations, and evaluations of evidence for monuments to be set.

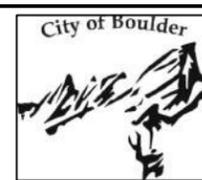
\*\* A Tabulation of Survey Monuments may be provided on the plans.

GENERAL NOTES:

- Unless indicated otherwise on this Survey Tabulation Sheet, all survey work and staking intervals shall be done in accordance with the latest edition of the CDDT Survey Manual.
- Adequate information for establishing lines, grades, and locations for all work items have been specified on the plans. Any additional information required to stake the item or element shall be generated by the Contractor's surveyor.
- The Contractor's surveyor shall provide an estimate of the man-hours necessary to complete the work items indicated on this sheet. A copy of this sheet, with the estimated man-hours written on the blank line to the left of the specified items, shall be submitted with the Survey Schedule to the Engineer \_\_\_\_\_ days prior to the Presurvey Conference - Construction Survey.
- Stakes and Monuments which are damaged or destroyed by the progress of construction shall be replaced by the Contractor at no additional cost to the Department.
- The Contractor shall furnish an As Staked (or GPS/RTS Construction Machine Control) Earthwork Quantity report to the Engineer prior to completion of twenty percent (20%) of the planned earthwork in any phase as per the CDDT Survey Manual. A printed copy of the As Staked (or GPS/RTS Construction Machine Control) Earthwork data report and a computer disk with that information on it, in the specified format shall be submitted to the Engineer. The Contractor shall field verify original ground cross sections at a maximum 500 feet intervals.
- Prior to beginning work on any subsequent operation, such as placing base course or paving, the Contractor shall certify in writing to the Engineer that the final grade is within specified tolerance.
- The Contractor's surveyor shall perform all field surveying and calculations necessary to tie plan grades into field grades.
- The Contractor shall coordinate construction staking on the project with any utility work.
- Fieldbooks shall contain daily records of points set and or measurements observed. The information recorded shall contain: date, crew members' names, point no., description, staking information, and sketches. If the survey information is collected electronically, information recorded shall be provided to the Project Engineer in a hard copy format that is intuitive, clear and related to the supplemental information recorded in the field books. All linear surveys, such as slope stakes and blue tops, shall have the station and offset information related to the measured information. Non-linear surveys such as structures staking shall have sketches relating electronic information, such as point numbers, to the sketch.
- The Contractor's surveyor shall submit the following fieldbooks to the Engineer:
  - Horizontal Control (Primary & Secondary)
  - Vertical Control (i.e. Benchmarks)
  - Property Pin Ties
  - Horizontal Alignment
  - Grading
  - Slope Staking
  - Minor Structures
  - Major Structures
  - One fieldbook for each work category shown on this sheet
  - Other Fieldbook(s): \_\_\_\_\_

Print Date: 08/01/2016  
 File Name: 63016\_SURVEYTAB\_01.DWG  
 Horiz. Scale: N/A Vert. Scale: N/A  
 City Project Manager  
 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202  
 Phone: 303-764-1520 Fax: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.



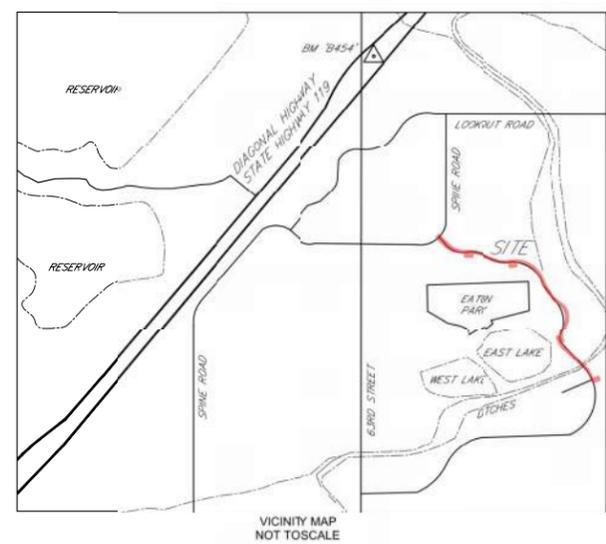
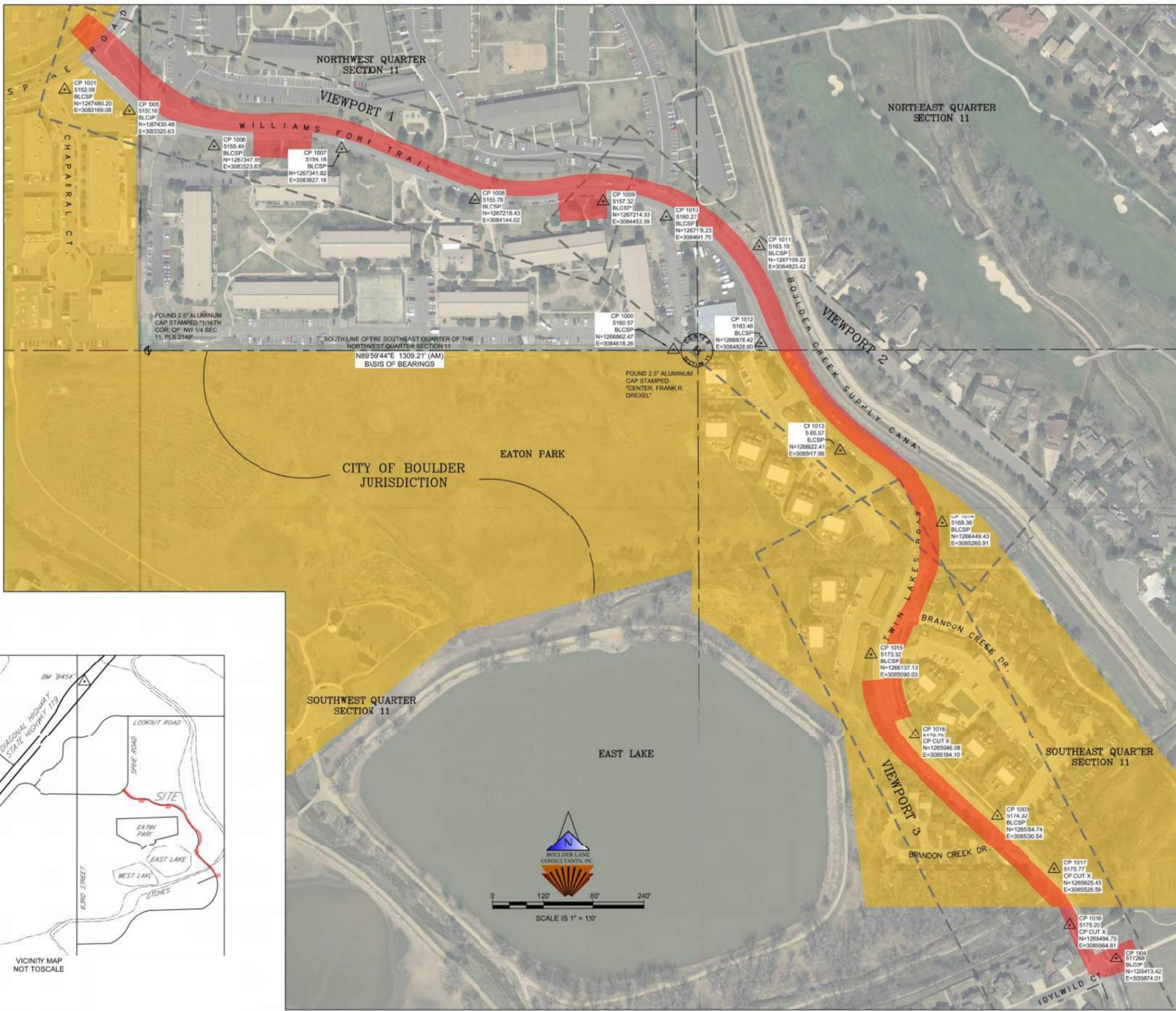
As Constructed  
 No Revisions:  
 Revised:  
 Void:

TWIN LAKES MULTI-USE PATH CONNECTIONS  
 SURVEY TABULATIONS  
 Designer: E. BAYLEY  
 Detailer: A. NILES  
 Sheet Subset: SURVEY  
 Structure Numbers  
 Subset Sheets: 1 of 2

Project Number / Code  
 TAP C070-076  
 20673  
 Sheet Number 9

PARCEL & TOPOGRAPHIC MAPPING OF THE  
**TWIN LAKES MULTI-USE PATH CORRIDOR**  
 LOCATED IN SECTION 11, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH P.M.,  
 COUNTY OF BOULDER, STATE OF COLORADO

- LEGEND**
- △ CONTROL POINT
  - WATER METER
  - WATER VALVE
  - FIRE HYDRANT
  - IRRIGATION VALVE
  - WATER MANHOLE
  - SANITARY SEWER MANHOLE
  - SANITARY SEWER CLEANOUT
  - STORM SEWER MANHOLE
  - ELECTRICAL METER
  - ELECTRICAL RISER
  - GAS VALVE
  - TELEPHONE PEDESTAL
  - SIGN
  - DECIDUOUS TREE WITH CALIPER
  - TWIN DECIDUOUS TREE WITH CALIPER
  - CLUSTER DECIDUOUS TREE WITH CALIPER
  - EVERGREEN TREE WITH CALIPER
  - FENCE LINE
  - ELECTRICAL LINE
  - TELEPHONE LINE
  - OHU OVERHEAD UTILITY LINE
  - SS SANITARY SEWER LINE
  - ST STORM SEWER LINE
  - WATER LINE
  - GAS LINE
  - CONCRETE
  - DIRT TRAIL/AREA
  - ASPHALT



- NOTES:**
- THIS PARCEL AND TOPOGRAPHIC MAP WAS PREPARED WITHOUT THE BENEFIT OF CURRENT TITLE COMMITMENTS AND DOES NOT CONSTITUTE A TITLE SEARCH BY BOULDER LAND CONSULTANTS, INC OR THE UNDERSIGNED. THIS TOPOGRAPHIC MAP DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT PROPERTIES: EASEMENTS (OTHER THAN APPARENT EASEMENTS); BUILDING SETBACK LINES; RESTRICTIVE COVENANTS; SUBDIVISION RECORDS; ZONING OR OTHER LAND-USE REGULATIONS; AND ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
  - THIS PARCEL & TOPOGRAPHIC MAP DOES NOT REPRESENT A "LAND SURVEY PLAT" OR "IMPROVEMENT SURVEY PLAT" AND THIS MAP IS NOT INTENDED FOR PURPOSES OF TRANSFER OF TITLE OR SUBDIVISIONS OF LAND.
  - SELECT EASEMENTS ARE SHOWN HEREON. A TITLE COMMITMENT MAY BE REQUIRED IF ALL ENCUMBRANCES ARE TO BE IDENTIFIED.
  - LOCATION FOR THE INFORMATION SHOWN HEREON IS BASED ON MODIFIED STATE PLANE COORDINATES, COLORADO NORTH ZONE 501. ALL DIMENSIONS ARE IN U.S. SURVEY FEET. PROJECT WAS SCALED TO GROUND AT "CP-1000" SHOWN HEREON AND WAS HELD AS THE ONLY TRUE STATE PLANE COORDINATE [CALCULATED COMBINED SCALE FACTOR OF 1.0002823]. ALL BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 11 AS SHOWN AND DESCRIBED HEREON. SAID LINE WAS DETERMINED TO BEAR NORTH 89°59'44" EAST BY GPS OBSERVATION.
  - PROJECT BENCHMARK FOR VERTICAL INFORMATION SHOWN HEREON IS "B 454" (PID: DJ 8203), AN INGS STEEL ROD IN MONUMENT BOX, PUBLISHED NAVD88 ELEVATION: 5161.19. SITE BENCHMARKS ARE DESCRIBED AS "CP-1000", "CP-1001", "CP-1003" THRU "CP 1018" SHOWN HEREON. CONTROL WAS DIGITALLY LEVELED HOLDING SAID NAVD88 ELEVATION. CONTOUR INTERVAL IS 1 FOOT.
  - THE LOCATIONS OF UNDERGROUND UTILITIES WERE BASED UPON VISIBLE SURFACE EVIDENCE AND PAINTED SURFACE MARKINGS DELINEATED BY VCS (MARKED APRIL 4, 2016). AS STATED IN TABLE A, ITEM 11 OF THE 2016 ALTA/NSPS MINIMUM STANDARD DETAIL REQUIREMENTS "LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND (UTILITY) FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED." INVERT ELEVATIONS ON STORM AND SANITARY INLETS AND/OR MANHOLES ARE THE BEST ESTIMATED AND ARE ROUNDED TO THE NEAREST 0.05 FOOT. MANHOLE AND INLET FLOW LINES ARE NOT ALWAYS APPARENT AND/OR READILY ACCESSIBLE. OSHI COMPLIANT MANHOLE ENTRY MAY BE NECESSARY TO PROCURE EXACT INVERT ELEVATIONS.
  - SELECTED LANDSCAPING TREES AND TREES 12" AND GREATER IN DIAMETER ARE SHOWN HEREON.
  - FLOOD INFORMATION: THE SUBJECT PROPERTY IS LOCATED IN ZONE X AS DEFINED BY FEMA. AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. SEE COMMUNITY PANEL NO. 08013C0412J AND 08013C0404J DATED DECEMBER 18, 2012. FLOOD INFORMATION IS SUBJECT TO CHANGE. THIS INFORMATION IS CONSISTENT WITH THE CITY OF BOULDER FLOOD HAZARD MAPPING.
  - DATES OF FIELDWORK: APRIL 4 THRU MAY 19 2016.
  - CERTIFICATION DEFINED: THE USE OF THE WORDS "CERTIFY" OR "CERTIFICATION" BY A REGISTERED PROFESSIONAL LAND SURVEYOR CONSTITUTES AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS AND FINDINGS WHICH ARE THE SUBJECT OF THE CERTIFICATION, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE. EITHER EXPRESSED OR IMPLIED. THE CERTIFICATION SHOWN HEREON EXTENDS ONLY TO THOSE PARTIES SPECIFICALLY MENTIONED THEREIN (PER COLORADO STATE BOARD RULE 5.2.2).
  - IN ACCORDANCE WITH C.R.S. 13-80-105:  
 NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.

**SURVEYOR'S CERTIFICATION**

I, JASON EMERY A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY TO HDR, INC. THAT, SUBJECT TO THE NOTES SHOWN HEREON, THIS TOPOGRAPHIC MAP WAS PREPARED UNDER MY RESPONSIBLE CHARGE AND CONFORMS TO APPLICABLE STANDARDS OF PRACTICE, AND ACCURATELY DEPICTS THE RESULTS OF SAID SURVEY.

JASON EMERY  
 COLORADO LICENSED PROFESSIONAL  
 LAND SURVEYOR NO. 20134  
 FOR, AND ON BEHALF OF,  
 BOULDER LAND CONSULTANTS, INC.  
 DATE: MAY 15, 2016



THIS MAP WAS PREPARED BY

**BOULDER LAND CONSULTANTS, INC.**

950 LARAMIE BLVD, UNIT D  
 BOULDER, CO 80304 (303) 443-366  
 www.BLCsurveyors.com